

LumenRadio SuperNova

RDM Controller Software
Rev. C – December 8, 2010



1 General

SuperNova is an RDM controller that comes free of charge with LumenRadio's CRMX products with RDM support. With SuperNova, you are able to automatically discover, configure and monitor all your RDM enabled devices as well as the connected CRMX RDM enabled products. This document describes in short the major features of SuperNova and how to use them.

1.1 System Requirements

SuperNova can be used on a computer running Mac OS X 10.5.0 or any later version, or Microsoft Windows XP and above. A minimum of 1 GB of RAM is recommended and a screen resolution of 1024x768.

It is necessary to have Java Runtime Environment 1.6 or later installed in order to run CRMX SuperNova. To download the latest version of Java, please visit <http://www.java.com>.

2 Download and Installation

2.1 Download

To download SuperNova, visit www.lumenradio.com/downloads.php. Select the version most suitable for your operating system.

2.2 Installation

2.2.1 Mac OS X

On Mac OS X, the compressed zip file you downloaded contains a single file called SuperNova.app. Place this file in your /Applications directory to install it.

2.2.2 Microsoft Windows

On Microsoft Windows, the file you downloaded is a Windows Installer file (.msi). Double click the file to install SuperNova on your computer. If you have a previous version of SuperNova installed, it will automatically be removed before the new version is installed.

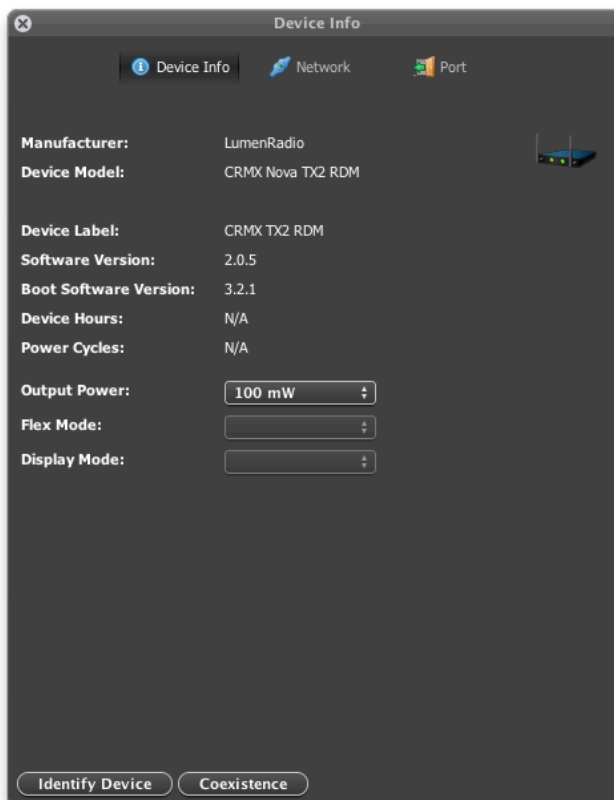
2.2.3 Other Operating Systems

As SuperNova is a Java based application, it should be possible to install and run it on all operating systems that has support for the Java Runtime Environment, such as GNU/Linux, OpenSolaris and Free/OpenBSD. This has however not been tested as of now, and LumenRadio cannot guarantee proper functionality nor provide support if SuperNova is used on other operating systems than Mac OS X or Microsoft Windows.

3 Finding and configuring CRMX transmitters

SuperNova will, when launched, automatically find any CRMX transmitters connected to the same network as your computer. If you do not see any transmitters, please verify that they are powered up and that the Ethernet cables are connected. If one or more transmitters are connected with conflicting IP addresses, a window will be displayed where each transmitter can be configured. This will have to be done before SuperNova can communicate properly with the transmitters.

When you double click a transmitter icon, a *Device Info* HUD will be displayed. In this window, a number of parameters can be read and set. The different settings are grouped into three different categories: *Device Info*, *Network* and *Port*.



3.1 Device Info

The Device Info panel allows you to see some information about the device, such as software version and the current output power. If the device supports different Flex Modes, those can also be set in this panel. For either of the three combo boxes *Output Power*, *Flex Mode* and *Display Mode*, the settings are applied once a new value has been selected.

3.2 Network

The Network panel contains network related setting for the transmitter's IP address, subnet mask and dhcp functionality. After changing the values in the text boxes, press the Apply button to restart the transmitter.

3.3 Port

The Port panel allows you to set the functionality of each port on the transmitter and contains all Ethernet protocol related settings.

3.3.1 DMX to Ethernet

The default mode of the XLR ports in CRMX transmitters and Flex products is to work in an inbound direction. All DMX data that is received is sent over the radio link to linked receivers.

You can also convert the DMX information to any supported Ethernet protocol and have it sent over Ethernet. CRMX transmitters and Flex products can thus work as protocol converters.

To enable Ethernet output, chose the desired port and then click the Enable Ethernet checkbox. Chose DMX as source, chose the protocol you wish to output and the corresponding settings. Click Apply, and the transmitter will restart.

3.3.2 Ethernet to DMX

CRMX transmitters and Flex products are also able to convert incoming Ethernet data to DMX. The DMX information will both be sent over the radio link to linked receivers as well as outputted on the corresponding XLR port.

To enable Ethernet to DMX conversion, chose the desired port and then click the Enable Ethernet checkbox. Chose Ethernet as source, chose the protocol that will be received over Ethernet and the corresponding settings. Click Apply, and the transmitter will restart.

4 Discovery

Performing a discovery means finding all connected RDM enabled devices. It is an automatic process that does not require any user input besides the action of starting the process.

To start a discovery process, click the *Discovery* button in SuperNova. A new window will appear in which you can choose from two types of discovery: *Full discovery* and *Incremental discovery*.

4.1 Full Discovery

A full discovery will attempt to find all connected RDM enabled devices. If you have run a previous discovery process, SuperNova will attempt to find those devices again.

Please note that any changes made to the Geographical layout in SuperNova will be reset when a full discovery is performed.

4.2 Incremental Discovery

An incremental discovery is a process that runs in the background and will continuously search for newly connected devices as well as remove devices that appear to have been disconnected. When the Incremental Discovery process is activated, you are able to connect and disconnect devices at will, and SuperNova will always display the current state.

Once the Incremental Discovery process is activated, the *Start* button will change appearance to *Stop* instead. The discovery dialog can now be closed and the Incremental Discovery process will keep running in the background. To stop the Incremental Discovery process, simply open the discovery dialog again and press the *Stop* button.

5 Geographical view

In the geographical view, all discovered devices are represented by linked icons. All icons are draggable, which means that you can move them around to represent the physical layout of a stage or other location. Lines are drawn between icons to indicate the topology of the system. A solid line means a wired connection and a dotted line means a wireless connection.

If the mouse is hovered above an icon, a window is displayed containing some basic information about the device and its current status. If you double click an icon, a *Device info* window will be displayed, where device specific configuration can be made.

It is possible to let each device identify itself by clicking the *Identify Device* button. If a device is in identify state, this will be indicated with a light bulb next to the device icon. The behavior in which RDM devices identify themselves is different between manufacturers and models. To turn off the identifying process, click the *Identify Device* button again. It is also possible to enter the identifying process by right clicking a device icon.

Right clicking an icon will bring up a context menu where some functions are immediately accessible without opening a *Device Info* window. The functions accessible can differ from one device to another and may also depend on different software and hardware versions.

If your transmitters and receivers support it, you have the possibility to link and unlink receivers from SuperNova. This is done by right clicking the device and choosing the appropriate function. Using the link and unlink functions through SuperNova has the same effect as pressing the link button on the transmitter or receiver. Please observe though that when unlinking one or more receivers through SuperNova, those devices will be removed from SuperNova until they are linked and discovered again.

5.1 Monitoring

SuperNova continuously polls every discovered device to gather status information. If SuperNova repeatedly fails to gather information about a specific device, a red warning icon will be displayed next to the device icon in the *Geographical View*.

By right clicking an RDM device icon, you can setup sensor monitoring. This requires that the RDM device has one or more sensors. When SuperNova detects that a sensor is out of range, a yellow warning icon will be visible next to the device icon.

It is possible to completely turn off the monitoring mechanism by clicking the green sphere in the top left corner of the screen. Once clicked, the icon will become red to

indicate that monitoring has been turned off. Please note that the monitoring mechanism will always be turned off before performing a discovery, and automatically go back to the previous state after the discovery process. It is possible to adjust the interval with which SuperNova polls the connected devices through the *Settings* window.

6 Device List

The device list is a spreadsheet layout of all devices. Each column is resizable as well as sortable. To sort the list by a certain parameter, simply click the header column once or twice for ascending or descending sorting.

It is possible to change two field values in this view: *Device Label* and *DMX Address*. To change those values, simply double click on the row corresponding to the device you wish to edit. When changing the Device Label, the new value will be propagated throughout the application.

7 DMX Map

In the DMX Map, a full DMX universe (512 channels) is displayed. On top of the channel grid, all RDM devices for the selected transmitter and port are shown, with their respective footprint and device labels for identification. To change the transmitter and port, use the menu in the lower left corner.

To change a device's DMX start address, simply click the device and drag it to the correct channel. The device will "snap" to the grid and automatically patch its values accordingly.

There is also a possibility to automatically patch all devices in the current universe. This is done by clicking the *Auto patch* button in the lower left of the screen. By doing this, all devices will be patched to have continuous DMX start addresses, with consideration to each device's footprint.

The DMX grid being displayed has room for 32 channels on each row. Devices whose DMX footprint span more than 32 channels or where the last DMX channel exceeds the last available channel on the current row will wrap around to the row underneath. To change the start address of such a device, it is possible to click the device on either row.

8 Coexistence

By clicking the *Coexistence* button in a *Device Info* window for a CRMX transmitter, a window will appear showing the current frequency band usage. In this view, three different types of data is visible:

- **Green** – history of transmissions originating from the currently selected CRMX transmitter. The height of the green bars indicates how much a specific frequency is being used.
- **Orange** – history of transmissions from other nearby systems. The depth of the orange bars indicates how much a specific frequency is being used.
- **Red** – real-time bursts of traffic from other nearby systems.

8.1 Frequency blocking

It is possible to block a certain frequency band from being used by CRMX systems. This is suitable if you for example are working at a venue where the venue demands that your equipment stays away from those frequencies even though they are not currently in use. By moving the mouse pointer over the horizontal line, the Wi-Fi channels in the frequency band will be displayed. When a Wi-Fi channel is displayed, double clicking will block that frequency, which will be indicated by the orange bars for that band becoming greyed out. Double clicking again on a blocked Wi-Fi channel will unblock that channel.

9 Save and Load your show

Once a discovery has been performed, it is possible to save all discovered devices and their positions to a file that can later be opened in order to continue from the last known state. These functions can be accessed by the *Load Show* and *Save Show* buttons.

10 Future versions

LumenRadio will continuously develop and release new versions of SuperNova with additional features. If the computer running SuperNova is connected to the Internet, SuperNova automatically checks for new versions at startup and will notify you if there are newer versions available for download.

11 Support

For support, please contact support@lumenradio.com.