

ERS-7

Entertainment Robot AIBO

❖ User's Guide (PC·Network)

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- The supplied software cannot be used with any device other than those devices specified herein.
- Some mobile communication devices may not work with the AIBO EYES feature due to unique configurations. Sony Corporation assumes no responsibility, in the case that the AIBO EYES feature does not work with such mobile communication devices.
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OPEN-R

“OPEN-R” is the standard interface for the AIBO Entertainment Robot system that Sony is actively promoting. This interface expands the capability of the entertainment robot through a flexible combination of hardware and interchangeable software to suit various applications. The AIBO robot ERS-7 conforms to OPEN-R version 1.1.5.

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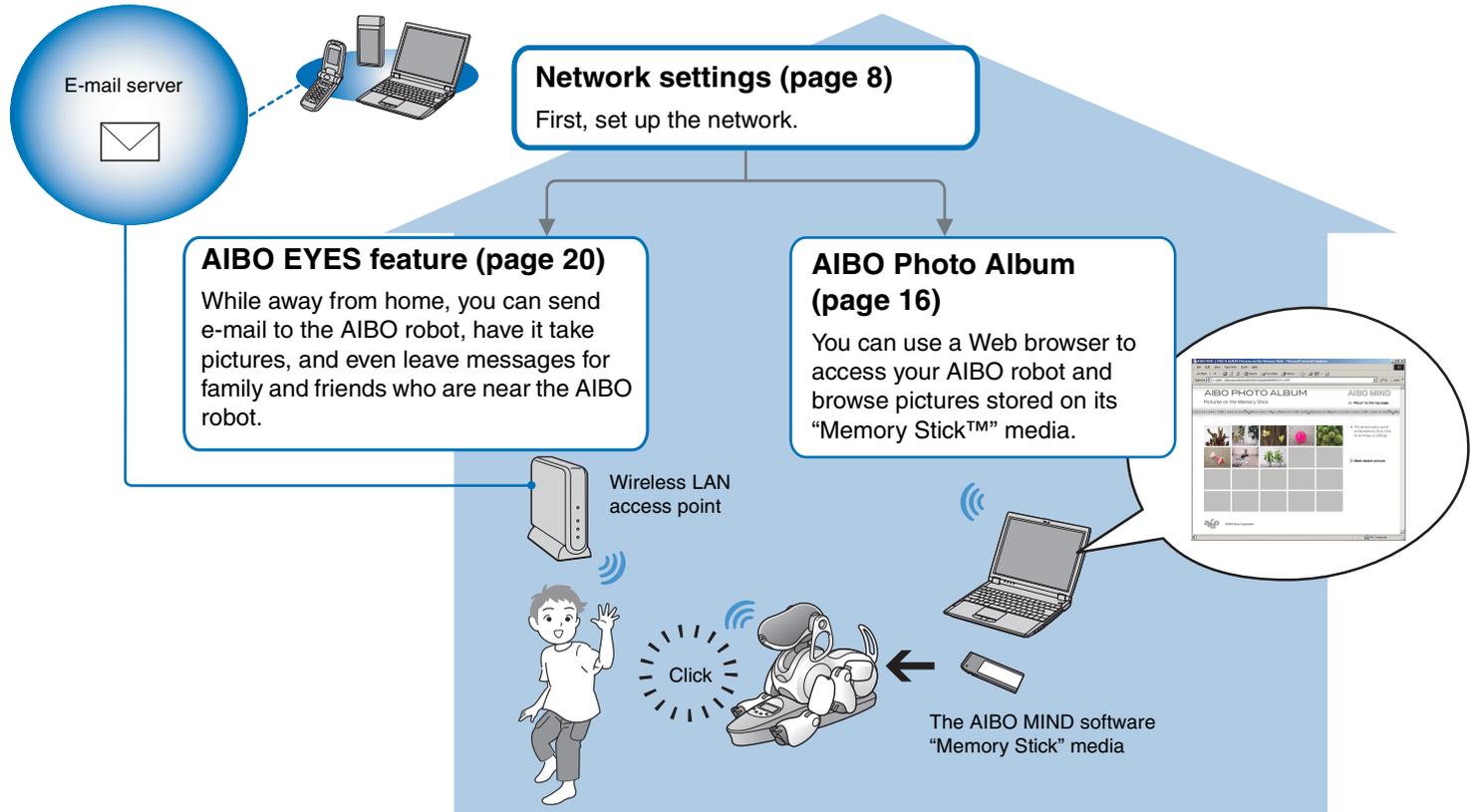
Other information about the AIBO robot is available on the Internet at the following site:
<http://www.aibo.com>

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Welcome to AIBO[®] Entertainment Robot ERS-7

PC network

Using the wireless LAN functionality of the AIBO Entertainment Robot ERS-7, you can view pictures taken by your AIBO robot in the AIBO Photo Album, in real-time. What's more, you can use your mobile communication device* (with Internet connectivity) or a standard connection to the Internet to play with the AIBO EYES feature.



* Your mobile communication device must have JPEG e-mail viewing capability.

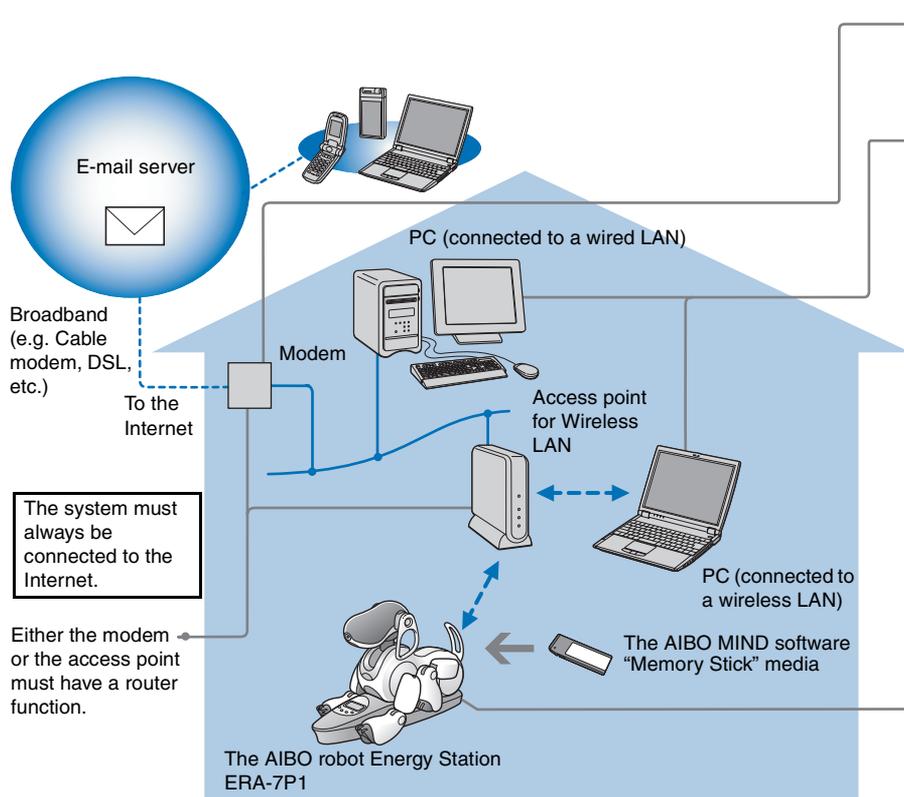
Network Configuration

In this section, we will confirm the system environment and set it up to use the AIBO® Entertainment Robot's wireless LAN connection.



Confirming system requirements

To use the AIBO EYES feature, your system must meet the following requirements.



Caution

The AIBO EYES feature cannot be used with USB-type cable and DSL modems.

A PC is required to configure the AIBO[®] Entertainment Robot's network and mail settings, as well as to view pictures taken by the AIBO robot via a Web browser. A "Memory Stick[™]" media reader/writer is required.

(Sony[®] brand is recommended)

- In order to connect your PC to an access point via a wireless LAN, your PC must have an IEEE 802.11b compatible wireless LAN adaptor.
- A Web browser must be installed.
- An e-mail account that supports POP* receiving and SMTP sending is required.

* The POP server must support the UIDL command (the command that displays a listing of IDs attached to individual e-mail messages). Check with your Internet service provider to determine whether support is available for your e-mail account.

When taking pictures of a certain scene at set intervals, place the AIBO robot on its Energy Station. The AIBO robot's clock features, as well as user-defined sleep/wake-up features are only available while the AIBO robot is in Station mode.

Using only the AIBO Photo Album

- An e-mail account and continuous Internet connection are not needed.
- A PC that supports a wireless LAN can be used in place of a wireless LAN access point.

Enabling the Wireless LAN function

In order to enable the AIBO[®] Entertainment Robot's wireless LAN function, turn the wireless switch on its body to ON.

If the AIBO robot is still operating, first press the pause button to put the AIBO robot in Pause mode.

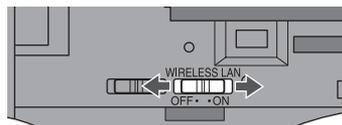
- 1 Hold the AIBO robot firmly, turn it upside down, and open the cover.**



Caution

- When lifting the AIBO robot, always hold it by its body, and not its extremities. (Those with small hands may have difficulty handling the AIBO robot.)
- Do not touch the charging contacts on the AIBO robot's stomach with your bare hands. Touching the contacts will reduce contact quality.

- 2 Slide the wireless switch to ON, and close the cover.**



Caution

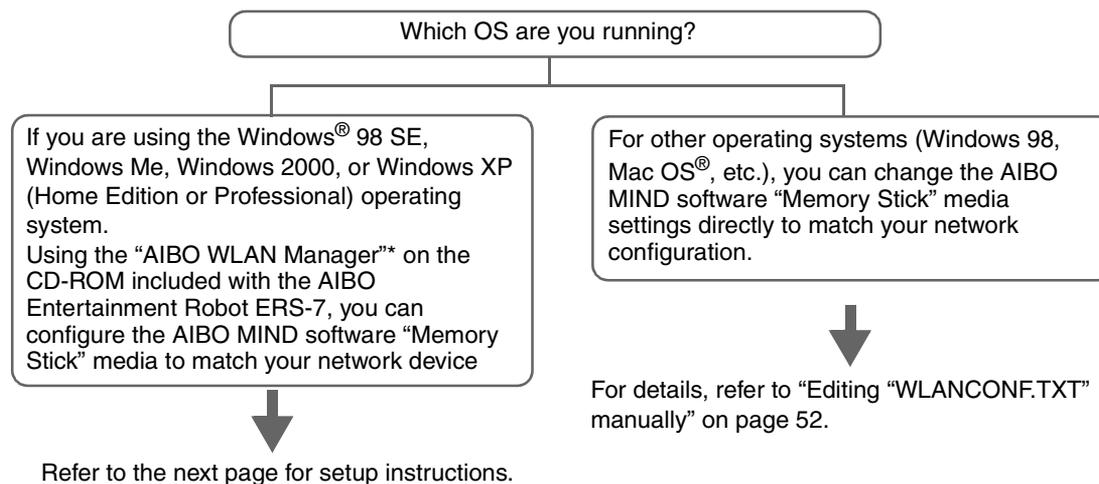
Simply turning ON the switch will not make the wireless LAN function usable. Refer to the next page for instructions on how to set up the network.

AIBO[®] Entertainment Robot's network setup

This section will guide you through the setup needed to enable your AIBO robot's wireless LAN function. A "Memory Stick[™]" media reader/writer* is required to set up the network.

* A Sony brand "Memory Stick" media reader/writer is recommended.

Network setup procedure



* "AIBO WLAN Manager" is a utility program used to configure the wireless LAN connection settings on the AIBO robot. "AIBO WLAN Manager" runs under the Windows 98 SE, Windows 2000, Windows Me, and Windows XP (Home Edition/Professional) operating systems.

Installing the “AIBO WLAN Manager”

Install the “AIBO WLAN Manager” on your PC.

Insert the CD-ROM included with the AIBO[®] Entertainment Robot ERS-7 into your CD-ROM drive.

The installer will automatically start.

If the installer does not start, double-click the “Setup.exe” file in the “SETUP” folder on the CD.

Follow the on-screen instructions to install the software.

Windows[®] XP users must install Universal Plug and Play

Windows XP operating system users must install Universal Plug and Play in order to use the AIBO robot’s search function. Use the following procedure to install Universal Plug and Play.

- ① Click “Start” → “Control Panel”.
- ② Select “Add/Remove Programs” → “Add/Remove Windows Components”.
- ③ In the “Components” list, select the “Network Services” check box, and then click “Details”.
- ④ Select the “Universal Plug and Play” check box, and then click “OK”.
If you used a CD to install the Windows operating system, you will be prompted to insert it into your computer.
- ⑤ Click “Next” to start installation.
- ⑥ When the “Completed the Windows Components Wizard” screen appears, click “Finish”.
Installation of Universal Plug and Play is now complete.
- ⑦ Close the “Add/Remove Programs” window.
- ⑧ Close the “Control Panel” window.

Configuring network settings with the “AIBO WLAN Manager”

Using the “AIBO WLAN Manager”, you can configure the AIBO MIND software “Memory Stick™” media to match your network device settings.

1 If using the Windows® XP operating system, click “Start” → “All Programs” → “AIBO WLAN Manager” → “AIBO WLAN Manager”.

If using an operating system other than Windows XP, click “Start” → “Programs” → “AIBO WLAN Manager” → “AIBO WLAN Manager”.

The “AIBO WLAN Manager” starts, and the “AIBO WLAN Manager” dialog box appears.

2 Insert the AIBO MIND software “Memory Stick” media into the “Memory Stick” media reader/writer.

Caution

Make sure the AIBO MIND software “Memory Stick” media safety switch is not in the “LOCK” position. If the switch is set to “LOCK”, then the AIBO® Entertainment Robot’s network settings and pictures will not be stored.

3 Configure each setting to match your network environment, and click Write.

Configuration options will differ depending on whether your network is using a DHCP Server*.

The DHCP server allows an IP address to be automatically allocated to a device on the network.

* For details on DHCP server functionality, refer to the instruction manuals included with your modem or access point.

Use the following procedure to confirm whether or not you are using a DHCP server in your network environment

(This procedure is for the Windows[®] XP operating system only. If using another operating system, consult its Help.)

- ① Click “Start” → “Control Panel”.
- ② Click “Network and Internet Connections” → “Network Connections”.
- ③ Right-click either “Wireless Network Connection” or “Local Area Connection”, and select “Properties”.
- ④ On the “General” tab, select “Internet Protocol (TCP/IP)” under “This connection uses the following items”. Click “Properties”.
- ⑤ Confirm your settings.

If “Obtain an IP address automatically” is selected

The DHCP server function is in use.

Proceed to page 12.

If “Use the following IP address” is selected

You are not using a DHCP server.

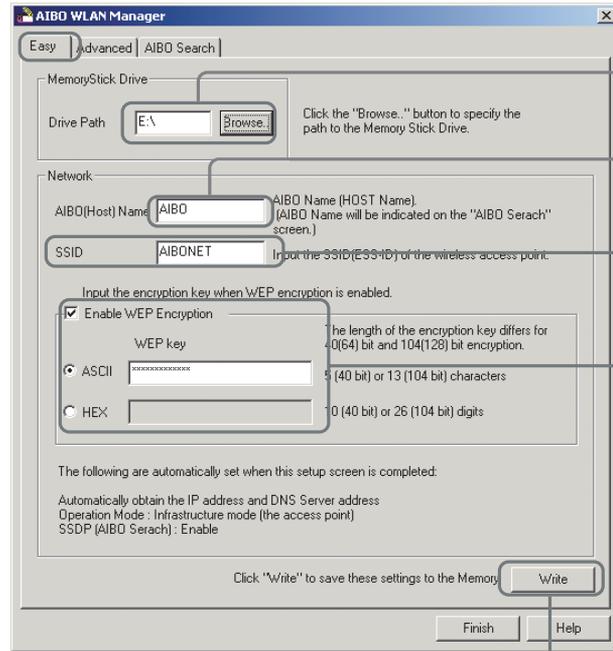
Proceed to page 13.

- In this case, use the following steps to manually assign your AIBO[®] Entertainment Robot an IP address. Make a note of your PC’s IP address displayed under “Use the following IP address”. Choose an IP address for your AIBO robot that does not conflict with this.
E.g. Your PC’s IP address: 192.168.0.10
→ Your AIBO robot’s IP address: 192.168.0.11, etc. (anything other than 192.168.0.10)

When using a DHCP server in your network environment

Configure settings on the “Easy” tab.

When using a DHCP server, changes to the “Advanced” tab (page 13) are unnecessary.



- ① Click the “Browse” button, and specify the drive where the AIBO MIND software “Memory Stick™” media is set (e.g. “S:” drive).
 - ② The name that you enter here will appear as the “AIBO Name” on the “AIBO Search” tab (page 14). This name can be up to 8 alphanumeric characters and must contain at least one letter.
 - ③ Enter the network name (SSID) used by the wireless LAN access point. (Maximum of 32 characters. Only alphanumeric characters and symbols are allowed.)
 - ④ Configure if using WEP (page 61). (If not using WEP, no settings are necessary.) If using WEP, select the “Enable WEP Encryption” check box, and enter the passkey (WEP) used by the access point. Alphanumeric passkeys must be 5 or 13 characters. Hexadecimal passkeys must be 10 or 26 characters.
- Example Configuration**
- | | Alphanumeric | Hexadecimal |
|------------------|---------------|----------------------------|
| WEP64 (40 bit) | AIBO2 | 4149424f32 |
| WEP128 (104 bit) | ENTERTAINMENT | 454e5445525441494E4d454e54 |
- ⑤ Confirm your settings, and click this button.

When not using a DHCP server in your network environment

Configure settings in the “Advanced” tab.

When not using a DHCP server, changes to the “Easy” tab (page 12) are unnecessary.

The screenshot shows the 'AIBO WLAN Manager' window with the 'Advanced' tab selected. The window is divided into several sections:

- MemoryStick Drive:** Includes a 'Drive Path' field with 'E:\' and a 'Browse...' button. A callout (1) points to the 'Browse...' button.
- Network:**
 - AIBO(Host) Name:** Field contains 'AIBO'. A callout (2) points to this field.
 - Wireless LAN:**
 - SSID:** Field contains 'AIBONET'. A callout (3) points to this field.
 - Operation Mode:** Dropdown menu set to 'Infrastructure'.
 - Enable WEP Encryption:** Checked checkbox. Below it is a 'WEP key' field with 'ASCII' selected and a masked key. A callout (4) points to this section.
 - Enable SSDP:** Checked checkbox. A callout (5) points to this checkbox.
 - Physical Address:** Field contains 'Unknown'. A callout (6) points to this field.
 - IP Address Configuration:**
 - Obtain an IP address automatically:** Unselected radio button.
 - Use the following IP address:** Selected radio button. Below it are fields for 'IP Address' (192.168.0.100), 'Subnet Mask' (255.255.255.0), and 'Default Gateway' (192.168.0.1). A callout (7) points to this section.
 - DNS Configuration:**
 - Obtain DNS server address automatically:** Unselected radio button.
 - Use the following DNS server address:** Selected radio button. Below it is a 'DNS Servers' field with '192.168.0.1'.
- Buttons:** 'Write', 'Finish', and 'Help' buttons are at the bottom. A callout (7) points to the 'Write' button.

The name that you enter here will appear as the “AIBO Name” on the “AIBO Search” tab (page 14). This name can be up to 8 alphanumeric characters and must contain at least one letter.

* For information on your AIBO robot’s IP address, refer to page 11.

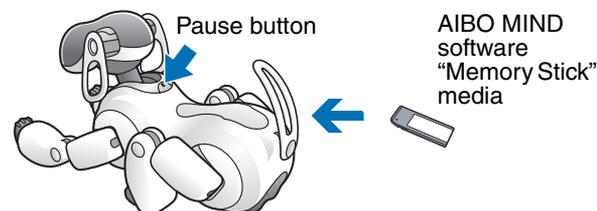


Hint

For additional settings, refer to “AIBO Entertainment Robot network settings” on page 58.

4 Remove the AIBO MIND software “Memory Stick™” media from the reader/writer. Insert it into the AIBO® Entertainment Robot, and press the pause button on the AIBO robot’s back to activate the AIBO robot.

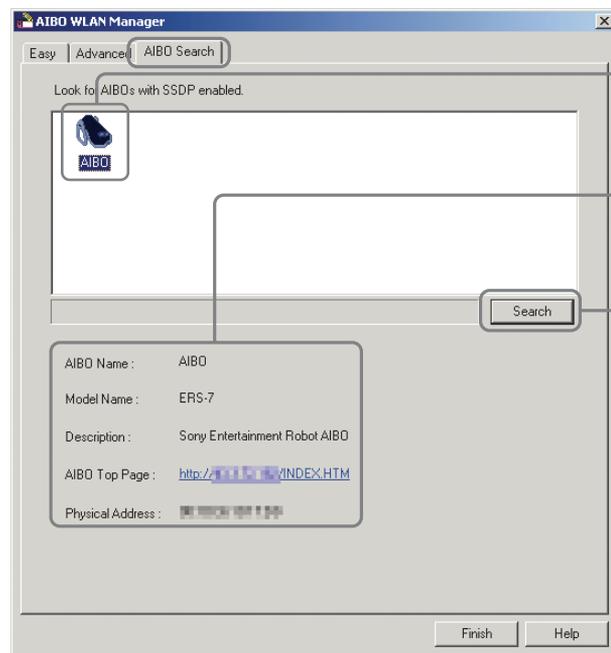
For instructions on inserting the “Memory Stick” media, refer to the “User’s Guide (Basic)” for the AIBO robot ERS-7.



5 Once your AIBO robot is activated, go to the “AIBO Search” tab in the “AIBO WLAN Manager” dialog box, and click Search.

An icon appears if the AIBO robot is on the same network as your PC.

An icon will appear only if the “Enable SSDP” check box is selected.



After clicking “Search”, the AIBO robots using the same network as the PC are shown.

When you click an AIBO icon in the list above, information for that AIBO robot is displayed.

Click this button.

💡 Hints

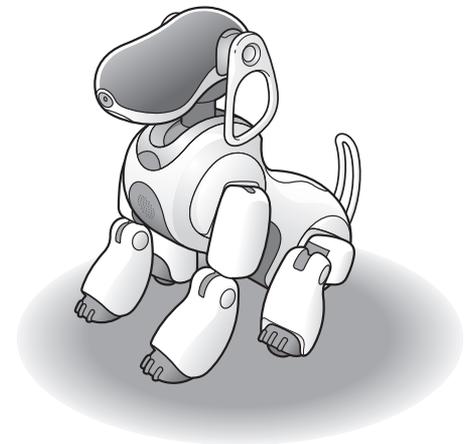
- If the AIBO icon does not appear even after clicking the “Search” button, then the PC cannot communicate with the AIBO robot wirelessly. Confirm the settings on the “Easy” and “Advanced” tabs. Also, check that the wireless switch (page 7) on the AIBO robot’s body is set to ON.
- Windows® XP operating system users must install Universal Plug and Play in order to use the AIBO search function. For the installation procedure, refer to page 9.

6 Click **Finish** to close the “**AIBO WLAN Manager**” dialog box.

You’ve completed this process! You can now communicate with your AIBO® Entertainment Robot wirelessly!

AIBO Photo Album

You can use your Web browser to view pictures taken by the AIBO[®] Entertainment Robot.



Viewing pictures with the AIBO Photo Album

You can use your Web browser to access the AIBO[®] Entertainment Robot, and view pictures that it took and stored on the “Memory Stick[™]” media, including the most recent picture.

Pictures taken by the AIBO robot are temporarily stored in the AIBO robot’s on-board memory (up to 20 pictures).

When the AIBO robot is deactivated by pressing the pause button, these pictures are saved on the “Memory Stick” media. In addition, pictures are automatically saved once a day, 10 minutes before the AIBO robot’s wake-up time. For instructions on setting the wake-up time, refer to the “User’s Guide (Basic)” for the AIBO robot ERS-7.

Here you will learn how to use your Web browser to view pictures with the AIBO Photo Album. For instructions on using a “Memory Stick” media reader/writer to view pictures stored on the AIBO MIND software “Memory Stick” media, refer to page 49.

Start your PC’s Web browser, and access the following address:

http://XXX.XXX.XXX.XXX

AIBO robot IP address

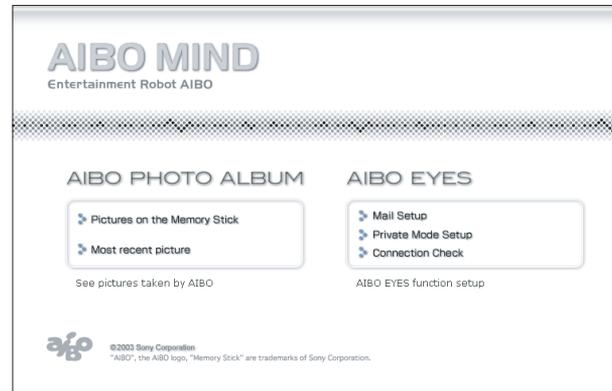
Alternatively, you can double-click the AIBO robot icon on the “AIBO Search” tab (page 14) of the “AIBO WLAN Manager”.



Hint

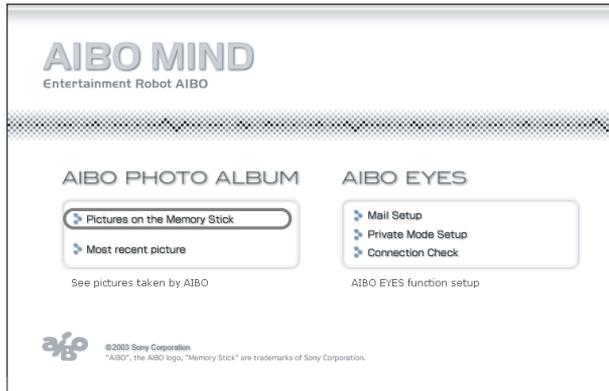
For information on your AIBO robot’s IP address, refer to page 11.

The AIBO MIND software top page is displayed.



Viewing pictures stored on the “Memory Stick™” media

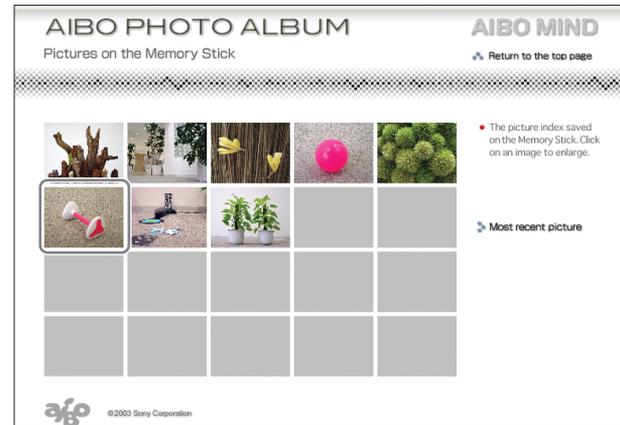
1 Click the “Pictures on the Memory Stick” under “AIBO PHOTO ALBUM”.



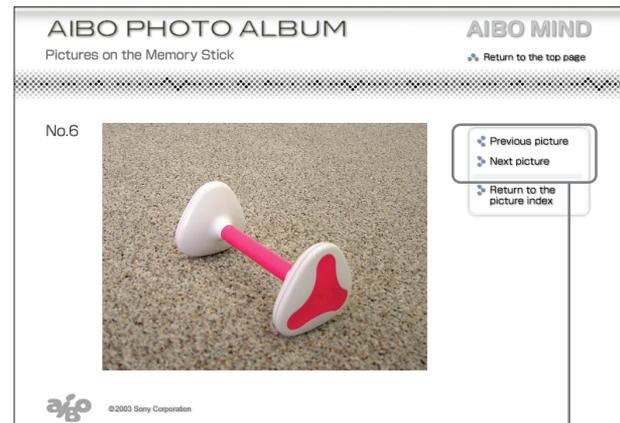
A list of pictures stored on the “Memory Stick” media is displayed. (Up to 20 pictures can be stored on the “Memory Stick” media.)

Picture size is 416 × 320 pixels.

2 Click the picture that you wish to see.



An enlarged view of the picture appears.



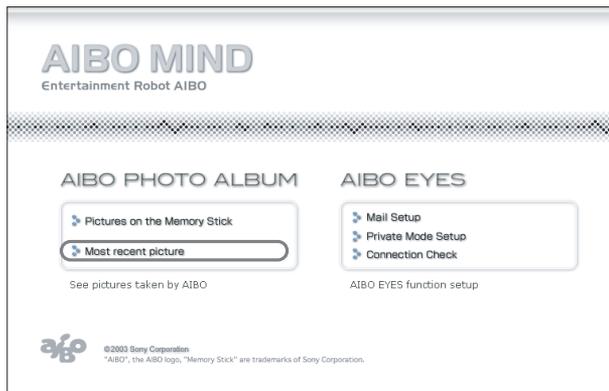
You can click these controls to view the pictures in order.

* The images shown above are displayed embedded in Web pages, so their resolutions differ from that of the actual pictures taken by the AIBO® Entertainment Robot.

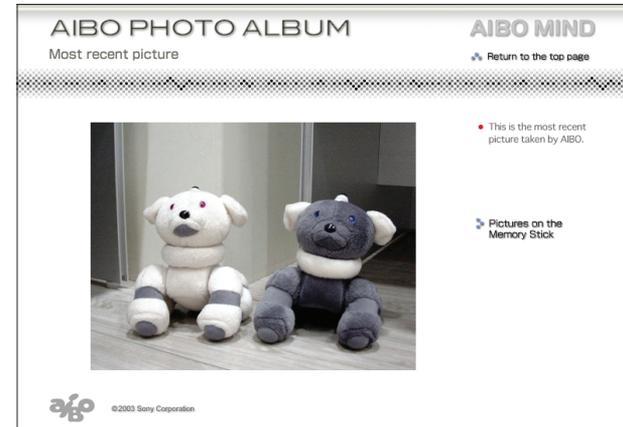
Viewing the most recent picture

You can view the most recent picture (only 1) taken by the AIBO® Entertainment Robot. This is useful when you wish to check the picture the AIBO robot just took.

Under “AIBO PHOTO ALBUM”, click on “Most recent picture”.

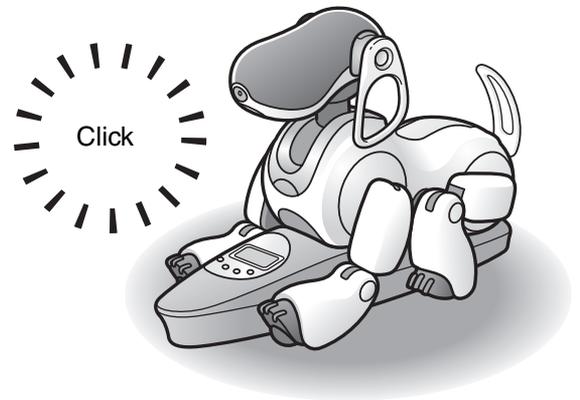


The most recent picture appears.



The AIBO EYES Feature

After setting up your e-mail, you can send the AIBO® Entertainment Robot e-mail (AIBO MAIL) to make it take pictures and enact and deliver messages.



Various AIBO EYES functions

The AIBO® Entertainment Robot will take pictures and enact and deliver messages based on e-mail commands you send.

Control the AIBO robot via the AIBO MAIL function (page 29)

You can include commands for pictures and messages in an e-mail, and send it to the e-mail address that the AIBO robot checks.

The AIBO robot checks for e-mail periodically. Upon receiving an e-mail, the AIBO robot will execute the commands contained in the message.

View pictures taken by the AIBO robot on your PC or mobile communication device* (page 30)

The AIBO robot can take pictures on command, or at set intervals.

You can also define the picture cues, and the angle of the AIBO robot's head.

the AIBO robot will e-mail the picture back to you*.



* A JPEG e-mail viewing capability is required.

Send the AIBO robot a message (page 36)

You can send messages and songs for the AIBO robot to play back to family or friends nearby.

You can also prerecord these messages.

The AIBO robot will alert you when it receives e-mail (page 39)

Upon receiving e-mail, the AIBO robot's wireless light will flash.

Regardless of whether the AIBO robot is on the Energy Station, the AIBO robot periodically checks for new e-mail, takes pictures and delivers messages according to the e-mail commands, and lets you know when a new message has arrived.

When the AIBO robot is not on the Energy Station, it will take pictures from a laying-down position at the place where it received the AIBO MAIL. Placing the AIBO robot on its Energy Station is helpful when taking pictures of a fixed point at regular intervals.

Communicate with your AIBO® Entertainment Robot without your PC

The AIBO robot is always connected to the Internet via wireless LAN (provided that your environment has a continuous Internet connection). This means that the AIBO robot can always send and receive e-mail, even if your PC is turned OFF.

Protection of privacy

With the AIBO EYES feature, multiple users can send photo command e-mail to the AIBO robot, and view the pictures taken by the AIBO robot. To protect your privacy, the AIBO robot has a Private Mode.

- User restrictions
The AIBO EYES feature is available to a maximum of five preregistered users.
- User name notification
In Private Mode: The AIBO robot uses a Voice Signature (page 38) to announce the name of the user that sent the photo or message commands.

Configuring e-mail

Once the network settings are completed, it is time to configure the e-mail address that the AIBO[®] Entertainment Robot will check, and then setup the AIBO EYES users. When using AIBO EYES in Private Mode (page 26), a maximum of five users can be registered to send/receive e-mail with the AIBO robot. This setup is performed via a Web browser.

1 If using the Windows[®] XP operating system, click “Start” → “All Programs” → “AIBO WLAN Manager” → “AIBO WLAN Manager”.

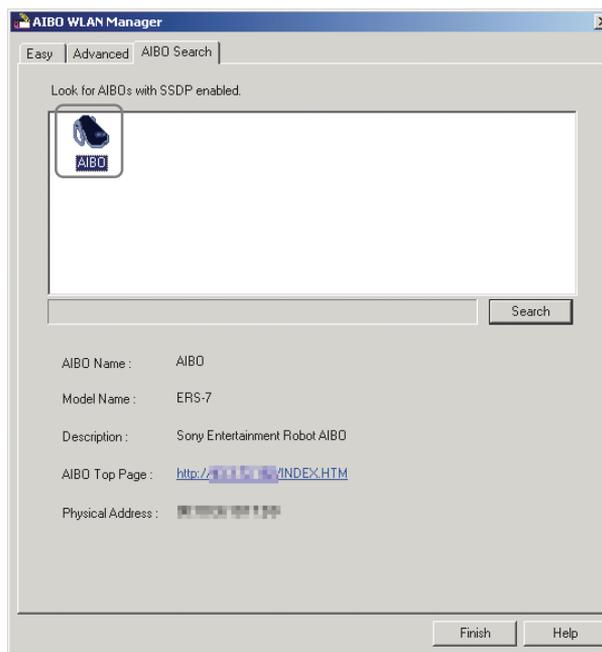
If using an operating system other than Windows XP, click “Start” → “Programs” → “AIBO WLAN Manager” → “AIBO WLAN Manager”.

The “AIBO WLAN Manager” starts, and an “AIBO WLAN Manager” dialog box appears.

2 On the “AIBO Search” tab, click “Search”.

An icon appears if the AIBO robot is in the same network as the PC.

3 Double-click the particular AIBO robot whose e-mail you wish to configure.



The AIBO MIND software top page appears.

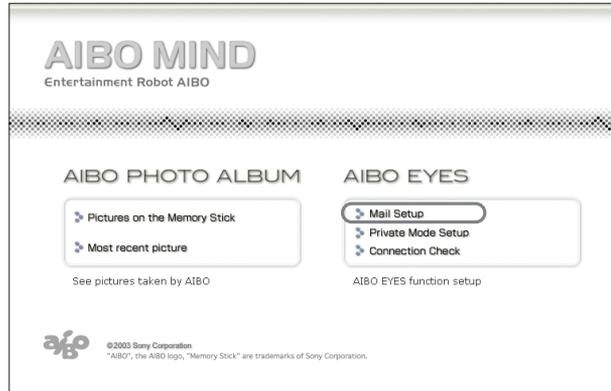


You can also display the AIBO MIND software top page by starting your Web browser, and access the following address:
`http://XXX.XXX.XXX.XXX`

AIBO robot IP address

For information on your AIBO robot’s IP address, refer to page 11.

4 Click “Mail Setup” under “AIBO EYES”.



The “Mail Setup” screen appears.

5 Fill each setup field, and click the “Save” button.

The screenshot shows the 'AIBO EYES Mail Setup' interface. It is divided into two main sections: 'AIBO EYES' and 'AIBO MIND'. The 'AIBO EYES' section contains the following fields:

- E-mail information:**
 - Receiving mail server (POP): pop.example.net
 - Sending mail server (SMTP): smtp.example.net
 - E-mail address: aibo@example.net
 - E-mail Account: aibo
 - E-mail password: [masked]
 - E-mail check interval: 5 min
- User Mode:**
 - Private Mode (selected)
 - Public Mode
- Picture by Voice Command:**
 - E-mail address: Message is not sent

The 'AIBO MIND' section contains a 'Save' button and a 'Return to the top page' link. A 'Private Mode Setup' and 'Connection Check' button are also visible.

Callouts from the right side of the page point to the following fields:

- Receiving mail server (POP): Specifies the server the AIBO® Entertainment Robot uses to send and receive e-mail. Refer to your e-mail software or check with your service provider for details. (This field is mandatory.)
- E-mail address: Enter the e-mail address that the AIBO robot will check. (This field is mandatory.)
- E-mail Account: This is the account used when logging on to the mail server. (This field is mandatory.)
- E-mail password: Password for the above e-mail address. (This field is mandatory.)
- E-mail check interval: You can set the desired interval for the AIBO robot to check e-mail. (Range: 1-60 minutes) (This field is mandatory.)
- User Mode: Choose either Private Mode (which restricts the AIBO EYES feature to preregistered users), or Public Mode. See the next page for details.
- Picture by Voice Command E-mail address: You can set the user who receives the picture when you say “Send e-mail”. The user number (User 1 - User 5) is set in “Private Mode Setup” (page 28). If you do not want to send the picture, select “Message is not sent”.
- Save button: Click this button when finished with the e-mail setup.

● Private Mode

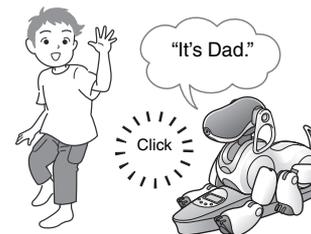
The AIBO EYES feature can be set to limit access only to registered users (maximum of five).

Those who wish to enjoy the AIBO EYES features of photo commands and picture viewing, but want to limit access to family and close friends, should select this mode.

In addition to user limits, the Private Mode includes a Voice Signature function; before taking a picture or playing a message, the AIBO[®] Entertainment Robot will identify the user who sent the command.

You can also record a unique Voice Signature for each user (page 38).

When the AIBO robot receives e-mail from an unregistered user, it will send an error notification e-mail to the address the AIBO robot checks to retrieve e-mail (page 50).



● Public Mode

The AIBO EYES feature does not restrict usage to the five registered users in this mode. This is convenient when using the AIBO robot in public spaces, as it enables multiple users have the AIBO robot take various pictures. In Public Mode, the Voice Signature function is not available.

Once you click the “Save” button, the AIBO® Entertainment Robot will check for new e-mail.

After a moment, the wireless light will turn ON to indicate the transmission status between the AIBO robot and the e-mail server.

If the e-mail check is completed successfully:

➔ The wireless light will turn blue.

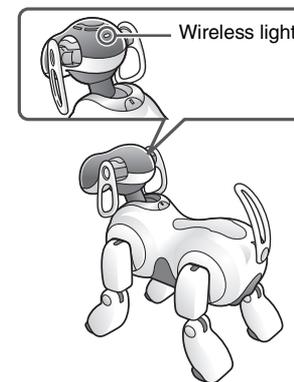
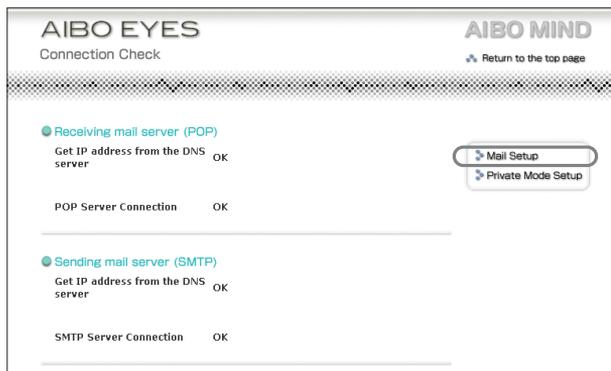
If there are new e-mail:

➔ The wireless light will flash blue.

If attempts to connect to the mail server failed, the wireless light will turn OFF.

If the wireless light turns OFF:

Click “Connection Check” in the “Mail Setup” screen, and check the current connection status.



6 If you are using AIBO EYES in Private Mode, click on the “Private Mode Setup”.

The “Private Mode Setup” screen appears.

7 Fill each Private Mode setup field, and click the “Save” button.

When using the Private Mode, you can register up to five users.

The e-mail address of the user.

In Private Mode, the AIBO® Entertainment Robot will vocally identify the person who sent the command before taking a picture or giving the message (Voice Signature function). The Voice Signature can be either the default voice or one recorded by the user. To use a voice recorded by the user, select from “User recording 1” through “User recording 5”. To perform the user recording, refer to page 38.

When making the AIBO robot take pictures periodically, you can set the desired interval. The AIBO robot will then e-mail the picture to the user. Leave the default settings (0 hours/0 minutes) if you don’t want the AIBO robot to perform this periodical picture-taking function. You can also command the AIBO robot to perform this task via the AIBO MAIL function WATCH command (page 33). The AIBO robot will automatically take the first picture after the desired interval, once you have saved these settings.

Set the head angles (page 31) that pictures are taken with. You can specify picture-taking at regular intervals through the AIBO MAIL function using the WATCH command (page 33).

Click this button when finished with the Private Mode setup.

This completes the setup procedure.

AIBO MAIL

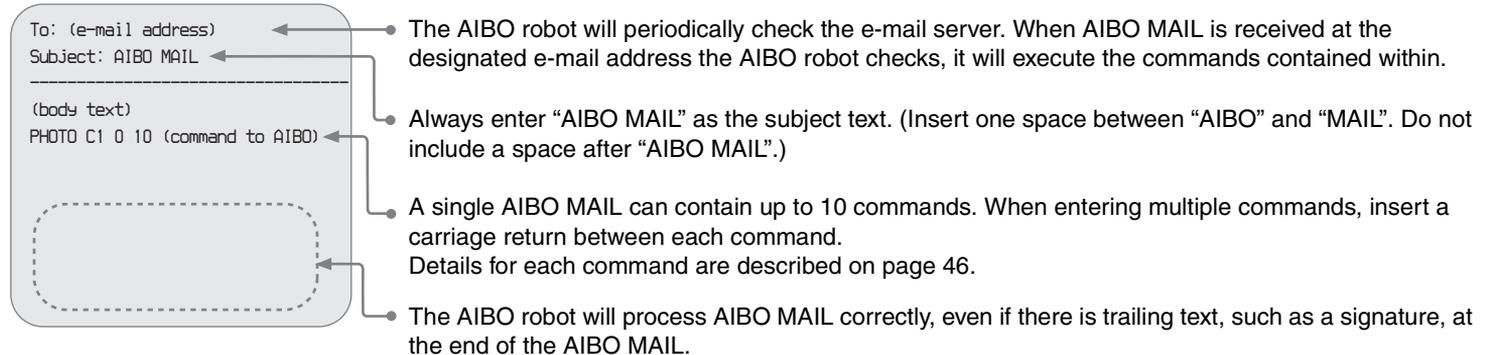
Let's try sending the AIBO[®] Entertainment Robot an e-mail with commands to take a picture or leave a message. The AIBO robot will take pictures, play back delivered messages, leave messages, and announce new e-mail according to your e-mail commands.

E-mail that contains commands for the AIBO robot to follow (e.g. take pictures or messages) is called an AIBO MAIL.

Writing AIBO MAIL

AIBO MAIL must be written according to specific rules:

- All characters must be alphanumeric. The AIBO MAIL is not case sensitive.
- Use plain text (no encoding, no HTML) when composing AIBO MAIL.
- A single AIBO MAIL must be less than 10 KB (10,000 characters in total, including the header).



Checking for e-mail

- With the AIBO EYES feature, the AIBO robot can check up to 199 messages on the e-mail server. Please manage your e-mail on the server, so that the number of messages does not exceed 199.
- The AIBO robot will not perform AIBO MAIL commands if that e-mail has already been opened and deleted from the server) via a PC or mobile communication device.*

* A JPEG e-mail viewing capability is required.

Viewing pictures taken by the AIBO[®] Entertainment Robot on your PC or mobile communication device*

You can send picture commands with the AIBO MAIL function from your PC or mobile communication device*. the AIBO robot will perform the command written in the e-mail, take the picture, and send it back to you.

Up to 20 pictures can be stored on the AIBO MIND software “Memory Stick™” media.

You can view pictures that the AIBO robot took using a Web browser (refer to page 17).

Voice Signature function

In Private Mode, the AIBO robot will play the Voice Signature of the user who is sending the command (e.g. “It’s Dad”), before taking the picture.

Refer to page 28 for Voice Signature setup. Page 38 contains instructions for recording custom Voice Signatures.

Caution

- The “Memory Stick” media can store up to 20 pictures, and will automatically continue to delete the oldest picture as you exceed 20 pictures.
- Sony is not responsible for any rights-infringement disputes and other issues that may arise between you and another person or entity, resulting from pictures taken with the AIBO robot. Do not take any pictures that may infringe on another person’s or entity’s rights.

* A JPEG e-mail viewing capability is required.

About the pictures that the AIBO robot sends

- The pictures are e-mailed as JPEG files, and simultaneously stored on the AIBO MIND software “Memory Stick™” media.
- Picture resolution is 208 × 160 pixels.
- Depending on lighting conditions at the time the picture is taken, flicker (horizontal stripes) or reddish or bluish bands may appear in pictures.
- Fast movements may result in distortion of the picture the AIBO robot takes.

The AIBO robot’s posture when taking pictures

The AIBO robot can take pictures in both Station mode and Autonomous mode.

Station mode



Since the AIBO robot can remain in a fixed position, it can periodically take pictures of a certain point at specified intervals.

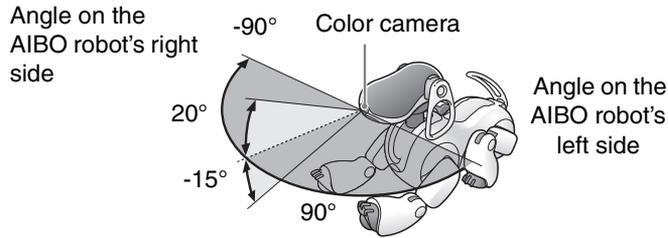
Autonomous mode



The AIBO robot will take pictures from a lying-down position from where it is when it receives the AIBO MAIL command.

The AIBO® Entertainment Robot's head angle (angle of the AIBO robot's color camera)

You can use commands in the AIBO MAIL to set the vertical and horizontal positioning of the AIBO robot's head (color camera) when having it take a picture.



You cannot change the AIBO robot's head angle when using a voice command to take a picture. The AIBO robot will look straight ahead and take the picture.

Taking pictures on command

You can tell the AIBO robot to take a picture using the AIBO MAIL command. Upon receiving this e-mail, the AIBO robot will take a single picture.

Note

The AIBO robot will check the e-mail server for e-mail at the desired interval that you initially set (page 25). When it acknowledges receipt of an AIBO MAIL with a photo command, it will take a picture.

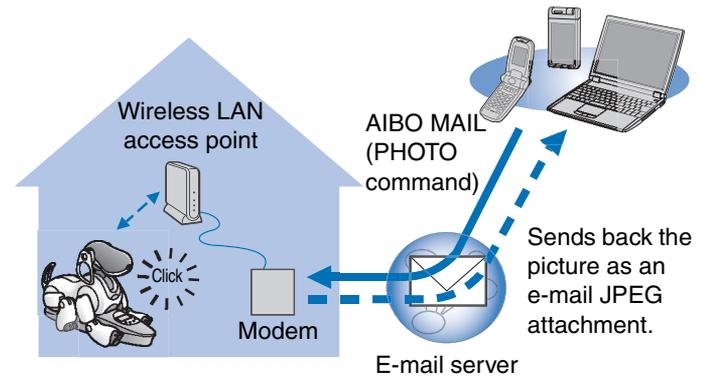
The command to use in your AIBO MAIL body text to have the AIBO robot take a picture and e-mail it back as a JPEG attachment is: **PHOTO**.

Note

For instructions on viewing the pictures taken by the AIBO robot with your Web browser, refer to page 17.

Receiving pictures as e-mail attachments with the [PHOTO command]

The AIBO robot will e-mail back the picture it took as a JPEG attachment.



Writing commands

PHOTO [cue [h_angle v_angle]]

You can choose picture cues (“Smile”, etc.). Refer to “Command parameter list” (page 46), and enter the command. (If you omit this, the default command C1: Countdown will automatically be selected.)

Camera angle selection is optional. You can select the horizontal and vertical angle of the color camera, and include it in the command [h_angle v_angle]. Otherwise, default settings will be used. The cue command is also optional, but it must be specified when using “h_angle” and “v_angle”.

Command body text example:

<Default setting, no camera angle>

“PHOTO” (same as “PHOTO C1 0 0”)

<Default setting, cue selected, no camera angle>

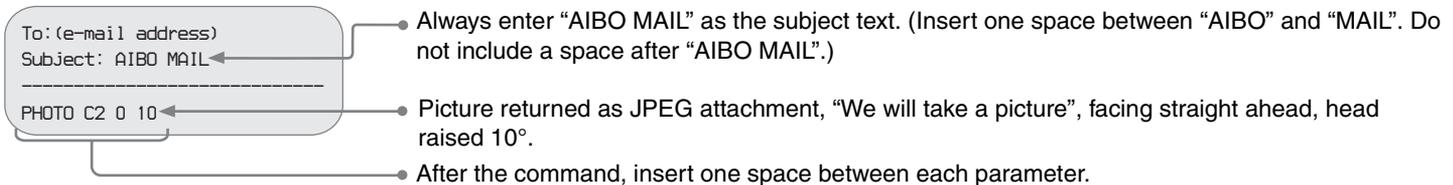
“PHOTO C4” (same as “PHOTO C4 0 0”)

Select the vertical angle of the color camera between -15° (down) and 20° (up). (The default is 0°.)

Select the horizontal angle of the color camera between -90° (the AIBO® Entertainment Robot’s right) and 90° (the AIBO robot’s left). (The default is 0°.)

AIBO MAIL example of a PHOTO command

All characters must be alphanumeric. AIBO MAIL is not case sensitive.



Directly commanding the AIBO® Entertainment Robot to take a picture – by voice command or by showing the appropriate AIBO card

You can have the AIBO robot take a picture by giving it a voice command or showing it the appropriate AIBO card.

For example, you can have the AIBO robot take a picture of your child and send it to your mother's PC or mobile communication device.*

* A JPEG e-mail viewing capability is required.

1 Say “Take a picture” to the AIBO robot. Or, show the AIBO robot the “Picture (B)” card.

Next, perform the procedure given by the voice guide.

To bypass the voice guide

Once you are accustomed to this procedure, you can bypass the voice guide by touching the AIBO robot's back sensor that corresponds to the desired function.



* The AIBO robot will look straight ahead and take one picture.

You cannot specify the AIBO robot's head angle when using a voice command to take a picture.

1 Say “Send e-mail” to the AIBO robot.

The AIBO robot will send the picture to the registered user specified in the “Picture by Voice Command” (page 25) field of the “Mail Setup” screen.

Regardless of the method used to specify the photo command (whether it is AIBO MAIL or voice command), the last picture taken by the AIBO robot will be sent to registered user specified in “Mail Setup”.

Taking periodic pictures at a set interval with the [WATCH command]

The AIBO robot can take periodic pictures at a specified interval, and e-mail them back as JPEG attachments. Set the interval in 10-minute increments, starting at a minimum of 10 minutes. (Minute units will be rounded up to the nearest 10th. For example, 15 minutes will be rounded up to 20 minutes.) The maximum you can set is 50 minutes.

Caution

If the AIBO robot is in the middle of checking the e-mail server or is in motion, there may be a slight delay in the timing of the scheduled picture taking.

Periodic picture commands can be given through either the user settings (configured with your Web browser; see page 28), or included in the AIBO MAIL command.

Writing commands

WATCH hour min [cue [h_angle v_angle]]

Camera angle selection is optional. You can select the horizontal and vertical angle of the color camera, and include it in the command [h_angle v_angle]. Otherwise, default settings will be used. The cue command is also optional, but it must be specified when using "h_angle" and "v_angle".
Command body text example:

<Default setting, no camera angle>

"WATCH 1 0" (same as "WATCH 1 0 C1 0 0")

<Default setting, cue selected, no camera angle>

"WATCH 2 30 C4" (same as "WATCH 2 30 C4 0 0")

Select the vertical angle of the color camera between -15° (down) and 20° (up). (The default is 0°.)

Select the horizontal angle of the color camera between -90° (the AIBO® Entertainment Robot's right) and 90° (the AIBO robot's left). (The default is 0°.)

You can choose picture cues ("Smile", etc.). Refer to "Command parameter list" (page 46), and enter the command. (If you omit this, the default command C1: Countdown will automatically be selected.)

Specify the picture interval in 10-minute increments (0-50). Minute units will be rounded up to the nearest 10th.

Specify the picture interval in 1-hour increments (0-23).

AIBO MAIL example of a WATCH command

All characters must be alphanumeric. AIBO MAIL is not case sensitive.

To: (e-mail address)

Subject: AIBO MAIL

WATCH 1 0 C3 0 0

Always enter "AIBO MAIL" as the subject text. (Insert one space between "AIBO" and "MAIL". Do not include a space after "AIBO MAIL".)

The AIBO Entertainment Robot will be set as follows:
Periodic picture mail, 1-hour intervals, "Strike a pose", facing straight ahead.

After each command, insert one space between each parameter.

Canceling the periodic pictures taking function

Send the AIBO[®] Entertainment Robot a WATCH command with the interval set to: [hour: 0] [min: 0].

(See page 33 for how to write a WATCH command.)

To: (e-mail address)

Subject: AIBO MAIL

WATCH 0 0

Always enter "AIBO MAIL" as the subject text. (Insert one space between "AIBO" and "MAIL". Do not include a space after "AIBO MAIL".)

Viewing pictures stored on the AIBO MIND software "Memory Stick™" media

Pictures taken by the AIBO robot are stored on the AIBO MIND software "Memory Stick™" media.

You can view these pictures using either of the following methods.

- View them with a Web browser (AIBO Photo Album)
➔ page 17
- Use a "Memory Stick" media reader/writer to view the pictures
➔ page 49

Sending the AIBO[®] Entertainment Robot a message or song

Using e-mail from your PC or mobile communication device*, you can send the AIBO robot messages or songs to play back or perform.

* A JPEG e-mail viewing capability required.

You can select from previously recorded messages or record your unique messages for the AIBO robot to play.

You can record up to five unique personal messages and save them as files. You can then command the AIBO robot to play these back by selecting the particular file and including it in your AIBO MAIL command body text.

For recording instructions, refer to page 38.

You can choose from two different AIBO MAIL commands to play messages or songs:

- Have the AIBO robot play back the message or song upon the recipient's request at a later time.
 - ➔ MSG
- Have the AIBO robot play back the message immediately.
 - ➔ PLAY

Having the recipient play back the AIBO robot's message and/or song [MSG command].

This command can be used when the recipient is not near the AIBO robot.

Caution

You can send up to 100 messages and songs to the AIBO robot. When unplayed messages exceed 100, an error e-mail is sent to the AIBO MAIL (message command) sender (page 50).

● Message sender

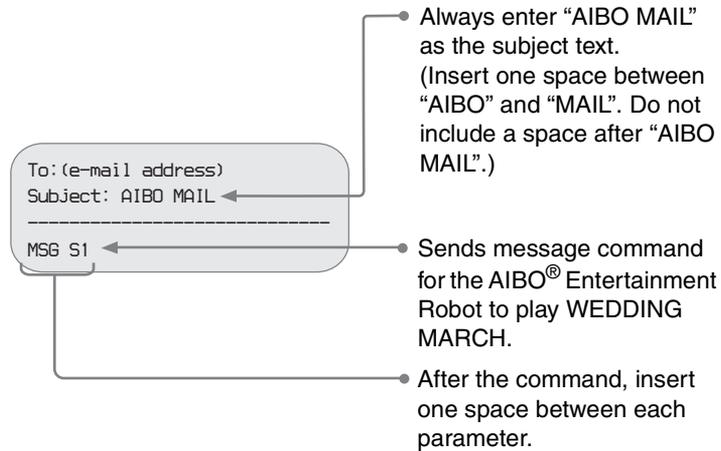
Specify a message or song to be sent by AIBO MAIL

Writing commands

MSG msg

Specify the message or song you wish the AIBO robot to play. Refer to "Command parameter list" (page 46) and enter the code for either the SONG or WORD (message) commands.

AIBO MAIL example of a MSG command



● When the AIBO robot has receives a message command

Say "*Check messages*" to the AIBO robot.

If there is a message, the AIBO robot will play it back.

Replaying a message	Touch the middle (orange) back sensor on the AIBO robot*.
Playing the next message (The last message will be erased.)	Touch the front (blue) back sensor on the AIBO robot*.
Canceling playback	Touch the rear (red) back sensor on the AIBO robot.

* If you don't touch the AIBO robot's back sensors within 10 seconds after previous message playback, message playback will be cancelled.

Having the AIBO® Entertainment Robot play back the message or song immediately [PLAY command]

This command can be used when the message recipient is near the AIBO robot.

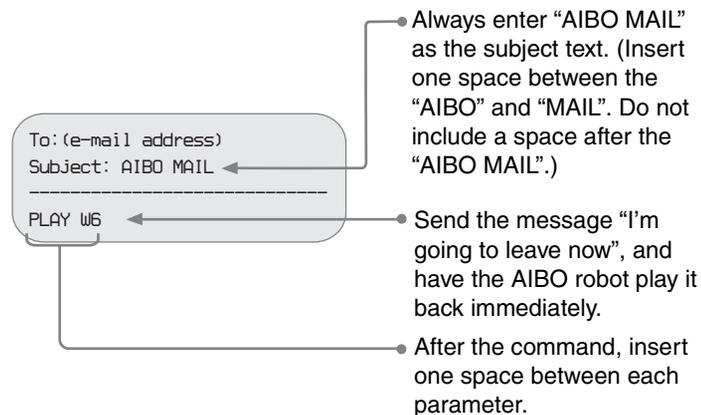
Specify a message or song and send it to the AIBO robot using the AIBO MAIL function.

Writing commands

PLAY msg

- Specify the message or song you wish the AIBO robot to play. Refer to “Command parameter list” (page 46) and enter the code for either the SONG or WORD (message).

AIBO MAIL example of a PLAY command



Immediately* after receiving the AIBO MAIL, the AIBO robot will play the message.

* Depending on the AIBO robot's condition, the message might not play, or its playback might be delayed.

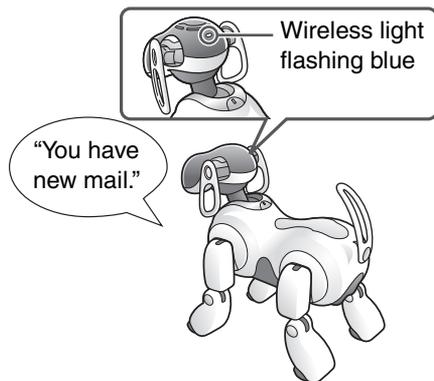
Recording unique messages/ recording Voice Signatures

You can prerecord both messages for the AIBO robot to deliver, and Voice Signatures (page 28) to identify people that leave messages or tell the AIBO robot to take pictures.

- 1** Say “*Recording mode*” to the AIBO robot.
- 2** Next, follow the AIBO robot’s voice guide to record the message.

The AIBO[®] Entertainment Robot will notify you of new e-mail

If a new e-mail arrives at the e-mail address that the AIBO robot checks, its wireless light will flash blue and notify you of this arrival. (Your PC does not need to be activated for this notification feature to work.) This notification is only for regular e-mail and not for AIBO MAIL arrivals.



The AIBO robot will periodically check for e-mail at the intervals you selected in the "E-mail check interval" in the "Mail Setup" screen (page 25) section for e-mail setup. When you tell the AIBO robot "**Check e-mail**", the AIBO robot will announce the results and let you know by saying:

- "You have new mail." (1-9 messages^{*})
- "Wow! You've got lots of mail." (More than 9 messages^{*})
- "You don't have any new mail."

^{*} AIBO MAIL is not included in this count.

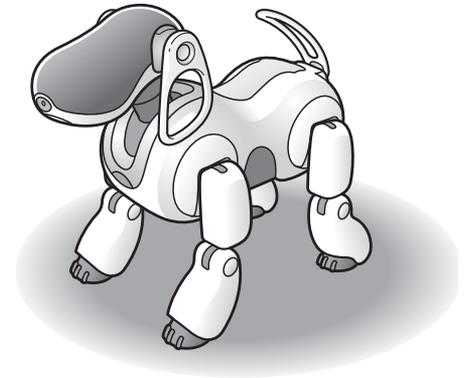
Note

You can confirm the AIBO robot's e-mail server connection by observing its wireless light:

- When the e-mail check is successfully completed, the wireless light will turn blue.
- When e-mail check is successfully completed and there is new e-mail, the wireless light will flash blue.
- When attempts to connect to the e-mail server fail, the wireless light will turn OFF.

Additional Information

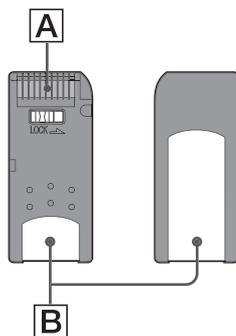
This section provides notes on usage and a troubleshooting guide.



Notes on use

To protect the data stored on the AIBO MIND software “Memory Stick™” media, note the following:

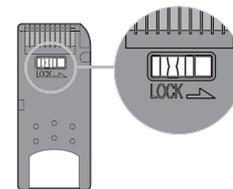
- The AIBO MIND software “Memory Stick” media is designed exclusively for use with the AIBO® Entertainment Robot ERS-7. It is not compatible with any other AIBO robot models.
- Do not use the AIBO MIND software “Memory Stick” media to save data from PCs or camcorders, or for any other purpose than using the AIBO Entertainment Robot ERS-7. Doing so may result in damage to the AIBO robot.
- We recommend that you use a Sony “Memory Stick” media reader/writer.
- Do not touch terminal **A** with your bare hands or metal objects.
- If the “Memory Stick” is used in a location subject to static electricity or electric noise, data may be lost or corrupted.
- Do not affix anything other than the “Memory Stick” media label on the areas indicated by **B**. A sticker has already been attached to the AIBO MIND software “Memory Stick” media at the factory.
- Do not bend, drop, or apply strong shock to the “Memory Stick” media.
- Do not attempt to disassemble or modify the “Memory Stick” media.
- To remove the “Memory Stick” media from the AIBO robot while it is still operating, first press the pause button to stop the AIBO robot’s movements and refer to the “User’s Guide (Basic)” for the AIBO Entertainment Robot ERS-7.
- Keep the “Memory Stick” media away from water and other liquids.



- Do not use or store the “Memory Stick” media in places subject to:
 - Excessively high temperatures, such as in a car parked in the sun.
 - Direct sunlight.
 - High humidity or corrosive gas.
- When carrying or storing the “Memory Stick” media, keep it in the supplied case.
- The contents of the AIBO MIND software “Memory Stick” media cannot be copied to another “Memory Stick” media. Doing so contravenes with the clauses of the End-User License Agreement and may void your authority to use this product.
- Sony® assumes no responsibility for any malfunctions that may occur as a result of using the AIBO Entertainment Robot ERS-7 in a way not specified in this manual and will void the product’s limited warranty or any extended warranty.
- The specifications of the AIBO MIND software are subject to change without notice.

Caution

- Do not set the safety switch of the “Memory Stick” media to “LOCK”. Doing so will make it impossible for the AIBO robot to store pictures.
- If the safety switch on the “Memory Stick” media is set to “LOCK”, the AIBO robot’s face lights will turn red to warn you while the AIBO robot is starting. Press the pause button once more to place the AIBO robot in Pause mode, and then unlock the safety switch on the “Memory Stick” media. When the AIBO robot starts normally, the face lights turn white.



Troubleshooting

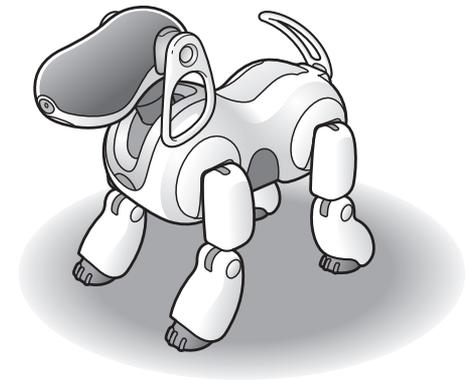
If you experience any difficulties, use this troubleshooting guide to check for the possible causes of the problem before contacting the AIBO Customer Link (customer service). You can also refer to the “Troubleshooting” section in the “User's Guide (Basic)” for the AIBO® Entertainment Robot ERS-7. Should the problem persist, contact the AIBO Customer Link (customer service). (See the last page of this guide for details about the AIBO Customer Link.)

Symptom	Remedy
I can't connect to the AIBO robot from my PC.	<ul style="list-style-type: none">• Network settings are incorrect. → Check your network settings (page 8).
The AIBO WLAN Manager cannot find the AIBO robot.	<ul style="list-style-type: none">• Under the Windows® XP operating system, Universal Plug and Play is not installed. → Install Universal Plug and Play (page 9).• If you have installed Universal Plug and Play under the Windows Me operating system, you will need to use Windows Update to update your Windows Me operating system to the latest version. → Click “Start” → “Windows Update”, and follow the on-screen instructions to update Windows Me.
Data transmission is slow.	<ul style="list-style-type: none">• The AIBO robot is conflicting with an access point or another wireless LAN device. → Try changing the wireless channel on the access point.• Many devices may be accessing the same access point at once. → Try waiting a while before attempting to access again.
Even though the AIBO robot is within 146 ft. (50 m) of the access point (or wireless LAN-ready PC), I still can't connect to it.	<ul style="list-style-type: none">• The signal range can vary according to the installation location and the surrounding environment. → Relocate the AIBO robot and the wireless LAN-ready PC closer to the access point.
The AIBO robot can't connect to the e-mail server, and the wireless light is not lit.	<ul style="list-style-type: none">• Make sure “E-mail Information” is properly set in the “Mail Setup” screen (page 25).• Make sure your network is configured correctly.

Symptom	Remedy
After telling AIBO® Entertainment Robot “Send e-mail”, the AIBO robot says “I’ve finished sending the e-mail”, but the e-mail fails to reach the recipient.	<ul style="list-style-type: none">• The recipient’s e-mail address setting may be incorrect.<ul style="list-style-type: none">→ Make sure the recipient's e-mail address is set correctly in the “Mail Setup” screen (page 25). In the “Picture by Voice Command” section, make sure the “Mail recipient” is not set to another user or to “Message is not sent”.
The AIBO robot isn’t notifying you of the arrival of new e-mail.	<ul style="list-style-type: none">• The e-mail check interval may be too long.<ul style="list-style-type: none">→ In the “Mail Setup” screen (page 25), try setting the “E-mail check interval” under “E-mail Information” to a shorter length.• The number of messages on the mail server may have exceeded 199.<ul style="list-style-type: none">→ With the AIBO EYES feature, up to 199 messages can be checked on the server by the AIBO robot. Please manage your e-mail on the server so that the number of e-mail does not exceed 199.→ If the AIBO MAIL is read from a PC (and left on the server) before AIBO has checked for that e-mail, then AIBO will not execute the commands contained in that e-mail.
The sound is interrupted while the AIBO robot is playing a message or song.	<ul style="list-style-type: none">• If the network is overloaded, the audio may be interrupted.

Appendix

- Words that the AIBO[®] Entertainment Robot can understand (AIBO EYES feature)
- Command parameter list (for AIBO MAIL commands)
- AIBO Entertainment Robot ERS-7 light
- Viewing pictures taken by the AIBO Entertainment Robot with a “Memory Stick™” media reader/writer
- Error e-mail examples
- Editing “WLANCONF.TXT” manually
- AIBO Entertainment Robot network settings
- Glossary



Words that the AIBO[®] Entertainment Robot can understand (AIBO EYES feature)

Below are some words (voice commands) that the AIBO robot can understand when using the AIBO EYES feature. For a complete list of words that AIBO can understand in Autonomous mode, and other various situations, refer to the “User’s Guide (Basic)” for the AIBO Entertainment Robot ERS-7.

In the following cases, the AIBO robot may not understand what you say.

- While the AIBO robot is emitting sounds or is in motion, it may not be able to hear you easily.
- The AIBO robot may not recognize several words depending on its mode or condition.
- The AIBO robot may not hear you if its surroundings are noisy. Try to speak to the AIBO robot in a quiet environment.
- When the pronunciation of a word is unclear. Try to pronounce each word clearly.

● Pictures

Take a picture.

Follow the AIBO robot’s voice guide to have it take a picture (page 33).

Send e-mail.

The AIBO robot sends the most recent picture to the specified user (page 33).

● Message playback

Check messages.

The AIBO robot plays a message or a song (page 37).

● Recording a message

Recording mode.

Follow the AIBO robot’s voice guide to record a Voice Signature or a unique message (page 38).

● Mail notification

Check e-mail.

The AIBO robot will notify you of new e-mail arrival.



Command parameter list (for AIBO MAIL commands)

The following is a list of codes that can be used as command parameters for the AIBO MAIL function.

- All codes must be entered in plain text. Codes are not case sensitive.
- Include “Code” values from these tables in your AIBO MAIL. For SONGS and WORDS, you can choose from either “Code 1” or “Code 2” values and the results will be the same.

PHOTO, WATCH command parameters

Cue (when taking pictures)

Code	
C1	Countdown (default setting)
C2	We will now take a picture
C3	Strike a pose
C4	Smile
C5	Show me some teeth!
C6	Show me your pearly whites!

MSG, PLAY command parameters

SONG

Code 1	Code 2	Title
S1	S.WEDDING	WEDDING MARCH
S2	S.BACH	AIR ON A G-STRING
S3	S.GRACE	AMAZING GRACE
S4	S.OLDCLOCK	GRANDFATHER'S CLOCK
S5	S.CUSTOM1	default *1
S6	S.CUSTOM2	default *1
S7	S.CUSTOM3	default *1
S8	S.CUSTOM4	default *1
S9	S.CUSTOM5	default *1
S10	S.CUSTOM6	default *1

*1 The contents of values S5-S10 can be provided via AIBO Custom Manager (supplied separately). AIBO Customer Manager is software that runs on a computer. For the latest information about AIBO Customer Manager and available contents, visit our Web site at <http://www.aibo.com>. The AIBO® Entertainment Robot is shipped with S5-S10 set to “Wedding March”.

WORD (voice message)

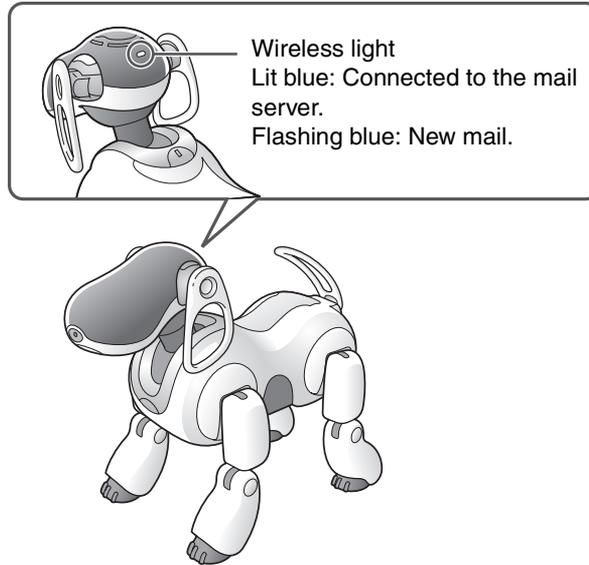
Code 1	Code 2	Message
W1	W.USER1	Recording 1 *2
W2	W.USER2	Recording 2 *2
W3	W.USER3	Recording 3 *2
W4	W.USER4	Recording 4 *2
W5	W.USER5	Recording 5 *2
W6	W.LEAVING	I'm going to leave now
W7	W.NOTYET	I can't leave yet
W8	W.LATE	I'll be late

Code 1	Code 2	Message
W9	W.CALLME	Call me
W10	W.THANKS	Thank you
W11	W.SORRY	I'm sorry
W12	W.CONGRATS	Congratulations!
W13	W.HANGIN	Hang in there
W14	W.ITSTIME	It's time now, get a move on
W15	W.LAUGH	Ha, ha, ha
W16	W.CUSTOM1	It's AIBO! *3
W17	W.CUSTOM2	It's AIBO! *3
W18	W.CUSTOM3	It's AIBO! *3
W19	W.CUSTOM4	It's AIBO! *3
W20	W.CUSTOM5	It's AIBO! *3
W21	W.CUSTOM6	It's AIBO! *3
W22	W.CUSTOM7	It's AIBO! *3
W23	W.CUSTOM8	It's AIBO! *3
W24	W.CUSTOM9	It's AIBO! *3
W25	W.CUSTOM10	It's AIBO! *3
W26	W.CUSTOM11	It's AIBO! *3
W27	W.CUSTOM12	It's AIBO! *3

*2 W1-W5 are recording files. For recording instructions, refer to page 38.

*3 The contents of values W16-W27 can be provided via AIBO Custom Manager (supplied separately). AIBO Customer Manager is software that runs on a computer. For the latest information about AIBO Customer Manager and available contents, visit our Web site at <http://www.aibo.com>. The AIBO robot is shipped with W16-W27 set to “It's AIBO!”.

AIBO[®] Entertainment Robot ERS-7 light



Viewing pictures taken by the AIBO[®] Entertainment Robot with a “Memory Stick[™]” media reader/writer

1 Remove the “Memory Stick” media from the AIBO robot.

For instructions on removing the “Memory Stick” media, refer to the “User’s Guide (Basic)” for the AIBO robot ERS-7.

2 Insert the “Memory Stick” media into the “Memory Stick” media reader/writer.

For details, consult the user manual included with your “Memory Stick” media reader/writer.

3 Copy the picture files from the “Memory Stick” media to your PC.

Copy the JPEG files from the “\OPEN-R\APP\PC\PHOTO” directory to your PC.

Pictures taken by the AIBO robot are saved on the “Memory Stick” media as files with file names of the form: “IMGxxxxx.JPG” (where xxxxx is a value ranging from 00001 to 00020).

If you exceed the 20 picture limit of the “Memory Stick” media, the oldest picture will be overwritten by each additional new picture.

Refer to each device’s documentation for details on copying files.

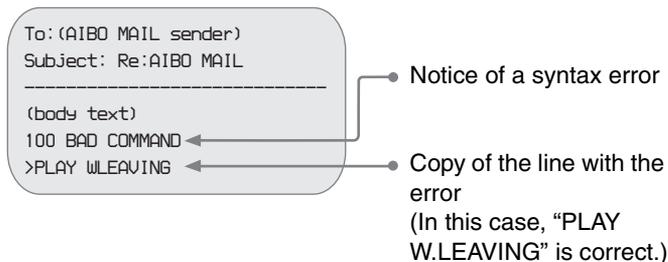
4 Remove the “Memory Stick” media from your PC.

For details on removing the “Memory Stick” media, refer to the user documentation included with your PC devices.

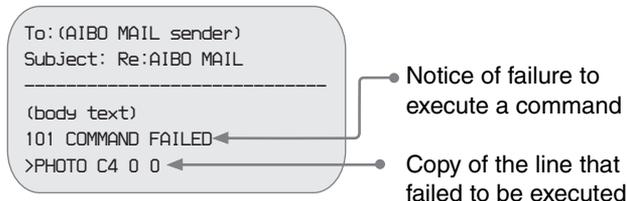
Error e-mail examples

If the following problems occur while using the AIBO EYES feature, the AIBO® Entertainment Robot will send an error notification e-mail to the AIBO MAIL sender or the owner of the e-mail address.

When there is a syntax error in the AIBO MAIL command

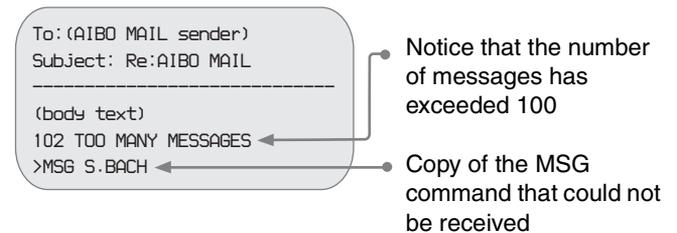


When the AIBO robot cannot execute a command because it is being picked up or stuck

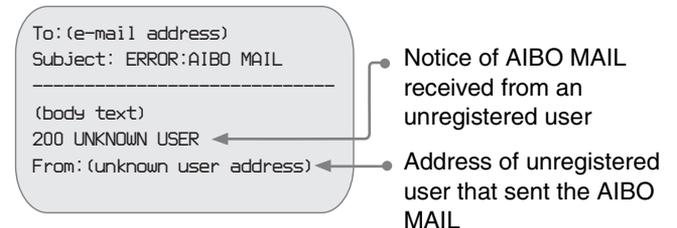


When the number of (unplayed) messages left with the AIBO robot exceeds 100

You can send up to 100 messages and songs to the AIBO robot. Wait for the AIBO robot to play the messages it is holding, and then resend the AIBO MAIL (MSG command).



When the AIBO robot receives AIBO MAIL from someone other than a registered user (Private Mode only)



When the head angle cannot be maintained

When the head angle cannot be maintained and the AIBO[®] Entertainment Robot's head falls forward, an error notification is sent, and the AIBO robot is deactivated. Make sure the Energy Station is placed on a level surface, and that there is nothing wrong with the AIBO robot's neck joint section.

To: (e-mail address)
Subject: ERROR:AIBO MAIL

(body text)

300 AIBO SHUTDOWN. HEAD UNSTABLE

← Notice that head angle cannot be maintained

When the POP server does not support the UIDL command

AIBO EYES feature cannot be used with a POP server that does not support the UIDL command. If you receive the error notification e-mail below, check with your Internet service provider to see whether your POP server supports the UIDL command.

To: (e-mail address)
Subject: ERROR:AIBO MAIL

(body text)

201 UIDL IS NOT SUPPORTED

← Notice that UIDL is not supported

Editing “WLANCONF.TXT” manually

Users of Windows® 98, Mac OS®, and other operating systems that do not support the “AIBO WLAN Manager” can use the following procedure to manually edit the contents of “WLANCONF.TXT” to configure the network. Users of the Windows 98 SE, Windows Me, Windows 2000, and Windows XP (Home Edition or Professional) operating systems can use the “AIBO WLAN Manager” (page 10).

1 Insert the AIBO MIND software “Memory Stick™” media into the “Memory Stick” media reader/writer.

2 Copy the wireless LAN configuration file “WLANCONF.TXT” from the sample folder into its parent folder.

Copy \OPEN-R\SYSTEM\CONF\SAMPLE\
WLANCONF.TXT into \OPEN-R\SYSTEM\CONF.

3 Edit the copy of “WLANCONF.TXT” with a text editor.

The contents to edit will depend on whether your network setup uses a DHCP server* or not.

The DHCP server allows an IP address to be automatically allocated to a device on the network.

* For details on DHCP server functionality, refer to the instruction manuals included with your modem or access point.

Use the following procedure to confirm whether or not you are using a DHCP server in your network environment

(This procedure is for the Windows[®] 98 SE operating system only. If using another operating system, consult its Help.)

- ① Click “Start” → “Settings” → “Control Panel”.
- ② Double-click “Network”.
- ③ Click “TCP/IP” → “Network Card Name”, and click the “Properties” button.
If “TCP/IP” → “Network Card Name” is not shown, click the “Add” button. In the “Select Network Component Type” window that appears, click “Protocol”, and click the “Add” button. Add the TCP/IP protocol.
- ④ Click the “IP Address” tab, and check the settings.

If “Obtain an IP address automatically” is selected

You are using a DHCP server.

Proceed to page 54.

If “Specify and IP address” is selected

You are not using a DHCP server.

Proceed to page 55.

- In this case, use the following steps to manually assign an IP address to the AIBO[®] Entertainment Robot. Make a note of your PC’s IP address displayed under “Use the following IP address”. Choose an IP address for the AIBO robot that does not conflict with this.

E.g. Your PC’s IP address: 192.168.0.10

→ The AIBO robot’s IP address: 192.168.0.11, etc. (anything other than 192.168.0.10)

When using a DHCP server in your network environment

```
#
# WLAN
#
HOSTNAME=AIBO
ESSID=AIBONET ← Specify the SSID used by the wireless LAN access point. (Maximum of 32
WEPENABLE=1      characters. Only alphanumeric characters and symbols are allowed.)
WEPKEY=AIBO2 ← Specify the passkey used by the wireless LAN access point (page 56).
APMODE=1

#
# IP network
#
USE_DHCP=1
#
# If DHCP is not used (USE_DHCP=0), you need to specify the
# network configuration using IP addresses.
#
#USE_DHCP=0
#ETHER_IP=192.168.0.100
#ETHER_NETMASK=255.255.255.0
#IP_GATEWAY=192.168.0.1
#DNS_SERVER_1=192.168.0.1

#
# SSDP
#
SSDP_ENABLE=1
```

Lines that begin with # are interpreted as comments and are not executed.

For details about each parameter, refer to “WLANCONF.TXT parameter list” (page 56).

When not using a DHCP server in your network environment

```
#
# WLAN
#
HOSTNAME=AIBO
ESSID=AIBONET
WEPENABLE=1
WEPKEY=AIBO2
APMODE=1

#
# IP network
#
#USE_DHCP=1
#
# If DHCP is not used (USE_DHCP=0), you need to specify the
# network configuration using IP addresses.
#
USE_DHCP=0
ETHER_IP=192.168.0.100
ETHER_NETMASK=255.255.255.0
IP_GATEWAY=192.168.0.1
DNS_SERVER_1=192.168.0.1

#
# SSDP
#
SSDP_ENABLE=1
```

Specify the SSID used by the wireless LAN access point. (Maximum of 32 characters. Only alphanumeric characters and symbols are allowed.)

Specify the passkey used by the wireless LAN access point (page 56).

Insert # at the beginning of this line.

Delete # from the beginning of this line.
Set the AIBO[®] Entertainment Robot's IP address*.

Set the AIBO robot's subnet mask address.

Enter the IP address of the device that is acting as a router.

Lines that begin with # are interpreted as comments and are not executed.

* For information on the AIBO robot's IP address, refer to page 11.

For details about each parameter, refer to "WLANCONF.TXT parameter list" (page 56).

WLANCONF.TXT parameter list

This list explains each parameter in the wireless LAN configuration file.

HOSTNAME	Defines the name the AIBO [®] Entertainment Robot uses on the wireless network. This name can be up to 8 alphanumeric characters and must contain at least one letter.
ESSID	The name of the wireless network. Up to 32 alphanumeric characters and symbols are allowed.
WEPENABLE	Sets whether to use WEP (wireless encryption system). Set this value to 0 if disabled, and 1 if enabled.
WEPKEY	Sets the WEP key (wireless passkey). Alphanumeric passkeys must be 5 or 13 characters. Hexadecimal passkeys must be 10 or 26 characters (0-9, A-F, a-f). (Supports WEP64 (40 bit) and WEP128 (104 bit) If using WEP64, use 5 alphanumeric characters, or “0x” followed by 10 hexadecimal characters. If using WEP128, use 13 alphanumeric characters, or “0x” followed by 26 hexadecimal characters. Example: For WEP64 (40 bit) String: WEPKEY=AIBO2 Hexadecimal: WEPKEY=0x4149424f32
APMODE	Sets the wireless LAN mode for the AIBO robot. For AIBO EYES feature, set this value to 1 (connect in Infrastructure mode).
ETHER_IP	Set the AIBO robot’s IP address. This parameter must be specified when the USE_DHCP value is set to 0.
ETHER_NETMASK	Sets the IP subnet mask. This parameter must be specified when the USE_DHCP value is set to 0.
IP_GATEWAY	Sets the gateway IP address. If a gateway is not present on the network, set this value to be the same as the ETHER_IP address. This parameter must be specified when the USE_DHCP value is set to 0.
DNS_SERVER_1	Sets the DNS server IP address. This parameter must be specified when the USE_DHCP value is set to 0.
USE_DHCP	Defines whether to use DHCP (Dynamic Host Configuration Protocol) to automatically assign the AIBO robot an IP address. Set this value to 0 if disabled, and 1 if enabled.

SSDP_ENABLE

Defines whether to use SSDP (Simple Service Discovery Protocol). In the “AIBO WLAN Manager”, when you click the “Search” button on the “AIBO Search” tab, the AIBO® Entertainment Robot will show up as an icon. (If using the Windows® XP operating system, Universal Plug and Play must be enabled.)

You can access the AIBO MIND top page simply by double-clicking the AIBO icon.

To use SSDP, launch the “AIBO WLAN Manager”, and configure the network in the “Basic” tab, or select the “Enable SSDP” check box in the “Details” tab. If manually editing the WLANCONF.TXT file, set the value to 0 if not using SSDP, and set it to 1 if using SSDP.

AIBO[®] Entertainment Robot network settings

This list describes the configuration values for the AIBO robot's internal wireless LAN function. Once the AIBO robot has communicated with the network devices, you can change these settings to suit your environment. For information on each parameter, refer to "Glossary" (page 59).

Parameter	Description
Hostname	The name for the AIBO robot used over the wireless relay. Up to 8 alphanumeric characters are allowed.
IP Address	IP address
Subnet Mask	Subnet mask value
IP Gateway	Gateway address
SSID	Name of the wireless network. Up to 32 alphanumeric characters and symbols are allowed.
WEP key	Keys used to encrypt wireless data must be 5 or 13 alphanumeric characters. Hexadecimal passkeys must be 10 or 26 characters (0-9, A-F, a-f). Ignore this setting if not using encryption.
Operation mode	Infrastructure mode

Glossary

Access point

A network device that contains both a wireless communication interface and an Ethernet interface, an access point acts as a bridge between wireless LAN and wired LAN.

To use an access point for wireless communication, you must specify an identifier called an SSID, a wireless communication channel, and a WEP key.

DHCP (Dynamic Host Configuration Protocol)

When building a TCP/IP network, IP addresses must be specified.

If a DHCP server is present on the network, then it can be used to automatically allocate IP addresses. DHCP server functionality is typically provided by a router.

IEEE 802.11b

The standard for wireless LAN that uses the 2.4 GHz frequency band. Transmission speeds of up to 11 Mbps have been achieved.

The AIBO[®] Entertainment Robot ERS-7 is based on IEEE 802.11b.

Infrastructure mode

Also called Access Point mode.

Communication mode used between an access point and a device with a wireless LAN card.

The wireless channel follows the channel defined by the access point. On the AIBO robot side, it is necessary to configure the SSID and WEP key to match the access point's settings.

IP address

In a TCP/IP network, numbers used to distinguish devices are called IP addresses. An IP address consists of 4 numbers from 0-255.

Example: 192.168.1.1
10.0.1.1

LAN (Local Area Network)

LAN usually refers to a relatively small-scale network, made up of Ethernet lines with transfer speeds of 10 Mbps - 100 Mbps. You can use an access point to connect a wireless LAN to a wired LAN.

Router

By connecting an external network (Internet) to a private network at home, a router allows one external network line to be shared by multiple network devices.

Router functionality can be found inside DSL modems, wireless LAN access points, and other network devices.

SSDP (Simple Service Discovery Protocol)

In a Universal Plug and Play environment, this is the protocol used to discover network devices.

If you enable SSDP on the AIBO[®] Entertainment Robot ERS-7, then you will be able to search the network for the AIBO robot ERS-7 using the “AIBO WLAN Manager”.

SSID

Also referred to as “Access Point ID”, “Group Name”, and “ESSID”.

When a wireless LAN-ready device performs wireless communication in Infrastructure mode, it uses a string called an SSID as its wireless network identifier.

The SSID on the AIBO robot should be set to the same SSID as on the access point.

The SSID can be a maximum of 32 characters. Only alphanumeric and punctuation characters are allowed.

Subnet mask

While an IP address is composed of 4 numbers ranging from 0-255 (see “IP Address”), in order to manage them more efficiently, IP addresses are split into network portions and host portions. This setting is called the subnet mask.

A subnet mask defines the network portion as those bits that are set to ‘1’.

Example: When a subnet mask of 255.255.255.0 is set for a device with an IP address of 192.168.1.1,

$\underbrace{192.168.1}_{\text{Network portion}}$	$\underbrace{.1}_{\text{Host portion}}$
---	---

TCP/IP (Transmission Control Protocol/Internet Protocol)

One type of communication method (protocol) used by network devices (such as PCs) to communicate.

TCP/IP is the most widely used protocol on the Internet.

This wireless LAN card communicates over TCP/IP.

When communicating over TCP/IP, a number called an “IP Address” is needed to distinguish among devices.

WEP (Wired Equivalent Privacy)

When using wireless communication, WEP is used to encrypt data to prevent it from being analyzed by another party. To enable WEP, you must configure a wireless passkey called a WEP key.

The AIBO[®] Entertainment Robot ERS-7 supports both the WEP64 (40 bit) and the WEP128 (104 bit) encryption systems.

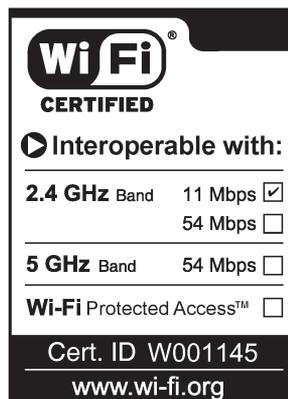
If using WEP64, use 5 alphanumeric characters, or “0x” followed by 10 hexadecimal characters.

If using WEP128, use 13 alphanumeric characters, or “0x” followed by 26 hexadecimal characters.

Wi-Fi (Wireless Fidelity)

Wi-Fi Alliance, the wireless LAN industry organization, prescribed this standard specification to ensure connectivity. Products that comply with this specification are allowed to use the “Wi-Fi (certified)” logo.

The wireless LAN module installed in the AIBO robot ERS-7 is certified by Wi-Fi, and supports connections with other Wi-Fi certified 2.4 GHz wireless LAN products (IEEE 802.11b compliant).



Wireless channel

Under IEEE 802.11b, the 2.4 GHz band is divided into 14 channels. Assigning different channels to different networks in proximity to one another avoids channel interference. The AIBO robot ERS-7 can use wireless channels 1-11. To configure the wireless channel under Infrastructure mode, set the channel value on the access point. The new setting will be automatically reflected in all of the network devices.

Customer Support

How can you contact the AIBO Customer Link (customer service)?

In the U.S.A.:

Call 1-800-427-2988

E-mail address: aibosupport@info.sel.sony.com

In Europe:

English line: +44(0)-20-7365-2937

German line: +49(0)-69-9508-6309

French line: +33(0)-1-5569-5117

