APPENDIX I

: USER'S MANUAL

Universal Remote Control

OWNER'S MANUAL

simply MORE powerful™

RF20

MasterControl™

Congratulations!

Congratulations on purchasing Universal Remote Control's MASTERCONTROL™ RF20 Pre-programmed and Learning Remote Control! You now have the power to control your entire home entertainment system with one easy-to-use remote. The RF20 can be used with thousands of audio/video Components because of the extensive code library pre-programmed into the remote. And, the RF20's impressive lineup of special advanced features can automate and customize the operation of your system in many ways. So... get ready to sit back, relax and simplify your home entertainment experience.

The Quick Setup DVD Program Guide supplied with the RF20 will assist you in programming your remote by guiding you through an easy step-by-step process. This Owner's Manual is designed as a companion reference source to the DVD Guide, should you need to refer back to a particular section, or review certain instruction detail not covered in the DVD. However, if you are unable to watch the DVD Guide for some reason, everything you need to know about programming the RF20 is contained in this Manual.

UNIVERSAL®
remote control

MASTERCONTROL™ RF20 Owner's Manual
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CONTNETS

CONTROL LOCATIONS

LIGHT BUTTON

SCREEN-LABELED DISPLAY BUTTONS

TITLE

FAVORITE CHANNEL

PAGE BUTTONS
changes the page of buttons displayed

PAGE NUMBERS

MAIN BUTTON
takes you to the main menu

FUNCTION BUTTONS

MAIN

TV

CABLE

DVD

VCR

AUDIO

1 · 2

AV

PAGE

ON   MAIN   OFF

VOL   MUTE   PREV CH   CH

GUIDE

MENU   INFO   EXIT

SEL

1   2   3

4   5   6

7   8   9

+10   0   ENT

UNIVERSAL®
remote control

RF20

Getting Started-Overview

This is what MASTERCONTROL™ RF20 is all about!

The RF20 is designed to operate up to 10 different Audio/Video Components and is pre-programmed to operate virtually all brands of TV, VCR, DVD and CD Players, Cable Set Top Boxes, Satellite Receivers, TiVo and other DVRs, Audio Components, Tape Decks, Multimedia PCs, XM Radio, Ipod, X-Box, Lighting Controls and other custom installation products. It also offers an impressive lineup of special features designed to provide you with many time-saving conveniences and enhance your overall entertainment experience. However, we strongly recommend that you fully complete all of the Basic Setup steps before proceeding to customize your RF20 with any of the special advanced features.

Battery Installation

The very first step is to insert the four AAA batteries that are included in the package into the battery compartment located in the back of the remote. Just press the tab and lift off the cover. Please be sure to insert the batteries correctly as you see in the diagram. Remember, there is a positive and negative end to each battery and you can tell by the + (positive) and - (negative) symbols. Once the batteries are correctly installed, replace the cover. Now you're ready to start!

GETTING STARTED
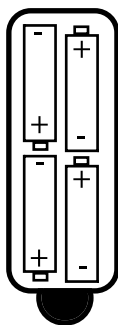
Activating Component Commands – Simple, Easy, Intuitive

Once you've programmed RF20 for your Components, all you have to do to operate a specific Component is first, press the MAIN button. This will display Page 1 of the MAIN menu on the LCD screen. Page 1 of the MAIN menu displays five Components. Then, simply select the Component you want to operate by pressing the corresponding Screen-Labeled Component Display Button on the right side of the LCD Screen. As an example, if you press the TV Display Button, the display label at the top of the screen will change from MAIN to TV, and all the buttons on RF20 will work your TV. To operate another Component, simply press the MAIN button again to return to Page 1 of the

MAIN menu and select the next Component you want to operate.

If you don't see the Component you want to control on Page 1 of the MAIN menu, just use the PAGE (▲) (▼) buttons on the left side of the screen to bring up Page 2 of the MAIN menu which displays an additional five Components.

Each Component is provided with five pages of pre-labeled command display buttons (or space for additional command display buttons). Once again, simply use the PAGE (▲) (▼) buttons to take you to the next command page, or return you to the previous command page.

TV DEVICE BUTTON

MAIN BUTTON
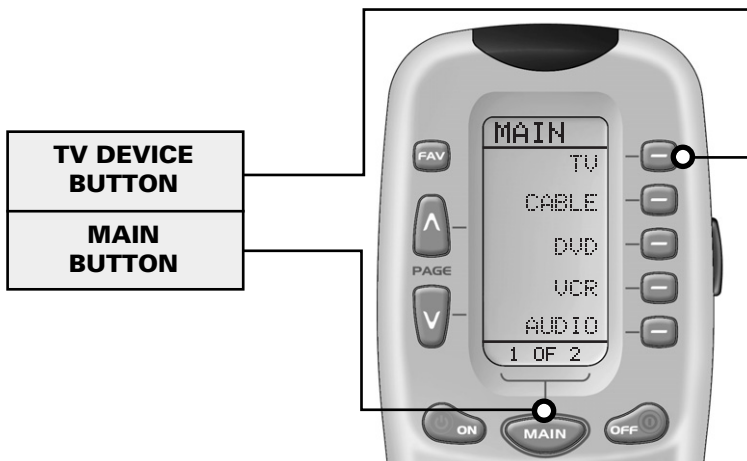
Light Button

The fully backlit keypad makes the RF20 easy to use in the dark or dim lighting conditions. Simply press the LIGHT button to backlight all the keypad buttons and LCD screen. To turn off the backlight, press the LIGHT button again, or just wait ten seconds (the backlight automatically shuts itself off). Lights out!

Try it out!

LIGHT
BUTTON

MAIN
TV
CABLE
DVD
VCR
AUDIO
1 OF 2

FAV
PAGE
ON   MAIN   OFF
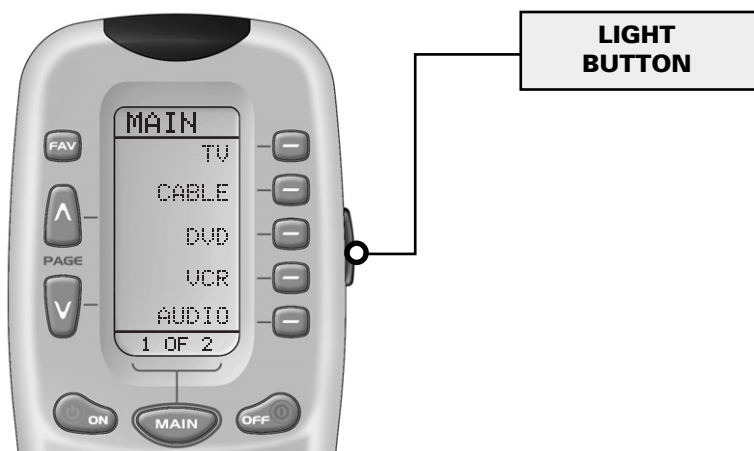
Basic Setup - Overview

There are two ways to program the RF20:

- **The Pre-Programmed Code Method**
- **The Learning Method**

The Pre-Programmed Code Method allows you to set up all the buttons at once, so it's the fastest and easiest of the two methods. The Learning Method allows you to transfer functions from other remotes (old or new), one button at a time.

Pre-Programmed Code Method

STEP 1:
The pre-programmed 3-digit codes are found in the back of this Manual on page 45. The codes are listed by Component category (i.e., TV, VCR, DVD, etc.), then by brand name. For instance, if you want to locate a code for a Sony TV, first locate the TV category, and then look for the Sony brand.

Once you have located the 3-digit code (or in some cases, several code numbers) for the Component that you want to operate with your RF20, write them ALL down on a piece of note paper. It's important that you write down all the codes because only one code is going to work for you.

STEP 2:
Now, turn on the Component you want to program... let's say your TV to start. Look up your TV's manufacturer setup code from your reference list.

BASIC SETUP

STEP 3:

Press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of the LCD screen. This signals that you are now in setup mode.

IMPORTANT:
You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

MAIN
TV
CABLE
DVD
VCR
AUDIO
1 OF 2

FAV

PAGE

ON   MAIN   OFF

VOL   MUTE   PREV CH   CH

GUIDE

MENU   INFO   EXIT

SEL

1 2 3
4 5 6
7 8 9
+10 0 ENT

MAIN BUTTON

ENTER BUTTON

BASIC SETUP

STEP 4:
Press the P-PRO display button to select the Pre-Programmed Method.

The screen will then display the five Components from Page 1 of the MAIN menu.

To display Page 2 of the MAIN menu that lists an additional five Components, simply press the PAGE (▲) (▼) buttons.

FIRST FIVE
DEVICE NAMES

PAGE
BUTTONS

P-PRO
BUTTON

BASIC SETUP

SETUP
P-PRO
LEARN
EDIT
MACRO
FAV
1 OF 2

ON   MAIN   OFF

P-PRO
TV
CABLE
DVD
VCR
AUDIO
SELECT

ON   MAIN   OFF
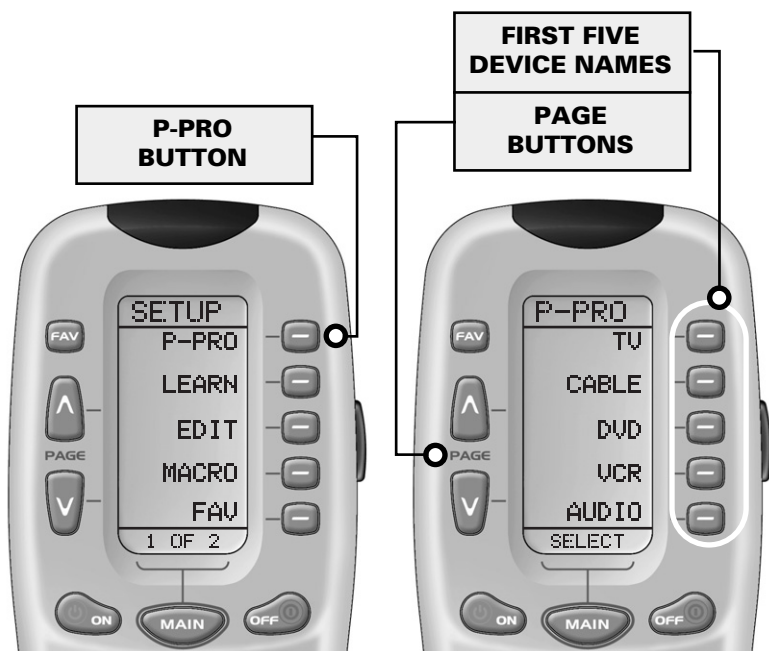
STEP 5:
Press the Component display button you want to program. For example: If you want to setup the TV Component button, press the TV Component display button. The display at the bottom of the LCD screen will flash "FROM - TABLE".

STEP 6:
In this step you verify the type of component you plan to operate with this component button. For example: If you plan to operate the TV component with the TV button, simply press the TV display button once again. However, if for example you are setting up AUX to operate a second DVD Player, you would first need to press AUX in Step 5, and then DVD in Step 6.

BASIC SETUP

NOTE:
If the Component fails to turn off after you have entered all the code numbers listed for your brand, you can scan through all the other code numbers that are pre-loaded into the RF20 for that Component (in this case TV) by using the UP or DOWN display buttons on the screen. (There is a chance that your Component was actually manufactured by another brand.) However, most of the code tables are so large that it is usually faster to use the Learning Method on Page 15.

BASIC SETUP

STEP 7:
Point the RF20 toward the Component you want to program, (in this example, TV), and punch in the 3-digit code that you wrote down for that specific Component. Use the Number buttons 0-9 on the remote to punch in the code. If the 3-digit code number that you just punched in is correct, the Component will turn off. If the Component does not turn off, continue entering code numbers from your list until the Component turns off. Some brands have several possible code numbers.
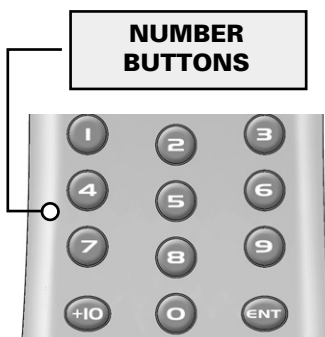
STEP 8:
When the Component turns off, press the ON button to turn the Component back on. Now you can test the Volume and Channel buttons (for TV), or PLAY and STOP (for VCR and DVD) to make sure they all work. If any of the buttons do not work properly, you need to find a new correct code. For

UP & DOWN BUTTONS

NUMBER BUTTONS

TV
089
UP
DOWN
SAVE
EXIT
NUMBER

ON   MAIN   OFF

example, maybe your Sony TV turned off with code number 147, but the volume controls did not work properly. If this is the case, try the next code number listed for that Component until you find a perfect match.

ON BUTTON	
VOLUME BUTTONS	
CHANNEL BUTTONS	
PLAY BUTTON	
STOP BUTTON	

BASIC SETUP

BASIC SETUP
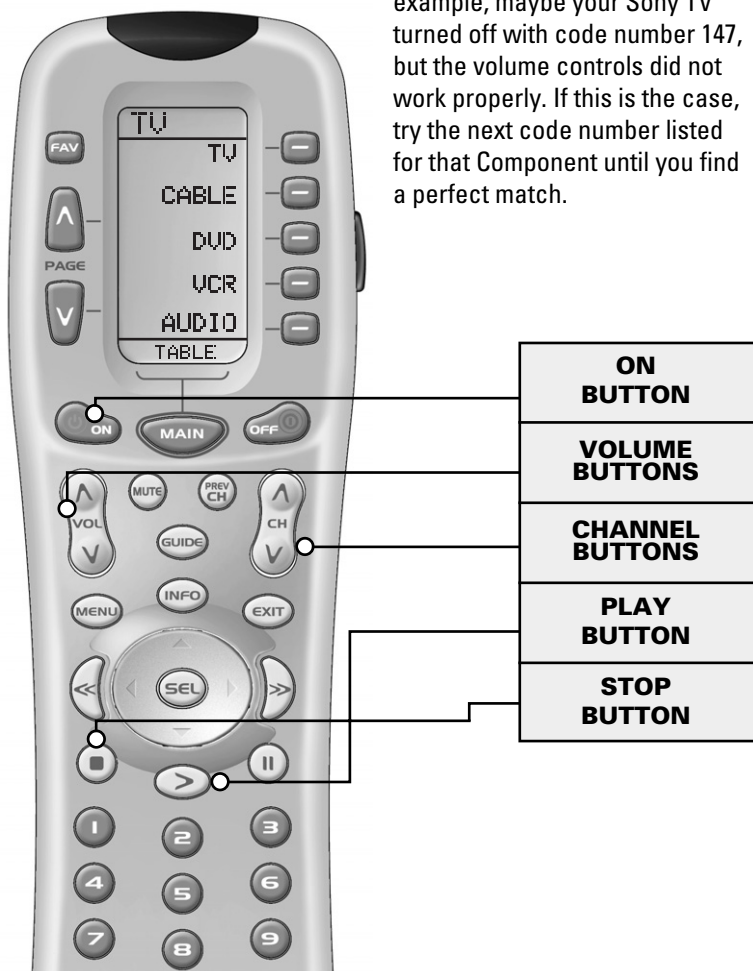
STEP 9:
Once you have found the right code, save the code number by pressing the SAVE display button that appears on the LCD screen. The LCD screen will blink "SAVED" two times, signaling that the code number has been successfully saved.

SAVE
BUTTON

TV
089
UP
DOWN
SAVE
EXIT
NUMBER

FAV
PAGE
ON   MAIN   OFF
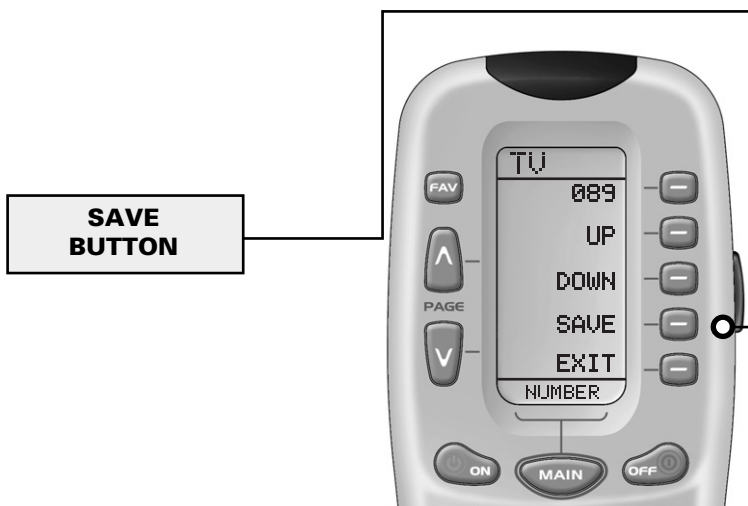
STEP 10:

Exit SETUP mode by pressing the MAIN button two times. When the LCD screen displays MAIN, you are back in normal operating mode.

NOW, PROGRAM THE REST OF YOUR COMPONENTS BY REPEATING STEPS 1 THROUGH 9. IN MOST SYSTEMS, YOU CAN FINISH BASIC SETUP IN JUST A FEW MINUTES AND PUT ALL YOUR OLD REMOTES AWAY.

TV

TV

CABLE

DVD

VCR

AUDIO

TABLE

FAV

PAGE

MAIN
BUTTON

ON   MAIN   OFF

BASIC SETUP
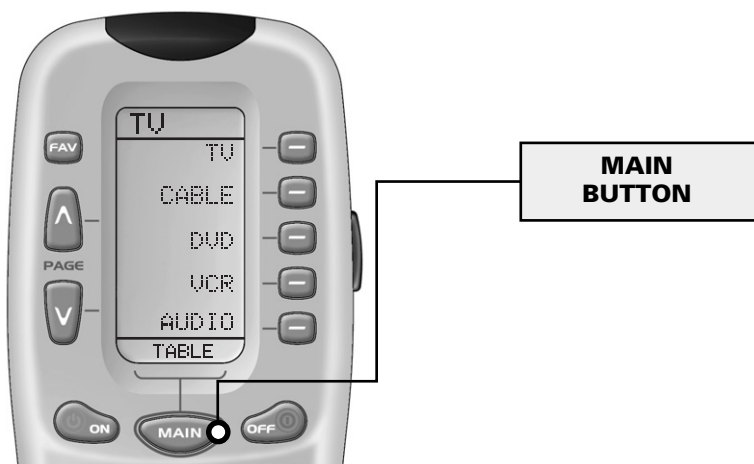
Learning Method

The RF20 can actually 'learn' commands from other remote controls (old or new), one-button-at-a-time, so it will never become obsolete. RF20 is the last remote you'll ever need! Just follow these simple steps:

STEP 1:
Line-up the RF20 with the other remote control, head-to-head, one or two inches apart.

STEP 2:
On the RF20, press and hold the MAIN and ENT (Enter) buttons at the same time for approximately three seconds, until the word "SETUP" is displayed at the top of the LCD screen. This signals you are now in SETUP mode.

IMPORTANT
You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

MAIN
BUTTON

ENTER
BUTTON

STEP 3:
Press the LEARN display button on the LCD screen. The top of the screen will change to "LEARN" and display the five Components from Page 1 of the MAIN menu.

LEARN

To display Page 2 of the MAIN menu that lists an additional five Components, simply press the PAGE (▲) (▼) buttons.

STEP 4:
Select the Component you want to teach commands to by pressing that Component display button on the LCD screen (in this example, TV). The top of the TV screen will change to "TV".

TV

NOTE: If you want to teach any command to a Component button, press the desired Component display button once the top of the screen displays "MAIN", by pressing the PAGE button. The top of the screen wil change to "READY". Then go to STEP 6.

SETUP
P-PRO
LEARN
EDIT
MACRO
FAV
1 OF 2

FAV

PAGE

LEARN
BUTTON

BASIC SETUP
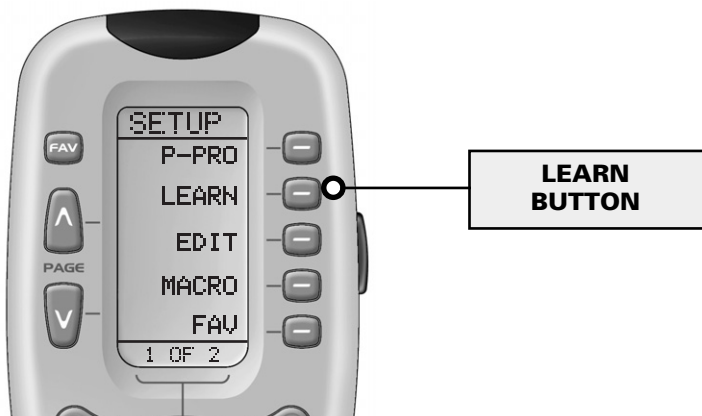
STEP 5:
Press any button on the RF20 that you want to teach a command to. The top of the screen will change to "READY" and the bottom of the screen will display the button name you pressed.

READY

NOTE: If you don't see the display button you would like to teach on the LCD screen, use the PAGE (▲) (▼) buttons. The only buttons you can't teach are the PAGE and MAIN buttons.

STEP 6:
Press and hold the button on the other remote control that you want to 'teach' to the RF20 until the LCD display on the RF20 changes to either "GOOD" or "FAILD". If the "GOOD" label appears on top of the display, you were successful. If the "FAILD" label appears on top of the display, try 'teaching' the same button to the RF20 once again by repeating STEPS 5 and 6.

GOOD   FAILD

STEP 7:
Now, continue to teach the RF20 any other commands from your other remotes by repeating STEPS 4 through 6 (to go back to STEP 4, simply press MAIN once).

STEP 8:
Once you have completed teaching all the button commands to the RF20, return to normal operation by pressing the MAIN button twice.

NOTE: Test all your new commands. If any of them don't work, try the Learning Method again, following these suggestions:

• Move to another room. Plasma TVs, sunlight, halogen or quartz lighting can interfere with the learning process.

• Even though the old remote seems to be working fine, put in fresh alkaline batteries.

• Gradually vary the distance between the remote controls. Try 1", 2" and so on, up to 4 feet.

• Try tapping the button on your old remote instead of pressing and holding it during the learning process.

Some additional Information regarding the Learning Process:

• Learned functions override any existing pre-programmed functions on the remote control.

• All buttons can be learned except for the PAGE, MAIN and LIGHT buttons.

• Learned functions are automatically erased when a new function is learned on the same button.

• Learned functions are retained even after a different Setup Code Number is programmed into the remote.

• To return to an original pre-programmed function, a learned function must be erased.

BASIC SETUP

Transmitting (Busy Signal) Icon

When a command is being transmitted, an icon will appear in the upper right corner of the LCD screen. This indicates that a signal is being sent. This is particularly useful when setting up Macros and FAVs, since it flashes with every step of a sequence of commands.

CHILD LOCK FEATURE

This 'child-lock' feature prevents the unauthorized use of the remote control by children. It blocks all operations of the remote control.

To Activate:
Press the +10 and ENT (Enter) buttons simultaneously for 3 seconds. The bottom of the LCD will blink "LOCKED" three times and then display "LOCKED".

To Return to Normal Operation:
Press the +10 and ENT (Enter) buttons simultaneously again for 3 seconds. The LCD will display the last use mode.

Customizing Your RF20 with Special Advanced Features

After you've finished all your basic setup, you can choose to make operation easier by customizing the RF20 just the way you want, using the Special Advanced Setup Features described in this section.

Customizing the LCD Screen

You can easily edit or change the name of any of the display buttons (including Favorite Channels) on the LCD screen by following these steps:

STEP 1:
Press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of the LCD screen. This signals that you are now in setup mode.

IMPORTANT:You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

STEP 2:
Press the EDIT display button. The LCD display will change to the EDIT menu.

STEP 3:
Press the TEXT display button. The screen will display the list of Components and "EDIT" will appear at the top of the screen.

STEP 4:
Navigate to the Component and page where there is a button label you want to EDIT, selecting between the FAV, MAIN, COMPONENT display buttons; then using the PAGE button.

NOTE: If you wish to change the name of a Component button, press the Page (▲) Up button twice.The top of the display will change to MAIN, and you can navigate to MAIN page 1 or page 2 before going on to Step 5.

CUSTOMIZING

STEP 5:

Press the button you wish to edit. The first character space of your button label will start to blink.

UP CURSOR
Button deletes all test

LEFT CURSOR
Moves blinking character left

DOWN CURSOR
deletes the currently blinking character

RIGHT CURSOR
Moves blinking character right

BLINKING CHARACTER

FAV

∧ PAGE ∨

SELECT

DVD
OP-CL
ZOOM
■PROG
REPEA
A-B
EDIT

ON MAIN OFF

STEP 6:
Change the character by using any of the number keys. Each press of the same number button selects the next character of that number's group, as shown in the diagram below.

STEP 7:
Once the character you want appears, move to the next space by pressing the Right cursor button.

STEP 8:
When you are finished editing the button, press the button you edited and "SAVED" will flash at the bottom of the display.

To change any other button labels on the same Component, press the next button, then repeat steps 6-8. If you wish to edit a button on another Component, press the MAIN button once, then repeat Steps 4-8.

STEP 9:
Once you've finished editing buttons, press the MAIN button four times to return to normal operation.

CUSTOMIZING

Favorite Channel Setup

This is one of RF20's most desirable features. Once it's set up, you can select up to 40 favorite channels with the press of a button - without the need to remember or type in a channel number. Let the channel surfing begin!

To access Favorite Channel listings, simply press the FAV button to display Page 1 of Favorite Channel listings. There are eight pages of Favorite Channels, with five Channels on each page, for a total of 40 Channels. Just use the PAGE (▲) (▼) buttons to locate the Channel you want to setup. Each Channel can be setup to be instantly selected with the press of one button.

To setup a Favorite Channel button, follow these steps:

STEP 1:
Press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of the LCD screen. This signals that you are now in setup mode.

IMPORTANT:
You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

STEP 2:
Press the FAV display button.

The top of the display will show "FAV". The bottom of the display will flash "SELECT"

FAV
BUTTON

SETUP
P-PRO
LEARN
EDIT
MACRO
FAV
1 OF 2

FAV

ON   MAIN   OFF

STEP 3:
Use the PAGE (▲) (▼) buttons until you locate the name (i.e.,ABC, CBS, NBC) of the favorite channel you want to setup.

STEP 4:
Press the favorite channel display button you want to setup. The top of the screen will change to show the channel name. The bottom of the screen displays "STEP0", indicating that you have not entered the channel number yet.

STEP 5:
Press either the TV, SAT or CABLE Component button (select the Component you use to enter channel numbers).

STEP 6:
Press each of the number buttons for the channel.

Note: If a number is repeated when setting the channel (for example, channel "33" or "522"), it is usually best to set a half second delay in between the identical numbers by pressing the (II) PAUSE button. Each press of the PAUSE button increases the delay by a half second.

PAUSE BUTTON

NOTE: Some brands of television require an ENT (Enter) command after the channel numbers.

STEP 7:
Press the LIGHT button after you enter the channel number.
A new screen appears displaying SAVE, UNDO or EXIT.

STEP 8:
To save the channel you entered, press the SAVE display button. The UNDO display button lets you erase the last entry. The EXIT display button erases all entries for this button.

STEP 9:
When you are finished setting up Favorite Channel buttons, press the MAIN button twice to return to normal operation.

CUSTOMIZING

SAVE
BUTTON

FAV
SAVE

UNDO

EXIT
SELECT

FAV

PAGE

ON   MAIN   OFF

MacroPower™ Setup

MacroPower™ is a unique feature that enables you to turn all of your Components ON or OFF, at the same time, simply with the press of one button.

We call that a "Macro". What would normally take multiple remotes and button pushes, the RF20 can accomplish with the press of one button. In addition to the Power ON or OFF buttons, any of the Display buttons (on any Component or Page) can be set to be Macro buttons as well. Feel the power!

To setup a Power ON macro button that will turn ON several components at the same time (for example, TV, VCR and CABLE), follow these easy steps:

STEP 1:
Press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of the LCD touch screen. This signals that you are now in setup mode.

IMPORTANT: You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

STEP 2:
Press the MACRO display button on the LCD screen. The top of the screen will display "MACRO". The bottom of the display will flash "SELECT".

STEP 3:
Press the ON button. "ON" will display at the top of the LCD screen. "STEP0" will display at the bottom of the screen indicating that no macro steps have been entered yet.

STEP 4:
Press the first component display button you want the Macro to turn on (in this example, TV) and "TV" will display at the top of the screen and "STEP 1" at the bottom.

STEP 5:
Then, press the ON button to confirm the command and "STEP 2" will display at the bottom of the screen. (NOTE: Whenever a button is pressed, another Macro step is counted and displayed at the bottom of the screen.)

STEP 6:
Now, press the MAIN button to return to the Main Component listing. ("STEP 3" will display at the bottom of the screen.)

CUSTOMIZING

STEP 7:
Press the second component display button that you want the Macro to turn on (in this example, VCR) and "VCR" will display at the top of the screen. ("STEP 4" will display at the bottom of the screen.)

STEP 8:
Then, press the ON button to confirm the command. ("STEP 5" will display at the bottom of the screen.)

STEP 9:
Now, press the MAIN button to return to the Main Component listing. ("STEP 6" will display at the bottom of the screen.)

STEP 10:
Press the third component display button that you want the Macro to turn on (in this example, CABLE) and "CABLE" will display at the top of the screen. ("STEP 7" will display at the bottom of the screen.)

STEP 11:
Then, press the ON button to confirm the command. ("STEP 8" will display at the bottom of the screen.)

NOTE : Don't worry about the number of steps. Each macro button can store up to 190 steps, so you are not likely to run out of steps!

You can also program delays in between commands by pressing the (II) PAUSE button. Each press adds half a second to the delay.

STEP 12:
Press the LIGHT button to end your macro. A new screen will appear:

STEP 13:
If you are satisfied with your macro, press the SAVE display button. The UNDO display button lets you erase the last step. The EXIT display button erases all the macro steps.

STEP 14:
Press the MAIN button twice to return to normal operation.

SAVE BUTTON

UNDO BUTTON

EXIT BUTTON

CUSTOMIZING
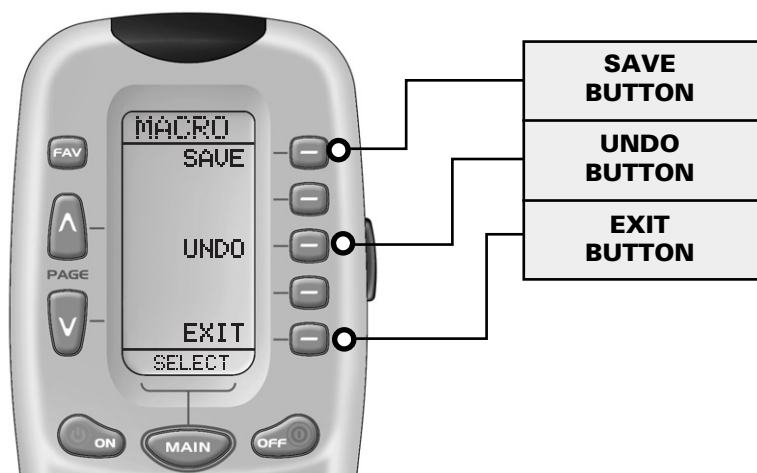
Advanced Macro Options:

SETTING UP A POWER OFF MACRO:

Simply follow the same steps as outlined above, except press the OFF button in place of the ON button.

SETTING A COMPONENT BUTTON AS MACRO:

If you wish to set one of the Component buttons as a macro, in STEP 3, press the Page Up button twice. The top of the display will change to MAIN, and you can navigate to MAIN page 1 or page 2. Press the Component button you want to set as a Macro button. The top of the screen will display the button label you selected. Select the Component and Page that has a button you want in your Macro using the MAIN, Component and Page buttons. Simply press the button(s) with the command(s) you want in your Macro. Then complete and save the Macro by following STEPs 12 and 13 as outlined above.

PROGRAMMING A "PRESS & HOLD" MACRO:

Another option for Component button macros is to only send the macro if the button is pressed and held. This is setup by entering a delay as the first step of the macro. The amount of delay determines how long the user must press the button before the macro is sent. The advantage of this option is that a normal press of the COMPONENT button will simply switch Components without sending the macro command.

SimpleSound™ Setup & Other 'Punch Throughs'

SimpleSound™ is a dynamic feature that gives you total volume control over all the Components in your system, even those without their own built-in volume control, such as TiVo, DVD and VCR... saving you the hassle and inconvenience of constantly needing to switch between Component modes on the remote. With SimpleSound™, you can set the RF20's volume control buttons to always control the sound in your system, even when you're in VCR or DVD mode, without switching back to AUDIO or TV. Even more exciting, SimpleSound™ is what is called a 'Punch Through' feature and is not limited strictly to volume control. Click and enjoy!

STEP 1:
In a basic home entertainment system, the sound may come from your TV. In a more advanced system, the sound may come from your audio Component such as a Surround Sound Receiver or Home Theatre system. So, first, you need to identify which Component you want to use in your system for sound.

STEP 2:
Press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of the LCD screen. This signals that you are now in setup mode.

IMPORTANT: You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

STEP 3:
Press the PAGE (▲) UP button to display Page 2 of the Setup Menu on the LCD screen. Press the PUNCH display button.

STEP 4:
Then press the VOL (Volume) display button. The screen will display "VOL" at the top. This sets up the group of three buttons (Volume Up, Volume Down and Mute) in one action!

VOLUME
BUTTON

CUSTOMIZING

CUSTOMIZING

The bottom of the display flashes "PUNCH TO". Press the button for the Component that doesn't have volume control commands yet (i.e.,DVD). This is the Component you are going to PUNCH TO for the volume and mute commands.

NOTE: If you want to PUNCH TO the MAIN Component, press the POWER OFF button at this time.

STEP 5:
The bottom of the display will then flash "PUNCH FROM". Now select the Component that has the volume commands you want to use (i.e.,TV for systems using the TV speakers, AUDIO for systems with surround sound receivers). The bottom of the display will flash "SAVED".

STEP 6:
Repeat STEPS 4-5 until all your Components operate the volume perfectly.

STEP 7:
Press the MAIN button twice to return to normal operating mode and test your SimpleSound™ settings.

NOTE:The Punch Through feature is not limited to volume and can also be applied to channel selection or other functions. If you find yourself switching to a particular Component frequently to use a group of controls, consider using Punch Through for another group, as listed here:

VOL	**Volume Up,Volume Down and Mute**
CH	**Channel Up, Channel Down, Previous Ch and Channel (0-9) buttons.**
PLAY	**Play, Stop, Pause, Rewind and Fast Forward**
VOD	**Guide, Menu, Info, Exit, Up, Down, Left, Right, Select**

Simply perform the steps outlined above, but in STEP 4, press one of the control options (CH, PLAY or VOD).

Setting Backlight Options

You can customize the backlighting feature to suit your specific preferences by following these simple steps:

Adjusting Length of Backlight Time

You can adjust the amount of time that the RF20 backlight stays on by entering the SETUP mode and proceeding to page 2 (using the PAGE (▲) UP button), then pressing the LIGHT display button on the LCD screen (not the Backlight button). Then enter the amount of time you would like the light to stay on using the number pad (0-99 seconds). After making your selection, press the SAVE display button.

Adjusting Contrast

You can make the text darker by pressing both the MAIN and cursor UP buttons at the same time. To make the text appear lighter, press both the MAIN and cursor DOWN buttons at the same time.

Turning OFF Backlighting

If you don't want backlighting at all (this extends battery life), press the ON display button that appears on the screen. The ON will change to OFF. Press the SAVE display button. Exit the setup mode by pressing the MAIN button.

| MAIN BUTTON |
| UP & DOWN CURSOR |
| HIGH CONTRAST |
| LOW CONTRAST |

CUSTOMIZING
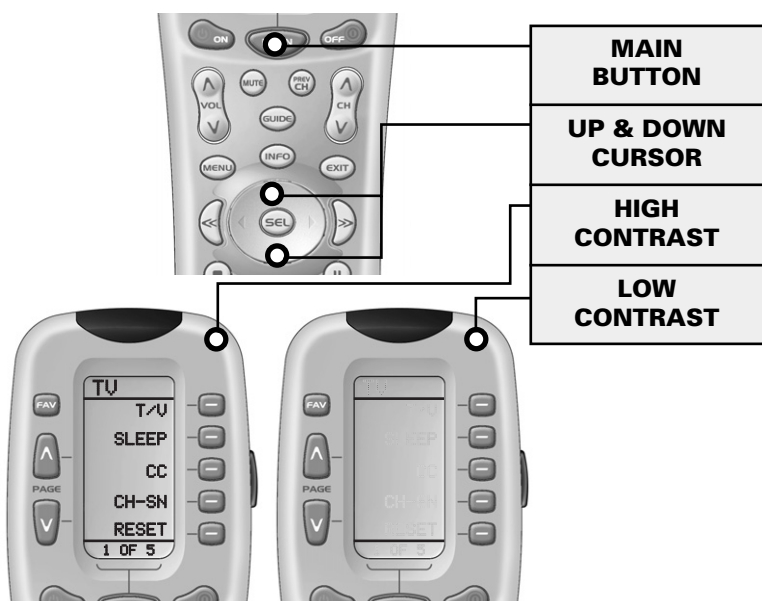
Hiding and Adding Pages

Each of your RF20 Components actually contains eight pages. However, only five pages are visible in the factory default setting. Three page are hidden in each Component. If you wish to use the hidden pages, you can ADD it. If you don't want to use some of the existing pages, you can HIDE them. You can add or hide pages on Components OR on your favorite channel pages using this simple process:

NOTE: Be sure to program your Macros before you hide pages with potential macros in them. You can't access hidden pages during macro setup. However, after you finish Macro setup, you can hide pages without affecting operation of your macros.

STEP 1:
Press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of the LCD screen. This signals that you are now in setup mode.

IMPORTANT:You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

STEP 2:
Press the EDIT display button on the LCD screen.

STEP 3:
Press the PAGE display button once the screen changes to EDIT mode.

CUSTOMIZING

EDIT BUTTON

PAGE BUTTON
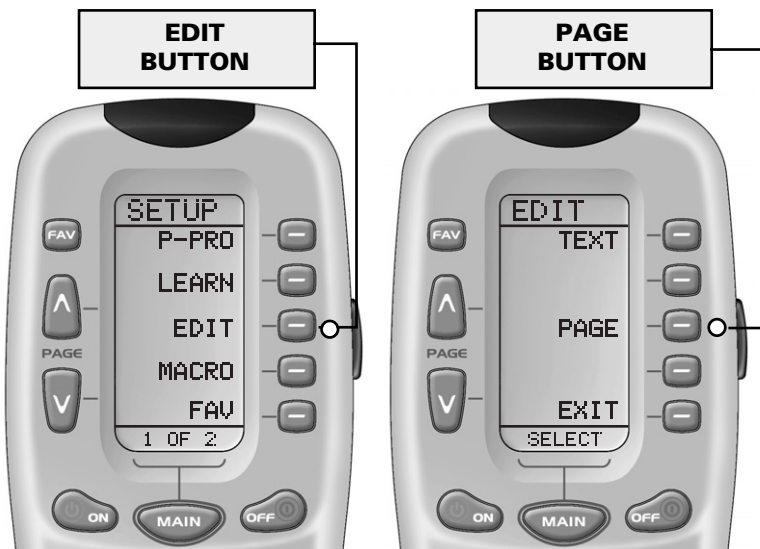
This page is hidden. To ADD it, press the LIGHT button.

This page is visible. To HIDE it, press the LIGHT button.

STEP 4:
"PAGE" appears at the top of the screen. Now, you can navigate to any page, using the MAIN, COMPONENT, FAV, and PAGE display buttons.
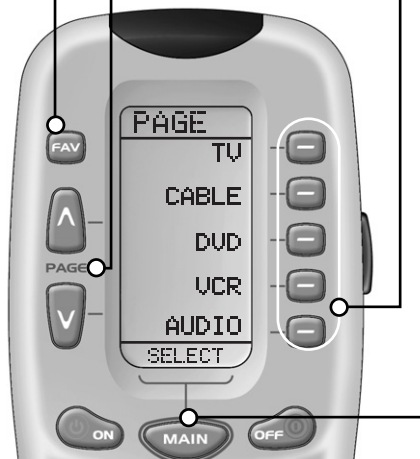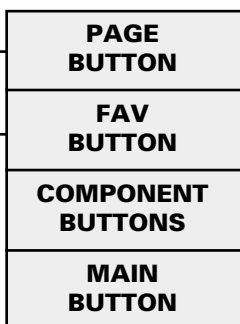
STEP 5:
When you select a page, the top of the screen indicates whether you want to "ADD?" or "HIDE?" the page displayed. When you want to change a page's visibility (i.e., either ADD or HIDE), simply press the LIGHT button.

STEP 6:
You can continue to ADD or HIDE pages on other Components by repeating Steps 4 and 5.

STEP 7:
When you are finished adding and hiding pages, press the MAIN button four times to return to normal operation.

PAGE BUTTON

FAV BUTTON

COMPONENT BUTTONS

MAIN BUTTON

CUSTOMIZING

Recalling Pre-Programmed Setup Code Numbers

In case you didn't write down the Pre-Programmed Code Numbers that you used to set up your RF20, you can easily recall them using this simple process:

STEP 1:
Press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of the LCD touch screen. This signals that you are now in setup mode.

IMPORTANT: You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

STEP 2:
Go to Page 2 of the Setup Menu by pressing the PAGE (▲) button.

STEP 3:
Press the RECAL display button on the LCD screen. The display will change to the Recall screens. The screen automatically switches between four screens, alternately flashing Page 1 components and code numbers, then Page 2 components and code numbers.

STEP 4:
Write down the code numbers as they appear for future reference. Page 43 of this manual provides a convenient space for you to record your code numbers.

STEP 5:
Return to normal operation by pressing the MAIN button twice.

CUSTOMIZING

Cloning Other RF20s

If you are fortunate enough to own more than one RF20, you'll be happy to know that you can easily copy and transfer all the setup from one RF20 to another. Just follow these easy steps:

STEP 1:
For both the programmed RF20 that you want to clone, and unprogrammed RF20, press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of their respective LCD screens. This signals that both remotes are now in setup mode.

IMPORTANT:You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.

STEP 2:
Press a PAGE button on each remote to bring up Page 2 of Setup and display the CLONE button.

STEP 3:
Press the CLONE button on each remote.

STEP 4:
Align the two RF20s head-to-head, about an inch apart.

STEP 5:
Press the RECV display button on the unprogrammed RF20 that you want to setup by cloning.

STEP 6:
Press the SEND display button on the programmed RF20 that you want to clone.

STEP 7:
Press the START button on the unprogrammed RF20, and then press the START button on the programmed RF20 that you want to clone.

NOTE: Cloning typically takes about 40 seconds. After successful cloning is completed, the newly cloned RF20 will flash "GOOD".

STEP 8:
Return to normal operation by pressing the MAIN button twice.

CUSTOMIZING

Erasing Commands - Overview

You can erase an individual button with a learned command, a macro or a favorite channel. You can erase an ENTIRE Component's learned command or macro buttons. You can also erase ALL your learned commands on all Components or all your macros or favorite channels everywhere.

If you really want a fresh start, it is possible to reset everything to the factory default settings.

Erasing Learned Buttons, Macros or Favorite Channels

ERASING COMMANDS

STEP 1:
Press and hold the MAIN and ENT (Enter) buttons at the same time for approximately 3 seconds, until the word "SETUP" is displayed at the top of the LCD screen. This signals that you are now in setup mode.

> **IMPORTANT: You now have 30 seconds to perform the next step while you are in SETUP mode. If you don't press a button within 30 seconds, SETUP will disappear from the screen, signaling that you have exited setup mode and you will need to start over.**

STEP 2:
Press a PAGE button to display Page 2 of Setup.

STEP 3:
Press the ERASE display button on the LCD screen.

STEP 4:
Press either the LEARN, MACRO or FAV button. The following screen appears:

ALL - Erases ALL of the specified (Learned, Macro or FAV buttons everywhere in the RF20)

DEVICE - Erases all learned or Macro buttons in a single Component (NOTE: This option is not available for FAVs.)

KEY - Erases one button only.

STEP 5:

If you press ALL, the RF20 displays a "SURE?" button. After the SURE button is pressed, all the buttons will be erased.

If you press DEVICE, a list of Components will appear. Press the Component button that you wish to erase. The bottom of the screen will flash ERASE twice, then ERASED.

If you press KEY, you'll have to navigate to the Component and Page you want using the MAIN, COMPONENT and PAGE buttons. Press a button to erase it. The bottom of the display will flash ERASE twice, then ERASED.

STEP6:

To return to normal operating mode, press the MAIN button four times.

SURE BUTTON

Re-setting RF20 to Original Factory Default Settings

If you want to start with a clean slate, you can re-set the RF20 its original factory default settings by performing the following steps.

NOTE: This process will essentially erase EVERYTHING you have programmed into the RF20.

STEP 1:
Press and hold both the MAIN and the STOP buttons for 10 seconds.

STEP 2:
After 10 seconds, the RESET screen appears. Press the ALL button. The RF20 will display a "SURE?" button. Press the SURE button to erase all of your settings and return to the factory default setup

MAIN
BUTTON

STOP
BUTTON

SURE
BUTTON

ERASING COMMANDS

ERASING COMMANDS
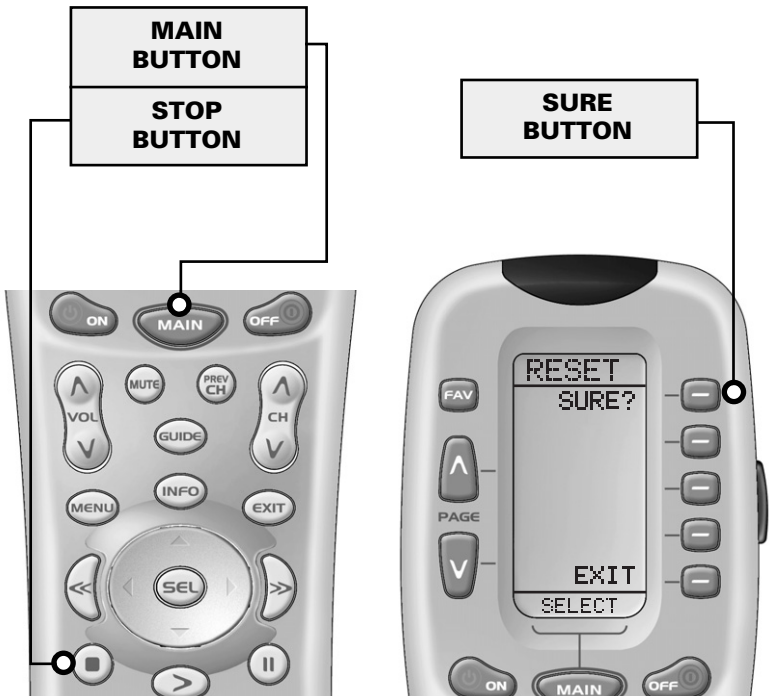
The Optional PowerBlaster™ (for 'barrier-free' RF control) [Sold separately]

Of all the fabulous RF20 features, this is probably the most exciting. When used in combination with the optional PowerBlaster™, the RF20 becomes an amazing remote control powerhouse that sends multi-directional RF (Radio Frequency) signals that pass through walls, doors and floors - both indoors and outdoors.

This changes everything! It enables you to control Components that are completely out-of-sight, up to 100' away. The PowerBlaster™ picks up RF20's radio frequency signals from any direction, regardless of distance, so RF20 doesn't need to be pointed directly at any Component. Just imagine - no more pointing! Now you can close your entertainment center doors, hide your Components, and still control them with ease. Control outdoor speakers on your patio. Control your Components anywhere!

One of the best things about this is -- nothing has to be done to the RF20 for this feature to work.
Every time you press a button on the RF20, it sends both a standard IR (Infrared Command) AND an RF (Radio Fre-quen-cy) signal. If you install the PowerBlaster™ kit, it will automat-ically receive RF20's radio signals and translate them into the infrared commands that control your Components.

NOTE: The RF20's radio signals will not control Components directly. You must have a PowerBlaster™ to receive the RF20's radio signals. Components that came with "no point-ing" radio remote controls cannot be operated by the RF20 unless the Component can be switched to standard IR (Infrared Control) via its internal menus. Some remote con-trol ceiling fans are radio only and cannot be operated by the RF20.

The RF20 sends radio signal to the PowerBlaster™, which is a radio receiver
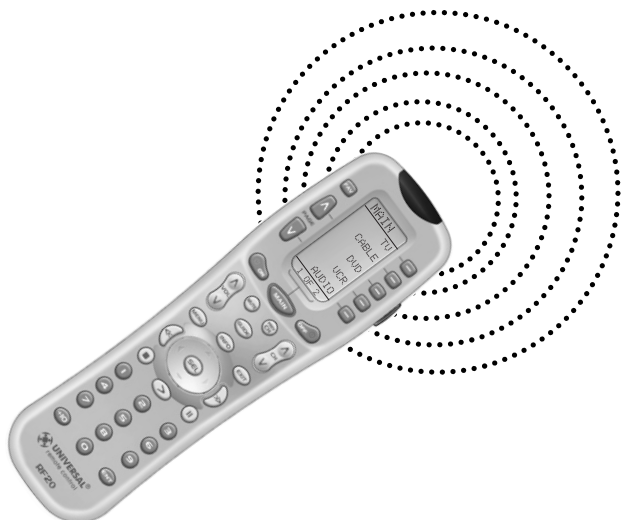
The PowerBlaster™ converts radio signals to standard infrared commands and sends them out via a built-in front blaster to Components in the same cabinet space.
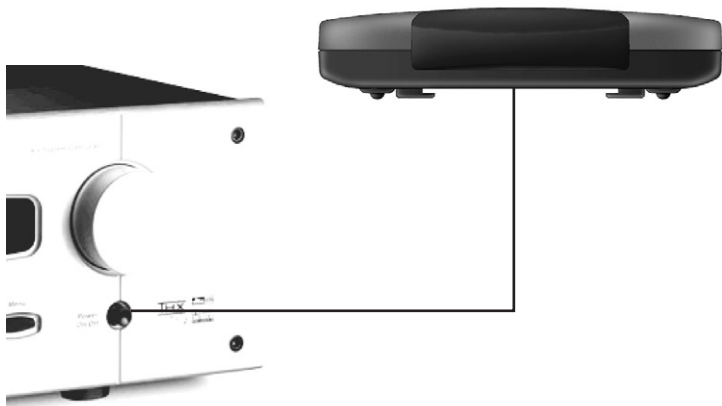
Self-adhesive "flashers" (included in the PowerBlaster™ kit) affix to the front panels of your Components. The flashers relay infrared commands to Components out-of-sight of the PowerBlaster's front blaster. The flashers plug into PowerBlaster's rear flasher line output jacks. Each flasher has a 10' cable to easily reach Components on nearby shelves.

THE POWER BLASTER

Pre-Programmed Code Notes

Record the three digit codes for your system here

AUDIO   _____

DVD   _____

CD   _____

SAT   _____

TV   _____

VCR   _____

CABLE   _____

AUX   _____

LIGHT   _____

TAPE   _____

PHONO   _____

TV2   _____

VCR2   _____

DVR   _____

LDP   _____

XM RADIO   _____

IPOD   _____

X-BOX   _____

Pre-Programmed Code Tables

The RF20's Pre-Programmed code library is divided into categories (TV, VCR, AUX, etc.). Each category actually includes many types of Components. For example, the VCR category includes TV/VCR combo units.

Within each category, the code numbers are listed in rows by brand (Sony, Panasonic, B & K, etc.). Some brands have more than one three digit code for you to try. Just circle the correct row and refer to it while you setup (step by step instructions for using Pre-Programmed codes are found on page 7).

TV   TVs, Plasmas, Projectors and Monitors

CABLE   Cable TVs and Web TVs

DVD   DVD Players and TV/DVD Combos

VCR   VCRs and TV/VCR Combos

AUDIO   Amps, Preamps, A/V Receivers and XM Radios

SAT   Satellite Receivers

CD   CD Players and CD Changers

DVR   TiVo, Replay and other DVR's

AUX   Tape Decks, Lighting Controls, Multimedia PCs,
            Xbox, iPod and Custom Installation Products

TV

BRAND	CODE NUMBERS
ADMIRAL	072 081 161 160
ADVENT	247
AKAI	197 146 248 404 405
A MARK	112 143
AMPRO	167 073 157 183
AMSTRAD	052
ANAM	043 054 056 080 112 131
AOC	197 004 112 058
APEX DIGITAL	006 310
AUDIOVOX	076 273
BARCO	233
BLAUPUNKT	088
BROKSONIC	238
CAIRN	201
CANDLE	197 002 003 004
CAPEHART	058
CETRONIC	043
CITIZEN	197 002 003 004 043 101 103 143
CLASSIC	043
CONCERTO	004
CONTEC	043 050 051
CORONADO	143
CRAIG	043 054
CROWN	043 143
CURTIS MATHES	197 101 004 143
CXC	043
DAEWOO	004 016 043 044 076 103 114 125 127 143
DAYTRON	004 143
DELL	320 319 321
DREAMVISION	235 345
DWIN	177 257
DYNASTY	043
DYNATECH	062
EIKI	187
ELECTROHOME	143 024 076 196
EMERSON	028 048 043 155 005 197 004 047 050 051 076 096 143 151 153 154
EPSON	324
ESA	323
FISHER	007 057
FUJITSU	246 198 346
FUNAI	028 043
FUTURETECH	043
GATEWAY	242 268
GE	160 144 165 073 197 008 009 034 056 074 130 155 161 004 091 157 183
GEM	387
GOLDSTAR	113 116 102 004 106 112 119 127 143
HALL MARK	004
HANNSPREE	381
HITACHI	011 163 166 004 009 010 012 023 075 143 158 072
HP	378 316 327
HYUNDAI	337 338
INFINITY	164
INFOCUS	333 230 330
INSIGNIA	350 399 403 052 164
JBL	164
JCPENNEY	004 024 197 008 009 030 065 101 143 156 160
JENSEN	013
JVC	038 034 070 083 145 199 210 240 241

BRAND	CODE NUMBERS
KEC	043
KENWOOD	197 070
KLOSS	002 059
KMC	143
KTV	043 197 143 154
LG	363 113 116 102 004 106 112 119 127 143 243 284 365
LODGENET	072
LOEWE	164
LOGIK	072
LUXMAN	004
LXI	166 007 015 052 081 160 164
MAGNAVOX	164 059 197 003 060 061 004 063 064 127 022 160 094 239 226 273 390
MARANTZ	197 164 184
MATSUI	164
MAXENT	242
MEMOREX	007 072 004
METZ	088
MGA	197 004 024 028 042
MINERVA	088
MINTEK	362
MITSUBISHI	124 109 024 004 028 040 042 146 191
MTC	197 004 062 101
NAD	015 025
NEC	272 132 130 134 197 040 016 024 056 019 236 262
NIKEI	043
NUVISION	351
ONKING	043
ONWA	043
OPTOMA	265 270
OPTONICA	019 081
ORION	096
PANASONIC	080 034 056 092 164 208
PHILCO	197 003 059 060 064 164 004 024 056 063
PHILIPS	164 005 093 038 197 003 004 059 127 184 206 239 259
PIONEER	335 135 025 197 018 023 116 393 272
POLAROID	138 268 328 353 354 356 388
PORTLAND	004 143
PROSCAN	144 160 161 165 167
PROTON	004 131 058 143 171 173 193
PROTRON	392 398
QUASAR	034 056 092
RADIO SHACK	019 004 143 043 127
RCA	333 160 165 065 156 144 161 197 004 024 056 152 023 074
REALISTIC	007 019 043 047
ROCTEC	186
RUNCO	168 169 178 179 180 181 182 183 073 157 340 395
SAMPO	197 058 004 202
SAMSUNG	258 050 089 101 105 004 127 143 160 228 229
SANYO	166 007 020 053 057 082 187
SCEPTRE	276
SCOTT	028 043 004 048 143
SEARS	015 030 004 007 028 057 143 094 160 082 165 166
SELECO	189 200 205 227
SHARP	251 081 019 014 170 028 029 004 022 143 175
SIEMENS	088
SIM2	189 200 205 227
SIGNATURE	072
SOLE	231 232
SONY	277 070 139 147 126 185 194 085 213 279

	BRAND	CODE NUMBERS
TV	SOUNDESIGN	028 004 003 043
	SPECTRICON	112
	SSS	004 043
	SUPRE MACY	002
	SVA	328
	SYLVANIA	197 003 059 060 063 064 164 044 160 127
	SYNTAX OLEVIA	376 363
	TANDY	081
	TATUNG	056 062
	TECHNICS	034 080
	TECHWOOD	004
	TEKNIKA	002 003 004 024 028 043 072 101 143
	TELEFUNKEN	037 046 086 087
	TELERENT	072
	TERA	172
	TMK	004
	TOSHIBA	138 015 030 007 040 062 101 325
	TOTEVISION	143
	UNIVERSAL	008 009
	VIDEO CONCEPTS	146
	VIDIKRON	174 184 188 192 340
	VIDTECH	004
	VIEWSONIC	242 389 390
	VIZIO	386 387
	WARDS	004 008 009 019 028 060 061 063 064 072 074 143 164 034
	WESTING HOUSE	076 280
	WINBOOK	339
	YAMAHA	197 004
	YORK	004
	YUPITERU	043
	ZENITH	073 072 095 103 157 183 243 284
	ZONDA	112

BRAND	CODE NUMBERS
ABC	004 103 003 039 042 046 053
ADELPHIA	043 074
ADVANCED NEWHOUSE	043
ALTRIO	043
AMERICAST	099
ARCHER	005 007 014
ARMSTONG	074
AT&T BROADBAND	074
ATLANTIC BROADBAND	043 074
BELL SOUTH	099
BLUE RIDGE	043 074
BRESNAN	074
BRIGHT HOUSE	043 110
BUCKEYE COMM	074
CABLEVISION	043 074 108
CENTURION	092
CENTURY	007
CHARTER	043 074
CITIZEN	007
COGECO	074
COMBANO	080 081
COMCAST	043 074 110
COMSAT	074
COX DIGITAL	043 074
DIGICABLE	101
EAGLE	020 030 040
EASTERN	057 066
ECHOSTAR	106
ELECTRICORD	032
GEMINI	008 054
GENERAL ELECTRIC	072
GENERAL INSTRUMENT	074 103 104
GNC	099
GOLDEN CHANNEL	030
HAMLIN	049 050 055
HITACHI	103 055
INSIGHT	074
JERROLD	074 004 103 002 003 008 009 010 069
MAGNAVOX	010 012 064 079 095 094
MASSILLON	074
MEDIA ONE	107
MEDICOM	074
MEMOREX	052
MITSUBISHI	102
MOTOROLA	074 110 109 111
MOVIE TIME	028 032
MOXI	111
NCTC	074
NSC	015 028 038 071
OAK	031 037 053
PACE	043 074
PANASONIC	044 047
PARAGON	052
PHILIPS	006 012 013 020 085 095
PIONEER	043 103 034 051 063 076 105
PRUCER	059
PULSAR	052
RCA	047
RCN	074
RECOTON	098

BRAND	CODE NUMBERS
REGAL	049 050
REGENCY	057
RODGERS	043
SAMSUNG	030
SCIENTIFIC ATLANTA	043 011 003 041 042 045 046
SEREN	043
SERVICE ELECTRIC	074
SHAW	074
SIGECOM	043
SONY	096 108
SPRUCER	047 078
STARCOM	002 004 008 009
STARGATE	008 030 097 104
SUSQUEHANNA	043 074
TIME WARNER	043 074
TOCOM	039 040 056
TOSHIBA	052
UNITED CABLE	004 053
UNIVERSAL	005 007 014 032 035
VIDEOTRON	043
VIEWSTAR	012 015 018 086 087 088 089
WIDE OPEN WEST	043 099
ZENITH	052 060 093 100

CABLE / WEBTV

CODE TABLES

BRAND	CODE NUMBERS
AIWA	146
AKAI	281
ALPINE	098
APEX DIGITAL	087 111 115 112 116
ARCAM	122
CAMBRIDGE AUDIO	215
CARY AUDIO DESIGN	174
CLASSE	167
COBY	258
DENON	007 080 173
FUNAI	143
GATEWAT	175
GE	026 027
GO VIDEO	137 218 220 221 222
HARMAN KARDON	084 140
HITACHI	101
ILO	268
INSIGNIA	143
INTEGRA	142 180
JVC	012
KENWOOD	151
KLH	135
KISS	179 279
KRELL	104
LEXICON	148
LG	091 057 074
LITEON	264 265
MAGNAVOX	066 096 143
MALATA	267
MARANTZ	083 095
MERIDIAN	153
MITSUBISHI	017
MYRYAD	102 134
NAD	088 155
NAKAMICHI	103
ONKYO	076 035 180
OPPO	266
PANASONIC	021 042 138 139 144 150
PHILIPS	066 083 095 105 166
PIONEER	023 092 099 107 108 131
POLAROID	233 234 237
PRIMARE	193 194
PROCEED	086
PROSCAN	026 027
RCA	026 027
RJTECH	269
ROTEL	204
SAMSUNG	056 070 119 165 170 137 159
SANSUI	154
SANYO	147
SENSORY SCIENCE	222 223
SHARP	094
SONY	033 118 145 126 191
SYLVANIA	143
SYMPHONIC	143
TAG MCLAREN	156
TATUNG	102
TEAC	270
THOMPSON	026 027
THULE	177

BRAND	CODE NUMBERS
TOSHIBA	035 034 130 141 164 188 273
VENTURER	149
VINC	161
YAMAHA	042 089 166 195 197
ZENITH	057 074 091
DVD-TV/DVD Combos	
AIWA	146
AKAI	281
FUNAI	143
INSIGNIA	143
SAMSUNG	165
SYLVANIA	143
SYMPHONIC	143
TOSHIBA	130
DVD-TV/DVD/VCR Combos	
MAGNAVOX	143
PANASONIC	144
SYLVANIA	143
TOSHIBA	164
DVD-DVD/VCR Combos	
GO VIDEO	137 218
PANASONIC	150
PHILIPS	105 (VCR Functions for VCR 067)
POLAROID	234
SAMSUNG	137 159
SANSUI	154
SONY	145
TOSHIBA	141
ZENITH	091 (VCR Functions for VCR171)
DVD-DVD Recorders	
GATEWAY	175
GO VIDEO	220 221 222
ILO	268
KISS	279
LITEON	265
PANASONIC	139
SENSORY SCIENCE	222
SONY	191
TOSHIBA	188
DVD-DVD-LD	
DENON	206 207
FUNAI	120
KENWOOD	152 013
MAGNAVOX	032 121
MARANTZ	211
MITSUBISHI	121
NAD	121
OPTIMUS	049 013
PANASONIC	113
PHILIPS	032
PIONEER	106 117 121
RADIO SHACK	120
RCA	002
REALISTIC	049
RUNCO	127

DVD

CODE TABLES

BRAND	CODE NUMBERS
SANYO	075
SHARP	152 013
SONY	053 110
TECHNICS	113
THETA DIGITAL	032
TOSHIBA	152 106
YAMAHA	043 129

CODE TABLES

	BRAND	CODE NUMBERS
VCR	AIWA	034 161
	AKAI	016 146 043 046 124 125 142
	AMPRO	072
	ANAM	031
	AUDIO DYNAMICS	012 023 039 043
	BROOKSONIC	035 037 129
	CANON	028 031
	CAPEHART	108
	CRAIG	003 040 135
	CURTIS MATHES	031 041
	DAEWOO	111 116 117 119 005 007 010 065 108 110 112
	DAYTRON	108
	DBX	012 023 039 043
	DYNATECH	034 053
	ELECTROHOME	059
	EMERSON	006 029 035 017 025 027 031 034 036 037 046 101 129 131 138 153 162 116
	FISHER	003 010 008 009
	FUNAI	034
	GE	031 072 147 063 107 109 144
	GO VIDEO	132 136 155 040 115
	GOLDSTAR	101 106 114 013 020 012 123
	HARMAN KARDON	012 045
	HITACHI	004 026 150 018 034 043 063 137 160 013
	INSTANTREPLAY	031
	JCL	031
	JCPENNEY	012 013 015 040 066 101
	JENSEN	043
	JVC	048 043 130 150 055 060 012 031 050 152 166
	KENWOOD	014 048 034 047
	LG	101 106 114 013 020 012 123
	LLOYD	034
	LXI	034 003 009 017 106
	MAGIN	040
	MAGNAVOX	067 031 034 068 041 156 164
	MARANTZ	067 069 012 031 156
	MARTA	101
	MATSUI	027 030
	MEI	031
	MEMOREX	101 003 010 014 031 034 053 072 102 134 139
	MGA	045 046 059
	MINOLTA	013 020
	MITSUBISHI	059 061 151 013 020 045 046 051 142 049 168
	MTC	034 040
	MULTITECH	024 034
	NEC	012 023 039 043 048
	NORDMENDE	043
	OPTONICA	053 054
	ORION	025
	PANASONIC	066 070 145 083 133 140 157 163 074 167
	PENTAX	013 020 031 063
	PHILCO	031 034 067
	PHILIPS	031 067 034 101 054 071 156
	PILOT	101
	PIONEER	021 013 048
	PORTLAND	108
	PULSAR	072
	QUARTZ	002 014
	QUASAR	066 145 075
	RADIO SHACK	123

BRAND	CODE NUMBERS
RCA	107 109 144 147 158 041 145 013 020 140 034 040
REALISTIC	003 008 010 014 031 034 040 053 054 101
RICO	058
RUNCO	148
SALORA	014
SAMSUNG	102 104 113 115 112 120 032 040 066 107 109 122 125
SANSUI	022 043 048 135
SANYO	003 010 007 014 134 102
SCOTT	017 037 112 129 131
SEARS	003 008 010 014 081 013 101 009 017 073 112
SHARP	149 054 031 159 165
SHINTOM	024
SIGNATURE	034
SONY	056 057 058 077 052 003 078 076 031 149 154
SOUNDESIGN	034
STS	013
SYLVANIA	031 034 059 067
SYMPHONIC	034
TANDY	010 034
TATUNG	039 043
TEAC	034 039 043
TECHNICS	031 070
TEKNIKA	031 019 034 101
THOMAS	034
TMK	006
TOSHIBA	112 131 079 008 059 047 082 013 042 081
TOTEVISION	040 101
UNITECH	040
VECTOR RESEARCH	012
VICTOR	048
VIDEO CONCEPTS	012 034 046 141
VIDEOSONIC	040
WARDS	003 013 017 024 031 034 040 053 054 131
YAMAHA	012 034 039 043
ZENITH	072 080 056 048 101 034 058
VCR-TV/VCR Combos	
DAEWOO	005 117
EMERSON	153
FUNAI	034
GOLDSTAR	101 123
HITACHI	034
JCPENNEY	101
LG	101 123
LLOYD	034
MAGNAVOX	034 067
MEMOREX	101
PANASONIC	070 167
PHILIPS	034 067
RADIO SHACK	123
RCA	034
SEARS	101
SONY	057 154
SYLVANIA	067
SYMPHONIC	034
THOMAS	034
ZENITH	034

BRAND	CODE NUMBERS
ADC	007
ADCOM	082 092 225 161 269 355 356 366
AIWA	170 018 104 202 203 213 211 188
AKAI	138 189
AMC	125 126 127 128 258 281 282 038
AMEND	054
AMX	196
ANGSTROM	142
ANTHEM	335 336 337 338 339
ARCAM	141 418 419
ATLANTIC TECHNOLOGY	342
AUDIO ACCESS	147
AUDIO ALCHEMY	135
AUDIO DESIGN	194 221 011
AUDIO EASE	021 196 207
AUDIO FILE	071
AUDIO MATRIX	167
AUDIO SOURCE	273
AUDIO TECHNICA	134
B & K	096 097
BOSE	070 170 224 347 409 459 460 532
BOSTON ACOUSTICS	447
BRYSTON	023
CAMBRIDGE AUDIO	522
CARVER	006 028 061 071 201 214 226 180 185 022 029 077 284
CASIO	076
CHIRO	140
CINEMA SOUND	034 134
CITATION	148 272
CLARION	026
CLASSE	537
COMPAQ	382
CURTIS MATHES	076
DELPHI	415 515
DENON	002 034 109 215 229 230 027 037 234 259 330 340 341 349
	350 400 401 402 444 564
EAD	466
EIGER	149
ELAN	057 290
ENLIGHTENED AUDIO	099 098
ESCIENT	368 381 451 452 453 454
FANFARE	352
FISHER	047 214 180 182 297
FLEXTRONICS	378
FOSGATE	062 231
FOSGATE AUDIONICS	342
GE	056 260
GOLDSTAR	008
HAFLER	174
HARMAN KARDON	231 233 254 153 154 118 121 227 277 317 318 365
HITACHI	020
IMERGE	371
INKEL	197
INSIGNIA	589
INTEGRA	354 438
JAMO	398
JBL	263
JCPENNEY	076 216
JEFF ROWLAND	206
JENSEN	058

BRAND	CODE NUMBERS
JVC	240 163 191 114 266 279 291
KENWOOD	026 066 145 146 181 190 197 192 182 199 151 222 180 005 280 374 550
KINERGETICS	220 140
KLH	331
KOSS	216 573
KRELL	150 072 376 384
KYOCERA	007
LEXICON	120 235 236 237 357 358 359 360 361 362 363 364
LINN	124 377
LUXMAN	137 139 052 165 115 004 009
LXI	076 056
MAGNAVOX	086 164 152 208
MARANTZ	006 028 031 040 063 185 186 251 265 119 289 296 492
MCINTOSH	238 286
MCS	076
MERIDIAN	100 012 013
MITSUBISHI	242 243 204
MONDIAL	157 158 042 043 081 112
MYRYAD	276 293
NAD	186 113 283 478 479
NAKAMICHI	111 244 245 172 183 287
NEC	176
NIRO	343
NILES	403
ONKYO	017 046 064 107 108 187 079 080 090 179 209 270 275 438
OPTIMUS	026 041 138
OUTLAW	342
PANASONIC	032 195 219 177 292 383 516
PARASOUND	129 130 132 261 294 295 333 334
PHAST	196
PHILIPS	249 250 251 063 119
PIONEER	014 033 039 044 045 050 069 159 168 116 035 078 198 480
POLKAUDIO	029 515
PRIMARE	464
PROCEED	144 268
RCA	010 048 117 156 067 288
REALISTIC	019 056 073 075 095
REQUEST	351
REVOX	162
ROTEL	074 083 085
RUSSOUND	379 391 392
SAMSUNG	016 571
SANSUI	040 048 110 119 065 228
SANYO	047 059
SCOTT	019 091
SEARS	076
SHARP	026 094 131 175 181
SHERWOOD	024 038 055 102 103 105 106 051 030 447
SIRIUS	585
SONY	018 093 223 247 248 160 166 015 101 184 218 271 353 369 372 380 417 421
SOUNDESIGN	036
SOUNDMATTERS	375
SOUNDSTREAM	084 088
SSI	068
SUMO	171
SUNFIRE	344 345 346 494
TAEKWANG	138
TEAC	005 019 049 111 212 217

AUDIO

BRAND	CODE NUMBERS
TECHNICS	122 176 193 219 178 177 200 257 262
THETA DIGITAL	136
TOSHIBA	060 087 198 278
WARDS	180
XM SATELLITE RADIO	415 515
YAMAHA	026 253 169 067 173 205 264 232 089 264 274 285 332 373 432 433
ZENITH	143 210
AUDIO-XM Radios & Tuners	
BOSE	170 532
DELPHI	415 515
FANFARE	352
KENWOOD	550
POLKAUDIO	515
SIRIUS	585
SONY	380
XM SATELLITE RADIO	415 515

CODE TABLES

BRAND	CODE NUMBERS
CABLEVISION / VOOM	148
DIRECTV	173
ECHOSTAR / DISH	122 167 168
EXPRESSVU	122
GENERAL ELECTRIC	151 106 150
GENERAL INSTRUMENT	148
GOI	122
HITACHI	139 140
HTS	122
HUGHES	161 162 068 154 165 166 108 117
JVC	122
LG	170
MAGNAVOX	136
MEMOREX	136
MITSUBISHI	068 154
MOTOROLA	148
NEXT LEVEL	148
PANASONIC	142 160
PANSAT	172
PAYSAT	136
PHILIPS	152 153 156 068 154 136 108 117
PROSCAN	151 106 150
RADIOSHACK	148
RCA	151 106 150
SAMSUNG	123 155 163 169 175
SKY	164
SONY	103
STAR CHOICE	148
TOSHIBA	127 068 154 157 158
UNIDEN	136
ZENITH	159

BRAND	CODE NUMBERS
ADCOM	062 042
AIWA	059 065 088 089 105 122 170 187
AKAI	085 195 202
AMC	231 232
AMEND	118
ARCAM	238
AUDIO ACCESS	119 147
AUDIO EASE	165
AUDIO TECHNICA	046
BSR	037 057
CALIFORNIA AUDIO	103 008
CAPETRONIC	063
CARRERA	057 080
CARVER	185 041 044 050 086 107 130 134 135 138 139 203 204
	167
CASIO	111 182
CLARINETTE	182
CREEK	159
CROWN	035
DENON	002 123
EMERSON	042 069 102
FISHER	050 185 134 008
FRABA	111
GENEXXA	010 069 102
GOLDSTAR	080
HAITAI	093
HARMAN KARDON	018 033 047 208
HITACHI	042 175
INKEL	130 143 144
JCPENNEY	014 061 092 141
JENSEN	158
JVC	004 022 136 163 213 214 242 243
KENWOOD	185 007 023 055 071 072 142 137 254
KOSS	061
KRELL	241
KYOCERA	005
LOTTE	102
LUXMAN	011 028 070 076 249 252
LXI	059
MAGNAVOX	044 107
MARANTZ	027 041 044 051 077 107 209 246
MCINTOSH	212 247
MCS	014 073 092
MEMOREX	010
MISSION	044 107
MITSUBISHI	179
MITSUMI	153
MODULAIRE	182
MONDIAL	147
MYRYAD	244 155
NAD	006 005 067 178
NAKAMICHI	217 218 219 095
NEC	014 062
NIKKO	046
NSM	044 107
ONKYO	030 038 039 168 169
OPTIMUS	010 050 057 058 081 082 083 085 093 195
PANASONIC	103 201 172 008 068 248
PARASOUND	233 240
PHILIPS	041 044 107 246 253

BRAND	CODE NUMBERS
PIONEER	010 020 025 056 174 175 176
PROCEED	239
PROTON	044 107 228
QUASAR	103 008
RADIO SHACK	182
RCA	017 042 150
REALISTIC	042 050 051 102 181 182 187
ROTEL	044 107 161 178 250
SAE	044 107
SANSUI	044 069 107 128 171 190 125
SANYO	050
SCOTT	069 102
SHARP	026 031 051 066
SHERWOOD	003 019 051 096 112 115 119 166
SIGNATURE	033
SONY	048 081 097 126 133 177 225 226 164
SOUNDESIGN	251
SUMO	155
SYLVANIA	044 107
SYMPHONIC	052 181
TAEKWANG	195 085
TANDY	010
TEAC	015 034 036 051 052 101 131 140 079
TECHNICS	060 103 200 172 184 008 068
TECHWOOD	076
THETA DIGITAL	234 235
TOSHIBA	006 067 091 160 148
VECTOR RESEARCH	080
VICTOR	004 022 114 124
WARDS	185 033
YAMAHA	024 046 054 186 183 245
YORX	182

DVR

BRAND	CODE NUMBERS
DISH	122
ECHOSTAR	122
HUGHES	108 117
HUMAX	117
JVC	122
PHILIPS	108 090 117
RCA	109
REPLAY NETWORKS	075
SONY	104 105
TIVO	090 117
TOSHIBA	117

CODE TABLES

BRAND	CODE NUMBERS
3M	152
AIWA	164
APPLE/iPod	412 401
ARCHER	155
AURORA MULTIMEDIA	220
AUTON	191
BOSE	409
CELADON	221
CRESTRON	213 214 215 216 217 218
DELL	261 262
DMX	156
DRAPER SCREEN	204
DREAMVISION	097
DWIN	080 253
EVERQUEST	206
EXTRON	151
FAROUDJA	184
FUJI	209
GATEWAY	261 262
HAUPPAUGE	294 295
HP	261 262
HUNTERDOUGLAS	219
JERROLD	153
JVC	185
KENWOOD	185
KENSINGTON	406
KEYSPAN	297
LITE-TOUCH	208 257
LUTRON	158 159 077
MAKITA	186 201
MICROSOFT/XBOX	408 107
MINDPATH	205
NILES	160 187
NSM	161
PIANO DISC PLUS	085
POLKAUDIO	162
RUSSOUND	081
SCIENTIFIC ATLANTA	163 156
SIMA	082
SOLO ELECTRONICS	207
SOMFY	078 079
SONY	164 165 166 261 262
STARCOM	153
TURBOSCAN	167
VELODYNE	203
X-10	183 093
XANTECH	168 169 170 171 172 188 189
AUX-TAPE	
AIWA	015 071 100 114
CARVER	006 008 027 024 036
DENON	105 227 229
FISHER	064
GOLDSTAR	011
HARMAN KARDON	233
JVC	106 116 239 240
KENWOOD	005 013 023 026 064 145 146 181 190
LINN	124
LUXMAN	035 137 139
MAGNAVOX	027

BRAND	CODE NUMBERS
MARANTZ	014 027 056 065 087
MCINTOSH	238
MITSUBISHI	242 243
NAD	029 048
NAKAMICHI	244 245 025
ONKYO	002 012 016 017 018 019 115
OPTIMUS	026 054 055
PANASONIC	007 010 032 088 195
PHILIPS	027 087
PIONEER	003 039 047 050 066 098 222
QUASAR	007 088
SANSUI	027 113 119 224
SHARP	026 057 131 175 181
SHERWOOD	038 004 028 030 033 034
SONY	020 022 052 084 089
TEAC	009 059 212
TECHNICS	007 010 076 088 109 122 193
TOSHIBA	112
VICTOR	106
YAMAHA	021 026 031 067 040
AUX-Media PC Controls	
DELL	261 262
GATEWAY	261 262
HAUPPAUGE	294 295
HP	261 262
KEYSPAN	297
SONY	261 262
TOSHIBA	261 262
WINBOOK	261 262
AUX - Gaming System Controls	
MICROSOFT/XBOX	408 107
SONY/PS2	414
AUX-iPod Controls	
APPLE/iPod	412 401
BOSE	409
KENSINGTON	406

AUX

CODE TABLES

Frequently Asked Questions

What is a "macro" button?

A "macro" is a button on the RF20 that you setup to make a lot of things happen when you press it. For example, to watch a DVD in most home theaters requires several remote controls and many button presses (power up the TV, power up the surround sound, power up the DVD player, set the TV to the correct video input, set the surround sound to the correct audio input and finally; press play on the DVD player remote control).

Instead of pressing all of those buttons one at a time, the RF20 enables you to setup one button that does all those steps automatically with one press. For more information on how and why you should setup macro buttons, watch the Quick Setup DVD Program Guide or refer to pages 26-29 in this Manual.

If the batteries run out, will I lose my settings?

No. The RF20 stores all of your settings in non-volatile FLASH memory. You could remove the batteries for months, replace them at your convenience, and the RF20 would still remember your settings.

Who can I call for more answers?

The Universal Remote Control Technical Support and Customer Service staff are ready to answer any questions you might have.

Call us at 1-914-835-4484
Monday - Friday, 9AM to 6PM (EST)

USALimited Warranty Statement

Your Universal Remote Control, when delivered to you in new condition, is warrantedagainst defects in materials or workmanship as follows: UNIVERSALREMOTE CONTROL,INC. warrants this product against defects in material or workmanship for a period of one(1) year and as set forth below. Universal Remote Control will, at its sole option, repair theproduct using new or comparable rebuilt parts, or exchange the product for a comparablenew or rebuilt product. In the event of a defect, these are your exclusive remedies.

This Limited Warranty covers only the hardware components packaged with the Product. Itdoes not cover technical assistance for hardware or software usage and it does not coverany software products whether or not contained in the Product; any such software is provided "AS IS" unless expressly provided for in any enclosed software Limited Warranty.

To obtain warranty service, you must deliver the product, freight prepaid, in its originalpackaging or packaging affording adequate protection to Universal Remote Control at theaddress provided in the Owner's Manual. It is your responsibility to backup any macroprogramming, artwork, software or other materials that may have been programmed intoyour unit. It is likely that such data, software, or other materials will be lost during serviceand Universal Remote Control will not be responsible for any such damage or loss. Adated purchase receipt, Bill of Sale, Installation Contract or other verifiable Proof ofPurchase is required. For product support and other important information visit UniversalRemote Control's website: http://www.UniversalRemoteControl.com or call the UniversalRemote Control Customer Service Center (914) 835-4484.

This Limited Warranty only covers product issues caused by defects in material or work-manship during ordinary consumer use. It does not cover product issues caused by anyother reason, including but not limited to product issues due to commercial use, acts ofGod, third-party installation, misuse, limitations of technology, or modification of or to anypart of the Universal Remote Control product. This Limited Warranty does not coverUniversal Remote Control products sold as USED, AS IS, REFURBISHED, so-called "BSTOCK" or consumables (such as batteries). This Limited Warranty is invalid if the factory-applied serial number has been altered or removed from the product. This LimitedWarranty is valid only in the United States of America.

This Limited Warranty specificallyexcludes products sold by unauthorized resellers.

UNIVERSALREMOTE CONTROLSHALLNOT BE LIABLE FOR ANYINCIDENTALORCONSEQUENTIALDAMAGES FOR BREACH OF ANYEXPRESS OR IMPLIED WARRANTYOR CONDITION ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BYAPPLICABLE LAW, THERE IS NO OTHER WARRANTYEXPRESSED OR IMPLIED. UNIVER-SALREMOTE CONTROLWILLNOT BE HELD RESPONSIBLE FOR STATEMENTS MADEBYOTHERS CONCERNING THE MERCHANTABILITYOR FITNESS FOR APARTICULARPURPOSE ON THIS PRODUCT. Some states or jurisdictions do not allow the exclusion orlimitation of incidental or consequential damages, or allow limitations on how long animplied warranty lasts, so the above limitations or exclusions may not apply to you. ThisLimited Warranty gives you specific legal rights and you may have other rights which varyfrom state to state or jurisdiction to jurisdiction.

Specifications

Learning Capability - 825 IR commands at standard
frequencies (15kHz to 100kHz)
Macro Capability - 453 Macros of up to 190 steps each
IR Range (Line of Sight via Infrared): 30-50 feet,
depending on the environment
RF Range (radio frequency): 50 to 100 feet, depending
upon the environment
RF Frequency: 418MHz
Weight: 7.1 oz. (with batteries)
Size: 8.5" x 2.5" x 1"
Batteries: Four AAA Alkaline batteries included
LCD Size: 0.88" x 1.88"

Federal Communication Commission Interference Statement

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 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 off and on, the user is encouraged to try to correct the interference by one more of the following measures:

◆ Reorient or relocate the receiving antenna.
◆ Increase the separation between the equipment and 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.

Warning!

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
Note : The manufacturer is not responsible for any Radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

FCC Caution

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

OTHER INFO