

OPERATING INSTRUCTIONS

URC-1 PROGRAMMABLE REMOTE CONTROLLER

GENERAL

The URC-1 is a highly versatile learning remote, capable of storing up to 32 commands on each of 4 layers. Layers are selected by a 4-position BANK switch. Unlike many learning remotes, the URC-1 will send commands in sequences (macros), up to a maximum of 10 steps under one or more individual buttons. It also includes extended memory to store the longer codes of some remote controls.

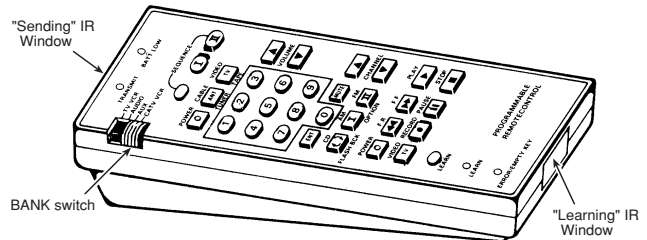


Fig. 1

PRECAUTIONS

The URC-1 is a precision electronic instrument that uses microprocessor circuitry and should be treated with care. Do not allow the URC-1 to get wet or excessively hot. Do not leave it in direct sunlight or store it in hot locations, such as in a car.

INSTALLING THE BATTERIES

- The URC-1 uses four triple-A (AAA) size batteries.
- Use alkaline batteries for maximum life.
- When replacing the batteries, replace all four at the same time. Mixing old batteries with new ones will shorten battery life. Unremoved old batteries may damage the URC-1.

CAUTION: There is **backup power for approximately two to three minutes** built into the URC-1. This allows the remote control to retain its learned commands while you are changing batteries. If you exceed this length of time however, the URC-1 will lose its memory and have to be completely re-programmed.

TEACHING THE URC-1 COMMANDS FROM OTHER REMOTE CONTROLS

To "teach" the URC-1 commands from other remotes, proceed as follows:

1. Place both units on a flat surface leaving your hands free to operate the push buttons.
2. Place the "teaching" remote approximately 1 to 2 inches away and to the rear of the URC-1 - see Fig. 2.
3. Press and release the recessed **LEARN** button to enter the Learn mode. The **LEARN** LED will light. Refer to Fig. 3.
4. Slide the BANK switch to the desired position (TV, Audio, Video or Aux).
5. **Press and hold** the desired button on the URC-1 to store a command.

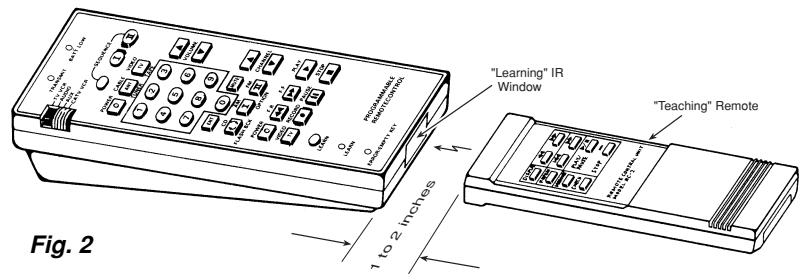


Fig. 2

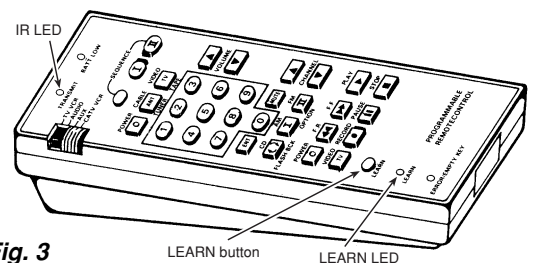


Fig. 3

6. Using your other hand, **press and release** the desired key of the "teaching" remote. The **LEARN** LED will start blinking. When the command has been learned, the **IR** LED will go on.
7. Release the button on the URC-1.
8. Repeat steps 4, 5 and 6 for all commands you wish the URC-1 to learn.
9. If no other key is pressed **within two minutes**, the URC-1 will automatically leave the learn mode and the **LEARN** LED will turn off, with new commands learned. You may also press the **LEARN** button if you wish to leave the learn mode more quickly.

LED INDICATORS

IR LED:

- Lights when a button press sends a stored command.
- In Learn mode, the **IR** LED lights when a button has accepted a command.

BATT LED:

- Lights when the batteries need replacing.

LEARN LED:

- Lights when the **LEARN** button is pressed.

ERROR LED:

- Lights if a button is pressed that does not have a stored command.
- Lights when the URC-1 encounters a long command code in the Learn mode. Refer to "ERROR LED AND EXTENDED MEMORY" for details.

BUTTON USAGE

To improve visibility of the URC-1 buttons in a darkened room, certain buttons have been molded in ivory and blue for the most frequently used commands.

- We suggest that you use them for such functions as volume, mute, and channel selection, as designated, or for any functions you anticipate needing most frequently.
- In addition, two orange colored keys are designated for power and one red key for recording. Some TV sets or cable boxes have a jump or flash-back key for moving immediately between the two most recently viewed channels without having to press any other functions.
- The **LAST** button (meaning last viewed) on the URC-1 is used for programming this function and may also be used for CD source select.

SHORT COMMANDS

Some commands, such as Channel Up and Channel Down, may change channels two at a time or cause other multiple actions if memorized at full length. If a button on the original hand-held remote controller requires only a short tap for its command to be properly executed, and results in multiple actions if the button is pressed too long, only a short burst of it should be stored in the URC-1. Step 6, under "TEACHING THE URC-1 --", should be modified as follows for this type of command:

6. Using your other hand, press the desired button of the "teaching" remote **only as long as you usually press it when controlling the audio/video equipment directly**. The **LEARN** LED will start blinking. When the command has been learned, the **IR** LED will go on.

NOTE: It may be necessary to experiment with the length of time you press the "teaching" remote control button to obtain the desired result.

ERROR LED AND EXTENDED MEMORY

Some remote control codes require more memory than is normally allocated by the URC-1. When you try to learn these codes, the **LEARN** LED will blink in the normal manner, but will be followed by the **ERROR** LED lighting up. If this happens, no command will be stored in memory.

- To store these types of commands, you must go through steps 5, 6 and 7 twice (under "TEACHING THE URC-1 -- ", Pg 1), when learning.
- The URC-1 will **allocate four-times as much memory** on the second pass as it did on the first.
- If one command from a hand-held remote controller requires extended memory, the other commands from that controller will usually require it also.

SEQUENCE (MACRO) FUNCTIONS

The URC-1 has two sequence buttons available for each of the four positions on the BANK switch. Each button can send up to ten separate commands that have been previously stored on other individual buttons. A single press of a sequence button would then send out these commands to activate various units in a programmed sequence.

HOW TO PROGRAM SEQUENCES

1. Two buttons are specifically marked for Sequence use and are labelled **I** and **II**. Using these buttons, a total of eight sequences are possible with the four banks.
2. Each sequence button can send up to ten individual commands from the same or other banks.
3. The commands you want in the sequence must have been previously stored into the URC-1.
4. For example, suppose you want to sequence the following previously stored commands using the **Sequence I** button on the **TV** bank:
 - TV power (stored in **TV** bank)
 - VCR power (stored in **VIDEO** bank)
 - Set TV to Video source (stored in **TV** bank)
 - VCR play (stored in **VIDEO** bank)

Proceed as follows:

- a) Press **LEARN** button to enter the learn mode (**LEARN**-LED will light).
 - b) Select the BANK into which you want to store Sequence I (in this case the **TV** bank).
 - c) Press the recessed **SEQUENCE** button.
 - d) Press **SEQUENCE I** button.
 - e) Press TV "Power" button (**TV** bank).
 - f) Move BANK switch to **VIDEO**; press VCR "Power".
 - g) Move BANK switch to **TV**; press "Video" source select button.
 - h) Move BANK switch to **VIDEO**; Press "Play" button.
 - i) Press the recessed **SEQUENCE** button to leave the sequence mode.
 - j) Press the recessed **LEARN** button to leave the learn mode (**LEARN**-LED goes off).
5. **Sequence I** is now completed. **Test the sequence** by moving the BANK switch to **TV**. Press **SEQUENCE I** button; it will send TV power, VCR power, set TV to Video source and VCR Play commands. The VCR will now play through the video line inputs on your TV.

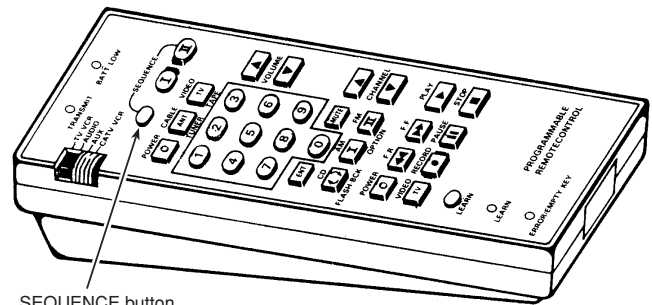


Fig. 4

EXECUTION TIMES

- Some components will not execute consecutive commands quickly, particularly after a power ON command.
- We therefore suggest that commands, such as Power ON and Play on the same component, be separated by one or more commands of different components, so more time is given between commands for execution in the sequence.
- You may even store "dummy" commands (commands from a remote control not used in your system) to use up time in the sequence.
- Actual execution times for a full 10 command sequence can vary from 2 to 5 seconds or more, depending on the code length of various manufacturer's commands.

Example of Separated Commands:

To turn on a Cable Box, select channel 22, turn on a TV, select channel 3, turn on a VCR, select Record mode. Store sequence under **SEQUENCE II** button.

Proceed as follows:

- a) Press **LEARN** button.
- b) Select desired Bank for the sequence.
- c) Press recessed **SEQUENCE** button.
- d) Press **SEQUENCE II** button.
- e) Press button with the TV "Power" command.
- f) Press button with the Cable box "Power" command.
- g) Press button with the VCR "Power" command.
- h) Press button with the Cable box "CH 22" command (push number button "2" twice).
- i) Press button with the TV "CH 3" command.
- j) Press button with the VCR "Record" command (watch CH 22 while recording) .
- k) Press **SEQUENCE** button to leave Sequence Mode.
- l) Press **LEARN** button to leave Learn Mode.

Note that the power commands for each of the components in the above example are separated from a subsequent command by two commands of different components.

HOW TO USE ANY BUTTON AS A SEQUENCE BUTTON

While 2 separate buttons are marked for sequence functions, in reality any button can be used for sequencing. For instance, the POWER button could actually have a sequence of several power commands from a variety of products. Simply follow the same instructions as explained above, substituting the desired button for the Sequence I or II buttons in the procedure.

NOTES:

1. Even though buttons **I** and **II** are marked as Sequence buttons, they may be used for storing individual commands as well.
2. The button used for a sequence cannot be used to store an IR command in that bank. However, the same button can be used to store an IR command in a different bank.

TROUBLESHOOTING TIPS

Batteries

- The URC-1 most easily learns commands from other remote controls when they have strong batteries. As the teaching remote controller battery weakens, the strength of its signal weakens -- making it more difficult for the URC-1 to learn the commands.
- If you have any difficulty with the URC-1 learning commands, make certain you have **fresh batteries** in the teaching controller.

Lock-Up

- On rare occasions, a condition known as "lock-up" may occur when learning commands. The **LEARN** LED will flicker continuously and the **ERROR** LED may stay on. Pressing the **LEARN** button will have no effect.
- **To clear a lock-up, remove one of the batteries for about 10 seconds.**
- **CAUTION:** If you leave the battery out for more than 2 or 3 minutes, all programming will be lost.

RESET Button

- The RESET button is located in the Battery Compartment as shown in Fig. 5. If you have persistent trouble with lock-ups or learning certain commands, you may wish to clear all stored commands from the URC-1. To do so, press this button for 5 seconds.
- Remember, if you use the RESET button, all of the programming information you have entered will be erased. There is no way to restore this information except by re-programming.

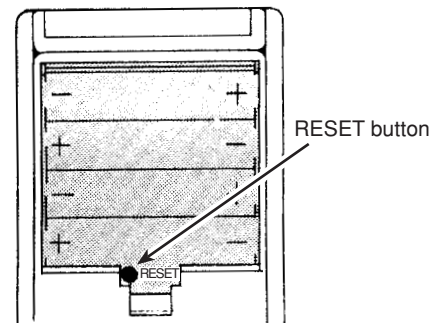


Fig. 5