SUR-47 / SUR-BU

Universal Touch Screen Remote Control with IR /RF transmission base unit

User's Manual

sima

Preface

About this manual

This manual is designed to make using the SUR-47 Touch Screen Remote Control as easy as possible. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice.

Copyright

© Copyright Sima Products Corporation 2003

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic or other means, in any form, without prior written permission of Sima Products Corporation.

Trademarks

All trademarks and registered trademarks are the property of their respective owners.

FCC - The Federal Communication Commission Radio Frequency interference Statement includes the following paragraph:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

* Reorient or relocate the receiving antenna
* Increase separation between the equipment and the receiver.
* Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
* Consult the dealer or an experienced radio/TV technician for help.

The user should not modify or change this equipment without written approval from Sima Products Corp. Modification could void authority to use this equipment.

90 Day Limited Warranty

Sima Products Corporation warrants this product against defects in materials and workmanship for a period of 90 days from the date of purchase. During the warranty period, the product will be repaired or replaced, at Sima's option. If you think you need to send your unit in for service, **call Sima Customer Service at 800-345-7462.**

Conditions

Ship unit, freight prepaid, including reasonable proof of purchase and description of problem to:

Attn: Customer Service
Sima Products
140 Pennsylvania Ave., Bldg #5,
Oakmont, PA 15139

This warranty is void if any defects are caused by abuse, misuse, negligence or unauthorized repairs. All liability for incidental or consequential damages is specifically excluded. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Table of Contents

Chapter 1 - Introducing the SUR-47 1
SUR-47 Features 1
Unpacking the SUR-47 1
Identifying Components 2
Chapter 2 - Getting Started 4
Installing The Base Unit 4
Using the IR blaster cable 4
Installing Batteries 4
Battery Indicator 4
Battery Tips and Precautions 5
About the Touch Screen 5
Turning the Touch Screen On 5
Touch Screen Precautions 5
Touch Screen Buttons 5
Using Hard Keys 6
Entering the Setup Menus 6
Navigating the Setup Menus 6
The Setup menu tree 7
Chapter 3 - Setting Up the SUR-47 8
Device Menu 8
Creating a New Device 9
Re-Labeling Devices 10
Setting the RF Address 10
Deleting Devices 11
Code Menu 11
Using Pre-Code to Program Devices 12
Using the Learning Mode 13
Before Using the Learning Function 13
Erasing Key Codes 15
Erasing Device Codes 16
Debugging Device Codes 17
LCD Layout 18
Using Macros 18
Creating a New Macro 19
Deleting a Macro 20
Viewing a Macro 21
Setting Channels 21
Adding a Quick Channel 22
Deleting a Quick Channel 23
Relabeling a Quick Channel 23

Using the Transmission Feature 24
Miscellaneous Menus 24
Setting the Date and Time 25
Setting the Power Down Time 26
Setting the Backlight On Time 26
Setting the Beep Signal 27
Checking the Version Number 27
Resetting the SUR-47 to Factory Defaults 28
Chapter 4 - Controlling Devices 29
Selecting a Device to Control 29
Alternating Touch Screen Pages 29
Viewing the Macro Key 30
Using the Quick Channel Buttons 31
Controlling Devices 32
Using the AUX Key 32
Appendix A - Specifications 33
Appendix B - Accessories 34
Appendix C – Troubleshooting 35
Troubleshooting Tables 35

Chapter 1 - Introducing the SUR-47

Congratulations on your purchase of the SUR-47 Touch-Screen Remote Control. The SUR-47 is a digital universal remote control that is easy to use, enabling you to control up to 16 electronic devices equipped with an infrared (IR) remote.

- The SUR-47 comes with an IR/RF base unit to receive and send signals from the remote and operate devices from any room in your house or up to 100 feet away.
- The SUR-47 uses a Touch Screen panel and control buttons and is simple to use. Simply select a device and the appropriate screen appears. You can control up to sixteen devices, including VCRs, DVDs, TVs, and satellite dishes.
- The SUR-47 is easy to set up. You can quickly configure each device in your household or office using the innovative "learning eye" feature. In addition, the advanced macro function enables you to initiate a chain of up to 60 commands with the touch of a single button.
- The SUR-47 is equipped with a remote finder feature to help locate it when lost.

Convenient and easy to use, the SUR-47 provides you with a complete central control solution.

Note: *This manual helps you learn how to use the advanced features of the SUR-47. It does not explain how to use the functions for your devices. Please refer to your device user's manual for information related to your device.*

SUR-47 Features

The following list identifies the SUR-47's key features.

- Choice of IR (direct to device) or RF (to base unit to device) signal transmission.
- Lost remote finder button - activates beep to locate remote when lost.
- Large Touch Screen display.
- Macro sequence function—each macro can store 60 commands.
- Controls up to 16 devices including DVDs, TVs, Satellite Receivers, VCRs and CDs.
- Learns the IR codes from your existing remote controls to quickly set up devices.
- Pre-programmed manufacturer's codes for many models.
- User programmable buttons for each device include 6 hardware buttons, the device key and 42 soft buttons.
- Optional PC Interface for connection to a personal computer.

Unpacking the SUR-47

After you have unpacked the SUR-47, check the contents to make sure the following items are included.

- SUR-47
- This User's Manual
- Pre-programmed Code List
- SUR-BU base unit
- IR blaster cable
- AC adapter

If any of the above items are missing or appear damaged, contact your dealer immediately. Do not throw the shipping carton away in case you need to ship your SUR-47.

Identifying Components

Refer to the following illustration to identify the components of the SUR-47.

Infrared Emitter: Point the infrared emitter at the device you want to operate.

Light Sensor: Detects ambient light to automatically set the LCD panel backlight.

Quick Channel: Enables you to group channel types for easy access.

LCD: Backlit LCD emulates the hard key controls, and provides a user interface for the SUR-47.

Touch Screen: Enables you to change channels, configure the SUR-47, create macros, and more.

Backlight/LCD: Press this button to turn on the LCD backlight or to wake up the unit.

Hard Key: These buttons enable you to turn the controlled devices on and off, change channels, and adjust or mute the audio volume.

Page/Date: Press this button to browse through the device screens. Press and hold this button to display the date and time.

Device Keys: Press these buttons to display remote control screens for the devices listed.

Learning Eye: Point your device's remote control at the learning eye to enable the SUR-47 to learn your device's infrared codes.

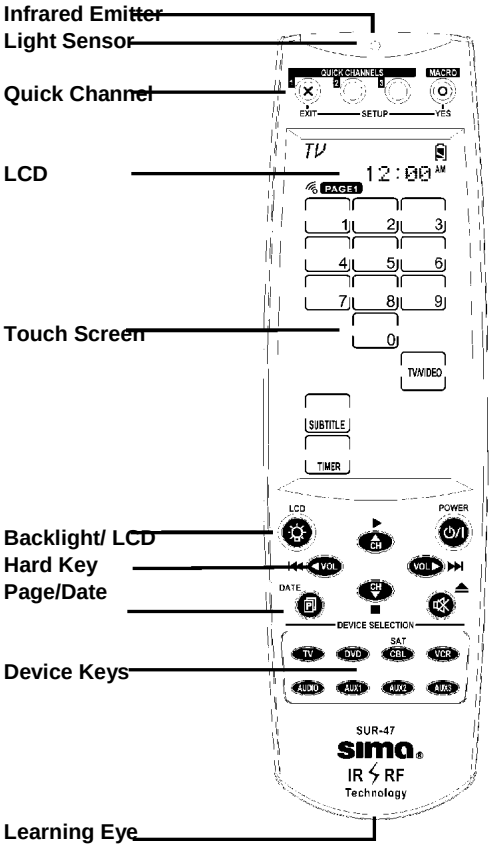


Figure 1A: SUR-47 Front View

1. RF antenna
2. Base Unit address setting
3. IR Out jack
4. AC adapter input

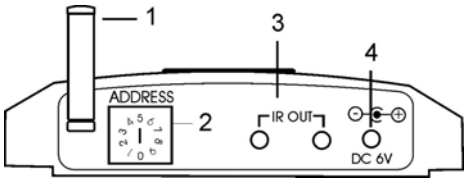


Figure1B: SUR-BU Rear View

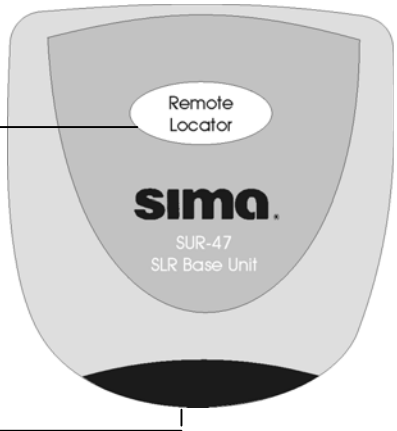
Fig. 1B IR Out jack – Connect the IR blaster cable to this jack to operate a specific device.

Base Unit address setting – Set the RF address of the base unit by selecting an address number between 0 and 9.

AC adapter input – Plug AC adapter into jack.

RF Antenna – to receive RF signal

Remote Locator Button



RF

Infrared Emitter

Figure 1C: SUR-BU front view

Fig. 1C Remote Locator Button – Press to trigger beep signal and locate remote.

Infrared Emitter– Sends IR signal, aim at equipment

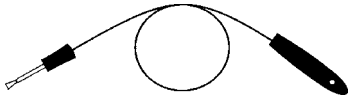


Figure 1D: IR Blaster cable with front and rear adhesive

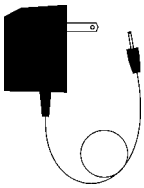


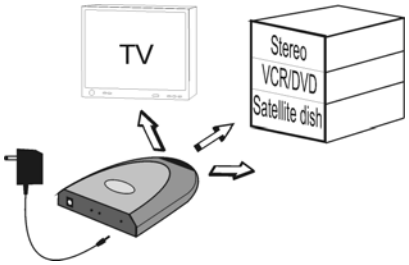
Figure 1E: AC adapter

Fig. 1D IR Blaster Cable – Attach directly to equipment that is not within directional range of base unit. With front and rear adhesive.

Fig. 1E AC Adapter – Plug into base unit and into 120V AC outlet.

Chapter 2 - Getting Started

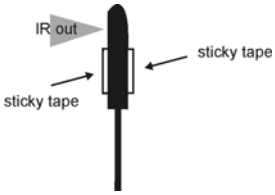
Installing The Base Unit



The SUR-BU base unit is equipped with 4 IR emitting LEDs which are positioned in a North, South, East and West configuration to flood the room with IR signals. Place the unit so the IR transmission can be "seen" by the IR receiving windows on your TV, VCR, DVD and A/V equipment. You may want to experiment to find a location that gives the best results. Rubber feet for table top placement and screws for wall mounting are included.

1. Plug AC adapter into AC adapter jack on base unit and into 120V AC wall outlet.
2. Set address code if necessary. See page 10, *Setting the RF Address* for more information.
3. Position base unit so that it is aimed at equipment. Use IR blaster cable for equipment out of directional range.

Using the IR blaster cable



The IR blaster cable can be used with individual pieces of equipment that face different directions, are located in a cabinet or otherwise not in direct line of sight with the base unit. The cable comes with double stick tape on both sides to allow attachment directly to a device or to aim at several devices. Contact Sima at 800-345-7462 if additional IR blaster cables are needed.

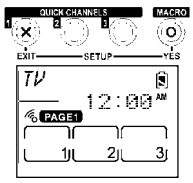
Installing Batteries

The SUR-47 operates on four AAA Alkaline batteries (not included). Batteries must be inserted before you can operate the SUR-47.

1. Turn the remote over, push the tab in the direction of the arrow on the battery cover and slide the cover off.
2. Insert the batteries, matching the batteries to the (+) and (–) marks inside the battery case.
3. Snap the battery cover back into place.

Battery Indicator

A battery icon is displayed in the upper right-hand corner near the time display. When the batteries are almost depleted, the battery low icon appears. When the battery low icon appears, you are not allowed to enter setup mode.



Battery full **Battery half full** **Battery low**

Figure 2: The Battery Icon

Battery Tips and Precautions

- Immediately replace the batteries when the battery low icon appears.
- The SUR-47 will not lose programmed data when replacing batteries, but will reset the time.
- Always use fresh batteries. Alkaline batteries are recommended. Do not mix different types of batteries.
- Match the positive (+) and negative (–) polarities of the batteries to the diagram in the compartment.
- Do not expose the batteries to excessive heat or flame.
- Keep batteries out of the reach of children.
- Weak batteries reduce the effective distance of the unit.
- To reduce danger of leakage and damage, remove used batteries when used longer than two years.

About the Touch Screen

The Touch Screen reduces the number of buttons by changing its configuration for each device selected. In this way, the Touch Screen provides 672 buttons (16 devices x 2 pages x 21 buttons per page).

Turning the Touch Screen On

Touch the screen to activate it. It will turn itself off after the user-defined power down time period. (To change the down time, see *Setting the Down Time* on page 26.

Touch Screen Precautions

Please read the following instructions carefully:

- Tap the LCD Touch Screen gently; never use force.
- Do not use a pen or any sharp object to tap the screen. You might damage the surface.
- Keep the Touch Screen dry. Wipe off any spills immediately. The SUR-47 is not waterproof; never immerse it in liquid.
- Don't expose the SUR-47 to extreme temperatures. Keep it away from heat sources.
- Avoid dropping the SUR-47.
- Don't drop anything on the Touch Screen.
- Clean the LCD Touch Screen with a soft cloth. If needed, dampen the cloth slightly before cleaning. Never use abrasives or cleaning solutions.

Touch Screen Buttons

The Touch Screen buttons enable you to operate the SUR-47 and your external devices. Use these buttons to program codes from your existing remotes, control your devices, and set up command sequences called macros. You will hear a beep when you press a button. To activate or deactivate the beep, see *Setting the Beep Signa*l on Page 27. the SUR-47 turns itself off after a user-specified time. To change the time, see *Setting the Power Down Time* on page on page *26*. Press the LCD button to wake the unit up.

Using Hard Keys

The buttons on the bottom part of the SUR-47 enable you to operate devices as well as program the SUR-47. Three buttons have special functions:

DATE **Page/Date Button:** Toggles from Page 1 to Page 2 of the device buttons menus. If held down for more than two seconds, the date and time are displayed.

POWER **Power Button:** Turns devices off and on. During Touch Screen Layout (see page 18) displays all possible LCD options.

LCD **Backlight/LCD Button:** Press this button quickly to turn on the backlight or to wake up SUR-47 if LCD has turned off.

Entering the Setup Menus

Press and hold the ⊗ and the ◎ buttons simultaneously to access the setup menus.

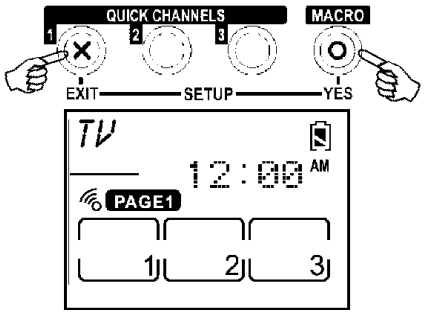


Figure 2: Entering the Setup Menus

Note: When the battery low icon appears or you are in Quick Channel mode, you are not allowed to enter setup mode.

Navigating the Setup Menus

While in the setup menus, press ▲ and ▼ on the Touch Screen to scroll up and down through the menus and settings. Press ◀ and ▶ to scroll left and right through menus and settings. Press OK or ◎ to confirm settings, and press ⊗ to exit a menu.

Note: When using the setup menus, you must press each button within two minutes of pressing the last button. Otherwise, the SUR-47 will exit setup mode and return to normal operation mode.

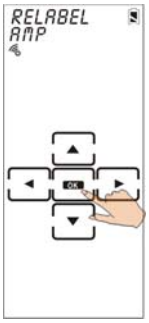


Fig:4 Navigating Menus

The Setup menu tree

SETUP

DEVICE	NEW	*New Device*
	RELABEL	*Edit Device Label*
	ADDR	*Address for RF*
	DELETE	*Erase Device Code*
CODE	PRE-CODE	*Pre-programmed Code*
	LEARN	*Code Learning*
	DEL KEY	*Erase Key Code*
	DEL BANK	*Erase Device Code*
	DEBUG	*Collect Unrecognizable (Un-learnable) IR Codes*
LAYOUT		
MACRO	NEW	*Set Macro Key*
	DELETE	*Erase Macro Key*
	VIEW	*View Macro Process*
QUIK CHN	ADD	*Set Channel Classification*
	DELETE	*Delete Channel Classification*
	RELABEL	*Edit Channel Classification*
TRANS	PRE-CODE	*Pre-programmed Code*
	MEMORY	*Memory*
OTHER	CLOCK	*Date & Clock*
	POWER	*Power Down*
	BACKLIT	*Backlit Period*
	BEEP	*Beep on/off*
	VERSION	*Program & Pre-programmed Code Version*
RESET		*Reset To Factory Setting*

Figure 5: Setup Menu Hierarchy

Chapter 3 - Setting Up the SUR-47

Before the SUR-47 can be used to control a device, it needs to be configured to display your existing remote control buttons. It must be programmed to send the correct infrared signals.

This chapter guides you through the Touch Screen layout and SUR-47 setup procedure.

Before continuing, refer to *Navigating the Setup Menus* on page 6 to learn how to navigate the menus.

Device Menu

Enter the setup menus, scroll to Device and press OK to enter the device menu. In the device menu, press ▲ and ▼ to scroll through the menu options:

- **New:** enables you to set up a new device
- **Relabel:** enables you to rename a device
- **Delete:** enables you to delete a device configuration

Note: The SUR-47 includes eight default devices:

TV DVD SAT VCR

AMP TUNER CD AUX

When a new device is created, the SUR-47 automatically loads a default device configuration making it easy for you to edit the new device layout.

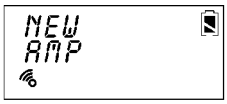
Creating a New Device

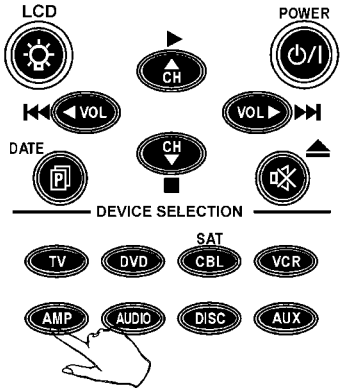
Follow these steps to create a new device:

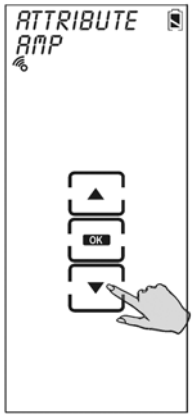
1. Press ▲ or ▼ to select NEW.
2. Press OK.
3. Press the device key you want to use for this device (for example AMP).
4. Edit the device label. The label can be up to 8 alphanumeric characters:
   - Press ▲ or ▼ to scroll through the characters (from A-Z, 0-9, and the space key).

   Note: Press and hold ▲ or ▼ to quickly scroll through the characters.
   - Press ◀ or ▶ to move to the previous or next character. When selected, the character blinks.
   - Press OK to confirm the entry.

   You are prompted to select an attribute for the new device.
5. Press ▲ or ▼ to select a device whose attributes will be loaded to the new device.
6. Press OK to confirm the entry.



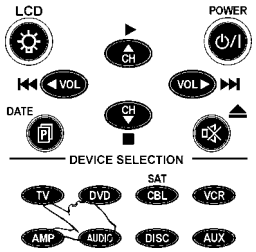




Re-Labeling Devices

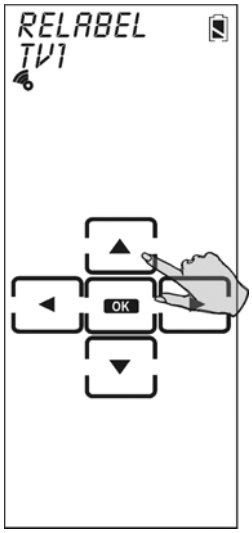
Follow these instructions to edit a device label.

1. Press ▲ or ▼ to select RELABEL.
2. Press OK.
3. Press the device key you want to relabel (for example TV).



4. Edit the device label:
   - Press ▲ or ▼ to scroll through the characters (from A-Z, 0-9, and the space key).

   Note: Press and hold ▲ or ▼ to quickly scroll through the characters.
   - Press ◀ or ▶ to move to the previous or next character. When selected, the character blinks.
   - Press OK to confirm the entry.
5. Press Exit ⊗ to exit to the device menu.



Setting the RF Address

Each device button (TV, VCR, DVD etc.) can be set to operate on either IR or RF frequencies. When transmitting an IR signal the SUR-47 will operate the selected device by directly sending IR signals to the device. To operate in this mode, you must point the SUR-47 at the desired device.

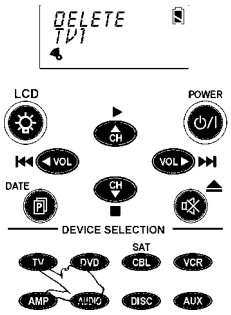
To operate in the RF mode, the SUR-47 transmits an RF frequency signal to the SUR-BU base unit, which sends an IR signal to the desired device. Both the device and the base unit must be set to the same RF address to operate properly. To set the RF address:

1. Press ▲ or ▼ to select ADDR
2. Press OK
3. Select either IR to operate in the IR mode or an RF address (0-9) for the base unit and device
4. If an RF address is selected, set the base unit to the same RF address by adjusting the ADDRESS wheel on the rear panel as needed.

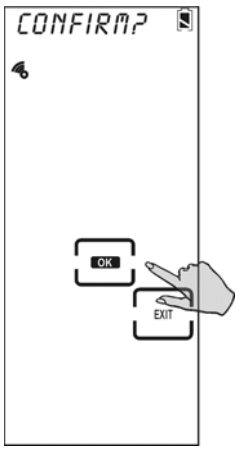
Deleting Devices

Follow these instructions to delete a device configuration including the LCD display and codes.

1. Press ▲ or ▼ to select DELETE.
2. Press OK.
3. Press the device key you want to delete (for example TV).



4. Press ◎ to delete the device. You are prompted to confirm the deletion.
5. Press OK to confirm the deletion. Press EXIT to cancel the deletion.
6. Press Exit ⊗ to exit the setup menu.



Code Menu

Enter the setup menus, scroll to Code and press OK to enter the code menu. In the code menu, press ▲ and ▼ to scroll through the code menu options:

- **Pre-Code -** use this method to automatically configure all buttons on the SUR-47 for use with a specific manufacture model number. This feature is the fastest way to program the SUR-47 but requires that your device be located in the Pre-programmed Code List that was bundled with the SUR-47. Some newer or less-common devices may not be pre-programmed and must be learned using the Learning Function.
- **Learn -** use this method to directly learn the proper infrared signals from another remote control. This method is perfect for newer or less common devices or if a certain button still does not perform the desired function after using pre-programmed manufacturer codes; however, not 100% of codes can be learned and it may be necessary to collect unrecognized codes and send them to Sima Products. (See page 17 for more information on unrecognized code collection.)
- **Del Key -** erases the key code
- **Del Bank -** erases the device code
- **Debug -** collects unrecognizable (un-learnable) infrared codes for debugging purposes

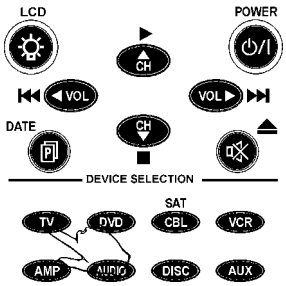
Using Pre-Code to Program Devices

Follow these instructions to program a device using preprogrammed codes.

Press ▲ or ▼ to select PRE-CODE › and then press OK.

Manually Selecting the Code

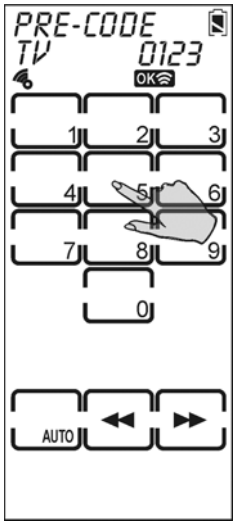
1. Turn on the device you want to program the SUR-47 to control.
2. Select the device (for example TV).
3. Check the preprogrammed code list that was bundled with the SUR-47 for the four-digit code number of your device. If no code is displayed, that means this device has no pre-code.



4. Enter the four-digit code number and press YES button ◎ to confirm the entry.

   Note: If the code only has one digit (for example, 0001), you do not have to input the preceding zeros; in this example, press '1'.

5. Press the POWER button ⏻ to test the code. The device you are trying to control should turn on (or off) as you press this button. If not, return to Step 2 and try another code.



You can also press ◀◀ or ▶▶ to decrease or increase the four-digit code number.

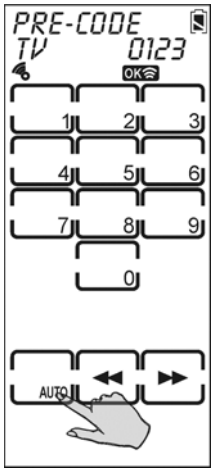
Note: Some codes are designed to operate more than one model. It may take several tries to find the code that works with your unit.

6. Press YES to confirm the selection and save the settings or click EXIT to exit.

   Note: When you enter the Manufacture Code and an 'ERROR' message is displayed, it could be for two reasons:

   1. That code number doesn't exist in the Manufacture Code table yet.
   2. That code number is not in the range of the Manufacture Code table reserved for the default device screen

Selecting a Code Automatically



1. Turn on the target device you want to control.
2. Press the device hardware button (for example TV).
3. Point the SUR-47 at the target device.

   Press the AUTO button. An "OK" message displays while the SUR-47 automatically cycles through the codes. Wait for the device to turn on and then press the POWER button or AUTO key to stop the automatic search.

   The last tried code is displayed in the upper right-hand corner. Test this code by pressing the POWER button .

   If it doesn't work, you may need to press the tuning down key and try a few of the previously scanned codes.
4. Press YES to confirm and save the settings or EXIT to exit.

Using the Learning Mode

Follow these instructions to detect and learn a remote control's configuration.

Before Using the Learning Function

Before you start using the SUR-47's learning function, please heed the following precautions:

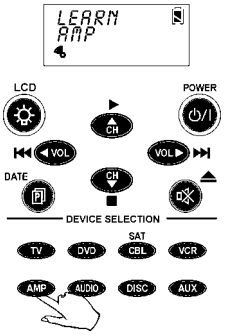
- Not all infrared codes are learnable by the SUR-47. You may need to first collect the codes (see page 17 for more information) and then email them to Sima Products. New system firmware will be sent to you allowing your SUR-47 to learn the codes.
- To change from a device that has already been programmed, delete all of the commands for the first device before teaching new ones. For example, to operate the living room TV instead of the bedroom TV, delete all commands for the bedroom TV first. Then re-configure the TV device screen for the living room TV.

Code learning does not work with all devices. Select one device screen in advance before using code learning mode. All keys except the quick channel keys, sleep, page and macro can be learned.

Learning from Another Remote Control

Before using learning mode, set both remotes on a flat surface so that the device's remote control IR is pointed at the SUR-47's learning eye, which is located at the bottom of the unit.

1. Press ▲ or ▼ to select LEARN.
2. Press OK.
3. Point the target device's remote control at the SUR-47 learning eye located at the base of the unit (see Figure 1A: SUR-47 Front View).
4. Press the button corresponding to the target device.

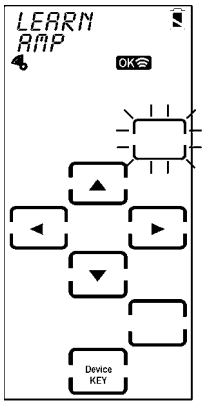


The SUR-47 Touch Screen sequentially displays screens corresponding to first the hard keys, then page one of the soft keys, and finally page two of the soft keys. The blinking rectangle denotes the key being learned.

5. Press the corresponding button of the target device's remote control.

   The SUR-47 screen displays an **OK** message if the code was successfully learned or an **ERROR** message if the code was not learned.

   Press PAGE to toggle between hard and soft key displays.
   Note: When the remote has learned the last button on the page, the next page is automatically displayed.



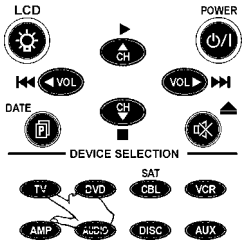
Hard Key Page

6. Press EXIT to exit learning mode.

Erasing Key Codes

Follow these instructions to delete SUR-47 key codes.

1. Press ▲ or ▼ to select DEL KEY.
2. Press OK.
3. Select the device whose key code you want to delete (for example TV).



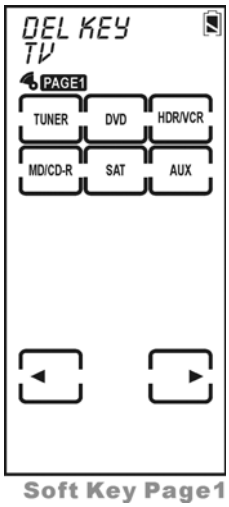
4. Select the key corresponding to the code that you want to delete.

   The SUR-47 screen displays an **OK** message if the code was successfully deleted.

   Press PAGE to toggle between hard key and soft key displays.

   Press the device buttons to select a different device.
5. Repeat the above steps to delete other keys.
6. Once you press the button that you want to delete, the code is deleted.

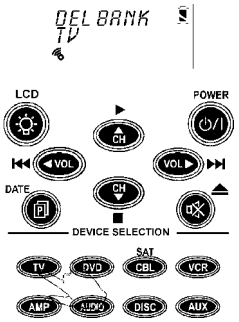
   Press YES or EXIT to exit.



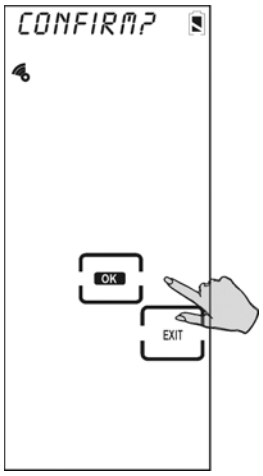
Erasing Device Codes

Follow these instructions to delete a device code from the SUR-47.

1. Press ▲ or ▼ to select DEL BANK.
2. Press OK.
3. Select the device whose codes you want to delete (for example TV).
   Press PAGE to scroll between device pages.



4. Press YES to delete the device codes. You are prompted to confirm the deletion.
5. Press OK to confirm the deletion or EXIT to cancel.



Debugging Device Codes

Use this procedure if the SUR-47 is unable to recognize the infrared signals from another remote control.

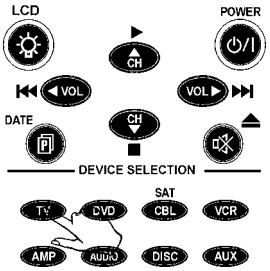
Once you have collected unrecognizable codes, you can use the optional SUR-PC link cable (see *Appendix B* - Accessories on page 34 for more info) to upload them to your personal computer and then email them to Sima Products for analysis.

The email address is info@simacorp.com

Note: *Every time you enter DEBUG mode, the SUR-47 replaces previously stored unrecognized codes with new ones. If you have more than one remote that is not programmable, upload the first remote's unrecognized codes and then gather the second remote's unrecognized codes.*

Set up the LCD display before using this function. See *LCD Layout* on page 18.

1. Press ▲ or ▼ to select DEBUG.
2. Press OK.
3. Point the target device's remote control at the SUR-47 learning eye located at the bottom of the unit (see Figure 1A: SUR-47 Front View).
4. Select a device (for example TV).

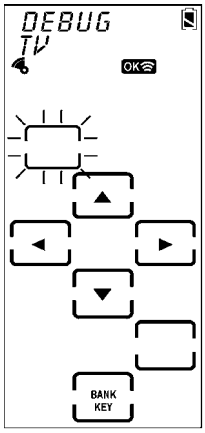


The SUR-47 Touch Screen sequentially displays screens corresponding to first the hard keys, then page one of the soft keys, and finally page two of the soft keys. The blinking rectangle denotes the key being learned.

5. Press the corresponding button of the target device's remote control.

   The SUR-47 screen displays an **OK** message if the code was successfully learned.

   Press PAGE to toggle between hard key and soft key displays.
6. Press YES or EXIT to exit debug mode.

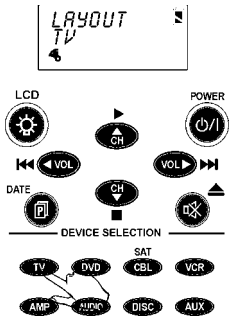


Hard Key Page

LCD Layout

The layout edit mode enables you to customize the SUR-47's Touch Screen display to match your existing remote controls.

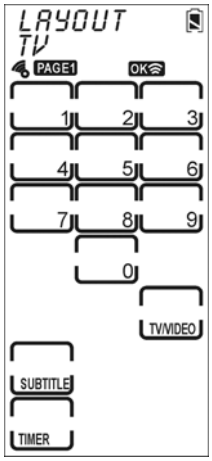
1. Press ▲ or ▼ to select LAYOUT.
2. Press OK.
3. Select a device (for example TV).



4. On the device pages, select the key you want to customize. Continue pressing the key to scroll through the available choices for the key.

   Press POWER to display available icons for the page of LCD display.

   Press PAGE to scroll through the LCD screens for the device.
5. After you have finished customizing the layout, press YES to confirm changes, or press EXIT to exit without making any changes.



Using Macros

A macro is a series of commands. The Macro feature enables you to initiate a sequence of up to 60 commands with a single button. You can create a macro on any control button and insert time delays into the sequence. Remember, however, assigning a macro eliminates the button's original function.

Note: *You cannot assign a macro to any of the eight Device keys, the page/date key, the backlight key, and the macro key, or the three Quick Channel keys.*

Enter the setup menus, scroll to Macro and press OK to enter the macro menu. In the macro menu, press ▲ and ▼ to scroll through the menu options:

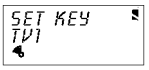
- **New** enables you to set up a new macro
- **Delete** delete a macro
- **View** view the macro steps

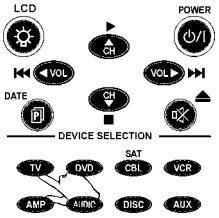
Creating a New Macro

Follow these steps to create a new macro:

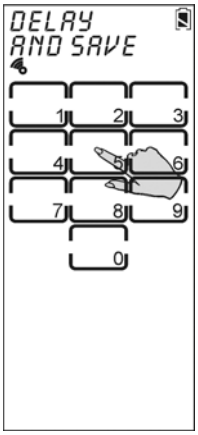
1. Press ▲ or ▼ to select NEW.
2. Press OK.
3. Press the device key you want to use for this macro (for example TV), and then press any key to define as the macro key. You hear three beeps to indicate that macro creation mode has started.

   Note: If you select a key that already has a macro stored in it, the new macro will replace the old macro.





4. Press the key or button sequence that you want to record.
5. Press YES ◎. You enter the Delay and Save screen. Do one of the following:
   - Enter the number of seconds you want to delay between each command. For example, if you want a six second delay between turning on your TV and then turning on your VCR, press '6'.
   - Press YES ◎ to save the macro and exit macro creation mode.



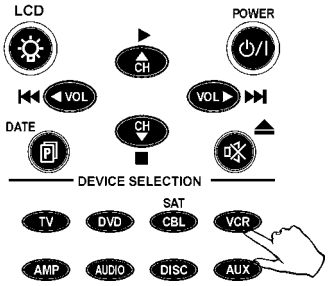
The following steps shows how to record a macro that turns on your TV, switches the TV to DVD viewing mode, turns on the DVD, and plays a DVD. Create other macros to suit your needs.

1. Press the EXIT ⊗ and YES ◎ buttons to enter the SETUP mode.	**9.** Press the DVD device button
2. Press ▲ or ▼ to select MACRO.	**10.** Press YES ◎ to select a time delay (1-10 sec) for each step. (Press '0' on the screen to select 10 seconds.)
3. Press OK to enter the MACRO menu.	**11.** Press the DVD power button
4. Press OK to enter the NEW menu.	**12.** Press the DVD play key.
5. Press OK to enter the SET KEY menu.	**13.** Press Yes ◎To save the macro
6. Press the TV device button	**14.** Press Yes ◎to exit the MACRO mode
7. Press the TV power button	**15.** Press EXIT ⊗ twice to exit the SETUP menu and return to the main menu.
8. Press the TV/Video key	

Deleting a Macro

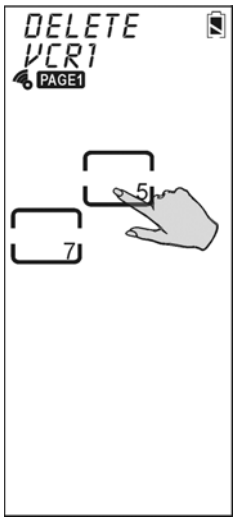
Follow these steps to delete a macro:

1. Press ▲ or ▼ to select DELETE.
2. Press OK.
3. Press the device key for the macro you want to delete.



The screen displays the macro key for the device.

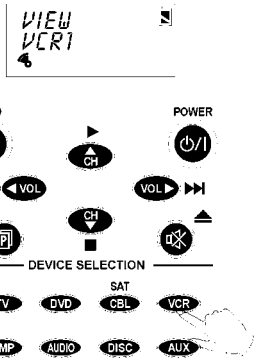
4. Press the macro key you want to delete; the macro key is deleted when the key is pressed.
5. Press YES ◎ or EXIT ⊗ to exit



Viewing a Macro

Follow these steps to view the steps of a macro:

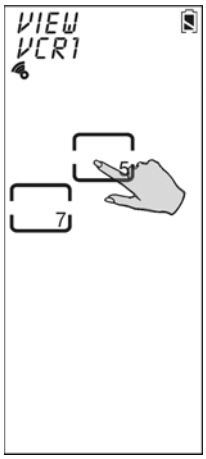
1. Press ▲ or ▼ to select `VIEW`.
2. Press OK.
3. Press the device key for the macro you want to view.



The screen displays the macro keys for the device.

4. Press the macro key for the macro you want to view.

   The screen displays the macro sequence.
5. After viewing the macro, press EXIT ⊗ to exit this menu.



Setting Channels

The SUR-47 enables you to classify channels into Quick Channel groups making it easier to locate all the programs on every device.

Enter the setup menus, scroll to QUIK CHN and press OK to enter the Quick Channel menu. In the channel menu, press ▲ and ▼ to scroll through the menu options:

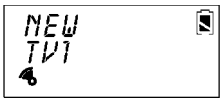
- **`Add`** enables you to add a Quick Channel
- **`Delete`** enables you to delete a Quick Channel
- **`Relabel`** enables you to rename a Quick Channel label

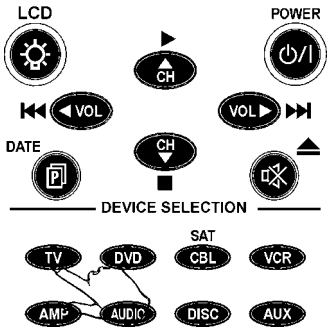
Note: The SUR-47 has three groups of Quick Channels; the total number of channels that can be assigned to all three groups is 50. For example, if 40 channels are included in the "News" category, 8 channels in "Movies", then only 2 channels can be included in the "Kids" category

Adding a Quick Channel

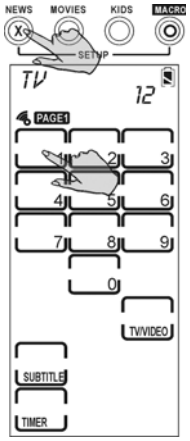
Follow these steps to add a new channel to a Quick Channel group:

1. Press ▲ or ▼ to select **ADD**.
2. Press OK.
3. Press the device key you want to use to set the Quick Channel (for example TV).



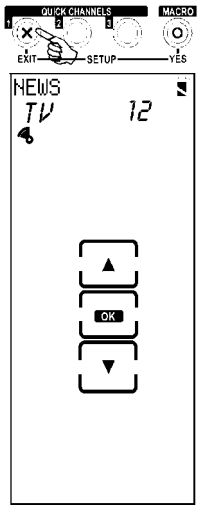


4. Enter the channel number (e.g., 12).
   Note: You can only use buttons number 0-9, +10, and Enter to enter the channel.
5. Select the Quick Channel classification (e.g., News).
6. Repeat steps 4 to 5 to continue adding channels.
7. Press YES ◎ to exit to the setup menu.



Deleting a Quick Channel

Follow these steps to delete a Quick Channel:

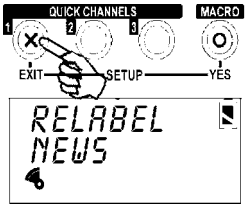


1. Press ▲ or ▼ to select DELETE.
2. Press OK.
3. Press the device key whose Quick Channel you want to delete (for example TV).
4. Press the Quick Channel that has the channel you want to delete (e.g., News).
5. Press ▲ or ▼ to locate the channel.
6. Press OK to delete the channel.
7. Repeat the previous steps to delete other channels.
8. Press YES ◎ to exit.

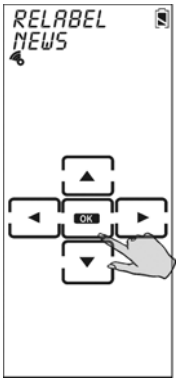
Relabeling a Quick Channel

This option enables you to edit the Quick Channel label on the LCD.

Follow these steps to edit a Quick Channel:



1. Press ▲ or ▼ to select RELABEL.
2. Press OK.
3. Press the Quick Channel that you want to relabel (e.g., News).



4. Edit the Quick Channel. The name of the Quick Channel can be up to 8 alphanumeric characters:
   - Press ▲ or ▼ to scroll through the characters (from A-Z, 0-9, and the space key).

   Note: Press and hold ▲ or ▼ to quickly scroll through the characters.
   - Press ◀ or ▶ to move to the previous or next character. When selected, the character blinks.
   - Press OK to confirm the entry.
   - Press EXIT ⊗ to exit to the device menu.

After setting up the QUIK CHN, press any Quick Channel button (e.g., "NEWS") to open the Quick Channel screen. Use the CH+ and CH- to scroll through all channels stored in this Quick Channel category. Press that Quick Channel button (e.g., "NEWS") again to exit the Quick Channel screen.

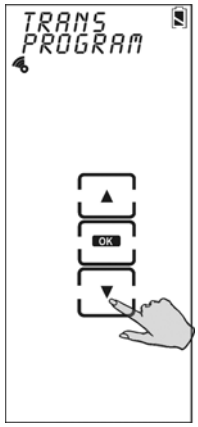
Using the Transmission Feature

The SUR-47 can transmit data to another SUR-47 or to a PC with the optional USB-UART cable. You can download firmware upgrades from the Internet or transfer configuration data.

Enter the setup menus, scroll to TRANS and press OK to enter the transmission menu.

Note: Before you use this feature to transfer data with your PC, you must connect the optional USB-UART cable. Refer to Appendix B for more information.

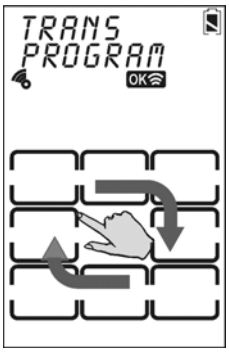
1. Press ▲ or ▼ to select TRANS.
2. Press OK.
3. Press ▲ or ▼ to select one of the following options:
   - PRE-CODE – transmits Preprogrammed Codes only
   - MEMORY –transmits All Flash Memory Data (Preprogrammed Code included)



4. Press OK to begin transmission.

   During the transmission, the LCD displays blank keys as shown in the illustration.

   When the transmission is completed, **OK** is displayed on the LCD. If there is an error in transmitting the data, **ERROR** is displayed.



Miscellaneous Menus

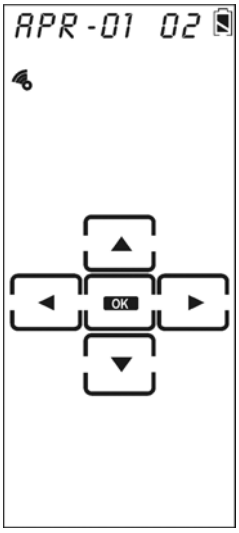
Enter the setup menus, scroll to Other and press OK to enter this menu. Press ▲ and ▼ to scroll through the menu options:

- **Clock** enables you to set the date and time
- **Power** enables you set the time that will elapse before the SUR-47 turns off
- **Backlight** lets you set the time that the backlight remains on
- **Beep** turns the key and button beep signal on and off
- **Version** displays the SUR-47 firmware version

Setting the Date and Time

1. Press ▲ or ▼ to select CLOCK.
2. Press OK.
3. Enter the date:
   - Press ▲ or ▼ to scroll through the characters:
     Month: JAN~DEC
     Day: 01~31
     Year: 02~50 (2002~2050)

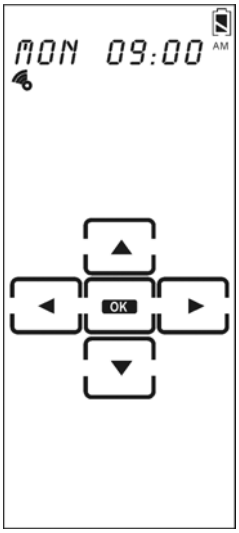
   Note: Press and hold ▲ or ▼ to quickly scroll through the characters.
   - Press ◀ or ▶ to cycle between the month, day, and year fields. When selected, the characters in the field blink.



4. Press OK to confirm the date. You are prompted to enter the hour and minute.
5. Set the hour and minute:
   - Press ▲ or ▼ to scroll through the characters (from 1~12 hours, 00 ~59 minutes).

   Note: Press and hold ▲ or ▼ to quickly scroll through the characters.
   - Press ◀ or ▶ to move the cursor to the previous or next character.
   - Press OK to confirm the time.

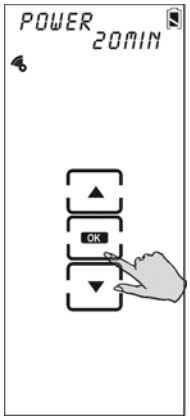
   Note: The clock is in a 12-hour format.



Setting the Power Down Time

1. Press ▲ or ▼ to select POWER.
2. Press OK.
3. Press ▲ or ▼ to select the time that will elapse before the SUR-47 turns off.

   Note: The power down time can be set from 01 ~ 90 minutes at 1-minute increments.
4. Press OK to confirm the setting.

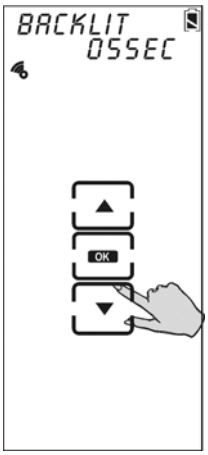


Setting the Backlight On Time

1. Press ▲ or ▼ to select BACKLIT.
2. Press OK.
3. Press ▲ or ▼ to select the time that the backlight stays on after pressing a key or button.

   Note: The backlight ON time can be set from 00 ~ 60 seconds at 1-second increments.

   Choose 0 second will disable Backlight function.
4. Press OK to confirm the setting.



5. Press ▲ or ▼ to set the light sensor sensitivity manually or press POWER to automatically detect the ambient light brightness.

   Note: The light sensor levels are 0 ~ 16.

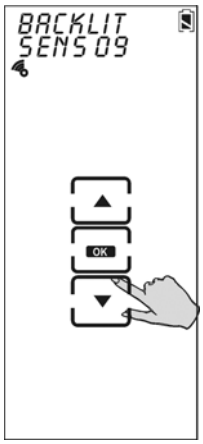
   0 never comes on

   5-8 normal dark room

   9-12 bright room

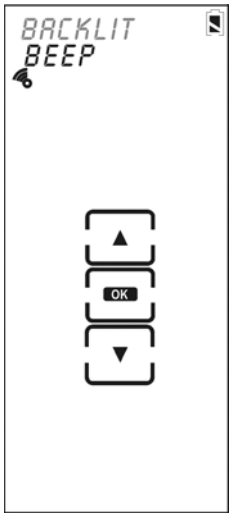
   16 - always comes on

6. Press OK to confirm the setting.



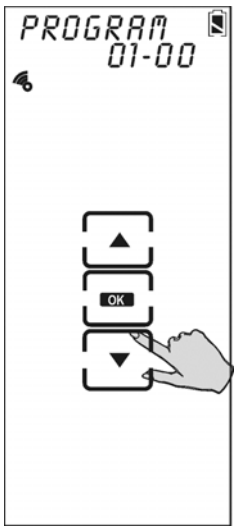
Setting the Beep Signal

1. Press ▲ or ▼ to select BEEP.
2. Press OK to toggle the beep on and off. When on, appears in the LCD screen.
3. Press EXIT ⊗ to exit.



Checking the Version Number

1. Press ▲ or ▼ to select VERSION.
2. Press OK.
3. Press ▲ or ▼ to view the program and pre-programmed (pre-code) version numbers.
4. Press EXIT ⊗ to exit.

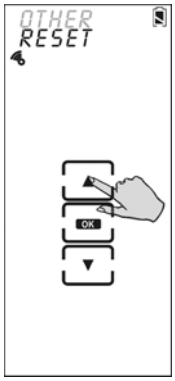


Resetting the SUR-47 to Factory Defaults

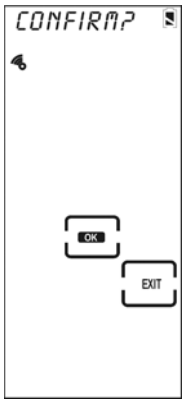
This item enables you to set the SUR-47 back to the factory default configuration.

Note: All macros, taught codes and user-defined keys are erased when resetting the SUR-47 to factory defaults!

1. Press ▲ or ▼ to select RESET . .
2. Press OK.



3. You are prompted to confirm the reset.
4. Press OK to confirm the reset or press EXIT ⊗ to exit.



Chapter 4 - Controlling Devices

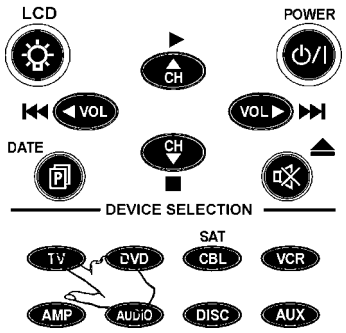
The SUR-47 is designed to be simple and straightforward to operate. This chapter explains how to use the SUR-47 to control all your devices.

Note: *This Chapter assumes you have already setup the SUR-47, assigned Infrared codes to different buttons and installed the SUR-BU, aiming it at your equipment.*

Selecting a Device to Control

Press one of the eight device buttons to pick the device. Press the same device button again to cycle through different devices in that bank.

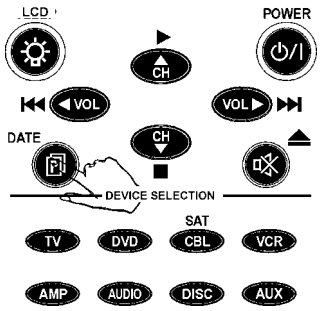
Note: The maximum number of devices you can assign to the 8 device keys of the SUR-47 is 16.



For example, if there are 8 devices in "TV", 2 in "DVD", 2 in "CBL", 1 in "VCR", 1 in "AMP", 1 in "Audio", and 1 in " Disc", then no device can be included in "Aux".

Alternating Touch Screen Pages

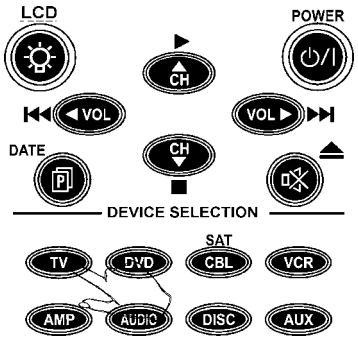
Press the PAGE Button to alternate between page 1 and page 2 of the device buttons.



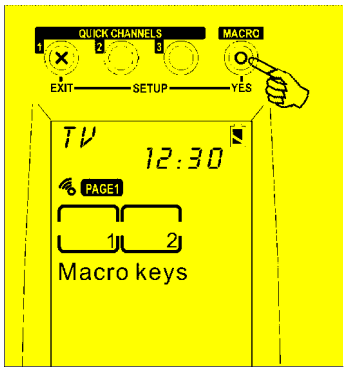
Viewing the Macro Key

You can view which keys are assigned to macros for any particular device. Follow these instructions:

1. Press the DEVICE button.



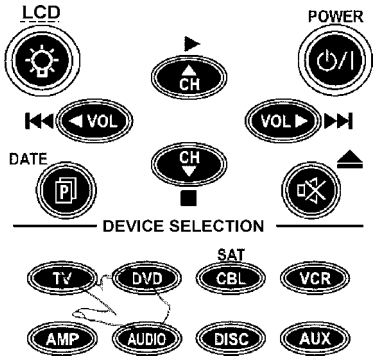
2. Press the MACRO button. The assigned macro keys are displayed for the device.



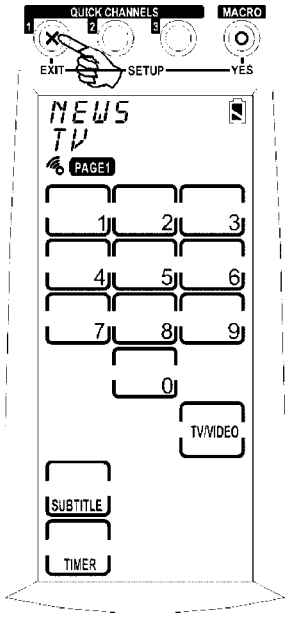
Using the Quick Channel Buttons

For information on setting up the Quick Channel buttons, refer to *Setting Channels* on page 21.

1. Press the Device button that corresponds to the quick channel you want to use (for example, TV).



2. Press the Quick Channel button. The selected Quick Channel is displayed with the device.
3. Press CH or CH to scroll through the channels you assigned to this Quick Channel (refer to *Setting Channels* on page 21).
4. Press the Quick Channel classification button again or press any Device key to return to return to normal operating mode.



Controlling Devices

1. In direct IR mode, make sure the SUR-47 is pointing at the target device. In RF mode make sure SUR-BU is pointing toward target device.
2. Press the hardware button or Touch Screen key you want to send.

Note: ***The Record Key Must Be Held Down for 2 Seconds****: As a safety feature, the record button needs to be pressed for 2 seconds. This is to prevent accidentally pressing the VCR record button and overwriting a tape.*

Using the AUX Key

The control buttons on the AUX device screen can easily be made identical to the control buttons on any other device screen. You can use it to operate a TV, VCR, or other device. For more information refer to *Creating a New Device* on page 9.

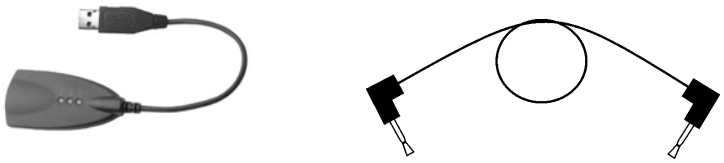
Appendix A - Specifications

Model	SUR-47 Remote
Dimensions (WxHxD):	2.3 x 8.2 x 0.9 inches (6.0 x 20.9 x 2.6 cm)
Weight (with Batteries):	7.0 oz (195g)
Weight (without Batteries):	5.3 oz (150g)
Number of Device:	16 devices
LCD Screen (WxH):	1.5 x 3.5 inches (3.9 x 9.0 cm)
Soft Button:	2 pages/21 keys (42 keys total)
Hard Buttons:	20 (6 command buttons)
Backlighting:	Blue LED
Learning Frequency:	10 kHz – 125 kHz, 455 kHz & Pulse
Memory:	256 KB flash memory
Batteries:	4 AAA Alkaline Batteries
Power Consumption:	LCD Off: 50 µA LCD On: 450 µA Operation: 150 mA (Max)
Battery Life:	Approx. 3 - 6 months
RF frequency	433 MHz
Operating Distance:	Approx. 30 feet (IR) /100' RF
PC Interface (option):	SUR-PC

Model	SUR-BU Base Unit
Dimensions (WxHxD)	4.2 x 4.5 x 1.0 inches (11.0 x 11.5 x 2.6 cm)
Weight	7.0 oz (195g)
RF Addresses/Freq	10 / 433 MHz
Power Input	5.5V, 500 ma
Operating Distance	Approx. 100' RF / 15' IR

Appendix B - Accessories

PC Interface Kit – SUR-PC

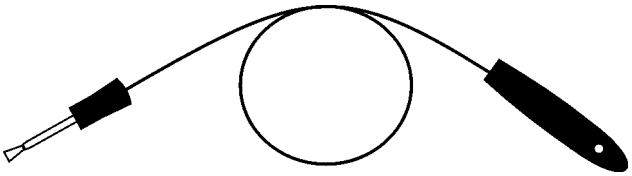


The SUR-PC is an optional link cable that enables transmission of system setup to a personal computer or another SUR-47. The following information can be transferred using the TRANS selection in the setup menus:

- PROGRAM – MCU Program
- PRE-CODE – Preprogrammed Code only
- MEMORY – All Flash Memory Data (Pre-programmed Codes included)

Please refer to the SUR-PC manual for instructions on using the cable.

IR Blaster Cable – SUR-IR



The IR Blaster Cable is an optional 6 ft. cable with an IR emitter on one end. It enables the base unit to send signals to a device that would not be within its normal directional range. A device can be operated by aiming the cable at the device or placing it directly onto the device.

Additional RF Base Unit – SUR-BU

The RF Base Unit receives the RF signal sent by the SUR-47and then sends the appropriate IR signal to the desired device. The SUR-BU should be aimed at the equipment you want to operate. It has 10 RF address settings that correspond to settings selected in the SUR-47. Additional base units can be placed throughout the house.

Appendix C – Troubleshooting

Troubleshooting Tables

Problem	Solution
LCD does not show anything when you touch it or press the hardware buttons.	Batteries may be dead. Replace the batteries with 4 new AAA Alkaline Batteries (page 4). Check that the batteries are properly installed by pressing the SLEEP button.
The SUR-47 doesn't operate a device.	Make sure that the desired device screen on the SUR-47 LCD panel has been selected. Ensure programming with the learning function (page 12) or using the manufacturer codes (page 13) has been properly done. If you see the ERROR message when pressing buttons, re-teach the button. **In IR mode:** Move closer to the device. The maximum operating distance is approximately 30 feet. Ensure that you are aiming the SUR-47 directly at the device and that there are no obstructions between the SUR-47 and the device. **In RF mode:** Make sure the SUR-BU base unit is aimed at desired equipment. Make sure RF address on base unit matches settings in SUR-47.
You cannot operate a device even after teaching the device using the learning function.	Make sure that your SUR-47 has correctly "learned" device's remote control code. (page 12). Delete the device data from the SUR-47 and carry out the learning function again (page 12). Make sure you did not program more than one remote for a given device.

Problem	Solution
You see "ERROR" display on the LCD during the learning procedure.	Make sure you hold the other remote's button down for about 2 seconds. Make sure you did not program more than one remote for a given device. Make sure the two remotes are not too close or too far apart and are aiming directly at each other - keep apart between 2~4 inches (5~10cm).
You see "ERROR" display during operation.	The button that you pressed has not been taught. Learn the button using the learning procedure (page12).
Your VCR will not record.	As a safety feature on SUR-47, you must press the REC key for 2 seconds.
Problems changing channels.	If your original remote requires the *ENTER* key to be pressed after a channel is selected, press the *ENTER* key to select the channel.
Macro does not work.	Be sure to aim the SUR-47 at the devices while the macro commands are being sent. Macro was not properly set up. Repeat macro set-up procedure (page 18).
IR LEARNING is not successful.	Replace batteries in the SUR-47 and the remote you are trying to configure. Keep distance between remotes to about 2~4 inches. Do not learn near an incandescent or florescent lamp. Bright or indirect light may interfere with learning codes. Memory capacity is full (48 keys for each of 16 models). The learning process has no errors, but you still can't control your AV devices: repeat the learning procedure again. If you still can't solve the problem, use the debug code feature and email codes to Sima Products (page 17). Original remote might not be compatible with learning procedure.
A button of your existing remote performs two or more functions	Some remotes issue multiple commands when a button is held down. Please be sure to teach different buttons of SUR-47 for these different commands. Each button of SUR-47 can only learn one command.

Problem	Solution
The LCD screen turns off.	The SUR-47 is preset automatically to switch the LCD off after the Power Down time. Just tap the SLEEP button to turn the SUR-47 back on again. You can also reset the Power Down time period (page 26).
One or more devices do not respond in RF mode.	When operating properly, the red LED light on the front of the base unit will blink while sending or receiving signals. To test base unit: 1. Press Remote Locator button. 2. Use remote in RF mode. LED should blink during each test. RF addresses for device(s) and base unit may not set to the same setting. Check setting on each and reset if needed. Check to make sure SUR-47 is set to operate in RF mode. Base unit is not aimed at desired device. Re-position base unit. No AC power to base unit. Make sure AC adapter is plugged in. Batteries may be low in remote. Change batteries if needed.

Sima Products Corporation
140 Pennsylvania Ave
Bldg. #5
Oakmont, PA 15139
800-345-7462
www.simacorp,com