

# ***Streaming Receiver Adaptor***

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## **Operating Instructions**

***BKM-FW50***

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## Precautions

- The software specifications of this unit are subject to change for improvements without notice.
- Screens shown by application software may differ slightly from the illustrations shown in this manual.
- For safety, connect the port of this unit only to a network where there is no danger of excessive voltage or voltage surges.
- The steps described in this manual are guaranteed only for use under the following environment conditions.

### **Operating system:**

Microsoft Windows XP

### **Browser:**

Microsoft Internet Explorer 6.0 or later

- Make sure to turn off the display's main power before inserting or ejecting a CF card (not supplied). Data may be lost or damaged if a CF card is ejected while being accessed by the unit.
- To ensure security on the network, setting a user name and password is recommended. For information on how to make these settings, see the section "Setup screen" (page 13).
- Because the BKM-FW50 reaches high temperatures while operating, be careful when removing it from a Flat Panel Display.

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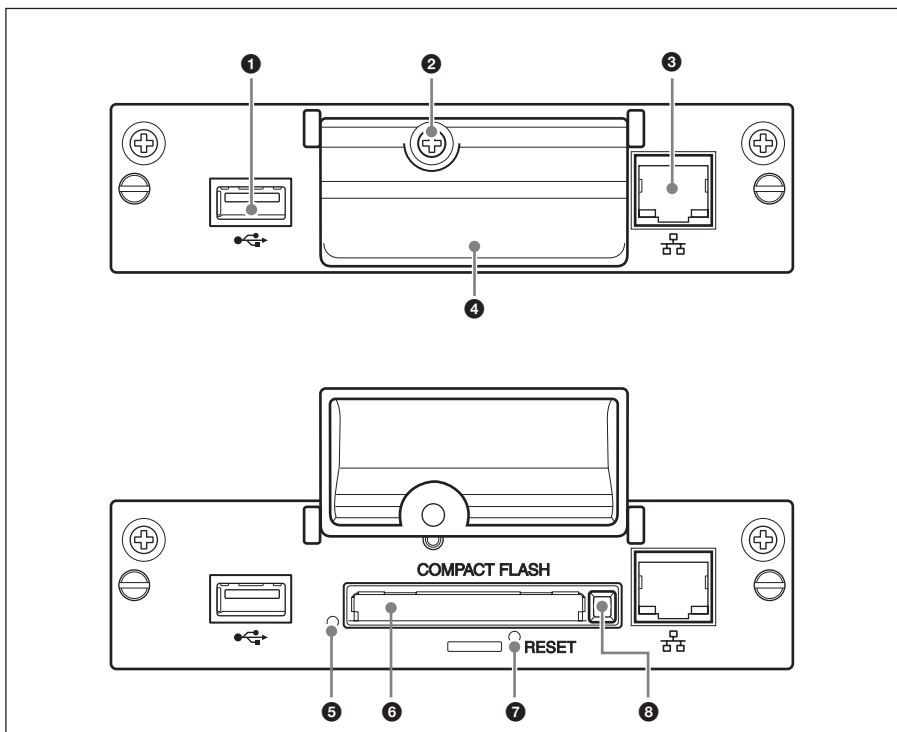
## About This Manual

This manual describes use and operation of the BKM-FW50 as installed in a Flat Panel Display of the FWD series and connected to a network.

*For information on regular operation of the display, consult the operating instructions of the FWD series product.*

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# Names and Functions of Parts and Controls



## 1 USB port

The port will be used for expanded functions to be introduced in future.

## 2 Memory card slot cover fastening screw

## 3 Network connector (10BASE-T/100BASE-TX)

Serves to connect the unit to a network, using a 10BASE-T/100BASE-TX LAN cable.

## 4 Memory card slot cover

## 5 Access indicator

Lights green when a CF (CompactFlash) card is being accessed by the unit. Before inserting a CF card, make sure to read "Precautions" on page 3.

## 6 Memory card slot

Accepts a CF card.

## 7 RESET button


When this button is pressed and held for more than 3 seconds, all settings of the unit revert to the default condition.

## 8 Eject button

Press this button to remove a CF card from the memory card slot.

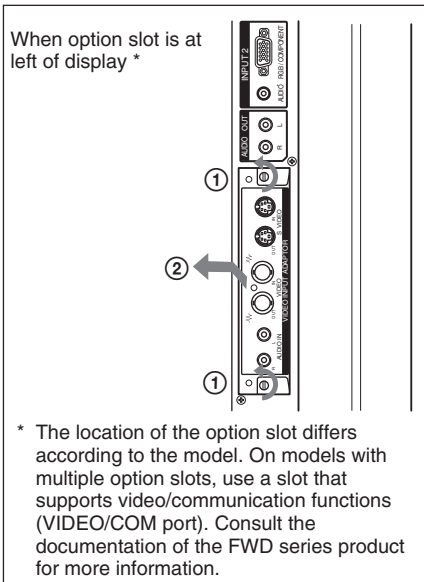
# Installation

## Before installation

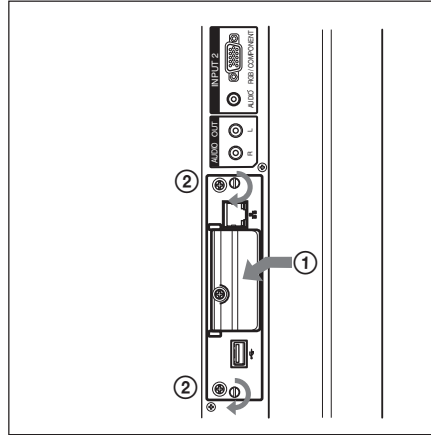
- Turn off power to the display and all other equipment connected to the display. For the display, proceed as follows: press  to put the display into standby mode and then disconnect the power cord from the AC outlet.
- While carrying out the installation, the display must be firmly secured.

Install the BKM-FW50 inside the display as follows.

- 1 If an optional adaptor is installed, loosen its fastening screws (top and bottom) by turning counterclockwise with a flatblade screwdriver and then carefully pull out the adaptor from the display.



- 2 Insert the BKM-FW50 into the display with correct orientation. Make sure that the adaptor is firmly seated in the internal connector of the display. Then tighten the fastening screws (top and bottom) with a flatblade screwdriver and perform the necessary connections.



## Caution

### Do not touch the connector section

Never touch the connector section inside the display. Otherwise there is a risk of accidents or damage.

# Playback of Still Images or Video From a CF Card

The BKM-FW50 is equipped with a memory card slot that accepts CompactFlash cards (not supplied). If you insert a CF card that contains images shot with a digital still camera into the slot of the BKM-FW50, the images can be viewed on the display in a slide show format. You can make various settings for playback of still images or video. For information on how to make these settings, see the section “Computer Operation” (page 9).

## Compatible media and file formats

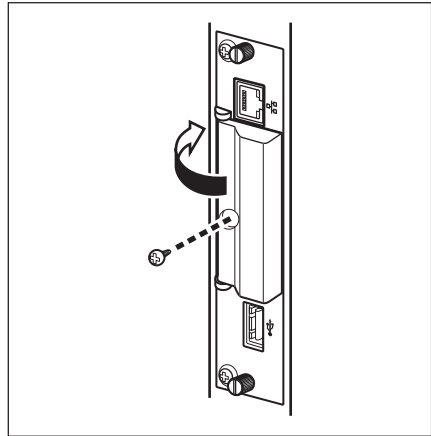
- Media:** CF (CompactFlash) card, Microdrive
- File format:** JPEG format, MPEG2 format etc. (For details, see page 10.)
- Recommended resolutions:**  
1360 × 768, 1280 × 768, 1024 × 768 (FWD-LX1 series)  
1024 × 768, 852 × 480 (FWD-PV1 series)
- Maximum resolution\*:**  
2592 × 1944
- Minimum resolution:**  
640 × 480

\* The higher the resolution, the longer images take to display.

## Inserting a CF card

After turning off the display power, perform the following steps.

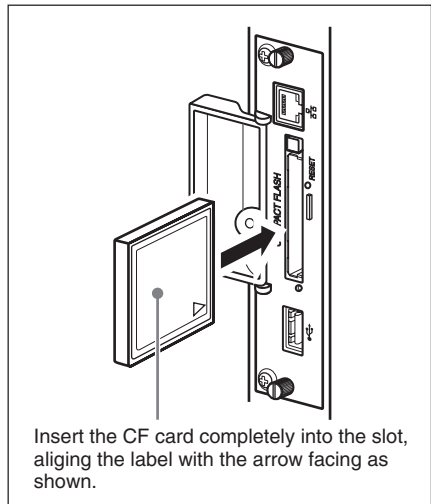
- 1 Remove the memory card slot cover fastening screw with a Phillips screwdriver.



- 2 Open the memory card slot cover and insert the CF card into the memory card slot.

### Note

Take care to insert the CF card with correct orientation, as shown in the illustration.



- 3 Replace the memory card slot cover and tighten the fastening screw with a Phillips screwdriver.

## Using slide show playback

When a CF card which contains still images taken with a digital still camera is inserted into the BKM-FW50, JPEG format still image files will be automatically detected, and the images will be shown on the display as a slide show.

### Detailed control of playback method

When the display is connected to a network via the BKM-FW50, any still image or video file stored on the CF card can be shown on the display. For information on settings and operation in this case, see the section “Computer Operation” (page 9). In addition, the BKM-FW50 is set to automatically display any still image or video slide show saved in the “DCIM\101MSDCF” folder, as the factory default.

### Removing the CF card

Turn power to the display off, and then proceed as follows.

#### Note

Make sure to turn off the display’s main power before inserting or ejecting a CF card. Data may be lost or damaged if a CF card is ejected while being accessed by the unit.

- 1 Remove the memory card slot cover fastening screw with a Phillips screwdriver.
- 2 Press the eject button to remove the CF card.
- 3 Replace the memory card slot cover and tighten the fastening screw with a Phillips screwdriver.

## Preparations for Using the Network Functions

The BKM-FW50 can be connected to a network with 10BASE-T/100BASE-TX LAN cable.

When connected to a LAN, the IP addresses of the BKM-FW50 can be set using one of the following two methods.

- **Assigning a fixed IP address to the BKM-FW50**

Normally this method should be used.

- **Automatically obtaining an IP address**

If the network to which the BKM-FW50 is connected has a DHCP server, you can have the DHCP server automatically assign an IP address. Note that in this case the IP address will change every time the display in which the BKM-FW50 is installed is turned on.

### Assigning a fixed IP address to the BKM-FW50

Note that a separate IP address is necessary for the display control function and for the still image/video playback function. Regarding details of IP address selection, consult your network administrator.

### Setting an IP address for the display control function

First, assign an IP address to the display control function, using the following procedure. The IP address assigned in this way is used for calling the display control function of the BKM-FW50 from a computer on the network. Also consult the operating instructions of the display.

- 1 Connect the BKM-FW50 installed in the display to the network, using suitable LAN cable.
- 2 Turn power to the display on and wait for about 30 seconds.

- 3 Using the menu of the display, assign one of the IP addresses that you have prepared beforehand (the one to be used for the display control function), as follows.
- 4 Press the MENU button on the display to bring up the main menu.
- 5 Use the **↑/↓** buttons to select “INITIAL SETUP/INFORMATION” and press the ENTER button. The “INITIAL SETUP/INFORMATION” menu appears.
- 6 Use the **↑/↓** buttons to select “IP Address Setup” and press the ENTER button.
- 7 Use the **↑/↓** buttons to select “Manual” and press the ENTER button.
- 8 Enter the necessary items.
  - 1) Use the **↑/↓** buttons to select the item to enter manually and press the ENTER button. A cursor appears in the leftmost field of the selected item.
  - 2) Use the **↑/↓** buttons or the numeric buttons on the remote control to enter a three-digit number (0 - 255). When you press the ENTER button or the **→** button, the cursor moves to the next field on the right. Enter a number in the same way.
  - 3) When all four fields of an item have been set, pressing the ENTER button or the **→** button confirms the entry for that item.
  - 4) Make settings for the other items in the same way.
- 9 Use the **↑/↓** buttons to select “Execute” and press the ENTER button.

Next, assign an IP address to the still image/video playback function.

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## Setting an IP address for the still image/video playback function

- 1 Start the browser of the computer (Internet Explorer 6.0 or later).
- 2 Enter the IP address that was assigned to the display control function into the address field, in the format “http://xxx.xxx.xxx.xxx”. Then press the Enter key on the keyboard.  
When a user name and password have been set, the “Network Password” screen appears. Enter the user name and password that were set, and then proceed to the next step.
- 3 Click the “Setup” tab.  
The “Setup” screen appears. This screen lets you set up the Network Password. The factory default settings are as follows:  
Name: root  
Password: fw50ad
- 4 Click the “Network” button.
- 5 Under “Internet Protocol (TCP/IP)”, click “Specify an IP address”. Then enter the IP address for the still image/video playback function in the input fields.
- 6 Click “Apply”.

### Automatically obtaining an IP address

If you set up the display as described below, an IP address can be assigned automatically by a DHCP server on the network.

- 1 Connect the BKM-FW50 installed in the display to the network, using suitable LAN cable.
- 2 Turn power to the display on and wait for about 30 seconds.



- 3 Press the MENU button on the display to bring up the main menu.
- 4 Use the **↑/↓** buttons to select “INITIAL SETUP/ INFORMATION” and press the ENTER button. The “INITIAL SETUP/INFORMATION” menu appears.
- 5 Use the **↑/↓** buttons to select “IP Address Setup” and press the ENTER button.
- 6 Use the **↑/↓** buttons to select “DHCP” and press the ENTER button.
- 7 Use the **↑/↓** buttons to select “Execute” and press the ENTER button.

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### Checking the automatically assigned IP address

When an IP address has been automatically assigned, you can call up the display control screen of the BKM-FW50 as follows and check which IP address has been assigned. The IP address changes each time power to the display is turned on. Therefore you must check the IP address as described here every time after turning power to the display off and on again.

- 1 Press the MENU button on the display to bring up the main menu.
- 2 Select “INITIAL SETUP/ INFORMATION” and check the IP address that is displayed in the “IP address” field.

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## Computer Operation

### Controlling the display

You can make various display settings on the screen of the computer. Make sure that the BKM-FW50 is properly installed in the display, and that the BKM-FW50, computer, and router or hub are properly connected with network cable. Then turn on power to the display, the computer, and the router or hub. There are five display screens, divided by function: “Information” screen, “Configure” screen, “Control” screen, “Player” screen, and “Setup” screen.

*For details on button functions, consult the operating instructions of the FWD series product.*

- 1 Start the browser of the computer (Internet Explorer 6.0 or later).
- 2 Enter the IP address that was assigned to the display control function into the address field, in the format “http://xxx.xxx.xxx.xxx”. Then press the Enter key on the keyboard. When a user name and password have been set, the “Network Password” screen appears. Enter the user name and password that were set, and then proceed to the next step.
- 3 Click the function tab at the top of the screen and select the desired screen.

### Setting items on respective screens

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#### Information screen

This screen shows the model name, serial number and other display information, as well as the power status and the input signal selection.

The screen is for information only. There are no items that can be set.

---

## Configure screen

### Timer

Lets you make settings for the timer function.

Click “Apply” when done.

### Screen Saver

Lets you make settings for the screen saver function.

Click “Apply” when done.

### Picture and Picture

Lets you make settings for the Picture and Picture function.

Click “Apply” when done.

#### Note

For details on these functions, consult the operating instructions of the FWD series product. Not all functions are supported by all display models.

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## Control screen

### POWER

Switches the display on or off.

### INPUT

Lets you select the input signal.

### PICTURE MODE

Lets you select the picture mode.

### ASPECT

Lets you switch the aspect ratio of the image.

### CLOSED CAPTION

Lets you control the display of subtitles on the screen.

When PICTURE MODE has been set to User1, User2, or User3, the following adjustments are possible. (Also consult the operating instructions of the FWD series product.)

### Contrast +/- buttons

Adjust the screen contrast.

### Brightness +/- buttons

Adjust the screen brightness.

### Chroma +/- buttons

Adjust the color intensity.

### Phase +/- buttons

Adjust the color balance.

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## Player screen

This screen lets you make settings for still image and video playback and operate the PC Presentation function of the BKM-FW50.

### Supported file formats

The following formats are supported for still image/video playback.

File type	File format	Extension
Still image	JPEG format	jpg, jpe, jpeg
	GIF format	gif
	PNG format	png
	BMP format	bmp
Video*	MPEG2 PS format (Up to 15 Mbps; 480p or 576p recommended)	mpg, m2v, mpeg
	Audio	MP3 format

\* Format of audio in video files:

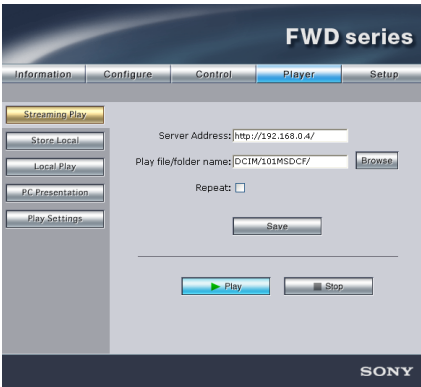
- Linear PCM
- MPEG-1 Audio Layer-2 (MP2)
- MPEG-1 Audio Layer-3 (MP3)

### Supported servers

The following Web/HTTP server formats are supported:

- Apache
- IIS

## Streaming Play



This screen lets you make settings for display and playback of still image and video files stored on a Web/HTTP server.

### Server Address

Enter the IP address of the Web/HTTP server where the still image or video files are stored.

### Play file/folder name

Specifies the location of the still image or video files on the Web/HTTP server specified in the “Server Address” field. You can either enter the location in the text box or click the “Browse” button and select the file or folder location on the screen that appears.

#### Note

If an “index.html” file is stored in the folder, other files and folders contained in the folder are not displayed.

### Repeat

Select this check box if the still images or video files are to be played back repeatedly.

### Save

Saves the settings made on this screen.

### Play

Starts playback of the selected file or of the still image/video files in the folder specified in “Play file/folder name”.

### Stop

Stops still image/video playback that was initiated by clicking the “Play” button.

## Store Local



This screen lets you download still image/video playback files stored on the Web/HTTP server and save them on a CF card (not supplied) inserted in the memory card slot of the BKM-FW50.

### Server Address

Enter the IP address of the Web/HTTP server.

### Play file/folder name

Specifies the location of the still image or video files on the Web/HTTP server specified in the “Server Address” field. You can either enter the location in the text box or click the “Browse” button and select the file or folder location on the screen that appears.

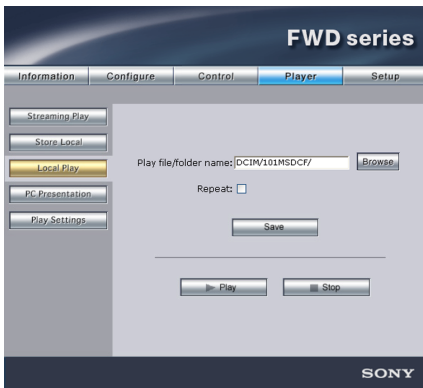
#### Note

If an “index.html” file is stored in the folder, other files and folders contained in the folder are not displayed.

### Store

Starts downloading the still image or video file or the contents of the folder specified in “Play file/folder name”.

## Local Play



This screen lets you make settings for display and playback of still image and video files stored on a CF (CompactFlash) card inserted in the memory card slot of the BKM-FW50.

### Play file/folder name

Specifies the location of the still image or video files on the CF card. You can either enter the location in the text box or click the “Browse” button and select the file or folder location on the screen that appears. The “DCIM\101MSDCF” folder is set as the factory default.

### Repeat

Select this check box if the still images or video files are to be played back repeatedly.

### Save

Saves the settings made on this screen.

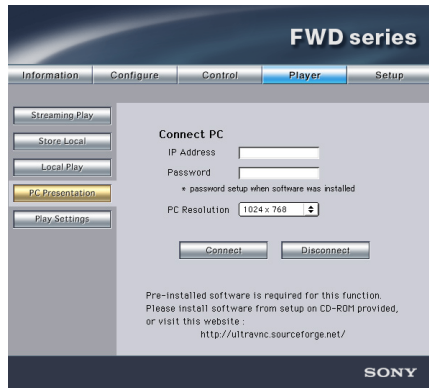
### Play

Starts playback of the selected file or of the still image/video files in the folder specified in “Play file/folder name”.

### Stop

Stops still image/video playback that was initiated by clicking the “Play” button.

## PC Presentation



This screen lets you start and stop the PC Presentation function of the BKM-FW50. By showing the contents of the computer desktop on the display, the PC Presentation function allows using the display as an external monitor for the computer.

### Note

To enable use of the PC Presentation function, UltraVNC must be installed on the computer.

UltraVNC is included on the CD-ROM supplied with the BKM-FW50. Insert the CD-ROM into the CD-ROM drive of the computer and follow the on-screen instructions to install UltraVNC.

### Connect PC

Select this to enable the PC Presentation function of the BKM-FW50. The following items also need to be set.

#### IP Address:

Enter the IP address of the computer.

#### Password:

Enter the password that was set during the installation of UltraVNC.

#### PC Resolution:

Select the screen resolution of the connected computer. If the resolution selected here differs from the computer’s actual resolution, the screen will not display at the proper size. Select a resolution so the screen size matches the display.

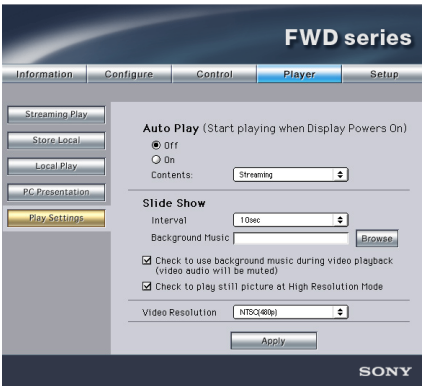
## Connect

Starts the PC Presentation function. When you click this button, the desktop screen of the computer at the specified IP address appears on the display.

## Disconnect

Select this to disable the PC Presentation function.

## Play Settings



This screen lets you make settings for the slide show function and for automatic display and playback of still image and video files.

### Auto Play

This setting specifies whether still image/video file playback should start automatically when the display in which the BKM-FW50 is installed is turned on. In combination with the ON timer of the display, this also allows automatic playback at a scheduled time.

To enable the function, select the “On” setting. From the “Contents” drop-down list, select either “Streaming” (automatic playback of still image/video files stored on a computer on the network) or “Local” (automatic playback of still image/video files stored on a CF card inserted in the BKM-FW50).

### Slide Show

The following items can be set for the slide show function.

## Interval:

Specifies the time interval until switching to the next still image or video.

## Background Music:

Lets you specify background music to be played during the slide show. Only music files stored on a CF card inserted in the BKM-FW50 can be used for this function.

When the “Check to use background music during video playback (video audio will be muted)” check box is selected, Background Music playback will be stopped while any video files contained in the slide show are played back.

When the “Check to display still pictures in High Resolution Mode” check box is selected, still images are displayed at high resolution (WXGA or XGA). If the folder includes both video files and still images, the screen turns off for several seconds to switch resolution when changing from a still image to a video (and vice versa).

## Video Resolution

Select NTSC (480p) or PAL (576p) as the playback resolution for video.

## Apply

Click here to save the settings.

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## Setup screen

This screen lets you set up the Network Password. The factory default settings are as follows:

Name: root  
Password: fw50ad

After you have made any changes or entered information, click “Apply” at the bottom of each screen to enable the settings.

Special characters cannot be used in the text fields.

## Owner Information

### Owner

Enter owner information here.

### Display Location

Enter information about the display installation location here.

### Memo

You can enter auxiliary information here.

## Time

### Time

Enter the time and the day of the week here.

## Network

### Internet Protocol (TCP/IP)

Select “Specify an IP address” to enter each value in the IP address’s numeric string. Select “Obtain an IP address (DHCP)” to acquire an IP address automatically from the DHCP server. In this case, be aware that the IP address will change each time the display attached to the BKM-FW50 is turned on.

#### Note

The BKM-FW50 requires a separate IP address for the display control function and the still image/video playback function. The IP address for the display control function can be set from the menu of the display attached to the BKM-FW50. For details, see “Setting an IP address for the display control function” on page 7.

### Password

The administrator and user name and password information can be entered here. The administrator name is fixed to “root”. Each can be a maximum of 8 characters long.

Once a user name and password are set, the “Network Password” screen appears whenever the display control screen of the BKM-FW50 is called up. To ensure

security on the network, setting a user name and password is recommended.

### Mail Report

When a display error has occurred, an error report is sent by e-mail (error notification).

### Address

Enter the target e-mail address here. Up to four addresses can be specified, for simultaneous sending of an error report. The maximum length for each address is 64 characters.

### Mail Account

#### Mail Address:

Enter the allocated mail address here. The maximum length for the address is 64 characters.

#### Outgoing Mail Server (SMTP):

Enter the mail server address here. The maximum length for the address is 64 characters.

#### Requires the use of POP Authentication before Send e-mail (POP before SMTP):

If POP authentication is required when connecting to the SMTP server, select this check box.

#### Ingoing Mail Server (POP3):

When POP authentication is used for the “POP before SMTP” setting, enter the POP3 server address here.

#### Account Name:

Enter the mail account name here.

#### Password:

Enter the mail password here.

#### Send Test Mail:

To test whether mail can be sent successfully to the specified address(es), select this check box and click “Apply”. A test mail will be sent.

#### Note

If any of the following items is not set or not set correctly, an error message appears, and test mail cannot be sent:

- Target address
- Mail account address and mail server address (SMTP)

**Advanced**

Gives access to advanced settings to enable use of various applications on the network. Make the settings as required by the respective application.

**Advertisement**

Lets you make settings for the Advertisement and Broadcast functions on the network.

**ID Talk**

Lets you make settings for the ID Talk function. ID Talk is a protocol that allows network-based control of the display in which the BKM-FW50 is installed. Controlled items includes various settings and adjustments such as color temperature and gamma. For information about supported ID Talk commands, contact your local Sony dealer.

**SNMP**

The BKM-FW50 is a network device which supports SNMP (Simple Network Management Protocol). Besides standard MIB-II, Sony Enterprise MIB is also supported. This screen allows making settings for SNMP.

For information about supported SNMP commands, contact your local Sony dealer.

**About the RESET button**

To reset all settings made on the Setup screen, use a thin pointed object to press and hold the RESET button for at least 3 seconds. All entered information will be cleared, and the unit is reset to the factory default condition.

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# Troubleshooting

Before requesting service, please check the following points. If the problem persists, contact your local Sony dealer.

Problem	Cause/Remedy
Cannot connect to network.	<ul style="list-style-type: none"><li>• BKM-FW50 is not correctly installed in display. → Push the BKM-FW50 fully into the slot, and tighten the fastening screws.</li><li>• Cable is not connected correctly to network port. → Plug the cable firmly into the network port.</li><li>• Network settings are incorrect. → When using a web browser from the computer, check the network settings of the computer. Press and hold the RESET button of the BKM-FW50 for at least 3 seconds to return the unit to the default condition. Then perform setup again.</li><li>• Cable type is incorrect. → Select a straight cable or a cross-wired cable, as required by the network environment.</li></ul>



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# Specifications

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## Input/output

Network	10BASE-T/100BASE-TX (connection speeds may differ, depending on the network environment)
Memory card slot	CF Type II
USB	Type A

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## General

Dimensions (including projecting parts)	135 × 32 × 95 mm (5 <sup>3</sup> / <sub>8</sub> × 1 <sup>5</sup> / <sub>16</sub> × 3 <sup>3</sup> / <sub>4</sub> inches) (W/H/D)
Mass	Approx. 300 g (10.6 oz.)
Power consumption	Approx. 10 W
Operating temperature	0 to +35°C (+32 to +95°F) (environment conditions for display in which BKM-FW50 is installed)
Storage temperature	-10 to +40°C (+14 to +104°F)
LED indicators	Link (green)/ Act (orange)
Cable length	Max. 100 m (Category 5)

Design and specifications are subject to change without notice.

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