

# NATIONAL CONTROL DEVICES

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## Fusion Master Control Panel Quick Start Guide



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Notice: Portions of this manual require internet access.

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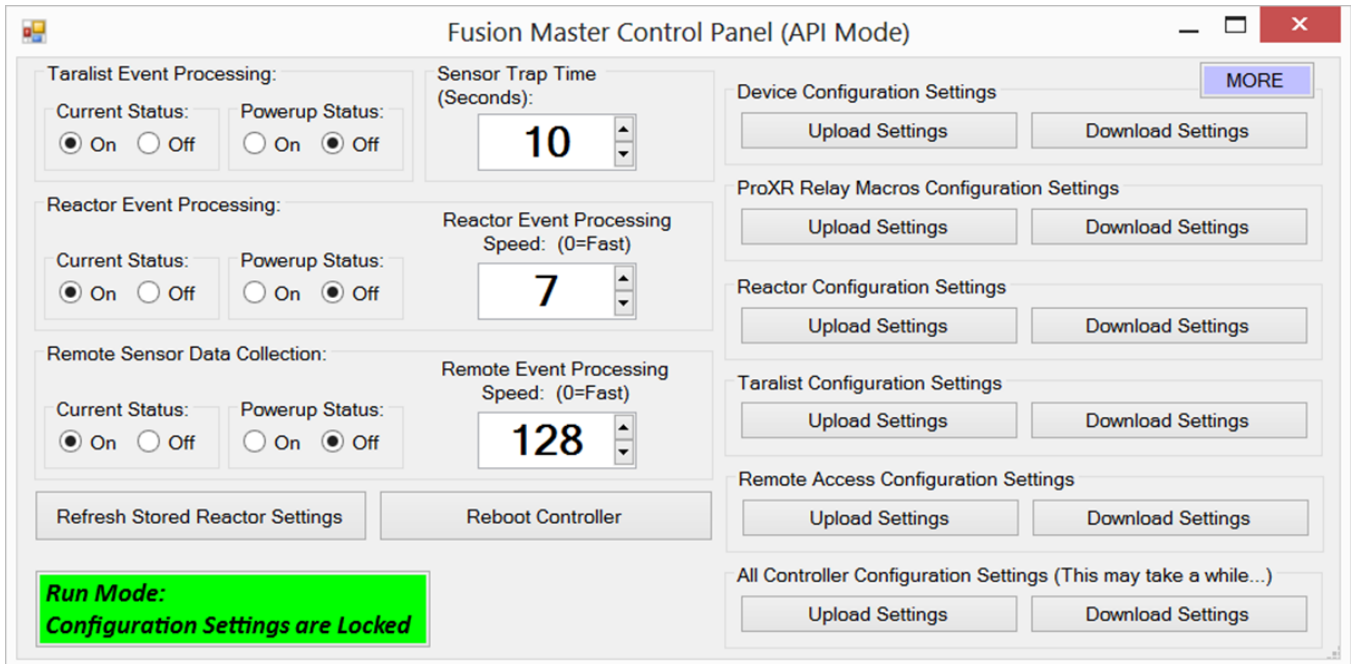
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## Fusion Master Control Panel

Fusion Series controllers have some very important commands that warranted their own control panel. The Fusion Master Control Panel is used to control the performance of the Fusion CPU as well as control the three most important background tasks. The Fusion Master Control Panel also allows you to download and upload device settings to the controller. This is very useful for customers who need to backup certain features of their Fusion controller.



### Taralist Event Processing

Turn Taralist Event Processing on or off with this control panel. When off, Taralist event processing will stop functioning, but the Taralist command set will continue to function.

### Reactor Event Processing

Turn Reactor Event Processing on or off with this control panel. When off, Reactor will stop evaluating sensors. Note that if this function is turned off, Remote Sensor Data Collection stops functioning, as remote data collection operates under Reactor. The interface will NOT reflect this condition, as the interface is designed to directly modify the on/off states of each of these three features. Turning off Reactor Processing does not turn off Remote Sensor Data Collection, but it does stop the task that calls Remote Data Collection.



## **Remote Sensor Data Collection**

Turn Remote Sensor Data Collection off to stop communications with wireless sensors. This feature will stop functioning if Reactor Processing is stopped. Remote Data Collection is used by Reactor to access wireless sensors. Remote Access should be turned off when tunneling to another device or when sending commands to a remote device.

## **Reactor Event Processing Speed**

Reactor Event Processing Speed is used to control how fast Reactor reads sensors and makes decisions to control relays. Users might be tempted to set this value to full speed, however, this will affect performance of other background tasks and may cause relays to glitch on and off if a sensor is setting on the threshold of a relay control operation. Users should experiment with this setting, keeping in mind the default processing speed is 7. Small adjustments and experimentation is advised.

## **Remote Sensor Data Collection Speed**

The speed of Remote Sensor Data Collection can be adjusted using this control panel. This is a rather intensive operation for the Fusion controllers, as very large API packets of data must be assembled and sent as a background task. Decreasing this speed significantly increases the workload of the Fusion CPU. Experimentation is advised as this function will slow the performance of the CPU for other tasks, including communications with a computer. Users are advised to set this setting as high as possible so Fusion has plenty of time to service other tasks. We do not advise extremely low settings, as this generates large amounts of wireless traffic, which may interfere with other nearby Fusion controllers from communicating with each other. If you are only working with two or three controllers tied together using Remote Access, lower settings will help improve sensor reaction time.

## **Sensor Trap Time**

Sensor Trapping is an experimental feature. If a sensor detects a value that is out of range, the sensor value can be trapped for the number of seconds defined by this setting. When the sensor is trapped, the actual value of the sensor will be ignored. Instead, the trapped value will be shared.

## **Power-Up States**

The Power-Up State of Reactor, Taralist, and Remote Access may also be controlled from this control panel. Note that these functions modify internal EEPROM memory that is only examined when the controller first powers up.



### Loading and Saving Fusion Settings

Fusion Controllers contain EEPROM used to store various configuration settings. The Fusion Master Control Panel should be used to directly load and save EEPROM data into a Fusion controller. Note that a reboot may be required after uploading new configuration data.

#### Command Set (Decimal Format)

233	245	0	Turn Off Remote Access	Rx: 0 = Off / 1 = On
233	245	1	Turn On Remote Access	Rx: 0 = Off / 1 = On
233	245	2	Report Status of Remote Access	Rx: 0 = Off / 1 = On
233	246	0	Turn Off Reactor Processing	Rx: 0 = Off / 1 = On
233	246	1	Turn On Reactor Processing	Rx: 0 = Off / 1 = On
233	246	2	Report Status of Reactor Processing	Rx: 0 = Off / 1 = On
65	246	0	Turn Off Taralist Processing	Rx: 0 = Off / 1 = On
65	246	1	Turn On Taralist Processing	Rx: 0 = Off / 1 = On
65	246	2	Report Status of Taralist Processing	Rx: 0 = Off / 1 = On

EEPROM Location 142 Stores Power-up State of Reactor, Taralist, and Remote Access

Bit 0 Contains the Activity State of Taralist

Bit 1 Contains the Activity State of Reactor

Bit 2 Contains the Activity State of Remote Access

Please see the *Fusion EEPROM Quick Start Guide* for more information on modifying EEPROM.



### Command Set (Hexadecimal Format)

0xE9	0xF5	0x00	Turn Off Remote Access	Rx: 0 = Off / 1 = On
0xE9	0xF5	0x01	Turn On Remote Access	Rx: 0 = Off / 1 = On
0xE9	0xF5	0x02	Report Status of Remote Access	Rx: 0 = Off / 1 = On
0xE9	0xF6	0x00	Turn Off Reactor Processing	Rx: 0 = Off / 1 = On
0xE9	0xF6	0x01	Turn On Reactor Processing	Rx: 0 = Off / 1 = On
0xE9	0xF6	0x02	Report Status of Reactor Processing	Rx: 0 = Off / 1 = On
0x41	0xF6	0x00	Turn Off Taralist Processing	Rx: 0 = Off / 1 = On
0x41	0xF6	0x01	Turn On Taralist Processing	Rx: 0 = Off / 1 = On
0x41	0xF6	0x02	Report Status of Taralist Processing	Rx: 0 = Off / 1 = On

EEPROM Location 142 Stores Power-up State of Reactor, Taralist, and Remote Access

Bit 0 Contains the Activity State of Taralist

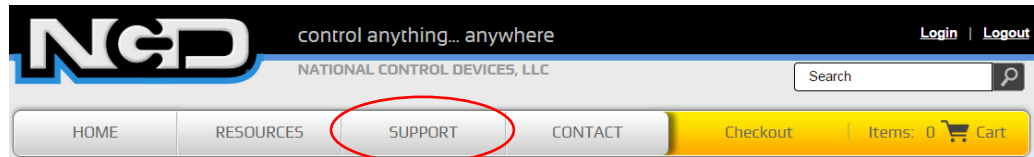
Bit 1 Contains the Activity State of Reactor

Bit 2 Contains the Activity State of Remote Access

Please see the Fusion EEPROM Quick Start Guide for more information on modifying EEPROM.

## Technical Support

Technical support is available through our website, [controlanything.com](http://controlanything.com). **Support** is the way we connect NCD engineers to our customers.



*Click on the **Support** tab at the top of any page on our website to be taken to the **Forum** page. Here you can publicly post or review problems that customers have had, and learn about our recommended solutions.*

Our engineers monitor questions and respond continually throughout the day. Before requesting telephone technical support, we ask that customers please try to resolve their problems through **Support** first. However, for persistent problems, NCD technical support engineers will schedule a phone consultation.





## Contact Information

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- [www.relaycontrollers.com](http://www.relaycontrollers.com)
- [www.relaypros.com](http://www.relaypros.com)

All other websites are not authorized dealers; we have noticed some retailers offering our products fraudulently.