

ST2001[®]

Internet Information Appliance
featuring Liberate Technologies

TV Navigator[®]  *Liberate[™]*



OWNER'S MANUAL

PRELIMINARY RELEASE—June 14, 1999





Avoid electric shock and fire hazard, keep this equipment away from moisture.

READ THESE SAFETY INSTRUCTIONS BEFORE INSTALLING AND OPERATING THIS EQUIPMENT

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER-SERVICEABLE PARTS INSIDE. OBTAIN SERVICE FROM QUALIFIED SERVICE PERSONNEL.

Do not stack electronic components or any other objects on top of the unit. The slots on top of the unit must be left uncovered to permit necessary airflow to the unit. Obstructing the airflow could impair performance or damage other components.

Do NOT stack the unit on top of any other electrical component which radiates heat (e.g., audio amplifier).

For proper operating voltage, check the identification/rating label on the underside of the unit.

NOTE: FCC regulations state that unauthorized changes to this product could void your authority to operate it.

WARNING: Any changes to this unit, not approved by Boca Research, Inc. may void your warranty.



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1

Introduction to Your ST2001

Welcome to ST2001 and the next generation of television viewing! ST2001 unites the World Wide Web with the latest in interactive television technology, powered by Liberate Technologies' TV Navigator.

The information in this guide will help you setup and start using your ST2001. Further help is available on-screen, after you set up the unit.

To become familiar with your ST2001 unit and User Guide, we recommend that you read through this preface. The preface contains the following information:

- ST2001 Features
- What's in Your Package
- If You're New to the Internet

Thank you for selecting ST2001 and welcome to the world of Enhanced™ TV!

Boca Research is a leading manufacturer of data communications, videoconferencing, multimedia, and networking products to facilitate the transmission of information on PCs, networks, and/or the Internet. Boca provides hardware products augmented with software for use in the corporate, consumer, and small office/home office marketplaces, and sells these products worldwide. Products are designed and manufactured in the U.S.A. with domestic and foreign parts, backed by a limited warranty, and various technical support options.

Boca Research's WEB address: <http://www.bocaresearch.com>

1. ST2001 Features

Your ST2001 allows you to watch television and browse the World Wide Web, separately or at the same time, all from your television screen.

- Using ST2001, you can do the following:
- Browse the World Wide Web and exchange e-mail (electronic mail) while you watch television.
- Receive notification of new e-mail or telephone messages.
- Use *Showsurf*, the electronic TV programming guide that displays a matrix of programs currently showing on 9 of your television channels.
- Use *ShowSync* to go directly to Web sites that have information about the program or advertisement you are watching.
- Create your own list of favorite Web sites and television channels.
- View a Channel Bar display of information about the current television channel including the channel number, show name and times, and the current time (optional).
- Print your e-mail messages or Web pages.
- Restrict access to Web sites that may contain material inappropriate for children or sensitive viewers.
- Capture a frame or video sequence from the television screen or from a video camera attached to the ST2001 unit, and send it with an e-mail message.
- Play audio and video from the Web.

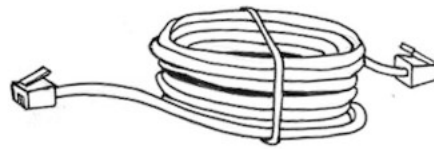
2. What's in Your Package

Make sure you have received all the items shown here. If you are missing anything, contact customer support. See the Customer Service Agreement that came with your ST2001 for more information.

- ST2001



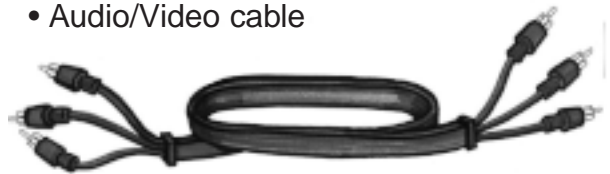
- Phone cable



- Wireless keyboard/AA batteries



- Audio/Video cable



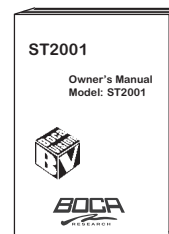
- Remote Control and AAA batteries



- S-video cable



- Owner's Manual



- AC power cord



Figure 1. Package Contents

3. If You're New to the Internet

This section provides brief explanations of some terms and concepts you'll see in this guide. Additional terms are explained in the *Glossary* on page 60. Detailed instructions on how to use your ST2001 are provided later in this guide and in on-screen help.

What is the Internet?

The Internet consists of thousands of devices all over the world that are connected to one another, mainly over telephone lines. These devices can exchange information. Whenever you are connected to the Internet (referred to as being "online") you can see material that's been put on a computer intended for public viewing. The Internet provides a vast source of information about almost any topic.

What's the difference between the Internet and the World Wide Web?

At first the Internet was only text. Today, graphics, sound, and animation can be displayed. The part of the Internet that can display this more dynamic information is called the "World Wide Web," or the "Web" for short. The Web is only a part of the Internet, however most people use the terms "Internet," "Net," "Web," and "World Wide Web" interchangeably.

How do you "get around" on the Web?

Material on the Web is displayed in "pages." You use a "browser" to view the Web pages. A browser is a software tool that provides an interface on your computer or TV screen for selecting and viewing Web pages. ST2001 provides a browser interface that you will use to view Web information on your TV. This is described in the chapter *Using Your ST2001* on page 28. The following are instructions to help you view content and navigate on the web:

- If you know the name of a "Web site" or "page," you can type it in a specific area of your Web browser. A Web address is formally called a "URL" which is an acronym for *Universal Resource Locator*.
- Most URLs are similar to the following address: <http://www.bocaresearch.com>. You will notice that most addresses or URLs begin with "www" which is an acronym for the *World Wide Web*.
- Most Web sites have "links"—words or pictures that take you to other related sites. You can tell something is a link because it is colored differently or has a box around it. You can follow these links by selecting them as your interests dictate. Going from place to place in this way is often called "browsing" or "surfing."
- You can search for a specific topic on the Internet. To do a search, press the **Search** key on the remote or keyboard. A text box will appear. After you type the topic you're interested in, you will see a list of sites containing information about your topic. You can select an item from the list to go to that site.

What is e-mail?

E-mail stands for electronic mail. E-mail allows you to send and receive messages electronically, using a computer rather than paper.

When you first turn on your ST2001 you will be led through the registration process. You will automatically receive an e-mail address similar to the following: *ksmith@nc.com*. Having your own e-mail address allows you to send and receive e-mail from anyone who has an e-mail account on the Internet.

2

Setting up Your ST2001

This chapter gives step by step instruction on how to connect your ST2001 to your television, telephone line, VCR, cable box, antenna or satellite dish. These instructions assume that your television system is already set up and you simply want to add the ST2001 to the system.

Note: This chapter explains the most common ways to set up your ST2001. Other setup configurations may be possible, although they are not described here.

This chapter contains the following sections:

1. Overview of the Front Panel
2. Overview of the Back Panel
3. Setting Up ST2001
4. Connecting Optional Equipment

1. Overview of the Front Panel

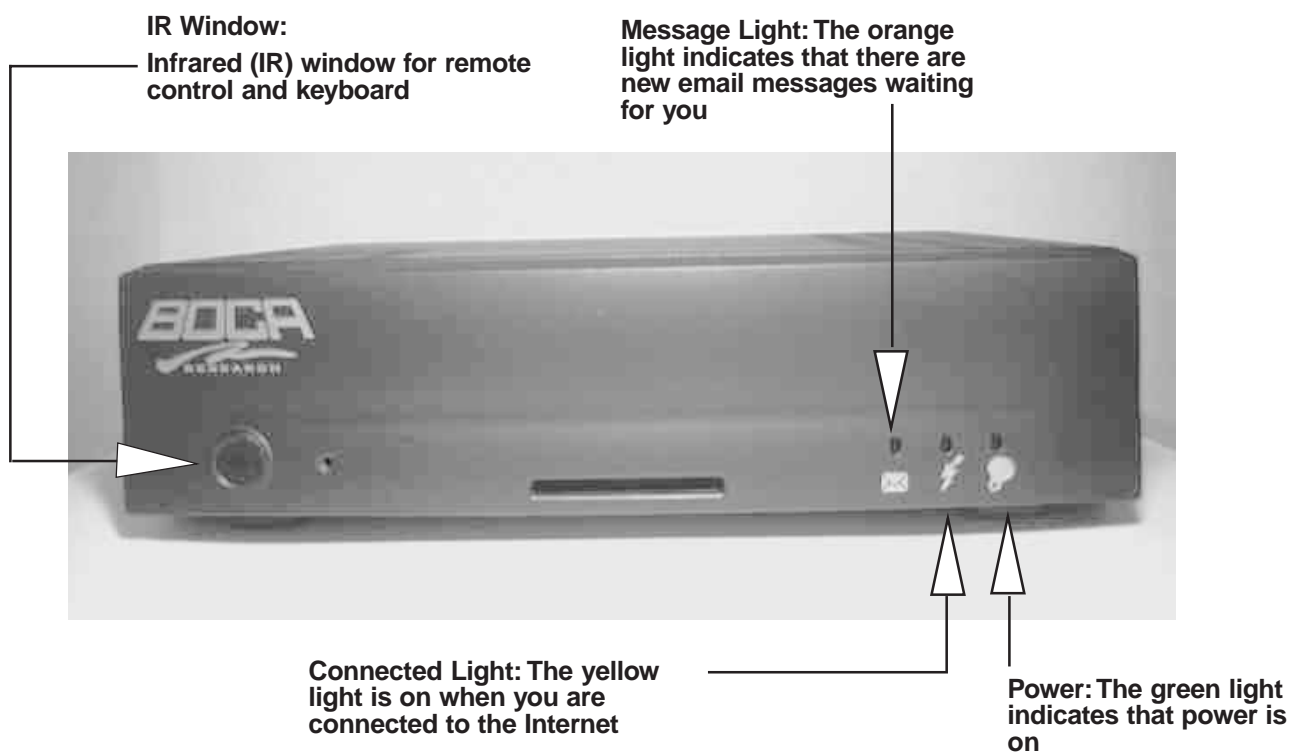
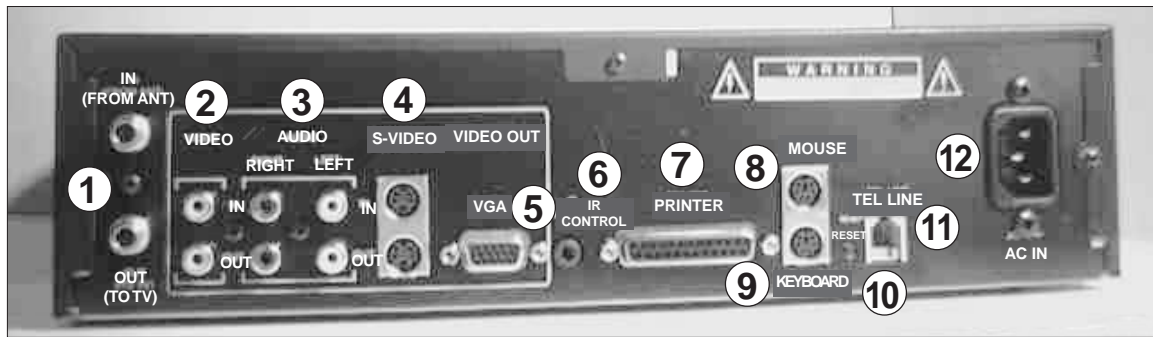


Figure 2. ST2001 Front Panel

2. Overview of the Back Panel



REAR VIEW:



**DO NOT PRESS THE RESET BUTTON
UNLESS INSTRUCTED TO DO SO BY
YOUR MANUFACTURER SERVICE REP.**

1 — IN (from ANT); OUT (to TV)

2 — VIDEO (IN-OUT). Use the video cable to connect this port to the VIDEO-IN jack on your TV.

3 — AUDIO (IN-OUT). Use the OUT jacks to output stereo sound to your TV, using the included audio cables. Use the IN jacks to bring stereo sound into the unit.

4 — S-VIDEO (IN-OUT). Use the OUT port if your television features an S-video connector. S-Video may provide improved clarity of the video display. Use the IN port to bring in S-Video signals from another source, i.e., a DSS receiver.

5 — VGA. Use this port if you are connecting the unit to a computer monitor.

6 — IR CONTROL. Optional connector that allows the unit to control another device, i.e., a VCR.

7 — PRINTER. Allows connection of printer to the unit, for printing of WEB pages, emails, other documents.

8 — MOUSE. Connect a PS/2 compatible mouse.

9 — KEYBOARD. Connect a PS/2 compatible personal computer keyboard.

10 — RESET BUTTON

11 — TEL. LINE. Attach one end of the supplied telephone cable to this jack and the other end to your phone outlet.

12 — AC IN. Connect the AC (110/220V) power cord here. Attach the other end to your wall outlet. **(MAKE THIS CONNECTION LAST).**

Figure 3. ST2001 Back Panel

3. Setting Up the ST2001

To setup your ST2001, perform the following steps in sequence. Each step is required.

Step 1: Determine what type of jacks are on your television.

Step 2: Connect the ST2001 to the television.

Step 3: Connect your television signal source and VCR or signal splitter (if you have these components).

Step 4: Connect the telephone line and power outlet.

Step 1: Determine the jack types

How you connect the ST2001 to your television depends on two factors:

- Your television signal source (whether you have cable, satellite or an antenna)
- The jacks available on your television (whether your television has an S-Video jack, Audio/Video (A/V) jacks or an RF (UHF/VHF) jack)

Look at the back of your television to see what kind of jacks it has.

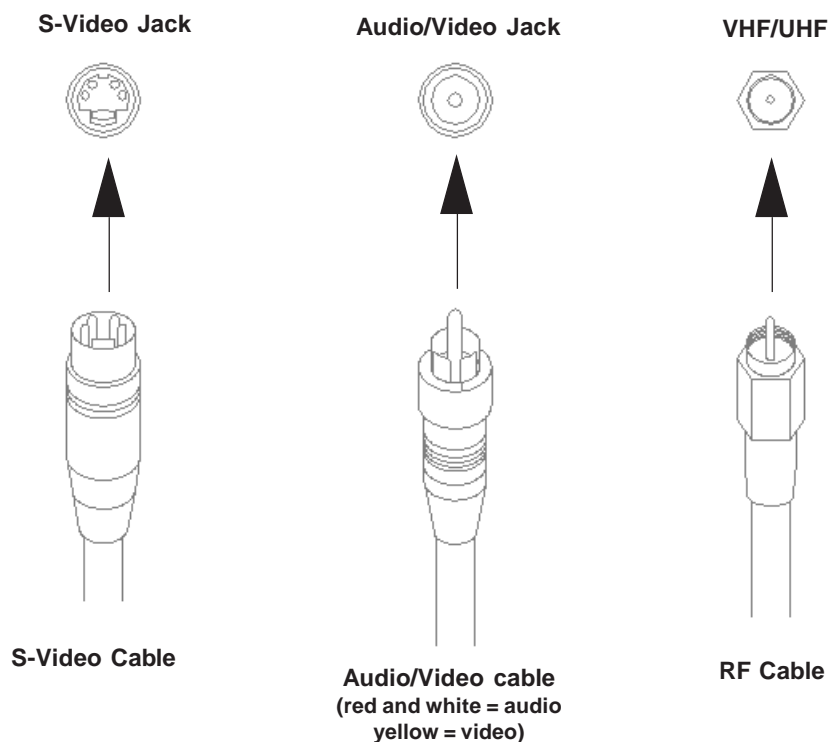


Figure 4. TV Jack Types

S-Video Jack—S-Video provides the best picture quality of the connection options. S-Video is found on most late model televisions.

Audio/Video Jacks— If your television has Audio/Video (A/V) jacks but no S-Video jack, you will use the yellow A/V jack instead of the S-Video connector. The yellow A/V jack is for “composite” video and may be labeled “Comp” or “Video” on your television. Your television may have right and left audio (A/V) jacks (colored red and white), or it may have only one white audio (A/V) jack.

RF Jack—If your television doesn’t have any A/V jacks, you will need an RF modulator to connect the ST2001 to your television’s RF (VHF/UHF) jack. RF modulators are available at most electronics stores. A typical RF modulator is shown in Figure 5.

Note: If you have a VCR, it is possible to connect the ST2001 to the television through the VCR, without using an RF modulator. See the procedure *If your television has only an RF (VHF/UHF) jack* on page 18.

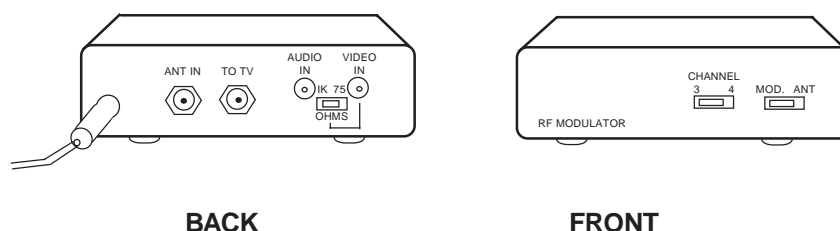


Figure 5. RF Modulator

Step 2: Connect the ST2001 to your television

Connect the ST2001 to the television before you connect other equipment such as the telephone line or VCR.

1. Make sure the TV is turned off. *Don't plug in the ST2001 yet.*
2. Connect the ST2001 to the television. Follow the steps for the type of jacks on your television.

Option A. Television with an S-video jack (page 16)

Option B. Television with A/V jacks and *no* S-video jack (page 17)

Option C. Television with *only* an RF (VHF/UHF) jack (page 18)

Option A. Television with an S-Video jack:

1. Connect the supplied S-Video cable from the “S-Video Out” jack on the ST2001 to the “S-Video In” jack on the television.
2. Connect the A/V cable from the “Audio Out” jacks on the ST2001 to the “Audio In” jacks on the television (red to red (right) and white to white (left)). If your television has only one audio A/V jack, use only the white connector.

Note: Do *not* connect the yellow A/V jacks. If you connect the yellow jacks when you have S-Video, picture quality diminishes.

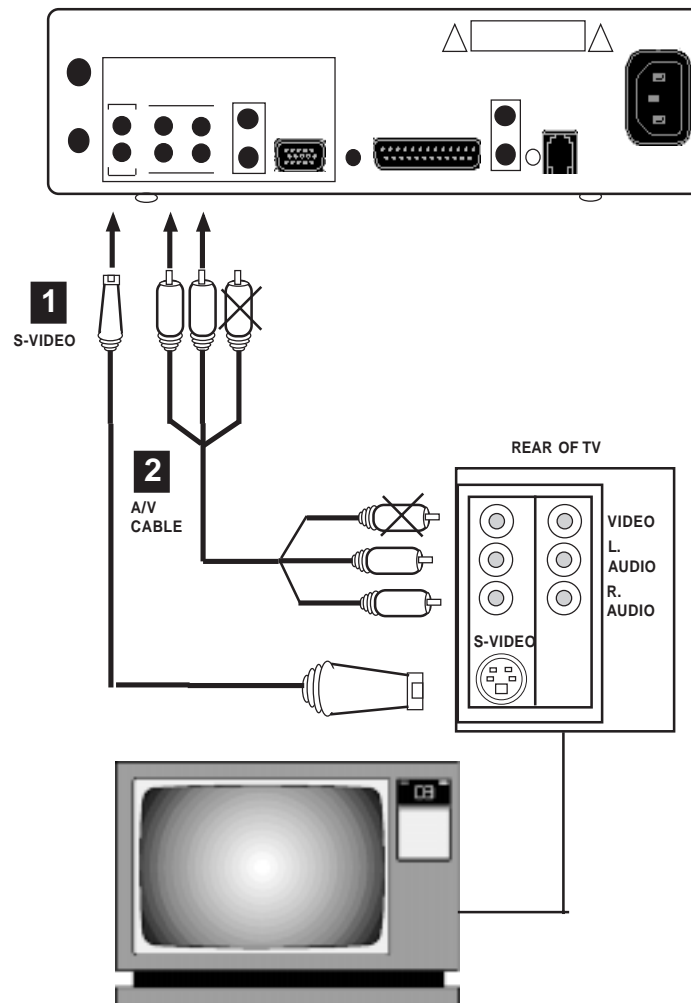


Figure 6. Connect a TV with S-Video Jack

Option B. Television with A/V jacks and no S-Video jack

- Connect the A/V cable from the “A/V Out” jacks on the ST2001 (yellow to yellow (video), white to white (audio left), and red to red (audio right), if available) to the “A/V In” jacks on the television. If your television has only one audio A/V jack, use only the white connector.

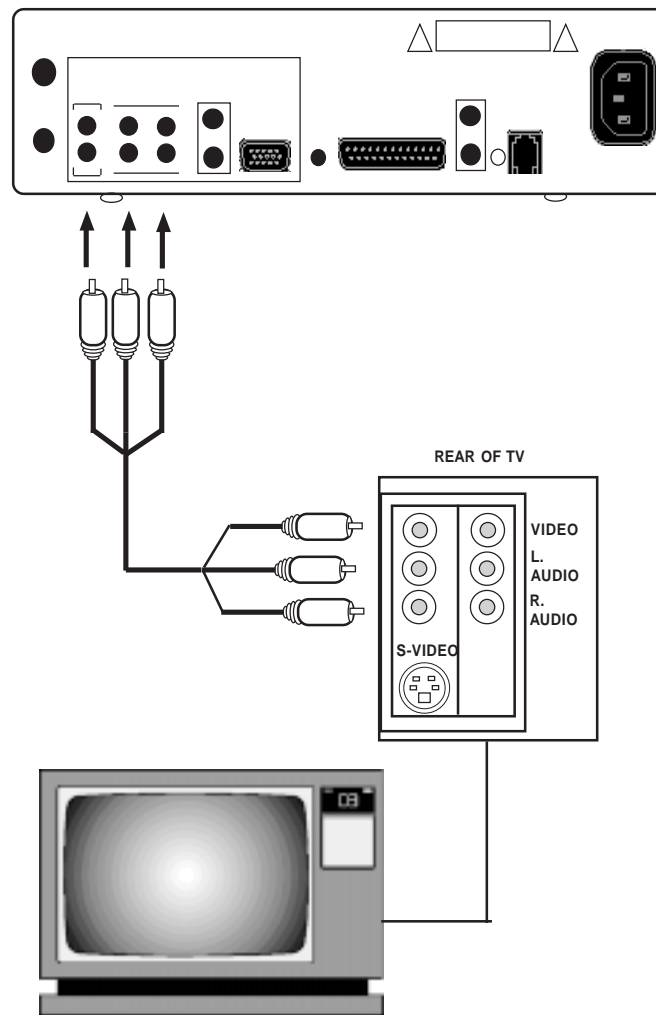


Figure 7. Connect a TV with A/V Jacks

Option C. Television with only an RF (VHF/UHF) jack

1. Obtain an RF modulator to connect the ST2001 to your television. RF modulators are available at most electronics stores. Refer to the instructions included with the RF modulator for setup information.
2. Connect the RF cable from the “VHF/UHF” jack on the television to the “TV” jack on the RF modulator.
3. Connect the white A/V cable from the left “Audio Out” jack and the yellow A/V cable from the “Video Out” jack on the ST2001, to the “Audio/Video In” jacks on the RF Modulator. Do *not* connect the red Audio jack.

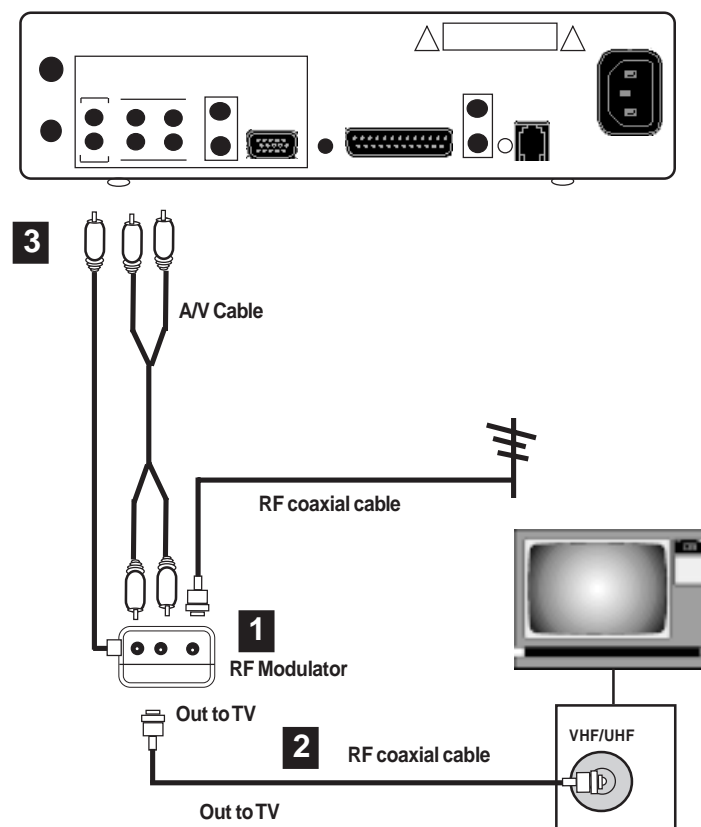


Figure 8. Connect a TV with an RF Modulator

Note: If you have a VCR, it is possible to connect the ST2001 through the VCR to the television, instead of using an RF Modulator. This is an alternative setup method that is not described here. If you attempt this setup, note that you will have to change the input mode on your VCR to receive the input from the ST2001. Check your VCR owner's manual for information on changing the VCR input.

Step 3: *Connect your television signal source and VCR*

This section explains how to connect the ST2001 to your television's signal source, and to a VCR or signal splitter, if you have these items. Your signal source is an antenna, cable or satellite connection. The setup is different, depending on your equipment.

Follow the steps for your equipment:

Option A. If you *do not* have a VCR, cable box or satellite receiver (Figure 9 below)

Option B. If you have *only* a cable box or satellite receiver (page 20)

Option C. If you have *only* a VCR (page 21)

Option D. If you have a VCR *and* a cable box or satellite receiver (page 22)

Option E. If you have a signal splitter (page 23)

Option A. *If you DO NOT have a VCR, cable box or antenna receiver*

If you do not have a VCR, separate cable box or satellite receiver, connect the RF cable from your antenna, cable, or satellite connection to the "In From ANT" jack on the ST2001.

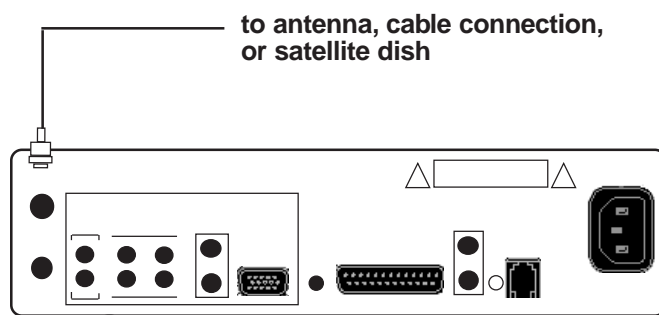


Figure 9. Connect the TV signal source

Option B. If you have ONLY a cable box or satellite receiver

1. Connect the RF cable from your antenna, cable or satellite connection to the cable box or satellite receiver.
2. Connect the RF cable from the cable box "RF Out" jack to the ST2001 "Antenna" jack.

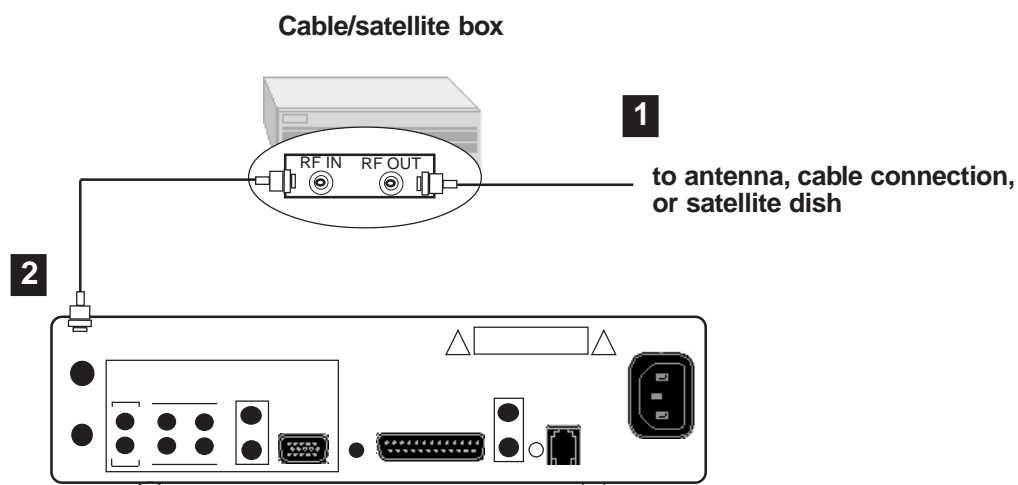
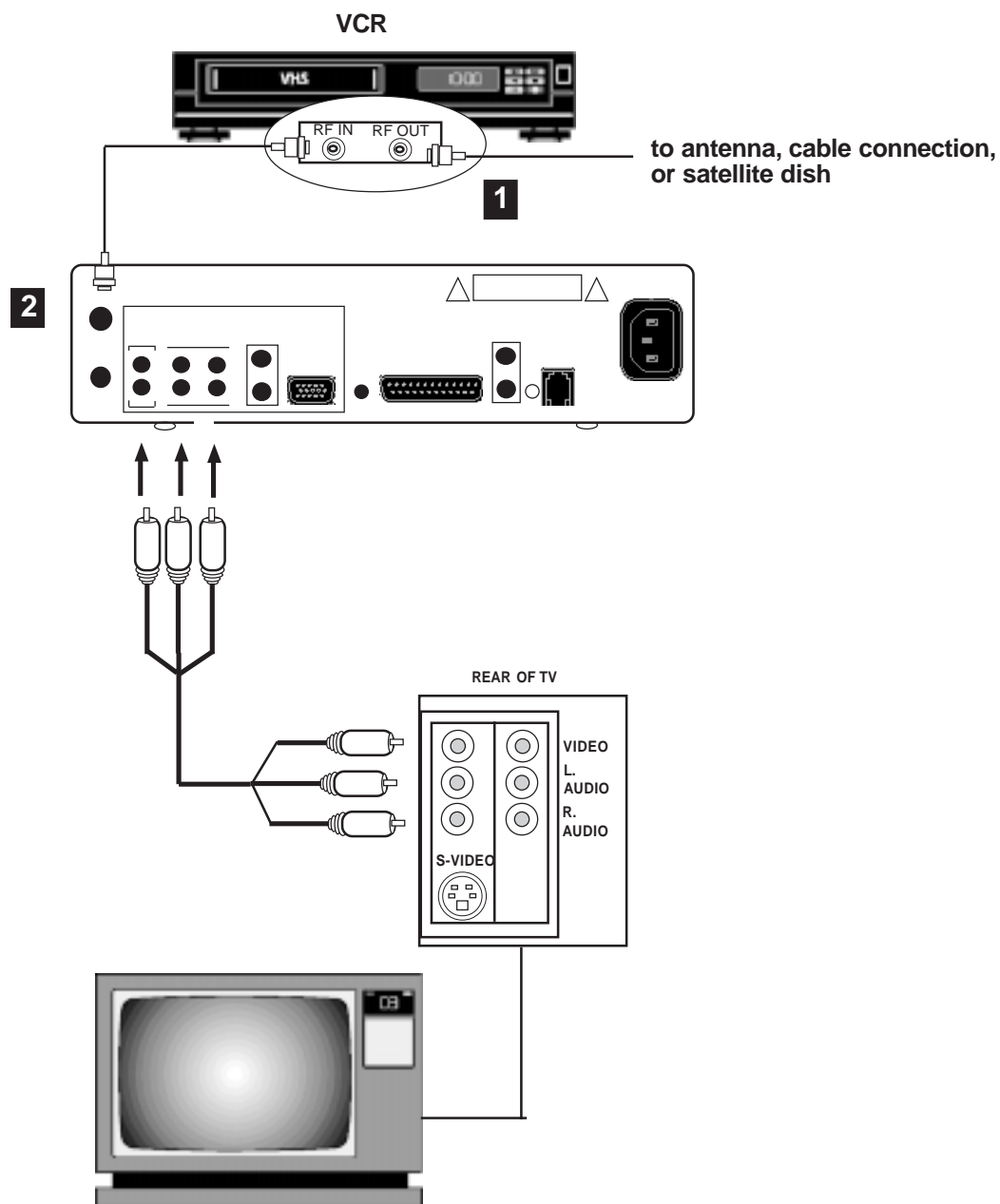


Figure 10. Connect a Cable Box

Option C. If you have ONLY a VCR

1. Connect the RF cable from your antenna, cable or satellite connection to the VCR "RF In" jack.
2. Connect the RF cable from the VCR "RF Out" jack to the ST2001 "Antenna" jack.

**Figure 11. Connect a VCR**

Option D. If you have a VCR AND a cable box or satellite receiver

1. Connect the RF cable from your antenna, cable or satellite connection to the cable box "RF In."
2. Connect the RF cable from the cable box "RF Out" jack to the VCR "RF In" jack.
3. Connect the RF cable from the VCR "RF Out" jack to the ST2001 "Antenna" jack.

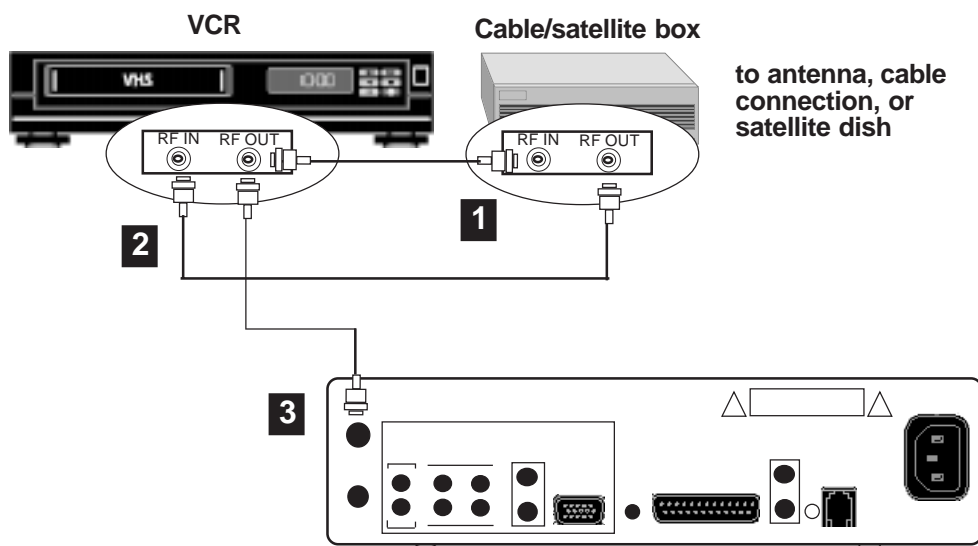


Figure 12. Connect a Cable Box and VCR

Option E. If you have a signal splitter

Instead of setting up the ST2001 as described in the previous procedures, you can purchase and install a signal splitter (available at most electronics stores). A signal splitter enables you to:

- Watch television without turning on the ST2001.
- Preserve your television's stereo sound if you want to use your VCR to record something or play a video while you use your ST2001. Normally, you would leave your VCR off while you are using your ST2001.

The following illustration is one example of how to setup the ST2001 using a signal splitter.

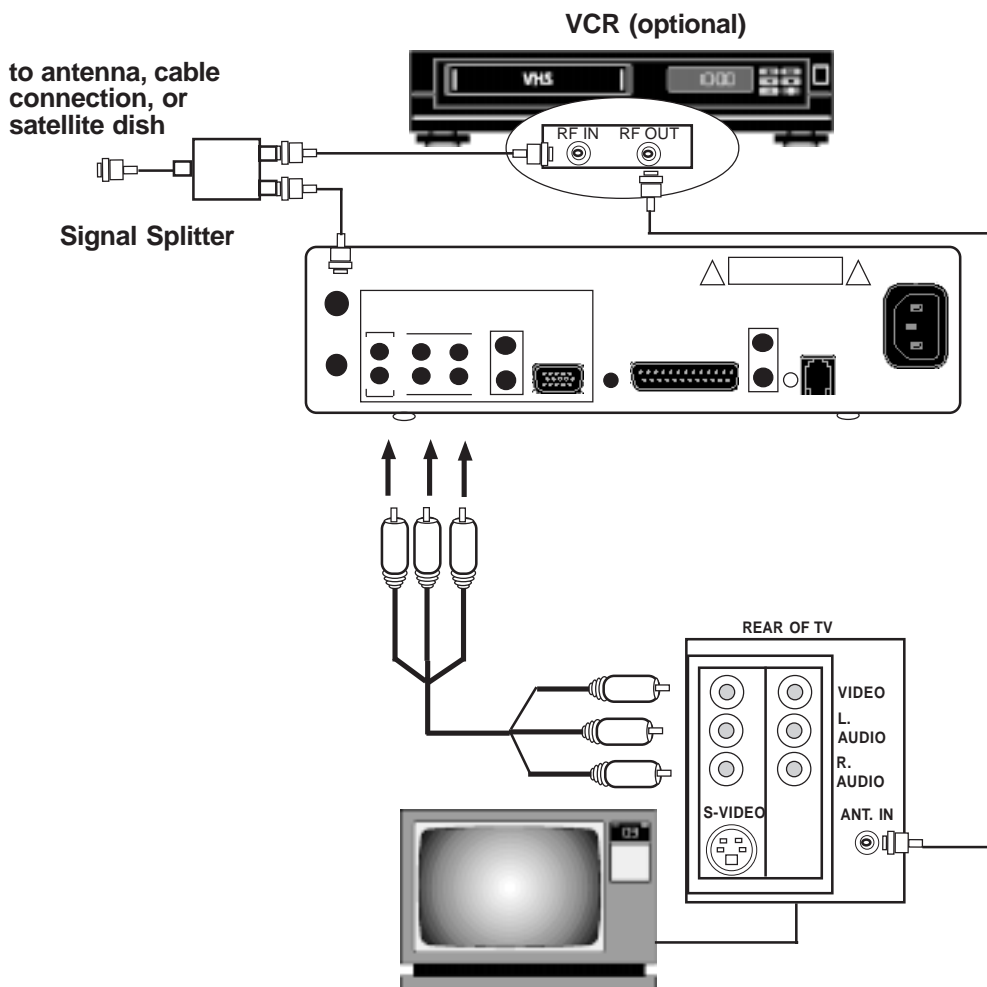


Figure 13. ST2001 Setup using a Signal Splitter

Step 4: Connect your telephone line and power cord

Connect the ST2001 to a phone line and power outlet. The ST2001 uses the phone line to contact your Service Provider. You can also connect a telephone if you want to use it on the same phone line as the ST2001.

1. Connect the telephone cord from a phone jack in the wall to the “TEL LINE” jack on the ST2001.
2. If you want to use a telephone on the same jack, connect the telephone to the “PHONE” jack on ST2001. The phone will act as if it's plugged directly into the wall. Or, you may use a “splitter” (as shown; not supplied), if you have a single phone line.
3. Connect one end of the supplied power cord to the “AC In” jack on the ST2001. Connect the plug end to a wall outlet.

Do *not* turn on the ST2001 yet.

When you are done, continue to *Using Your ST2001 for the First Time* on page 29.

Note: If you have a printer, camera, or PC-compatible keyboard, you can connect them to the ST2001 now or later. See the procedures on pages 25, 26, and 27, respectively.

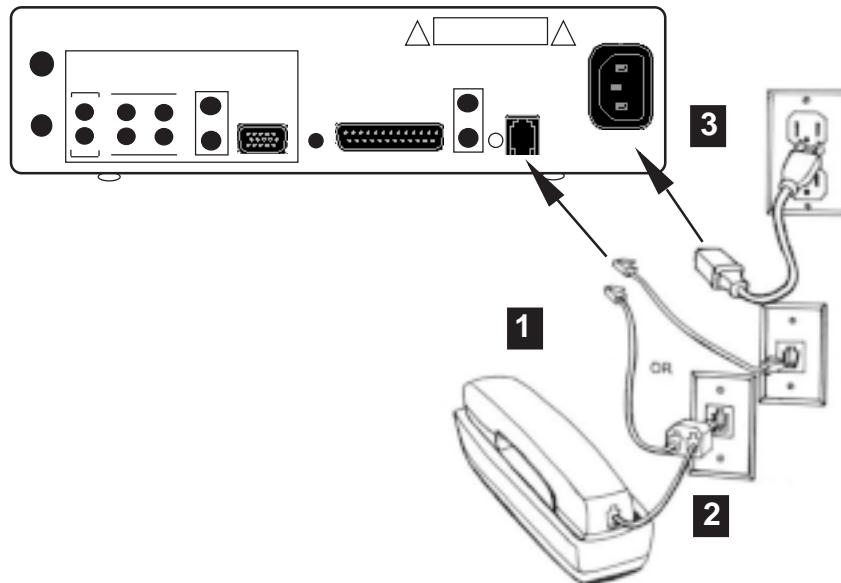


Figure 14. Connect a Phone Line and Power Outlet

4. Connecting Optional Equipment

You can connect optional equipment to the ST2001:

- Connect a printer (Figure 15 below)
- Connect a camera for video mail (page 26)
- Connect a PC-compatible keyboard (page 27)

Connect a printer

Connecting a printer to your ST2001 allows you to print e-mail messages, images from your television screen, and Web pages. You do *not* need to install software that came with your printer to print from the ST2001. Refer to the ST2001 on-screen Help for information about compatible printers. On-screen Help is available on the ST2001 Home page, after the ST2001 is running. See *Using ST2001 Internet and TV Features* on page 38.

Note: If your printer is an older model that uses a uni-directional cable, you need to purchase a bi-directional cable. Check your printer manual if you do not know what type of cable your printer uses.

Follow these steps to connect your printer:

1. Connect one end of your printer's parallel printer cable to the printer connector on the back of the ST2001.
2. Connect the other end of the parallel printer cable to the connector on your printer.

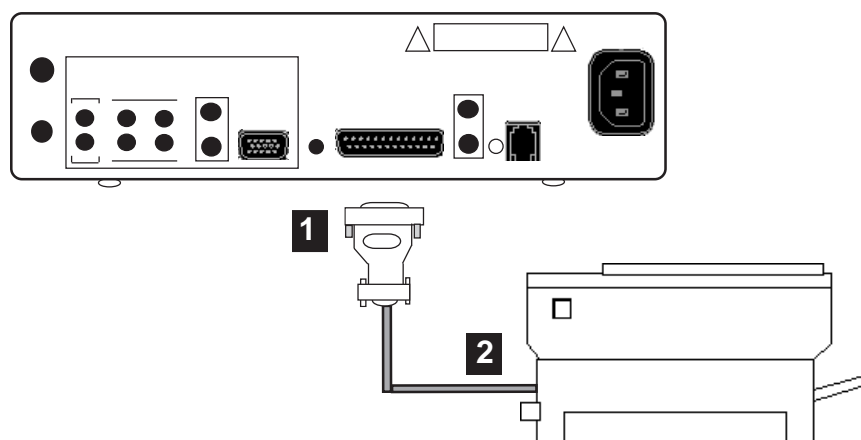


Figure 15. Connect a Printer

Refer to the owner's manual that came with your printer if you can't locate the printer connector.

Connect a camera for video mail

You can connect a video camera to the ST2001 to “capture” an external picture or video to send with an e-mail message. If your camera has an S-Video jack you can connect the camera using the S-Video cable. Otherwise, use the A/V cable and jack. An S-Video connection is recommended if your camera has the S-Video Out jack.

Connecting with the A/V cable

1. Connect the yellow plug on your A/V cable from the ST2001 “Video In” jack to the “Video Out” A/V jack on your camera.
2. If your camera captures sound, connect the A/V cable from the “Audio In” jacks on the ST2001 to the “Audio Out” jacks on the camera (red to red (right) and white to white (left)). Refer to the owner’s manual that came with your camera if you can’t locate the A/V jack on your camera.

Connecting with the S-Video cable

1. Plug the S-Video cable from the ST2001 “S-Video In” jack to the “S-Video Out” jack on your camera. To see an illustration of the S-Video jack on the back of the ST2001, see page 13. Refer to the owner’s manual that came with your camera if you can’t locate the S-Video jack on your camera.
2. Connect the A/V cable from the “Audio In” jacks on the ST2001 to the “Audio Out” jacks on your camera (red to red (right) and white to white (left)). If you are using the S-Video connector, do *not* connect the yellow A/V jack. If you connect the yellow jack when you have S-Video, picture quality diminishes.

Changing the channel input

When you want to use the camera to take a picture or video for an e-mail attachment, you must change the channel to 998, for S-Video connections, or to 999, for Video connections. Follow the instructions in the on-screen Help to add picture or video images to your e-mail messages. On-screen Help is available on the ST2001 Home page, after the ST2001 is running. See *Using ST2001 Internet and TV Features* on page 38.

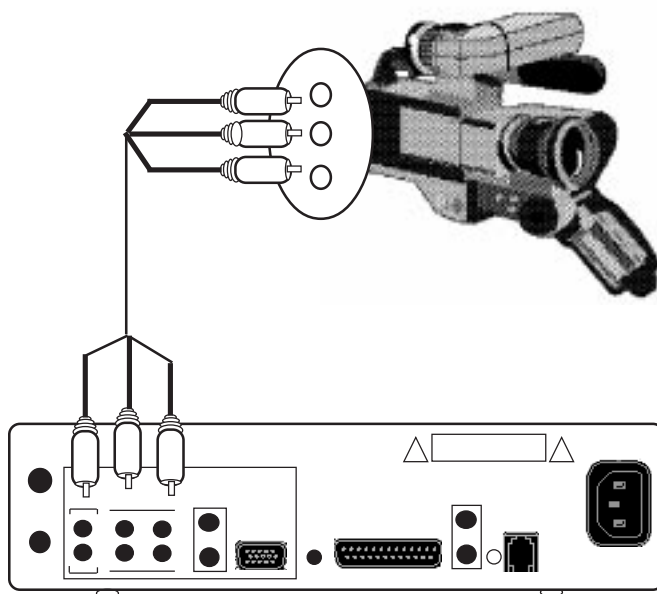


Figure 16. Connect a Camera with A/V Cable

Connect a PC-compatible keyboard

If you prefer not to use the ST2001 wireless keyboard, you can connect a regular PC (computer) keyboard to the “keyboard” (KBD) jack on the back of the ST2001. If you want to verify the location of the keyboard jack, see the ST2001 back panel overview diagram on page 13. For the list of corresponding keyboard functions see *Using a PC-Compatible Keyboard* on page 56.

3

Using Your ST2001

This chapter explains how to use your ST2001. It describes how to use the remote and keyboard to navigate around the screen, register your account, navigate from the ST2001 Home page, use TV and Internet features, and troubleshoot your system.

This chapter contains the following sections:

1. **Using Your ST2001 for the First Time**
2. **Using ST2001 Internet and TV Features**
3. **How to Do Common Tasks**
4. **Overview of the Remote**
5. **Overview of the Wireless Keyboard**
6. **Using a PC-Compatible Keyboard**
7. **Troubleshooting**

1. Using Your ST2001 for the First Time

After you successfully set up your components, follow these steps in sequence, to begin using your ST2001.

Step 1: Turn on the television and set the input source

Step 2: Power on the ST2001

Step 3: Practice selecting objects on-screen

Step 4: Automatic TV Setup

Step 5: Register your ST2001

Step 1: Turn on the television and set the input source

1. Turn on the television. Do *not* power on the ST2001 yet.
2. If you used either the S-Video or A/V connectors to connect the ST2001 to your television, set the input source on your television for the correct jack type. On many televisions you change the input by pressing a button labeled "Input" or "TV/Video" on the television or on the remote. Check your television owner's manual for more information. If you do not recall which type of jacks you used, see the section *Setting Up the St2001* on page 14.
3. If you used the RF input connector to connect the ST2001 to your television, you do *not* have to change the input. Simply tune the television to channel 3.
4. Set the television volume to a medium loudness. Make sure the volume is not set to Mute.

Step 2: Power on the ST2001

- Press the Reset button on the rear panel of the ST2001. The power light on the front of the unit is green when the unit is on.

When you turn on the ST2001, a logo screen appears briefly on your television screen, followed by the Welcome screen.



If the Welcome screen appears, continue to *Practice selecting objects on-screen* on the next page . If you don't see the Welcome screen, do the following:

If the green light on the front of the ST2001 is on, and the television is on, but you don't see the Welcome screen, try the following:

- Make sure all the cables are firmly attached.
- Make sure you've set up the components properly.
- If you used S-Video or A/V connectors to connect the ST2001 to your television, make sure the television has been set to the correct input source. Check your television manual for more information.
- If you connected the ST2001 using an RF connector, make sure the television is tuned to channel 3.
- Try pressing the **TV/Net** button on the remote or keyboard.

If you've tried the above suggestions and the Welcome screen still doesn't appear, refer to the Trouble-shooting section.

Figure 17. ST2001 Welcome Screen

Step 3: Practice selecting objects on-screen

This section explains how to navigate from the initial Welcome screen to the tutorial screen, and gives information about how to navigate and select objects on screen.

Note: Use the ST2001 remote or keyboard to move around on the screen. Make sure they are equipped with batteries before you begin using them.

1. On the initial Welcome screen, move the highlight using the down arrow key on the remote or keyboard until you highlight **Continue**. Then press the **Enter** key to select **Continue**. Make sure the remote or wireless keyboard is pointed to the ST2001 and the line of sight is not obstructed.
2. Next, the tutorial screen appears. Follow the on-screen instructions to practice using the remote or keyboard to move around and select objects on the screen.

For detailed instructions on how to navigate on your screen see the section *Getting Around on Screen* on the next page.



3. When you are finished practicing, select **Continue**. The Automatic TV setup screen will appear next.

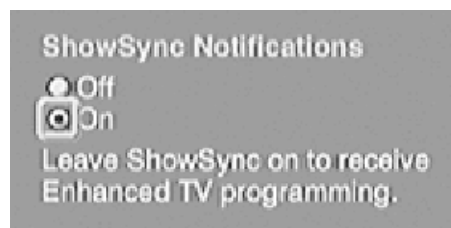
Figure 18. ST2001 Tutorial Screen

Getting around on screen

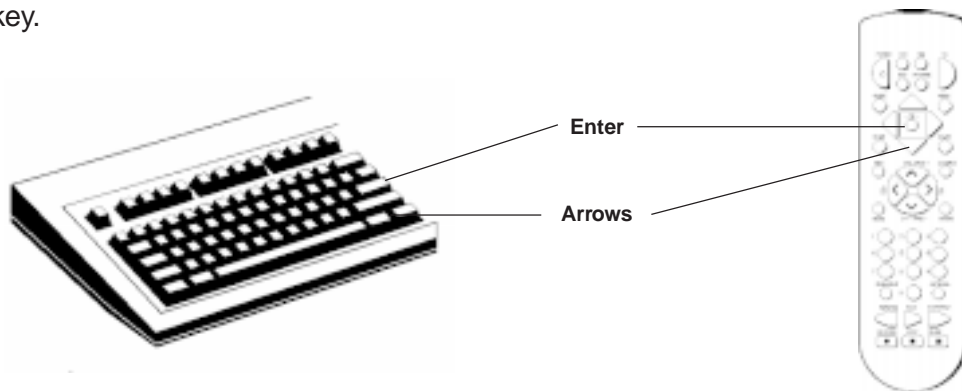
This section explains how to select objects on the screen.

To select objects on the screen, use the **Arrow** and **Enter** keys on the remote or keyboard to highlight objects and text boxes. If you want to refer to illustrations of the remote or wireless keyboard, see pages 48 and 49.

A yellow highlight rectangle on the screen appears around an item you have selected, as shown in the following illustration:



1. To highlight an object or text box on-screen, press the Up, Down, Left and Right **Arrow** keys (↑↓←→) on the ST2001 remote or keyboard. The highlight moves on the screen in the direction indicated by the **Arrow** key.



2. To select a highlighted object, press **Enter** on the remote or keyboard. When you press **Enter**, the highlight changes color and an alert sound plays to indicate that the ST2001 received your input.

Important: When using the remote or wireless keyboard, make sure that no objects obstruct the line of sight between them and the ST2001.



Typing text using the wireless keyboard

If you have a wireless keyboard you can use it to enter text on the screen.

1. Use the **Arrow** keys on the keyboard or remote to highlight the text box in which you want to enter text.



2. When the desired text box is highlighted, use the keyboard to type the text you want to enter. To correct a mistake, press the key combination **Ctrl+Backspace** or **Ctrl+Shift+Backspace**.

Note: If you don't have the wireless keyboard, you can connect a PC (personal computer) keyboard to the "keyboard" (KBD) jack on the back of the ST2001. See *Using a PC-Compatible Keyboard* on page 56.

Typing text without a keyboard

If you don't have a wireless keyboard or a PC keyboard, you can use the on-screen keyboard to type text on the screen. Follow the steps below to use the on-screen keyboard:

1. Use the **Arrow** keys on the remote to highlight the text box in which you want to enter text.
2. Press **Enter** on the remote to display the on-screen keyboard.



3. Press the **Arrow** keys on the remote until the character you want is highlighted on the on-screen keyboard, then press **Enter** on the remote.
4. Repeat Step 3 for each character you want to enter.
5. When you're finished entering text, move the highlight to the **Enter** key on the on-screen keyboard, and then press **Enter** on the remote.

Step 4: *Automatic TV Setup*

When you select **Continue** from the tutorial screen, the ST2001 automatically scans the TV channels to determine the proper setup.

1. The ST2001 automatically attempts to determine the proper setup for your television and scan for channels. You *do not* have to do anything during the Automatic setup. Simply wait for the process to complete. You can change the settings later using the Setup option on the ST2001 Home page.
2. When the automatic setup finishes, your ST2001 connects to your Service Provider. You can now register your ST2001.

Step 5: *Registering your ST2001*

After the automatic TV setup finishes, a series of on-screen instructions will lead you through the registration process. During registration you will:

- Set up an e-mail account and optional password
- Provide billing information for your Internet account

The ST2001 Owner

The person who registers the ST2001 is considered the “owner” and is the only person who can make certain changes to the system such as adding or removing users. If you don’t want to be the owner, or you don’t want to register right now, turn off the power on the ST2001. Press the **Power** button on the front of the ST2001 or the **Power** key on the remote or keyboard.

Using the Telephone during Registration

As part of the registration process, you will connect to the Internet. This is referred to as “being online.” Your ST2001 uses your telephone line to connect to the Internet. Check to make sure no one is using the phone line attached to your ST2001 and follow the instructions on-screen and in this section of the manual.

If someone calls while you are online and you have call waiting, your ST2001 disconnects from the Internet so that you can take the call. If you don’t have call waiting, the caller receives a busy signal. If you have call waiting and someone calls you while you are completing registration, you can take the phone call. When you finish the call, you can return to registration at the place where you were interrupted.

Registration Step by Step

1. If you have Caller ID activated on your phone, you will see a screen similar to the one shown below.
2. If the following screen appears, enter your phone number in the box provided. Include the area code. You do not have to enter a 1 at the beginning of the number. You can enter dashes or spaces in the number, although it is not necessary to do so. When you are done, select **Continue**.

The image shows a registration screen titled "Enter Phone Number" with the NC logo in the top right corner. The screen has a grey background. Below the title, it says "Please enter the phone number that you are using to connect your NC TV Navigator to your service provider." There is a text input field labeled "Phone Number:". At the bottom, there are two buttons: "Cancel" and "Continue".

Figure 19. ST2001 Registration Screen

On the next screens that appear, you will enter information to set up your new account. Have your credit card information ready before you begin.

3. Select the country where you live from the pull-down menu, then select **Begin**. If you need further instructions, select **Help** from this screen.
4. On the next screen, enter your name as it appears on your credit card and the address and phone number to be used for billing. The information you provide on this screen will be used to bill you for your Internet service. See the Customer Service Agreement that came with your ST2001 for details.
5. Enter credit card information.

Important: Your credit card information is securely transmitted (the data is “encrypted”); no unauthorized person can access it.

6. On the next screen, you can enter a password. You are not required to have a password, but if others are going to use the ST2001, you may want a password so you are the only person who can access your e-mail. If you do not want to create a password, you can skip this screen by selecting **Next**.

7. If you enter a password, it appears as asterisks (stars) for security. Enter the same password again to verify it.

Note: If you don't have a keyboard, consider creating a password consisting of numbers only, so you can enter it easily using the remote.

8. On the next screen, indicate whether or not you accept the terms and conditions of the End User License Agreement and the Customer Service Agreement. The License Agreement is printed at the back of this guide; the Customer Service Agreement is a document that comes with your ST2001.
9. Next you are able to review all the information you've entered. Make sure it's correct and then select **Submit**.
10. If your information is incorrect, select any item to bring up the editable registration screen. Select **Next** to advance to the registration screen that contains the information you wish to change. When you've re-entered your information, select **Next** to advance to the last screen, and then select **Submit** to update your information.

Note: The suggested e-mail address is verified to ensure that no other ST2001 customers are using it. You may choose a different e-mail address, but it may be rejected if someone is already using it.

11. The registration process will now take place. This can take a few minutes. A screen showing TV programming may appear while the registration is completing.
12. You will see a screen with your account number and e-mail address when registration has been completed. It will be similar to the following screen.
13. Write down your account number and e-mail address and then select **Continue**. **Important:** Make sure you write down your account number and e-mail address. You will use your account number if you need to contact customer support for help.



Figure 20. ST2001 Confirmation Screen

14. At the end of the registration, the Quick Tips screen appears. Review the Quick Tips for information about using your ST2001. Select the arrows at the bottom of the screen to move between the Quick Tips screens. When you are finished, select **Exit**. When you exit, the ST2001 Home page appears and you can begin using your ST2001.

Note: You can also view Quick Tips later, from the on-screen Help.

Continue to the next section, *Using ST2001 Internet and TV Features* which begins on the next page.

2. Using ST2001 Internet and TV Features

This section will help you get started using your ST2001. Once you are familiar with the basic ST2001 navigation tools, you can use the on-screen Help to find detailed instructions about most ST2001 functions and features.

Remember to use the **Arrow** and **Enter** keys on the ST2001 remote or keyboard to move around on the screen and select objects. If you need assistance moving around on the screen and selecting objects, review the section earlier in this guide, *Getting Around on Screen* on page 32.

Starting your Internet travels: The Home page

The ST2001 Home page is the starting point for your Internet travels and other ST2001 features. The Home Page appears after you register your ST2001, and whenever you turn on the ST2001 and television.

The Home page lets you connect to the Internet and do other tasks such as read and send e-mail, access Caller ID information, change the setup of the TV, phone, printer or e-mail, add ST2001 users, and find on-screen Help. When you are connected to the Internet a User icon appears on the Home page, showing which user is logged on.

To display or hide the Home page:

Press **Home** on your remote or keyboard to display the ST2001 Home page while watching TV or browsing the Internet. To hide the Home page, press the **TV/Net** button.



Figure 21. Home Page with User Logged On

Home Page Functions

Your ST2001 Home page allows you to do the following tasks:

- **Mail** connects to the Mail Center to retrieve or send e-mail or to see if you received messages or phone calls while you were away.
- **TV** provides access to TV Ticker, and TV Fun, if these items are enabled.
- **Net** connects you to the Internet. You can choose one of the pre-defined Web pages, a list of Favorites or enter a URL for a specific Web site that you want to go to.
- **News** provides a pre-defined list of News and Entertainment sites.
- **Setup** allows you to change the setup of the ST2001, television, mail accounts, and phone, and to adjust the time. You can also submit billing or address changes to your Service Provider.
- **Users** allows you to add and change ST2001 users and user information.
- **Help** provides detailed instructions for all your ST2001 Internet features and functions.

On-screen Help

The ST2001 on-screen help provides detailed information and instructions about most ST2001 features. To display help on any topic:

- Select **Help** on the ST2001 Home page and then select the **Help** option. The Help topics will be displayed.



Figure 22. ST2001 Help Topics

Tools for Browsing the Internet: The Menu Bar

The Menu Bar provides Internet tools for you to use while browsing the Internet.

To display or hide the Menu Bar:

- Press **Menu Bar** on your remote or keyboard. To hide the Menu Bar, press **Menu Bar** again.

The Menu Bar options are different when you are browsing the Internet (**Net**) or watching television (**TV**). The following is an example of the Menu Bar when connected to the Internet.



Figure 23. Menu Bar when Connected to the Internet

The following is an example of the Menu Bar when watching television.



Figure 24. Menu Bar when Watching TV

Menu Bar Functions

The Menu Bar provides the following options:

- **The URL Text Box** allows you to connect to an Internet address or “URL.” Type the URL in the box and then press **Enter** on your keyboard or remote to travel to the location. **Note:** The ST2001 applies intelligent URL completion. For example, you only need to type *disney* to go to “*www.disney.com*.”
- **Save Page** is a **Net** feature that allows you to save the location of a particular page so you can easily return to the page later. Your page will be saved as a “Favorite.” To view your Favorites, you can select **Favorites** from the Menu Bar.

- **Send Page** is a **Net** feature. If you find a page that might be interesting to someone else you know on the Internet, you can send the page with an e-mail message. Select **Send Page** and your mail center will appear on the screen. From there you can compose a message and send the Web page's URL.
- **Picture Mail** is a **TV** feature that allows you to take a picture of something on your screen, and connect to the Mail Center to send the picture as an attachment to an e-mail message.
- **TV Bar** is a **Net** feature that allows you to display the TV bar at the top of your screen, when you are browsing the Internet. The TV Bar shows a small display of the current TV program that is playing.
- **ShowSurf** is a **TV** feature that displays a matrix of nine TV programs on your television screen. You can move around to any one of the shows appearing in the matrix, and it will display in real-time. If you want to watch the show, you can select it to display full-screen on your TV.
- **Favorites** are Web pages you have saved by selecting **Save Page**. Favorites make it easy to connect quickly to your frequently visited places on the Internet. Select **Favorites** to view a list of your Favorites. You can also use the **Faves** button on the keyboard or remote to display your favorites.
- **Print** prints the current Web page or e-mail message. For instructions on connecting your printer to the ST2001, see *Connecting a Printer* on page 25.
- **Hang-up** disconnects you from the Internet. If you have a wireless keyboard you can also disconnect from the Internet by pressing the **Hang-up** button on the keyboard.
- The **Home** picture on the Menu Bar returns to the Home page.

Connecting to the Internet or Mail Center

You can connect to the Internet from the Home page or the Menu Bar.

To connect to the Internet from the Home page:

- Use the Arrow keys on the remote or keyboard to highlight **Net** and then press **Enter**.
- From the list of **Net** options, select a pre-defined URL or type a URL in the text box.

To type a URL in the Menu Bar:

- Select the Menu Bar text box using the Arrow keys on the remote or keyboard.
- Type the URL and then press **Enter**.

Disconnecting from the Internet



To disconnect from the Internet, you can use any of the following options. The current television program will continue to display when you disconnect. When you want to return to the Internet, press the **TV/Net** button on the remote or keyboard.

- Select **Hang-up** from the User icon on the Home page screen.
- Select **Hang-up** from Menu Bar.
- If you have a wireless keyboard, press the **Hang-up** key.

Note: If there's no Internet activity for a while, the ST2001 will automatically disconnect from the Internet and display television.

Status Bar Notices

When you make a selection a Status Bar appears at the bottom of the screen. The Status Bar displays information about the task or command you entered, so you know if your selection is being processed.



Figure 25. Status Bar

Displaying Full-screen TV or Internet

You can display full-screen TV or full-screen Internet anytime.

To switch between full-screen TV and Internet:

- Press the **TV/Net** button on your remote or keyboard.

Note: If you are connected to the Internet, the **TV/ Net** button toggles you between the Web page you were last viewing and TV. If you are not connected to the Internet, **TV/ Net** will toggle you between the Home page and TV.

Watching TV while Browsing the Internet

While you are browsing the Internet, you can watch television by selecting **TV Bar** from the Menu Bar, the remote, or the keyboard. The TV Bar displays a small TV screen and icons of your “Favorites.” Favorites are Web sites that you visit frequently and are displayed on the TV Bar for easy access. To display or hide the TV Bar:

- Select **TV Bar** from the Menu Bar or press **TV Bar** on the remote or keyboard.

Sending and Receiving E-mail

You can send and receive e-mail messages when you are watching TV or you are online browsing the Internet. To connect to the Mail Center:

- Press the **Mail** button on the remote or keyboard or select **Mail** on the Home page. When the Mail Center appears, follow the on-screen instructions.

Sending a Picture or Video with an E-mail Message

You can take a picture or video of a TV program and send it as an attachment to an e-mail message. If you have a camera attached to your ST2001, you can take a picture or video of an external source, such as your family or friends, to send with an e-mail message. To send a picture or video as an attachment to an e-mail message:

1. Use the keyboard or remote to change the TV channel to display the camera picture or desired TV show on your screen. To display a camera picture for cameras with S-Video connections, the channel is 998. For cameras with video connections, the channel is 999.
2. Press **Mail** on the remote or keyboard or select **Mail** on the Home page to connect to the Mail Center. When the Mail Center appears, select **Write a Message**.



Figure 26. Mail Center

3. In the Write Message window, select the **Attachments** option and choose **Add Video** or **Add Picture**.
4. A picture preview screen appears. Select **Add Picture** or **Add Video** to select the picture or video to send with the e-mail message.
5. After you select Add Picture or Add Video, you will be able to complete your e-mail message and send the picture or video as an attachment.

Adding ST2001 users

The owner is the person who initially registered the ST2001. The owner can add other ST2001 users who will have their own unique login identities and e-mail accounts.

To add users:

- Select **Users** from the Home page and then select **User Setup**. Follow the on-screen instructions to add the user. Use the On-screen Help if you need assistance.

To specify parental control:

- When you add a user, you can set a Parental Control option, which restricts the user's access to Web sites on the Internet. Select the option, **Parental Control On** when you are adding the user.

Using your telephone while you are online

Your ST2001 uses your telephone line to connect to the Internet. If you are online and want to use your telephone to make a call, pick up the phone. In a few seconds the ST2001 will disconnect from the Internet. Press the receiver lever on the phone to get a dial tone. When you're done with your phone call and hang up, your ST2001 will ask if you want to reconnect to the Internet.

If someone calls you while you are online, and you have call waiting, your ST2001 disconnects from the Internet so that you can take the call. When you finish the phone call, you can reconnect to the Internet. If you don't have call waiting, callers receive a busy signal while you're online.

Leaving the ST2001 on

It's OK to leave your ST2001 on when you're not using it. Make Note of the following:

- Just because the ST2001 is on does *not* mean that you are connected to the Internet. You can tell if you're connected to the Internet by looking at the front of the ST2001; if the yellow **CONNECTED** light is on, you're connected. Also, if the Home page is displayed, the Welcome User icon will appear if you are connected. If there's no Internet activity for a while, the ST2001 will automatically disconnect from the Internet and display television.

- Even though you may not be charged for the time you spend on the Internet, you should disconnect from the Internet when you're not using it (so that you can use your phone, for example).

Updating your ST2001

Periodically, software updates will be available for your ST2001. Software updates contain changes and enhancements to your ST2001. When an update becomes available you will be alerted the next time you connect to your account.

If you see a special screen that alerts you to an available software update, select **Update Now** to update your ST2001. It can take up to 15 minutes for the software update to complete, so you may want to update your software at another time. Select **Update Later** and a software update will be available the next time you login to your account.

Make sure to complete the update at some point, so you will have the latest software on your ST2001.

3. How to Do Common Tasks

Buttons and keys mentioned here are located on the remote or optional wireless keyboard. Some of the options indicated also appear on-screen, for example, on the Home page. For more information, see the on-screen Help .

	To do this Task	Do this
Controlling the ST2001	Turn the ST2001 on or off	Press Power .
	Display the Home page	Press Home .
	Switch from TV to Internet or from Internet to TV	Press TV/NET .
	Change the TV channel	Use the ST2001 remote or keyboard.
	Change the TV volume	Use the ST2001 remote.
	Disconnect from the Internet and still watch TV	1. Press Menu Bar . 2. Select Hang Up . OR 1. Press Home . 2. Select Hang Up from User icon.
EMAIL	Read E-mail	1. Press Mail . 2. Select Mailbox .
	Send an E-mail message	1. Press Mail . 2. Select Write a message .
	Send Picture or Video Mail	1. Select the Camera or TV channel. 2. Press Mail . 3. Select Write a message . 4. Select Attachments .
THE INTERNET	Go to a Web site	1. Press Menu Bar . 2. Type the address (URL). 3. Press Enter . OR 1. Press Home . 2. Select Net .
	Go to a Web site you saved as a Favorite	1. Press Menu Bar . 2. Select Favorites . 3. Select a web page from the list.
	Save a Web page as a Favorite	1. Press Menu Bar . 2. Select Save Page .
	Go back/forward one screen	Press Back or Forward (Fwd) .

	To do this Task	Do this
OTHER TASKS	Change settings (TV, Mail and so on)	<ol style="list-style-type: none"> 1. Press Home. 2. Select Setup. 3. Select the menu item of the settings you wish to change.
	Display or hide the TV Bar	1. Press TV Bar .
	Log off so another user can log on	<ol style="list-style-type: none"> 1. Press Home. 2. Select Users. 3. Select Switch User. 4. Select a username.
	Add a User	<ol style="list-style-type: none"> 1. Press Home. 2. Select Users.
	Get on-screen Help	<ol style="list-style-type: none"> 1. Press Home. 2. Select Help.

4. Overview of the Remote

Use your ST2001 remote to interact with the screens and menus while using your ST2001. Refer to the following illustration for a description of the buttons.

Remote Control

POWER. Turns off components (i.e., places them in standby). Toggles power on off for other brand components that you have programmed.

VCR, N/C, DVD, SAT• CABLE, TV. Buttons used to place the remote into the proper mode to operate a particular component.

TV/NET. Alternates between TV and ST2001 functions.

ARROWS and OK. The arrows allow you to move the highlight items on menu screens when surfing the Web. Press OK to select a highlighted selection.

MENU BAR. Displays the main menu. When surfing the Web, pressing the MENU button displays the Toolbar feature.

HOME. Returns you to your home page.

BACK. Returns you to the previous screen.

CH+ PAGE UP/ CH- PAGE DOWN. In TV mode, changes channels. In N/C mode, scrolls through web content one page at a time.

VOL +/-. Increases and decreases TV volume.

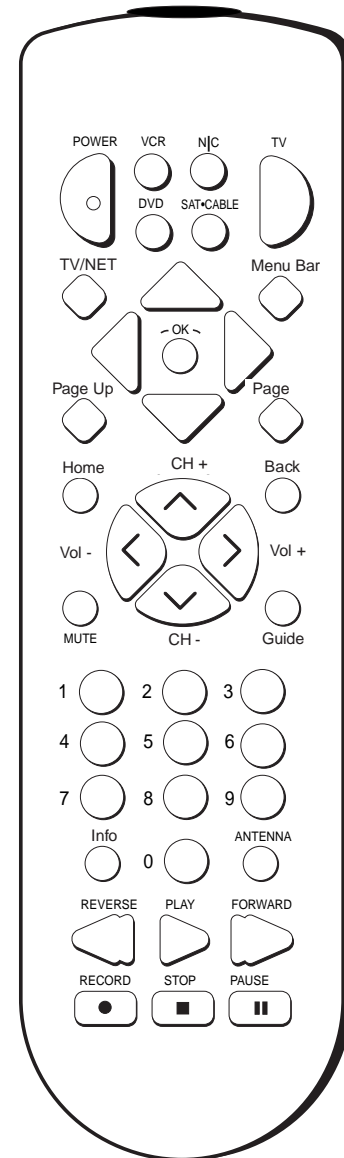
MUTE. Temporarily shuts off sound.

INFO. Depending on what feature you are using, this button provides additional information (program details or web page details, for example).

NUMBERS. Allows you to enter numbers.

ANTENNA. Switches the antenna input on a TV.

TRANSPORT. (Reverse, Play, Forward, Stop, Pause, Record). Use when operating a VCR or DVD player, or when using Internet audio or video devices (in N/C mode).



NOTE: This universal remote controls several different components (e.g., TV, VCR, Cable Box). These modes are activated with the component buttons.

Install Batteries

1. Remove the battery cover on the back of the remote control by sliding the battery compartment door off with your thumb.
2. Insert four AAA batteries.
3. Replace the cover which snaps back in place.

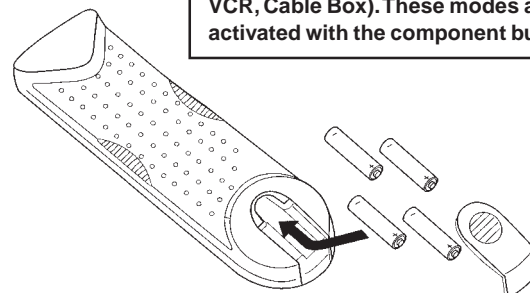


Figure 27. ST2001 Remote

5. Overview of the Wireless Keyboard

The following illustration describes the functions of the keys on the ST2001 wireless keyboard. **Note:** If you are using a PC-compatible keyboard with your ST2001, see the section *Using a PC-Compatible Keyboard*, on page 49 for descriptions of the PC keys.

Wireless Keyboard Diagram (underside)

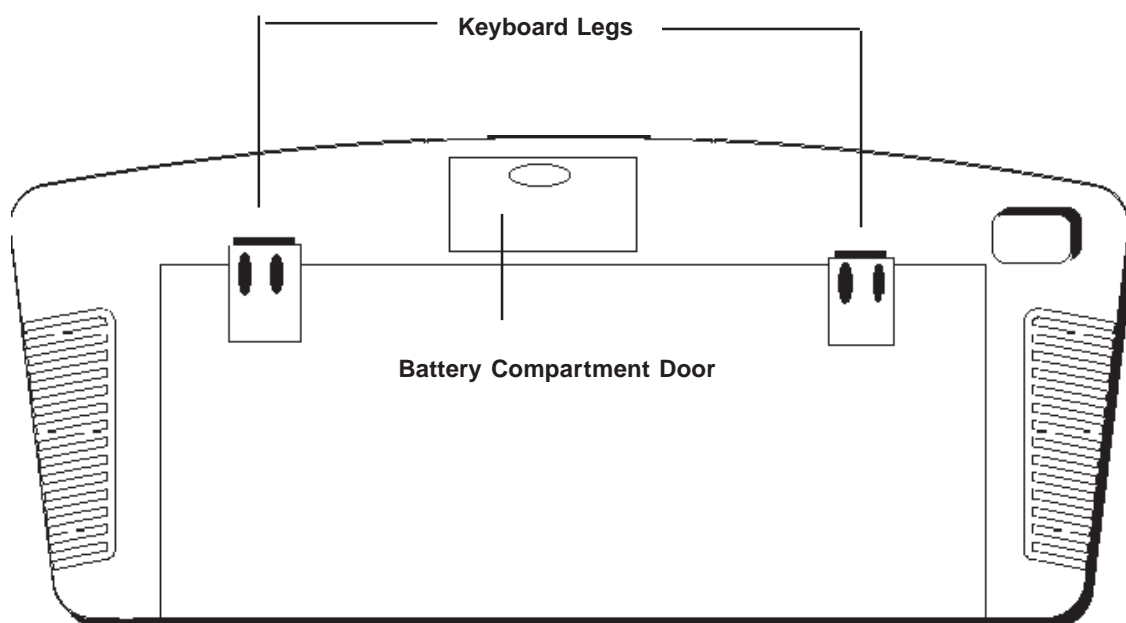


Figure 28. ST2001 Wireless Keyboard

Keyboard Functions and Features

1 — Arrows and ENTER / OK. Use the **arrows** to highlight items on the menu screens, and when surfing the web. Press **ENTER / OK** to select a highlighted item.

2 — POWER. Turns the unit on and turns it off (standby mode).

3 — CLEAR. In ICA-application sessions, performs standard keyboard functions.

4 — FUNC. In combination with number keys, FUNC provides the equivalent function of pressing F1 to F10 on a PS/2-compatible keyboard.

5 — CTRL. In ICA-application sessions, performs standard keyboard functions.

6 — ALT. In ICA-application sessions, performs standard keyboard functions.

7 — GUIDE. Reserved for future applications.

8 — REW.

9 — STOP/PLAY/PAUSE. Controls Internet sound and movie player functions. STOP also stops loading a web page and stops printing.

10 — FF. Fast Forward.

11 — VOL-. Volume Down.

12 — VOL+. Volume Up.

13 — MUTE. Mutes sound.

14 — LAST CH. Returns you to the preceding channel.

15 — CH-. Channel down.

16 — CH+. Channel up.

17 — TV/NET. Alternates between TV and ST2001.

18 — PAGE UP and PAGE DOWN. Scroll up and down through web content one page at a time.

19 — BACK. Returns you to the preceding frame, web page, menu, or toolbar.

20 — FWD. Returns you to the current frame, web page, menu, or toolbar.

21 — MENU BAR. Brings up the Main menu, or the Toolbar when you're surfing the web.

22 — TV BAR. Access to links, favorites.

23 — HISTORY. Lists recently visited sites.

24 — TV INFO. Displays selected TV channel.

25 — HOME. Takes you back to the URL specified during setup.

26 — MAIL. Reserved for future applications.



LEFT AND RIGHT MOUSE CONTROLS.

Use the left mouse control to select a highlighted item on menu screen or Internet. The right mouse control is reserved for future applications.

POINTER. Use to highlight items on menu screens and when you're surfing the web and when running software applications.

Figure 29. ST2001 Wireless Keyboard (keypad layout)

Note: The TV power key on the wireless keyboard is preset to operate Sony TVs. If you have a TV other than Sony that you want to turn on and off with the ST2001 wireless keyboard, see the procedure on page 53 to program the key.

Wireless Keyboard Commands

Keyboard commands or “shortcuts” allow you to use a combination of keys to perform a function or enter special characters. Use the following tables to find a specific keyboard combination.

Special Character Combinations

The following is a list of key combinations to type for special characters.

Note: To enter a special character that requires more than two keys, simultaneously press the **CTRL** key and the key, release both keys, and then press the second key combination. For example, for **Ñ** press **CTRL** and **n** together, release the keys, then press **Shift** and the **n** key again.

Character	Keyboard Combination	Character	Keyboard Combination
1/4	Ctrl + z	æ	Ctrl + ‘
1/2	Ctrl + x	Æ	Ctrl + Shift + ‘
ç	Ctrl + c	œ	Ctrl + q
Ç	Ctrl + c + Shift	Œ	Ctrl + Shift + q
3/4	Ctrl + v	á	Ctrl + e then a
×	Ctrl + b	Á	Ctrl + e then Shift + a
ñ	Ctrl + n then n	é	Ctrl + e then e
Ñ	Ctrl + n then Shift + n	É	Ctrl + e then Shift + e
ã	Ctrl + n then a	í	Ctrl + e then i
Ã	Ctrl + n then Shift + a	Í	Ctrl + e then Shift + i
õ	Ctrl + n then o	ó	Ctrl + e then o
Õ	Ctrl + n then Shift + o	Ó	Ctrl + e then Shift + o
μ	Ctrl + m	ú	Ctrl + e then u
÷	Ctrl + /	Ú	Ctrl + e then Shift + u
¿	Ctrl + Shift + /	®	Ctrl + r
å	Ctrl + a	†	Ctrl + t
Å	Ctrl + Shift + a	¥	Ctrl + y
ß	Ctrl + s	ä	Ctrl + u then a
¶	Ctrl + d	Ä	Ctrl + u then Shift + a
Ð	Ctrl + Shift + d	ë	Ctrl + u then e
f	Ctrl + f	Ë	Ctrl + u then Shift + e

Character	Keyboard Combination	Character	Keyboard Combination
©	Ctrl + g	ï	Ctrl + u <i>then</i> i
¹	Ctrl + h	Ï	Ctrl + u <i>then</i> Shift + i
²	Ctrl + j	ö	Ctrl + u <i>then</i> o
³	Ctrl + k	Ö	Ctrl + u <i>then</i> Shift + o
¬	Ctrl + l	ü	Ctrl + u <i>then</i> u
...	Ctrl + ;	Ü	Ctrl + i <i>then</i> Shift + u
â	Ctrl + i <i>then</i> a	È	Ctrl + Shift + ' + e
Â	Ctrl + i <i>then</i> Shift + a	ì	Ctrl + ' + i
ê	Ctrl + i <i>then</i> e	Ì	Ctrl + ' <i>then</i> Shift + i
Ê	Ctrl + i <i>then</i> Shift + e	ò	Ctrl + ' + o
î	Ctrl + i <i>then</i> i	Ò	Ctrl + ' <i>then</i> Shift + o
Î	Ctrl + i <i>then</i> Shift + i	ù	Ctrl + ' + u
ô	Ctrl + i <i>then</i> o	Ù	Ctrl + <i>then</i> Shift + u
Ô	Ctrl + i <i>then</i> Shift + o	±	Ctrl + =
û	Ctrl + i <i>then</i> u	—	Ctrl + -
Û	Ctrl + i <i>then</i> Shift + u	°	Ctrl + 0
ø	Ctrl + o	¡	Ctrl + 1
Ø	Ctrl + Shift + o	™	Ctrl + 2
“	Ctrl + [£	Ctrl + 3
”	Ctrl + Shift + [¢	Ctrl + 4
‘	Ctrl +]	¤	Ctrl + 5
’	Ctrl + Shift +]	§	Ctrl + 6
«	Ctrl + \	¶	Ctrl + 7
»	Ctrl + Shift + \	•	Ctrl + 8
à	Ctrl + ' + a	°	Ctrl + Shift + 8
À	Ctrl + ' <i>then</i> Shift + a	ª	Ctrl + 9
è	Ctrl + ' + e		

Function Combinations

The following is a list of key combinations for special functions.

Function	Keyboard Combinations
Sends a Web page when connected to the Internet	Ctrl + Shift + m
Saves pages in Favorites	Ctrl + Shift + s
Go to Favorites	Ctrl + Shift + f
Hang-up	Ctrl + Shift + h
Print	Ctrl + Shift + p

Programming the TV Power Key on the Wireless Keyboard

The **TV** and **TV/Video** Power keys on the ST2001 Wireless keyboard are pre-set to operate Sony brand televisions. If your television is *not* a Sony brand, you can use the following procedure to program the power key to turn your television on and off.

Program the TV and TV/Video buttons

To program the wireless keyboard **TV** and **TV/Video** buttons:

1. Find the code number for your television from the list of *Codes for programming North American TV models* on pages 54-55. If more than one code number is listed for your television, use the first number listed. **Note:** If the first code listed for your television doesn't work, try each subsequent code in the list until you find the correct one.
2. Press and hold down the **TV** button on the keyboard.
3. Enter the code number using the keyboard keys.
4. Release the **TV** button.

Note: You must perform Step 4 within 10 seconds of Step 3, or you must start again from Step 2.

Check if the Code Number works

Use the following procedure to make sure the code you entered works.

1. Aim the Keyboard at your television and press the **TV** key. The television should turn on.
2. If the television responds, try pressing the **CHANNEL+** and **CHANNEL-** keys to change the channels.
If the code did not work, try programming the remote using the other codes listed for your TV.

Codes for programming North American TV models

TV Brand	Code Number
A-MARK	88, 37, 90
ADMIRAL	55, 102, 109, 114
AKAI	20, 6, 103
ANAM	37, 47, 64, 41, 50
AOC	6, 37, 20, 56
BELL & HOWELL	67, 114, 109, 138
BROSONIC	68, 103, 112
CANDLE	6, 12, 20, 46, 50
CENTRION	45, 112
CETRONIC	50
CITIZEN	20, 46, 6, 50, 12, 90, 45, 9, 10
CLASSIC	50
CONCERTO	6
CONTEC	50, 78, 83, 81
CORONADO	88, 90, 113
CRAIG	7, 49, 50, 120, 121, 122, 123
CROSLEX	30, 111
CROWN	50
CURTISMARHES	1, 6, 20, 90, 17, 31, 103, 119, 123
CXC	50
DAEWOO	88, 1, 93, 31, 32, 33, 38, 52, 2, 3, 92, 34, 46, 50, 35, 36, 4, 5, 6, 8, 135, 136, 103
DAYTRON	1, 6, 20, 113
DYNASTY	50
EMERSON	88, 1, 90, 50, 83, 19, 30, 81, 20, 6, 25, 55, 23, 36, 120, 122, 121, 123, 103, 115, 113
FISHER	8, 80, 61, 15, 125
FUNAI	50, 19, 69, 6
GE	1, 61, 72, 50, 58, 17, 18, 6, 49, 19, 90, 102, 118, 103, 107
Gold Star	88, 27, 1, 37, 10, 11, 42, 90, 39, 40, 92, 99, 103, 113, 112, 130
HITACHI	88, 6, 90, 71, 77, 70, 21, 22, 23, 25, 103, 113, 131, 132
INFINITY	82
JBL	82
JCP	91, 92, 17, 20, 103, 102, 107, 130
JVC	60, 16, 128, 129
KLOSS	92
KMC	88, 90, 13
KTV	88, 90, 50, 61, 20, 103, 113, 123, 133, 134
LOGIK	84, 6
LUXMAN	84, 6
LXI	61, 8, 15, 82, 102, 103, 111, 125, 119, 112
MAGIN	49
MAGNAVOX	25, 88, 61, 6, 90, 12, 98, 92, 100, 82, 20, 17, 103, 111, 112, 113
MARANTZ	94, 82, 20, 90, 124
MATSUI	82
MGA	1, 6, 19, 94, 20, 73, 50
mitsubishi	95, 75, 1, 6, 19, 20, 73, 66, 80, 88, 103, 112, 124

TV Brand	Code Number
MTC	26, 15, 6, 49, 93, 20, 8, 75
NEC	25, 75, 20, 8, 6, 5, 1, 103, 112
NIKEI	50
ONKING	50
ONWA	50
OPTONICA	69
PANASONIC	64, 72, 58, 82, 107, 116, 117, 118
PENNEY	61, 6, 49, 66, 18, 90, 50, 77, 25
PHILCO	1, 8, 88, 61, 6, 90, 50, 12, 98, 92, 100, 82, 20, 103, 111, 113
PHILIPS	88, 1, 61, 6, 90, 12, 98, 92, 82, 20, 5, 57, 118, 119, 137,
PIONEER	65, 26, 118, 119, 137
PORTLAND	88, 6, 90, 103, 108
PROTON	1, 31, 6, 90, 77, 78
QUSASAR	72, 58, 107, 118
RADIO SHACK	50, 92, 25, 90, 102, 112, 115, 123, 124
RCA	61, 6, 71, 66, 87, 20, 90, 1, 62, 102, 103, 104, 105, 106, 107, 108
REALISTIC	8, 49, 50, 25
SAMPO	1, 20, 90, 6, 19, 26, 49
SAMSUNG	88, 1, 61, 28, 43, 29, 81, 44, 48, 49, 90, 92, 51, 103, 112, 113, 126, 127
SANYO	89, 80, 62, 78, 13, 14, 125
SCOTT	1, 50, 19, 90, 6, 112, 123
SEARS	88, 61, 6, 8, 90, 91, 89, 80, 15, 19
SHARP	88, 90, 85, 24, 25, 69, 113, 114, 115
SIGNATURE	84, 6, 114
SONY	77, 74, 101
SOUNDESGN	1, 50, 12, 6, 19
SPECTRICON	37
SSS	6, 50
SYLVANIA	1, 61, 6, 12, 98, 92, 20, 100, 82, 103, 111, 112
SYMPHONIC	2, 6, 90, 12, 20, 123, 139
TATUNG	72, 69
TECHWOOD	6, 59
TEKNIKA	88, 46, 6, 90, 50, 12, 19, 94, 84
TELEFUNKEN	96, 97
TELERENT	84
TMK	1, 6, 90
TOSHIBA	8, 91, 15, 75, 114, 119
TOTEVISION	49, 90
UNIVERSAL	17, 18
VIDEOSONIC	49
VIDTECH	6, 103, 112, 131
WARDS	88, 1, 90, 6, 36, 17, 18, 89, 80, 50, 39, 23, 78, 64, 55, 103, 112, 113, 115
YAMAHA	6
ZENITH	76, 84, 6, 109, 110

6. Using a PC-Compatible Keyboard

If you connect your ST2001 to a PC-compatible keyboard, use the following keys for the corresponding functions. The instructions for connecting the PC keyboard are on page 49.

PC Keyboard	Function when Connected to Internet	Function when Watching TV
Esc	Turns the ST2001 off	Turns the ST2001 off
F1	Go to Home page	Switch to net mode Go to Home page
F2	Go to Mail Center	Switch to net mode Go to Mail Center
F3	Go to Program Guide	Switch to net mode Go to Program Guide
F4	Go to Search page	Switch to net mode Go to Search page
F5	Pause media	-none-
F6	Rewind media	-none-
F7	Stop media	-none-
F8	Play media	-none-
F9	Fast forward media	-none-
F10	Volume down	Volume down
F11	Volume up	Volume up
F12	Mute audio	Mute audio
PrintScrn/SysRq	Show/hide History page	Show/hide History page
Scroll lock	Go to Help page	Go to Help page
Pause/Break	Switch to TV	Switch to Internet
Insert	Show messages (same as pressing Info button on remote)	Show channel number
Delete	Clear currently selected text area	-none-
Home	Move back one link in history Cancel operation	Return to last channel
End	Move forward one link in history	Return to last channel
Page Up	Scroll up by one screen	-none-
Page Down	Scroll down by one screen	-none-
Up Arrow	Move highlight up	Channel up
Down Arrow	Move highlight down	Channel down
Right Arrow	Move highlight right	-none-
Left Arrow	Move highlight left	-none-
Enter	Select highlighted link Perform selected action	Display ShowSurf
Right Alt	Show/hide Menu Bar	Show/hide Menu Bar (switches to Web mode after action taken)
Left Alt	Show/hide TV Bar	-none-
- (keypad)	Channel down (if TV is visible)	Channel down
+ (keypad)	Channel up (if TV is visible)	Channel up
* (keypad)	Return to last channel (if TV is visible)	Return to last channel
Delete	Clear selected text field	Clear channel numbers on-screen

7. Troubleshooting

The following section provides troubleshooting solutions. Also, see the on-screen Help, specifically the “Frequently Asked Questions” section. If the solutions provided don’t solve your problem, see next page for support options.

Symptom	POSSIBLE CAUSES AND SOLUTIONS
Arrow keys don’t work	Make sure no objects obstruct the line of sight between the remote or keyboard and the ST2001. The remote or keyboard may need new batteries. See also “Screen is ‘frozen.’”
Unable to enter text in a text box	Use the arrow keys to move to the text box and then activate the text box by pressing the Enter key. You should then be able to type in the box.
TV displays only static or “snow” on some channels	Perform Automatic TV Setup (select Setup then TV) to skip channels that don’t broadcast in your area. (You cannot perform Channel Scan if you have a cable box.)
TV displays only static or “snow” on every channel	Make sure connections are correct. Make sure the TV is set to proper input source. Select Setup then TV to perform the Automatic TV Setup.
TV shows picture on only one channel	Make sure your VCR and/or cable box are tuned to the output channel (3 or 4) of the cable or satellite box.
No picture	Make sure all power cords are connected. Try pressing the TV/NET button. Make sure the TV input is set properly. Make sure the TV source is set properly on the TV (this is probably done on screen; check your TV manual).
No sound	Make sure the TV volume isn’t on Mute or set too low.
Volume too high Cannot enter text on screen	Set TV volume to medium loudness; adjust volume with remote. Make sure no objects are between the keyboard and ST2001. The keyboard may need new batteries. See also “Screen is ‘frozen.’”
Modem dials, but ST2001 doesn’t connect	Try switching the phone line from one jack to another on the ST2001. Make sure you’ve entered a dialing prefix (select Setup, then Phone) if you need one to get an outside line.
You see a message “Unable to connect” or “Can’t connect to service provider” Screen is “frozen” or completely black, or Power button doesn’t work	The network service provider may be experiencing difficulties. Try to connect again later. Try turning the ST2001 power off and on again (the Power button is on the front of the ST2001). Press the Power button and hold it down for 3 seconds. Then press the button again. Make sure the TV and VCR are set to the correct channel.
You see a message that says you need to update your software	Select Update Now. New software is available and can be installed on your ST2001 automatically. The update can take up to 15 minutes. You may choose to update the next time you login by choosing Update Later.
Your printer is connected to the ST2001 but doesn’t work	Check on-screen Help to verify if your printer is ST2001 compatible. Make sure the printer is connected with a bi-directional cable. Uni-directional cables are not supported.

4

Servicing your Product

How to get Technical Assistance

The dealer that you purchased this product or your computer from is the first place you should go for technical assistance. The dealer is usually the most qualified source of help, and is most familiar with your system and how this product should be installed. Many dealers have customer service and technical support programs, with varying levels of support offered, depending on your needs and computer knowledge. **Please contact the dealer first whenever a problem occurs.**

If your Dealer Can't Assist you ...

If you can't get assistance from your dealer, the manufacturer provides varying levels of technical assistance as summarized below.

The Standard Free Technical Support number is for quick answers to specific inquiries on product features and technical questions (call **561-241-8088**; M-F, 8 am to 6:30 pm EST). Direct access to technical support representatives is provided on a limited basis. If you require immediate attention or in-depth help with the installation of the product, please call our 900-priority support number for service. This number gives you immediate access to senior-level technicians. The number is **900-555-4900**. You will be charged \$2.00 per minute. The charges will appear on your next phone bill.

Should your product need to be returned for service or replacement, see instructions on the next page.

Boca Research's on-line technical support includes the following support options:

- Browse our FAQs
- Browse upgrades and other files available for download
- Access our virtual technician for interactive on-line support
- Register your product on-line
- Sign up to be on our beta program
- View or download product manuals
- Request e-mail support
- Browse our glossary of terms
- Read through our white papers
- Read about our Y2K readiness

Your other support options include:

- **Phone Support: 561-241-8088**
- **Priority Support: 900-555-4900 (\$2.00 per minute charge)**
- **Technical Support E-mail:** support@bocaresearch.com (Current turn-around time for e-mail is about 72-96 hours, excluding holidays, weekends and e-mail sent after 3:00 pm on Fridays.)
- **QuickFax Product Information: 561-995-9456**
- **BBS: 561-241-1601**
- **CompuServe: GO BOCA**
- **Technical Support Fax: 561-997-2163**
- **Direct ftp access through:** <ftp://ftp.bocaresearch.com>

NOTE: CALLING TECHNICAL SUPPORT WITHOUT COMPLETE AND ACCURATE INFORMATION CONCERNING YOUR PROBLEM MAY BE BOTH TIME-CONSUMING AND FRUSTRATING FOR YOU.

1. When calling Boca Research Technical Support, have the model and serial number of the unit available.
2. Call our Technical Support Department between the hours of 8:00 a.m. and 6:30 p.m. EST Monday through Friday at (561) 241-8088. A technician will be available to discuss the problem(s) you are experiencing.

If factory service is required, you will be given a Return Merchandise Authorization (RMA) number. Please place this number on the outside of the package when you return the item(s) for service and reference it on any correspondence included in the package. Boca Research, Inc. will return any product which is not accompanied by an RMA number.

3. Refer to the Limited Warranty Statement at the beginning of this manual to determine if the product is covered under the Boca Research, Inc. Limited Warranty.
4. Certain parts will not be covered under the Boca Research, Inc. Limited Warranty. Dealer installed parts are warranted by the dealer. Parts which you have installed yourself are covered only by the supplier's warranties. In these cases, Boca Research, Inc. can identify which parts are defective, but will not replace such parts until specific written authorization is received from you. The cost of parts and labor involved in making such repairs will be billed to you C.O.D.
5. When sending the product to Boca Research, Inc. for repairs, please be sure to include:

- the ST2001 unit
- your name
- your return street address (for UPS purposes)
- phone number
- the RMA number mentioned above

Package the product securely in a container equivalent to the original packaging, and insure the package to protect against loss or damage during transit. Shipping charges must be prepaid; C.O.D. shipments will not be accepted. Please use the address below for all correspondence:

Boca Research, Inc.
RMA Department - RMA # _____
6500 West Rogers Circle
Suite 3000
Boca Raton, FL 33487-2841

NOTE ON INTERNATIONAL SHIPMENTS: Customer is responsible for all charges associated with shipping product directly to Boca Research's facility. This includes but is not limited to freight charges, customs charges, freight forwarding fees, storage fees, handling fees, documentation fees, duties, taxes, port charges, etc. Boca Research will NOT pay charges on freight which is not correctly routed directly to Boca Research's facility.

6. If the repairs performed on your product were covered by the warranty, Boca Research, Inc. will return it prepaid via UPS.

5

Specifications

Dimensions: 10.83 x 12.6 x 2.48 inches (275 mm x 320 mm x 63 mm)

Weight: 5.95 lb. (2.7 Kg)

Power rating: AC 100-230V, 50/60HZ

Power consumption: Max. 25W

Operating temperature: 41° F to 95° F (5° C to 35° C)

Storage temperature: -4°F to 140° F (-20° C to 60° C)

Glossary

A

AC. Alternating current. The standard 110-volt electrical current found in most U.S. homes.

address. See *E-mail address, URL.*

Address Book. A feature that allows you to save your often-used e-mail addresses. The Address Book is part of the Mail Center.

Automatic TV Setup A procedure that programs the ST2001 tuner to skip TV channels that broadcast only static in your area. Channel scan is performed during registration. You can also do it anytime by selecting Setup, then TV.

B

browser A program that enables you to navigate around the Internet. Most browsers provide links so that you can easily perform common tasks, such as going to the previous or next page.

C

coaxial cable A kind of a cable that carries television signals. A coaxial connector has one thin central pin. Also called *RF/coaxial cable*.

composite video A type of video signal used by televisions in the United States. Composite video provides picture quality better than RF, but not as good as S-Video. Composite video jacks are colored yellow.

D

domain In e-mail addresses, the domain is the suffix that indicates how the host computer is classified. Common suffixes are “com” for company, “gov” for government, “edu” for educational institution, “mil” for military, “net” for network provider, and “org” for nonprofit organization. Some domain names also indicate the country the host is in (for example, “ca” for Canada, “jp” for Japan). The domain name is always preceded by a period (“dot”).

E

e-mail Electronic mail, or e-mail, is like postal mail, except that messages are sent via phone lines and read on a computer or TV screen instead of on paper. You receive e-mail at your own address and send e-mail to others at their address.

e-mail address The text that specifies where an e-mail message is sent. A typical e-mail address looks like this: kmckenzie@nctv.com. The name in front of the “@” symbol (pronounced “at”) is the recipient of the mail (usually a person, but it can also be a group or company). The information after the “@” symbol identifies the computer (the “host”) to which the e-mail gets sent. Hostnames have two parts: a name and a suffix indicating the host’s “domain.”

encryption A way of coding information traveling over the Internet so that only the authorized people can access the information. For example, during the ST2001 registration process, all the information you provide is encrypted.

F

Favorites You can mark any Web site as one of your Favorites (select Save Page from the Menu Bar). Then you can easily go to that site by choosing it from your list of Favorites. To view your Favorites, select Favorites from the Menu Bar.

G

Guide A feature that displays an on-screen television program guide. When you press Guide on the remote or keyboard, you’ll see a list of TV programs broadcast on each channel. You can sort the listings by date, start time, and category, and you can select a program title for more information about the show.

H

highlight A yellow box around a selectable item on screen. To select an item on screen, you move the highlight (using the arrow keys on the remote or keyboard) and press Enter.

History A feature that enables you to return easily to a Web site you visited recently. When you press the History key on the keyboard, you’ll see miniature images of the Web sites you visited recently during your current session online. You can select one of the images to return to that Web site. Unlike Favorites, the History list is not preserved when you disconnect from the Internet.

Home The starting point for your Internet travels. Your Home is like a table of contents that contains links for places you’ll want to visit often, such as the Mail Center and the Internet.

host A computer that handles requests for data and services from other computers (called *clients*). Also called a “server.”

hypertext Text that you select to “link” to another page. Hypertext is usually displayed in a different color to discern it from regular text. When you select hypertext, other relevant information appears on screen. See also *link*.

I

infrared (IR) A technology that lets devices communicate with each other using IR “beams” instead of having to be connected with wires. TV remotes use IR; so does the ST2001 wireless keyboard. For IR devices to work properly, the line of sight between them must be free of obstructions.

Internet A worldwide network of networks—many thousands of computers that can communicate with one another, mainly via telephone lines. The Web is a part of the Internet. Many people use the terms “Web” and “Internet” interchangeably.

IR See *infrared*

IR Emitter A device for controlling components (such as a cable box or VCR) connected to your ST2001.

ISP See *service provider*.

L

link Text or a picture on a Web page that you can select to get more information. When you select a link, you see information relevant to that link. Most links take you to another Web page.

lock symbol If you see a symbol of a lock on the Menu Bar, it means the Web page you're viewing has been *encrypted*. Any data on the page—data sent to you or entered by you—can be viewed only by authorized people.

login name The name ST2001 uses to identify the people using it. A login name can be anything—just a first name or a nickname, for example.

M

Mail Center The place in ST2001 where you write, send, and read E-mail.

Mailbox The place in the Mail Center where you receive and read E-mail messages.

Menu Bar An on-screen navigation device. The Menu Bar provides a way to go quickly to your Home page, a specific Web site, the Mail Center, and other useful places on the ST2001 and the Web. You can display the Menu Bar at any time by pressing Menu Bar on the remote or keyboard.

modem A device that enables other devices (such as computers) to communicate with one another over telephone lines. The word *modem* comes from the term “modulator/demodulator.”

N

network Two or more computers or other devices connected to one another so that they can exchange information.

O

online When you're connected to the Internet, you are “online.” Information on the Internet (or Web) is also said to be “online.”

owner The person who registers ST2001. The owner is the only person who can make certain changes to the system, such as adding or removing users.

P

page The standard unit for displaying information on the World Wide Web. A page can be one screen, or it can be many screens that you can view by scrolling. See also *site*.

Parental Control A feature that enables you to restrict access to Internet sites that may contain material inappropriate for children or sensitive viewers. Each user has the option to have Parental Control on or off. To turn it on or off, select Users then User Setup.

PPP Point-to-point protocol. A protocol is a set of rules used to transmit data over telephone lines. This type of connection enables devices to communicate with other devices that use TCP/IP connections.

protocol A set of rules or standards that electronic devices use to communicate with one another.

R

registration The process of setting up an account so that you can use your ST2001 to access the Internet and exchange E-mail.

RF Abbreviation for *radio frequency*. An RF cable is the same thing as a *coaxial* cable. This is the standard connection used to transmit television signals from an antenna or cable to the TV.

RF modulator A device that enables a television without A/V jacks to receive audio and video signals from another device.

S

scroll When you look at a Web page bigger than your TV screen, you *scroll* to see the rest of the page. When you scroll, part of the page becomes visible on screen, while another part moves off the screen. To scroll, you select an arrow pointing down (to see more at the bottom) or up (to see more at the top).

Search A feature that lets you look for specific terms on the Web. When you press Search on the remote or keyboard, a text box appears on screen. You can type words in this text box and then select Search. You'll see a list of Web sites containing the words you typed in. You can also specify a search from the Net button on your Home page.

server See *host*.

service provider Just as a telephone company provides phone service, a service provider supplies Internet service. Also called ISP, for Internet Service Provider, and “dial-up service.”

site A “place” on the World Wide Web that has its own address (*URL*). Also called a “Web site.” One Web site can contain many Web pages.

smart card A magnetized piece of plastic, the size of a credit card, used for login security. When you want to connect to the Internet, you insert the smart card into the slot on the front of the ST2001. The smart card is optional.

S-Video A type of video signal used by televisions in the U.S.

Among the options for connecting the ST2001 to your television (composite, RF), S-Video provides the highest-quality video signal.

surfing Viewing content on the Internet, usually by selecting “links” that take you to related sites. Also called “browsing.”

T

TCP/IP Transmission Control Protocol/Internet Protocol. A set of rules that electronic devices use to communicate with one another. All the computers and other devices on the Internet use TCP/IP.

text box An area on screen where you can enter text. For example, during registration, you type your name and address in a text box.

tuner A device that receives television signals and determines which TV channel is displayed. Most VCRs have tuners in them. The ST2001 also has a tuner.

TV Bar An area at the top of your TV screen that displays television programs while you're browsing the Web. To view the TV Bar while browsing select the TV Bar button from the Menu Bar.

U

URL Uniform Resource Locator—the address for a Web site. Each Web page has its own unique URL. A typical URL looks something like this: *http://www.zenith.com*. When typing in a URL, it's important to enter it exactly, or the browser might not be able to find it. See also *domain*.

W

Web The World Wide Web, or simply “the Web,” is a part of the Internet that supports graphics, hypertext, sound, and animation.

World Wide Web See *Web*.

Web site See *site* and *page*.

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