

# MSC-400 System Quick Reference Guide

Power LED indicates that the MSC-400 is powered on.

USB 1 LED indicates that the USB Programming Port (Front Panel USB) is connected to a PC.



Status LED lights whenever an RF signal is received and UNDERSTOOD.

USB 2 LED indicates that the USB PC Keyboard Port (Rear Panel USB) is connected to a PC.

Learning Sensor for learning IR commands. Normally, learning is more convenient via a remote.

Sensor LEDs light when a Sensor is sensing that a component is ON (Video is present or Voltage is high).

Front Panel USB port is used ONLY for PROGRAMMING

## MSC-400 Master System Controller Front Panel

NOTE: MSC Editor Software is not included with the MSC-400. It can only be downloaded from the URC Dealer Only website. If you have not registered yet, call your distributor or sales representative for a registration code and use the Dealer Login at: [www.universalremote.com](http://www.universalremote.com)

### Notice to 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.

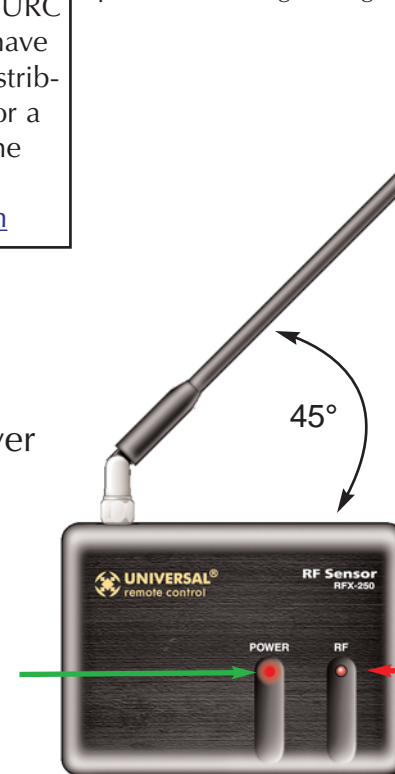
### Warning

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.

## RFX-250 Narrow Band RF Receiver Front Panel

Once the RFX-250 is correctly connected, the POWER LED lights.



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.

If the RF LED lights, the RFX-250 must be moved to a new mounting location. It is receiving in-band RF INTERFERENCE.

# MSC-400 System Quick Reference Guide

## MSC-400 Master System Controller Rear Panel

### IR and RS232 Outputs

**For RS-232:** Connect to Outputs 7-12 only. Order either RS232M (Male connector for component) or RS232F (Female connector for component). No RS232 cables are included with the MSC-400.

**For IR:** Outputs 1-6 are IR only. Outputs 7-12 can be used for either RS232 or IR. Standard emitters can be used on 1-6, sleeved emitters should be used for Outputs 7-12. Control the IR output level via the adjustment screws on the top panel.



Standard Emitter for Outputs 1-6 (can be used temporarily in Outputs 7-12). Compatible with MRF-300. Order **IR6** - Six emitters in one box.

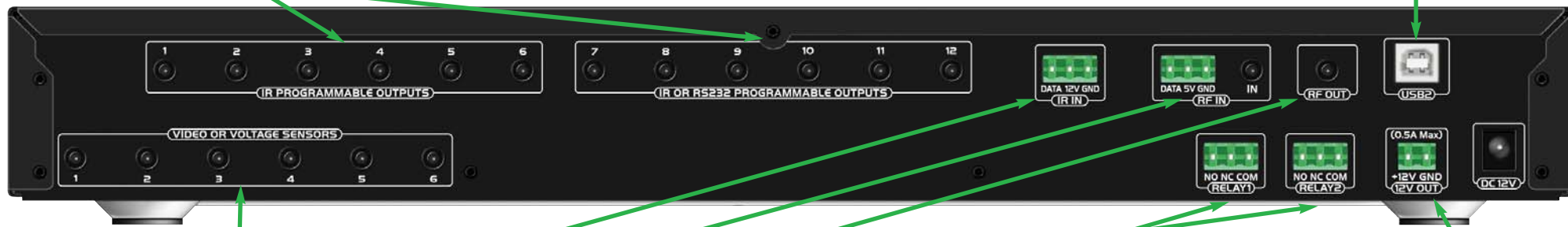


Sleeved Emitter for Outputs 7-12. Can be used with 1-6 as well. Order **IRS6** - Six sleeved emitters in one box.



RS-232 Connector for Outputs 7-12. Order **RS232M** (Male DB-9 connector for component) or **RS232F** (Female DB-9 connector for component).

**USB2 Keyboard Port**  
This port allows keyboard control of a PC. This port cannot be used for programming. USB1 on the front panel is used for programming the MSC-400.



### Video or Voltage Sensor Inputs

Sense video via the **VID-6** Video sensor (six to a box) or sense a 3-25 V AC or DC voltage via the **VS-100** Voltage Sensor (six to a box). The VS-100 Voltage Sensor is necessary when using other manufacturer's current, light or RF sensors. No video or voltage sensors are included with the MSC-400.

### IR Input

This port enables an IR Keypad or connecting block to route IR signals to all emitters.

### RF Input

This port connects to up to three RFX-250s in parallel.

### RF Output

This port connects to other MRF or MSC units in the same location.

### Relays 1 and 2

Each relay is compatible with Low Voltage applications (less than 30V with no more than .5 amps maximum current). The relay can be programmed to Open, Close or Toggle it's state in three ways: 1. Latching 2. Momentary for a specified time 3. Momentary for as long as the button is pressed and held.

### 12V Output

This is not programmable, simply a convenient power supply for any Relay 1 or 2 controlled device that needs 12V (less than .5 amp).

## Combining Two MSC-400's in Master Slave Configuration

When configuring two MSC-400's to be a single Master/Slave combination, the following connections must be made:

- All RFX-250s must be connected to the MASTER (10' cable is included).
- The MASTER RF OUT is connected to the SLAVE RF IN (10' cable is included).
- An RS232 accessory cable must connect between the #12 RS232 ports of both the MASTER and the SLAVE (this cable is not included, order the **MS-01** Master/Slave cable).

### Master



### Slave



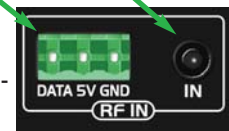
## RFX-250 RF Receiver



RFX-250 Side View

Connect **ONE** (only) of either of the RFX-250's RF OUT connectors to **ONE** (only) of either of the RF IN connectors on the MSC-400 using either your cable or the supplied cable.

Note that 5V and GND positions are different on the RFX-250 compared to the MSC-400. The Data connects to Data, 5V connects to 5V and GND connects to GND.



MSC-400 Rear View