APPENDIX H

: USER'S MANUAL

EUT Type: RF Base Station

FCC ID.: OZ5URCMRZ260

MRZ-260 Installation Manual

COMPLETE CONTROL™

Universal Remote Control®

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Introduction

The MRZ-260 base station has incorporated a new wireless technology referred to as Zigbee. This technology improves the range and reliability throughout a house and gives you the ability to control as many identical components as needed. In order to control a Zigbee base station an Zigbee remote is needed such as the MX-880Z.

1. The MX-880Z sends radio waves in every direction, so you don't have to point the remote anymore!

2. The MRZ-260 built-in Front Blaster sends commands to components in the same cabinet space or you can use flashers.

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 MRZ-260 Front Blaster. The flashers plug in to the MRZ-260 rear flasher line outputs via their 10 foot cables. Uniquely, the MRZ-260 can also connect to components with rear panel IR Inputs via its adjustable IR Line Outputs.

Features and Benefits

Interference Rejection and Extended Range via Zigbee
The MRZ-260 receives Zigbee signals via its integrated receiver and antenna and is the only wireless standards-based technology:
  * allows omni-directional control
  * enables broad-based deployment of wireless networks with low cost, low power solutions.
  * provides the ability to run for years on inexpensive primary batteries for a typical home theatre application.

Two Fixed IR Outputs with RFTX URC Lighting Control
The MRZ-260 is equipped with two fixed IR line outputs with standard 3.5 mm jacks for standard and sleeved IR emitter/flashers. One Fixed IR Output has a dual role for URC Ligting Control via the RFTX transmitter

Two Variable IR Outputs Match Rear Panel IR Inputs
The MRZ-260 is equipped with two adjustable IR line outputs. Each output can be individually matched to rear panel IR inputs on any component that is designed to be operated by a standard IR repeater. The outputs utilize a 3.5mm jack and are compatible with standard IR emitter/flashers as well.

No Limit Equipment Locations With Identical Components
Each MX remote is "addressable." They can be programmed to specifically control components in a particular room by installing an MRZ-260 base station <u>at each location</u>. In operation it's simple: when you select a device located in the Den, the MX remote only sends commands to the Den. When you select a device located in the Family Room, the MX remote only sends commands to it.

A Single MRZ-260 Can Control an Array of Identical Components or Identical Zones of a Multi Zone Preamp/Matrix Switcher
Each MRZ-260 has four "addressable" IR Line Outputs. For example, you can control up to four identical TV's with one MRZ-260 or route volume commands for a specific zone to a particular zone IR input on a multi-zone preamp. If you have more than four identical components or zones, there is no limit on how many MRZ-260s can be installed to control them (thus allowing an unlimited amount of identical components or zones in one house).

Parts Guide

The MRZ-260 RF Base Station includes:

1 - MRZ-260 Base Station
1 - Mounting Plate for wall mounting the MRZ-260
4 - Screws for wall mounting
1 - 9V-300mA Power Supply
12 - Labels for IR Line Outputs

4 - Visible Flashers with 10 foot plug in cables including 1 pink sleeved emitter for the RFTX-1 port
4 - Extra self adhesive pads for Emitters
1 - Screwdriver for Variable Outputs

Installation and MAC Address Discovery

1. Unplug the MRZ-260. Test all IR commands and macros line of sight.

2. Power on all AV components including the TV. Turn on all of the lights and lower all dimmers to 50%. Power on anything that may create Interference (particularly devices with high speed microprocessors or hard drives).

3. Once all commands and macros work in direct line of sight, connect the MRZ-260 to its DC wall adapter and plug the wall adapter into a live AC outlet.

4. The next steps are necessary to "Discover the MRZ-260 base". Open CCP editor.

5. Select Program then Configure Home.

6. Add a MRZ-260 base station and the properties window opens.
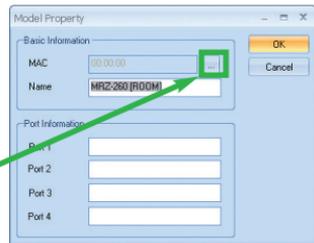
7. Plug in a Zigbee remote control such as the MX-880Z remote via USB to the PC.

8. Click on the Browse button to automatically discover the MAC address of the MRZ-260 base or type in the 8 characters found on the MAC ID sticker located in the rear of the base.

Note: If you receive a Not Connected message simply unplug then replug the USB cable and try again.
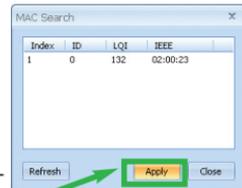
9. Once the MRZ-260 is found, highlight the matching MAC address and select Apply.

10. Now the MAC address will populate the MAC field.
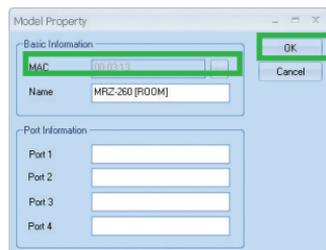
11. Press OK to close the window and now the MRZ-260 has been discovered.

12. Place the MRZ-260 in a location at least 3 feet away from satellite receivers, cable boxes, HDTV tuners, DVRs, PCs or any other device with a high speed microprocessor (these generate broad band Radio

Frequency Interference -RFI). Of course, you should keep in mind that the emitter cables are 10' long.

13. Observe the Status LED of the MRZ-260.

The red POWER LED indicates that the MRZ-260 is powered on.

The red STATUS LED flashes when a command is pressed from the remote.
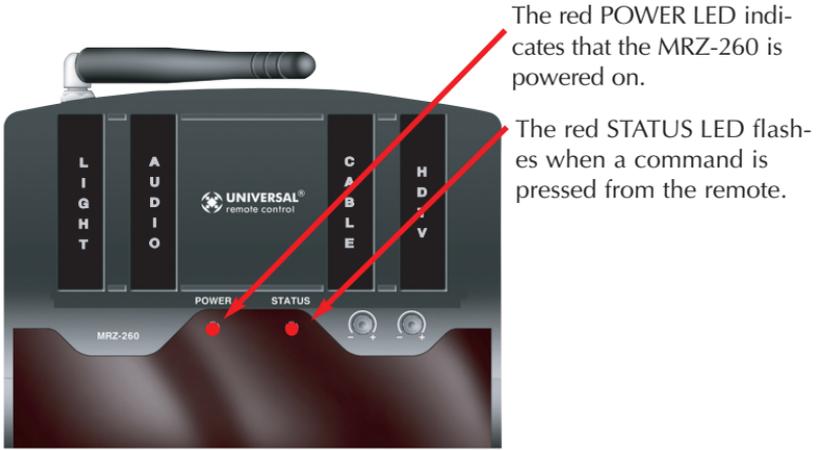
14. Once you have found a location, test to see if the range is adequate and that macro reliability is perfect. Start with the antenna angle set to 45 degrees and positioned so that the long side of the antenna is facing the customer's favorite seating position.

45°

15. Now that the location is fixed, connect each of the emitters to the appropriate IR output and run the cable to the appropriate component. Do not attach the emitters to the front panel yet!

Utilize the included preprinted labels to identify which emitter goes to which component. If you'd like to make your own, the slots for the labels have been sized at 12mm to enable a Brother P-Touch 12mm label to fit perfectly.

NOTE: TiVo, Replay TV, other DVRs, Satellite Receivers and Cable Boxes are all extremely sensitive to IR overload or saturation. For this reason, it is recommended that you always connect the IR flashers for these types of component to the Variable IR Outputs of the MRZ-260.

Testing

Test a few commands for each device before fixing the flasher in place on the front panel of a device.

Since TiVo, Replay TV, Satellite Receivers and Cable Boxes are all extremely sensitive to IR overload or saturation, you should test them thoroughly. Put up the on screen guide and test the navigation arrows. Compare operation via RF to the original remote control. Operation should be identical. Zigbee is not slower. If operation is inconsistent or sluggish, lower the IR line output and/or reposition the flasher.

If you still have sluggish operation, check that the remote control is set to a particular LINE OUT, rather than ALL. When IR commands are sent to all the flashers in a cabinet, you can have difficulty adjusting the IR Output. Reprogram the remote control to send IR commands only via a specific (1-4) Line Output, then readjust the IR Line Output level.

Note: *Remember, the MRZ-260 will NOT respond if you select IR line outputs 5 or 6. The MRZ-260 has only four IR Line Outputs.*

1. Connect an IR emitter to each IR output and run the emitter wire to the front panel of each component. DO NOT STICK the emitter in place. ADJUST the level first.

2. Adjust each of the IR Output levels for best operation. If the component operates best at minimum level, but is still operating sluggishly or intermittently, move the emitter farther away from the components IR sensor.

Integrating RFTX-1 to control URC Lighting

Not only will you have greater control of your home theatre equipment with Zigbee, now you also have control of your URC Lighting. What better way to watch a movie and control your universe!

Step 1: Simply use a sleeved emitter and plug into the rear of the RFTX-1 pink fixed port.

Step 2: Then choose the frequency of the URC lighting.
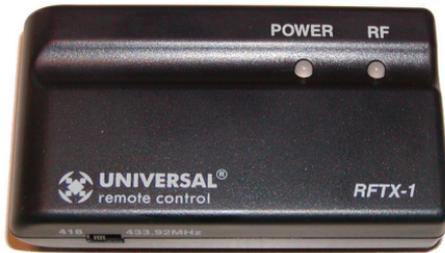
Front Blaster Overload

A few models of audio/video components can be <u>overloaded</u> by the Front Blaster. If you are having intermittent or inconsistent results with a particular component, try repositioning the MRZ-260 and facing the Front Blaster in a different direction. If this improves the situation but is impractical, it may be necessary to utilize the self-adhesive flashers only and follow the steps below to Disable the Front Blaster. This will limit the number of components your MRZ-260 can control to four. If you have more than four components you can purchase an additional MRZ-260 or upgrade to an MRF-350.

Enabling/Disabling the Front Blaster - Step by Step via PC

Note: *If you are programming a URC MX "addressable" remote control that sets up without a PC, refer to the owners manual to disable the Front Blaster.*

Open the PC software, then plug the MX PC programmable remote control into the PC. Open your saved configuration and follow these steps to turn off the front blaster:

Step 1 - Open the RF Control Window
The RF Control window opens after selecting RF Control or Settings from the Program Menu of most MX/TX editors or from the Main Menu of the ProWizard.

Step 2 - Turn on/off the Front Blaster
Click on the cell in the IR LED OUTPUT/IR BLASTER column. A list box will appear. Select a PORT for your device or chooose Blaster 1 to turn it on.

Device	Signal	Receiver	IR Output
WATCH	RF	MRZ-260 [ROOM]	ALL
TV1	RF	MRZ-260 [ROOM]	ALL
TV2	RF	MRZ-260 [ROOM]	Port 1
TV3	RF	MRZ-260 [ROOM]	Port 2
LISTEN	RF	MRZ-260 [ROOM]	Port 3
FAVS	RF	MRZ-260 [ROOM]	Port 4
			Blaster 1
			ALL

Step 3- Next, click on Save to apply your change.

Controlling Four Identical Components/Zones

There are several considerations to take into account when you are installing an MRZ-260 to control an array of identical components:

1. Each identical component must receive IR commands ONLY from a dedicated Flasher affixed to its front panel or a rear panel direct IR input. The SIGNAL of the remote should be set to RF ONLY for each identical component. IR can still be utilized for other devices in your system!

2. You must note the NUMBER of the Flasher Output you have utilized for EACH of the identical components.

Identical Components/Zones - Step by Step via PC

Step 1 - Create and Program a Device for Each Component/Zone
Try to name each device with a descriptive title. At a minimum, label them TV1, TV2, TV3 and so on.

Step 2 - Open the RF Setup Window
The RF Setup window opens after selecting RF Control from the Program Menu. The RF Setup window is composed of a "spread sheet" of options for EACH of your devices.
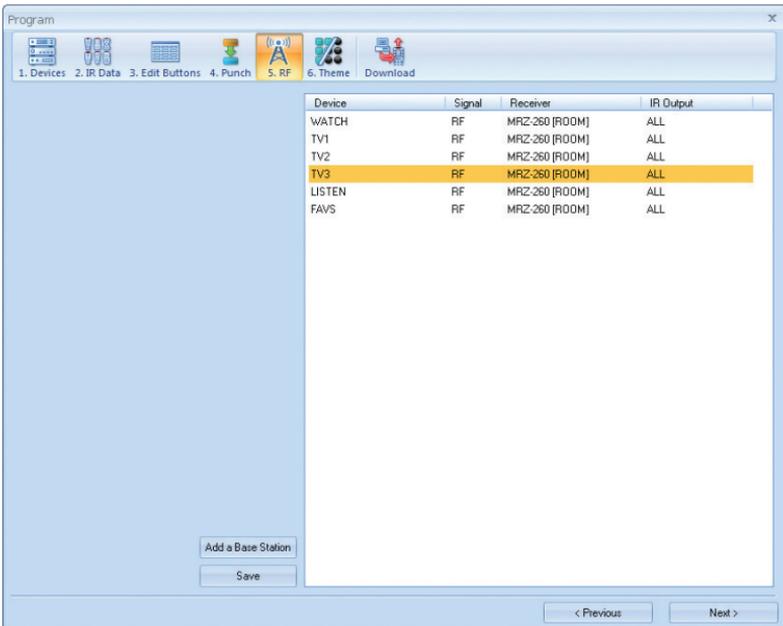
By looking at the Signal column, you can see that the factory default pro-
gramming sets all of the devices to send both IR and RF commands. If you
look at the column for Flashers, you can see that the default sends IR com-
mands for all devices to ALL of the flashers. Both options must be changed
for identical components. Additionally, you must disable the Front Blaster
(see page 6 for directions).

Step 3 - Adjust the Signal For Each of the Identical Devices
The RF Setup window enables you to adjust the Signal output for each
device individually, by clicking on the intersection of a row and a column
and then selecting RF from the three options shown in the pull down list
box.

**Select RF from the three options shown for EACH of the identical TVs. You
may leave the other components of the system set to IR & RF.**
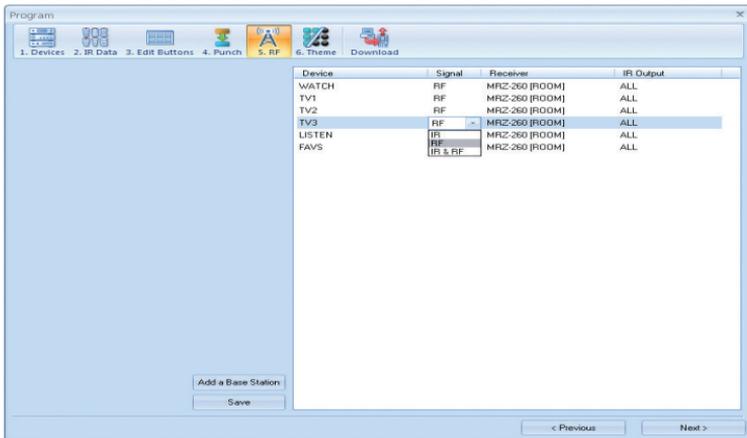
Step 4 - Adjust the Flashers For Each of the Identical Devices
The RF Setup window enables you to adjust which Flashers output by the
remote control for each device individually, by clicking on the intersection
of a row and a column and then selecting **1-4** from the seven options
shown in the pull down list box.

**Select the correct Flasher (refer to your connection notes) for EACH of the
identical TVs. You may leave the other components of the system set to
ALL.**

See figure on the next page.

In the figure below, each device is set to a specific flasher.
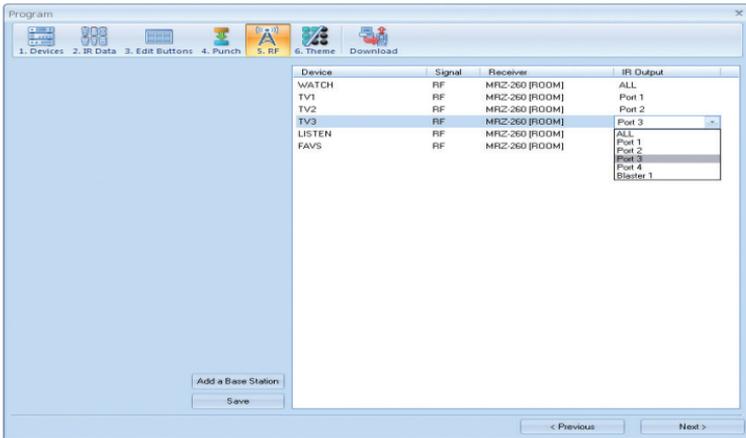
Note: *Remember, the MRZ-260 will only respond to selections 1 through 4.*

Step 5 - Close the RF window and Download to the Remote.

Programming For Multiple Equipment Locations

You can operate an unlimited amount of different equipment locations, each with an MRZ-260 assigned with a unique MAC Address. You program each of your remotes to talk to the equipment locations you want by assigning each of your devices to a receiver. First, you must add and name your receivers for the locations they are placed in:

Step 1 - Open CCP Editor
This editor will allow you to program multiple base stations.

Step 2 - Click on Program and Configure Home

Step 3 - Add as many MRZ-260 base stations as needed
Follow steps 4 - 11 on page 3 'Installation and Discovery' to automatically discovery multiple base stations for an unlimited amount of equipment locations.

Step 4 - Save and Download to your remote.

USA Limited Warranty Statement

Your Universal Remote Control, when delivered to you in new condition, is warranted against defects in materials or workmanship as follows: UNIVERSAL REMOTE 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 the product using new or comparable rebuilt parts, or exchange the product for a comparable new 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. It does not cover technical assistance for hardware or software usage and it does not cover any 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 original packaging or packaging affording adequate protection to Universal Remote Control at the address provided in the Owner's Manual. It is your responsibility to backup any macro programming, artwork, software or other materials that may have been programmed into your unit. It is likely that such data, software, or other materials will be lost during service and Universal Remote Control will not be responsible for any such damage or loss. A dated purchase receipt, Bill of Sale, Installation Contract or other verifiable Proof of Purchase is required. For product support and other important information visit Universal Remote Control's website: http://www.UniversalRemoteControl.com or call the Universal Remote Control Customer Service Center (914) 835-4484.

This Limited Warranty only covers product issues caused by defects in material or workmanship during ordinary consumer use. It does not cover product issues caused by any other reason, including but not limited to product issues due to commercial use, acts of God, third-party installation, misuse, limitations of technology, or modification of or to any part of the Universal Remote Control product. This Limited Warranty does not cover Universal Remote Control products sold as USED, AS IS, REFURBISHED, so-called "B STOCK" 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 Limited Warranty is valid only in the United States of America. This Limited Warranty specifically excludes products sold by unauthorized resellers.

Frequently Asked Questions

Can I use flasher/emitters that I have already installed in the system to connect to the MRZ-260?
Yes, the flashers are compatible if they use 3.5mm mono mini plugs with the same polarity (Tip is data, sleeve is ground).

I'm getting inconsistent operation regardless of flasher level or position.
Some components are easily overloaded with IR from nearby flashers. Prevent IR from affecting the problem component from other flashers or the front panel blaster by setting the device to a specific IR Line Output instead of ALL, then adjust the Line Output.

Specifications

Power Supply: 9V 300mA
IR Flasher Line Outputs: 3.5mm Mono Mini Jack
RF Frequency: 2.4GHz

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.

COMPLETE
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