APPENDIX G

: USER'S MANUAL

MRX-20 Advanced Network System Controller Owner's Manual

Control the Experience.

MRX-20 Advanced Network System Controller Owner's Manual © 2012 Universal Remote Control, Inc.

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Table Of Contents

Congratulations! 1

Features and Benefits 1

Parts Guide 1

MRX-20 Front Panel Descriptions 2

MRX-20 Rear Panel Descriptions 3

Navigating the MRX-20's On-Screen Menu 4

On-Screen Menu Options Overview 5

Using the On-Screen Menus 7

Adjusting the Settings on the MRX-20 20

Installing the MRX-20 26

Specifications 30

USA Limited Warranty Statement 31

Federal Communication Commission Interference Statement 33

Declaration of Conformity 34

Congratulations!

Thank you for purchasing the Total Control MRX-20 Advanced Network System Controller. The unit displays an on-screen interface to control all connected devices throughout the entire home using a Total Control compatible remote. Using the on-screen interface, make a selection to issue a command from the MRX-20 to any connected device such as turning off the lights in every room, viewing the home's security cameras. View the artist name, song title and album art your child is listening to in their room from a Total Control remote or keypad. Also control whole house music from sources such as a DMS-1200, DMS-100, SNP-1 and a PSX-2.

Features and Benefits

- Control the Advanced Network System Controller's on-screen interface using a TRG-100/200 Umotion remote.
- Stores and issues commands and macros for all IP, IR, RS-232, Relay, Sensor and 12V controlled devices to MRX series base stations in a project.
- Control URC One-Way Lighting with an optional RFTX-1 RF Transmitter.
- View a slide show, on your display device, using pictures stored on an online photo sharing service like Picassa.
- Can be programmed off premises via the internet.
- Easy rack-mounting via optional RMK-2 rack mounting kit.

Parts Guide

The MRX-20 Advanced Network System Controller includes:

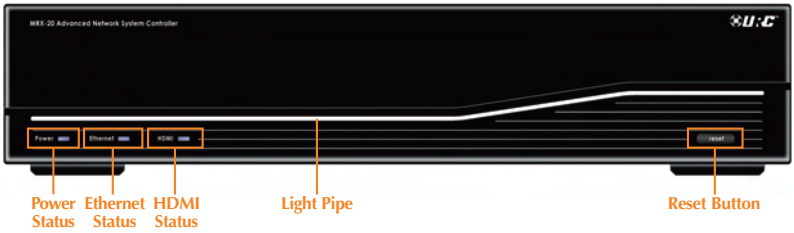
1 - MRX-20 Advanced Network System Controller
1 - Owner's Manual
1 - Power Cord

10 - IR Emitters with standard 3.5mm plugs

(Optional) - RMK-2 Rack Mount kit, RS-232 Cable, Video Sensor, Voltage Sensor

MRX-20 Front Panel Descriptions

The front panel consists of:



Power Status LED: When illuminated this light indicates the MRX-20 is ON.

Ethernet Status LED: The **Ethernet** LED indicates when the MRX-20 is connected to the network:

- **Connected:** Illuminated.
- **Not Connected:** Blinks.

HDMI Status LED: The **HDMI Status LED** signifies the MRX-20 has a valid HDMI connection:

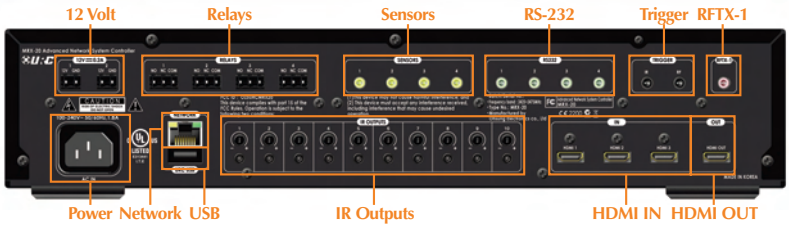
- **Connected:** Illuminated.
- **Problem:** Flashes
- **Not Connected:** Not illuminated.

Reset: Press to **reset** the MRX-20. Resetting the unit will not lose its programming. Press and hold the Reset button for 15 seconds to erase all programming and set the MRX-20 to its original factory condition.

Total Control Illumination: Attractive, adjustable accent lighting.

MRX-20 Rear Panel Descriptions

The rear panel consists of:



Power: Plug the included **Power cable** into the rear of the MRX-20.

Network: Communicate over the **Network** to a MRX-20 using an Ethernet cable.

USB: For future use!

IR Outputs: Ten standard 3.5mm **IR emitter ports** with individual output level attenuators.

HDMI IN: Three **HDMI IN** ports for transfer of digital HD video and multichannel audio viewable via the display device connected to the HDMI OUT port.

HDMI OUT: One **HDMI OUT** port used to connect a display device.

12 Volt: Two programmable **12V/0.2A** outputs. Each may be programmed to turn ON, OFF or momentarily TOGGLE its output.

Relays: Four programmable **Relays** to be normally opened (NO), normally closed (NC) or momentary contacts. A maximum of 30V/.5A can be used per relay.

Sensors: Four **Sensor** ports allow programming of state dependent and triggered macros. Compatible with URC Video (*URC part:* VID-6) and Voltage (*URC part:* VS-100) sensors.

RS-232: Four **RS-232** ports support TX (Transmit), RX (Receive) and GND (Ground) connections for two-way communication. Compatible with URC cables RS232F and RS232M.

Trigger IN: For future use!

RFTX-1: Attach an optional **RFTX-1** transmitter to control URC One-Way Lighting products via 418MHz or 433.92MHz wireless RF.

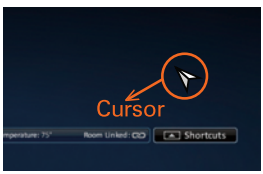
Navigating the MRX-20's On-Screen Menu

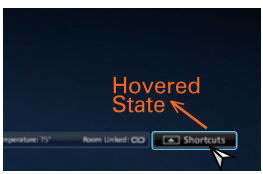
Navigating through the MRX-20's on-screen interface is very simple. Control the on-screen menu's using URC's Umotion remotes (TRG-100/200).

While moving the remote, notice that the on-screen **cursor** mimic's your movements. Place the cursor over a button to reveal its **hovered state** and select.

TRG-100

TRG-200





On-Screen Menu Options Overview

Quick Bar Menu

The **Quick Bar menu** was designed to contain up to ten of the most needed commands for the device that is being used. Your Custom Professional programs these commands, so any changes to your current view will need to be adjusted by your installer.

Device Menu

When the basic commands found in the Quick Bar do not include the action you need to perform, use the **Device Menu** to access all of that device's commands. For example, your custom programmer may not have included an EJECT command in the DVD's Quick Bar menu. Use the **Device Menu** to see the additional commands and eject the DVD from the player.

Shortcuts Menu

This user adjustable menu, **Shortcuts,** allows you to add common activities (like Watch TV, Listen to Radio, etc.) for easy access. Although any of these actions can be accomplished using the Main Menu (see below), this would be a multi-step navigation process as opposed to a single-click action.

Favorites Menu

Use this menu for instant access to your **Favorite Channels**, like ABC, HBO, etc... These channels are previously set by your custom installer.

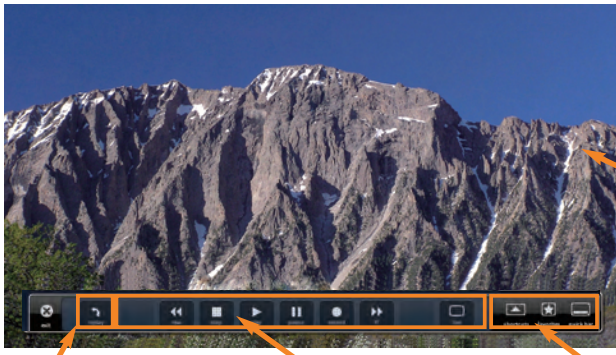
Main Menu

This **Main Menu** will allow you to control any "connected device" in your Total Control System. Depending upon programming, most device /activities will be placed into subfolders (like Music, Entertainment, etc.). Accessing these subfolders will allow you to control any device that is available in the chosen room (*see Rooms Menu*).

Using the On-Screen Menus

Quick Bar Menu

While watching or listening to a device, such as a Cable or CD, access the **Quick Bar menu** with a TRG-100/200 remote by pressing the **Umotion** button. The Quick Bar menu opens. Move the remote around the on-screen interface to reveal the on-screen cursor. Hover over a button and press the **Umotion** button again to select.



Exit: Closes the **Quick Bar** menu.

Customizable buttons: These buttons vary based on the type of device (Cable, DVD, etc...) A maximum of ten buttons can be modified by your Custom Professional.

Shortcuts: Opens the **Shortcuts** menu with a list of user selected favorite devices.

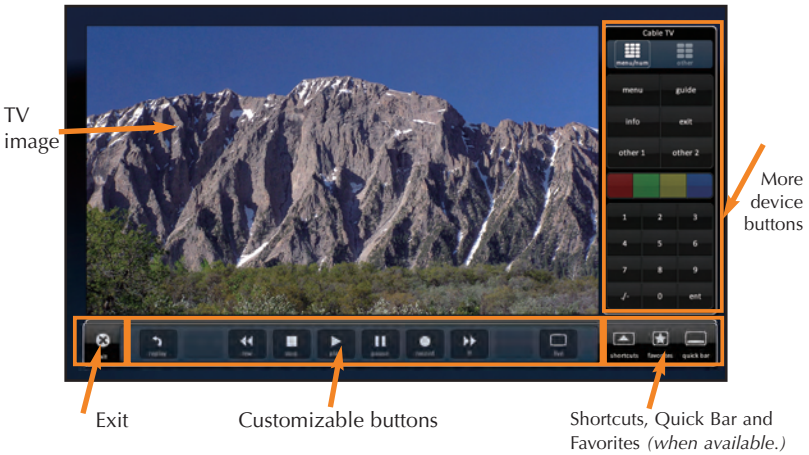
Favorites: This option is only available when using a device with stored favorites. Pressing the **Favorites** button closes the Quick Bar and opens the Favorite channel menu.

Full screen: Press to toggle between the **Quick Bar** (current view) and the device's **Full Screen** menu.

TV image: Select the **TV image** to close the Quick Bar menu.

Device Menu

While watching or listening to a device, such as a Cable or CD, access the **Device menu** with a TRG-100/200 remote by pressing the **Umotion** button or the Full Screen button from the Quick Bar menu. Move the remote around the on-screen interface to reveal the on-screen cursor. Hover over a button and press the **Umotion button** again to select.



Exit: Closes the **Device** menu.

Customizable buttons: These buttons vary based on the type of device (Cable, DVD, etc...) A maximum of ten buttons can be modified by your Custom Professional.

Shortcuts: Opens the **Shortcuts** menu with a list of user selected favorite devices.

Favorites: This option is only available when using a device with stored favorites. Pressing **Favorites** will close the **Device menu** and open the **Favorite channel menu**.

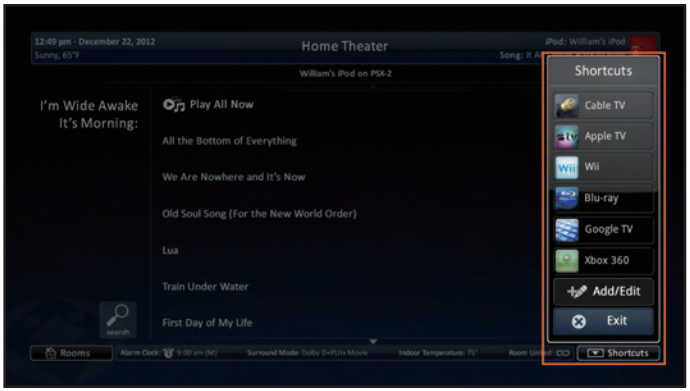
Quick Bar: Press to toggle between the **Quick Bar** and **Device's Full Screen menu**.

TV image: Select the **TV image** to close the full screen Device Menu.

More Device Buttons: The full screen option provides the customer with **more device commands** that are unavailable using the Quick Bar menu.

Shortcuts Menu

There are a maximum of six (6) shortcuts per room location. Remember, the MRX-20 can access any room in the Total Control system regardless of its physical location.



Only items that appear in the currently selected room are available to be added to the **Shortcuts** menu.

Using the Shortcuts Menu

Select the **Shortcuts menu** by pressing the **Shortcuts** icon.

If nothing is selected after 60 seconds, the **Shortcut** menu closes and performs the same action as selecting the item on the main menu.

Editing Shortcuts

To add devices/activities to **Shortcuts,** select the **Add/Edit** button in the **Shortcut** menu.

This opens the **Shortcuts Add/Edit** screen, which allows the user to scroll through all of the devices/activities available to that room. Select up to 6 devices/activities by selecting the **check box** shown for each possibility. Once all 6 are chosen, the remaining devices/activities will be grayed out to show there are no more choices to be made.

Reorder devices by selecting the reorder icon at the top of the **Add/Edit** window; this opens the Reorder Items list.

If you would like to change the order in which the activities/devices appear, drag the items, using the **"grabber"** on the right side of the boxes to rearrange them.

If you would like to remove an item from the list, select the **X** (delete) icon to the left of the device/activity name.

Selecting the **Go Back** option will revert to the **Add/Edit** screen without making any changes

Selecting the **Save** option will make the requested changes and revert back to the **Add/Edit** screen.

Favorites Menu

While watching a device such as Cable or Satellite, press the **Umotion** button on the TRG-100/200 remote. Press the **Favorites** button, from either the Quick Bar or Device menu, to access the favorite channel list.

Main Menu

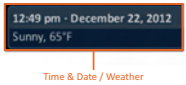
While using a TRG-100/200 remote, press the **Main** button to access the Main Menu's on-screen interface. Pressing the **Umotion** button activates the remote's motion control. Move the remote around the on-screen interface to reveal the on-screen cursor. Hover over a button and press the **Umotion** button again to select.

Title Bar

The **Title Bar** is present on all MRX-20 screens and contains valuable information during normal use. Easily find out the time, weather, now playing information and the room that the MRX is controlling.

Time & Weather

This data, found on the left-hand side of the **Title Bar** will show the current time, date and weather information. Pressing this area of the **Title Bar** will open the **Time & Weather Module**. For more information about this module, refer to the **Time & Weather Module** section, later in this manual.



Current Room

The current room portion of the **Title Bar** shows the room that the MRX-20 is controlling. Remember, in a Total Control system, the MRX-20 will **default** to control the room in which it is placed, using the **Rooms Menu** will allow it to control any other room in the system.

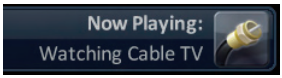
Now Playing

Appearing on the right-hand side of the **Title Bar**, this displays the source that is currently being used in the room that the MRX-20 is controlling.

- The Now Playing display will show the **device** that is being used (in this case, William's iPod), **device icon**, and **metadata information** is displayed since it is a URC media device.

  *The metadata will change, every 5 seconds, rotating between **song, artist** and **album**.*

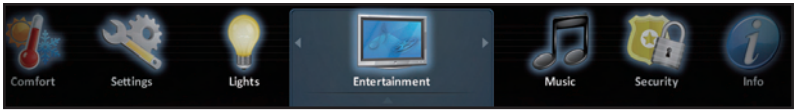
- If an activity is being performed (like DVD or Cable) in the selected room, the Now Playing section will display the activity.



If an activity is being performed in the selected room, the Now Playing bar will describe the activity.

Categories/Devices Ribbon

This ribbon shows the various categories of control that are available to the selected room. The quantity of categories is determined by the system setup and can vary from one to multiple categories programmed by the system designer.



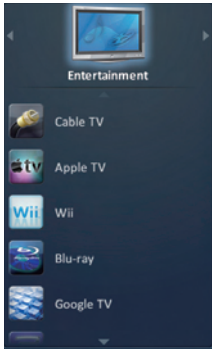
Although only seven categories can fit on the screen at any moment, navigate left or right to other categories, if available.

Select a **category** by hovering over the icon then pressing the Umotion button or using the five-way cursor to select; this reveals the devices/activities available for that category (submenus).

Device List

Submenus contain the devices/activities that were placed in the chosen category by the system programmer.

Move the remote **up** or **down** through the list, then hover over a device/activity to select its icon by pressing the **Umotion** button.



Status Bar

The **Status Bar**, located at the bottom of the screen, provides valuable status and feedback of the Total Control system. The four sections of the **Status Bar** are determined by the system programmer.

Sunrise Time: Updated at midnight every day, this shows the sunrise time for the next day.

Sunset Time: Updated at midnight every day, this shows the sunset time for the next day.

URC Thermostat Temperature: If a THZ-100 (URC's thermostat) is included in your home, this shows the current temperature status based upon the internal sensor, optional wired sensor, or the average temperature of both.

Alarm Clock: If the room being controlled has an **Alarm** that is set to activate for that room the status bar displays an alarm clock icon and the next scheduled time/day.

Surround Mode: When used with URC's DMS-AV Surround Processor this displays the current **surround mode** of the processor.

Room Linked Status: Whenever the chosen room/area is **"linked"** to other rooms, this shows a link acknowledgment and icon.

Weather Alerts: Based on the current location entered by the system programmer, the words **"Weather Alert"** appears if an automatic alert is received via the Internet.

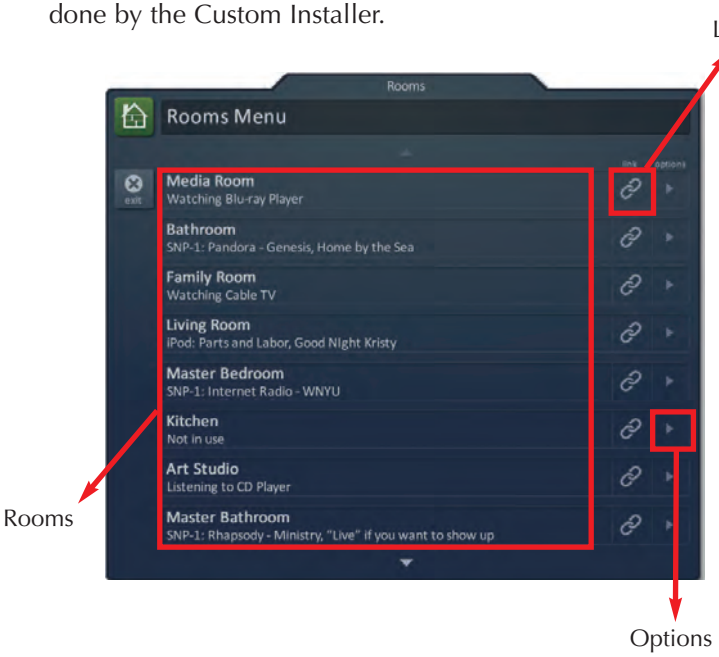
Vacation Mode: Whenever the Vacation Mode is activated for the Total Control system, the status bar displays **"Vacation Mode: ON"**.

Rooms Menu

The **Rooms Menu** offers the user control of every room throughout the home. It is now easier to turn off lights in other rooms while in the Master Bedroom.

The **Rooms Menu** is used to:

- **Temporarily Link** rooms in a Total Control DMS system. This allows all of the linked rooms to listen to the same audio source and join the volume commands into a single interface.
- **Monitor** the status of other rooms in the Total Control project
- **Control** any other room in a Total Control project as if it were a remote in that room. This is dependent upon the programming done by the Custom Installer.

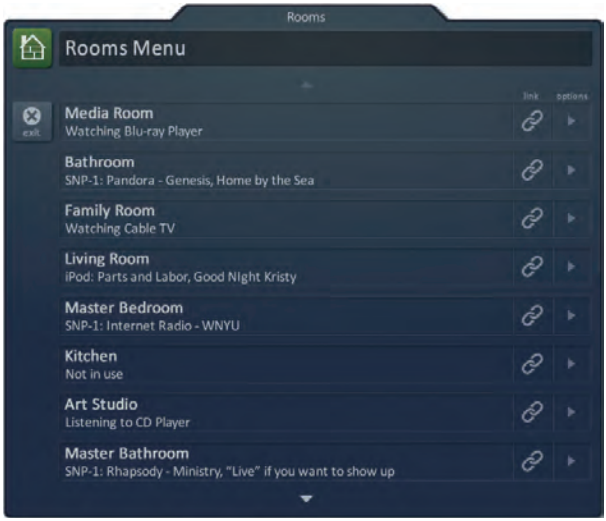


Room List Buttons

- Each room listing will have an associated box and action buttons.
- The **Exit** button will return the user to the last screen used
- Selecting the room name will allow for control of that room (see Selecting a Room)

Initial View (Room Monitoring)

When the **Rooms Menu** opens up, the room list populates with all of the rooms in the Total Control project. Each room displays its **status** so the user can visually see what is "going on" in that room.



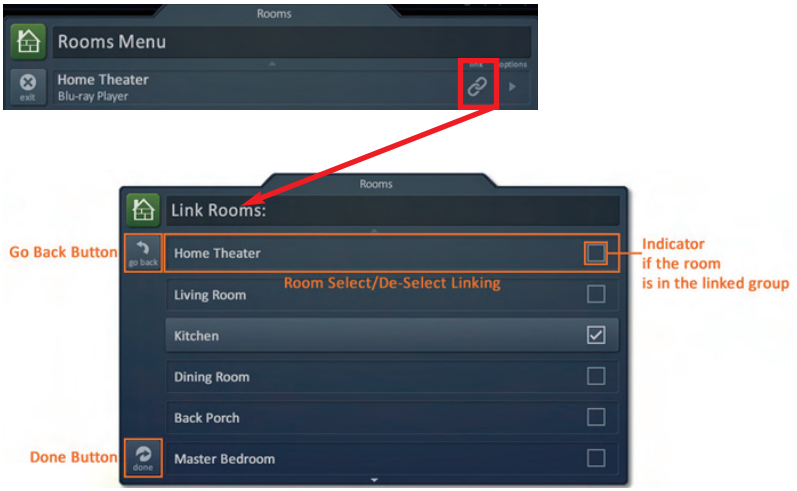
Selecting a Room (Room Control)

Selecting any room from the room list will allow the MRX-20 to control that room, as if it were physically in that room.

Returning the MRX-20 to control the room where it is physically located requires accessing the **Rooms Menu** and selecting the appropriate room.

Linking Rooms (DMS Audio only)

Selecting the **Link Rooms** button will open up the **Link Rooms** screen with the current room already selected. Only rooms/areas that are part of the DMS family of products will appear.



- Select, using the **check boxes**, the rooms that you would like to LINK. Pressing the check box will alternately "check" and "uncheck" it.
- The **Go Back** button will cause the screen to revert to the **Room Menu** without making any changes.
- The **Done** button will temporarily save the checked rooms as a **linked group** that can be controlled from any of the linked rooms.

Linked rooms are saved until the power is turned OFF, or the user manually unlinks the room(s).

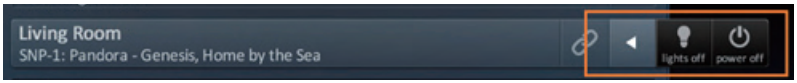
Using Linked Rooms

Once a room is linked, pressing the volume or mute buttons for that room will cause the **Linked Rooms Volume Pop-Up** to display. This menu will display the volume levels for all rooms in the temporary group.

- Selecting **All Linked Rooms** results in the volume and mute commands to operate ALL rooms (e.g. Volume Up causes the volume in all linked rooms to rise simultaneously, and at the same rate).
- Selecting an individual room in the **Linked Room List** allows the volume and mute buttons to adjust sound ONLY for the room chosen.

Room Options

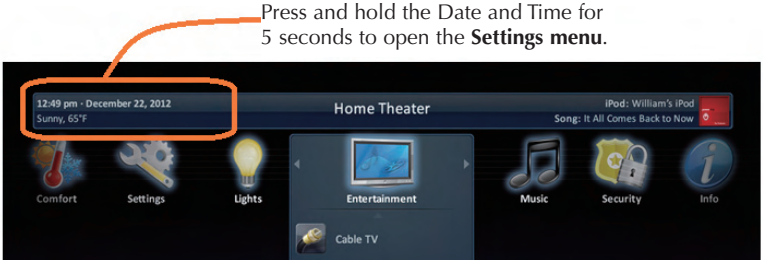
Selecting the **Room Options** button for a room will cause the menu to expand and offer the user various options to control the room.



- **Lights Off:** If URC controlled lights are located in the selected room, the Options menu will display a **light bulb icon**. Selecting this icon will issue a ***"lights off"*** command for the chosen room.
- **Power Off:** Selecting the **power icon** will issue a ***"room off"*** command for the selected room. The default for this command is to turn off all audio and video devices in that room, however this may have been altered by the system programmer.

Adjusting the Settings on the MRX-20

You can adjust the settings of the MRX-20, by pressing and holding the Date and Time area for five seconds. When you do, the screen will change to the Settings menu.



Settings Menu

The MRX-20 Settings Menu contains user adjustable configuration. Select an option by using the 5-way navigation or hovering over an icon. If no icon is pressed for 45 seconds, the unit will timeout and return to the Main Menu screen.

The **Settings** Menu is broken down into the following categories:

Screen Saver: Manage the type of ***screen saver*** (Generic or Photo slideshow) to use and when it should turn on.

General: Contains settings for Date, Time, and Temperature scale.

Motion Speed: Adjust the **TRG-100/200 motion** to slow, medium or fast.

Network: View information about the connected **network**.

System: Quickly view the Memory Usage, Firmware Version and other details about the MRX-20.

Screen Saver

The **Screen Saver** settings menu allows you to select what type of screen saver to use and for how long.

Select one of the radio buttons found on the right side of each property:

- **Use Generic Screen Saver:** Uses URC's generic slide show after a certain amount of time specified in ***Turn On After.***
- **Use Photo Slide Show as Screen Saver:** View stored photos as a slide show and automatically play after a certain amount of time specified in ***Turn On After***. (Photos are stored in the Photo Slide Show folder, available when selected in the Photo Viewer module.)
- **Turn On After:** Select a time, between 15 to 120 minutes, to turn on the screen saver. Press the **+ (plus)** or **- (minus)** buttons to increase or decrease the time.
- **Do Not Use Screen Saver:** Turns off the screen saver.

Selecting **OK** will accept any changes made and return to the **Main** menu, as well as selecting **Exit** will return the user to the **Main** menu, without incorporating any changes.

General

The **General** settings screen allows for setting the Date, Time and Temperature scale (Fahrenheit/Celsius). To view the rest of the **General** settings menu, be sure to move the remote up or down or press the arrow with the TRG-100/200 remote.

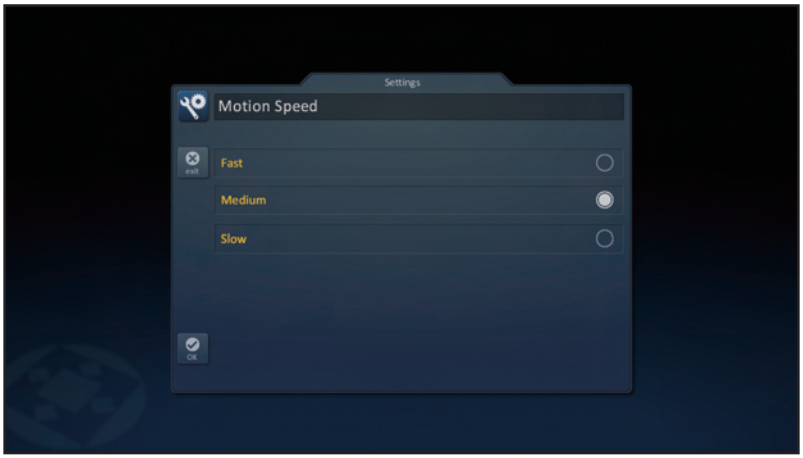
Using the arrow found at the left and right sides of each property (hour, minutes, month, etc.) adjusts the value up, or down, respectively.

Selecting **OK** will accept any changes made and return to the **Main** menu, as well as selecting **Exit** will return the user to the **Main** menu, without incorporating any changes.

Motion Speed

Adjust the TRG-100/200 motion speed by selecting one of the options (slow, medium or fast) on the MRX-20 user interface.

Selecting **OK** will accept any changes made and return to the **Main** menu, as well as selecting **Exit** will return the user to the **Main** menu, without incorporating any changes.



Network

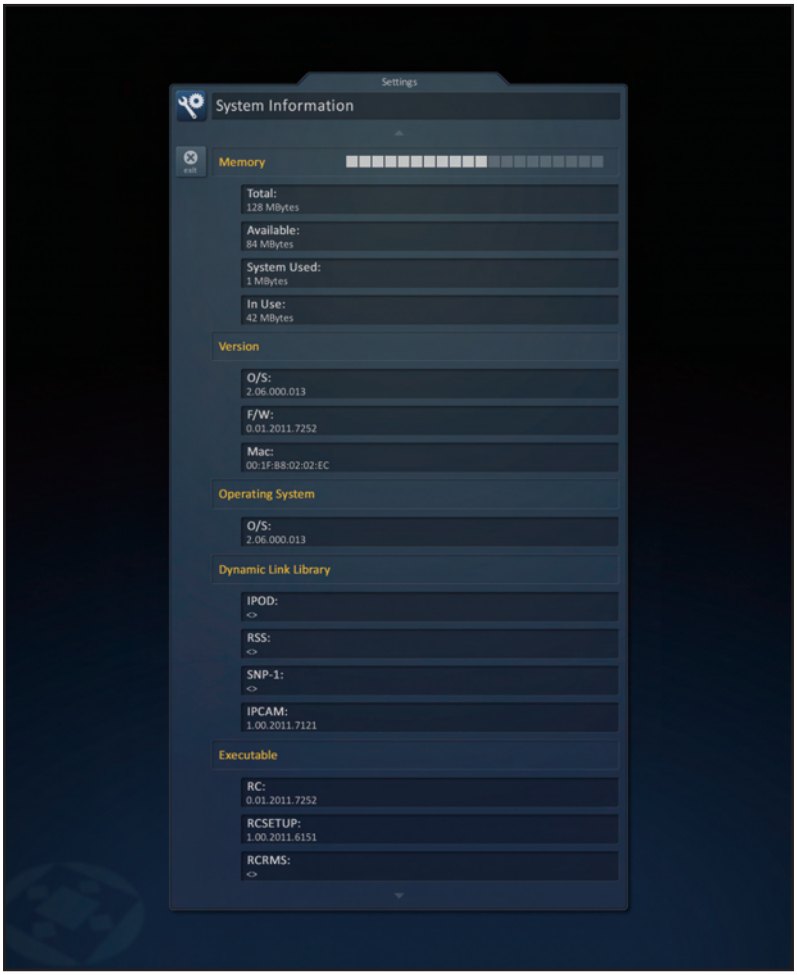
This option will show important information about the current network, its settings and give the ability to edit the IP address of the MRX-20.

The **Network Information** screen will display the **status** of the network connection (connected, not connected), current **address type** (DHCP or Static), **IP address**, **Subnet Mask**, **Gateway** and **DNS**.

Selecting **Exit** will return the user to the **Main** menu.

System

Although none of the information can be modified, these **System Pages** will show important information about your MRX-20. These pages should only be needed by a custom install professional, or a technical support representative.



Selecting **Exit** will return the user to the **Main** menu.

Installing the MRX-20

Physical Installation of the MRX-20 and Accessories

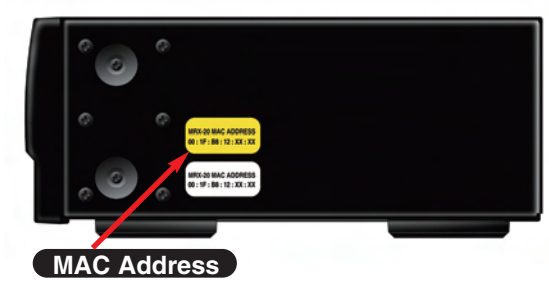
The MRX-20 Advanced Network System Controller can be installed anywhere in the home with a Cat-5 cable. Up to eight MRX-20's can be installed, where the first unit is the primary and the other seven units are auxiliary. Also DO NOT mix MRX-10's and MRX-20's in an installation. Once installed it can then be programmed to operate all local equipment using IR, RS-232, Relays or 12V Triggers. It can either be placed on top of the equipment or rack mounted (using the optional rack-mount adapter.) It must receive power using the included power supply. All IR emitters, HDMI, RS-232 cables and sensors are plugged into their respective ports on the back. Wires are connected to the detachable connectors for use of the relays.

Network Installation

1. Connect an **Ethernet cable (RJ45)** to the rear of the MRX-20 and into the network router or switch.

2. Connect your **laptop** into the same network router as the MRX-20.

3. **Plug flashers** into any of the ten flasher ports on the rear of the MRX-20.



Locating the MAC Address

The network **MAC Address** is a unique number that identifies a device on a network. By listing the MAC address during programming, URC network devices can use DHCP. The MAC address of the MRX-20 can be discovered over the network through programming. The unit's MAC address can be found on a label on the side of the unit (left side when facing rear).

Optimizing IR Flasher Levels

Test a few commands for each device before fixing the flasher in place on the front panel of a device. Since Satellite Receivers and Cable Boxes are extremely sensitive to IR overload or saturation, you should test them thoroughly. Put up the cable or satellite on-screen guide and test the navigation arrows. Compare operation via RF to the original remote control. Operation should be identical. If operation is inconsistent or sluggish, lower the IR line output and/or reposition the flasher.

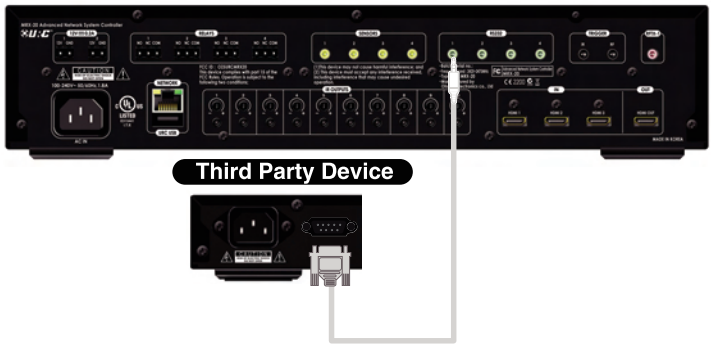
If you still have sluggish operation, check that the remote control is set to a particular LINE OUT, rather than ALL. When IR commands are sent to all the flashers in a cabinet, you can have difficulty adjusting the IR Output. Reprogram the remote control to send IR commands only via a specific (1-8) Line Output, then readjust the IR Line Output level.

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** with the included adjustment tool 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 component's IR sensor.

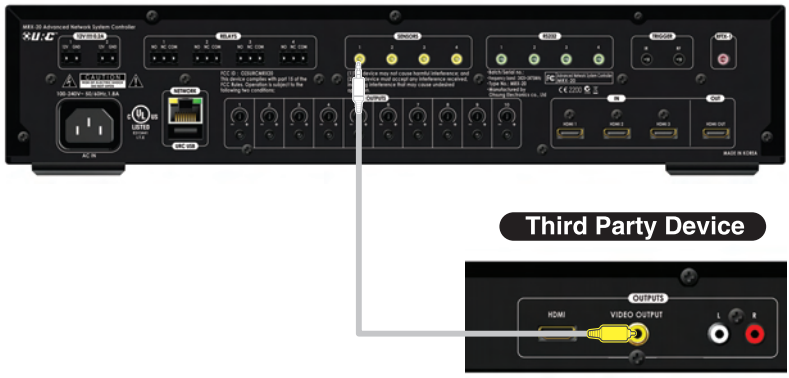
RS-232 Connection

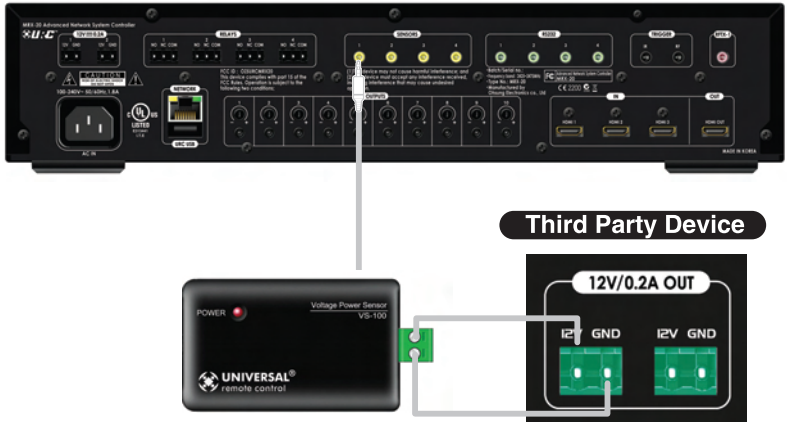
The MRX-20 can operate equipment via **RS-232** communication. This allows ***discrete serial commands*** to be triggered from a Total Control remote and sent from the MRX-20 over the network connection. The signal is then sent to the device over proprietary URC RS-232 cables. These use either male or female DB-9 connections with standard pin-outs. Programming is done in the Accelerator software.



Using Power/Video Sensors with the MRX-20

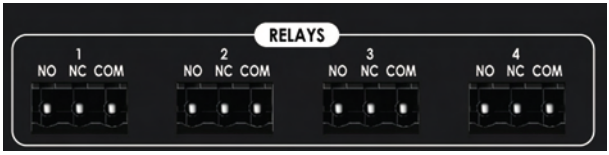
The MRX-20 can use either a **Video** (composite) or **Voltage** signal to determine the power status of the equipment it controls. This can then be used to alter the function of a Macro by using IF/ELSE statements in the programming software. Using a VID-1 Video Sensor cable, the MRX-20 can detect a video signal from a Composite or Component video output. The VS-100 Voltage Sensor will detect a Voltage of 3-25V either AC or DC.





Wiring to the Relay on the MRX-20

The MRX-20 has a **Relay** with three contacts, NO, NC, and COM. These can be used as dry contacts or to send a current to an electrical switch or motor for use with screens, blinds, curtains, etc.



The Relay can be used as either a latching contact or a momentary contact depending on the programming. The command to actuate the Relay is programmed using the Accelerator software and is sent from the MRX-20 when triggered by any Total Control system remote.

Using an RFTX-1 for URC One-Way Lighting products

The MRX-20 can use an **RFTX-1**, via the available RFTX-1 port. It controls URC One-Way Lighting products at 418 or 433.92 MHz.

Specifications

-Microprocessor : ARM Cortex-A8 Core

-Memory : 512MByte

-Input & Outputs:

- IR : Ten adjustable output
- USB : One (for future use)
- Ethernet : One 10/100 RJ45 port (Indicator 2LED)
- RS-232 : Four, supporting TX, RX and GND
- Sensor : Four, supporting Video or Voltage sensing (requires URC sensors)
- Relays : Four, NO, NC or COM
- HDMI : Three Input , One Output

-RF:

- Frequency : 2425-2475 MHz
- Range : 50 to 100 feet, depending upon the environment

-Others

- Power Supply : AC 100-240V 50/60 Hz
- Weight : 7.2 lbs (3.3 Kg)
- Size : 17.04″ x 8.70″ x 3.70″ (W X D X H)
- Environmental Condition : 0℃ - 40℃

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.UniversalRemote.com or call the 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.**

LIMITATION OF REMEDIES
UNIVERSAL REMOTE CONTROL SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OR CONDITION ON THIS PRODUCT. IN NO EVENT SHALL UNIVERSAL REMOTE CONTROL BE LIABLE, WHETHER IN CONTRACT OR IN TORT (INCLUDING NEGLIGENCE) FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, ACCESSORY OR SOFTWARE, OR FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATA, SOFTWARE OR APPLICATIONS OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE ABILITY OR INABILITY TO USE THE PRODUCTS, ACCESSORIES OR SOFTWARE TO THE FULL EXTENT THESE DAMAGES MAY BE DISCLAIMED BY LAW.

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, THERE IS NO OTHER WARRANTY EXPRESSED OR IMPLIED. UNIVERSAL REMOTE CONTROL WILL NOT BE HELD RESPONSIBLE FOR STATEMENTS MADE BY OTHERS CONCERNING THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT. Some states or jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights and you may have other rights which vary from state to state or jurisdiction to jurisdiction.

REV020708

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.

Federal Communication Commission (FCC) Radiation Exposure Statement

The device and the antenna for this device must be installed to ensure a minimum separation distance of 20 cm or more form a person's body. Other operating configurations should be avoided.

Declaration of Conformity

Company Name	:	OH SUNG ELECTRONICS CO., LTD.
Company Address	:	#181 GONG DAN-DONG, GUMI, GYEONG BUK, REPUBLIC OF KOREA
Contact Information	:	Phone: +82-54-468-7281, Fax: +82-54-461-8368
Brand Name	:	UNIVERSAL remote control
Product Name	:	Advanced Network System Controller
Model Name	:	MRX-20

This product herewith complies with the requirements of EMC Directive (2004/108/EC) and R&TTE Directive(1995/5/EC) issued by the Commission of the European Community

Compliance with these directives implies conformity to the following European Community

- EMC Directive
  - EN 55022 (2010)
  - EN 55024 (2010)
  - EN 55013 (2001) + A1 (2003) + A2 (2006)
  - EN 55020 (2007) + A11 (2011)
  - EN 61000-3-2 (2006) + A1 (2009) + A2 (2009)
  - EN 61000-3-3 (2008)
  - AS/NZS CISPR 13 (2012)
  - AS/NZS CISPR 22 (2009) + A1(2010)
- R&TTE Directive
  - ETSI EN 301-489-1 V1.9.2(2011)
  - ETSI EN 301 489-17 V2.1.1(2012)
  - ETSI 300 328 V1.7.1(2006)
  - ETSI 50385(2002)
  - ETSI EN 50383(2010)
  - EN 60950-1(2006)+A11(2009)+A1(2010)+A12(2011)

List of test reports and/or certificate verified compliance with the standards above

- EMC Directive
  - Report No.
  - Testing Laboratory : Gumi College EMC Center
- R&TTE Directive
  - Certificate No.
  - Certificate Body : SIEMIC (No. 2200)

Date of issue : May.1.2013

Name and signature of authorized person : Quality Assurance Team

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OCE-0141A Rev 01