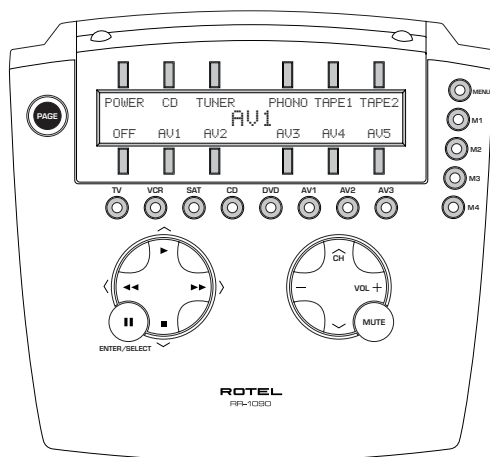




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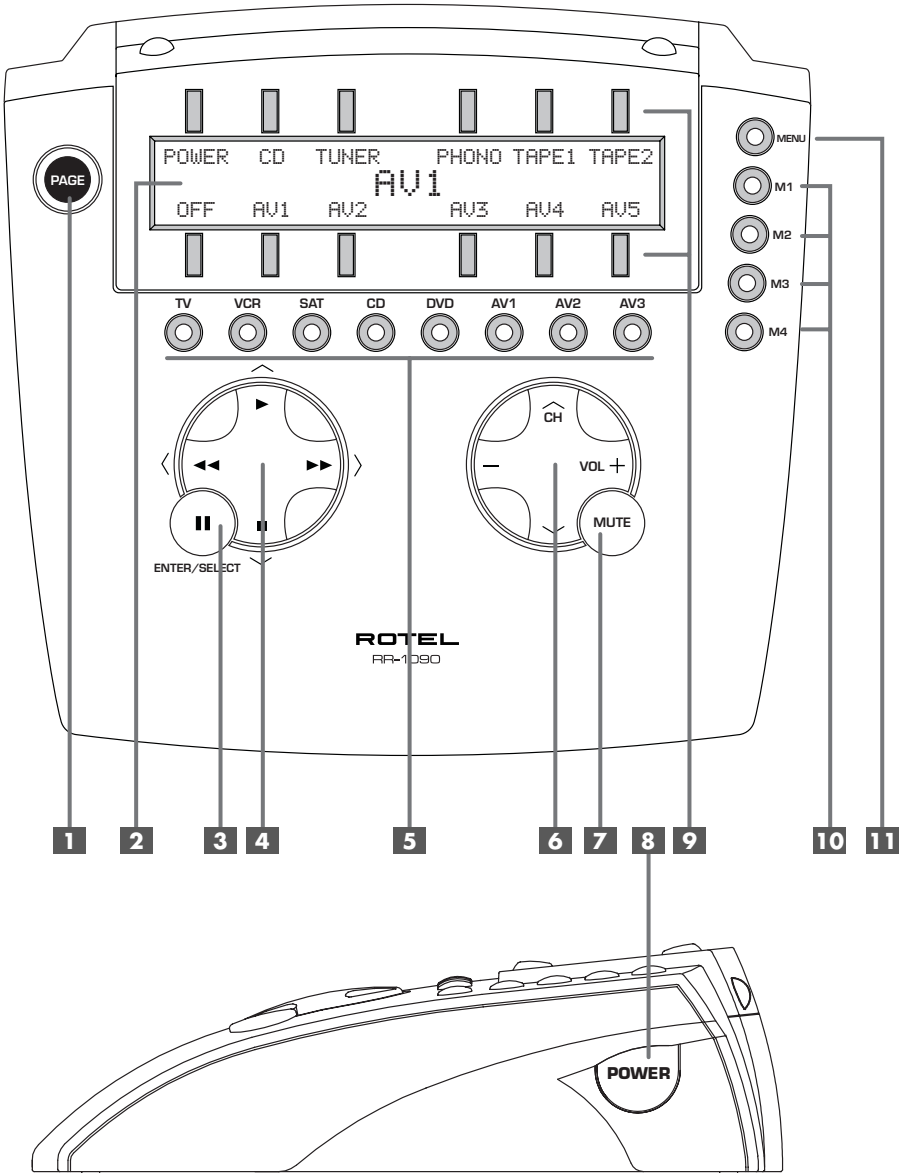
Owner's Manual

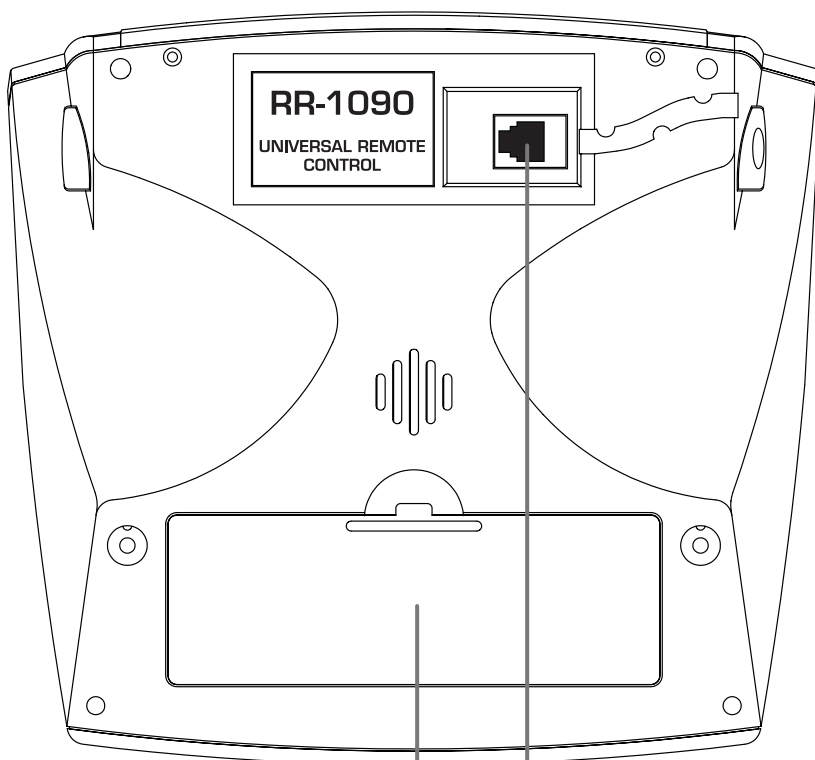


RR-1090

Universal Remote Control

1. Layout



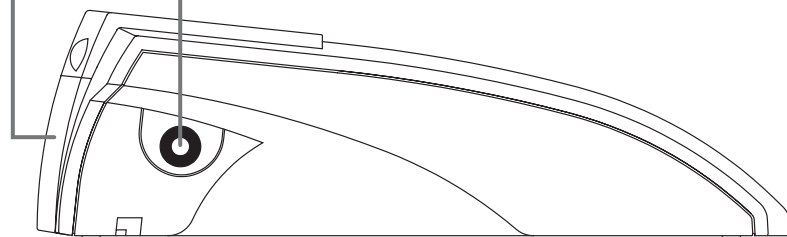


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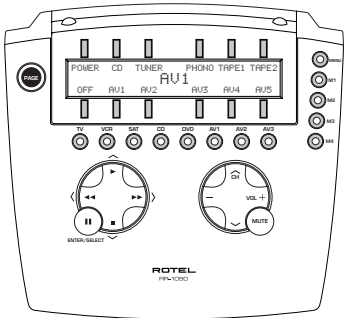
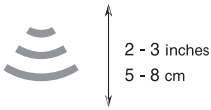
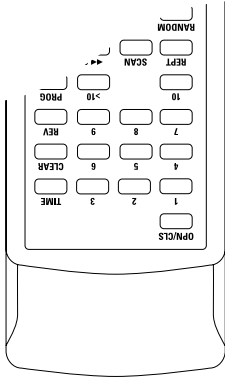
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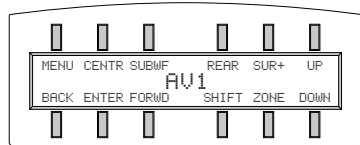
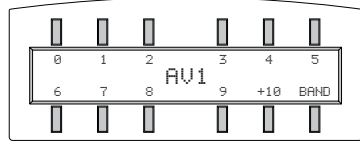
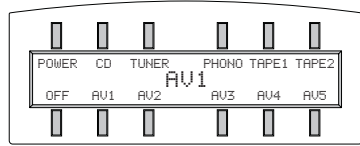
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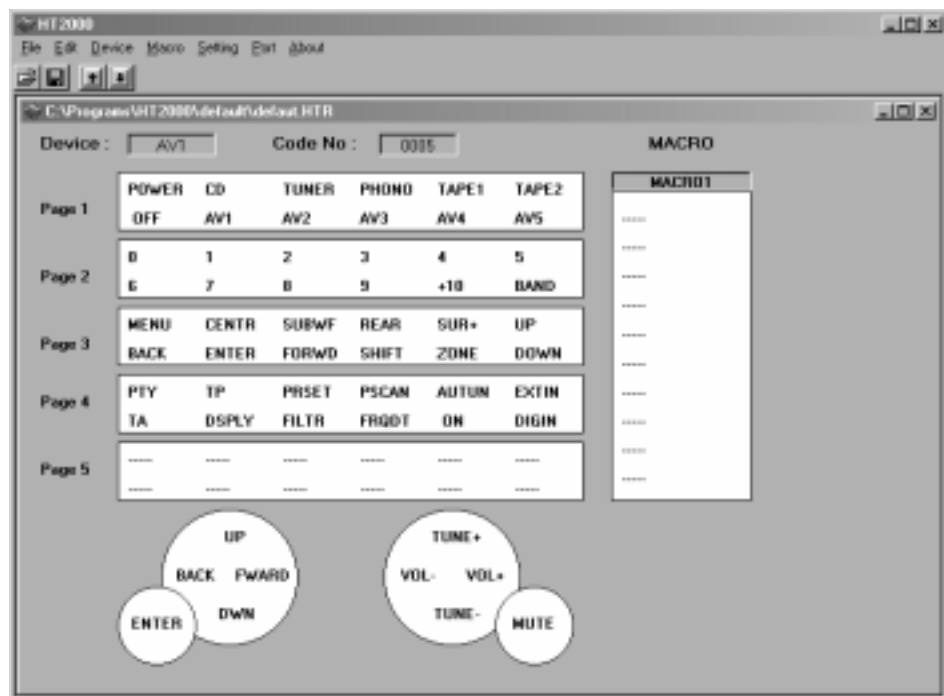
2. Learning



3. Sample Device Pages



4. PC-Link Software



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Introduction

Thank you for purchasing the RR-1090 Universal Remote Control. The RR-1090 can replace up to eight infrared remote controls, operating audio or video components from Rotel and other manufacturers. The RR-1090 includes command sets for hundreds of audio/video components plus it can learn additional commands from your existing remotes. Operation of the RR-1090 is simple and intuitive using just a few buttons and a large LCD menu display.

Key Features

- Simple programming using built-in command sets for hundreds of components
- Pre-programmed to operate Rotel components.
- Teach the RR-1090 additional commands from other remotes.
- LCD display provides simple menu-driven operation with customizable labels for every command.
- Backlighting for ease of use in dark rooms along with optional beep whenever a button is pressed.
- Four MACRO keys send a sequence of up to 10 commands with the press of a button.
- Includes rechargeable batteries and charger.
- Serial cable and software for programming RR-1090 from any Windows® 95/98 computer.

Sensible Precautions

- The RR-1090 is rugged, but it is not indestructible. So please don't drop it!
- Do not expose the RR-1090 to moisture. To clean the RR-1090, use a soft, lint-free damp cloth. Avoid harsh cleaning solvents.
- Don't try to take the RR-1090 apart. Disassembly will void the warranty.

Battery Installation and Recharging 14 13

The RR-1090 includes 4 AA rechargeable nickel hydride batteries and a 9V DC adaptor/recharger. When the batteries are weak and need to be recharged, a "LOW BATTERY" indicator appears in the display.

To install the batteries, turn the RR-1090 over and lift the cover off the battery compartment **14** by pressing the release tab and lifting up. Place the four AA batteries inside (follow the polarity illustrations on the bottom of the compartment) and replace the cover.

To recharge batteries, insert the adaptor cable into the connector on the left side of the RR-1090 **13**. Plug the power adaptor/recharger into an AC wall outlet (USA: 120V/60Hz or Europe: 230V/50Hz). A "CHARGING" indicator appears in the display while the adaptor is plugged in.

Leave charger operating overnight for a full charge. The remote can be operated with the charger plugged in while the batteries are charging.

NOTE: You can use conventional alkaline AA batteries instead of the rechargeable batteries shipped with the RR-1090; however, do **not** use the power adaptor/charger with alkaline batteries.

Getting Started

See Figure 1

Please review the following controls and features of the RR-1090:

IR Emitter/Sensor 12

The IR Emitter/Sensor is located in the top edge of the RR-1090. It sends the IR commands and must be pointed at the desired component. It also receives IR codes from your other remotes during the LEARNING process or when duplicating the configuration settings from one RR-1090 to another.

Device Buttons 5

Eight round buttons on the RR-1090 select which command set is active and which component will be controlled. For example, press the AV1 button and the RR-1090 becomes the remote control for your Rotel Surround Sound Processor. Press the TV button and the RR-1090 becomes the remote control for your TV set.

To operate the RR-1090, first press the DEVICE key for the desired component. Then, press basic or menu COMMAND buttons to send the infrared commands for that component.

NOTE: The AV1, AV2, and AV3 DEVICE keys can be used for any type of component.

Basic Command Buttons 3 4 6 7 8

The POWER button on the right side of the remote plus two large round 4-way buttons and two smaller round buttons in the center of the RR-1090 duplicate the primary functions for your components – power, volume, channel up/down, play, fast forward, pause, etc. The commands for each button vary, depending on the selected DEVICE button.

Menu Command Keys 9 and LCD Display 2

At the top of the RR-1090 is a group of 12 rectangular buttons surrounding an LCD display. These MENU COMMAND keys provide additional functions shown by menu labels appearing in the display adjacent to each button.

The function of these buttons varies depending on the type of component selected by the DEVICE buttons and the menu page displayed.

PAGE Button 1

Each component selected by a DEVICE button can have up to 48 menu commands. These commands appear in the LCD display in groups (or pages) of twelve. Press the PAGE button to advance to the next page of commands, with new labels appearing in the LCD display. Each press of the PAGE button jumps to the next group for that component, eventually cycling back to the original page.

MACRO Buttons 10

Four buttons labeled M1, M2, M3, and M4 provide a special macro function – sending a sequence of up to 10 commands. For example, a macro sequence could turn on the TV set, select channel 5, turn on the surround processor, and select the TV input.

Two of the MACRO buttons (M3 and M4) are also used in customizing the RR-1090.

Menu Button 11

This button activates and selects between a series of menu screens in the LCD display used for customizing the RR-1090. The MENU button is not used during normal operation.

Power Button 8

In addition to serving as a basic command button, the POWER button is also used during the SETUP procedure when searching the database of IR command codes.

Serial Connector 15

This 4-pin modular connector on the back of the RR-1090 can be used to connect the remote to a standard DB-9 serial connector on a PC using the supplied cable.

Using PC-LINK software supplied with the unit, codes and commands can be uploaded and/or downloaded from a Windows® 95/98 computer to the RR-1090 remote. This allows easy transfer of one remote's programming to other RR-1090 remotes as well as simplified customization. See the section on PC-LINK software in this manual.

Operating the RR-1090

This section of the manual explains the basic operation of the RR-1090 and most of its standard features.

NOTE: *The RR-1090 is pre-programmed with the codes for Rotel surround sound processors stored under the AV1 device button. Rotel CD and DVD codes are stored under the CD and DVD buttons.*

Activating the RR-1090

To conserve battery power, the RR-1090 goes into “sleep” mode following 60 seconds of inactivity. Press any button to activate the remote. Labels appear in the LCD display when the remote is active

Sending IR Commands

Instead of using multiple remotes to operate your system, you simply press a button on the RR-1090 to make it the remote control for your CD player or the remote control for your TV set and send commands to operate the desired component. Here’s how:

1. Press any button on the RR-1090 to activate the remote (if necessary).
2. Press a DEVICE button **5** to activate the command set for the desired component. For example, press the AV1 button for a Rotel surround processor. The label for your selected device appears in the center of the display.
3. Press a COMMAND button **3 4 6 7 8 9** to send an IR command to the component you have selected. For example, press the VOL+ command to increase the volume on a Rotel surround processor. Basic commands are available on the large round buttons **3 4 6 7** in the center of the remote and the POWER button **8**. Additional commands are available on the 12 MENU COMMAND keys **9** at the top of the remote, corresponding to the command labels visible in the LCD display. While a COMMAND button is being pressed, the label associated with that command replaces the DEVICE name in the center of the display.

4. Press the PAGE button **1** to see the next page of 12 available menu commands in the display. Up to four “pages” of commands may be available for a particular component. Press the PAGE button repeatedly to cycle through all available groups of commands for that component. See Figure 3.

NOTE: *The COMMAND buttons duplicate controls on many different types of components. Their function depends on the type of component selected. Make sure that you have pressed the correct DEVICE button before sending IR commands.*

Sending Macro Commands

Four buttons on the RR-1090 (labeled M1, M2, M3, and M4) can store multiple command macro sequences – for example, a sequence that turns on the TV set, selects channel 5, turns on the surround processor, and selects the TV input. A macro sequence is sent by pressing the MACRO button where the macro is stored.

Programming Command Codes

The RR-1090 contains hundreds of command sets for components. Programming the remote involves selecting the command sets that correspond to the components in your system and assigning each of them to one of the eight DEVICE buttons by entering the 4-digit code for that component. This need only be done once during initial setup of the RR-1090.

The easiest way is to find your components and corresponding 4-digit codes from the list of codes at the end of this manual. If your component is not listed, there are alternative search methods for finding the right command set.

NOTE: *Programming the RR-1090 is done in a menu-driven setup mode accessed by pressing the MENU button. At any time during the process, you can exit the setup mode and return to normal operation by pressing the MENU button twice in succession.*

4-Digit Code Programming

Find your audio/video component in the code list and note the 4-digit code(s):

1. Press the MENU button to reach the main menu.
2. Select SETUP from the LCD display menu by pressing the MENU COMMAND key above the first letter of the SETUP label.
3. Press one of the DEVICE buttons to select where you wish to store this component's codes. If you choose the multipurpose AV1, AV2, or AV3 device buttons, you will be further prompted to select the type of component (CD, VCR, etc.)
4. Select ENTER CODE by pressing the MENU COMMAND key above that label.
5. Input the 4-digit code using the MENU COMMAND keys corresponding to the digits in the LCD display. Upon completion, the successfully entered code will be confirmed in the display.
6. Once the code has been entered, the menu will present two options. Press another DEVICE key to program additional codes. Press the MENU button to return to the main menu; press the MENU button a second time to exit the setup mode and return to normal operation.

Test the code by sending commands to the components (i.e. the POWER command). If the code does not work properly, repeat the procedure using the next 4-digit code listed for the brand of component.

Search Code by Brand Name

You can also use the following search method to find and test the code numbers available for your brand of component.

1. Press the MENU button to reach the main menu.
2. Select SETUP from the LCD display by pressing the MENU COMMAND key above the first letter of the SETUP label.
3. Press one of the DEVICE buttons to select where you wish to program this component's codes. If you choose AV1, AV2, or AV3, you will be further prompted to select the type of component (CD, VCR, AMP, etc.).

4. Select BRAND NAME by pressing the MENU COMMAND key above that label.
5. Select the first letter of your component's brand-name. If necessary, press the M4 button for the next page of letters or the M3 button for the previous page of letters.
6. Select your component's brand name from the list appearing in the display (pressing M4 or M3 for additional listings). The prompt "press POWER key to test" appears in the display
7. Press the POWER button on the right side of the RR-1090 to test the first available code for your brand. The 4-digit code being tested is shown in the display.

If the POWER command turns on or off the desired component, you have found a code that may work. You can test additional commands by pressing MENU COMMAND keys corresponding to commands for that 4-digit code shown in the display. If successful, press the DEVICE button to save the code.

If the POWER command does not work, press the POWER button to test the next available code for that brand, with the new 4-digit code being tested shown in the display. Continue pressing the POWER button and testing codes until you have found a code that works, saving it by pressing the DEVICE button.

If none of the available codes for that brand work, you will be asked to search the entire library of codes for that kind of component. Select YES to jump to the search procedure (step 5 in the following section). Select NO to return to the main menu

Auto-Search Programming

To search for a code from the full list of available 4-digit codes for a type of component:

1. Press the MENU button to reach the main menu.
2. Select SETUP from the LCD display menu by pressing the MENU COMMAND key above the first letter of the SETUP label.
3. Press one of the DEVICE buttons to select where you wish to program this component's codes. If you choose AV1, AV2, or AV3, you will be further prompted to select the type of component (CD, VCR, AMP, etc.).

4. Select SEARCH by pressing the MENU COMMAND key below that label. The prompt “press POWER key to test” appears in the display.
5. Press the POWER button on the right side of the RR-1090 to test the first available code. The 4-digit code being tested is shown in the display.

If the POWER command turns on or off the desired component, you have found a code that may work your component. You can test additional commands by pressing MENU COMMAND keys corresponding to commands for that 4-digit code shown in the display. If successful, press the DEVICE button to save the code.

If the POWER command does not work, press the POWER button to test the next available code, again with the 4-digit code being tested shown in the display. Continue pressing the POWER button and testing codes until you have found a code that works, saving it by pressing the DEVICE button.

If none of the available codes work, a prompt will tell you that you have tested all available codes. Press the MENU button to return to the main menu.

Learning Commands

If the programmed command sets for your component do not include functions you need, you can teach the RR-1090 individual commands from your existing remotes:

1. Place the RR-1090 and the original remote control on a flat surface end to end as shown in Figure 2 at the front of this manual. The IR signals sent by the other remote must be aimed at the IR emitter/sensor of the RR-1090.
2. Press the MENU button to reach the main menu.
3. Select LEARNING from the LCD display menu by pressing the MENU COMMAND key above the first letter of the LEARNING label.
4. Press one of the DEVICE buttons to select where you wish to program this component’s codes.
5. Select the RR-1090 COMMAND key where you wish to memorize the command. You can choose one of the BASIC COMMAND buttons or one of the MENU COMMAND keys (using the PAGE

button to advance to a new page of MENU COMMANDS if necessary to find an unused key). The LCD display will show “LEARNING”.

6. Press and hold the corresponding command button on the original remote to send the IR code being learned to the RR-1090.

If the learning procedure fails, the RR-1090 will display “ERROR” and revert back to Step 5 above. Reposition the two remotes and try again, starting from Step 5.

When a code is successfully learned, the RR-1090 will prompt you to edit the label it has assigned to the command. Select NO to keep the current label. Select YES to edit the label and enter the desired letters (using the M3 or M4 buttons to move to the next page of letters). Labels can be up to 5 characters. Press the MENU button to store the new label.

To learn additional commands, repeat from Step 5 above. To return to the main menu, press the MENU button.

NOTE: *The RR-1090 has a capacity of 240 commands. If capacity is reached, the remote will display COMMAND FULL and not allow you to learn an additional command. See the section on deleting commands to clear command space.*

Macro Programming

Four buttons on the RR-1090 (labeled M1, M2, M3, M4) can store macro sequences of multiple commands sent by pressing one button.

To program a macro sequence, first make sure that all of the desired commands have been learned by the RR-1090 – the macro feature simply records a sequence of individual RR-1090 button commands.

1. Press the MENU button to reach the main menu.
2. Press the PAGE button for the next page of menu options.
3. Select MACRO from the LCD display.
4. Press the MACRO button (M1, M2, M3, or M4) where you wish to store the new macro sequence.

5. Enter the new label for the **macro** by pressing MENU COMMAND keys corresponding to the letters in the display (using the M3 or M4 buttons to move to the next page of letters). Labels can be up to 5 characters long. After entering the label, press the MENU button to store it.
6. Memorize the first step in the macro. Press a DEVICE button to change to the desired device and individual COMMAND keys to memorize commands from the selected device (press the PAGE button to see additional pages of available commands).
7. To memorize additional commands, press the selected MACRO button to confirm the previous memorized command and then memorize the next command. Repeat until the entire sequence has been stored.
8. When the entire macro sequence has been entered, press the MENU button to store the macro sequence.

NOTE: A macro sequence can contain up to 10 commands, not including any DEVICE button presses.

Custom Device Page

Generally, all commands stored under a DEVICE button operate a single component. However, it is possible to build one special command set, called a CUSTOM PAGE, which includes individual commands copied from other devices. For example, you could build a CUSTOM PAGE command set containing copies of the most used commands from all devices, providing a simple-to-use subset of favorite commands. This CUSTOM PAGE command set can be accessed by pressing the DEVICE button where it is stored. To build a custom device page:

1. Press the MENU button to reach the main menu.
2. Select PREFERENCE from the LCD display.
3. Select CUSTOM PAGE from the LCD display.
4. Press the DEVICE button where you wish to store the CUSTOM PAGE command set.

5. Enter the new label for the device by pressing MENU COMMAND keys corresponding to the letters in the display (using the M3 or M4 buttons to move to the next page of letters). Labels can be up to 7 characters long. After entering the label, press the MENU button to store it.
6. Press a DEVICE button to select the device where the first command you wish to copy to the CUSTOM PAGE is located.
7. Press the COMMAND key for the first command you wish to add to the CUSTOM PAGE.
8. Select the location in the CUSTOM PAGE where you wish to store the command by pressing any MENU COMMAND key. The label for that command appears in the selected location.
9. Repeat steps 6 - 8 for each additional command you wish to copy to the CUSTOM PAGE.

If you wish to auto-arrange the commands, press the M4 button. Press the MENU button to return to the main menu.

NOTE: To copy additional commands at any time, repeat steps 1–3 and steps 6–10. Because you are copying to an existing CUSTOM PAGE, steps 4 and 5 are not necessary and will be skipped.

Deleting Stored Commands

You can erase previously stored commands:

1. Press the DEVICE button containing the command you wish to delete.
2. Press the MENU button to reach the main menu.
3. Select EDIT from the LCD display.
4. Select DELETE KEY from the LCD display.
5. Press the COMMAND key you wish to erase. You can delete commands from BASIC COMMAND buttons or MENU COMMAND keys (using the PAGE button to scroll through the available pages of commands).
6. Select YES or NO to confirm the deletion.
7. Repeat steps 5 and 6 to delete additional commands. If desired, press the M4 button to auto-arrange the new commands in the display. Press the MENU button to return to the main menu.

Volume Punch-through

In many systems, the VOLUME is adjusted at the TV set or the A/V processor. For convenience, the RR-1090 has a VOLUME PUNCH-THROUGH feature that copies the volume commands from either the TV device or any programmed A/V device to device keys for other components such as CD players, VCRs, SAT receivers, and DVD players. After enabling this feature, volume controls from either the TV or A/V processor are available even when one of these other DEVICE command sets is active.

To enable the VOLUME PUNCH-THROUGH feature:

1. Press the MENU button to reach the main menu.
2. Select PREFERENCE from the LCD display.
3. Select PUNCH THROUGH from the LCD display.
4. Select the volume commands (from either the TV command set or an A/V command set) to copy to another DEVICE by selecting either TV VOL or AMP VOL from the LCD display. If you select AMP VOL, you will need to select the A/V command set with the desired volume commands (AV1, AV2, or AV3) from the next LCD display menu by pressing a MENU COMMAND key.
5. Press a DEVICE button to select the target device where you want the volume commands to be copied. The VOLUME PUNCH THROUGH command cannot be copied to a TV device or any A/V device. They can be copied to any other kind of device (CD, SAT, LD, DVD, etc.). If you select an improper DEVICE key, nothing happens. After you have selected an allowable DEVICE key, a confirmation PUNCH THROUGH OK appears in the display.
6. Press the MENU button to return to the main menu.

RESET Function

You can return the RR-1090 to its original factory programming at anytime by using the RESET function.

NOTE: Using the RESET function erases **all** learned commands, labels, and configuration settings. Make sure this is what you want to do!

To reset the RR-1090:

1. Press the MENU button to reach the main menu.
2. Press the PAGE button to advance to the second page of options.
3. Select REMOTE SETTINGS from the LCD display by pressing the MENU COMMAND key above the first letter of the REMOTE SETTINGS label.
4. Select RESET from the LCD display by pressing the MENU COMMAND key below the first letter of the RESET label.
5. Select YES or NO to confirm. If you select YES, the RR-1090 will erase all custom programming and return to its original factory settings, displaying a series of progress messages followed by the final confirmation DEFAULT SETTING.
6. Press the MENU button to return to the main menu.

DUPLICATE Function

The DUPLICATE function transfers programming, including learned commands and custom labels, from one RR-1090 to a second RR-1090. You have the option of transferring data from just a single DEVICE key or from all eight DEVICE keys. To transfer the programming, place two RR-1090 remotes with their IR windows facing each other, then proceed as follows.

On the remote that will be receiving the data:

1. Press the MENU button to reach the main menu.
2. Press the PAGE button to advance to the second page of options.
3. Select DUPLICATE from the LCD display by pressing the adjacent MENU COMMAND key.
4. Select RECEIVE from the LCD display by pressing the adjacent MENU COMMAND key. A READY TO RECEIVE INDICATOR appears in the display.

On the remote that will be sending the data:

1. Press the MENU button to reach the main menu.
2. Press the PAGE button to advance to the second page of options.
3. Select DUPLICATE from the LCD display by pressing the adjacent MENU COMMAND key.
4. **To transmit codes for all devices**, select the COPY ALL DEVICES menu option. **To transfer codes for just one device**, select COPY ONE DEVICE and then select the DEVICE button to be copied. This begins the data transfer procedure with a SENDING prompt appearing in the display.

At the completion of the transfer procedure a confirmation will appear on the sending RR-1090:

- **If the data transfer is successful**, "FINISH SENDING" appears.
- **If the data transfer fails**, "SENDING ERROR" appears in the LCD and the unit reverts to normal operating mode. Reposition the two remotes and try again.

NOTE: Do not attempt to use the DUPLICATE function to transfer data from any remote other than another Rotel RR-1090.

Custom Labels

The labels for DEVICE buttons and COMMAND keys can be edited. Also, the location of the COMMAND keys for a device can be moved from one position in the LCD display to another.

Edit a DEVICE Name

To change the name that appears in the center of the LCD display when you select a DEVICE button:

1. Press the DEVICE button you wish to rename.
2. Press the MENU button to reach the main menu.
3. Select EDIT from the LCD display.
4. Select DEVICE NAME from the LCD display.

5. Enter the new label for the device by pressing MENU COMMAND keys corresponding to the letters in the display (using the M3 or M4 buttons to move to the next page of letters). Labels can be up to 7 characters long. After entering the label, press the MENU button to store it.

Edit a COMMAND Name

To change the name that appears in the LCD display next to a MENU COMMAND key:

1. Press the DEVICE button containing the COMMAND key you wish to rename.
2. Press the MENU button to reach the main menu.
3. Select EDIT from the LCD display.
4. Select KEY NAME from the LCD display.
5. Press the BASIC COMMAND button or MENU COMMAND key (using the PAGE button for additional choices) that you wish to rename.
6. Enter the new label for the device by pressing MENU COMMAND keys corresponding to the letters in the display (using the M3 or M4 buttons to move to the next page of letters). Labels can be up to 5 characters long. After entering the label, press the MENU button to store it.
7. Repeat steps 5 and 6 to label additional COMMAND buttons or press the MENU button to return to the main menu.

Move a COMMAND Name

To change the location of a MENU COMMAND key in the LCD display:

1. Press the DEVICE button containing the COMMAND key you wish to move.
2. Press the MENU button to reach the main menu.
3. Select EDIT from the LCD display.
4. Select MOVE KEY from the LCD display.
5. Select the MENU COMMAND key to move.
6. Select the new location for the COMMAND key.
7. The two COMMAND keys exchange locations.

Auto-arrange COMMAND Names

As an alternative to manually moving keys, you can have the RR-1090 automatically arrange the MENU COMMAND keys for a DEVICE.

1. Press the DEVICE button containing the COMMAND keys you wish to auto-arrange.
2. Press the MENU button to reach the main menu.
3. Select EDIT from the LCD display.
4. Select AUTO-ARRANGE from the LCD display.

Other Configuration Options

The RR-1090 features backlighting and a keytone beep to assist in operation. Additionally, password protection can be enabled to protect access to the setup features.

Backlighting

Backlighting makes the LCD display visible in low light conditions. There are three available settings:

- **With Light Sense.** Senses the lighting level in the room and turns on the backlighting for 5 seconds with any key press when the room is dark. (default setting)
- **Always On.** Backlighting will be turned on for 5 seconds with any key press regardless of the room lighting.
- **Always Off.** Backlighting is disabled.

To configure the backlighting:

1. Press the MENU button to reach the main menu.
2. Press the PAGE button to advance to the second page of menu options.
3. Select REMOTE SETTINGS from the LCD display.
4. Select BACKLIT from the LCD display.
5. Select one of three backlighting modes from the LCD display.

Beep Sound

The RR-1090 has a keytone feature that beeps to confirm each button press. This feature can be enabled (default) or disabled.

To configure the beep sound:

1. Press the MENU button to reach the main menu.
2. Press the PAGE button to advance to the second page of menu options.
3. Select REMOTE SETTINGS from the LCD display.
4. Select BEEP SOUND from the LCD display.
5. Select SOUND ENABLE or SOUND DISABLE.

Password

A password can be defined and enabled to prevent access to the setup menus. Once defined and enabled, the password will be required before access to the setup menus is allowed.

The factory default password is "2000", however the password protection is disabled by default.

To enable or disable password protection:

1. Press the MENU button to reach the main menu.
2. Press the PAGE button to advance to the second page of menu options.
3. Select REMOTE SETTINGS from the LCD display.
4. Select PASSWORD from the LCD display.
5. Select ENABLE or DISABLE.
6. If prompted, enter the password by pressing the MENU COMMAND keys corresponding to the characters shown in the display (using the M3 or M4 buttons to move to the next page of characters). After entering the password, press the MENU button.

To change the password:

1. Press the MENU button to reach the main menu.
2. Press the PAGE button to advance to the second page of menu options.
3. Select REMOTE SETTINGS from the LCD display.
4. Select PASSWORD from the LCD display.

5. Select CREATE from the LCD display.
6. When prompted, enter the old password by pressing the MENU COMMAND keys corresponding to the characters shown in the display (using the M3 or M4 buttons to move to the next page of characters). After entering the password, press the MENU button.
7. Enter the new password by pressing the MENU COMMAND keys corresponding to the characters shown in the display, using the M3 or M4 buttons to move to the next page of characters. Passwords can be up to 4 characters in any combination of letters or numbers. Press the MENU button.
8. Re-enter the new password to confirm and press the MENU button. A PASSWORD SET confirmation appears in the display. You can then select ENABLE or DISABLE.

NOTE: *Once the password is changed, you cannot access the setup menus if you forget the new password. Unless you have a need for extra protection, we recommend leaving the default password "2000" unchanged.*

PC-Link Software

The Windows® 95/98 PC-LINK software provided with the RR-1090 remote can be used to work with complete configuration files for the RR-1090 remote. These configuration files contain a complete set of options, command sets, macros, and custom labels to fully customize a RR-1090 remote. The configuration files can be saved to or opened from the hard disk. They can also be uploaded from or downloaded to the RR-1090 using the supplied serial cable. This provides a convenient way to transfer the desired programming to a number of RR-1090 remotes.

In addition, many of the configuration options for the RR-1090 can be modified in the PC-LINK software, a procedure that may be more convenient than using the RR-1090's own setup menus.

Installing PC-LINK Software

To install and run the PC-LINK software on a Windows® 95/98 computer:

1. Insert DISK 1 in your disk drive.
2. Run the program SETUP.EXE, either by double-clicking the filename in Windows® Explorer or by clicking RUN from the START button menu and typing A:\SETUP.EXE.
3. Follow the steps in the setup program, accepting the default directory for the installation of the program (C:\PROGRAMS\HT2000) or specifying a new location using the BROWSE button.
4. You will be prompted to insert DISK 2 during the installation. When the files are installed, you will be prompted to restart your computer to complete the installation.
5. Run the PC-LINK software either by double-clicking the filename HT2000.EXE in Windows® Explorer or by clicking RUN from the START button menu and typing C:\PROGRAMS\HT2000.EXE.

Loading and Saving Configuration Files

To use the PC-LINK software, you open a configuration file which appears in the main PC-Link screen as shown in the illustration at the front of the manual. These configuration files can be stored on your computer disk with the file extension "*.HTR".

NOTE: *The factory default configuration file "DEFAULT.HTR" is installed in the DEFAULT subdirectory of the HT2000 installation directory.*

To open a configuration file from a computer disk:

1. Select OPEN from the FILE menu.
2. Use the dialog box to find the DEFAULT.HTR configuration file (or the file of your choice).
3. Click the OPEN button.

To save a configuration file to a computer disk:

1. To save a configuration file with the same name, select SAVE from the FILE menu. The new file will overwrite the old file.
2. To save a configuration file with a different name, select SAVE AS from the FILE menu. Enter a new file name in the dialog box (the .HTR extension will be added automatically). Click the SAVE button.

Uploading and Downloading Configuration Files

Using the PC-LINK software and the supplied serial cable, you can upload and download a configuration file from the RR-1090 remote to your computer. For example, you could upload the configuration file from the remote, modify it, and then download the new configuration settings to the remote.

To use the upload/download feature, you must configure your computer and put the remote in data transfer mode.

Connect the RR-1090 to your computer:

1. Plug the 4-pin modular connector on the supplied cable into the jack on the back of the remote.
2. Plug the other end of the cable into a DB-9 serial connector (COM1 or COM2) on your computer.
3. Start the PC-LINK software and select the port you plugged the cable into (COM1 or COM2) from the PORT menu.

Put the RR-1090 in DATA TRANSFER mode:

1. Press the MENU button to reach the main setup menu.
2. Press the PAGE button to advance to the second page of options.
3. Select PC LINK from the LCD display by pressing the adjacent MENU COMMAND key.

To upload a configuration file from the RR-1090 to the computer:

1. Make sure the RR-1090 is in data transfer mode.
2. Select UPLOAD from the FILE menu in the PC-LINK software. An "UPLOADING..." prompt appears in the remote's LCD screen during the transfer.
3. When the upload is complete, the configuration file will be opened in the PC-LINK software, where it can be modified, downloaded to another RR-1090, or saved to the computer disk.

To download a configuration file from the computer to the RR-1090:

1. Make sure the RR-1090 is in data transfer mode.
2. Open the desired file in the PC-LINK software.
3. Select DOWNLOAD from the FILE menu in the PC-LINK software. A "DOWNLOADING..." prompt appears in the remote's LCD screen during the transfer.
4. When the DOWNLOAD is complete, the new configuration settings will be installed in the RR-1090, overwriting any previous settings.

Modifying Configuration Files

The PC-LINK software can be used to see the current settings of an open configuration file and modify many of them. The modified configuration file can then be saved to a disk or downloaded to a RR-1090. Here are the available options in the PC-LINK software:

To select a DEVICE to be viewed or modified, chose the device from the DEVICE menu. The key names and other settings for that device are displayed in the PC-LINK screen.

To rename a DEVICE, select DEVICE NAME from the EDIT menu or double-click the DEVICE box on the main screen. Type the new name in the dialog box and click OK.

To rename a KEY, click the desired key in the main screen and select KEY NAME from the EDIT menu or double-click the desired key. Type the new name in the dialog box and click OK.

To delete a KEY, click the desired key in the main screen and select DELETE KEY from the EDIT menu. Click YES or NO to confirm.

To rearrange the KEYS for the current device, select ARRANGE KEY from the EDIT. You can also manually move the page keys to another location by clicking the key name, holding the mouse button, and dragging the label to a new location.

To view the steps in a MACRO, select the desired macro from the MACRO menu. The steps recorded in the macro are displayed down the right side of the main screen.

To change the KEY TONE setting, select KEY TONE from the SETTING menu. Click the desired option in the dialog box.

To change the BACKLIGHT setting, select BACKLIT from the SETTING menu. Click the desired option in the dialog box.

To view the PASSWORD setting, select PASSWORD from the SETTING menu.

To view the VOLUME PUNCH-THROUGH setting, select PUNCH THROUGH from the SETTING menu.

NEW TEXT INDICATED IN RED

4-Digit Codes

A/V Device Codes

ROTEL 0005, 0015, 0025, 0035
YAMAHA 0045, 0055, 0065

TV Device Codes

AKAI 0331
ALBA 0431
AMSTRAD 0481
ANAM 0251
AOC 0361
BAUER 0441
CANDLE 0351, 0361
CENTURION 0411
CITIZEN 0351, 0361
COLORTYME 0361
CONCERTO 0351
CRAIG 0251
CURTIS MATHES 0161, 0361
DAEWOO 0291, 0301, 0331
DECCA 0271
DIXI 0331
ELTA 0331
EMERSON 0021, 0061, 0071, 0081,
0091, 0101, 0111
ENVISION 0361
ETRON 0331
FISHER 0171
FORMENTI 0441
GE 0131, 0161, 0201
GEC 0271
GEMINI 0391
GENEXXA 0431
GOLDSTAR 0031, 0121, 0351, 0411
GOODMANS/TASHIKO 0271
HITACHI 0181, 0351
JENSEN 0311
JVC 0001, 0261, 0281
KENWOOD 0361
LOGIK 0381
LUXMAN 0351
MAGNASONIC 0031
MAGNAVOX 0341, 0391, 0401, 0411,
0421, 0581, 0591, 0601
MARANTZ 0221, 0351, 0361
MATSUI 0271, 0331
MEMOREX 0331, 0351, 0381, 0571
MGA 0361, 0561, 0571
MITSUBISHI 0221, 0321, 0561, 0571
MONTGOMERY 0351
MTC 0351, 0361

NAD 0551
NEC 0241, 0351, 0361
NIKKAI 0271, 0431
NIKKO 0031
OPTIMUS 0551
OPTONICA 0541
OSAKI 0271
PANASONIC 0191, 0251
PENNY 0161, 0351, 0361, 0521,
0531
PHILCO 0361, 0581, 0591, 0601
PHILIPS 0401
PIONEER 0511, 0551
PROTON 0351, 0501
PULSER 0351
QUASAR 0251
RADIO SHACK 0541
RCA 0051, 0141, 0151, 0181,
0411, 0491, 0531
REALISTIC 0541
SAISHO 0331
SAMPO 0361
SAMSUNG 0331, 0341, 0351, 0361
SANYO 0171, 0231, 0271
SEARS 0161, 0171, 0351, 0481,
0521
SHARP 0461, 0471, 0541, 0621
SIGNATURE 0351, 0381
SIMPSON 0581
SONY 0371, 0451, 0631
SQUAREVIEW 0481
SURPA 0351
SYLVANIA 0361, 0441, 0581, 0591,
0601
SYMPHONIC 0481
TANDY 0271, 0431
TATUNG 0271
TECHWOOD 0351
TEKNIKA 0351, 0381, 0571
TELETECH 0331
TERA 0501
TMK 0351
TOSHIBA 0351, 0521
VECTOR RESEARCH 0361
VIDIKRON 0211
WARDS 0361, 0381, 0451, 0541,
0581, 0591, 0601
YAMAHA 0361
ZENITH 0011, 0041, 0381

VCR Device Codes

AKAI	0262
AUDIO DYNAMICS	0202
BLAUPUNKT	0412
CANDLE	0342
CITIZEN	0342
CURTIS MATHES	0342
DBX	0202
DYNATECH	0342, 0472
EMERSON	0072, 0122, 0132, 0142, 0152, 0162, 0172, 0182, 0192, 0212, 0342
GOLDSTAR	0082
GOODMANS	0402
HITACHI	0102, 0562, 0572, 0582, 0592, 0602
JVC	0002, 0202, 0472, 0522, 0532, 0542, 0552
KENWOOD	0202, 0542
LXI	0022, 0342
MAGNAVOX	0342, 0482, 0492, 0502, 0512
MARANTZ	0202, 0402
MATSUSHITA	0342
MEI	0222
MEMOREX	0232, 0242, 0472, 0512
MINOLTA	0592, 0602
MITSUBISHI	0452, 0462, 0542
MONTGOMERY	0472
MOTOROLA	0472
NAD	0442
NEC	0202, 0292, 0422, 0432, 0542
OLYMPUS	0412
OPTIMUS	0442, 0472
OPTONICA	0402, 0472
ORION	0212
PANASONIC	0012, 0052, 0092, 0222, 0342, 0372, 0382, 0392, 0412
PENNY	0202, 0432, 0602
PENTAX	0592, 0602
PHILIPS	0282, 0342, 0420, 0492
PIONEER	0442, 0542
PULSAR	0512
QUARTZ	0272
QUASAR	0382, 0932
RADIO SHACK	0472
RCA	0112, 0382, 0392, 0482, 0592, 0602
REALISTIC	0402, 0472
RICOH	0352, 0362
SAISHO	0212, 0582

SAMSUNG	0212, 0312
SANKY	0472, 0512
SANSUI	0292, 0542
SANYO	0242
SBR	0282
SCOTT	0342
SEARS	0302, 0342, 0592, 0602
SHARP	0402, 0472
SONY	0032, 0332, 0352, 0362
STS	0602
SUNPAK	0352
SYLVANIA	0492, 0502
TEKNIKA	0322
TELEFUNKEN	0252
TMK	0212
TOSHIBA	0062, 0302, 0342
VECTOR RESEARCH	0202
VICTOR	0542, 0552
VIDEO CONCEPTS	0202, 0432
WARDS	0322, 0402, 0472, 0482, 0602
YAMAHA	0202
ZENITH	0042, 0362, 0512

CD Device Codes

ACOUSTIC RESEARCH	1346
ADC	0076, 0116
ADCOM	0256, 0306, 1066
ADS	0316
AIWA	0346, 0996, 1086, 1106
AKAI	0226, 0536, 0586
ALPINE	1266, 1356
AUDIO TECHNICA	0596
BSR	0296, 0706, 0826
CALIFORNIA AUDIO LAB	0106
CAPTEONIC	1256
CARRERA	0296
CARVER	0336, 1186
CASIO	0396
CROWIN	0236
CURTIS MATHES	0396
DENON	0326, 0926, 0936
DUAL	0556
DYNAMIC BASS (H)	0606
EMERSON	0256, 0376, 1156
EROICA	1326
FISHER	0146, 0606, 0976, 1056
GARRARD	0416
CENEXXA	0356, 0376, 1156
GOLDSTAR	1186, 1276, 1316, 1386
H/K	0156, 0226, 0516, 1046
HITACHI	0246, 0256, 0556, 0866
INKEL	0166, 0446

JVC	0366	STARON	1286
KENWOOD	0096, 0146, 0456, 0636, 0776, 0786, 0796, 0806, 0946	STS	0076
KYOCERA	0076	SYLVANIA	0266
LUXMAN	0126, 0476, 0726, 0756, 0766, 1036	SYMPHONIC	0386
MAGNAVOX	0216, 0266, 0696, 1006	TANDY	0356
MARANTZ	0266, 0286, 0426, 0836, 1396	TANGBERG	1246
MCLINTOSH	0406, 1136	TEAC	0286, 0386, 0436, 0576, 0846, 0886, 1406
MCS	0956, 1366	TECHNICS	0106, 0656, 1146
MEMOREX	0256, 0276, 0286, 0356, 0376, 1156	TECHWOOD	1376
MGA	0186	TELEFUNKEN	0556
MISSION	0266	THOMSON	0556
MITSUBISHI	0186, 0496	TOSHIBA	0086, 0736
MTC	1306	VECTOR RESEARCH	0116, 1186
NAD	0086, 0666, 0763, 0746	VICTOR	0366
NAKAMICHI	0176, 0486, 0566	WARDS	0226
NEC	0306, 0956, 1016	YAMAHA	0056, 0066, 0136, 0466, 0596, 0626, 1116
NIKKO	0596, 1056		
ONKYO	0206, 0506, 0546, 0856, 1206		
OPTIMUS	0276, 0296, 0606, 0646, 0896, 0906, 0916, 0946, 0986		
PANASONIC	0106, 0876, 1146, 1176		
PENNY	0956		
PHILIPS	0216, 0266		
PIONEER	0356, 0986, 1096		
PROTON	0266, 1236		
QUASAR	0106		
RCA	0256, 0966, 1166		
REALISTIC	0256, 0276, 0286, 0376, 0606, 0896		
REVOX	1226		
ROTEL	0006, 0016, 0026, 0036, 0046, 0266		
SABA TELECOMMANDER	0556		
SAE	0266		
SAMSUNG	1336		
SANSUI	0266, 0676, 1026, 1076, 1156		
SANYO	0196, 0606, 0686, 0816		
SCOTT	0376, 1156		
SEARS	0396		
SHARP	0286, 0716, 0946, 1116, 1126		
SHERWOOD	0166, 0286, 0446, 0526		
SIEMENS GARRARD	1296		
SIGNATURE	0226		
SONTEC	1216		
SONY	0116, 0616, 0916, 1196		

DVD Device Codes

AKAI	0068
JVC	0098, 0188
ONKYO	0078
PANASONIC	0038
PHILIPS	0108
PIONEER	0118, 0128, 0198
ROTEL	0008
SAMSUNG	0088
SHARP	0048
SONY	0028
TOSHIBA	0058
YAMAHA	0018, 0138, 0148, 0158, 0168, 0178

LD Device Codes

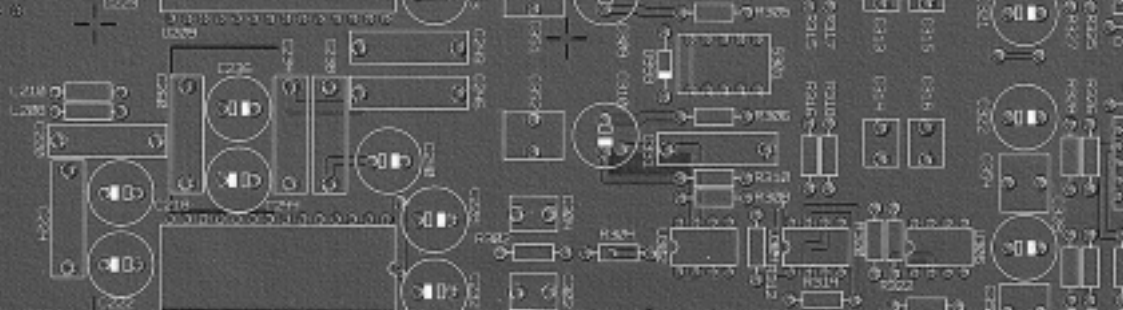
AIWA	0177
DENON	0167
DISCO VISION	0037
FUNAI	0177
HITACHI	0037
KENWOOD	0107, 0127
MAGNAVOX	0047
MARANTZ	0047
MITSUBISHI	0157
NAD	0157
PANASONIC	0097, 0197
PHILIPS	0047
PIONEER	0037, 0057, 0157
RCA	0187
REALISTIC	0177
ROTEL	0007, 0017

SHARP 0147
 SONY 0067, 0077, 0137
 VICTOR 0117
 YAMAHA 0027, 0087

SAT/DSS Device Codes

ABC 0253, 0373
 ALPHA STAR 0773
 ANTORONIX 0133
 ARCHER 0133, 0283
 BBT 0073
 CABLETIME 0163
 CANAL + 0863
 CLYDE CABLEVISION 0193
 COLOUR VOICE 0303, 0343
 COMTRONICS 0213, 0273
 EAGLE COMTRONICS 0273
 EASTERN 0063
 ECHOSTAR 0783
 ELECTRICORD 0203
 ELECTUS 0263
 GE 0113, 0123
 GEC CABLE SYSTEM 0193
 GENERAL INSTRUMENT 0793, 0803
 HAMLIN H5 0633, 0643, 0653, 0663,
 0673
 HITACHI 0753
 HUGHES NETWORK 0813
 JERROLD 0253, 0433, 0593, 0603,
 0613, 0602, 0803, 0823
 MAGNAVOX 0003, 0413, 0423
 MAMM 0293
 MEMOREX 0003, 0383
 MOVIE TIME 0143, 0203
 NORTHCOAST 0013
 NSC 0143
 OAK 0103, 0533, 0543
 PACE (ON DIGITAL) 0903
 PANASONIC 0443, 0453, 0463, 0473
 PARAGON 0383
 PHILIPS 0003, 0033, 0213, 0303,
 0313, 0323, 0333, 0343,
 0413, 0423, 0913
 PIONEER 0083, 0553, 0693
 PRIMESTAR 0803, 0823
 PULSAR 0383
 RCA DSS 0393, 0403, 0833
 REALISTIC 0133
 REGENCY/EASTERN 0683
 RUNCO 0383
 SAMSUNG 0273
 SCIENTIFIC ATLANTA 0363, 0563, 0573, 0583
 SIGNAL 0273

SKY 0893
 SL MARX 0273
 SONY 0843
 SPECTAVISION 0233
 STANDARD COMP 0183
 STARCOM V 0253
 STARGATE 0273
 SYLVANIA/TEXSCAN 0373, 0493
 TEKNIKA 0173
 TELESERVICE 0053
 TELEVIEW 0273
 TEXSCAN 0183, 0373
 TFC 0023
 TOCOM 0223, 0353, 0503, 0513,
 0523
 TOSHIBA 0383, 0853
 TPS 0873
 TUDI 0043
 UNIDEN 0003
 UNIKA 0133
 UNIVERSAL 0133, 0153, 0203, 0283
 VIDEOWAY 0093
 VIEWSTAR 0213
 XSAT 0883
 ZENITH 0243, 0383, 0483



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