

APPENDIX I  
: USER'S MANUAL

# MRF-150 INSTALLATION MANUAL



Guide to Installing the MRF-150 RF Base  
Station for “No-Pointing” RF Operation

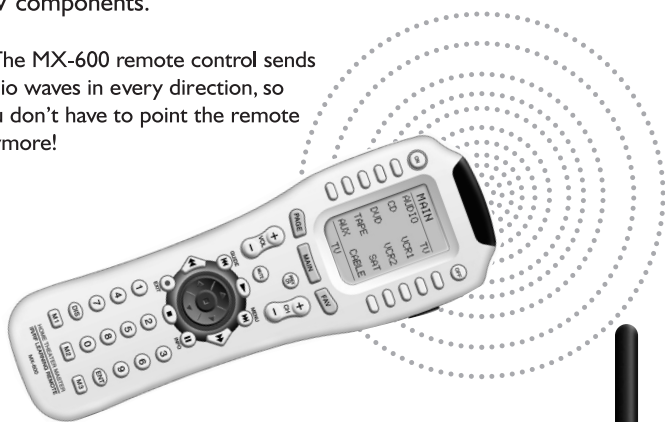


**HOME THEATER MASTER**  
Entertainment Made Simple™

## Introduction

Thank you for purchasing an MRF-150 RF (Radio Frequency) Base station, the “no-more-pointing” companion to the MX-600 RF Remote Control. The combination of the MX-600 with it’s companion MRF-150 base station will enable you to place your audio/video components out of sight behind closed doors and/or in another room of your house. The MX-600 sends radio signals to the MRF-150 throughout your house (50-100’ away, indoors or outdoors). The MRF-150 converts your commands to the infrared signals that control your A/V components.

1. The MX-600 remote control sends radio waves in every direction, so you don’t have to point the remote anymore!



2. The MRF-150’s built-in Front Blaster sends commands to components in the same cabinet space as the MRF-150.



3. Self-adhesive “Flashers” affix to the Infrared sensors on the front panels of your components. The Flashers relay commands to components out of sight of the MRF-150’s Front Blaster. The flashers plug in to the MRF-150’s rear flasher line outputs via their 10 foot cables.

## Features and Benefits

### **No More Pointing - Radio Waves Penetrate Closed Cabinet Doors**

The MRF-150 receives the RF signals of the MX-600 remote control from any direction. You no longer need to point the remote control at any of your A/V components. You can also place the components distracting blinking lights and displays behind closed doors and out of sight.

### **Reliable Home Theater Control from Any Seat**

The MRF-150 receives RF signals from your MX-600 from within a radius of 50 to 100 feet, enabling control out of sight audio/video components behind walls and closed doors. Range depends on the structure of your home and the amount of interference generated by computers, microprocessors and other devices within and nearby your home.

## Parts Guide

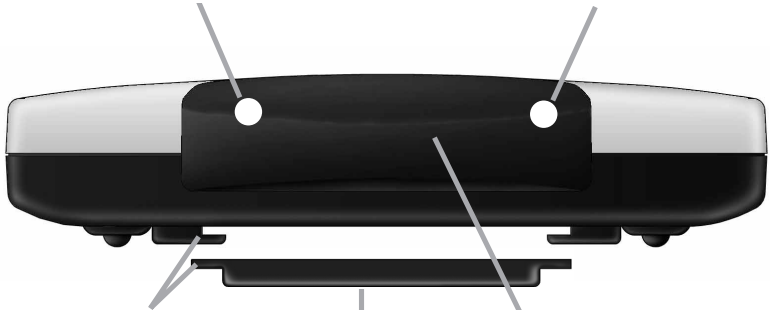
The MRF-150 RF Base Station includes:

- 1 - MRF-150 Receiver with integrated antenna
- 1 - Mounting Plate for wall mounting the MRF-150
- 4 - Screws for wall mounting the mounting plate
- 1 - 9V-300mA Power Supply
- 6 - Flashers with 10 foot plug in cables.

## MRF-150 Details

Red POWER LED lights when the MRF-150's power supply is plugged into an active AC outlet.

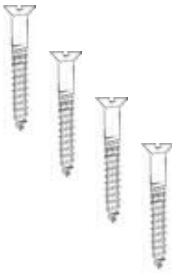
Red STATUS LED lights when the MRF-150 receives an RF signal from the MX-600.



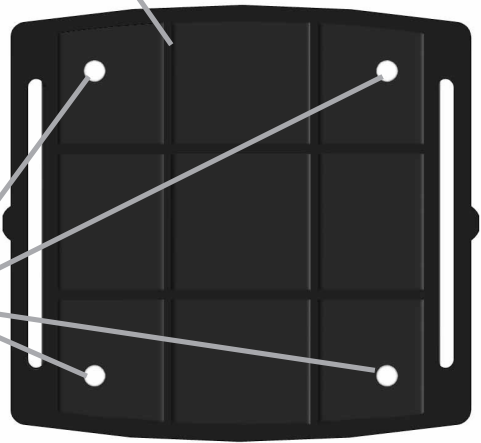
The Mounting Plate guides enable the MRF-150's matching guide to slide and "snap" into place for mounting on the wall.

Front Blaster sends Infrared commands to all A/V components in the same cabinet space.

The MRF-150 Mounting Plate



Using the four enclosed screws, you can choose to fix the mounting plate to a wall or the back of your component cabinet.



## MRF-150 BASE STATION

Integrated Antenna swings in any direction to optimize RF reception and range.



Included 9V power supply plugs into the MRF-150's power connector.



Six Rear Flasher Line Output Jacks connect flashers for control of A/V components out of sight of the MRF-150's Front Blaster.



Six Plug-In Flashers are supplied with 10 foot cables and six extra self-adhesive pads (in case a flasher has to be repositioned).

## Installation

### Step 1 - Place the MRF-150

The MRF-150 should be placed so that the Front Blaster will control as many of the system's A/V components as possible. If you are utilizing the rear Flasher outputs only, the MRF-150 may be concealed and mounted to the rear wall or back of the system cabinet. The mounting plate slides apart from the receiver, mounts to the wall, then the receiver is slid back into place.

### Step 2 - Connect the Power Supply

Connect the 9V power supply to an active UNSWITCHED AC outlet. The MRF-150 must always be powered up. The red POWER LED should light.

### Step 3 - Test the MX-600

Observe the MRF-150's STATUS LED blinking while you press and hold a programmed button (one with an actual command). This tells you that the MRF-150 is receiving the RF commands of the MX-600.

### Step 4 - Orient the Antenna for Optimum Range

If you need to extend the range of the remote, try adjusting the angle of the MRF-150 receiving antenna via its pivoting ball mount.

### Step 5 - Test Operation Without Flashers

With the MX-600's IR output blocked by a jacket or pillow, test the control of your components using just the Front Blaster. In most cabinets, the MRF-150's Front Blaster will control any A/V components in the same cabinet space by reflections from the cabinet walls and doors. Make sure that the components operate with the cabinet doors closed or open. If a component is placed too far away from the front blaster, you will need to utilize the included Flashers plugged into the MRF-150's rear Flasher Line Output jacks.

If you have problems with components that are close to the Front Blaster, try repositioning the the MRF-150 farther away.

### Step 6 - Connect Flashers to Out of Sight A/V Components

**Important Note: Test the operation BEFORE sticking the flasher in place.**

Use a flashlight to identify the correct location of the component's IR sensor, then try a few commands while moving the flasher around the face plate of the component. The most reliable operation typically occurs a half inch or so away from the IR sensor. Once you have found the spot that gives the most reliable operation, peel off the protective backing of the self-adhesive tape on the included Flashers and stick them in place.

**Important Note: Always replace the self-adhesive tabs if you have to reposition a flasher. Six extra self-adhesive tabs are supplied for this purpose.**

## Frequently Asked Questions

### **Can I use flasher/emitters that I have already installed in the system to connect to the MRF-150?**

Yes, the flashers are compatible, however flashers from other companies are equipped with a mini plug that is too large to fit the MRF-150's flasher jacks. Use Radio Shack part # 274-327 to convert 3.5mm plug Flasher/Emitters to the MRF-150.

### **How can I increase the range of the MX-600?**

Often, you can increase range by repositioning the MRF-150 and/or by re-orienting the antenna. Try to avoid placing the MRF-150 directly adjacent to satellite receivers, personal computers or any other component using high speed microprocessors if possible.

## Warranty

The MRF-150 is covered against any manufacturers defects or workmanship for a period of one year from the date of purchase if purchased from an authorized Home Theater Master dealer. Units purchased from online auction sites or other unauthorized resellers have no warranty. This warranty does not cover the following items:

- Damage from misuse, neglect, or acts of nature.
- Products that have been modified or incorporated into other products.
- Products purchased more than 12 months ago.
- Units purchased from unauthorized dealers or companies.

## Specifications

### **MRF-150**

Power Supply: 9V 300mA

IR Flasher Line Outputs: 2.5mm Mono Mini Jack

RF Frequency: 418MHz

### **MX-600**

Range: 50 to 100 feet, depending upon the environment

Weight: 8 oz. (with batteries)

Size: 9.0" x 3.0" x 1.3"

Batteries: Four AAA Alkaline batteries included

LCD Size: 1.4" x 2.1"



# Information To The User

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.



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# HOME THEATER MASTER<sup>®</sup>

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