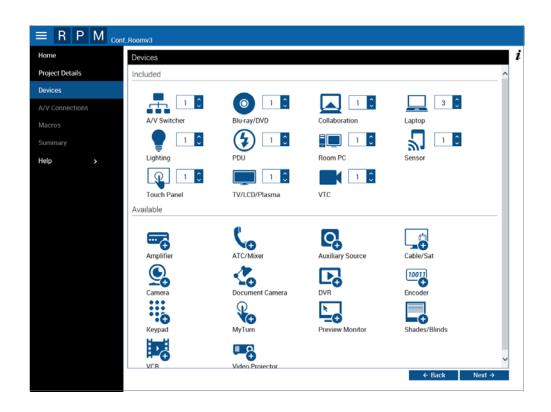


INSTRUCTION MANUAL

RPM RAPID PROJECT MAKER

NSS-RPM (V3.0 OR HIGHER)



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Table of Contents

RPM - Rapid Project Maker	6
Overview	6
RPM Configuration Manager	6
Supported Web Browsers	
RPM System Limitations	
Supported Devices	
Notes on Devices	
Supported AMX Controllers, Touch Panels and Accessories	
AMX Controllers & A/V Switchers	8
AMX Touch Panels	8
RMS Scheduling Touch Panels	8
AMX Solecis® Digital Switchers	8
AMX Alero Web Conferencing Audio Mixer	8
AMX Keypads	8
AMX Accessories	9
Supported Controlled Devices	9
RPM System Types	10
Classroom	10
Conference	10
Dual Room	11
Custom	
RPM and RMS Enterprise	12
Duplicate Control Methods	
Related AMX Software - RPMLoader	
RPM v3.x User Interface	12
Menu View	12
Folder View	14
Project View	
Project View Filters	
Help Tips View	
Using RPM (Rapid Project Maker)	17
Quick Start Instructions	17
Accessing the RPM Web Application	18
Creating a New RPM Project	19
RPM Configuration Report	27
Project/Controller Information	
Device Count Listing	
Device Configuration Information	
Device Connections	28

	DXLink and ICSLan Device List	. 29
	Macros: Touch Panel Summary and Definitions	. 29
	Device-Specific Configuration Information	. 30
	Cable Diagrams	. 30
	AMX Equipment List	. 30
	Switcher Usage	
	Opening an Existing RPM Project	
	Organizing RPM Projects	
	Creating a New Projects Folder	
	Adding Projects To Folders (via Drag-and-Drop)	
	Renaming Custom Folders	
	Moving/Reordering (Custom) Project Folders	
	Deleting (Custom) Project Folders	
	Adding a Custom Logo to the RPM Project	
_	Changing the UI Theme Background Color	
Ap	pendix A - Working With Macros	35
(Overview	35
ı	Editing Existing Macros	35
	Adding Macro Items to a Macro	. 36
	Macros By Panels	
	Creating a New Macro	38
	Deleting Macro Items	
	Deleting Macros	
ı	ighting Scenes and Macros	41
ı	Jsing the "Send To Page" Touch Panel Navigation Option	42
	Copying and Editing an Existing Macro to Use "Send To Page"	. 42
	Creating a New Macro That Uses "Send To Page"	
Apı	pendix B - RPM Configuration Manager	46
	Overview	46
ı	aunching the RPM Configuration Manager	46
	Home Page	
	Settings Menu	
	Advanced Volume	
	pendix C - RPM and NetLinx Master Security	
ı	NX Controllers Security - Overview	
	NX Controllers Security Presets	
	Accessing the NX Controller's Web Control Pages via NetLinx Studio	
	Viewing and Modifying System Security Settings	
	REPUREDURED NA AVSIETI AELULIIV AELULIUS = LUW AELULIIV	. : 11.1

Removing Security on the NX Controller via the "Authentication on Server Ports Option"	50
Disabling the Authentication On Server Ports Security Setting	50
Low Security - Configuring the NX Controller to Work With RPM	51
Creating a New User on the NX Master	51
Configuring Touch Panels to use the New User Login to Connect to the Controller	52
Medium Security - Configuring the NX Controller to Work With RPM	53
RPM Required NX System Security Settings - Medium Security NI Controllers Security - Overview	
Accessing the NI Controller's Web Control Pages via NetLinx Studio	54
Viewing and Modifying System Security Settings (NI Controllers)	54
Configuring the NI Controller to Work With RPM	55
Creating a New User on the NI Master	55
Configuring Touch Panels to use the New User Login to Connect to the NI Controller	56

RPM - Rapid Project Maker

Overview

Design, configure and deploy AMX systems in less than an hour with Rapid Project Maker (RPM).

RPM is a cloud-based configuration tool that allows AV technicians or IT professionals to easily configure an AMX system by using a step-by-step approach. RPM simplifies more than just the configuration - it is a comprehensive tool designed to help throughout the process, from start to finish. With no programming required, the user can configure the project, create a user interface and generate step-by-step instructions on how to install the system.

Users can store their projects on AMX.com, allowing installers to access and manage them from anywhere.

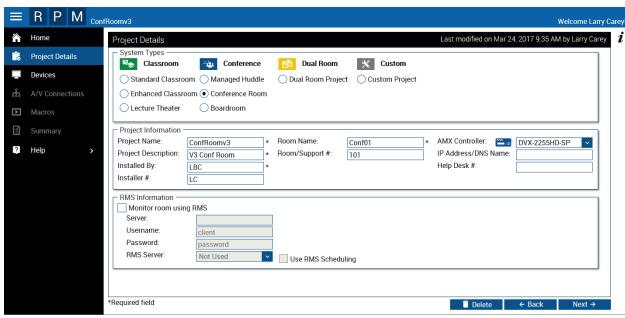


FIG. 1 RPM - Example Project Details Page

RPM Configuration Manager

RPM v2.5 or higher includes a powerful new tool: the "RPM Configuration Manager". The RPM Configuration Manager resides on the AMX Controller and provides access to many configuration settings (FIG. 2):



FIG. 2 RPM Configuration Manager (Sample Home page)

Use the RPM Configuration Manager to view, edit and test various aspects of the RPM project - on the fly, without having to launch the RPM web application.

See Appendix B - RPM Configuration Manager on page 46 for details.

Supported Web Browsers

RPM is supported on the following web browsers:

Supported Web Browsers	
Windows	Macintosh/Apple
Internet Explorer v8 (or higher)	Safari v4 (or higher)
Google Chrome v9 (or higher)	Google Chrome v9 (or higher)
Mozilla Firefox v3 (or higher)	Mozilla Firefox v3 (or higher)

RPM System Limitations

RPM is intended to assist in the creation of small to medium-sized control systems with a single NetLinx Controller and a limited number of controlled devices.

The fundamental limitation of any RPM system is simply the device types and specific numbers of devices supported in the RPM user interface. Systems that require more complex design (including multiple controllers, custom device control and extensive custom touch panel design) may not be appropriate for RPM.

Supported Devices

Device Type	Max Supported	Control Method
AMX A/V Switcher (up to 18 x 12)	4 Used with DVX	IP, RS232
ATC /Mixer	1	IP, RS232** (see Notes)
Amplifier	1 for single room 2 for Dual Room	RS232
Auxiliary Sources	16	User Interface
Blu-ray/DVD Players	2	IP, RS232, IR* (see <i>Notes</i>)
Cable, Satellite tuners	2	IP, RS232, IR* (see <i>Notes</i>)
Camera	4	IP, RS232, IR* (see <i>Notes</i>)
DVRs	2	IP, RS232, IR* (see Notes)
Document Cameras	2	IP, RS232, IR* (see <i>Notes</i>)
ENZO™	2	Native
Encoder	2	Native
Keypads (Massio***, Metreau & Novara)	4	IP, AxLink
Laptops	16	User Interface
Lighting	1	IP, RS232
PDU	1	AxLink
Preview Monitor	4	n/a (uncontrolled device)
Room PCs	4	User Interface
Scheduling Panels	4	User Interface
Sensors	4	ClearConnect, I/O
Shades/Blinds	2	Up to 3 x relay ports (open, close, stop)
TV/LCD/Plasma	4	IP, RS232
Touch Panels	4	User Interface
VCR	2	IP, RS232, IR* (see <i>Notes</i>)
VTC	1 for single room 2 for Dual Room	IP, RS232
Video Projectors	4	IP, RS232

Notes:

Notes on Devices

RPM supports up to a total of four Display devices (Preview Monitor, TV/LCD/Plasma, Video Projector) in any combination. If more than four Display devices are selected, RPM will prompt you that the maximum number has been exceeded.

^{*} IR controlled devices do not provide feedback.

^{**} The ATC (Audio Conference/Mixer) device type requires a configuration file that must be transferred to the device in order to support RPM functionality. A link to this configuration file is provided in the RPM project report (only if an Audio Conference/Mixer device is included in your RPM project). Refer to the device manufacturer's documentation for instructions on downloading a file to the device.

^{***} Massio Virtual Keypads are configured via the NetLinx Master's web configuration pages. Refer to the Massio ControlPads and Keypads Instruction Manual for details.

Supported AMX Controllers, Touch Panels and Accessories

RPM supports the following AMX Controllers and Touch Panels:

AMX Controllers & A/V Switchers

•				
Enova DVX All-In-One Presentation Switchers				
• DVX-3256HD-SP/T	DVX-2255HD-SP/T			
 DVX-3255HD-SP/T 	 DVX-2250HD-SP/T 			
• DVX-3250HD-SP/T	 DVX-2210HD-SP/T 	Master Firmware version: 4.2 (or higher)		
• DVX-3156HD-SP/T	 DVX-2155HD-SP/T 	Master Firmware version: 4.3 (or higher)		
• DVX-3155HD-SP/T	 DVX-2150HD-SP/T 			
• DVX-3150HD-SP/T	• DVX-2110HD-SP/T			
Massio ControlPads				
• MCP-106		Master Firmware version: v1.3.31 (or higher)		
• MCP-108		Pluster Filliware version. V1.3.31 (or higher)		
NetLinx NX Integrated Control	NetLinx NX Integrated Controllers			
• NX-4200	• NX-2200	Master Firmware version: 1.2 (or higher)		
• NX-3200	• NX-1200	Priustei i iiiiiwure version. 1.2 (or nigher)		
NetLinx Integrated Controllers				
• NI-3101		Master Firmware version: 3.6 (or higher)		

AMX Touch Panels

Tabletop				
• MXR-1001-BL/SL	HPX-MSP-10-BL/SL	HPX-MSP-7-BL/SL		
• MXT-2001-PAN	• MXT-1901-PAN	• MXT-1001	• MXT-701	
MXT-2000XL-PAN	MXT-1900L-PAN	• MXT-1000	• MXT-700	
• MST-1001	• MST-701	• MST-431		
Wall Mount				
• MXD-2001-PAN	• MXD-1901-PAN	• MXT-1001	• MXT-701	
MXD-2000XL-PAN	• MXD-1900L-PAN	• MXD-1000-L	• MXD-700-L	• MXD-430
• MSD-1001-L/2	• MSD-701-L/2	• MSD-431-L	•	

RMS Scheduling Touch Panels

MXD-2000XL-PAN-P	MXD-1900L-PAN-P	
• MXD-1000-P	• MXD-1000-L/2	• MSD-1001-L/2
• MXD-700-P	• MXD-700-L	• MSD-701-L/2
• MXD-430	• MSD-431-L	

AMX Solecis® Digital Switchers

• SDX-810	• SDX-814-DX
• SDX-510	• SDX-514M-DX
• SDX-410	• SDX-414-DX

AMX Alero Web Conferencing Audio Mixer

ALR-AEC

AMX Keypads

Ethernet Keypads			
• MKP-108-BL/WH	MKP-106P-BL/WH	MKP-106L-BL/WH	
MET-6NE-BL/WH	MET-7E-BL/WH	MET-13E-BL/WH	
MET-7X-BL/WH	MET-13X-BL/WH	CCD-W6BRL	
Metreau Series			
MET-6N-BL/LA/WH	MET-7-BL/LA/WH	MET-13-BL/LA/WH	
Novara Series			
SP-08-AX-EU-BL/WH	SP-08-AX-UK-BA/BL/WH	SP-08-AX-US-BA/BL/WH	
SP-16-AX-UK-BA/BL/WH	SP-16-AX-US-BA/BL/WH		

AMX Accessories

ICSLan Device Control Boxes EXB-IRS4 EXB-COM2 EXB-REL8 Note: One ICSLan device per type (EXB-COM2, EXB-IRS4, and EXB-REL8) can be used in a system. **Touch Panel Accessories** MXA-MP MXA-MPL **Lighting Controls** NXB-CCG CCD-OCRB-P **DXLink Twisted Pair Transmitters/Receivers** • AVB-RX-DXLINK-HDMI AVB-TX-MULTI-DXLINK AVB-WP-TX-MULTI-DXLINK **Amplifiers** SV-AMP-1

Supported Controlled Devices

RPM supports devices that have RPM-compatible modules.

To search for RPM-compatible devices at www.amx.com:

1. Go to www.amx.com (Trade Site), and click on the TECH CENTER link at the top of the page (FIG. 3):



FIG. 3 www.amx.com - TECH CENTER link

2. In the Navigation menu (left side of page), click on Search Third Party Devices (FIG. 4):



FIG. 4 www.amx.com (Tech Center) - Search Third Party Devices

3. In the Search Device Database page, fill in the search criteria as desired and select RPM Compatible to filter the results to show only RPM-compatible Modules (FIG. 5):

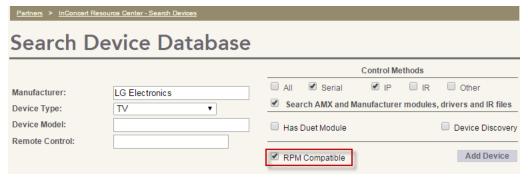


FIG. 5 Search InConcert Database with "RPM Compatible" option selected

4. Click **Search** to search the InConcert database for RPM-compatible modules, based on the search criteria. The results are displayed below the search fields (FIG. 6):

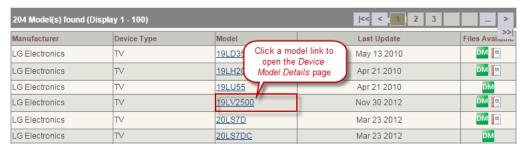


FIG. 6 InConcert Database - Search Results

5. Click the desired **Model** link to open the *Device Model Details* page for the selected device (FIG. 7):



FIG. 7 InConcert Database - Device Model Details page

The Device Model Details page includes a listing of all files that are available to download for this device

- · Previous versions of the device files are indicated in red; the current versions of the file are at the bottom of the list.
- Only RPM-compatible modules and RPM-Supported Devices with IR files are appropriate for use with RPM.
- The RMS icon in the Device Model Details page indicates whether the Duet module for this device is RPM-compatible.
- 6. Click the **Download** icon to download the selected file.

RPM System Types

RPM supports the creation of four categories of Systems: *Classroom*, *Conference*, *Dual Room* and *Custom*. The System Type is selected in the *Project Details* page (the first page in the RPM web application - FIG. 8).



FIG. 8 System Type selection (Project Details page of the RPM web application)

Note that each System Type is represented with a different icon in the *Project Details* page. These icons are also used in the Projects View in the *Home* page.

Classroom

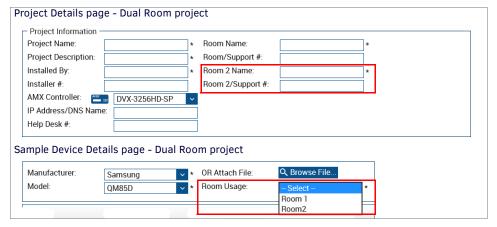
Classroom systems provide three levels of AMX systems optimized for various sizes of classrooms: Standard Classroom, Enhanced Classroom and Lecture Theater.

Conference

Conference systems provide three levels of AMX systems optimized for various sizes of conference rooms: Managed Huddle, Conference Room and Boardroom.

Dual Room

Dual Room projects support device configuration for two distinct rooms. When *Dual Room Project* is selected as the System Type, RPM will prompt you to specify names for two rooms, and as each device is added to the system, specify the room to which the device will be added (FIG. 9):



Volume page - Dual Room project

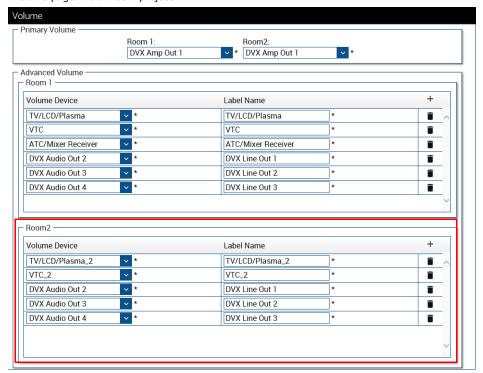


FIG. 9 Dual Room project - Room Usage selection

Dual Room systems have the following hardware requirements:

- Dual Room system require DVX-3250/3255/3256HD, DVX-3150/3155/3156HD, DVX-2210/2250/2255HD, or DVX-2150/2155 Controllers. NX-Controllers, NI- Controllers, and MCP-106/108 Controllers are not supported for Dual Room systems.
- Dual Room systems require the use of MXT-, MXD-, MST- or MSD touch panels.

NOTE: NXT-, NXD- and MVP- panels are not supported for Dual Room systems.

Custom

The *Custom* system configuration only includes an AMX Controller and no devices by default. There are exceptions, based on the AMX Controller selected (in the *Project Details* page - see FIG. 23 on page 19). If an AMX Controller is selected that requires a second device type to function, then the required support device is automatically added to the project. Examples include:

- With Custom Project selected as the System Type, and the MCP-108 selected as the AMX Controller, RPM will automatically add one Keypad device to the system.
- With Custom Project selected as the System Type, and the DVX-2110HD-SP selected as the AMX Controller, RPM will
 automatically add one A/V Switcher device to the system.

 With Custom Project selected as the System Type, and the Use RMS Scheduling option selected, RPM will automatically add one Scheduling Panel device to the system.

RPM and RMS Enterprise

RMS Enterprise (RMS-ENT) allows the equipment in the room(s) configured in RPM to be monitored for status, and also provides the ability to schedule the room(s) via RMS. By default, RPM Projects use RMS-ENT

Refer to "RPM and RMS Enterprise" (available to view/download on the RPM catalog page at www.amx.com for details on how RPM devices and rooms interact with RMS.

Duplicate Control Methods

When upgrading RMS from v4.x to v4.6, there are several Control Methods (specific to DVX and Touch Panel assets) that may be duplicated as a result of the v4.6 SDK upgrade.

If duplicate Control Method entries are found (in the *Asset Management* page - Control Methods tab), they should be removed as described in the RMS Enterprise v4.6 (or higher) System Administrators Manual.

NOTE: Refer to "Working With Control Methods" in the "Management - Assets (Classic UI) section" of the RMS Enterprise (v4.6 or higher) System Administrators Manual for details.

Related AMX Software - RPMLoader

RPMLoader is a stand-alone application that transfers RPM project files to a target AMX Controller. RPMLoader is installed on your PC via the **Download RPMLoader** command button in RPM (accessible via the **Summary** page).

Refer to the RPMLoader on-line help and Operation/Reference Guide for details.

RPM v3.x User Interface

RPM version 3.x features an updated user interface, which includes all of the functionality of previous versions of the program, and provides several additional features (FIG. 10):

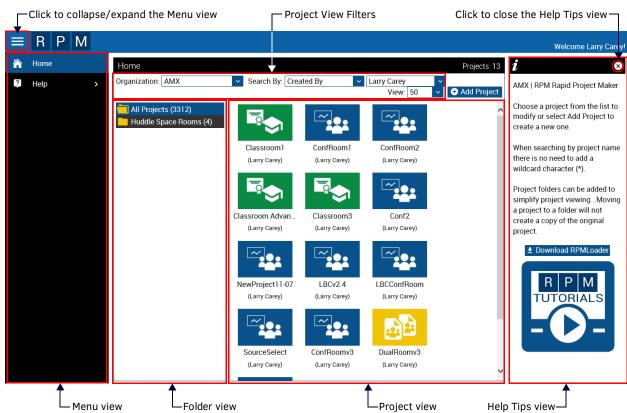


FIG. 10 RPM v3.x User Interface

Menu View

The Menu View is located along the left side of the main RPM window, and provides shortcuts to various functions within RPM. Note that when RPM is open to the Home page (as shown in FIG. 10), the only options displayed in the Menu View are *Home* and *Help*.

- Click Home to return to the Home page
- Click Help to open the Help menu which contains links to RPM Help (this document), Release Notes and the About RPM window: (FIG. 11):

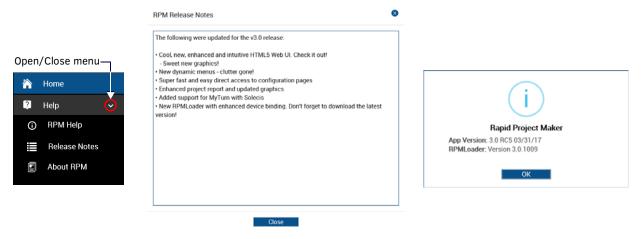


FIG. 11 RPM v3.x Help menu, sample Release Notes and About RPM window

When an RPM Project is open, the Help menu provides links to each of the main RPM project pages (*Project Details*, *Devices*, *A/V Connections*, *Macros* and *Summary*), based on the devices currently in the open Project (FIG. 12). For example, the *Volume* option is only available after a device that utilizes volume control is configured in the Project (in this case *TV/LCD/Plasma*):

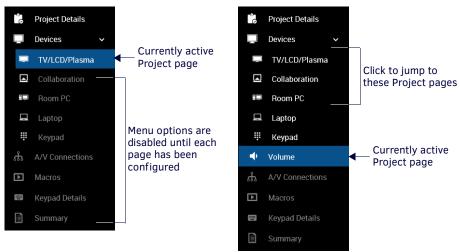


FIG. 12 RPM v3.x Help menu - Project-specific links

- The currently active Project page is highlighted in the Menu view.
- Note that links to Project pages are made available only after each page has been configured. Click these links to jump to the Project pages view and edit these settings.

To minimize the Help menu, click the Menu button (FIG. 13). When minimized, click the icons to jump to the desired Project page:

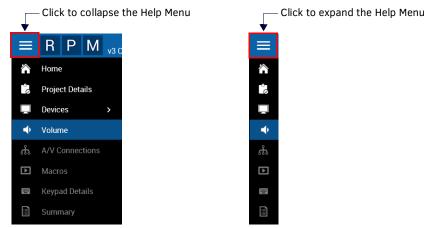


FIG. 13 RPM v3.x Help menu - Project-specific links

Folder View

The Folder View provides the ability to organize RPM Projects into custom folders. Also, the Folder View features context menus with options to create, rename and/or delete custom folders as well as links to the RPM Release Notes and About RPM windows (see FIG. 11 on page 13). The number of Projects contained in each folder is indicated in parenthesis after the folder name.

Note that until custom folders have been added, the only folder listed is the All Projects folder. Once one or more custom folders have been added, they are listed beneath the All Projects folder, in the order in which they were added (FIG. 14):

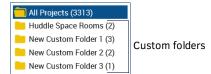


FIG. 14 RPM v3.x Help menu - Project-specific links

Right-click on the All Projects folder, or within the Folders view (but not on a custom folder) to access the Folder View context menu. Right-click on a custom project folder to open the Custom Folder context menu (FIG. 15):



Folder View context menu (right-click All Projects or within the Folders view to access)



Custom Folder context menu (right-click any custom folder to access)

FIG. 15 RPM Folders context menu

The Custom Folder context menu provides links to rename or delete the selected custom folder. Note that these options do not apply to the All Projects (system) folder. The All Projects folder cannot be renamed or deleted.

NOTE: Refer to the Organizing RPM Projects section on page 32 for details on working with custom Project folders.

Project View

The Project View presents all of the RPM Projects contained in the selected folder (see Folder View above), in the form of icons/ labels. Note that RPM uses different icons for each system type (FIG. 16):











FIG. 16 RPM v3.x - Projects View and Project Type icons

NOTE: Hover over any Project in the Project View window to view Project Details, including the Project Name, System Type, Created By (name), Created Date, Modified Date, Status, and Folder location.

Project View Filters

The Projects listed in the Project View can be filtered via the Project View Filters provided above the Project View window (FIG. 17):

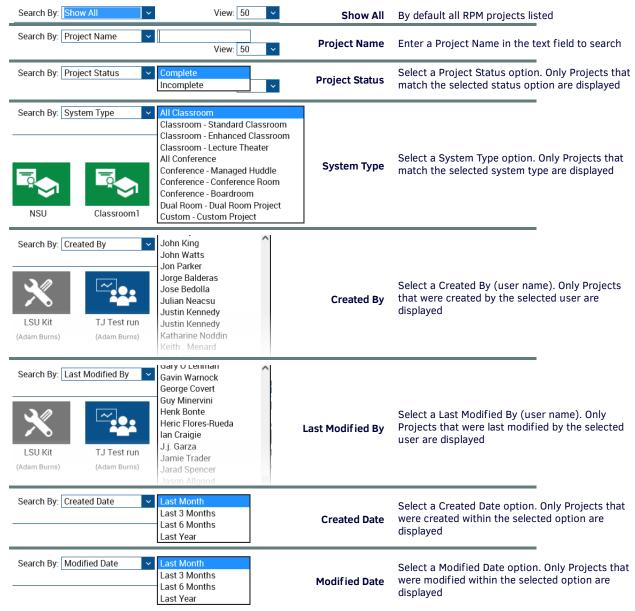


FIG. 17 RPM v3.x - Projects View Filters

Note that by default, *Show All* is selected, in which case all RPM Projects created are included in the Projects View. Refer to the *Opening an Existing RPM Project* section on page 31 for details.

Help Tips View

The Help Tips View is located along the right side of the main RPM window, and provides helpful tips on using the options on the current page (FIG. 18).

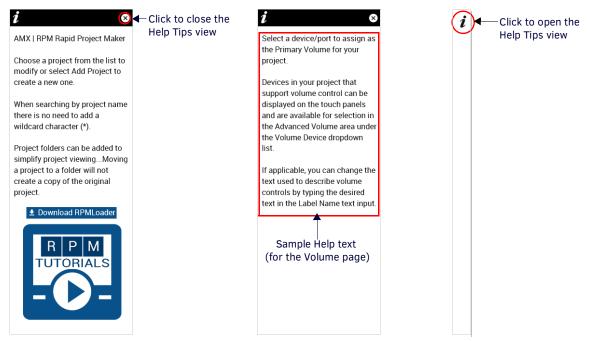


FIG. 18 RPM v3.x - Help Tips View

Note that Help Tips view for the main RPM page includes two links (FIG. 19):



FIG. 19 Home Page Help Tips - links to download RPMLoader and to access RPM Tutorial videos on YouTube

- **Download RPMLoader** Click to download the RPMLoader software application required to transfer RPM Project files to the NetLinx Master. See the RPMLoader on-line help or Instruction Manual for instructions on using RPMLoader to transfer RPM Project files.
- RPM Tutorials Click to access a series of instructional videos for using RPM, on the "AMX Configure" YouTube channel

Using RPM (Rapid Project Maker)

Quick Start Instructions

There are several basic steps to creating a control system with RPM:

- 1. Open the RPM Web Application via the AMX Services Home page at https://my.amx.com. See Accessing the RPM Web Application below.
 - NOTE: An easy way to locate the RPM Home Page on www.amx.com is to enter "RPM" in the Search field at the top of the page.
- 2. In the RPM Home Page, click Add Project to access the Project Details page (see FIG. 22 on page 19).
- 3. In the *Project Details* page, enter basic information to start a new project, including selecting the *System Type* (see page 10), basic project information (*Project Name*, *Description*, etc.), Room Name, AMX Controller selection, and RMS Information (only if RMS Enterprise will be used to monitor this system). See *Creating a New RPM Project* on page 19 for details.
- 4. Click **Next** to proceed to the *Devices* page. Use the options on this page to specify the devices to be included in this system (see FIG. 25 on page 20).
- Click Next to proceed to the first of a series of Device Configuration pages. Each device that is included in the system is configured via its own page. The pages and the options presented on these pages depend on the devices included in the system (see FIG. 26 on page 21).
- 6. When all devices have been configured, click **Next** to proceed to the *Volume Control* page. The options on this page allow you to specify which system devices will have a volume control available on the touch panel page (see FIG. 28 on page 22).
- 7. Click **Next** to proceed to the *A/V Connections page*. The options on this page allow you to specify the physical connections for the *A/V* devices in the system (see FIG. 29 on page 23.
- 8. Click **Next** to proceed to the *Macros* page. The options on this page allow you to add and edit system macros. See the *Appendix A Working With Macros* section on page 35 for details.
- Click Next to proceed to the UI Themes page. The options on this page allow you to select a UI Theme for the touch panel(s) in this project, as well as select a logo image and background color for the RPM-generated panel pages (see FIG. 32 on page 24).
- 10. Click Generate to generate the RPM project.
- 11. Click **View Report** to open the RPM-generated *Project Report* (PDF) file. The Project Report provides an in-depth summary of the project/system, including illustrated Control Connections to assist in making the correct physical connections from the AMX Master to controlled devices in the system. See *RPM Configuration Report* on page 27 for details.
- 12. Click Download Project to download a copy of the generated RPM Project to your PC (as an *.rpmx file).
- 13. Use the RPMLoader application (installed separately) to transfer the RPM Project file to the target AMX Controller.

These steps are described in detail later in this section (see Creating a New RPM Project on page 19).

Accessing the RPM Web Application

RPM is part of the *AMX Services Portal* (at www.amx.com). There are two ways to access the RPM web application: In the AMX TRADE SITE, click on the **RPM** link to open the Cloud Services home page (FIG. 20), and click the **ACCESS RPM** link (FIG. 20):

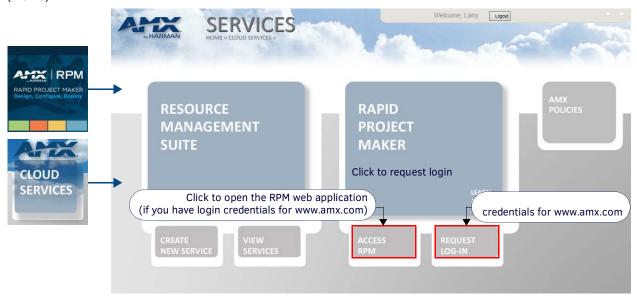


FIG. 20 RPM Cloud Services home page

NOTE: All requests for RPM access should go through the AMX Sales Manager responsible for the account that is requesting access. Once you have successfully logged in and clicked on the **ACCESS RPM** link (FIG. 20) the RPM Home page is presented (FIG. 21):

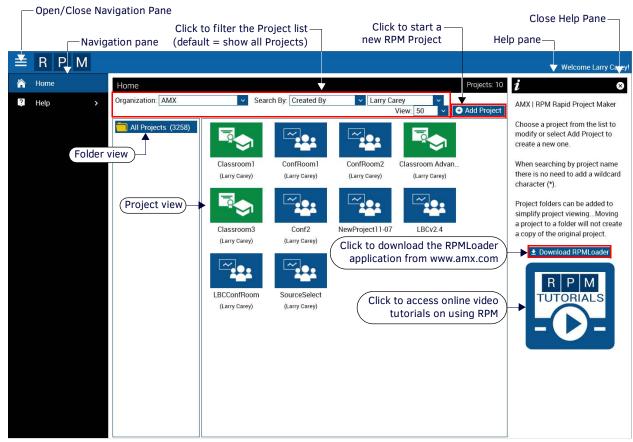


FIG. 21 RPM - Home Page

Creating a New RPM Project

1. To start a new RPM project, click Add Project in the upper-right corner of the Home page (FIG. 22):



FIG. 22 Home Page - Add Project button

2. This opens the *Project Details* page for a new RPM Project. Use the options in this page to select a System Type, enter Project Details, and specify an AMX Controller and its IP address (FIG. 23):

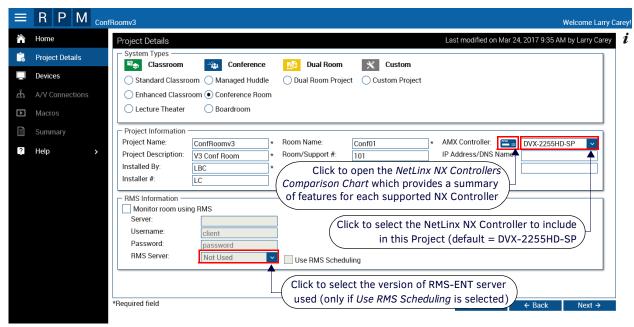


FIG. 23 Project Details page (New Project)

- See page 10 for descriptions of the four RPM System Types (Classroom, Conference, Dual Room and Custom).
- Note that fields marked with asterisks are required fields. The application will prompt you to enter required information before proceeding to the next page (FIG. 24):



FIG. 24 Required Field

- The AMX Controller's IP Address/DNS Name is *not* a required field. This allows you to enter this information later if necessary. However, if you know the Master's IP information it is recommended that you enter it here.
- Click on the icon to the right of the AMX Controller to open the Controllers Comparison Chart. This PDF document presents a summary of the features available on each of the NetLinx NX Integrated Controllers.
- The RMS Information options at the bottom of the page determine whether this project will be integrated into a RMS
 Enterprise (v4.1 or higher) system. Click Monitor room using RMS to include support files required for this RPM project be
 integrated into an existing RMS Enterprise system (selected by default for new projects). When this option is selected, the
 following options are enabled, and input is required in order to proceed:

RMS Information		
Server URL:	Enter the URL of the RMS Enterprise Server here. The URL must include a protocol prefix (such as "http://"). The program will alert you if the URL entered is invalid.	
Username:	This read-only field displays the Username used by the RMS Enterprise Server.	
Password:	Enter the Password required by the RMS Enterprise Server.	
RMS Server:	Select the RMS version that is running on the RMS Server: 4.3, or 4.6 (default = v4.6). Note: This option is enabled only if a DVX x2xxHD-SP/T, MCP-10x, or NX master is selected as the AMX Controller. 4.3 is used by default with NI masters.	
Use RMS Scheduling	Click to implement RMS Scheduling panels in the system. These panels are designed to provide scheduling-specific functionality, rather than a fully-functional touch panel.	

Click Next to proceed to the Select the Devices in your System page. Use the options in this page to review the devices
currently included in the system, and add/remove devices from the system. Note that specific devices are pre-selected based
on the System Type selected for this project (FIG. 25):

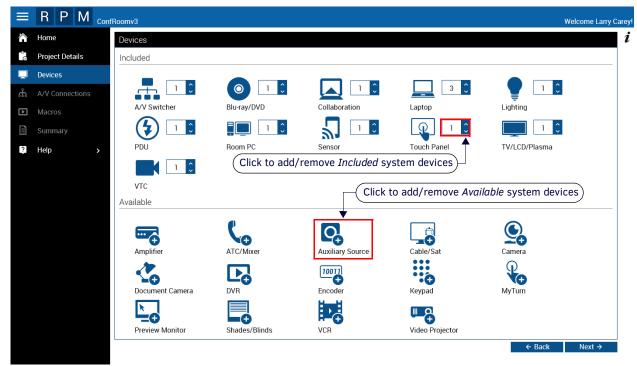


FIG. 25 Sample Device Selection page

- Devices in the Included section of this page are currently included in this system. The number of each device type is
 indicated for each device type. Click the Up and Down arrow buttons to increase or decrease the number of each device
 type included. Included devices that are not required for the system type can be removed by setting the number to zero in
 this case the device will be removed from the Included section to the Available section. Note that certain devices are
 required, in which case the program will not allow the number to be adjusted.
- Devices in the Available section of this page are not included in this system, but can be added via the Add (+) icon next to
 each device type. When a device type is added, it moves from the Available section to the Included section, at which point
 the number of that device type can be adjusted as necessary.
- 4. Click **Next** to proceed to the first *Device Details* page. Use the options on this page to configure each device. The pages and options presented are based on the devices included in the system. Click **Next** to save changes and proceed through each device in the system. An example Device Details page (for a TV/LCD/Plasma device) is shown in FIG. 26:

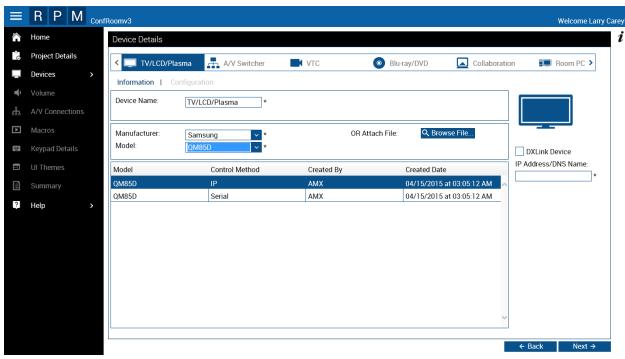


FIG. 26 Sample Device Details page (TV/LCD/Plasma)

Note that as you proceed, progress is indicated at the top of each Device Details page (FIG. 27):

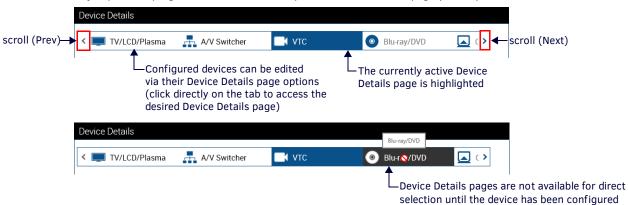


FIG. 27 Device Details - Progress Bar

5. The last *Device Details* page is the *Volume* page. Use the options on this page to specify which devices will have volume controls presented on the touch panel (FIG. 28):

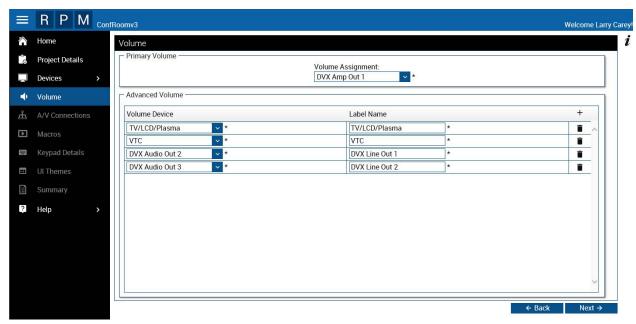


FIG. 28 Sample Volume page

The *Primary Volume* setting specifies which device will be controlled by the main volume control on the touch panel. The *Advanced Volume* settings specify up to six additional volume controls to be included on the touch panel.

- Under *Primary Assignment*, select the device that will use the main volume control on the touch panel. Note that by default, if an Enova DVX is selected as the AMX Controller, then the Primary Volume Assignment is set to control the DVX.
- Under Advanced Volume, specify up to six additional volume controls to be included on the touch panel page.
 - Use the drop-down menus under **Volume Device** to select a device. Note that the devices listed in these menus are based on the devices in the project that use volume control.
 - Use the text fields under Label Name to edit the default label that will be displayed for each volume control.
 - Click Unassign to remove Advanced Volume assignments as desired. Note that Advanced Volume assignments are
 optional.

NOTE: Volume and mic levels can be adjusted, muted and/or tested later via the Advanced Volume page in the RPM Configuration Manager. See Appendix B - RPM Configuration Manager on page 46 for details.

6. Click **Next** on the *Volume* page to proceed to the *A/V Connections page* (FIG. 29). Use the options on this page to route audio and video from each source device to the desired input or output on the A/V Switcher. Note that RPM provides a default connection configuration which can be altered as desired.

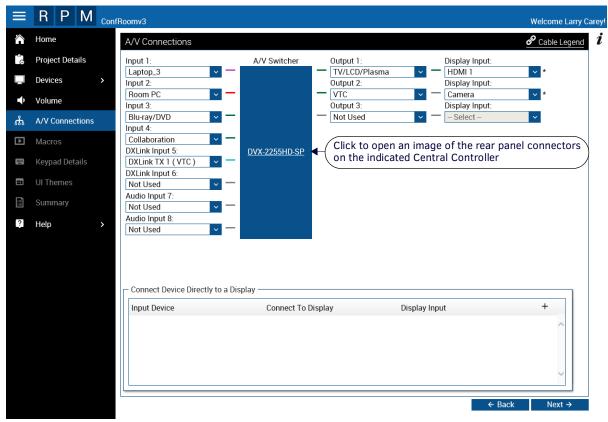


FIG. 29 Sample A/V Connections page

- Use the Input Devices drop-down menus to assign the source devices in your project to the various inputs available on the
 selected DVX A/V Switcher. Note that by default, the Input Device assignments are pre-populated based on the devices in
 your project. Use the Input Device drop-down menus (see FIG. 29) to select a different device for each input if necessary.
- Click on the device link under A/V Switcher to open the Device Connections view an image of the rear panel connector layout of the selected DVX Switcher (FIG. 30):



FIG. 30 Example Device Connections view

- Use the Output Device drop-down menus to assign a source (input) device to the various outputs on the DVX Switcher.
 Again, these assignments are pre-populated based on the devices in your project. Use these menus to change output devices if necessary.
- Use the **Display Input** drop-down menus to select the input on the display device that is connected to the Switcher output. Note that the options presented in these menu are based on the display devices connected to the DVX Switcher.
- If the project includes multiple switchers, a *Switcher Usage* report is generated, which indicates which devices are connected to each switcher.

NOTE: You can bypass the A/V Switcher by using the "Connect Device Directly to a Display" options at the bottom of this page to specify an Input Device and a Display, and the Display Input to use for the connection.

7. Click Next to proceed to the Macros page (FIG. 31):

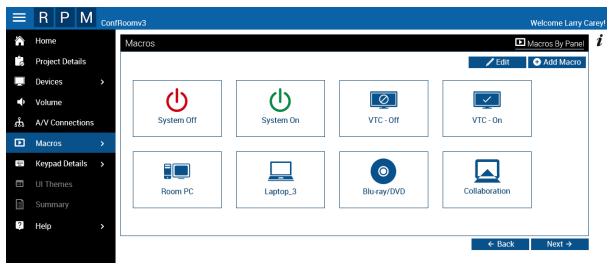


FIG. 31 Sample Macros page

Use the options on this page to edit the default macros in the project as well as create new macros if necessary. Refer to the *Appendix A - Working With Macros* section on page 35 for details.

8. After configuring any keypad buttons and/or sensors in the project, click Next to proceed to the UI Themes page (FIG. 32):

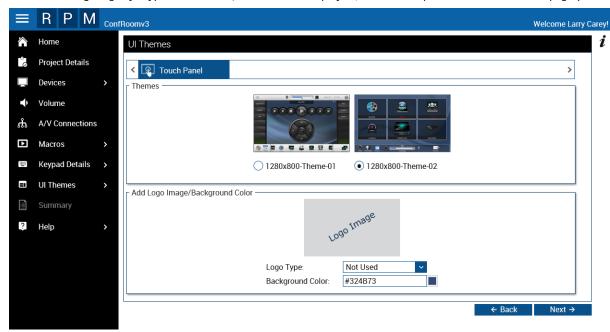


FIG. 32 Sample UI Themes page (indicating two Themes for a 1280x800 panel)

Use the options on this page select a UI Theme for each touch panel in this project, as well as select a logo image and background color for the RPM-generated panel pages. Note that some panels provide more than one theme to choose from (as indicated in FIG. 32). Click to select the theme to use for the selected panel.

9. Click **Next** to proceed to the *Summary* page (FIG. 33). This page presents a summary of the current project. Review the information on this page before generating the project.

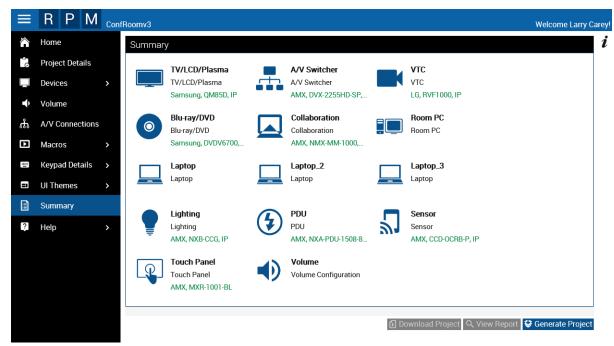


FIG. 33 Sample Summary page

10. Use the command buttons along the bottom of the *Summary* page to generate the RPM project and transfer it to the target AMX Controller.

Note that initially, only the **Generate Project** command button is enabled - the *View Report* and *Download Project* buttons are enabled only after the project has been generated:

a. Click Generate Project to generate the RPM project. Progress in indicated at the bottom of the page (FIG. 34):

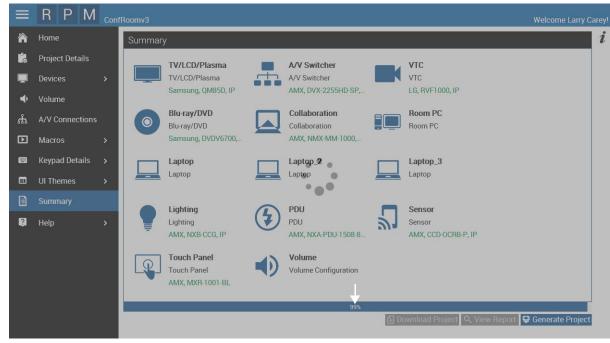


FIG. 34 RPM Summary Page - Project Generation progress

 Click Download Project to download the project to your PC. RPM will prompt you to download the latest version of RPMLoader, if necessary (FIG. 35):



FIG. 35 RPMLoader Update available

NOTE: RPMLoader is a stand-alone application that transfers RPM project files to a target AMX Controller and devices. Generally, there is a RPMLoader version for each updated version of RPM. For example RPM v3.x requires RPMLoader v3.x. Refer to the RPMLoader online help for details on using the RPMLoader application.

- c. Click View Report to download the project's Configuration Report to your PC. See the RPM Configuration Report section on page 27 for details. Note that the Configuration Report is included in the *.rpmx file, and is available to be opened via RPMLoader.
- 11. Open the downloaded RPM project in the RPMLoader application and click **Start File Transfers** to transfer the RPM project files to the AMX Controller.

RPM Configuration Report

Click the **View Report** button along the bottom of the *Summary* page to download the *Configuration Report* for this project, in the form of a PDF file. The Configuration Report provides a comprehensive summary of the project, including sections on:

Project/Controller Information

A summary of the Project and Controller information, including the IP Address/DNS Name of the Controller (if it was entered in the RPM UI).

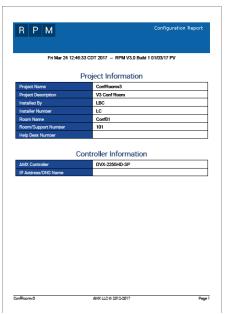


FIG. 36 Example RPM Configuration Report pages

Device Count Listing

A summary of the device types, and the number of each type that is in the project.

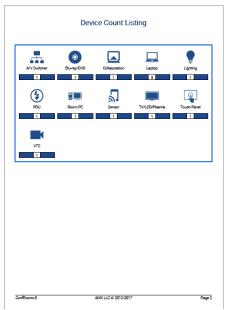


FIG. 37 Example RPM Configuration Report pages

Device Configuration Information

A listing of each device with Control Information for each device in the project.

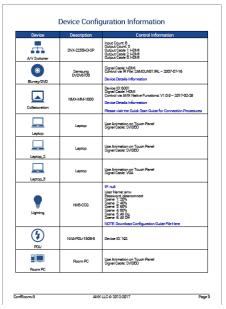
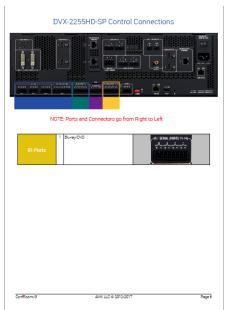


FIG. 38 Example RPM Configuration Report pages

Device Connections

A visual summary of the physical connections that must be made to connect the devices in the project. Use these pages to install the devices in the system.



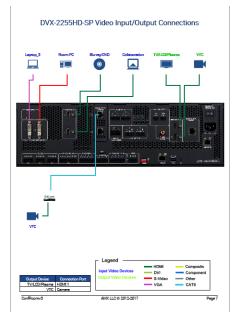


FIG. 39 Example RPM Configuration Report pages

DXLink and ICSLan Device List

A listing of DXLink and ICSLan Devices in the system with connections and setting summaries.

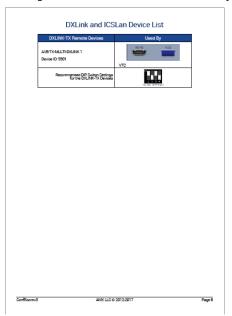
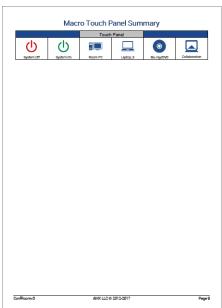


FIG. 40 Example RPM Configuration Report pages

Macros: Touch Panel Summary and Definitions

A listing of the macros that will be displayed on the touch panel(s), and a definition of the items included in each Macro.



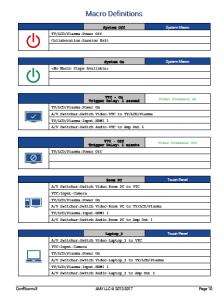


FIG. 41 Example RPM Configuration Report pages

Device-Specific Configuration Information

Depending on the devices included in the project, configuration information for specific devices (such as Touch Panels, ENZO, Sensors, etc.) is included.

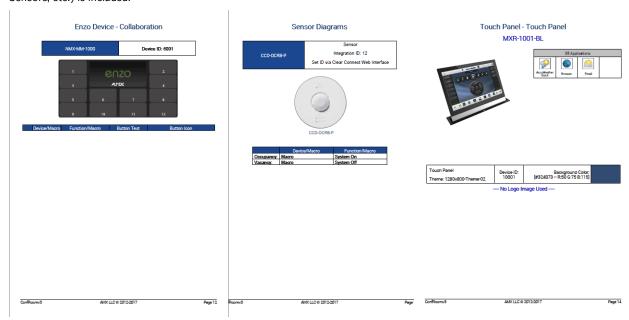


FIG. 42 Example RPM Configuration Report pages

Cable Diagrams

Diagrams that provide detailed pin-out information for the connectors used in the project.

AMX Equipment List

A summary of all AMX devices as well as recommended accessories, with FG numbers. This section also provides a listing of third-party devices in the project, with manufacturer and model information.



FIG. 43 Example RPM Configuration Report pages

Switcher Usage

If the project includes multiple switchers, this report indicates which devices are connected to each switcher.

Opening an Existing RPM Project

Once a RPM project has been started, it is added to the Projects View in the Home page (FIG. 44):

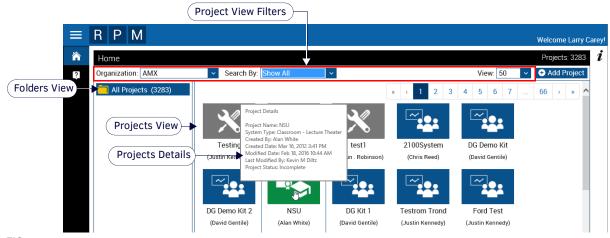


FIG. 44 RPM Home Page - Projects View, Project Details and Search Filters

NOTE: Hover over any Project in the Project View window to view Project Details, including the Project Name, System Type, Created By (name), Created Date, Modified Date, Status, and Folder location.

Use the Organization and Search By drop-down menus to filter the view as desired:

- 1. Select an organization from the *Organization* drop-down. This filters the Projects view to only show projects associated with the selected organization name.
- 2. Select a search criteria from the Search By drop-down menu (FIG. 45)

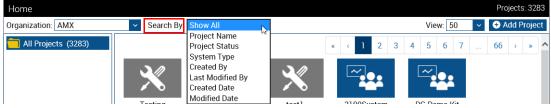


FIG. 45 Search By Drop-Down Menu

This selection may invoke a secondary field. For example, if "Created Date" is selected under Search By, then several dateoriented options are presented in a secondary drop-down menu (FIG. 46):

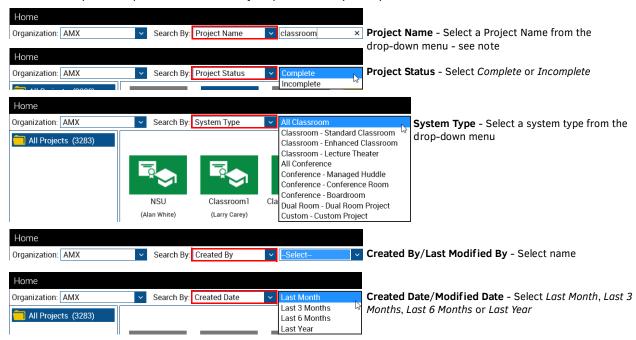


FIG. 46 Secondary Search By Drop-Down Menus

NOTE: When searching by Project Name, there is no need to enter an asterisk as a wild-card character.

Organizing RPM Projects

Use the **Folders** view (the left pane of the Projects view) to create custom folders. Use custom folders to organize RPM projects according to your needs (see FIG. 44 on page 31).

- By default, the only folder in the *Folders* view is the **All Projects** folder. With this folder selected, all RPM projects are indicated in the *Projects* view. The **All Projects** folder cannot be renamed, moved/reordered, or deleted.
- Create new custom folders as desired to organize your Projects.
- Select a folder to show only that folder's Projects in the Project view.
- Use custom folders in conjunction with the Organization and Search view filters to quickly locate Projects.

Creating a New Projects Folder

 Right-click on All Projects in the Folder view and select New from the context menu. This creates an empty folder with a cursor prompt (FIG. 47):

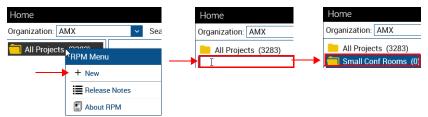


FIG. 47 Folders View context menu

2. Type a name and press *Enter* to create the folder. The example in FIG. 47 shows that a new folder named "*Small Conf Rooms*" has been added. The number following the folder name indicates the number of Projects currently in each folder. Therefore, the new folder indicates zero (**0**) projects at this point.

NOTE: If you do not specify a name for the new folder, it will automatically be named "New folder". Subsequent new (unnamed) folders will be named "New folder 2", "New folder 3", etc. These folders can be renamed later if desired (see Renaming Custom Folders on page 33).

3. Create more folders as necessary (up to a maximum of 49) to organize your projects as desired.

Adding Projects To Folders (via Drag-and-Drop)

- 1. Select the **All Projects** folder (or any other folder that contains a Project that you intend to add to the new folder) to populate the Projects view. Use the *Organization* and *Search By* fields to filter the Projects view as needed (see FIG. 45 on page 31).
- 2. Drag-and-drop a project from the Project View onto a folder to place a link to the selected Project in the target folder (FIG. 48):

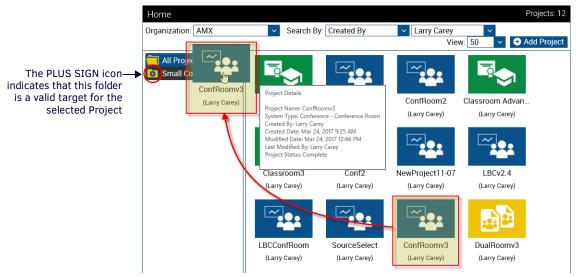


FIG. 48 Moving a Project into a Folder via Drag-and-drop

3. The application indicates that the Project was moved (FIG. 49) - click **OK** to proceed:



FIG. 49 System message - Project Moved

- Note that as Projects are dragged into new folders, they are still also listed in the All Projects folder.
- Projects cannot be added to multiple custom folders.

Renaming Custom Folders

Custom folders can be renamed. The default All Projects folder cannot be renamed.

1. Right-click on a custom folder and select Rename from the context menu. Type the new name in the text field (FIG. 50):

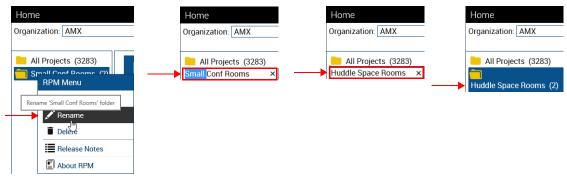


FIG. 50 Folders view context menu - Rename

Moving/Reordering (Custom) Project Folders

By default, custom folders are listed in the Folders view according to the order in which they were created. Custom folders can be moved/reordered within the Folders view, simply clicking and dragging them into the desired order.

Note that the All Projects folder is always at the top of the Folders list, and cannot be moved.

Deleting (Custom) Project Folders

Custom folders can be deleted, but the default *All Projects* folder cannot be deleted. Note that deleting a custom folder does not delete the Projects contained in the folder.

1. Right-click on the custom folder that you want to delete and select Delete Folder from the context menu (FIG. 50):

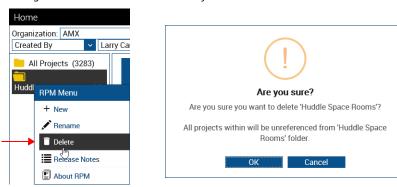


FIG. 51 Folders view context menu - Delete

2. RPM will prompt you to verify this action - click **OK** to proceed.

Adding a Custom Logo to the RPM Project

1. In the UI Themes Page, open the Logo Type menu (FIG. 52):

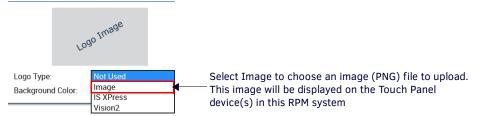


FIG. 52 Folders view context menu - Delete

Note that by default, Logo Type is set to Not Used.

- 2. To add a custom image to the system (to be displayed on the completed touch panels in the system), select Image.
- This invokes the Choose File to Upload dialog. Locate and select the PNG image file that will be used as the system logo for this project, and click Open.
- 4. The selected image is displayed in the UI Themes page (FIG. 53):

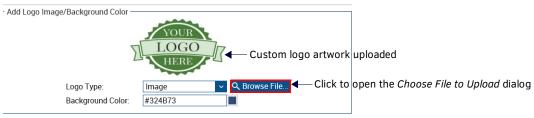


FIG. 53 Sample custom logo artwork uploaded

Note that once an image file has been uploaded, the Browse File button is provided to allow you select a different image if desired.

Changing the UI Theme Background Color

1. In the Background Color field (UI Themes page), select a custom color or enter a hexadecimal color value (FIG. 54):

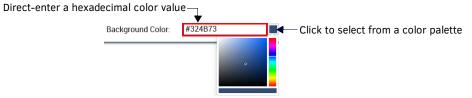


FIG. 54 Background Color settings (UI Themes page)

Appendix A - Working With Macros

Overview

A *Macro* is a set of sequential commands or device functions that are combined together, so that the user can initiate a series of events via a single button press. RPM supports the creation of macros, via options in the *Macros* page (FIG. 55):

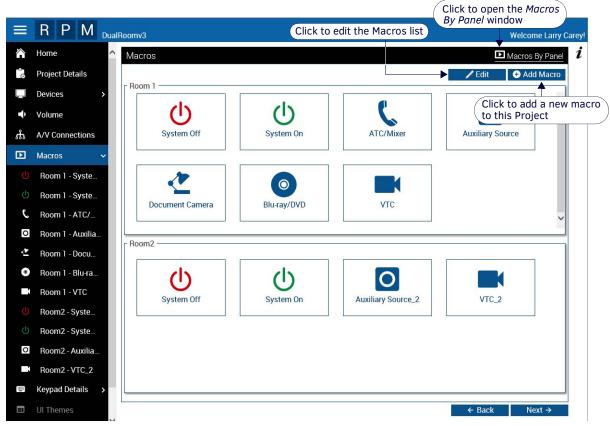


FIG. 55 RPM - Macros page

NOTE: The example shown in FIG. 55 is for a Dual Room project (see "Room 1" and "Room 2").

Editing Existing Macros

Note that there are default macros indicated in the *Macros* window, based on the devices that are in the Project. These are included to provide templates for common macros. Click to edit the macros as described below:

- 1. Click **Macros** in the menu bar to open the *Macros* page.
- 2. Click on a macro to edit its properties in the *Macro Details* page. FIG. 56 shows a sample *Macro Details* page (for the *Collaboration* macro):

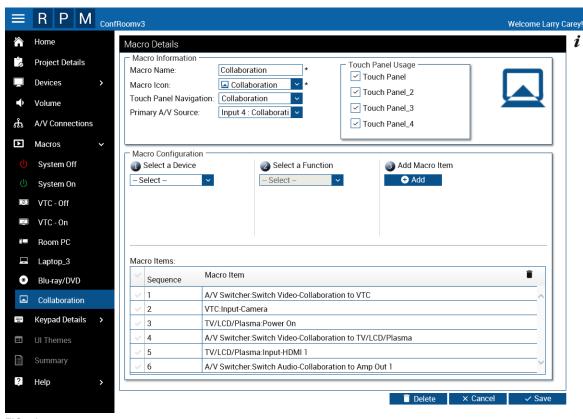


FIG. 56 Macro Details page (Collaboration macro selected)

Note that the current list of actions included in this macro are indicated in the *Macro Items* list. These are the actions that will be triggered by this macro, in the order indicated in the Sequence column.

Adding Macro Items to a Macro

To add a Macro Item (or action) to this macro:

1. Use the fields in the *Macro Information* section to view/edit basic information on the selected macro. To edit the **Macro Name**, click in the text field and enter a new name as desired.

NOTE: If the selected macro is renamed, the original macro remains in the Macros list under its original name. In many cases, it is quickest to select a macro that is similar to what is required, editing the Macro Details and saving the modified macro under a new name.

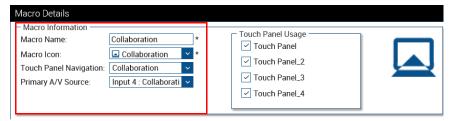


FIG. 57 Macro Details page - Select a Device

2. Under **Touch Panel Usage**, to specify which touch panels in the Project will display this macro. FIG. 58 on page 36 indicates that this project has four touch panels, and the selected macro will be displayed on the first two panels only.

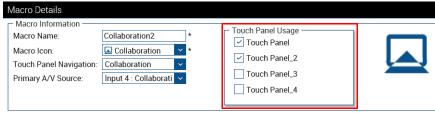


FIG. 58 Macro Details page - Select a Device

- The Touch Panel Usage list indicates all input device(s) including touch panels and keypads present in the current project.
- The Touch Panel Usage list is only presented if the current project has more than one touch panel/input device.

- By default, all touch panels are selected are selected for Touch Panel Usage.
- De-select any touch panels in this list that you do not want to access this macro.
- For Dual-Room projects that have more than one touch panel assigned to each room, use this option to specify which touch panel(s) in each room will present this macro.
- 3. Under **Select a Device**, select a device that you want to add to the macro, from the drop-down list of devices in this project (FIG. 59):



FIG. 59 Macro Details page - Select a Device

NOTE: The Touch Panel Usage window allows you

4. Under Select a Function, select the device function that you want to include in the macro (FIG. 60):



FIG. 60 Macro Details page - Select a Function

5. Under Add Macro Item, click Add to add the Macro Item (Device and Function) to the bottom of the Macro Items list (FIG. 61):

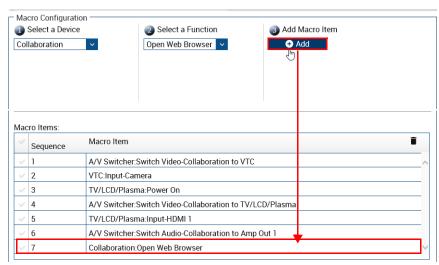


FIG. 61 Macro Details page - Macro Items list

NOTE: Macro items are listed sequentially in the order that they will occur when the macro is triggered. Click and drag to re-order the macro items as desired.

- 6. Repeat steps 1-3 to add more items to the macro.
- 7. Click **Save** to save your changes and return to the main *Macros* page.

Macros By Panels

Click the **Macros by Panels** button on the *Macros* page (see FIG. 55 on page 35) to view a listing macros that are assigned to each a panel in the project (FIG. 62):

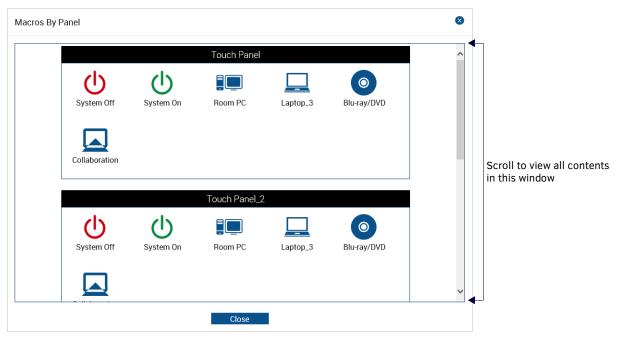


FIG. 62 Macros By Panels window

Creating a New Macro

1. In the Macros page, click Add Macro (see FIG. 55 on page 35) to open the Macro Details page for a new macro (FIG. 63):

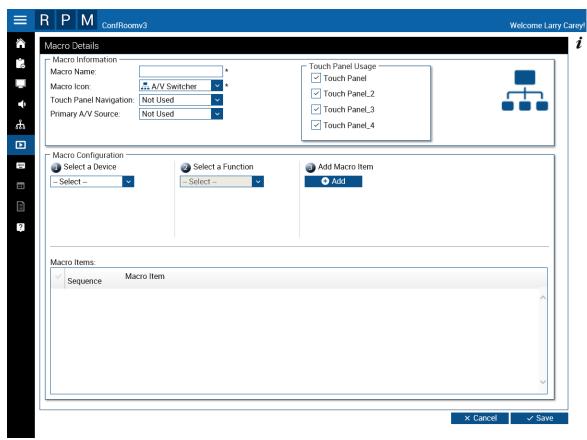


FIG. 63 Macro Details page for a new macro

2. Under Macro Name, enter a name for the new macro.

- 3. Under **Macro Icon**, select an icon to associate with this macro. This icon will be included in this macro's button on the touch panel.
- 4. Under **Touch Panel Navigation**, select the touch panel page to which the button for this macro will be added (default = *Not Used*).
- 5. Under **Primary A/V Source**, select the source for the A/V source to be used for this macro. This option is only presented if the current system includes more than one display device (default = *Not Used*).
- 6. If the current project has more than one touch panel, then the **Touch Panel Usage** option allows you to specify which touch panel(s) will present this macro as a button.
 - By default, all panels are selected. De-select any panels that you do not want to present this macro button.
 - If your Dual-Room project has more than one touch panel assigned to each room, this option allows you to specify which touch panel(s) in each room will present this macro. De-select panels that you do not want to present this macro.
- 7. Add macro items via the Select a Device, Select a Function and Add Macro Item options (FIG. 64):

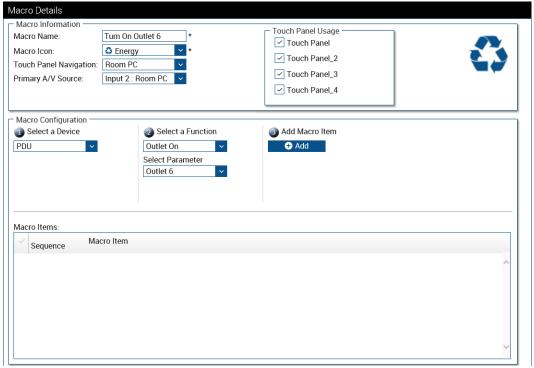


FIG. 64 Macro Details page - example new macro Items

- a. Under Select a Device, select the device that you want to add to the macro, from a the drop-down list of devices in this project.
- b. Under Select a Function, select the device function that you want to include in the macro.
- c. Under Add Macro Item, click Add to add the macro item (Device and Device Function) to the Macro Items list (FIG. 65):
- Repeat steps a c to add more items to the *Macro Items* list, as necessary.
- Click-and-drag to re-order the macro items to change the sequence of events.
- Click the **Delete** button to delete a selected macro item from the list.

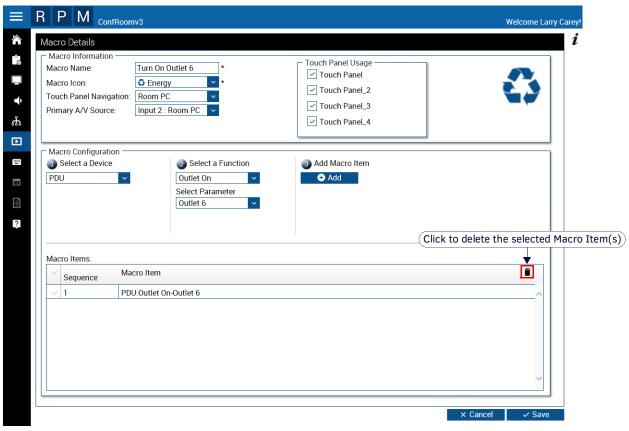
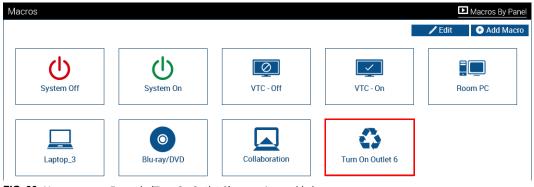


FIG. 65 Macro Details page - new Macro Item added to Macro Items list

8. Click **Save** to save the macro and return to the main *Macros* page. Note that the new macro is now indicated in the *Macros* window (FIG. 66):



 $\textbf{FIG. 66} \ \ \text{Macros page - Example (Turn On Outlet 6) macro item added}$

Click on any macro to edit its settings in the Macro Details page.

Deleting Macro Items

- 1. Select an item in the Macro Items list (see FIG. 65).
- 2. Click the Delete button.
- 3. The program will prompt you to confirm this action (FIG. 67):



FIG. 67 System Prompt - Verify deleting Macro Item(s)

- 4. Click **OK** to proceed.
- 5. Click Save to save your changes and return to the main Macros page.

Deleting Macros

Some macros can be deleted entirely from the Project, via the **Delete** option in the RPM menu (FIG. 68):

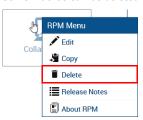


FIG. 68 RPM Macro - Delete

- 1. Right-click on a Macro to access the RPM Menu.
- 2. Select Delete.
- 3. The system will prompt you to verify this action select **OK** to proceed (FIG. 69).
- 4. The system then prompts you to verify modifying the devices to which this macro is currently assigned select **OK** to proceed (FIG. 69):



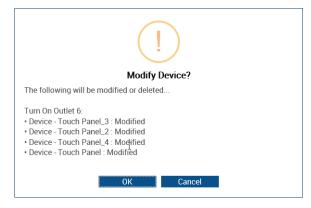


FIG. 69 Delete Macro / Modify Device

5. The system indicates when a macros has been deleted (FIG. 70) - click **OK** to return to the main Macros page.

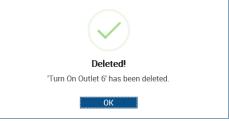


FIG. 70 Macro deleted

Lighting Scenes and Macros

RPM $Lighting\ Scenes\ can$ be added to a new or existing macro. Refer to the $NXB-CCG\ NetLinx\ Clear\ Connect^{\intercal M}\ Gateway\ RPM\ Device\ Configuration\ Guide\ for\ details.$

Using the "Send To Page" Touch Panel Navigation Option

RPM (v2.6 or higher) features a Touch Panel Navigation option for macros named "Send to Page" (FIG. 71):

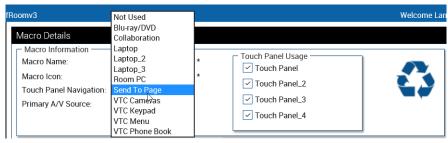


FIG. 71 Touch Panel Navigation menu - Send To Page option

This option creates a new touch panel page that presents a series of buttons that allow the end user to select a display device for the Primary A/V Source device signal.

NOTE: The Send to Page navigation option is only available for RPM projects that include more than one display device.

There are two ways to approach using the *Send To Page* navigation option: Either copy and edit an existing macro that already uses the *Primary A/V Source* device that you want to use, or create a new macro from scratch. Both methods are described below:

Copying and Editing an Existing Macro to Use "Send To Page"

1. In the main Macros page, right-click on an existing A/V Source device macro, and select Copy from the RPM menu (FIG. 72):



FIG. 72 Macro context menu

This invokes the *Copy Macro* dialog, where you can assign a name for the copied macro (FIG. 73). Note that by default, the Macro Name for the copied macro uses the prefix "Copy_":



FIG. 73 Copy Macro dialog

- 2. Enter a new name if desired, and select Copy.
- 3. The system indicates that the selected macro was successfully copied (FIG. 74) click $\bf OK$ to proceed. :

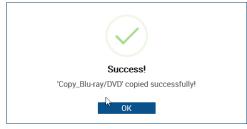


FIG. 74 Macro Copied Successfully

4. The new (copied) macro is added to the Macros page (see "Copy_Blu-ray/DVD" in FIG. 75):

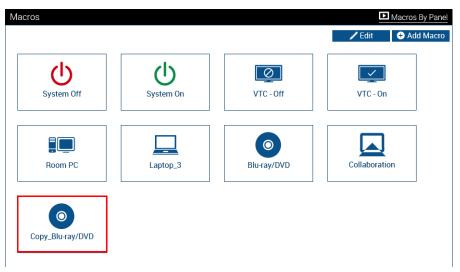


FIG. 75 Macros page with "Copy_Blu-ray/DVD" macro

5. Select the copied macro to edit its details, in the Macro Details page (FIG. 76):

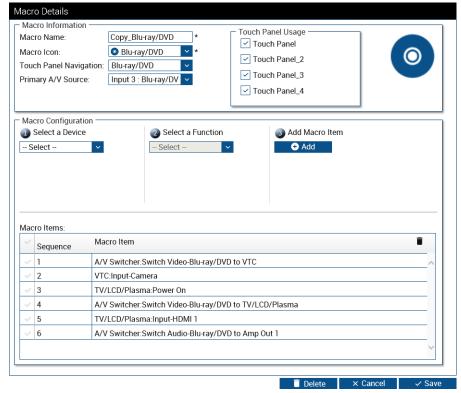


FIG. 76 Example Macro Details page (for the "Copy_Auxiliary Source" device macro)

a. Under Touch Panel Navigation, select Send To Page (FIG. 77):

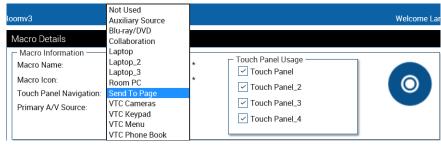


FIG. 77 Example Macro Details page (Copy_Auxiliary Source macro)

b. Delete all entries in the Macro Items list. To do this, select an item and click the Delete button (FIG. 78):

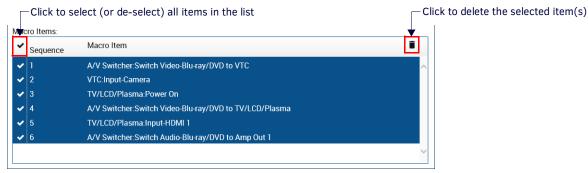


FIG. 78 Empty Macro Items list

c. The system will prompt you to verify this action (FIG. 79) - click **OK** to proceed.

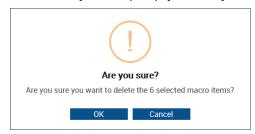


FIG. 79 System Prompt - Delete Macro Items

NOTE: With "Send To Page" selected as the Touch Panel Navigation, it is not necessary include these macro items, assuming that the display devices are already powered on when this macro is triggered.

6. Click **Save** to save this macro and return to the main *Macros* page (FIG. 75 on page 43).

When the project is loaded on the touch panel, the Copy_Auxiliary Source device button takes the user directly to the Send To page, where they can select which display device will display the Copy_Auxiliary Source device's content (FIG. 80)::

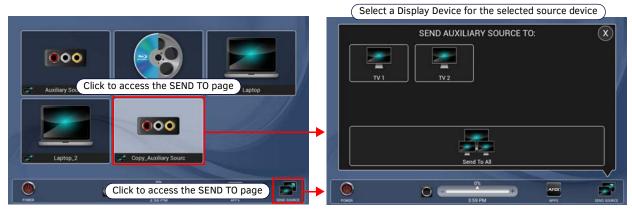


FIG. 80 RPM Touch Panel - Devices page and Send To pages

NOTE: Only device macros that use the Send To Page navigation option open the SEND TO page on the touch panel.

Creating a New Macro That Uses "Send To Page"

1. On the main Macros page, select Add Macro (FIG. 81):



FIG. 81 Macros page - Add Macro button

- 2. This open the *Macro Details* page, where you will define the new macro.
- 3. In the Macro Name field, enter a descriptive name for this macro. In this example, the Macro Name will be "Send Laptop 3" (to indicate that the device "Laptop_2" will be used as the A/V source for this macro.
- 4. Under **Macro Icon**, select an appropriate icon to be displayed for this macro button on the touch panel. In this example, the *Laptop* icon would be a good choice.
- 5. Under Touch Panel Navigation, select Send To Page.
- Under Primary A/V Source, select the device that will use this macro. In this example, the primary A/V Source device will be "Laptop 3" (FIG. 82):

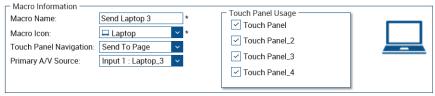


FIG. 82 Macro Details page indicating "Laptop 3" as the Primary A/V Source

NOTE: The Send To Page option is only available after the Primary A/V Source device has been selected.

Appendix B - RPM Configuration Manager

Overview

The "RPM Configuration Manager" resides on the AMX Controller and provides access to many configuration settings. Use the RPM Configuration Manager to view, edit and test various aspects of the RPM project - on the fly, without having to launch the RPM web application.

Launching the RPM Configuration Manager

Once a RPM project has been transferred to the NetLinx Controller (via RPMLoader), the RPM Configuration Manager is accessible via the RPM button on the Master's web interface (FIG. 83):

System Configuration



FIG. 83 Sample AMX Controller web interface indicating RPM Configuration Manager option

NOTE: Refer to the RPMLoader online help for details on using the RPMLoader application.

Click the RPM button in the Web Controls window to access the RPM Configuration Manager - Home page.

Home Page

The RPM Configuration Manager *Home* page displays basic information on the RPM project loaded on the Master, including the version of RPM used to generate the project, the version of Master firmware currently running on the Master, and the Master's Serial number and MAC address (FIG. 84):



FIG. 84 RPM Configuration Manager - Sample Home page

Settings Menu

The Settings menu provides access to many details of the current RPM configuration. Note that the contents of this menu will depend on the devices in the system, as well as the system configuration.

The settings that are accessed via this menu can be changed "on the fly" - when a settings are changed in the RPM Configuration Manager, the changes are immediately picked up by the Master, and propagated to system devices (as appropriate). A sample Settings menu is shown in FIG. 85:

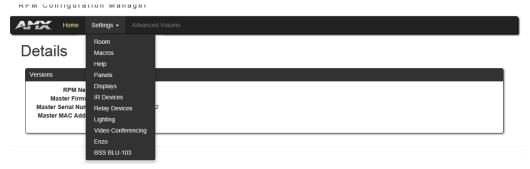


FIG. 85 RPM Configuration Manager - Sample Settings menu

Advanced Volume

The Advanced Volume page provides access to volume and microphone level controls for all devices in the system. Use the controls on this page to mute, adjust or test volume levels (FIG. 86):

RPM Configuration Manager



FIG. 86 RPM Configuration Manager - Sample Advanced Volume page

Changes made on this page take effect immediately.

Appendix C - RPM and NetLinx Master Security

NX Controllers Security - Overview

NX Central Controllers support three Security Presets ("Low", "Medium" and "High") that can be selected (and modified if necessary) via the NX Controller's online WebConsole (Security page). RPM will work with the Low and Medium presets, but not the High Security preset.

The instructions that follow describe making minor but necessary modifications to the Low and Medium Security Presets on the NX Controller, in order to allow the touch panels in the RPM system to retrieve a custom artwork file if one is being used as the logo on the default panel pages.

NOTE: For details on using the NX Controller's WebConsole to configure the Controller, refer to the NX-SERIES CONTROLLERS WEBCONSOLE AND PROGRAMMING GUIDE (available at www.amx.com)

NX Controllers Security Presets

Security Presets Low Medium High

FIG. 87 NX-Series Controllers WebConsole (Security - General options): Security Presets buttons

- Low This is the default setting for NX Controllers. NX Controllers with Security set to Low will work with RPM and G4/G5 touch panels with one exception: if a custom image file is used as the logo on the default panel pages, an adjustment to the NX Controller is required to allow the panel to retrieve the image file from the Controller. See the Low Security Configuring the NX Controller to Work With RPM section on page 51 for details.
- Medium NX Controllers with Security set to Medium will also work with RPM and G4/G5 touch panels, with the same exception regarding custom logo images on the default panel pages.
 Note that the Medium Security Preset requires that HTTP support is enabled on the NX Controller, if G4 panels require
 - custom logos. See the Medium Security Configuring the NX Controller to Work With RPM section on page 53 for details.
- High The nature of the High Security Preset on NX Controllers precludes it from being used with RPM, since RPM has
 fundamental communications requirements that are not allowed by High Security mode.

Accessing the NX Controller's Web Control Pages via NetLinx Studio

NOTE: Download the latest version of NetLinx Studio4 from www.amx.com.

- Launch NetLinx Studio, connect to the NX Controller, and refresh the Online Tree (right-click inside the Online Tree tab of the Workspace Window). Refer to the NetLinx Studio Instruction Manual or online help for information on communicating with an NX Controller.
- Right-click on the NX Master and select Web Control Page to choose how to access the Master's online configuration pages (or "WebConsole"). While either selection is acceptable, in this example, the Launch Web Control Page via Default Browser option is selected (FIG. 88):

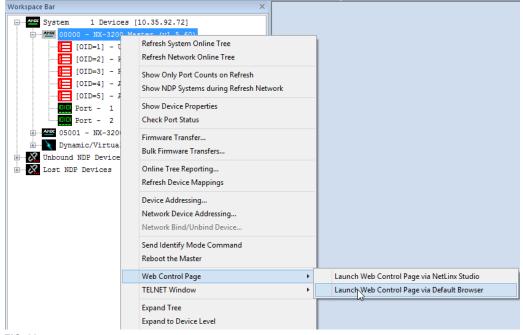


FIG. 88 NetLinx Studio online tree (NX Master selected) - Web Control Page options

3. The default browser opens NX Controller's WebConsole, to the Login page (FIG. 89):

System Configuration

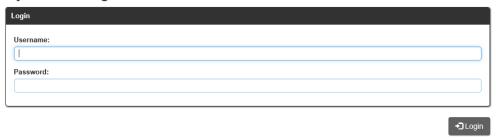


FIG. 89 NX Master WebConsole - Login page

4. Enter the Username and Password for the NX Controller (both are case-sensitive) and press Login to proceed to the Home page (FIG. 90):



FIG. 90 NX Master WebConsole - Home page

Viewing and Modifying System Security Settings

In the WebConsole Home page, select **Security** from the main menu bar to access **General** *System Security Settings* page. The example shown in FIG. 91 indicates the default Low Security Preset settings:

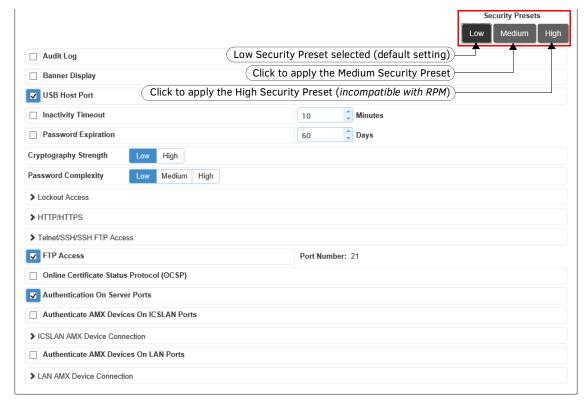


FIG. 91 NX Master WebConsole - Security > General System Security options (Low Security Preset)

RPM Required NX System Security Settings - Low Security

- The default Security settings in the Low Security Preset will work RPM and G4/G5 touch panels, no changes are required.
- Note that for G5 touch panels, the panel firmware must be at least v1.5.60 to work with RPM.

Removing Security on the NX Controller via the "Authentication on Server Ports Option"

Only if absolutely no security is required for the NX Controller in the RPM Project, there is an option on the *General System Security* page to disable security on the Controller: The **Authentication On Server Ports** option (FIG. 92):



FIG. 92 NX Master WebConsole - General System Security options (Authentication On Server Ports option)

WARNING: Turning off Authentication On Server Ports will enable full access to the System, with no Security!

By default, this option is enabled for all Security Presets.

Disabling the Authentication On Server Ports Security Setting

- 1. On the General System Security page, uncheck the Authentication On Server Ports option.
- 2. The system will prompt you to verify this action (FIG. 93):

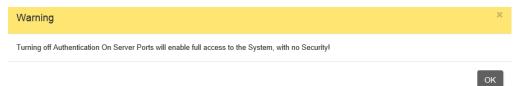


FIG. 93 Warning - Turning off Authentication On Server Ports will enable full access to the System, with no Security!

3. Click OK to proceed.

With all Security disabled on the NX Controller, it is not necessary to make any of the configuration changes described in the rest of this section.

Low Security - Configuring the NX Controller to Work With RPM

If a custom image file is used as the logo on the default RPM touch panel pages, then the NX Controller must be configured with a new User that has the specific permissions required to allow the panel to retrieve the image file from the Controller. See *Creating a New User on the NX Master* section (below) for details.

Additionally, each Touch Panel in the RPM system must be configured to use the Username and Password of the new User created on the NX Controller so that they can access the Logo image on the Controller. See *Configuring Touch Panels to use the New User Login to Connect to the Controller* section on page 52 for details.

Creating a New User on the NX Master

1. In the WebConsole, select **Security** from the main menu bar, and select **Users** on the *Security* page to access the *User Security Details* page (FIG. 94):

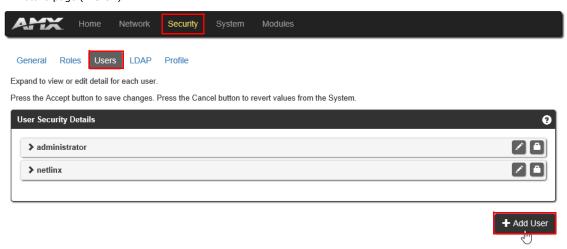


FIG. 94 NX Master WebConsole - Security > Users > Add User

- 2. Click + Add User to create a new user on the NX Controller via the options presented in the Add New User dialog (FIG. 95):
 - a. Enter a User Name and Password (both fields are case sensitive).
 - b. Select **Device** from the *Type* drop-down menu.
 - Select Studio from the Roles drop-down menu and click Done to assign the Studio role.
 Note that when Roles is set to Studio, the Permissions that are provided by the Studio role (and that will apply for the new

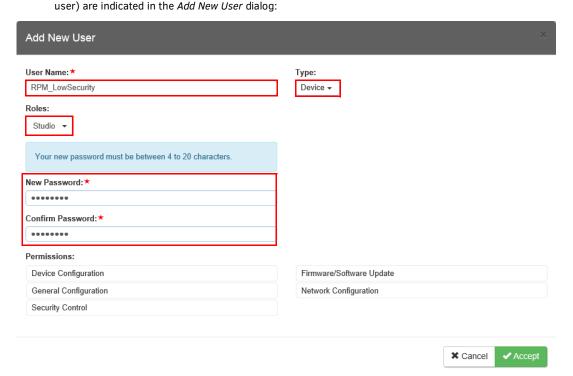


FIG. 95 Add New User dialog - New User ("RPM_LowSecurity")

d. Click Accept to create the new user and close the Add New User dialog. The new User (in this example, "RPM_LowSecurity") is indicated in the User Security Details list (FIG. 96):

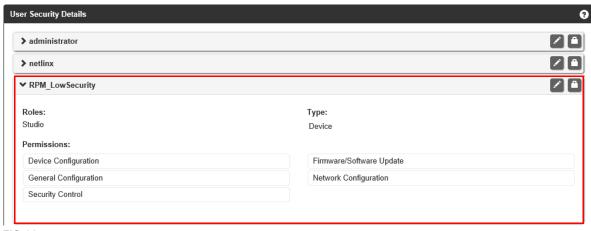


FIG. 96 User Security Details ("RPM_LowSecurity" user)

The User Name and Password that were assigned to this new User (FIG. 95) must be entered on each touch panel in the RPM System that you want to send the Logo via the RPM Configuration Manager, as described in the next section.

Configuring Touch Panels to use the New User Login to Connect to the Controller

NOTE: For G5 touch panels to work with a NX Controller, the panel firmware must be at least v1.5.60.

The Username and Password entered for the new User created in the previous section must be entered on each touch panel in the RPM System that to which you want to send the Logo. This is done via the *RPM Configuration Manager* (on the Controller). For information on the RPM Configuration Manager, refer to *Appendix B - RPM Configuration Manager* on page 46.

1. To launch the RPM Configuration Manager, click the RPM button on the WebConsole Home page (under Web Controls):



FIG. 97 RPM Configuration Manager - sample Touch Panel details (on the Touch Panel Status and Control page)

Select Settings > Panels from the menu bar to access the Touch Panel Status and Control page. This page provides a listing of
all touch panels in the RPM system. Each touch panel is represented as a separate device (based on the device numbers
assigned by RPM) with it's own set of configuration options.

An example of a touch panel device listing in the Touch Panel Status and Control page is shown in FIG. 98:

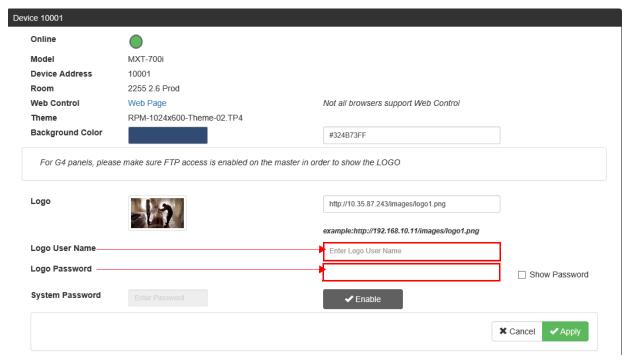


FIG. 98 RPM Configuration Manager - sample Touch Panel details (on the Touch Panel Status and Control page)

- 3. In the Logo User Name field, enter the Username assigned to the new User. This field is case sensitive.
- 4. In the **Logo Password** field, enter the Password assigned to the new User. This field is *case sensitive*. **NOTE:** Select the Show Password option to display the password characters as they are entered.
- 5. Click Apply to save changes.

Medium Security - Configuring the NX Controller to Work With RPM

- If a custom image file is used as the logo on the default RPM touch panel pages, then the NX Controller must be configured with a new User with the specific permissions required to allow the panel to retrieve the image file from the Controller. See Creating a New User on the NX Master section on page 51 for details.
- Additionally, every AMX device that is bound to the NX Controller (including each Touch Panel in the RPM system) must be
 configured to use the Username and Password of the new User created on the NX Controller, so that the devices can retrieve
 the Logo image from the Controller. See Configuring Touch Panels to use the New User Login to Connect to the
 Controller section on page 52 for details.

RPM Required NX System Security Settings - Medium Security

The example provided in FIG. 99 indicates the default Medium Security Preset settings for the NX Controller:

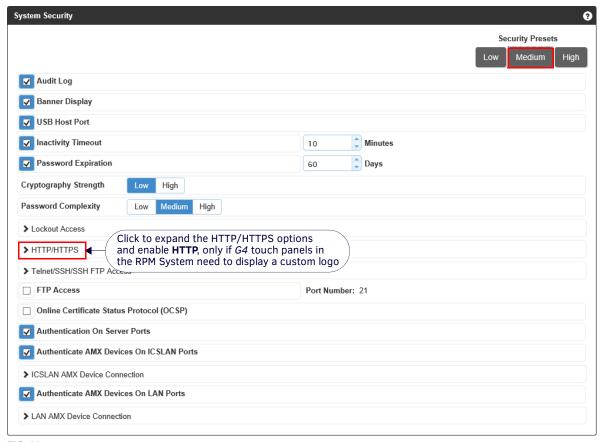


FIG. 99 NX Master WebConsole - Security > General System Security options (Medium Security Preset)

- The default settings in the Medium Security Preset will work RPM and G5 touch panels, no changes are required. Again, G5 touch panels require panel firmware of at least v1.5.60 to work with RPM.
- If there are G4 panels in the RPM System that need to display custom logos, then HTTP must be enabled (click the arrow icon next to HTTP/HTTPS to access this option (FIG. 100):



FIG. 100 NX Master WebConsole - General System Security options (HTTP/HTTPS options)

NI Controllers Security - Overview

Legacy NI Controllers use a different WebConsole that the one described for NX Controllers in the previous sections. The instructions that follow describe making the necessary modifications to the Security Settings on the NI Controller, in order to allow the touch panels in the RPM system to retrieve a custom artwork file if one is being used as the logo on the default panel pages.

NOTE: For details on using the NI Controller's WebConsole to configure the Controller, refer to the NETLINX INTEGRATED CONTROLLERS (FIRMWARE VERSION 3.0 OR HIGHER) WEBCONSOLE & PROGRAMMING GUIDE (available at www.amx.com).

Accessing the NI Controller's Web Control Pages via NetLinx Studio

NOTE: Download the latest version of NetLinx Studio4 from www.amx.com.

- Launch NetLinx Studio, connect to the NI Controller, and refresh the Online Tree (right-click inside the Online Tree tab of the Workspace Window). Refer to the NetLinx Studio Instruction Manual or online help for information on communicating with an NX Controller.
- Right-click on the NX Master and select Web Control Page to choose how to access the Master's online configuration pages (or "WebConsole"). While either selection is acceptable, in this example, the Launch Web Control Page via Default Browser option is selected (see FIG. 88 on page 48).
- 3. The default browser opens NI Controller's WebConsole, to the WebControl page (FIG. 101):



FIG. 101 NI Controller WebConsole - WebControl page (initial view)

Viewing and Modifying System Security Settings (NI Controllers)

In the WebConsole page, select **Security** from the main menu bar to access the System Security Details page. The example shown in FIG. 102 indicates the default security settings for NI Controllers:



FIG. 102 NI Controller WebConsole - System Security Details page (default settings)

Configuring the NI Controller to Work With RPM

If a custom image file is used as the logo on the default RPM touch panel pages, then the NI Controller must be configured with a new User that has the specific permissions required to allow the panel to retrieve the image file from the Controller. See *Creating a New User on the NI Master* section (below) for details.

Additionally, each Touch Panel in the RPM system must be configured to use the Username and Password of the new User created on the NI Controller so that they can access the Logo image on the Controller. See *Configuring Touch Panels to use the New User Login to Connect to the Controller* section on page 52 for details.

Creating a New User on the NI Master

 In the WebConsole, select Security from the main menu bar, and open the User Level tab to access the User Security Details options (FIG. 103):



FIG. 103 NI Master WebConsole - Security > User Level tab

2. Click + Add New User to create a new user on the NI Controller via the options presented in the User Security Details page (FIG. 104):



FIG. 104 NI Master WebConsole - User Security Details

- a. Enter a User Name and Password (both fields are case sensitive).
- b. Enable FTP Access.
- c. Enable HTTP Access.
- d. Click Accept to create the new user and close the User Security Details page. The new User is indicated in the User Level tab (FIG. 105):



FIG. 105 User Security Details ("RPM_User" user)

The User Name and Password that were assigned to this new User (FIG. 104) must be entered on each touch panel in the RPM System that you want to send the Logo via the *RPM Configuration Manager*, as described in the next section.

Configuring Touch Panels to use the New User Login to Connect to the NI Controller

The Username and Password entered for the new User created in the previous section must be entered on each touch panel in the RPM System that to which you want to send the Logo. This is done via the RPM Configuration Manager (on the NI Controller). For information on the RPM Configuration Manager, refer to Appendix B - RPM Configuration Manager on page 46.

1. To launch the *RPM Configuration Manager*, click the **rpm** link on the WebControl Home page (under Manage *WebControl Connections*):

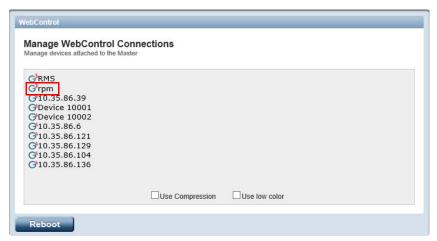


FIG. 106 RPM Configuration Manager - sample Touch Panel details (on the Touch Panel Status and Control page)

Select Settings > Panels from the menu bar to access the Touch Panel Status and Control page. This page provides a listing of
all touch panels in the RPM system. Each touch panel is represented as a separate device (based on the device numbers
assigned by RPM) with it's own set of configuration options.

An example of a touch panel device listing in the Touch Panel Status and Control page is shown in FIG. 98:

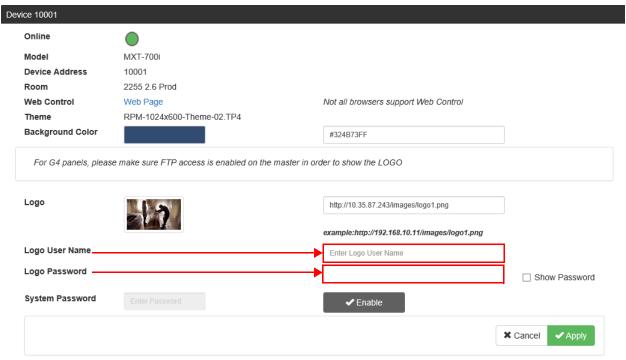


FIG. 107 RPM Configuration Manager - sample Touch Panel details (on the Touch Panel Status and Control page)

- 3. In the Logo User Name field, enter the Username assigned to the new User. This field is case sensitive.
- 4. In the **Logo Password** field, enter the Password assigned to the new User. This field is *case sensitive*. **NOTE:** Select the Show Password option to display the password characters as they are entered.
- 5. Click Apply to save changes.

