SOFTWARE RELEASE NOTES

Products: Series 400[®] Power and Data Distribution System Manufacturer: PRG Subject: S400 Software v6.0 Bulletin No: S400-012 Date: December 18, 2019

INTRODUCTION

S400 Software v6.0 Overview

Software version 6.0 is now available for the Series 400 Power and Data Distribution System. This includes both the system device software and a new 6.0 version of the S400Tools utility, S400ToolsFX.

Refer to "Loading Software to S400 System Devices Through the Configuration Window" on page 10 for instructions on updating Series 400 devices.

Refer to "Installing S400ToolsFX Software for Mac and Windows" on page 35 for installing S400ToolsFX software.

New System Features for Series 400 Software v6.0

Many improvements have been made to the Series 400 equipment software, including:

- + Increased universe limit from 256 to 701
- + Support labeling of breakouts no more "Trunk A/B," you can now have more control over your system organization
- + Added support for new breakout box hardware board
- + Improved IGMP support, for managing and improving network traffic and multicast interactions
- + RDM discovery improvements, including per-Universe RDM interaction

New Software Features for Series 400 Software v6.0

V6.0 of the S400Tools software includes a heavily updated and improved software suite, S400ToolsFX v6.0. Improvements include:

- + <u>Newly created Configuration Interface</u>, engineered for quick and easy changes to your S400 system - rename Rack Modules and Inputs/Outputs, Breakout Boxes, among other useful tools
- + a new DMX Source information layout showing information and status for all sources of DMX on the network
- + Multiple new options for monitoring DMX: Numeric, LED Wall, Spectrum, and Scope
 - View up to 64 universes on one screen (Mode dependent)
 - > DMX channel Mouse-Over on condensed views for DMX Channel Information
 - Scope View provides view of individual channels over time
- + <u>Newly updated DMX Activity Monitor</u>, giving you direct access to multiple streams of feedback at your fingertips
- + <u>New RDM User Interface</u>, which includes easy editing and feedback interactions with RDM-enabled fixtures, polling, Identification, and more:
 - > RDM Enable on a per-universe basis if needed
 - Optional continuous status and ongoing discovery



Figure 1: S400ToolsFX Main Interface

- Color-coded log for messages on Device Status
- Device Information Caching for improved performance
- + System Log Export to a text file for viewing and troubleshooting purposes
- + <u>CSV Import/Export of System Configuration file</u>, making it a simple process to move your configuration from one S400 system to another, as well as the standard Save/Load for System Configuration and DMX Sources.
- + <u>Newly created Dark Mode</u>, which makes using S400ToolsFX excellent for working in dark production conditions by being easier on the eyes, with less glare and screen intensity. The standard default white background mode is still available as well.
- + a <u>System Software Update Interface</u> for quick updating Series 400 equipment from the S400ToolsFX
- + <u>Cross-platform software</u> for Windows and MacOS

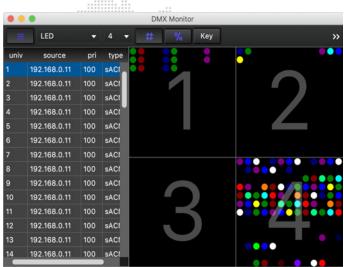


Figure 2: S400ToolsFX DMX Monitor in LED View

Known Issues

We have a very short list of known issues with S400ToolsFX - read this section prior to calling support:

- + Issue: Super Node software update may clear the Thumbwheel/Universe configuration.
- + Workaround: If you need to update Super Node software, do it prior to configuring your Super Nodes.
- + Issue: RDM issues may appear with multiple S400Tools applications active on the network.
- + Workaround: Don't have multiple instances of S400Tools running with RDM enabled simultaneously. Otherwise, multiple instances of S400Tools on the network is fine.
- + Issue: Dashboard can get too tall for the screen with a large number of DMX universes.
- + Workaround: Use the Preferences menu to bring up settings and adjust your dashboard panels.
- + Issue: Configuration -- Issues editing module names when a table is sorted by Name (May edit the wrong module, see wrong label presented, etc)
- + Workaround: Disable the Sorting by Name column when editing
- + Issue: Configuration Save/Load Users cannot currently create an offline S400 System within Tools and load to devices once online.
- + Workaround: Users Export CSV file of online system. User would paste in or alter settings as needed. Once the exported CSV is complete, the user can load that into S400ToolsFX which will then configure all devices with altered settings.

SERIES 400 HARDWARE INTERFACE

Series 400 Hardware

The Series 400 MOD Rack I/O Summary, the default status screen on the Modules, also features fast data access:

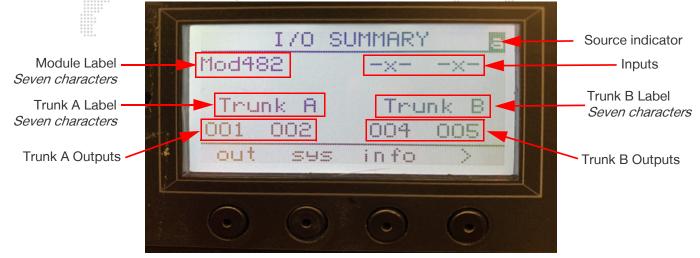
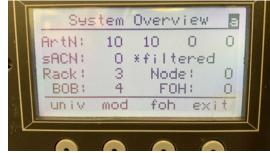


Figure 3: Series 400 v6.0 MOD Rack I/O Summary

Several of the S400 Module display menus have been reorganized to improve the user experience and for the implementation of new features.



v6.0 MOD Display System Overview

Figure 4: v5.x versus v6.0 MOD Rack Display Screen Layouts

The Series 400 MOD Rack displays are easy to navigate; below is a v6.0 System Overview screen, as a refresher:

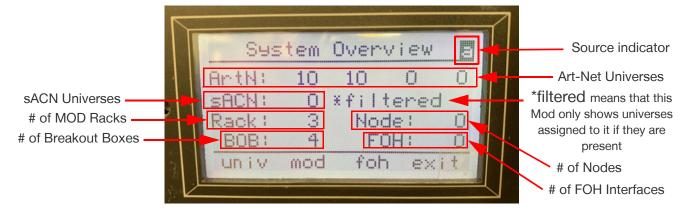


Figure 5: Series 400 v6.0 MOD Rack System Overview Display, Detailed

SERIES 400 SOFTWARE INTERFACE

Several application windows have been updated with new features and feedback, making Series 400 system management simple and feature-rich.

Main S400ToolsFX Window

S400ToolsFX has a completely new look and feel, with improved, effective features.

		S40	0 Tools FX					
- System SNode 1 merge: 2-wa	1	MOD 4	BO 1	ғон 1	[efresh	Refreshes information Opens Configuration Window
Sources Source: Cons Universes: 64	ole				I	Shov	v Sources	Opens Data Sources
Universes 0 5 000 0 050 sACN: 64	10		0 25	30	35	40	45 (Monitor	DMX Activity Monitor Opens the DMX Monitor
RDM Status: RDM Universe		RDM	Fixtures:		ļ		RDM	—— Opens the RDM Interface
System Log 12/16/1910:47:57 S4 12/16/1910:47:57 U 12/16/1910:47:58 N 12/16/1910:47:58 N 12/16/1910:47:58 N 12/16/1910:47:58 N 12/16/1910:47:58 N	sing S400 interfa ew device: Mod ' ew device: FOH ' ew device: Mod ' ew device: Mod '	ace: en15: ('Mod340" "FoH681" a 'Mod2001" 'Mod482"	(10.66.0.11), su at ip 10.66.1.84 ht ip 10.66.2.169 hat ip 10.66.7.2 at ip 10.66.1.22	1 9 09 6	k:255.25	55.0.0		System Log Window: Continuous feedback; click to open to a larger window Opens ToolsFX Display Prefs
PRG	IP	Softw	6.0 0.11 (255.255.0 are version s (Subnet N				₽	

Figure 6: S400 Tools FX Main Interface

S400ToolsFX Display Preferences

From this panel, accessible from either the Menu Bar or from the Gear icon in the lower right of the Main Window.

	splay Preferences		S400 Tools FX Display Preferences
C Select Visible Panels		- Select Visible Pa	anels
System			System
Sources			Sources
Universes			Universes 🦲
RDM			RDM 🚺
System Log	ı 🚺		System Log
Select Display Theme		Select Display Th	heme
Midnight 👻	Reset Defaults	Def	fault ▼ Reset Defaults

Figure 7: Midnight Theme (left) and Default Theme (right) showing Panel Toggles

The toggles in the figure above allow you to customize your Main Window with the panels you want to use; The example in **Figure 8** shows a Main Interface window with the RDM Panel toggled off:

000	S400 T	ools FX		🗧 😑 S400 Too	ols FX Display Preferences
SNode Node+ 0 0	MOD BO 6 12	FOH 0	Refresh		^{rces} 🧕 Toggle panels
merge: 4-way			Configure	RDI	verses on/off
				Select Display Theme	Reset Preferences
Source: Console Universes: 64	Vx76 S400 0 0		Show Sources	Midnight 🔻	Reset Defaults
Universes 0 5 000 050					
sACN: 64	Art-Net: 0		DMX Monitor	Change theme:	-1
System Log 10/23/19 14:50:02 New 10/23/19 14:50:03 New 10/23/19 14:50:03 New 10/23/19 14:50:03 New 10/23/19 14:50:03 New 10/23/19 14:50:03 New	v universe detected: 05 v universe detected: 06 v universe detected: 06 v universe detected: 06 v universe detected: 06	 9 100 (192.168.0.1 100 (192.168.0.1) 100 (192.168.0.1) 100 (192.168.0.1) 100 (192.168.0.1) 100 (192.168.0.1) 	1) 1) 1) 1) 1)	Default or Midnigl	Reset Defaults, and control whether you're prompted to do so on exit
0	Version 6.0 10.66.10.69 (255.255.0.0)	۵.	Open Di	splay Preferences

Figure 8: Main Interface Panel Toggles and Display Information

Below is an example showing only the System, Universes, and System Log panels. You can customize your Main S400ToolsFX layout to fit your show needs.

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000 050	23 0 5 		20 25 	30	35 DMX	40 Monitor	45	Select Display	Syst	tem Log Reset Prefe	Reset Defaults
10/23/19 1 10/23/19 1 10/23/19 1 10/23/19 1	4:50:02 New 4:50:03 New 4:50:03 New 4:50:03 New 4:50:03 New	universe detecte universe detecte universe detecte universe detecte universe detecte universe detecte Version (10.66.10	d: 059 100 d: 061 100 d: 060 100 d: 062 100 d: 063 100 d: 064 100	(192.168.0, (192.168.0, (192.168.0, (192.168.0, (192.168.0, (192.168.0,	11) 11) 11) 11) 11)		¢				

Figure 9: Alternate Main Window Layout Showing System, Universe, and System Log Panels

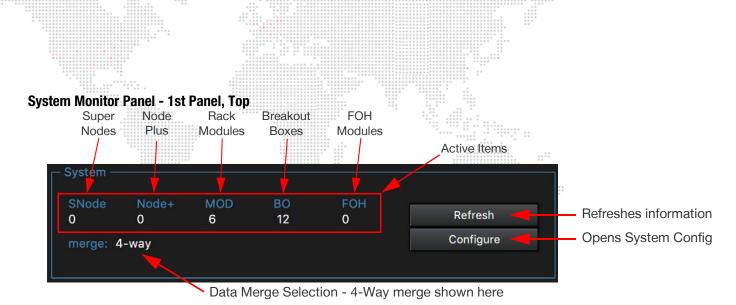


Figure 10: System Monitor Panel, Main Window

The System Monitor Panel is first on the Main Window, top of the interface; a detailed view is shown in Figure 10.

In addition to keeping a running count of active Series 400 system devices, this panel also provides information on your Data Merge, if any. The System Panel provides a list of Super Nodes, Node Plus, S400 Rack Modules, Breakout Boxes, and FOH Modules. From this panel you can also refresh the system feedback and access the Configuration Window, which allows for full configuration of your Series 400 system. As easy as this window is to interface, take a moment here to look through the features and functions of the Configuration Window.

Configuration Window

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ip addr	name		versio	on		breako	ut1	ve	ersion b1		ip a	ddr b1	break	out2		version b	2	ip	addr b2	In1	In2	TrA1	TrA2	TrB1	TrB2
																				univ	univ	univ	univ	univ	univ
10.66.1.4	211	5.1	r167 (10/23	/19	10:31)	Trunk A	5.	1 r153 (10/16 / 19	17:31)	10.66	19.167	Trunk	B	5.1 r1	53 (10/16/1	9 17:31)	10.66	6.25.76			200			
10.66.8.40	212	5.1	r167 (10/23	/19	10:31)	Trunk A	5.	1 r153 (10/16 <mark>/</mark> 19	17:31)	10.66	16.241	Trunk	B	5.1 r1	53 (10/16/1	9 17:31)	10.66	6.25.119						
10.66.1.181	213	5.1	r167 (10/23	/19	10:31)	Trunk A	5.	1 r153 (10/16/19	17:31)	10.66	16.223	Trunk	B	5.1 r1	53 (10/16/1	9 17:31)	10.66	5.24.41						
10.66.1.171	214	5.1	r167 (10/23	/19	10:31)	Trunk A	5.	1 r153 (10/16/19	17:31)	10.66	19.107	Trunk	в (5.1 r1	53 (10/16/1	9 17:31)	10.66	6.16.41						
10.66.11.52	215	5.1	r167 (10/23	/19	10:31)	Trunk A	5.	1 r153 (10/16/19	17:31)	10.66	19.214	Trunk	в (5.1 r1	53 (10/16/1	9 17:31)	10.66	6.27.99			91	91	91	91
10.66.1.180	216	5.1	r167 (10/23	/19	10:31)	Trunk A	5.	1 r153 (10/16/19	17:31)	10.66	18.137	Trunk	B (5.1 r1	53 (10/16/1	9 17:31)	10.66	6.19.190						61
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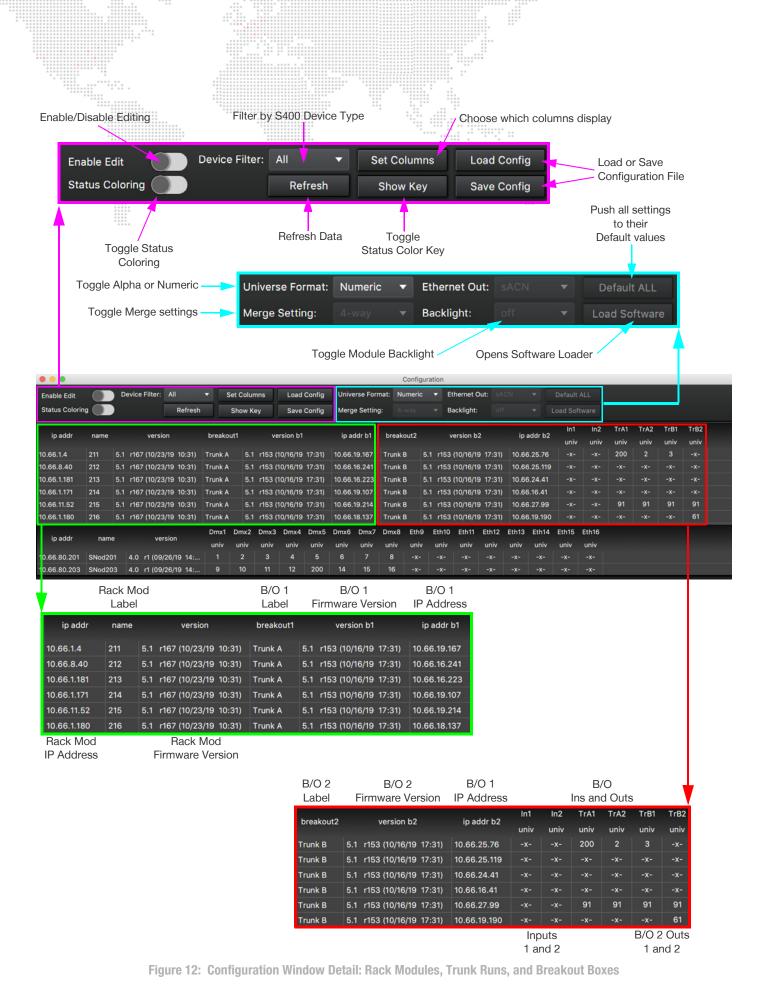
Figure 11: Main Configuration Window

The Main Configuration window affords you instant access and control over your S400 system: Ports and IP Addresses; Labels for Breakout Boxes and Rack Modules; and Software Versions, among other useful features and feedback. You also have control over Node Plus and Super Node units, their Software Versions, Port Information, and Direction.

This window also provides a color-based feedback system like v5 of the S400Tools software, and it can be enabled or disabled to suit your need. You have access to the columns that show, column sorting, and device filters for S400 equipment; configurations, once finished, can be saved from here, and existing configurations can be loaded from here. You can also identify Rack Modules from this window and toggle their display backlights here.

In addition to feedback and status, the Configuration Window requires you to enable editing as a safeguard while monitoring and managing your S400 system.

We'll break down the areas and features of the Configuration Window on the next page.



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Enable Edit		Device Fil	lter: All	• 9	Set Colu	mns	Load	Config	Unive	rse Form	at: Nu	meric	▼ Et	hernet (Out: sA		*	Default	t ALL							
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ip addr	name	v	version	breako	ut1	v	ersion b1		ip ad	dr b1	breako	ut2	ve	ersion b	o2	ip a	ddr b2	In1	In2	TrA1	TrA2	TrB1				
10.66.1.4	211	5.1 r167 (1	0/23/19 10:31)	Trunk A	5.1	r153 (10/16/19	17:31)	10.66.1	9.167	Trunk B	5.	.1 r153 (10/16/1	9 17:31)	10.66	.25.76	univ		200	univ 2	univ 3	univ -x-			
10.66.8.40	212	5.1 r167 (1	0/23/19 10:31)	Trunk A	5.1	r153 (10/16/19	17:31)	10.66.1	6.241	Trunk B	5.	.1 r153 (10/16/1	9 17:31)	10.66	.25.119									
10.66.1.181	213	5.1 r167 (1	0/23/19 10:31)	Trunk A	5.1	r153 (10/16/19	17:31)	10.66.1	6.223	Trunk B	5.	.1 r153 (10/16/1	9 17:31)	10.66	.24.41									
10.66.1.171	214	5.1 r167 (1	0/23/19 10:31)	Trunk A	5.1	r153 (10/16/19	17:31)	10.66.1	9.107	Trunk B	5.	.1 r153 (10/16/1	9 17:31)	10.66	.16.41									
10.66.11.52	215	5.1 r167 (1	0/23/19 10:31)	Trunk A	5.1	r153 (10/16/19	17:31)	10.66.1	9.214	Trunk B	5.	.1 r153 (10/16/1	9 17:31)	10.66	.27.99			91	91	91	91			
10.66.1.180	216	5.1 r167 (1	0/23/19 10:31)	Trunk A	5.1	r153 (10/16/19	17:31)	10.66.1	8.137	Trunk B	5.	.1 r153 (10/16/1	9 17:31)	10.66	.19.190						61			
ip addr	name		version	Dmx1 univ	Dmx2 univ	Dmx3 univ	Dmx4 univ	Dmx5 univ	Dmx6 univ	Dmx7 univ	Dmx8 univ	Eth9 univ	Eth10 univ	Eth11 univ	Eth12 univ	Eth13 univ	Eth14 univ	Eth15 univ	Eth16 univ							
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10.66.80.20	1 SN	od201	4.0 r1 (09	9/26/19	14:		1	2	3		4	5	6		7	8		x-	-x-	-x-	-x		-x-	-x-	-x-	-x-
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Editing Fields in Configuration Window

Editing fields in this window can only be done once the Enable Edit toggle is selected on, and the toggle switch turns red to notify you that you've entered Editing Mode. Once in Edit Mode, simply click on a field to edit its label or change its data. The image below shows the Configuration Window in Edit Mode, and a Breakout Box Label being changed:

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Enable	e Edit 🛛 🛑	De De	vice Filt	er: All	•	Set C	olumns	Load Config	Universe Format:	Numeric	•	Etherr
Status	Coloring			Refre	esh	Sho	w Key	Save Config	Merge Setting:	4-way	•	Backli
name	breakout 1	TrA1 univ	TrA2 univ	breakout2	TrB1 univ	TrB2 univ						
211	BOName	-	2	Trunk B	3	4	Enab	le Edit toggled	to ON (red indic	ator)		
212	Trunk A	5	6	Trunk B	7	8						
213	Trunk A	9	10	Trunk B	11	12	Click	on a field to ea	dit			
214		13	14	Trunk B	15	16						

Figure 14: Editing a Field in S400ToolsFX Configuration Window

Status Coloring in the Configuration Window

S400ToolsFX has an excellent feedback-coloring work flow that can be toggled on and off to fit your need. You also have instant access to the Status Coloring Key, accessible by clicking the "Show Key" button:

			/										Cor	figurat	ion											
Enable Edit		. 74	evice Filter	r: All		• s	et Colu	nns	Load	Config	Univer	se Forma	it: Nun	eric	▼ E	thernet Ou	t: sA(
Status Colorin	ng 🥡			R	efresh		Show K	ey	Save	Config	Merge	Setting:			∀ B	acklight:										
				-1																In1	In2	TrA1	TrA2	TrB1	TrB2	
ip addr	name		ver	sion		breakou	JCI	ve	rsion b1		ip ad	ar 61	breakou	tz)	ersion b2		ip ad	ldr b2	univ	univ	univ	univ	univ	univ	
0.66.1.4		5.1	r167 (10/	23/19 1	0:31)		5.1	r153 (1	0/16/13	17:31)	10.66.1	9.167		5.1	l r153	(10/16/19	17:31)	10.66.2	25.76							
0.66.8.40	212	5.1	r167 (10/	23/19 1	0:31)		5.1	r153 (1	0/16/19	17:31)	10.66.1	5.241		5.1	r153	(10/16/19	17:31)	10.66.2	25.119							
0.66.1.181	213	5.1	r167 (10/	23/19 1	0:31)		5.1	r153 (1	0/16/19	17:31	10.66.1	6.223		5.1	I r153	(10/16/19	17:31)	10.66.2	24.41							
0.66.1.171	214	5.1	r167 (10/	23/19 1	0:31)		5.1	r153 (1	0/16/19	17:31)	10.66.1	9.107		5.1	l r153	(10/16/19	17:31)	10.66.1	16.41							
0.66.11.52	215	5.1	r167 (10/	23/19 1	0:31)		5.1	r153 (1	0/16/19	17:31)	10.66.1	9.214		5.1	l r153	(10/16/19	17:31)	10.66.2	27.99							
0.66.1.180	216	5.1	r167 (10/	23/19 1	0:31)		5.1	r153 (1	0/16/19	17:31)	10.66.1	8.137		5.1	r153	(10/16/19	17:31)	10.66.1	9.190							
				Dmx1	Dmx2	Dmx3	Dmx4	Dmx5	Dmx6	Dmx7	Dmx8	Eth9	Eth10	Eth11	Eth12	Eth13	Eth14	Eth15	Eth16							
ip addr	name		version	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ							
0.66.80.201	SNod20		4.0 r1																							
0.66.80.203	SNod20	3 4	4.0 r1																							

-			N N		
)		Status Coloring Key		
DEVICES Green:	Online	UNIVERSES Green:	Active	PORT DIRECTION	
Red:	Offline Not saved	Red: Yel: -x-:	No source Too many sources Live input not assigned Idle input/output not assigned	»i «	Input Output

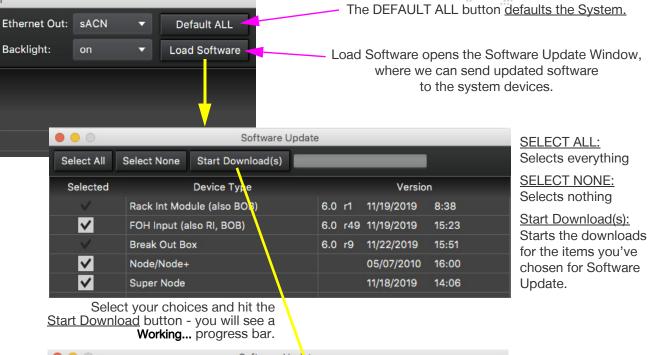
Figure 15: Configuration Window Showing Status Coloring ON, and Color Key



Continued on next page

Loading Software to S400 System Devices Through the Configuration Window

Not dissimilar from previous versions of S400Tools, uploading software to Nodes and Node Plus units, Breakout Boxes, FOH Modules, Rack Modules, and Super Nodes takes place through the configuration Window. On the far right side of the Configuration Window is the Load Software button -- this opens up the <u>Software Update Window</u>.



		Software l	Jpd <mark>ot</mark> e	;			
Select All	Select None	Start Download(s)		-	-		Working
Selected		Device Type				Versio	n
\sim	Rack Int Mod	lule (also BOB)		6.0	r1	11/19/2019	8:38
\checkmark	FOH Input (a	lso RI, BOB)		6.0	r49	11/19/2019	15:23
 V 	Break Out Bo	xc		6.0	r9	11/22/2019	15:51
\checkmark	Node/Node+					05/07/2010	16:00
\checkmark	Super Node					11/18/2019	14:06
		1					

NOTE:

You can choose one single device type to upload, you do not have to upload software to everything. Just remember, make sure your system software is up-to-date!

You will be notified when the process has finished - the Status Bar will be full and indicated by **Done**

		Software L	Jpdate				
Select All	Select None	Start Download(s)					Done
Selected		Device Type				Versio	n
\checkmark	Rack Int Mod	lule (also BOB)		6.0	r1	11/19/2019	8:38
✓	FOH Input (a	lso RI, BOB)		6.0	r49	11/19/2019	15:23
\sim	Break Out Bo	xc		6.0	r9	11/22/2019	15:51
✓	Node/Node+					05/07/2010	16:00
\checkmark	Super Node					11/18/2019	14:06

Figure 16: System Software Uploading Process

Setting Columns in the Configuration Window

You have full control over the arrangement and selection of visible columns, including Column Sorting by ascending and descending values, and moving columns around in any order you like. By clicking the Set Columns button, you enter Column Selection. In the example below, ONLY the Breakouts column is selected.

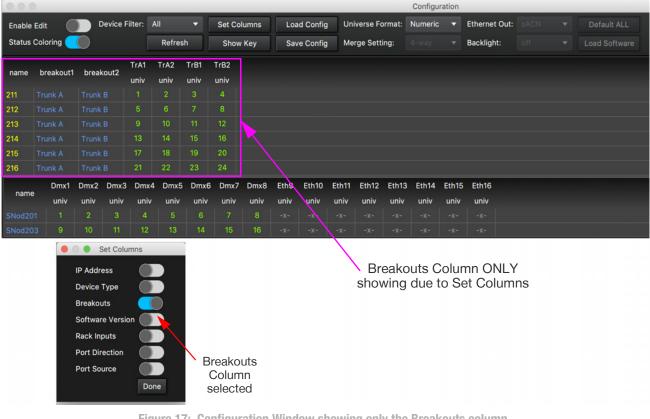


Figure 17: Configuration Window showing only the Breakouts column

Loading and Saving your Configuration File in the Configuration Window

As in the previous versions, you can save your configuration file, and load configuration files for your S400 systems. To accomplish this task, click on the <u>Save Configuration</u> button to save your configuration file where you want it. Consequently but not surprisingly, once you click on the <u>Load Configuration</u> button, you are given the option to load an S400 configuration file.

Enable Edit Device Filter:	All 🔻	Set Columns	Load Config	Universe Format	Numeric	•	Ethernet Out:	SACN	*	Default ALL
Status Coloring	Refresh	Show Key	Save Config	Merge Setting:	4-way	•	Backlight:	off	-	Load Software
					S	Sav Tags:	\$400 Configuration	File.s4x		
							PRG		0 ^	٩
				Technical Technical Topbox Desktop Desktop Downloads Applications Documents OneDrive - Pro Production Re Icloud Cloud Cloud Drive	Name All PRG Ligh All PRG Ligh Bad Boy Bat Truss Bat Truss Bat Roy Spi Cable Stand Custom Gob Custom Gob Fiber Fixture Testi GCLT Grund Cont	ot 4000 ot HP lish bbos lards kos	Sheets			A Date Modified May 1, 2017 at 09-5 Sep 30, 2014 at 17: Aug 29, 2019 at 14: Aug 29, 2019 at 14: Feb 22, 2019 at 16: Sep 17, 2019 at 202: May 1, 2017 at 09-2 Jan 3, 2019 at 164: May 1, 2017 at 09-2 May 1, 2017 at 09-2 Jan 3, 2019 at 164: May 1, 2017 at 09-2 Jan 3, 2019 at 164: May 1, 2017 at 113: Nov 13, 2018 at 161: Apr 29, 2017 at 114 May 20, 2018 at 154: May 10, 2018 at 151:

Figure 18: Saving a Configuration File

Filtering the Configuration Window per S400 Device Type

In S400ToolsFX, you can filter your display to view feedback by S400 Device Type: FOH Modules, Rack Modules, Node Plus units, and Super Nodes. In the example below, you see a Device Filter selection set to view ALL devices, and below in the image, you have an example of a Rack Module (MOD) only selection:

Device Filter set to ALL: the system shown here has Rack Modules and Super Nodes

• • •												(Configu	uration											
Enable Edit		D	evice Filter:	All 🖌	- s	et Colu	mns	Load	Config	Univ	erse For	mat: Ni	umeric		Ethernet O	ut: sA									
Status Colorin	ig 🌒			All FOH		Show K	ey	Save	Config	Merg	je Settin	g: 4			Backlight:										
ip addr	name		versic	Mod	eako	ut1	v	ersion b1		ip a	ddr b1	break	out2		version b2		ip	addr b2	In1 univ	In2 univ	TrA1 univ	TrA2 univ	TrB1 univ	TrB2 univ	
10.66.1.4	211	5.1	r167 (10/23	SNode	JINK A	5.1	r153	(10/16/19	17:31)	10.66.	.19.167	Trunk	в	5.1 r1	53 (10/16/19	17:31)	10.66	6.25.76	-x-		200	2	3	-x-	
10.66.8.40	212		r167 (10/23/		Trunk A	5.1	r153	(10/16/19	17:31)	10.66	.16.241	Trunk	в	5.1 r1	53 (10/16/19	17:31)	10.66	3.25.119							
10.66.1.181	213	5.1	r167 (10/23/1	19 10:31)	Trunk A	5.1	r153	(10/16/19	17:31)	10.66.	16.223	Trunk	в	5.1 r1	53 (10/16/19	17:31)	10.66	6.24.41							
10.66.1.171	214	5.1	r167 (10/23/1	19 10:31)	Trunk A	5.1	r153	(10/16/19	17:31)	10.66.	.19.107	Trunk	в	5.1 r1	53 (10/1 <mark>6/</mark> 19	17:31)	10.66	6.16.41							
10.66.11.52	215	5.1	r167 (10/23/1	19 10:31)	Trunk A	5.1	r153	(10/16/19	17:31)	10.66.	19.214	Trunk	в	5.1 r1	53 (10/16/19	17:31)	10.66	5.27.99			91	91	91	91	
10.66.1.180	216	5.1	r167 (10/23/1	19 10:31)	Trunk A	5.1	r153	(10/16/19	17:31)	10.66.	.18.137	Trunk	в	5.1 r1	53 (10/16/19	17:31)	10.66	6.19.190						61	
ip addr	name	1	versi	on	Dmx1 univ	Dmx2 univ	Dmx3 univ	Dmx4 univ	Dmx5 univ	Dmx6 univ	Dmx7 univ	Dmx8 univ	Eth9 univ	Eth1 univ		Eth12 univ	Eth13 univ	Eth14 univ	Eth15 univ	Eth16 univ					
10.66.80.201	SNod20		4.0 r1 (09/26	5/19 14:								8													
10.66.80.203	SNod20	3	4.0 r1 (09/26	5/19 14:		10		12	200	14	15	16		-x-											

Same system, but Device Filter set to display Rack Mods only

								Config	jurati	on								_
Enable Edit		Device Filter:	Aod	Set C	columns	Load Config	Universe Form	nat: Numeri		Ethernet Out:								
Status Colori	ng 🔵		Refresh	Sho	ow Key	Save Config	Merge Setting			- Backlight:								
ip addr	name	version		breakout1		version b1	ip addr b1	breakout2		version b2		ip addr b2	In1	In2	TrA1	TrA2	TrB1	TrB2
ip addi	name	version		Dreakouti	,	reision bi	ip addr bi	Dieakoutz		version b2		ip addr bz	univ	univ	univ	univ	univ	univ
10.66.1.4	211	5.1 r167 (10/23/1	9 10:31)	Trunk A	5.1 r153	(10/16/19 17:31)	10.66.19.167	Trunk B	5.1	r153 (10/16/19 1	7:31)	10.66.25.76			200			
10.66.8.40	212	5.1 r167 (10/23/1	9 10:31)	Trunk A	5.1 r153	(10/16/19 17:31)	10.66.16.241	Trunk B	5.1	r153 (10/16/19 1	7:31)	10.66.25.119	-x-					
10.66.1.181	213	5.1 r167 (10/23/1	9 10:31)	Trunk A	5.1 r153	(10/16/19 17:31)	10.66.16.223	Trunk B	5.1	r153 (10/16/19 1)	7:31)	10.66.24.41						
10.66.1.171	214	5.1 r167 (10/23/1	9 10:31)	Trunk A	5.1 r153	(10/16/19 17:31)	10.66.19.107	Trunk B	5.1	r153 (10/16/19 1)	7:31)	10.66.16.41						
10.66.11.52	215	5.1 r167 (10/23/1	9 10:31)	Trunk A	5.1 r153	(10/16/19 17:31)	10.66.19.214	Trunk B	5.1	r153 (10/16/19 1)	7:31)	10.66.27.99			91	91	91	91
10.66.1.180	216	5.1 r167 (10/23/1	9 10:31)	Trunk A	5.1 r153	(10/16/19 17:31)	10.66.18.137	Trunk B	5.1	r153 (10/16/19 1)	7:31)	10.66.19.190) -x-					61



Changing Universe Format, Merge Settings, and Ethernet Out in the Configuration Window

Altering the **Universe Format** of your system (Alpha or Numeric), the **Merge Settings** (2-Way, 3-Way, 4-Way, or Disabled), and the Ethernet Out (Streaming ACN or Art-Net) *[on Super Nodes ONLY]* is all done from the top panel of the Configuration Window. Continue to the next page for detailed images showing options.



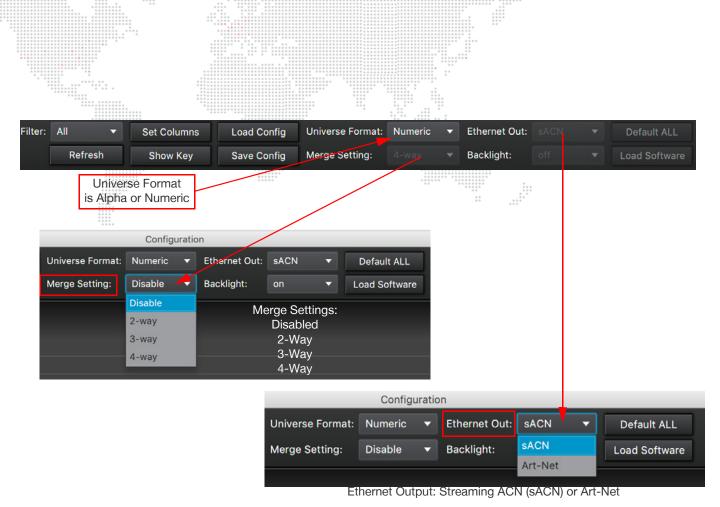


Figure 20: Universe Format, Ethernet Out Settings, and Merge Settings in the Configuration Window

Interfacing with Rack Modules

S400ToolsFX has the ability to turn on or off the Rack Module backlights remotely, as well as identifying a Rack Module that is online. In addition to this feature's usefulness, it is also extremely fast to implement, whether you're identifying a Rack Module or turning off all Module backlights in the entire system.

To identify a Rack Module in your S400 System: See Figure 21 on page 14.

- Step 1. Right click on the Rack Module you'd like to identify from the Configuration Window.
- Step 2. Choose "Identify" from the Right-click menu.
- Step 3. The selected Rack Module, if online, will blink swiftly to help you locate the Module.

To turn a Rack Module display ON or OFF through S400ToolsFX: See Figure 22 on page 14.

- Step 1. Select the Rack Module you would like to alter in the Configuration Window.
- Step 2. On the Menu Bar at the top of the Configuration Window, choose ON or OFF from the Backlight dropdown.

															6-2 0				
• • •			-	_	_	_	_	_	_	_	_			Confi	guration	1	_	_	_
Enable E	Edit		evice Fil	ter: A	II	•	Set Col	lumns	Loa	ad Config	Uni	verse Fo	rmat:	Numeric	•	Ethernet Out:			Defau
Status C	Coloring	\bigcirc			Refres	sh	Show	Key	Sav	ve Config	Me	rge Setti	ng:			Backlight:			Load S
name	breakout1	TrA1	TrA2	breal	cout?	TrB1	TrB2												
Hame	Dieakout	univ	univ	Dream	Courz	univ	univ												
211	Trunk A																		
212 Set I	Defaults											-		ENTI	Fγ·				
213 Iden	tify 🚽					11	12			Right	-click					ike to ider	ntify		
214		13	14				16												
215		17					20			Select	ted he	ere fo	r Ider	ntifica	tion i	s Module	211.		
216		21	22			23	24												
name	Dmx1	Dmx2	Dmx3	Dmx4	Dmx5	Dmx6	Dmx7	Dmx8	Eth9	Eth10	Eth11	Eth12	Eth13	Eth14	Eth15	Eth16			
Hame	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ	univ			
SNod201																			
SNod203		10	11	12	13	14		16											

Figure 21: Identifying a Rack Module in the Configuration Window Using IDENTIFY

	Configu	uratio	n			
Universe Format:	Numeric	•	Ethernet Out:	sACN	•	Default ALL
Merge Setting:	Disable	•	Backlight:	on	•	Load Software
TO TOGGLE MOI Left-click on the M Click to toggle the B	OD you'd like	to ider	ntify.	off on		

Figure 22: Toggling the Rack Module Backlight ON or OFF in the Configuration Window

Continued on next page

DMX Sources Window - 2nd Panel Down

The DMX Sources panel on the Main Window gives information on data sources, their universes, ports, and IP data.

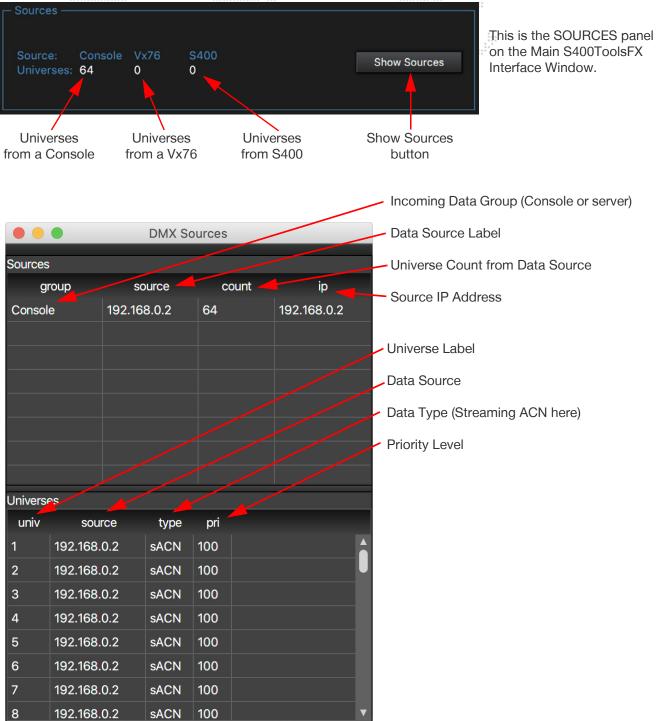


Figure 23: DMX Sources Window

Universes Panel and DMX Monitor Window - 3rd Panel Down

The v6.0 version of S400ToolsFX has several major enhancements and new features created to better serve your specialized production needs in system monitoring and interaction. Let's get familiar with the window:

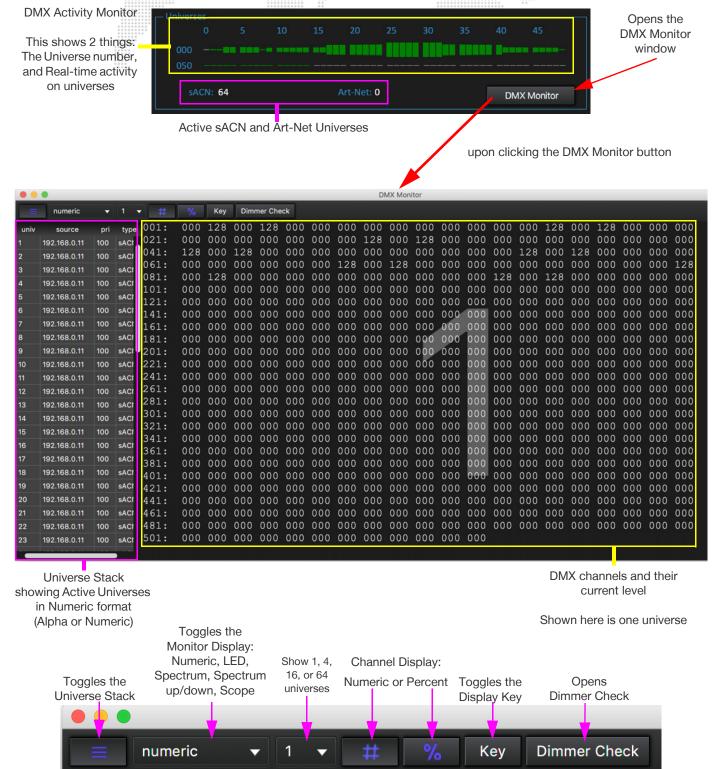


Figure 24: Getting Familiar with the Universes Panel and DMX Window

First View Type: DMX Numeric Display

The Numeric display in the DMX Monitor is simple: it's a per-channel display of active DMX universes and their data in numeric format. You can toggle on and off the stack of universes, show several universes at once, view their levels as percent or number value, and access a new feature of S400ToolsFX, the Dimmer Check.

Display Multiple Universes

Obviously seeing more than one universe at a time can be beneficial for a variety of monitoring and troubleshooting purposes, so you can do this in all of the different types of displays in the DMX Monitor.

You've already seen the single Universe display, here is a display of four (4) universes on the Monitor display:

• •	•														DMX	Mon	nitor																	
=	numeric	•	4 .	+	ŧ.		K	ey	Dimr	mer Cl	heck																							
univ	source	pri	type	001:021:		50 00 00 00				00 00								00 001:		00 00) 50) 00			00 00				00 0 50 0		0 00 7 FF	00 0		00 FF
1	192.168.0.11	100	SACI	041:061:		00 50				00 00		00 0					00 00	00 041: 50 061:		00 0					00 00				00 0			00 0		
2	192.168.0.11	100	sACI	081: 101:	00	50 00 00 00		00		00 00		00 0					00 00	00 081: 00 101:			00 00				00 00				00 0	0 00		00 0	0 00	
3	192.168.0.11	100	sACI	121: 141:	00	00 00				00 00		00 0				00	00 00	00 121: 00 141:		00 0					00 00				00 0			00 0	0 00	00
4	192.168.0.11	100	sACI	161: 181:		00 00				00 00			0 00				00 00	00 161: 00 181:	00	00 0			00		00 00				00 0			00 0		00
5	192.168.0.11	100	sACI	201: 221:		00 00				00 00			0 00		00		00 00	00 201:		00 0			00		00 00	00 00			00 0			00 0		
6	192.168.0.11	100	sACI	241: 261:		00 00				00 00			0 00	00			00 00	00 241:	00	00 0	00 00				00 00				00 0			00 0		
7	192.168.0.11	100	sACI	281: 301:		00 00	00			00 00	00 00		0 00				00 00	00 281:		00 0					00 00				00 0			00 0	0 00	00
8	192.168.0.11	100	sACI	321: 341:	00	00 00				00 00			0 00				00 00	00 321: 00 341:	00		00 00				00 00				00 0			00 0		00
9	192.168.0.11	100	sACI	361: 381:								00 0					00 00								00 00	00			00 0	0 00		00 0	0 00	00
10	192.168.0.11	100	sACI	401: 421:		00 00				00 00		00 0	0 00				00 00	00 401:						00	00 00			00				00 0		
11	192.168.0.11	100	sACI	441:		00 00												00 441: 00 461:							00 00							00 0		00
12	192.168.0.11	100	sACI	481: 501:														00 481: 501:													00		0 00	
13	192.168.0.11	100	sACI																															
14	192.168.0.11	100	sACI	001: 021:		00 00												00 001:		00 5 FF 1					FF F1 00 00				00 0 50 0) 50) FF	00 5 FF F		00
15	192.168.0.11		sACI	041:061:		00 00						00 0													50 00							00 0		50
16	192.168.0.11		SACI	081:		00 00						00 0								00 0					00 00				00 0			00 0 FF F		00
17	192.168.0.11	100	SACI	121:																														50
18	192.168.0.11	100	SACI	141:							00 0	00 0	0 00				00 00	00 141:							00 00 FF FI	60	00		00 0			50 0 00 F		00
19	192.168.0.11	100	sACI	181: 201:		00 00				00 00			0 00				00 00									00	0.0		00 0 50 0			00 5 00 F		FF
20 21	192.168.0.11 192.168.0.11	100 100	SACI	221: 241:		00 00						00	0 00												00 50		00					FF 0		00
21	192.168.0.11	100	SACI	261: 281:		00 00				00 00	0 0	00 0	0 00					00 261:							00 F1 00 00		00					00 0		00
22	192.168.0.11	100	SACI	301: 321:								00 0	0 00							00 0	00 00			00	00 00	00	00	00	00 0			00 0		00
23	192.168.0.11	100	SACI	341: 361:						00 00	00	00 0	0 00				00 00	00 341: 00 361:		00 0				00	00 00	00	00	00	00 0			00 0	0 00	
24	192.168.0.11	100	SACI	381: 401:		00 00				00 00	00	00 0	0 00				00 00				00 50 FF F1						00					00 F 00 0	F 00 0 00	
26	192.168.0.11	100	SACI	421: 441:						00 00		00 0						00 421:							00 00							00 0		00
27	192.168.0.11	100	sACI	461: 481:														00 461: 00 481:														00 5 FF F		
20	100 100 0 11		anci	501:		00 00															00 00				00 00									
			2																															

Figure 25: DMX Monitor showing Four Universes of DMX

You'll notice how each universe shows a number in the background to identify it; this is replaced by a letter in Alpha format if you choose Alpha characters instead of Numeric for Universes. Notice also that the former single universe display is now divided by 4. It will be further reduced in size by 16 and by 64 when you choose these options.

Dimmer Check

The Dimmer Check feature in S400ToolsFX is an excellent method for troubleshooting, testing, and ringing out a Series 400 rig with or without a console. The Dimmer Check function allows you to enter values for any number or range of channels, stack them on or advance one group at a time, and advance your channel selection all the way through your Universes continuously. Let's take a look at the Dimmer Check Window on the next page.

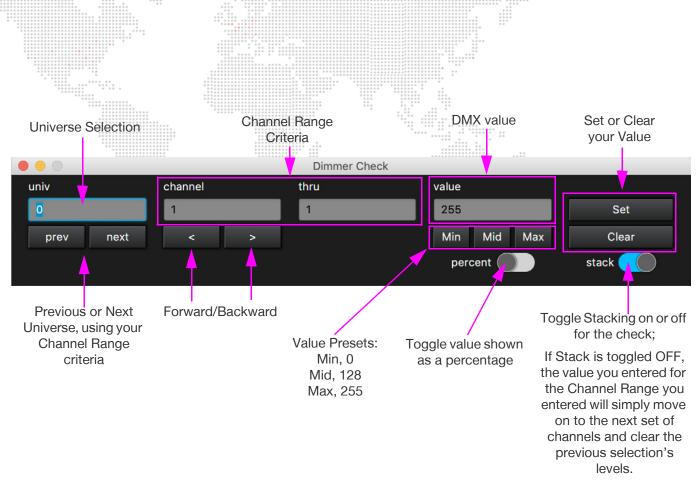


Figure 26: Becoming Familiar with the Dimmer Check Window

Dimmer Check Practical Applications

Let's look at a few examples of using Dimmer Check. The first example is a single channel set to Max (255). You'll notice that the channel becomes bright yellow. This is the indication that Dimmer Check is using that channel.

								DN	ΛX Ν	Ionit	or													
=	numeric	•	1	•	#	%	6	Ke	y	Dir	nme	r Che	eck											
univ	source	pri	type	001:	255	128 000	000	128 000	000	000 000	000	000 128	000	000 128	000	000	000	000	128 000	000	128 000	000	000	000
1	192.168.0.11	100	sACI	041:	128 000	000	128 000	000	000	000	000 128	000	000 128	000	000	000	000	128 000	000	128 000	000	000	000	000 128
2	192.168.0.11	100	sACI	081: 101:	000	128	000	000	000	000	000	000	000	000	000	000	128 000	000	128 000	000	000	000	000	000
3	192.168.0.11	100	sACI	121: 141:	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000
4	192.168.0.11	100	sACI	161: 181:	000		000	000	000	000	000	000	00.04	000	000	000	000	000	000	000	000	000	000	000
5	192.168.0.11	100	sACI	201: 221:		000	000	in	dia					nne		000	000	000	000	000	000	000	000	000
6	192.168.0.11	100	sACI	241: 261:	000	000	000							den		000	000	000	000	000	000	000	000	000
7	192.168.0.11	100	sACI	281: 301:	000	000	000		uð				nav	acr		000	000	000	000	000	000	000	000	000
8	192.168.0.11	100	sACI	321: 341:	000	000	000	000	000	000	000	000		000	000	000	000	000	000	000	000	000	000	000
9	192.168.0.11	100	sACI	361: 381:	000	000	000	000	000	000	000	000	000	- 10	000	000	000	000	000	000	000	000	000	000
10	192.168.0.11	100	sACI	401:	000	000	000	000	000	000	000	000		000	000	000	000	000	000	000	000	000	000	000
11	192.168.0.11	100	sACI	441:	000	000	000	000	000	000	000		000	000	000	000	000	000	000	000	000	000	000	000
12	192.168.0.11	100	sACI	481:	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	000	
13	192.168.0.11	100	sACI	501:	000	000		000	000	000	000		000	000	000	000								
		_							_															
	0							Dir	nme	r Ch	eck													
un	iv		chann	el			t	hru					Vá	alue										
1			1					1						255							Se	et		
	prev ne:	xt	<	:	>									Min	N	۸id	М	ах			Cle	ar		
														pe	rcen	t 🤇)		sta	ick (

Figure 27: Dimmer Check with a Single Channel

The next example is an example of a Stacked advance in the Dimmer Check. The Dimmer Check below started at Universe 1 and included all 512 channels at a MID level (128). The Dimmer Check selection was advanced forward once while keeping Stack toggled ON. Notice that both selections stay on at 128:

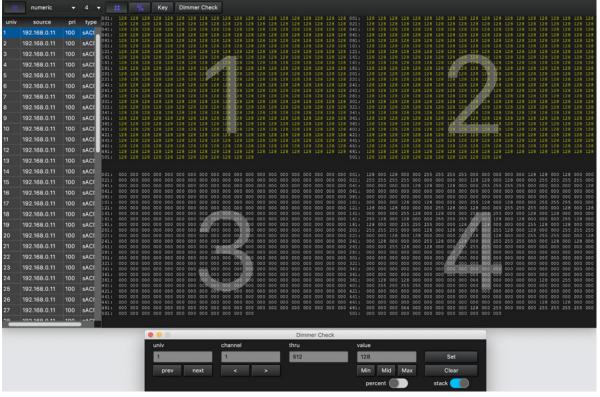


Figure 28: A Stacked Dimmer Check

The next example is the same scenario as in Figure 28, except Stack is toggled OFF:

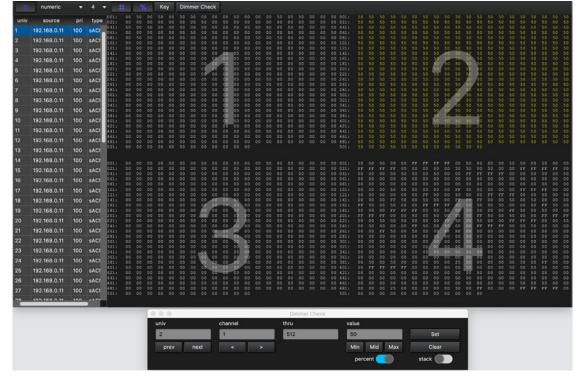


Figure 29: A Non-Stacked Dimmer Check

The third example in Dimmer Check to view is Percentage -- Dimmer check may be viewed as a percentage instead of a value, which can be applied to many situations. The example below is an example of a Stacked Dimmer Check using Percentage:

unv source pr type circle pr type	
Unix Source pr type c::::::::::::::::::::::::::::::::::::	
1 102.168.0.11 100 sACI 011 30	50 50 50 50 50 50 50 50 50 5 50 50 50 50 50 50 50 50 50 5
2 192.168.0.11 100 SAC1 101.1 100 101.1 100.1 100.1 100.1 100.1	50 50 50 50 50 50 50 50 50 5 50 50 50 50 50 50 50 50 50 5
3 192.168.0.11 100 sAC1 121.1 50	50 50 50 50 50 50 50 50 50 5 50 50 50 50 50 50 50 50 5
4 192.168.0.11 100 sAC1 161.1 50	50 50 50 50 50 50 50 50 50 5 50 50 50 50 50 50 50 50 5
5 192.168.0.11 100 sACt 301: 30<	50 50 50 50 50 50 50 50 50 5 50 50 50 50 50 50 50 50 5
6 192.168.0.11 100 sACt 24.11 50	50 50 50 50 50 50 50 50 50 5 50 50 50 50 50 50 50 50 50 5
7 192.168.0.11 100 sAC1 28.1 30 50<	50 50 50 50 50 50 50 50 50 5 50 50 50 50 50 50 50 50 5
8 192.168.0.11 100 sAC1 31.1 50.5	50 50 50 50 50 50 50 50 50 50 50 50 50 5
9 192.168.0.11 100 sAC1 sin so to to to so to so to	50 50 50 50 50 50 50 50 50 50 50 50 50 5
10 192.168.0.11 100 sAC1 101 s0 s0<	50 50 50 50 50 50 50 50 50 50 50 50 50 5
11 192.168.0.11 100 sAC1 411 50<	50 50
13 192.168.0.11 100 sACt 14 192.168.0.11 100 sACt 15 192.168.0.11 100 sACt 16 192.168.0.11 100 sACt 16 192.168.0.11 100 sACt 16 192.168.0.11 100 sACt 17 192.168.0.11 100 sACt 18 192.168.0.11 100 sACt 0.0 </th <th></th>	
13 192.168.0.11 100 sACI 14 192.168.0.11 100 sACI 011 00 <th></th>	
192.168.0.11 100 SACt 111 00 600 00	
10 132.168.0.11 100 SACI 0.0 <t< th=""><th></th></t<>	
10 132.168.0.11 100 SACI 21.0 0.0 <	00 50 00 00 FF FF FF FF 0 FF FF FF 00 00 00 00 00 5
10 122.168.0.11 100 SACI 121.68.0.11 000 SACI <th>00 00 00 00 00 00 00 00 0 00 00 00 00 00</th>	00 00 00 00 00 00 00 00 0 00 00 00 00 00
18 192:168.0.11 100 sACt 141: 00	00 50 00 00 FF FF FF 00 0 00 FF FF FF 00 00 50 00 5
21 192,168.0.11 100 sACt 241: 00	FF 00 00 50 00 50 00 00 0 50 00 50 00 00 00 FF 50 0
21 192.168.0.11 100 sACI 241: 00	00 00 00 FF 50 00 50 00 0 FF 50 00 50 00 00 FF FF F
21 192,168.0.11 100 sACI 241: 0	50 00 00 FF FF FF 00 00 5 FF FF FF 00 00 50 00 50 0
22 192.168.0.11 100 sACI 301: 00	00 00 00 00 00 00 00 00 00 0 00 00 00 00
24 192.168.0.11 100 sACI 351: 00 00 00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 0
25 192.105.0.11 100 SACI 421: 00 00 00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00 00 00
26 192.168.0.11 100 sACt 441: 00 00 00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00 00 00
27 192.168.0.11 100 sACT 481: 00 00 00 00 00 00 00 00 00 00 00 00 00	FF 00 00 00 FF FF FF FF 0 00
20 103 400 0 11 100 0 17	
Dimmer Check	
univ channel thru value	
1 1 512 50 Set	
prev next < > Min Mid Max Clear	
percent stack	

Figure 30: Dimmer Check Using Percentage Instead of Value

Second View Type: LED View

A new and innovative channel feedback view is the S400ToolsFX LED View, or "LED Wall," as you may hear it called. This view takes every three channels and creates a virtual LED Wall out of your universes. This view is designed to aid you in determining trends and searching out problems in the system.

A simplification of the LED View:

Each "LED" on the LED view is three channels. **Channel 1 is Red**, **Channel 2 is Green**, and **Channel 3 is Blue**. In the LED that is next to the first, Channels 4-6 will be represented. Channel 4 is Red, Channel 5 is Green, Channel 6 is Blue, and so on. <u>If a channel has no value, its LED will not show its color</u>. Brightness of the LED indicates value.

If Channel 1 is at full but Channels 2 and 3 are at 0, the LED will be RED.

If Channel 1 is out, Channel 3 is out, but Channel 2 is at full, the LED will be Green.

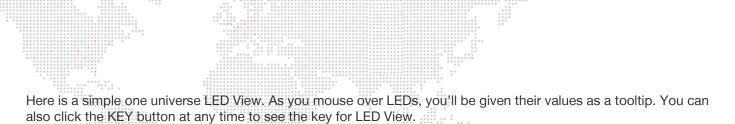
If Channel 1 and 2 are out but Channel 3 is at full, the LED will be **Blue**.

As the Channels mix in each 3-Channel LED, so will the colors of that LED:

If Channel 1 and 2 is at full and Channel 3 is out: **RED** (Channel 1 full) plus **GREEN** (Channel 2 full) equals **YELLOW**. If Channel 1 and 3 are at full but 2 is out: **RED** (Channel 1 full) plus **BLUE** (Channel 3 full) equals **MAGENTA**.

If Channels 2 and 3 are at full but Channel 1 is out: GREEN (Channel 2 full) plus BLUE (Channel 3 full) equals CYAN.

Let's look at some examples on the next page.



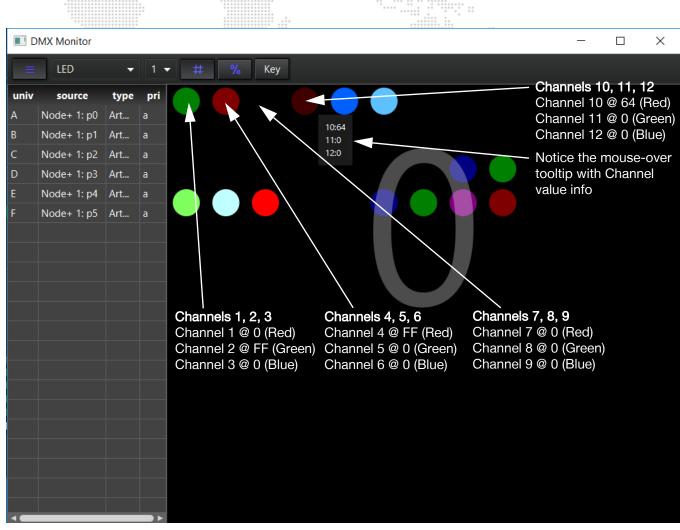


Figure 31: Becoming Familiar with the LED View

The LED View Key:

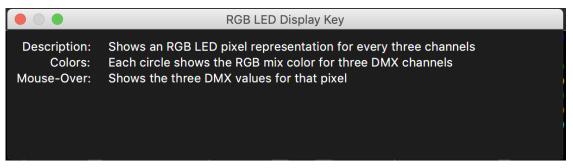


Figure 32: The LED View Key

When you are using a Series 400 System with more than one universe, the views behave just as Numeric display, showing 1, 4, 16, or 64 Universes. Notice as well the size reduction when viewing many Universes at a time.

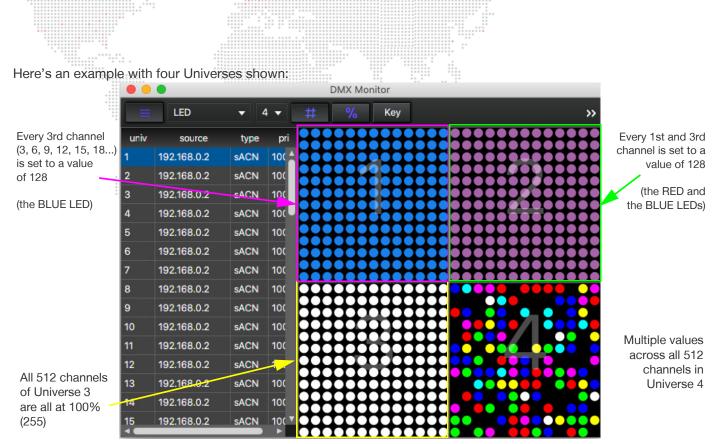


Figure 33: LED View with Four Universes

Here's an example with 16 Universes in LED View:

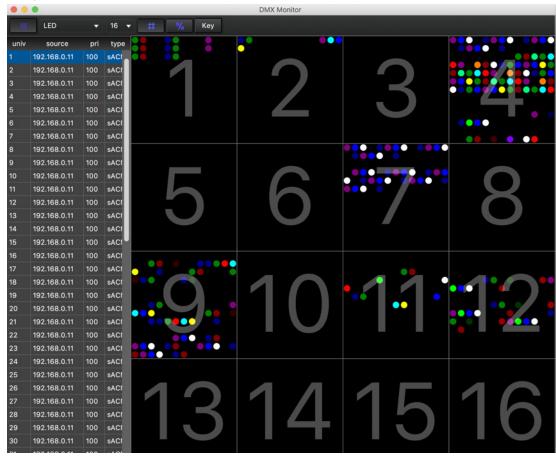


Figure 34: LED View Showing 16 Universes

			******		DMX Monitor				
E LED	▼ 64 ▼	# % Кеу							
univ source 1 192.168.0.11 2 192.168.0.11 3 192.168.0.11 4 192.168.0.11	pri type 100 SACI 100 SACI 100 SACI 100 SACI	1	2	3	4	5	6	7	8
5 192.168.0.11 6 192.168.0.11 7 192.168.0.11 8 192.168.0.11 9 192.168.0.11	100 SACI 100 SACI 100 SACI 100 SACI 100 SACI	9	10	·· 14	12	13	14	15	16
10 192.168.0.11 11 192.168.0.11 12 192.168.0.11 13 192.168.0.11	100 SACI 100 SACI 100 SACI 100 SACI	17	18	19	20	21	22	23	24
14 192.168.0.11 15 192.168.0.11 16 192.168.0.11 17 192.168.0.11 18 192.168.0.11	100 sACI 100 sACI 100 sACI 100 sACI 100 sACI 100 sACI 100 sACI	25	26	27	28	29	30	31	32
19 192.168.0.11 20 192.168.0.11 21 192.168.0.11 22 192.168.0.11 23 192.168.0.11	100 sACI 100 sACI 100 sACI 100 sACI 100 sACI 100 sACI 100 sACI	33	34	35	36	37	38	39	40
24 192.168.0.11 25 192.168.0.11 26 192.168.0.11 27 192.168.0.11 28 192.168.0.11	100 sACI 100 sACI 100 sACI 100 sACI 100 sACI 100 sACI	41	42	43	44	45	46	47	48
29 192.168.0.11 30 192.168.0.11 31 192.168.0.11 32 192.168.0.11 33 192.168.0.11	100 SACI 100 SACI 100 SACI 100 SACI 100 SACI 100 SACI	49	50	51	52	53	54	55	56
34 192.168.0.11 35 192.168.0.11 36 192.168.0.11 37 192.168.0.11	100 sACt 100 sACt 100 sACt	57	58	59	60	61	62	63	64

Figure 35: LED View Showing 64 Universes

Third View Type: Spectrum

Finally, here's a view looking at 64 Universes at a time:

The Spectrum view in the DMX Monitor is a unique view that relies on the color spectrum to display DMX activity. Each DMX channel has a vertical channel bar that represents its level, and due to its condensed design, mousing over a section gives you a tooltip of four (4) channels at a time.

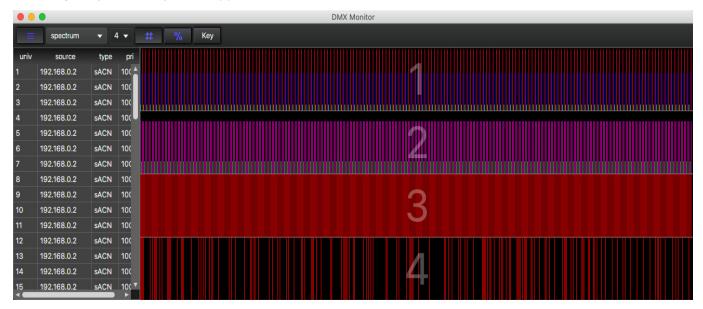


Figure 36: Four Universes in Spectrum View in the DMX Monitor Window

If we look at this graph next to the Key, you'll notice that the height of the DMX channel output corresponds to the color on the spectrum. High output levels are shown in red, the far right side of the spectrum, whereas low output levels appear as smaller lines. This is designed to help you monitor, diagnose, and spot trends in your system.

Make a direct correlation between the height of the lines and the color spectrum -- red means you're at full (255), between cyan and blue is about half (128), and yellow means a very low level.

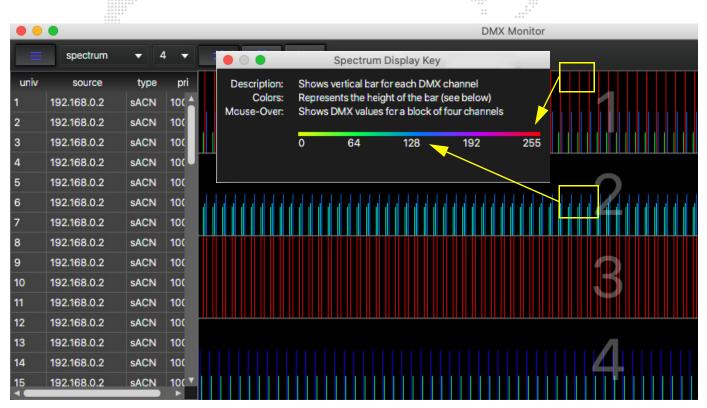


Figure 37: Getting Familiar with the Spectrum DMX Monitor Display

Fourth View Type: Spectrum Up/Down

The Spectrum Up/Down (Spectrum U/D) view in the DMX Monitor Window is a display of whether the channel is ascending or descending in value. Like the Spectrum View, there is a vertical line for each channel; blue lines are increasing DMX values on that channel, and green indicates a decrease in value on that channel. The purple color reflects a DMX channel that has not changed in 0.5 seconds.

Upon mousing over the lines, you'll see a group of four channels' levels, as in the Spectrum View.



Figure 38: The Spectrum Up/Down Key

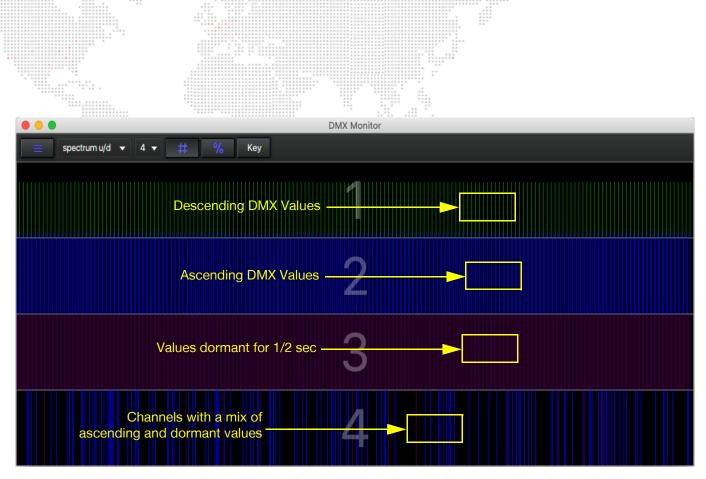


Figure 39: Spectrum Up/Down DMX Monitor View Showing Values

Fifth View Type: Scope

The Scope View in DMX Monitor is an excellent way to detect abnormalities in your universes on a per channel basis. Scope View is not based on color, it is pure DMX data in an oscilloscope format. The horizontal axis is time; each line represents one second. The vertical axis is DMX value, from 0 to 255. Let's get familiar with the Scope View, below:

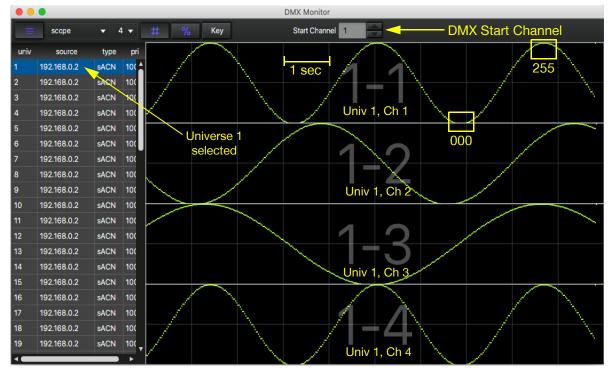


Figure 40: Scope View in the DMX Monitor Window

The RDM Panel and RDM Window - 4th Panel Down

S400ToolsFX has made drastic improvements and enhancements to RDM transactions in your Series 400 system. Let's take a moment to become familiar with the RDM Panel on the Main Window:

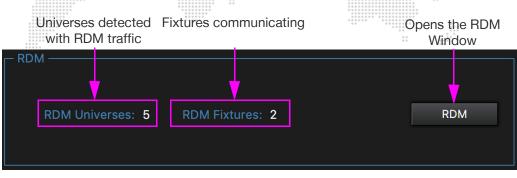


Figure 41: The RDM Panel on the Main Window

The RDM Window

When you click the RDM button on the RDM Panel on the Main Interface, you will encounter the RDM Window in its initial state -- you'll need to Enable RDM in order to use the RDM functionality.



Setup Enable RDM RDM F	Status Monitoring Enable Edit ixtures: Ongoing Discovery Enable Filtering			
univ addr source	model sw version	manuf	personality footprint	sts mags pt inv lamp hrs
	,	No content in table		
	No content	in table		Show Key Clear Log

Figure 42: Full Main RDM Window

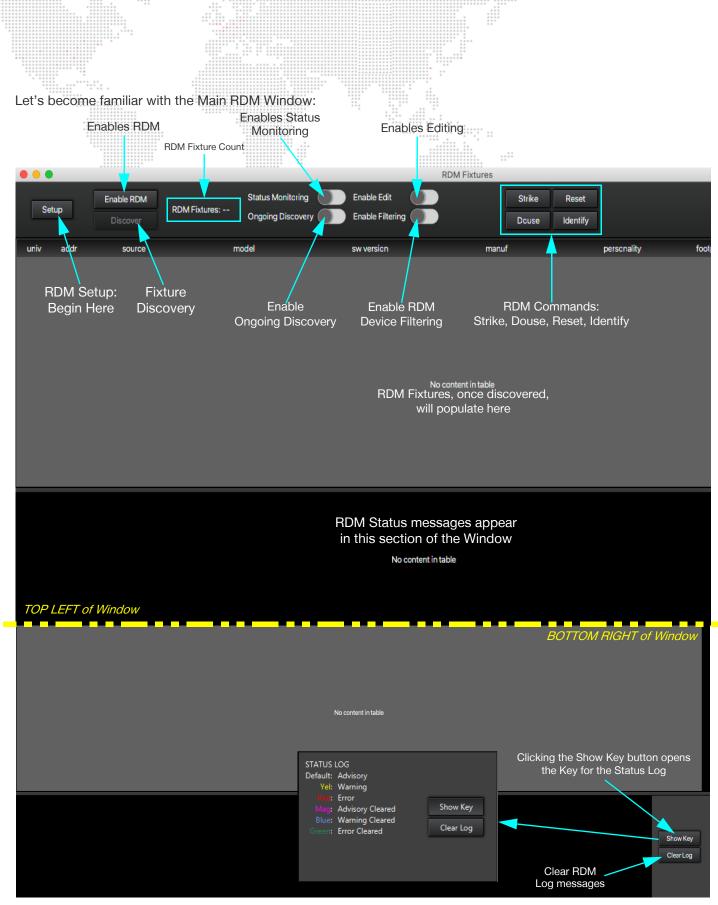


Figure 43: Becoming Familiar with the Initial RDM Window

In order to interact with fixtures via RDM, click the Setup button to begin. Once you click the setup button, you'll be presented with a list of Universes; from there, you can select some or all of your universes, click the Enable RDM button, then you can click the Discover button to find RDM-enabled fixtures on the Universes you selected.



In this example below, the Setup button has been clicked and the RDM button has been selected; universes that have RDM devices on them will populate in the left-hand column:

• • •				RDM I	- Fixtures					
Setup	Disable RD Discover	RDM Fixtures: 1	Status Monitoring Enable Ongoing Discovery Enable	e Edit 🔹 🚺 e Filtering 🚺	Strike Reset Dause Identify					
All None	univ ad	dr source	model	sw version	manuf	personality	footprint	sts msgs	pt inv	lamp hrs
select univs	1 4	Mod2001/TrunkA	Flare12_RDM	Vers 9.73	TMB SOLARIS LED	RGB 8bit (3ch)	3 ()	N/A	0
0										
1 2 3			Universes with	RDM data						
4										
7										
8										
9										
12 13										
13										
				No content	in table					Show Key
				No content						Clear Log

Figure 44: Initial RDM Universe Population

Once you have selected the Universes on the left to which you'd like to send a discover command, click the Discover button to discover RDM-enabled fixtures on selected Universes. Once you click the Discover button, the system will look for RDM-enabled fixtures:

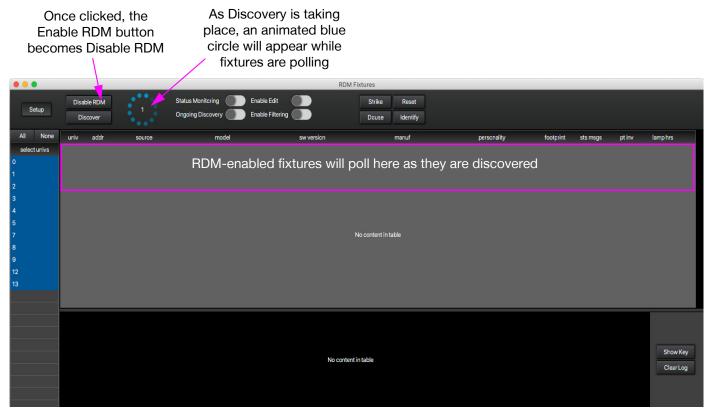


Figure 45: RDM-Enabled Fixtures Polling Under Discovery

Once RDM fixtures have identified themselves, you MUST ENABLE EDIT to make any changes or send an RDM command to RDM-enabled fixtures in the Universes you selected. Below is an example of the red indicator you'll see when you toggle the Enable Edit toggle to ON:

					RDM Fixtures					
Setup	Disable RDN Discover	1 RDM Fixtures: 1	Status Monitoring Ongoing Discovery	Enable Edit Enable Filtering		Reset Jentify				
All None	univ addr	source	model	sw version	ma	nuf personality	footprint	sts msgs	pt inv	lamp hrs
select univs 1		Mod2001/TrunkA	Flare12_RDM	Vers 9.73	TMB SOLARIS LE	D RGB 8bit (3ch)			N/A	0
0 1 2 3 4 5 7 8 9 9 12 13						ing Enabled: d indicator				
				No	o content in table					Show Key Clear Log

Figure 46: RDM Window, Edit Enabled

Once editing is enabled, you may send commands to the fixtures, and change their editable parameters, like Personality -- below is an example of a Personality change to a fixture in the RDM Window:

•••							RDM	Fixtures						
Setup	,	_	ble RDM scover	RDM Fixtures: 1	Status Monitoring	Enable Edit Enable Filtering		Strike Douse	Reset Identify					
All N	lone	univ	addr	source	model		sw version		manuf		personality		footprint	sts msgs
select univ	vs	1	4	Mod2001/TrunkA	Flare12_RDM	Vers 9.7	3	TMB SOLARI	SLED	X	RGBW 8bit (4ch)	•	4	0
1											RGB strobe (7ch) RGBW 16bit (8ch)			
2											RGBW 8bit (8ch)			
3											RGBW pix:1 (12ch)			
4											RGBW pix:2V (16ch)	-		
5	l										RGBW pix:4 (24ch)			
7						Cł	nanging a				RGBW pix:6V (32ch)			
8						Perso	nality via the	e			RGBW strobe (8ch)			
9						RD	M window				Strobe Only (4ch)			
12 13											unknown	U		
13														
							No conten	t in table						

Figure 47: Changing a Personality on an RDM-enabled Fixture



Once you've enabled editing in the RDM Window, you have right-click menu options for each fixture that polls RDM. The right-click menu includes the Strike, Reset, Douse, and Identify commands. Let's take a look at the Identify command. When you IDENTIFY a fixture, the fixture listening for the command will flash its intensity to allow you to locate its position in the rig. View the image below:

			 B = 0 <li< th=""><th></th><th>5 5 5 9 9 9 0</th><th></th><th></th><th></th></li<>		5 5 5 9 9 9 0			
						RDM Fixtures		
Setup		able RDM liscover	RDM Fixtures: 1	Status Monitoring Ongoing Discovery	Enable Edit	Strike Reset	=	
All None	univ	addr	source	model	sw versi	on manuf	personality	foc
select univs	1	4	Mod2001/TrunkA	Flare12_RDM	Vers 9.73	TMB SOLARIS LED	RGB 8bit (3ch)	3
0				Strike				
1				Douse				
2				Reset		Right-click the fixtur	e	
3				Identify	-	Select IDENTIFY		
4				Clear Log Msgs				
5	-				<u></u>			
8								
9	<u></u>							
12								2
13								8



Changing items like Fixture Address are equally as simple -- you only need to make sure that the Enable Edit button is toggled ON, and you can simply click on the item you would like to change. See the example below, of an Address Change:

									RDM Fixtu	ires			
		Disable f			Status Monitoring		Enable Edit			Strike	Reset) i	
5	etup	Discov		RDM Fixtures: 1	Ongoing Discovery		Enable Filtering			Douse	Identify	j i	
All	None	univ	addr	n	nodel		sw version		manuf			personality	foot
	t univs	200	1	Flare Q+		Vers 10.1	1	TMB S	OLARIS LED		RGBW	pix:12 (56ch)	56
2		61	101	Flare Q+		Vers 10.1	1	TMB S	OLARIS LED		RGBW	pix:12 (56ch)	56
3 61													
91				Cli	ck on the ac	dress							
200					make the ch								
-					then ente	r							
2													
1													

Figure 49: Changing Fixture Address in RDM Window



Clearing the status messages from the RDM Window Message Pane is also an operation that needs to take place while the RDM Window is in Edit Mode, with the Enable Edit toggle to ON.

In order to clear RDM status messages, simply select the fixture you'd like to clear, right click on it, and select "Clear RDM Messages. Here is an example of this procedure:

				0 0			$\begin{array}{cccccccccccccccccccccccccccccccccccc$			
• • •							RDM Fix	tures		
	Disable			Status Monitoring		Enable Edit		Strike	Reset	
Setup	Discov		OM Fixtures:	1 Ongoing Discove	ry 🔘	Enable Filtering		Douse	Identify	
All None	univ	addr		model	-	sw version	man			personality
select univs	200	1	Flare Q+	0.1	Vers 10.		TMB SOLARIS LE			ix:12 (56ch)
2	61	101	Flare Q+	Strike	Vers 10.	11	TMB SOLARIS LE	D	RGBW p	ix:12 (56ch)
3				Douse		Right	-click the fixture	<u>.</u>		
61				Reset		Ŭ				
91				Identify		Selec	t Clear Log Mso	gs		
200				Clear Log Msgs						
						RDM	System Messag	ges Log		
				discovery on univ						
				discovery on univ						
				discovery on univ						
	10/23/19 1	5:04:46 B	legin RDM	discovery on univ	verse 20					
				egory: TMB SOLA		Flare Q+, sw ve	ersion: Vers 10.11			
				l fixture: Flare Q+ l fixture: Flare Q+						
	10/23/19 1	5:04:51 R	DM discov	very complete						
				are Q+ @ 61.101	101					
	10/23/19 1	5:09:44 s	top identi	fy: Flare Q+ @ 61.	101					

Figure 50: Clearing Log Messages from the RDM Window

ATTENTION

An excellent habit to take up is DISABLING the RDM once you are finished with it. Once you close the RDM Window, RDM is disabled by default. However, considering the complexity of RDM as it stands today, get in the habit of disabling it prior to closing the window.

Please note: It is NOT RECOMMENDED to use RDM during show conditions.

System Log Window - 5th and Final Panel Down

S400ToolsFX maintains a running message and status log for your session, and is arguably one of the most important functions of the system. Not only does the message log show you timestamped changes, but logs every interaction that happens during your session, which allows you to finely track changes and problems in the system.

On the following page, we'll see a Main Window with the System Log at the bottom.

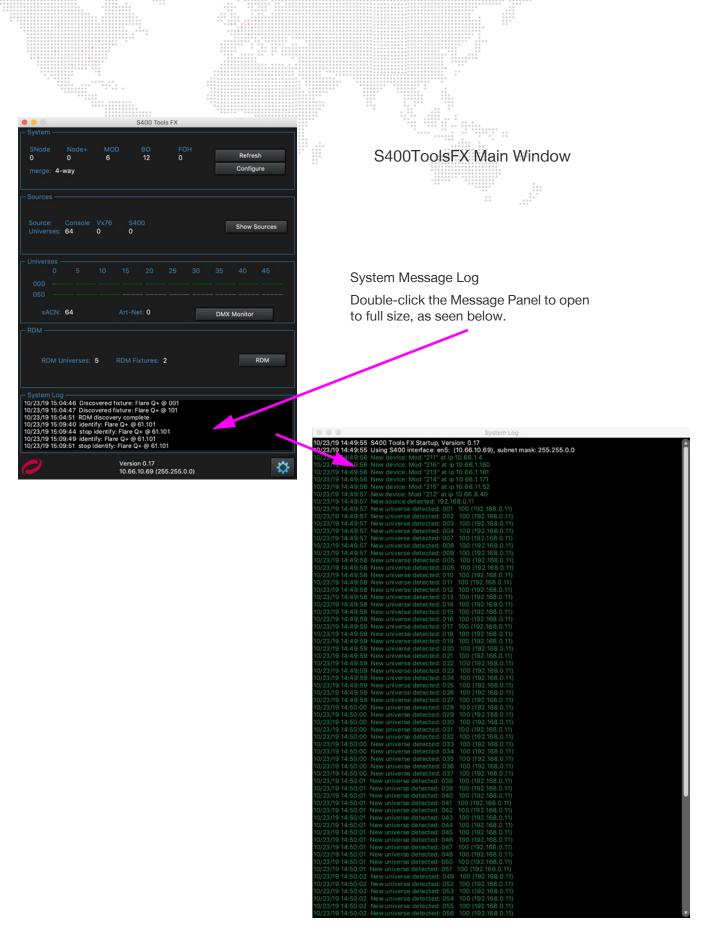


Figure 51: Opening the System Log from the Main Window



Saving the log as an exported text document a simple two-click process. Under FILE on the Menu Bar, selec EXPORT LOG, name your file and state its location, and hit enter:

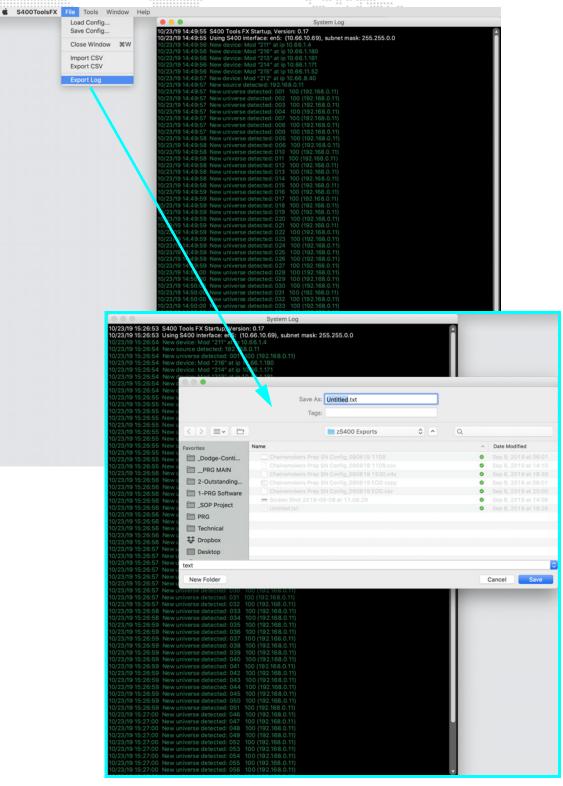


Figure 52: Saving the System Log

Closing Your S400ToolsFX Session

Once you are finished with your S400ToolsFX session, exported any logs you might need, and you've made sure to save your configuration file (See "Loading and Saving your Configuration File in the Configuration Window" on page 11.), you can close your session. S400ToolsFX will display a window asking if you'd like to close, and if you'd like to be asked every time if you'd like to close:

****		Confirm Quit		
Default QUIT Message	Quit S400 Tools?			?
Note check box toggle for prompting on exit asking if you'd like to close	✓ Prompt on exit	C	ancel	ОК

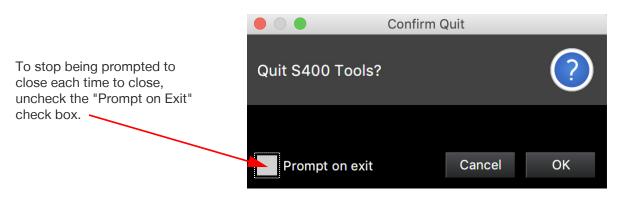


Figure 53: Closing Your S400ToolsFX Session

INSTALLING S400TOOLSFX SOFTWARE FOR MAC AND WINDOWS

S400ToolsFX for Mac

Mac installation for S400ToolsFX is very simple and installs like any other Mac-based installer.

Step 1. Download the S400ToolsFX DMG file to your computer. Drag the S400ToolsFX icon to the Applications Folder.

•

S400ToolsFX



Figure 54: Dragging the S400ToolsFX Application to the Mac Applications Folder

- Step 2. Connect a CAT5e cable from your computer to the S400 System.
- Step 3. Configure the network connection on your Mac. S400ToolsFX looks for a port with an IP address in the predefined S400 subnet (10.66.x.x). Configure the IP address of the port to be used to an address in that range, such as 10.66.0.11, and the subnet mask to 255.255.0.0.

Ethernet Adaptor		Network	Q Search
/ laup tor	Location:	Automatic	Mac Network Adapter window showing IPv4 settings changed to Manually Configure instead of Automatic, IP Address and
	USB 10/LAN 3 Connected Wi-Fi Connected Second	Status: Connected USB 10/100/1000 JAN has the IP addrags 10.6	Subnet Mask set to S400 range 3 is currently active and 66.0.11.
	Connected Connected	Configure IPv4: Manually	
	• USB 10/0 LAN 2	IP Address: 10.66.0.11 Subnet Mask: 255.255.0.0	
	• Display Ethernet	Router:	
	• USB 10/00 LAN	DNS Server: Search Domains:	
	• Thundeet Slot 2	Search Domains.	
	• Thundeernet 2	802.1X: WiFi (prg-wireless)	Connect
	USB 10/LAN 4 Not Connected + - &		Advanced ?
			Revert Apply

Figure 55: Configuring a Mac Network Adapter to Connect S400ToolsFX



Step 4. If you do not configure your Network Adapter to a S400ToolsFX IP address, you will get a status message informing you of the issue:



Figure 56: No 10.66.X.X Port Identified Warning Window

Step 5. Upon loading S400ToolsFX, you'll be asked if you would like to reload the previous S400 session. Confirm YES or NO as required.



ATTENTION

The user must restart S400ToolsFX for a new network interface to be recognized.

S400ToolsFX for Windows

The S400ToolsFX software is also built for Windows and has a similar installation procedure.

- Step 1. Download the S400ToolsFX executable to your computer
- Step 2. Double-click the installer and install the S400ToolsFX software.
- Step 3. Connect a CAT5e cable from your computer to the S400 System.
- Step 4. Configure the network connection on your Windows machine. S400ToolsFX looks for a port with an IP address in the pre-defined S400 subnet (10.66.x.x). Configure the IP address of the port to be used to an address in that range, such as 10.66.0.11, and the subnet mask to 255.255.0.0.

Please note that you will see the same message if you start S400ToolsFX without a proper S400 IP address.

To set your Windows computer to a proper S400 IP address in the 10.66.X.X range:

Step 1. Open the Windows Network and Sharing Center. Click the Change Adapter Settings option on the left side.

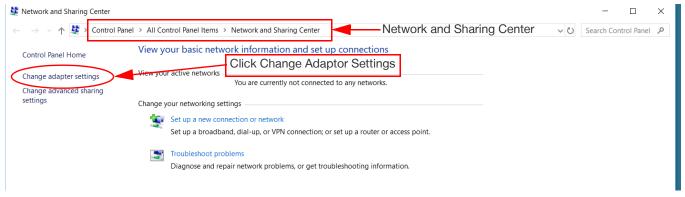


Figure 57: Windows Network and Sharing Center

Step 2. Upon clicking the Change Adapter Settings menu option, you'll be presented with a list of your Network Connections. Alternatively, you may go direct to this window by opening a command line window (Hold down the Windows Key and hit "R" for Run) and typing in **ncpa.cpl** and hit enter.

Network Con	nections					-		×
- → × ↑	🔌 🛬 > Control Panel > Netw	ork and Internet > Network (Connections			マ ひ Search Netw	ork Con	\$
Organize 🔻	Disable this network device	Diagnose this connection	Rename this connection	Change settir	ngs of this connection	• • •		
Loc	Bluetooth Network Connection Not connected	Mobility Clie Disabled	onnect Secure ent Connection		 Disable Status Diagnose Bridge Connections 	Wi-Fi Disabled Intel(R) Dual Band Wireless		
Rig	ht-click Prope	rties			Create Shortcut Delete Rename			

Figure 58: Opening Ethernet Adapter Properties

Step 3. Upon clicking Properties for your Ethernet Adapter, locate the IPv4 properties and double-click the item. You'll be presented with the Properties window for your Ethernet adapter. Change the setting from "Obtain IP Address Automatically" to "Use the Following IP Address" and enter in your S400 IP Address and its Subnet Mask:

Propriese Upper attice	Perction Rename this connection Change settings of this connection
Ethernet Properties Ketworking Connect using:	AnyConnect Secure ility Client Connection pled Ethernet Network cable unplugged Intel(R) Ethernet Connectio
Intel(R) Ethemet Connection (5) I219-LM Double-click TCP/IPv4 Configure This connection uses the following items: Configure for Microsoft Networks	Internet Protocol Version 4 (TCP/IPv4) Properties General You can get IP settings assigned automatically if your network supports
 ✓ File and Printer Sharing for Microsoft Networks ✓ QoS Packet Scheduler ✓ Intel(R) Technolog, Access Filter Driver ✓ Intemet Protocol Version 4 (TCP/IPv4) ⊥ Microsoft Network Adapter Multiplexor Protocol 	this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. Enter in your S400 IP and click OK Ogbtain an IP address automatically Oge the following IP address:
Microsoft LLDP Protocol Driver	IP address: 10 . 66 . 0 . 1 Subnet mask: 255 . 255 . 0 . 0 Default gateway:
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	Obtain DNS server address automatically Oute the following DNS server addresses:
OK Cancel	Preferred DNS server: . Alternate DNS server: .
tems 1 item selected	Valjdate settings upon exit Advanced OK Cancel

Figure 59: Changing the IP Address and Subnet Mask for Ethernet Adapter

