



APPLICATION NOTE

APP #074

Revision History

Date	Author	Description
09-21-11	Weston Klebs	Created App
06-04-15	Daniel Bonessi	Updated
09-08-16	Jeff Thelen	Updated
7-25-2017	DEW	Revised APP

HOW TO TRANSMIT FIRMWARE USING MCS-CONNECT

- 1. Using RS-232 port on Keypad**
- 2. Using RS-485 port on MAGNUM-N**

Any questions regarding this release, contact: support@mcscontrols.com

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How to Transmit Firmware Using MCS-Connect



NOTE: Important: VERSION XX FIRMWARE MUST USE VERSION XX MCS-CONFIG FILES. (EX: HVAC 17.25 must be using a MCS-CONFIG version 17).

MIXED FIRMWARE AND CONFIG FILE WILL NOT WORK. MAKE SURE YOU HAVE THE LATEST FILES PRIOR TO LOADING NEW FIRMWARE TO YOUR CONTROLLER.

Be sure to use the latest MCS-Connect programs. (Free upgrade @mcscontrols.com)

MCS-CONFIG update must be sent from MCS-SUPPORT if you have an older version than the MAGSOFT VERSION that you are downloading. (Example: MCS-CONFIG version 16 will not work with MCS-CONFIG version 17)

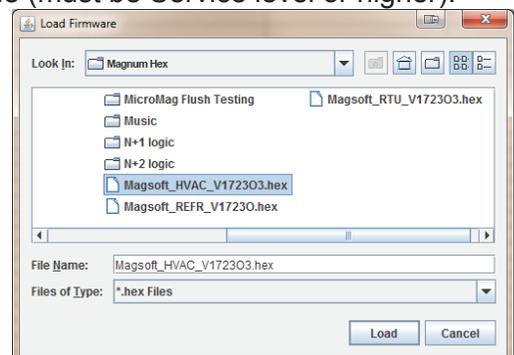
Consult with support@mcscontrols.com prior to upgrading your system.

1. To download the MAGSOFT upgrade: Go to www.mcscontrols.com
2. At top of main page click on 'SUPPORT', click on 'MAGNUM FIRMWARE'
3. Locate the latest version of the MAGSOFT for your controller - HVAC, CENT, REFR, or RTU - server will require a 'USERS NAME' and password. (call MCS-SUPPORT to receive that information)
4. **NOTE message about upgrading your 'FIRMWARE' before proceeding**
5. Start your download of MAGSOFT to the directory on your PC. 'MAGNUM HEX'

The screenshot shows a webpage with four blue buttons for downloading Magsoft firmware. Each button is labeled with the version and size. Below each button is a 'Please Note' section with instructions on how to load the firmware into a Magnum and use MCS-Connect to upload the hex file.

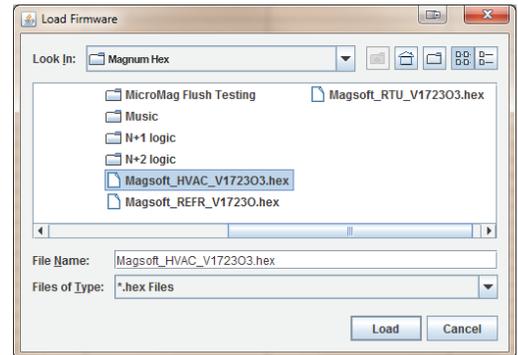
Standard Method using RS232 Serial cable

1. Open MCS-Connect
2. Select Local Serial as method of connection (you must already be connected to the Magnum through a Null Modem Serial cable to the Keypad. This will bring up the Magnum scanning screen.
3. Select the Magnum you would like to connect to and click the respective tab. Wait for the tables to load.
4. Click the **'VIEW'** button and enter the correct authorization code (must be Service level or higher). This will enable the **'LOAD'** button.
5. Click the **'LOAD FIRMWARE'** button and navigate to the firmware you wish to insert in the menu that pops up. (will be a .hex file)
6. Once you have selected the firmware, click **'LOAD'** and wait until firmware has finished transmitting.



Standard Method using RS485 cable to MAGNUM-N

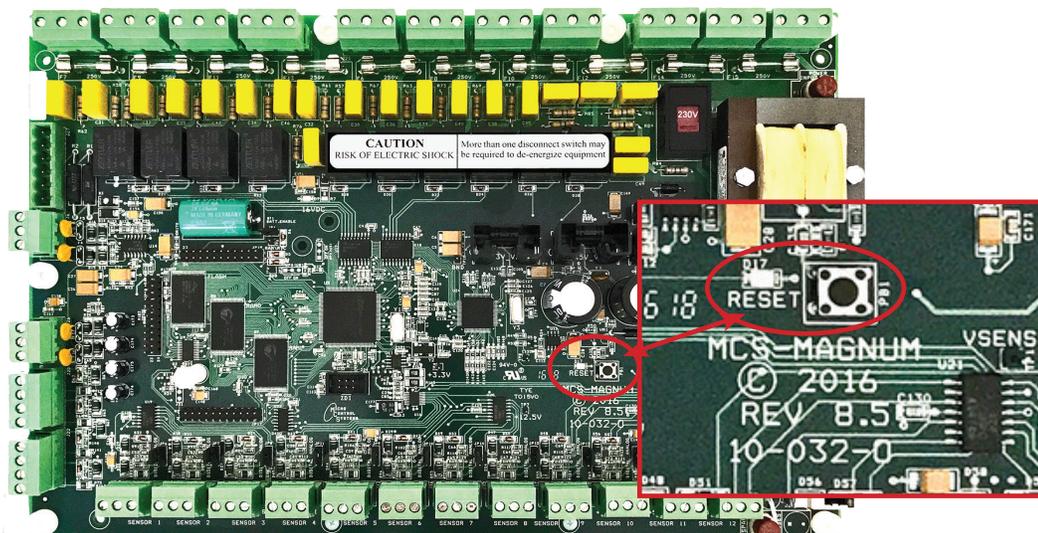
1. USING THE MCS-USB-485, connect the USB end to your PC port and connect the RS485 port to the MAGNUM-N port.
2. Open **MCS-Connect**
3. Select Local Serial as method of connection (you must already be connected to the Magnum using an MCS-USB-485 cable to the Magnum). This will bring up the Magnum scanning screen.
4. Select the Magnum controller you would like to connect to and click the respective tab. Wait for the tables to load.
5. Click the **'VIEW'** button and enter the correct authorization code (must be Service level or higher). This will enable the button.
6. Click the **'LOAD FIRMWARE'** button and navigate to the software you wish to insert in the menu that pops up. (will be a .hex file)
7. Once you have selected the firmware, click on 'LOAD' and wait until firmware has finished transmitting.



Backdoor Method

There may be certain situations where the standard method for transmitting software will not work (for example, software corruption through incomplete transfer, power failure, etc.). The magnum may be in constant reset and might not show up on the scanning screen of MCS-Connect. In such instances the following backdoor method must be used to transmit software.

1. Open MCS-Connect
2. Select Local Serial as method of connection (make sure you are NOT connected to the Magnum yet, keep the serial cable unplugged for this step so that the **'LOAD FIRMWARE'** does not become disabled). This will bring up the Magnum scanning screen. Click the button and navigate to the MAG-SOFT version you wish to insert in the menu that pops up (will be a .hex file).
3. Reconnect the MCS-USB-485 cable to the MAGNUM.
4. Before actually transmitting software however, locate the RESET button on the MCS-Magnum board.



You will need to start transmitting the software within seconds of pressing the RESET button.

5. Press the RESET button and then immediately begin transmitting the software.



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