

## rMan V2

# Setup and Operations Guide

# **rMan V2 Setup and Operations Guide**

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This equipment has been tested and found to comply with the limits for a Class A, digital device, pursuant to Part 15, Subpart B of the FCC Rules and the Canadian EMC Requirement (ICES-003). These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user will be required to correct the interference at their own expense. Shielded cables must be used to ensure compliance with the FCC Class A limits.

## ***Declaration of Conformity***

Utah Scientific, Inc.

4750 Wiley Post Way, Suite 150

Salt Lake City, Utah 84116-2878 U.S.A.

We declare our sole responsibility that the Utah-400 Digital Routing Switcher is in conformance with the following standards:

- EN50081-1 Generic Emission Standard
- EN50082-2 Generic Immunity Standard
- IEC-950 Product Safety
- C-UL 1950 Product Safety
- UL 1950 Product Safety

Following the provisions of the Directive(s) of the Council of the European Union

- EMC Directive 89/336/EEC
- Low Voltage Electrical Directive 72/23/EEC

Utah Scientific, Inc. hereby declares that the product specified above conforms to the above Directive(s) and Standard(s).

## ***Important Safeguards and Notices***

This section provides important safety guidelines for the Operator and Service Personnel. Specific warnings and cautions are found throughout the guide where they apply, but may not appear here. Please read and follow the important safety information, specifically those instructions related to risk of fire, electric shock, or injury to persons.

### ***Safety Symbols***



Hazardous Voltage symbol



Caution symbol. The product is marked with this symbol when it is necessary to refer to the manual to prevent damage to the product.

### ***Warnings***

Please observe the following important warnings:

- Any instructions in this guide that require opening the chassis, changing a power supply, or removing a board, should be performed by qualified personnel only. To reduce the risk of electric shock, do not perform any service unless you are qualified to do so.
- Heed all warnings on the unit and in the operating instructions.
- Do not use this product in or near water. Disconnect AC power before installing any options or servicing the unit unless instructed to do so by this manual.
- This product is grounded through the power cord ground conductor. To avoid electric shock, plug the power cord into a properly wired receptacle before connecting the product inputs or outputs.
- Route power cords and other cables so they won't be damaged.
- The AC receptacle (socket) should be located near the equipment and be easily accessible.
- Disconnect power before cleaning. Do not use any liquid or aerosol cleaner - use only a damp cloth.
- Dangerous voltages exist at several points in this product. To avoid personal injury, do not touch exposed conductors and components while power is on.
- Do not insert anything into either of the systems two-power supply cavities with power connected.

- Do not wear hand jewellery or watches when troubleshooting high current circuits, such as power supplies. During installation, do not use the door handles or front panels to lift the equipment as they may open abruptly and injure you.
- To avoid fire hazard when replacing fuses, use only the specified correct type, voltage and current rating as referenced in the appropriate parts list for this product. Always refer fuse replacement to qualified service personnel.
- Have qualified personnel perform safety checks after any service.

## ***Cautions***

Please observe the following important cautions:

- When installing this equipment do not install power cords to building surfaces.
- To prevent damage when replacing fuses, locate and correct the problem that caused the fuse to blow, before reconnecting power.
- Use only specified replacement parts.

## ***Company Information***

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Follow the menu instructions for Emergency Service.

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# rMan-V2

## SYSTEM OVERVIEW

The rMan Utility has been developed as a management tool for Utah Scientifics Router Operations. Once the SC-4 and control panels have been configured using the U-Con utility, rMan is utilized for system status and maintenance.

RMan can be used throughout the life of the facility's router operations for effective observation and maintenance. The program is also designed to offer corrective 'advice' when certain problems develop. This may involve certain steps or specific corrective action to resolve conflicts.

## INSTALLING rMan-V2

Locate the system installation CD v3.61 or newer. Larger numbers are newer. (If you do not have this CD, contact Utah Scientific Customer Support at 800-447-7204) **NOTE: this version of rMan has been v2.xx (x=various numbers indicating upgrades) since January 1, 2011 beginning on system CD v3.61. Any system CD prior to this will use rMan v1.05.**

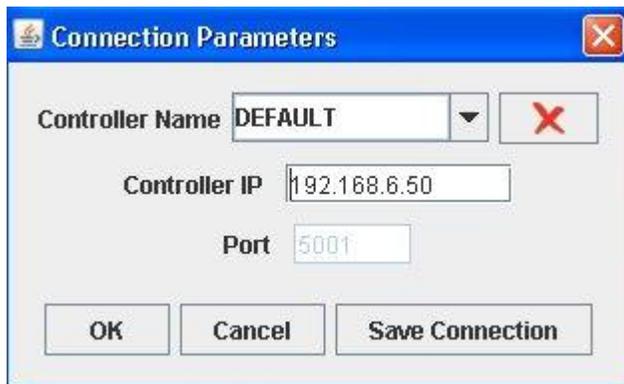


Open the Install2020 folder and navigate to the release-rMan-V2 folder. In the release-rMan folder double click the setup 2.xx bat file and follow the instructions. (see figures above) This will install Java and then put a shortcut on the desktop. Java may need to be installed manually. Double click the jre-6u15-windows-j586-s.exe file to run. **NOTE: If rMan doesn't work or run right then try installing it again.**

## LAUNCHING rMan-V2

Double click the shortcut to the rMan application located on the desktop or other location. Make sure an Ethernet connection exists between the SC-4/400 and the PC containing the rMan application. Follow the standard Ethernet protocol for the connection, using CAT5 cable. A crossover cable is required if running directly between the devices.

The first screen to open will be the connection parameters screen. This will default to the connection titled 'Default' and will prompt you to select an already existing controller from the drop down list or enter the correct IP address for the SC4/SC400. The next time it is opened the address will be the last one entered as well as the controller name. **NOTE: rMan only works with an SC4, SC400 and SCX400, not an SC3. The Ethernet port is 5001 and cannot be changed.**

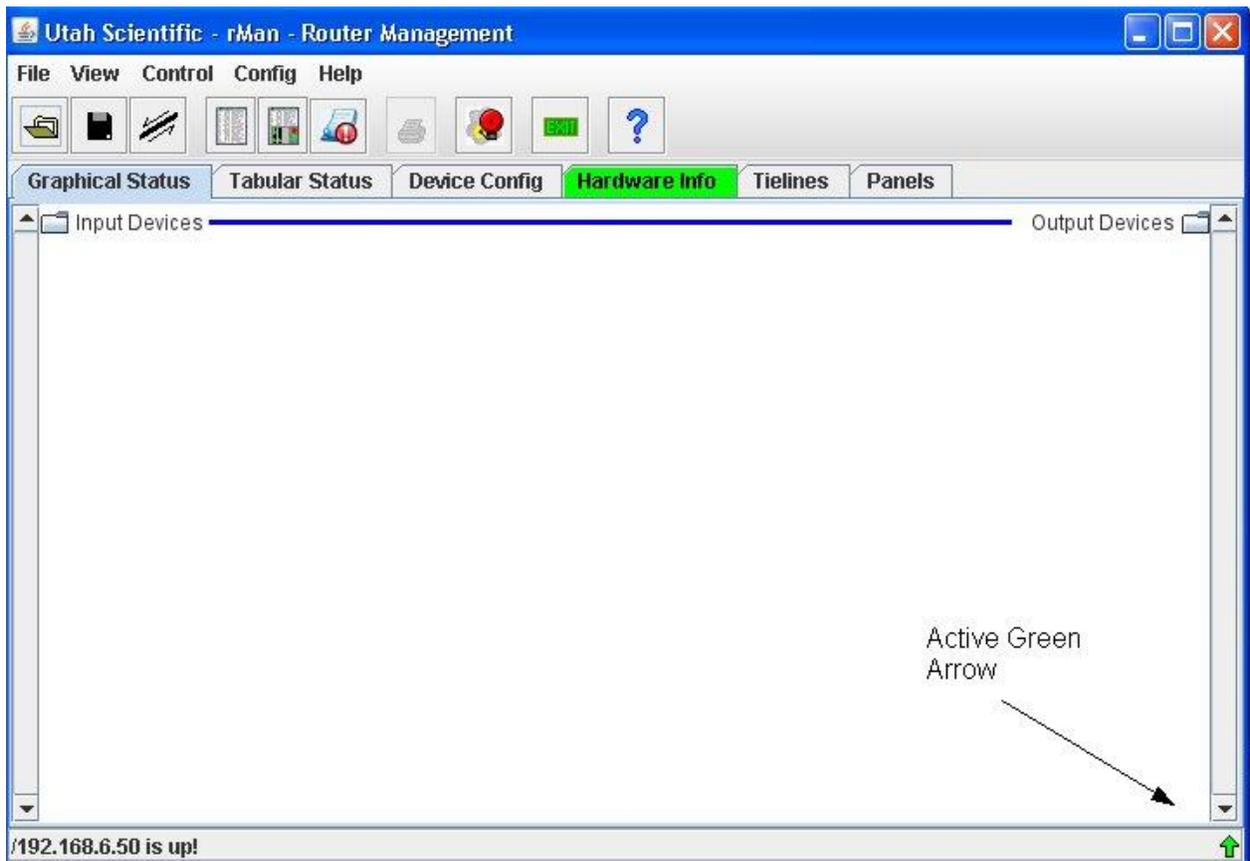


rMan Connection Screen

If the SC4/400 address is unknown, then you will need to attach a serial cable to the diagnostic port on the controller and use the `ifconfig` or `chassis -r` command. (Refer to the Systems Installation Guide Appendix D for details)

After you enter the correct IP address you will then click OK. If the address is incorrect then it will still launch the app but will not show any status. To save an IP address and controller name, click the 'Save Connection' button after typing in the details.

There should be a green arrow pointing up in the lower right corner of the program after it opens.



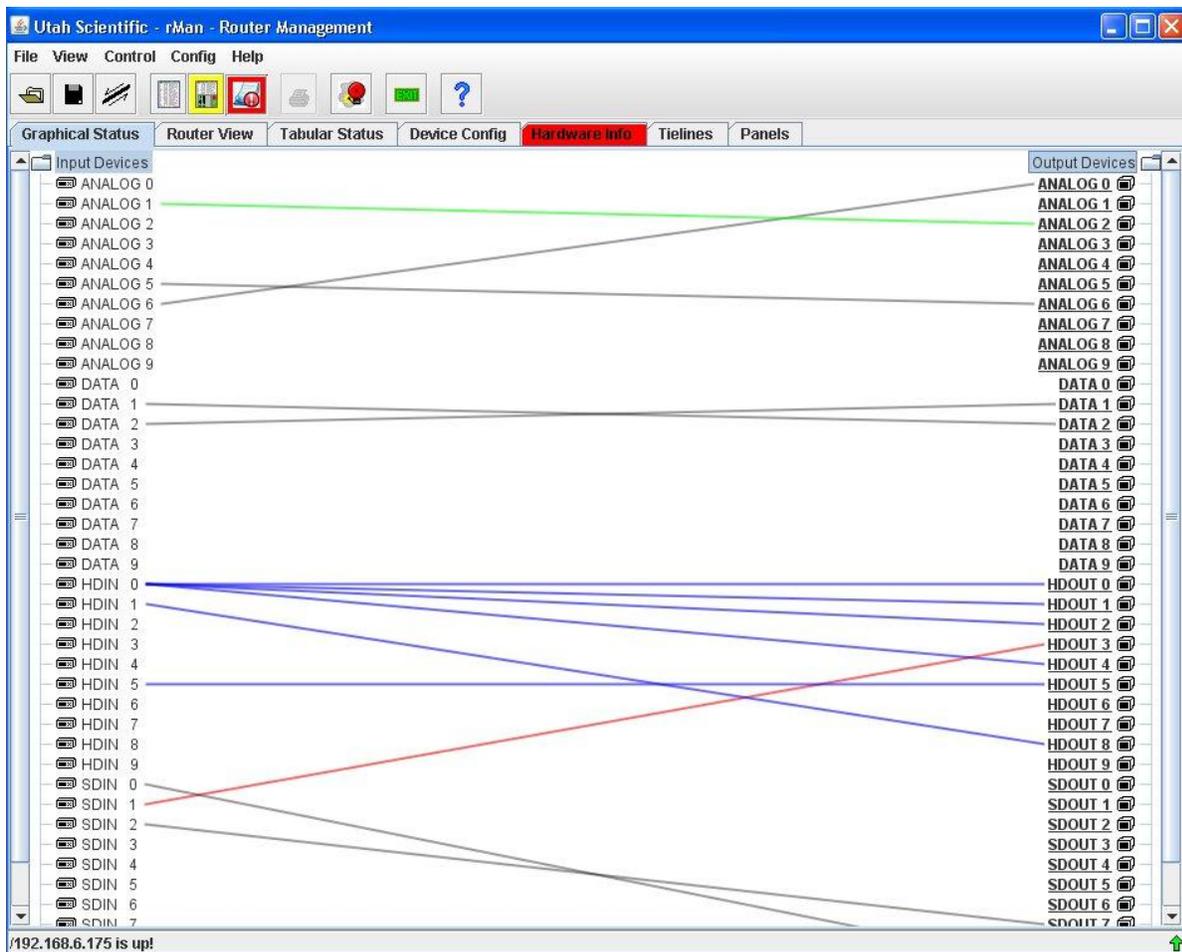
**rMan View with Active Green Arrow**

To open the application to full screen, click on the maximize button in the upper right corner or double click the blue status bar at the top of the screen.

## GRAPHICAL STATUS VIEW

The first view that will appear in the middle of the app will open with the graphical view as the default screen. This view will show all connections of what sources are connected to each destination in real time. It also allows for user intervention for viewing and clearing destination locks.

Double click directly on the word 'Input Devices' and 'Output Devices' to open the view for either or both lists. You will see all input to output connections drawn in lines. Blue lines indicate video format connection types. Green lines indicate audio format connection types. Gray to black connections indicates all video and audio format connection types. Red lines indicate tie line connections.



Connection Screen showing all Colored Connections

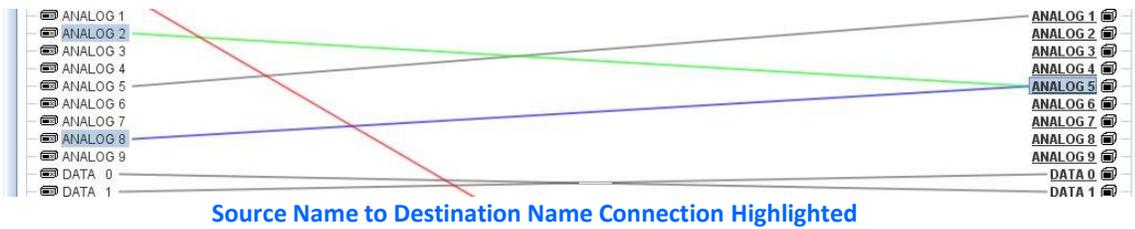
Double click on the Input Devices and Output Devices to minimize the view.

The names you see for Input and Output Devices is read from the SC4 input and output list. As switches are made the connections follow in real time.

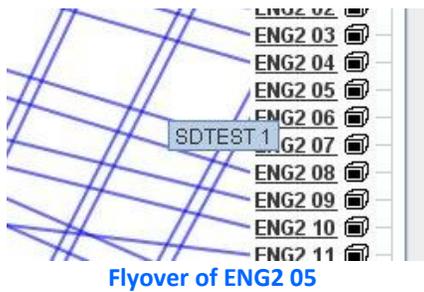
You can use the scroll bars to the left of the input devices and to the right of the output devices. You may also use the roller on the mouse when you are over the left or right section of the screen.

If you click directly on a source or destination connection it will highlight it as well as the name of the connection it is attached to on the other side of the screen. If you click on any source

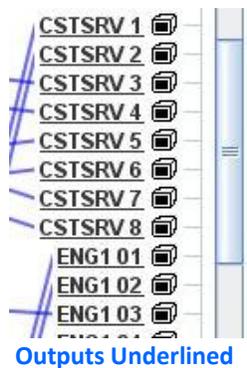
name that has a connection to an output it will automatically scroll the outputs to bring that output that it is connected to into view.



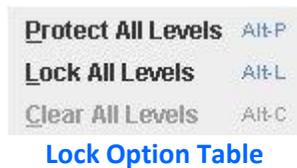
If you simply fly the mouse over the top of a connection name in the input or output device list and leave it sit for a couple of seconds, it will show all of the connections it is going to on the other side of the connection screen.



The outputs are underlined indicating other options it is capable of performing.



Right click on any output name and it will bring up the lock options. From this view the output you have right clicked on will allow either a protect or a lock to be applied to all levels. This will be for all levels associated to that output.



A protect, locks that output from being switched by any other panel except for rMan and must be cleared from rMan. A yellow shield will appear next to the output.



A lock, locks that output from being switched by any other panel but can also be cleared by any other panel. A blue lock will appear next to that output.



Clear will remove all protects and locks from that output. Double click on any output and it will change to the tabular status window and show all the levels and sources that are switched to that output as well as any locks or protects.

Utah Scientific - rMan - Router Management

File View Control Config Help

Graphical Status **Tabular Status** Device Config Hardware Info Tielines Panels

Dst Device	dig-vid
BARCO 2	AJA 1A
BARCO 3	AJA 1B
BARCO 4	HDTEST01
BARCO 5	IN 006
CONV 001	
CONV 002	
CSTSRV 1	SDTEST 1
CSTSRV 2	SDTEST 2
CSTSRV 3	CODI 1A
CSTSRV 4	CODI 1B
CSTSRV 5	HDTEST01
CSTSRV 6	HDTEST02
CSTSRV 7	AJA 1A
CSTSRV 8	AJA 1B
ENG1 01	SDTEST 1
ENG1 02	SDTEST 2
ENG1 03	HDTEST01
ENG1 04	HDTEST02
ENG2 01	HDTEST02
ENG2 02	HDTEST01
ENG2 03	AJA 1A
🛡️ ENG2 04	🛡️ AJA 1B
ENG2 05	SDTEST 1
ENG2 06	SDTEST 2
ENG2 07	CODI 1A
🔒 ENG2 08	🔒 CODI 1B
ENG2 09	HDTEST 3
ENG2 10	HDTEST 4
ENG2 11	IN 006
ENG2 12	

/192.168.6.50 is up!

Locks in Tabular Status View

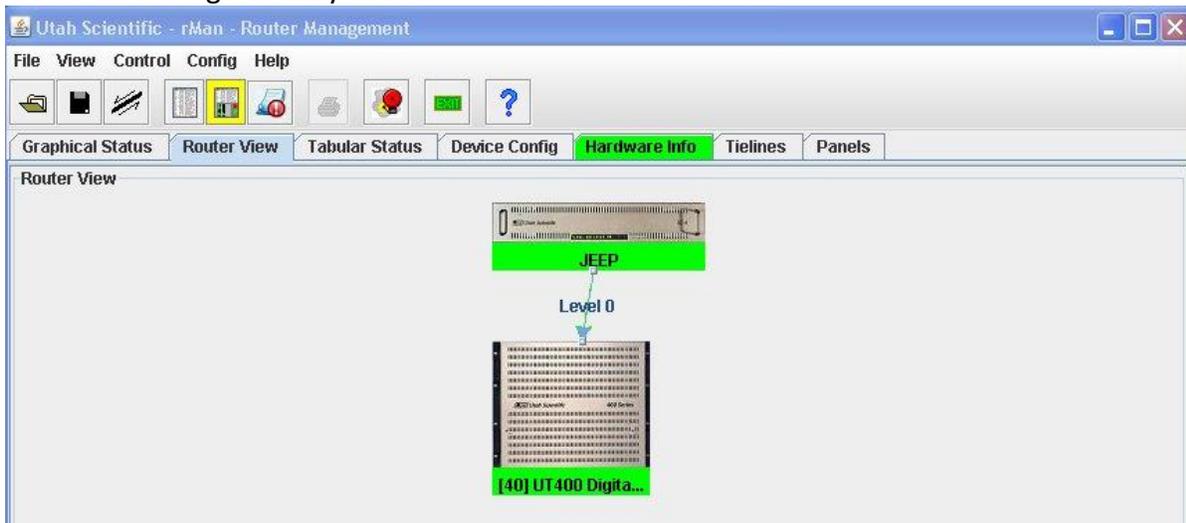
To clear individual levels, right click on the lock (padlock) or protect (shield) in the level column and select 'Clear Level'.

To clear all levels, right click on the lock (padlock) or protect (shield) in the Dst Device column and select 'Clear All Levels'.

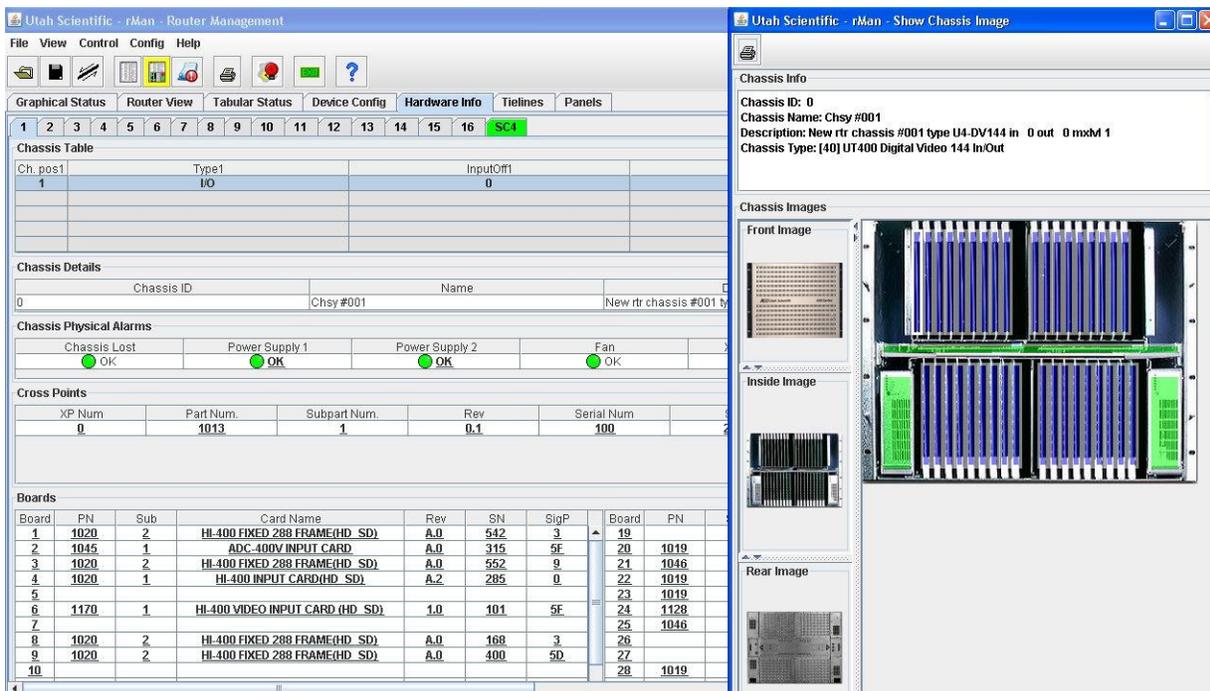
To lock or protect outputs from this table, right click on any name and select the desired lock or protect item. For all levels right click the Dst Device and for individual levels right click the level column item.

## ROUTER VIEW

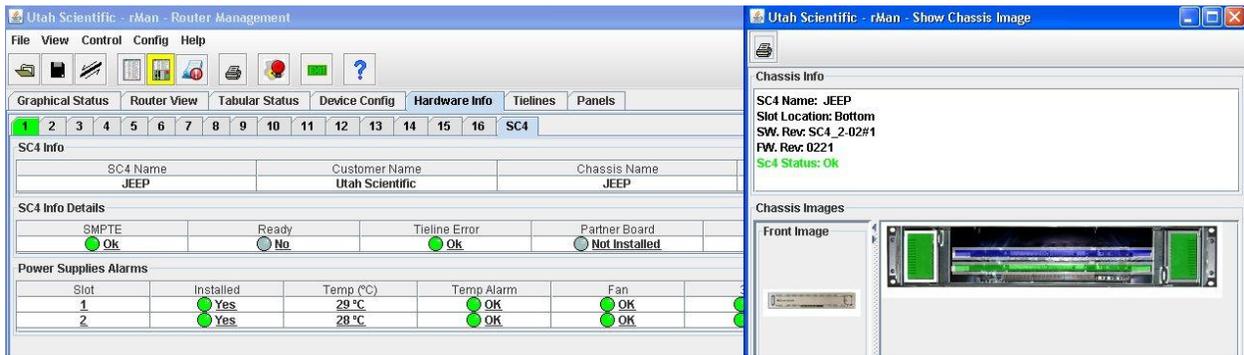
This will show the physical controller and all physical routers connected to the controller, in a graphical tree type view. It will give a description of the routers with lines going to them from the controller. The lines will also indicate what physical address (level) that router is set to, which is read back from the level dipswitch on that router. Double click on any device in this view and it will go directly to the hardware info table for that device.



Router View of Controller and Router



Router Hardware Info View after Double Clicking the Router

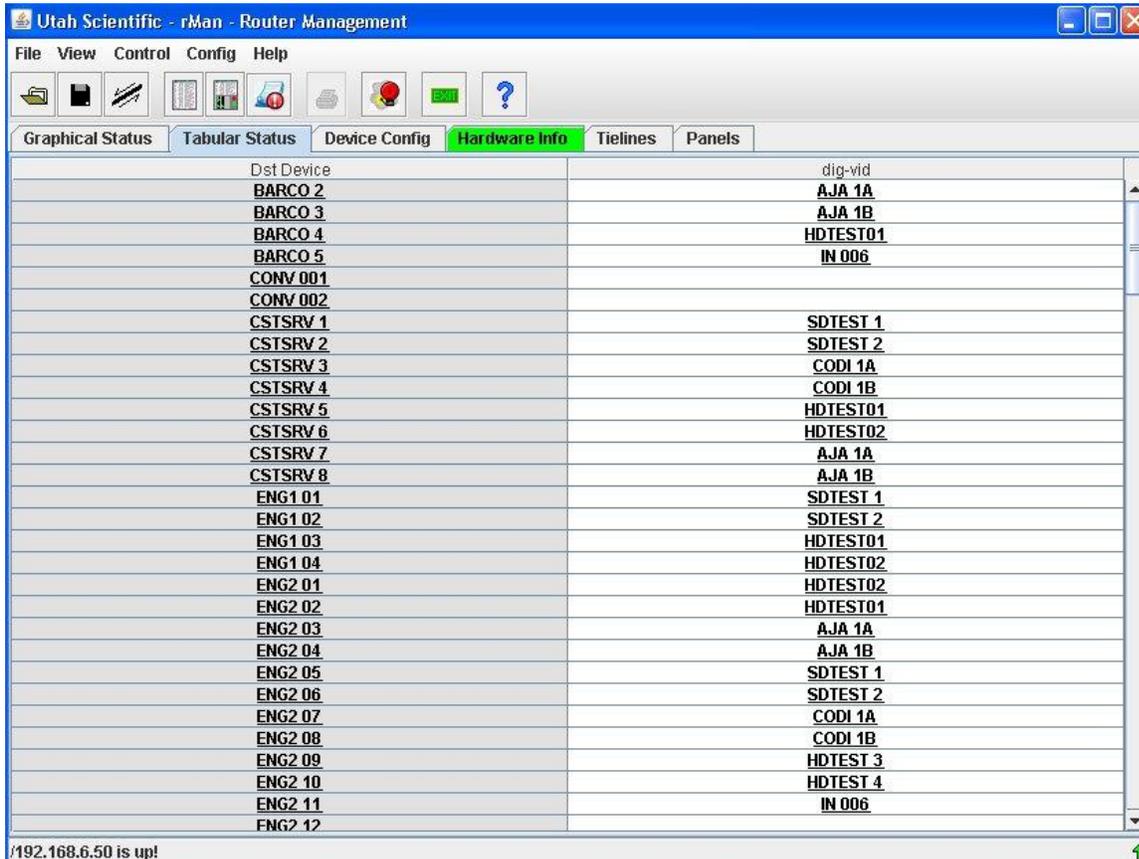


Router Hardware Info View after Double Clicking the Controller

## TABULAR STATUS VIEW

Click on the tab called Tabular Status at the top of the screen. This view shows the connections of all Input Devices currently routed to Destination Devices using the actual names of the Devices that are read back from the SC4 Input and Output Device list in real time as the routes happen.

This view shows the destination device list down the left side in the order they appear in the SC4 tables.



Tabular Status View with no Locks

The level columns will only read as Level 1 through 8. **NOTE: If there are more than 8 levels then it will not show status in this application. These levels are read from the level columns in the SC4 level table of which you will find the actual names for these levels and not numbers 1-8 at the top.**

There is a scroll bar to the right of the table that will allow you to go up and down the table.

To sort by any desired column, click the name above that column and it will have an arrow indicating up or down and remain there indicating which level the view is being sorted by. To lock or protect any output for all levels, right click on the Dst Device name (output name) and select lock or protect 'All Levels'. This will perform the action and show the lock or protect symbol in all of the level windows as well as the Dst Device name.

**Protect All Levels**    Alt-P

**Lock All Levels**     Alt-L

**Clear All Levels**    Alt-C

Lock Option Table

To lock or protect an individual level for any desired destination, right click on the level window for that output and select lock or protect 'Level'. This will perform the action and show the lock or protect symbol in that level only as well as the Dst Device name. **Note: there does not have to be a connection in any level in order to lock, protect or clear it.**

DATA 6								
DATA 7								DATA 4
DATA 8								
DATA 9								
HDOUT 0	SDIN 5							
HDOUT 1	SDIN 0							
HDOUT 2	HDIN 0							
HDOUT 3	HDIN 0							
HDOUT 4	HDIN 0							
HDOUT 5	HDIN 0							
HDOUT 6	HDIN 0							
HDOUT 7								
HDOUT 8								
HDOUT 9								
SDOUT 0		ANALOG 0		ANALOG 0				
SDOUT 1		SDIN 0		SDIN 0				
SDOUT 2								
SDOUT 3								
SDOUT 4								
SDOUT 5								

Locks and Protects in Tabular Status – All levels and Single Levels

To clear all levels, right click the Dst Device name and click the clear 'All Levels' item. To clear any single level, right click the desired level for that Dst Device and select the 'Clear Level' item. **Note: there does not have to be a connection in any level in order to lock, protect or clear it.**

## DEVICE CONFIG STATUS VIEW (FOR VIEWING ONLY)

Click on the tab in the center top of the screen called Device Config. This view shows the actual Input and Output device list that is currently located in the SC4 tables.

The list will show up beginning at Device number 0 and will status from smallest to largest numbers down the left side of the view. This cannot be sorted so all of the names and router numbers will show as they are connected to the index numbers.

The screenshot shows the 'rMan - Router Management' application window. The 'Device Config' tab is active, and the 'Sources' sub-tab is selected. The table displays the following data:

Device #	Source	HD Vid	SDI Vid	AES 1/2	AN Vid	AA Left	AA Right	DATA
11	SDIN 1	TIE	1	1				
12	SDIN 2	TIE	2	2				
13	SDIN 3	TIE	3	3				
14	SDIN 4	TIE	4	4				
15	SDIN 5	TIE	5	5				
16	SDIN 6	TIE	6	6				
17	SDIN 7	TIE	7	7				
18	SDIN 8	TIE	8	8				
19	SDIN 9	TIE	9	9				
9	HDIN 9	9						
8	HDIN 8	8						
7	HDIN 7	7						
6	HDIN 6	6						
5	HDIN 5	5						
4	HDIN 4	4						
3	HDIN 3	3						
2	HDIN 2	2						
1	HDIN 1	1						
0	HDIN 0	0						
20	ANALOG 0		TIE	TIE	0	0	0	
21	ANALOG 1		TIE	TIE	1	1	1	
22	ANALOG 2		TIE	TIE	2	2	2	
23	ANALOG 3		TIE	TIE	3	3	3	
24	ANALOG 4		TIE	TIE	4	4	4	
25	ANALOG 5		TIE	TIE	5	5	5	
26	ANALOG 6		TIE	TIE	6	6	6	
27	ANALOG 7		TIE	TIE	7	7	7	
28	ANALOG 8		TIE	TIE	8	8	8	
29	ANALOG 9		TIE	TIE	9	9	9	
60	DATA 0							0
61	DATA 1							1
62	DATA 2							2
63	DATA 3							3

Device Config Table Showing Sources

To view the inputs devices you will click on the Sources tab and to view the output devices you will click on the Destination tab located in the upper left corner of the table. This is a real time view of the read out from the SC4/SC400 that shows only the connection table and not any routes that are made.

The screenshot shows the 'rMan - Router Management' application window. The 'Device Config' tab is active, and the 'Destinations' sub-tab is selected. The table displays the following data:

Device #	Destination	HD Vid	SDI Vid	AES 1/2	AN Vid	AA Left	AA Right	DATA
9	HDOUT 9	9						
8	HDOUT 8	8						
7	HDOUT 7	7						
6	HDOUT 6	6						
5	HDOUT 5	5						
4	HDOUT 4	4						
3	HDOUT 3	3						
2	HDOUT 2	2						
1	HDOUT 1	1						
0	HDOUT 0	0						
20	ANALOG 0				0	0	0	
21	ANALOG 1				1	1	1	
22	ANALOG 2				2	2	2	
23	ANALOG 3				3	3	3	
24	ANALOG 4				4	4	4	
25	ANALOG 5				5	5	5	
26	ANALOG 6				6	6	6	
27	ANALOG 7				7	7	7	
28	ANALOG 8				8	8	8	
29	ANALOG 9				9	9	9	
30	DATA 0							0
31	DATA 1							1
32	DATA 2							2

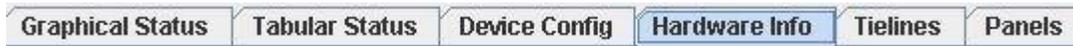
Device Config Table Showing Destinations

Use the scroll bar at the right of the screen to view up and down the list. Click directly on the name above each column to sort up or down.

## HARDWARE INFO

The 'Hardware Info' tabs purpose is to show information related to any Video and Audio router chassis, including the control system, in both its normal state as well as with errors that occur with those components. This includes all of the modular components such as, power supplies, fans, controllers, I/O cards, cross point cards, and voltages for each of these pieces.

While another tab is selected, the 'Hardware Info' tab will status green when everything is operating correctly. If it is red then that indicates an alarm issue on one or more of the router levels or the SC4. It will be blue when it has been selected and the table is in view.



Hardware Info Tab When Selected (Blue)



Hardware Info Tab With no Issues (Green)



Hardware Info Tab with Errors (Red)

Click the Hardware Info tab and it will be light blue in color. It will bring up the level and SC4 tabs. The level tabs have numbers 1 through 16 and represent the physical video and audio router levels, which are read back from a dip switch assignment on that router. The color white is for any levels that are not detected. The color green is of routers that are connected, including the SC4/SC400 and are running with no alarm conditions detected. The color red is of routers that are connected, including the SC4/SC400 and have alarm conditions.



Hardware Info Tab with Various Views

Any item that is a real physical level and is online will be green in color for that level tab, including the SC4/SC400. When the level or SC4 tab is selected, then that tab will turn blue. All other tabs will remain either gray (not online), green (online and all is good) or red (online with errors).

The 'SC4' tab will always be on line when rMan is running and connected. It is how the connection to rMan is being made.



Click on the SC4 tab and the following table and information will appear:

Graphical Status	Tabular Status	Device Config	Hardware Info	Tielines	Panels											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	SC4
SC4 Info																
SC4 Name		Customer Name			Chassis Name			Slot Location			Active					
JEEP		Utah Scientific			JEEP			Bottom			Yes					
SC4 Info Details																
SMPT		Ready		Tieline Error		Partner Board		Partner Bld State		SW Rev			FW Rev			
OK		Yes		OK		Installed		Ready		SC4 2.1-0 beta.15#5			0221			
Power Supplies Alarms																
Slot	Installed	Temp (°C)	Temp Alarm	Fan	3.3V	5V	12V	-12V								
1	Yes	30 °C	OK	OK	OK	OK	OK	OK								
2	Yes	28 °C	OK	OK	OK	OK	OK	OK								

SC4 Tab **NOTE: items that are underlined may be viewed in the chassis itself by right clicking the item and then clicking 'Show Me'.**

### SC4 Info

This information is read back from the SC4/SC400 card. The names below are assigned from the 'Hardware Profile' in the UCON-V4 application. **VERIFY THAT THIS IS CORRECT**

SC4 Info					
SC4 Name	Customer Name	Chassis Name	Slot Location	Active	
JEEP	Utah Scientific	JEEP	Bottom	Yes	

'SC4 Name' – This is the actual name used to connect in UCON.

SC4 Name
<b>KUSI-SC4</b>

'Customer Name' – This is the name of the company or call letters.

Customer Name
<b>Utah Scientific</b>

'Chassis Name' – This is used in the logging program to locate the different chassis types.

Chassis Name
<b>KUSI-SC4</b>

'Slot Location' – This is either top or bottom and indicates the slot the active card is in.

Slot Location
<b>Bottom</b>

'Active LED' – This indicates if the LED is working correctly on the card. Green is 'Yes'.

Active
<b>Yes</b>

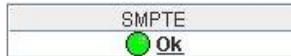
NOTE: Only the 'Active' control card will appear in this line and it will indicate which slot it is in (top or bottom) the chassis.

## SC4 Info Details

This table reads back the revisions of the software and firmware from the 'Active' SC4/SC400 card as well as any SMPTE alarms system wide. When the physical SMPTE alarm LED lights on the card it will indicate that here. This table also shows the state of the partner board.

SC4 Info Details						
SMPTE	Ready	Tieline Error	Partner Board	Partner Brd State	SW Rev	FW Rev
● Ok	● Yes	● Ok	● Installed	● Ready	SC4 2.1.0 beta.15#5	0221

**'SMPTE'** – The SC4/SC400 control card SMPTE LED will turn red if there are any alarms detected system wide. This includes card, power supply and fan failures from all physical levels recognized by the SC4. Otherwise it will remain green and status 'OK' in this box.



**'Ready'** – This box is synchronized to the physical 'Ready' LED's on the SC4/SC400 cards and will go green and status 'Yes' in this box when both 'Ready' LED's are lit on both cards. This indicates that the backup card tables have been updated to match the active card showing that it is 'Ready' to become active if necessary. (The ready LED only works with two cards installed for obvious reasons) **NOTE: The ready LED may status 'No' when the Partner board State actually status's 'Ready'. When programming is sent to the active card from Ucon it will turn the physical LED off while the backup card remains green.**



**'Tieline Error'** – This is going to status green and 'OK' unless there is tielines setup in the SC4. When there are, then this will turn red if the tielines that are in use reach the threshold of all being used.



**'Partner Board'** – This will go green and status 'Installed' when the partner card is present.



**'Partner Board State'** – When the redundant card is installed, this LED will be green and status 'Ready'. If there is no backup card installed, it will be gray and status 'N/I' for not installed.



**'SW Rev and FW Rev'** – This will show the software and firmware versions of the active card.

**NOTE: Cards must run on same versions in all cases – mismatched versions will cause control issues.**

SW Rev
<b>SC4 2-1-0 beta-15#5</b>

FW Rev
<b>0221</b>

## Power Supplies Alarms

This table refers to the power supplies installed in the SC4 chassis. NOTE: For an SC400 card installed in a UT400/64 chassis, this is unused. The power supplies in the UT400/64 chassis appear in the router level tables.

Power Supplies Alarms									
Slot	Installed	Temp (°C)	Temp Alarm	Fan	3.3V	5V	12V	-12V	
1	● Yes	30 °C	● OK	● OK	● OK	● OK	● OK	● OK	● OK
2	● Yes	28 °C	● OK	● OK	● OK	● OK	● OK	● OK	● OK

**‘Slot’** – This position will have a number 1 for the left physical slot and 2 for the right physical slot in the frame.

Slot
<b>1</b>
<b>2</b>

**‘Installed’** – This will indicate if the supply is physically installed in its slot. If not then it will status ‘No’ and have no alarms. Otherwise, it would status ‘Yes’ and if there are any alarms they will appear in the remaining cells for voltage or temp alarms.

Installed
● <b>Yes</b>
● <b>Yes</b>

**‘Temp’** – This is the readout of the actual supply temperature and will status in Celsius. 25-30 degrees is normal.

Temp (°C)
<b>30 °C</b>
<b>28 °C</b>

**‘Temp Alarm’** – If there are temperature alarms, the ‘Temp’ LED will go red and this will indicate an alarm in this window.

Temp Alarm
● <b>OK</b>
● <b>OK</b>

**‘Fan’** – Fan failures on the supplies will turn the alarm RED and indicate an alarm in this window.

Fan
● <b>OK</b>
● <b>OK</b>

**‘3.3V, 5V, 12V, -12V’** – Any of these four voltage LED’s will turn red on the supply if they go out of their tolerable range and will indicate an alarm in this window.

3.3V	5V	12V	-12V

## Level numbers 1-16

The status of the router chassis and their cross point cards, I/O cards, fans and power supplies, are located behind the level number 1-16 tabs. There are level dip switch assignments, which are unique to each router, that make up the numbers 1-16. These dip switches are either located on the cross point card or on the rear of the chassis, depending on the type of router. This level assignment is reported to the SC4/SC400 as the level number for that router. The tab will look like the following figure.



Click on the level number for any of the physical levels and the tables will show the following information: **NOTE: the actual physical level numbers are offset by one in this table and correspond to the physical dip switch settings assigned to that router. I.e.; level 1 in this rMan table is actually level 0 (dip switch) in the level table found in Ucon in the SC4 setup tables. Level 2 in this rMan table is actually level 1 in the SC4 tables, and so on.**

**Chassis Table**

Ch. post1	Type1	InputOff1	OutputOff1	Status1
1	I/O	0	0	

**Chassis Details**

Chassis ID	Name	Description	Type
0	Chsy#001	New rtr chassis #001 type U4-DV144 in 0 out 0 mxv... [40] UT400 Digital Video 144 In/Out	

**Chassis Physical Alarms**

Chassis Lost	Power Supply 1	Power Supply 2	Fan	XPT Power Supply	SMPTE	Board Lost

**Cross Points**

XP Num	Part Num.	Subpart Num.	Rev	Serial Num	S.W	F.W	Installed	Active
0	1013	1	0.1	100	2.18	2.3	Yes	Yes

**Boards**

Board	PN	Sub	Card Name	Rev	SN	SigP	Board	PN	Sub	Card Name	Rev	SN	SigP
1	1020	2	HI-400 FIXED 288 FRAME(HD. SD)	A.0	542	3	19						
2	1045	1	ADC-400V INPUT CARD	A.0	315	5F	20	1019	1	UR4 HD VIDEO OUTPUT(HD. SD)	A.0	235	13
3	1020	2	HI-400 FIXED 288 FRAME(HD. SD)	A.0	552	9	21	1046	1	DAC-400V OUTPUT	C.1	135	0
4	1020	1	HI-400 INPUT CARD(HD. SD)	A.2	285	0	22	1019	1	UR4 HD VIDEO OUTPUT(HD. SD)	A.0	250	55
5							23	1019	1	UR4 HD VIDEO OUTPUT(HD. SD)	A.0	226	5F
6	1170	1	HI-400 VIDEO INPUT CARD (HD. SD)	1.0	101	F	24	1128	1	DAC-400VB	A.1	115	5F
7							25	1046	1	DAC-400V OUTPUT	C.1	328	1F
8	1020	2	HI-400 FIXED 288 FRAME(HD. SD)	A.0	168	3	26						
9	1020	2	HI-400 FIXED 288 FRAME(HD. SD)	A.0	400	5D	27						
10							28	1019	2	HO-400 OUTPUT CARD(HD. SD)	D.1	956	5F
11							29	1019	1	UR4 HD VIDEO OUTPUT(HD. SD)	A.0	202	0
12							30	1019	1	UR4 HD VIDEO OUTPUT(HD. SD)	A.0	154	F
13							31	1019	2	HO-400 OUTPUT CARD(HD. SD)	C.2	60	5F

### Hardware Info View

If any items in the chassis tables are yellow, then this indicates a new device has been added and you must go to the Ucon-V4 app and run the Update SC4 Hardware' from the 'SC-4 Data' menu item. It should then go green. It will only turn red after the system has been updated and

recognized by the SC4/SC400 and then detects an error. If expansion cards are added, it will status yellow again, indicating that something is new or different since the last update. **NOTE:** First click the tab and find out what is different prior to running another update from UCON-V4.

## Chassis Table

This table describes the upper level of the router chassis, from where it's positioned to the type of router it is and its dip switch settings.

Chassis Table				
Ch. pos1	Type1	InputOff1	OutputOff1	Status1
1	I/O	0	0	OK
				N/A

Chassis Table

**'Ch.pos 1'** – This will indicate which position from bottom to top of chassis that are stacked on top of each other, such as the series 1 UT400 576 router, which made up multiple frames for a single level. In most cases there will be a single chassis only, but if there are more than one for any single level, this number is for the position number of each chassis.

Ch. pos1
1

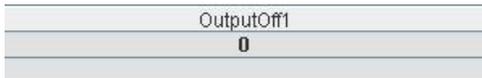
**'Type 1'** – This is the description of the chassis type. This example is of a chassis with both input and output cards installed. Some chassis may have only inputs or only outputs and will indicate that here.

Type1
I/O

**'InputOff1'** – This is the offset number of the inputs, if they begin at a number higher than the number 0. If offset this number is read back from the dip switch and will always then the offset would be in increments of 64. A V144 would be in increments of 144 and so forth.

InputOff1
0

**'OutputOff1'** – This is the offset number of the outputs, if they begin at a number higher than the number 0. If offset this number is read back from the dip switch and will always be in increments the size of the router. For instance, if the router were a V64 chassis then the offset would be in increments of 64. A V144 would be in increments of 144 and so forth.



**'Status1'** – This will status a green LED if the router is read back correctly. Otherwise it will have a red alarm LED.



## Chassis Details

This section is used to describe custom names and descriptions for each router type that will make the best sense to the persons viewing it in rMan. It will also read back the type of router it is with an ID name, which cannot be edited.

Chassis Details			
Chassis ID	Name	Description	Type
0	Chsy#001	New rtr chassis #001 type U4-DV144 in 0 out 0 mxlr... [40] UT400 Digital Video 144 In/Out	

**'Chassis ID'** – This is a read back of the chassis ID assigned to the type of router it is.

Chassis ID
0

The following table shows the various chassis types and their ID

Chassis ID	Chassis Type
UT200_AA (132)	UT200_AA
UT200_AA_LEFT( 133)	UT200_AA_LEFT
UT200_AA_RGHT( 134)	UT200_AA_RGHT
UT200_DA (136)	UT200_DA
UT200_AV (144)	UT200_AV
UT200_DV (152)	UT200_DV
UT300_AA_MONO (4)	UT300_AA_MONO
UT300_AA_LEFT( 5)	UT300_AA_LEFT
UT300_AA_RGHT( 6)	UT300_AA_RGHT
UT300_AA_EXP (7)	UT300_AA_EXP
UT300_DA_AES( 8)	UT300_DA_AES
UT300_DA_ES422 (9)	UT300_DA_ES422
UT300_DA_EXP (11)	UT300_DA_EXP
UT300_AV_XPT (16)	UT300_AV_XPT
UT300_AV_XPT_DA (48)	UT300_AV_XPT_DA
UT300_AV_XPT_OC (80)	UT300_AV_XPT_OC";
UT300_AV_XPT_EXP (112)	UT300_AV_XPT_EXP
UT300_DV_XPT (24)	UT300_DV_XPT
UT300_DV_XPT_DA (56)	UT300_DV_XPT_DA
UT300_DV_XPT_OC (88)	UT300_DV_XPT_OC";
UT300_DV_XPT_EXP (120)	UT300_DV_XPT_EXP
UT1500_XPT_32 (28)	UT1500_XPT_32
UT1500_XPT_64 (29)	UT1500_XPT_64
UT1500_XPT_96 (30)	UT1500_XPT_96
UT1500_XPT_128 (31)	UT1500_XPT_128";
UT400_DV_32 (77)	UT400 Digital Video 32 In/Out";
UT400_DA_32 (76)	UT400 Digital Audio 32 In/Out";
UT400_DV_64 (68)	UT400 Digital Video 64 In/Out
UT400_DA_64 (73)	UT400 Digital Audio 64 In/Out
UT400_HDS (67)	UT400 Digital Video 288 HDS In/Out Fixed
UT400_HDS_REDUN (69)	UT400 Digital Video 144 HDS In/Out Redun
UT400_DV_144 (64)	UT400 Digital Video 144 In/Out
UT400_DA_144 (70)	UT400 Digital Audio 144 In/Out";
UT400_DA_144_REDUN (74)	" UT400 Digital Audio 144 In/Out Redun";
UT400_DV_288_INP ( 65)	" UT400 Digital Video 288 Input
UT400_DV_288_OUT (66)	UT400 Digital Video 288 Output
UT400_DA_288_INP (71)	" UT400 Digital Audio 288 Input
UT400_DA_288_OUT (72)	UT400 Digital Audio 288 Output"
UT400_DV_288_REDUN (78)	UT400 Digital Video 288 In/Out Redun
UT400_DA_288_REDUN (79)	UT400 Digital Audio 288 In/Out Redun
UT400_DATA (75)	UT400 DATA

MXLATOR_NOCONF (96)	MXLator Non Configured
MXLATOR_CONF (97)	" MXLator Configured
MX_CHASSIS_NONE (0)	" No Chassis
MX_CHASSIS_UNKNOWN (1)	Unknown
MX_CHASSIS_SIMULATED (2)	Simulated
MX_CHASSIS_GENERIC (3)	Generic
UT400_528 (81)	UT400XL 528 In/Out
UT400_XL_BTM (82)	UT400XL 1056 In/Out Bottom
UT400_XL_TOP (83)	UT400XL 1056 In/Out Top";
UT400_528_144_REDUN (84)	UT400S2 144 In/Out
UT400_528_288_REDUN (85)	UT400S2 288 In/Out

**'Name'** – This is a custom name that is given to the router level in the UCON-V4 application from the 'Set Hardware Profile' table. A custom name may be a more simplified name for the router level than the one that is read back from the controller.

Name
Chsy #001

**'Description'** – This is a custom description that is given to the router level in the UCON-V4 application from the 'Set Hardware Profile' table. A custom description may be a more simplified description for the router level than the one that is read back from the controller.

Description
New rtr chassis #001 type U4-DV144 in 0 out 0 mxlwl 1

**'Type'** – Refer to the table above in the 'Chassis ID' section.

Type
[40] UT400 Digital Video 144 In/Out

## Chassis Physical Alarms

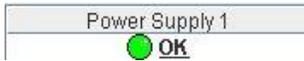
This part of the table relates directly with the alarm LED's located on the physical cross point card in each router. Each of the following items will have a graphical LED in its window. If an item like a power supply is not installed, it will status 'N/I'. It will status 'Error' if it has an alarm and the LED will be red. If all is good, it will status 'OK' and be green.

Chassis Physical Alarms						
Chassis Lost	Power Supply 1	Power Supply 2	Fan	XPT Power Supply	SMTPE	Board Lost
 OK	 OK	 OK	 OK	 OK	 OK	 OK

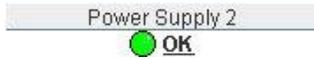
**'Chassis Lost'** – A green LED is normal. If there are any issues on the MX bus, such as cable length or connection issues, then this LED will go red.

Board Lost
 OK

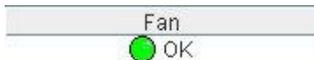
**'Power Supply 1'** – This is the left hand power supply position for all routers. It will status green unless there is an issue and then it will turn red and status 'Error'.



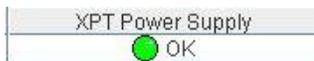
**'Power Supply 2'** – This is the right hand power supply position for all routers. It will status green unless there is an issue and then it will turn red and status 'Error'.



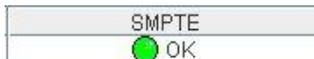
**'Fan'** – This is the LED for all fans within that router level. Green indicates that all fans are functioning properly. If any fans fail, then this will turn red and status 'Error'.



**'XPT Power Supply'** – This is specific to the cross point card. It will status green if all the voltages on the cross point card are good. If any supplies fail on the cross point card, it will turn red and status 'Error'.



**'SMPTE'** – This LED will be green if all other alarms are green. If any alarm goes off and turns red, then this will also turn red and status 'Error'.



**'Board Lost'** – If for any reason the cross point board is not communicating, this alarm will go red and status 'Error'.

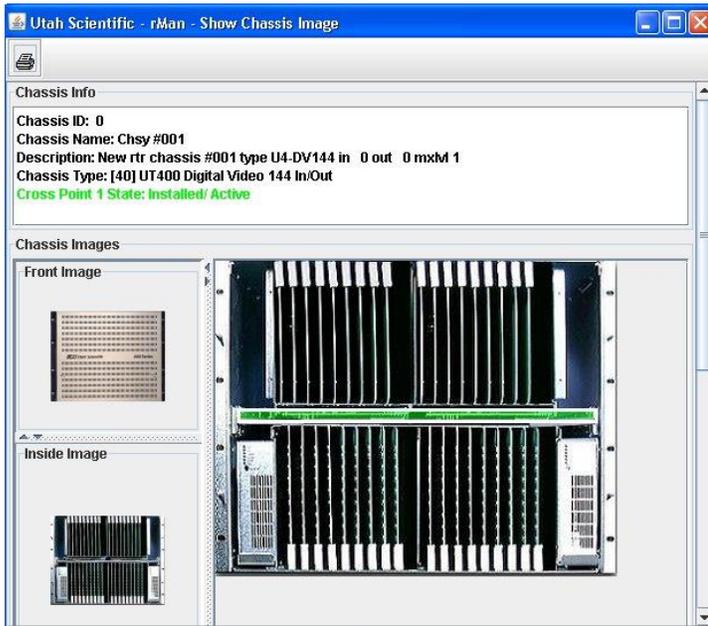


## Cross points

This table will give specific details based on the information read back from the cross point card such as part numbers, revisions and whether the board is the active board or not.

XP Num	Part Num.	Subpart Num.	Rev	Serial Num	S.W	F.W	Installed	Active
<u>0</u>	<u>1013</u>	<u>1</u>	<u>0.1</u>	<u>100</u>	<u>2.18</u>	<u>2.3</u>	<u>Yes</u>	<u>Yes</u>

All items will be underlined, which indicates that the card can be viewed in the 'chassis image view' window. Any line that is highlighted in yellow indicates that it is new and not recognized by the SC4/SC400. To view the item that is underlined, right click on any of the window items that are underlined and then click the 'Show Me' item. It will open a view of the chassis and highlight the item in green. In this case, the cross point card. NOTE: the chassis info window will show details about that router. The color of the cross point line will be green, red or yellow and will give the status of the board.



**'XP Num'** – This number will be 0 through 8 and is read back from left to right and from top to bottom. For example; if there is only one card installed it will always read 0. If there are two cross point cards installed and they are one above the other (144 router type), then the top card is 0 and the bottom is 1. If there are two cards installed side by side (288 router type), then the one on the left will read back as a 0 and the one on the right would be 1. If there are four cards installed (528 router type), then the top left card is 0, the top right card is 1, the bottom left card is 2 and the bottom right card would be 3.

XP Num
<u>0</u>

**'Part Num'** – this is the part number of the printed circuit board.

Part Num.
<u>1013</u>

**'Sub Part Num'** – This is the additional number associated with the part number. There may be more than one type of the same part number and this will determine what that may be.

Subpart Num.
<u>1</u>

**'Rev'** – This is the revision of the cross point card

Rev
<u>0.1</u>

**'SN'** – This is the serial number of the cross point card

Serial Num
<u>100</u>

'S.W.' – This is the software revision of the cross point card

S.W
<u>2.18</u>

'F.W.' – This is the firmware revision of the cross point card

F.W
<u>2.3</u>

'Installed' – If there are two card slots and one is empty, this will status 'No'. Otherwise it will status 'Yes'.

Installed
<u>Yes</u>

'Active' – This indicates if the card is currently in the active state. If it statuses 'No' then the card is in redundant mode.

Active
<u>Yes</u>

## Boards

The following table will display all of the I/O cards installed in the router level along with their part number, name, serial number and where they are located in the router frame.

Boards							Boards						
Board	PN	Sub	Card Name	Rev	SN	SigP	Board	PN	Sub	Card Name	Rev	SN	SigP
<u>1</u>	<u>1020</u>	<u>2</u>	<u>HI-400 FIXED 288 FRAME(HD_SD)</u>	<u>A.0</u>	<u>542</u>	<u>3</u>	<u>23</u>	<u>1019</u>	<u>1</u>	<u>UR4 HD VIDEO OUTPUT(HD_SD)</u>	<u>A.0</u>	<u>226</u>	<u>5F</u>
<u>2</u>	<u>1045</u>	<u>1</u>	<u>ADC-400V INPUT CARD</u>	<u>A.0</u>	<u>315</u>	<u>5F</u>	<u>24</u>	<u>1128</u>	<u>1</u>	<u>DAC-400VB</u>	<u>A.1</u>	<u>115</u>	<u>5F</u>
<u>3</u>	<u>1020</u>	<u>2</u>	<u>HI-400 FIXED 288 FRAME(HD_SD)</u>	<u>A.0</u>	<u>552</u>	<u>9</u>	<u>25</u>	<u>1046</u>	<u>1</u>	<u>DAC-400V OUTPUT</u>	<u>C.1</u>	<u>328</u>	<u>1F</u>
<u>4</u>	<u>1020</u>	<u>1</u>	<u>HI-400 INPUT CARD(HD_SD)</u>	<u>A.2</u>	<u>285</u>	<u>0</u>	<u>26</u>						
<u>5</u>							<u>27</u>						
<u>6</u>	<u>1170</u>	<u>1</u>	<u>HI-400 VIDEO INPUT CARD (HD_SD)</u>	<u>1.0</u>	<u>101</u>	<u>F</u>	<u>28</u>	<u>1019</u>	<u>2</u>	<u>HO-400 OUTPUT CARD(HD_SD)</u>	<u>D.1</u>	<u>956</u>	<u>5F</u>
<u>7</u>							<u>29</u>	<u>1019</u>	<u>1</u>	<u>UR4 HD VIDEO OUTPUT(HD_SD)</u>	<u>A.0</u>	<u>202</u>	<u>0</u>
<u>8</u>	<u>1020</u>	<u>2</u>	<u>HI-400 FIXED 288 FRAME(HD_SD)</u>	<u>A.0</u>	<u>168</u>	<u>3</u>	<u>30</u>	<u>1019</u>	<u>1</u>	<u>UR4 HD VIDEO OUTPUT(HD_SD)</u>	<u>A.0</u>	<u>154</u>	<u>F</u>
<u>9</u>	<u>1020</u>	<u>2</u>	<u>HI-400 FIXED 288 FRAME(HD_SD)</u>	<u>A.0</u>	<u>400</u>	<u>5D</u>	<u>31</u>	<u>1019</u>	<u>2</u>	<u>HO-400 OUTPUT CARD(HD_SD)</u>	<u>C.2</u>	<u>60</u>	<u>5F</u>
<u>10</u>							<u>32</u>	<u>1019</u>	<u>2</u>	<u>HO-400 OUTPUT CARD(HD_SD)</u>	<u>D.0</u>	<u>557</u>	<u>0</u>
<u>11</u>							<u>33</u>						
<u>12</u>							<u>34</u>						

Any line that is highlighted in yellow indicates that it is new and not recognized by the SC4/SC400. To view the item that is underlined, right click on any of the window items that are underlined and then click the 'Show Me' item. It will open a view of the chassis and highlight the item in green. In this case, all I/O cards except board 32. NOTE: the chassis info window will show details about that router. The color of the cross point line will be green, red or yellow and will give the status of the board. The example below is of board 32 and will status yellow and give a description of this card in the chassis info window.



'Board' – these are position numbers of each I/O card when viewing the chassis. The numbers go top to bottom and left to right beginning with 1. All items will be underlined which indicates that they can be viewed. If the card has any issues or is removed, it will status red. If the slot is empty from when the last SC4 update happened, it will status blue. If a card is added to an empty slot since the SC4 was last updated, it will status yellow.

Board
<u>1</u>
<u>2</u>
<u>3</u>
<u>4</u>

**'PN'** – this is the part number of the I/O card.

PN
1020
1045
1020
1020

**'Sub'** – This is the additional number associated with the part number. There may be more than one type of the same part number and this will determine what that may be.

Sub
2
1
2
1

**'Card Name'** – this is the description name of the I/O card.

Card Name
HI-400 FIXED 288 FRAME(HD SD)
ADC-400V INPUT CARD
HI-400 FIXED 288 FRAME(HD SD)
HI-400 INPUT CARD(HD SD)

**'REV'** – this is the revision number of the I/O card.

Rev
A.0
A.0
A.0
A.2

**'SN'** – this is the serial number of the I/O card.

SN
542
315
552
285

**'Sig P'** – This is the signal presence detection column which will read back the number of lights on that particular card that are lit.

## TIELINES TABLE (Status Only)

This table will display the results of the tieline setup and the actual tieline usage in real time, with a visual connection table that displays the tieline paths.

The upper table shows the tie line pools, the actual tie lines, the sources and destinations, and the usage of each tie line. Each column is sortable by clicking on the top of the columns.

The screenshot shows the 'Utah Scientific - rMan - Router Management' window with the 'Hardware Info' tab selected. The 'Tielines Table' is displayed with the following data:

Pool	Tieline	Sources	Destinations	Tieline Usage
● SD to HD	SD>HD1			Unused
● SD to HD	SD>H0	SDIN 1	HDOUT 3	Used
● SD to HD	SD>H1			Unused
● AN to SD	AN > DIG			Unused
● AN to SD	AN > DIG0			Unused
● AN to SD	AN > DIG1			Unused

Green LED's in the Pool Column Indicate Tielines Available for use.

The screenshot shows the 'Utah Scientific - rMan - Router Management' window with the 'Hardware Info' tab selected. The 'Tielines Table' is displayed with the following data:

Pool	Tieline	Sources	Destinations	Tieline Usage
● SD to HD	SD>HD1	SDIN 4	HDOUT 1	Used
● SD to HD	SD>H0	SDIN 1	HDOUT 3	Used
● SD to HD	SD>H1			Unused
● AN to SD	AN > DIG			Unused
● AN to SD	AN > DIG0			Unused
● AN to SD	AN > DIG1			Unused

Yellow LED's in the Pool Column Indicate Tielines are Nearly All Used

The screenshot shows the 'Utah Scientific - rMan - Router Management' window with the 'Hardware Info' tab selected. The 'Tielines Table' is displayed with the following data:

Pool	Tieline	Sources	Destinations	Tieline Usage
● SD to HD	SD>HD1	SDIN 4	HDOUT 1	Used
● SD to HD	SD>H0	SDIN 1	HDOUT 3	Used
● SD to HD	SD>H1			Unused
● AN to SD	AN > DIG	ANALOG 1	SDOUT 0	Used
● AN to SD	AN > DIG0	ANALOG 2	SDOUT 1	Used
● AN to SD	AN > DIG1	ANALOG 3	SDOUT 2	Used

Red LED's in the Pool Column Indicate Tielines are All In Use

'Pools' – This column will show the pools with their names, as they were created in UCON-V4.

Pool
● SD to HD
● SD to HD
● SD to HD
● AN to SD
● AN to SD
● AN to SD

Pool
● SD to HD
● SD to HD
● SD to HD
● AN to SD
● AN to SD
● AN to SD

Pool
● SD to HD
● SD to HD
● SD to HD
● AN to SD
● AN to SD
● AN to SD

**'Tieline'** – This column will show each tieline name within their pool, as they were created in UCON-V4. Green indicates there are still tielines available for use. Yellow indicates that the tieline thresh hold has been reached and there are very few tielines available for use. Red indicates that there are no more tielines available for use and something will need to be cleared before another one can be used.

Tieline
SD>HD1
SD>H0
SD>H1
AN > DIG
AN > DIG0
AN > DIG1

**'Sources' and 'Destinations'** – The sources and destinations will only have names in these columns for tielines that are in use. There shouldn't be a source without a destination as they go together. The name that appears in these columns is read back from the SC4 tables.

Sources	Destinations
SDIN 4	HDOUT 2
SDIN 2	HDOUT 1
ANALOG 2	SDOUT 0
ANALOG 3	SDOUT 1
ANALOG 6	SDOUT 2

**'Tieline Usage'** – This column will show either 'Used' or 'Unused' depending on that specific tieline.

Tieline Usage
Used
Used
Unused
Used
Used
Used

The lower table is the actual tie line path in a physical view. This will display each tie line path in real time that is currently connected. Double click the tieline in the upper table and it will display the path in the lower table.

The screenshot shows the 'Utah Scientific - rMan - Router Management' application window. The 'Tielines' tab is active, displaying a table of tie lines and a corresponding graphical path view.

Pool	Tieline	Sources	Destinations	Tieline Usage
SD to HD	SD>HD1	SDIN 4	HDOUT 1	Used
SD to HD	SD>H0	SDIN 1	HDOUT 3	Used
SD to HD	SD>H1			Unused
AN to SD	AN > DIG	ANALOG 1	SDOUT 0	Used
AN to SD	AN > DIG0	ANALOG 2	SDOUT 1	Used
AN to SD	AN > DIG1	ANALOG 3	SDOUT 2	Used

The 'Tieline Path' section shows a graphical representation of the path for the selected tie line 'AN > DIG0'. It consists of three nodes: 'AN > DIG0' (red box), 'ANALOG 2' (blue box), and 'SDOUT 1' (blue box). A green dashed arrow points from 'AN > DIG0' to 'SDOUT 1', and a blue dashed arrow points from 'ANALOG 2' to 'AN > DIG0'.

**Tieline View of Analog 2 to SDOUT1**

## PANELS TABLE (Status Only)

Click on the tab labeled 'Panels' in the upper row of tabs. When the table opens it will display the list of active panels. This comes from the actual panels that are connected. Each column is sortable by clicking on the top of the columns. To view a picture of the panel type, click on the desired panel in this table.

List of Active Panels						
Panel Node#	Name	Type	Model	Version	Fast Flag	Status
82	EDIT_UCPMX	UCP	UCP-MX	VER 2.00		Online
84	TAPE_VTR1	UCP	UCP-72	VER 2.00		Online
85	PROD_QC	UCP	UCP-64	VER 2.00		Online
86	EDIT_ALL	UCP	UCPMMB	VER 2.00		Online
87	INGEST_SERV1	UCP	UCP-72	VER 2.00		Online

**'Panel Node #'** – this is the panel number that is read from the dip switch on the control panel.

Panel Node#
82
84
85
86
87

**'Name'** – this is the name assigned to the panel. This name is created and can be changed in UCON.

Name
EDIT_UCPMX
TAPE_VTR1
PROD_QC
EDIT_ALL
INGEST_SERV1

**'Type'** – this is the name of the type of panel series. Either UCP, SCP or CSP.

Type
UCP

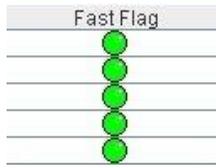
**'Model'** – this is the actual model type of the control panel.

Model
UCP-MX
UCP-72
UCP-64
UCPMMB
UCP-72

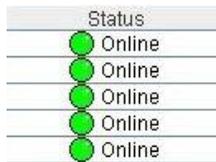
**'Version'** – this is the SW version of that control panel.

Version
VER 2.00

**'Fast Flag'** – This is the current type of control panel (UCP), which has the new UNIC interface card. Fast flag indicates that the panel can be programmed quickly. It will status green for all new panels and be off if they are SCP or CSP types.



**'Status'** – This will only status 'Online' with green LED's. If the panels are removed from the bus they will drop off the list entirely. If they are being programmed they will status this with a green LED as well.

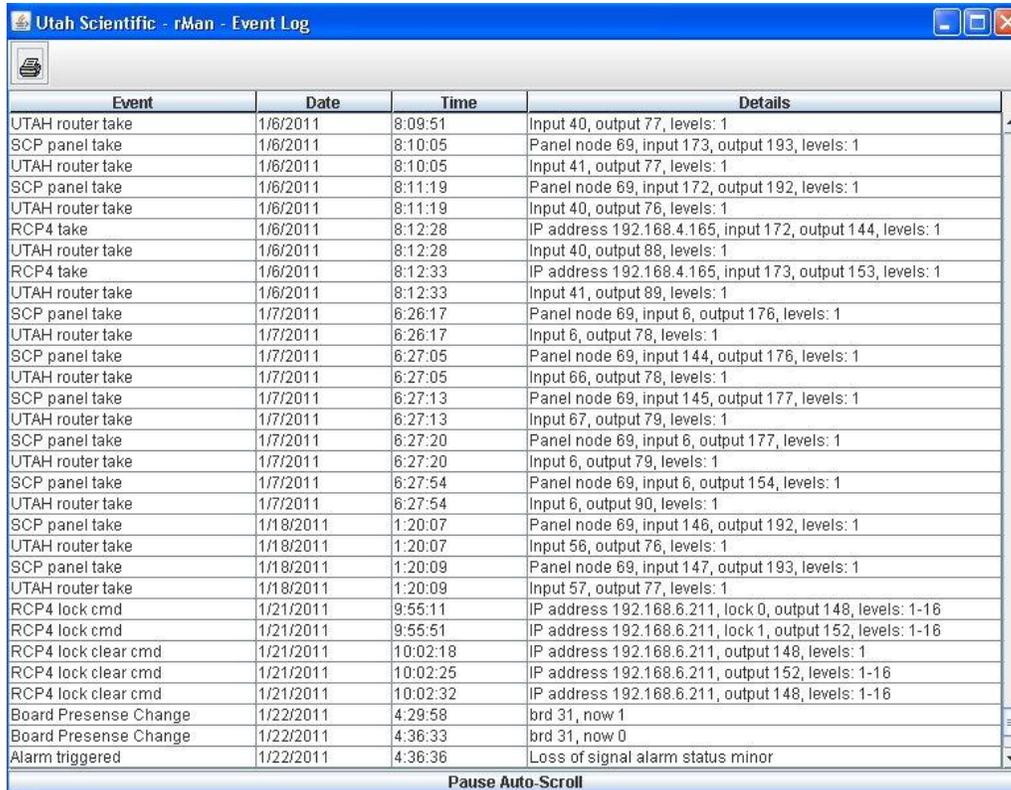


**'Hardware View of Panel'** – The lower window is a picture of the panel. To view the panel click the desired panel line in the upper table and it will be highlighted and then appear in the lower table.



## EVENT LOG

Every take that occurs on the system happens via Unet or Ethernet control panels, serial automation, Ethernet automation or Ethernet Soft Panels. These are called events and are recorded in the SC4/SC400 memory log space of which is brought out in this 'Event Log'. **NOTE:** The memory space that retains this information is limited to approximately one week.



Event	Date	Time	Details
UTAH router take	1/6/2011	8:09:51	Input 40, output 77, levels: 1
SCP panel take	1/6/2011	8:10:05	Panel node 69, input 173, output 193, levels: 1
UTAH router take	1/6/2011	8:10:05	Input 41, output 77, levels: 1
SCP panel take	1/6/2011	8:11:19	Panel node 69, input 172, output 192, levels: 1
UTAH router take	1/6/2011	8:11:19	Input 40, output 76, levels: 1
RCP4 take	1/6/2011	8:12:28	IP address 192.168.4.165, input 172, output 144, levels: 1
UTAH router take	1/6/2011	8:12:28	Input 40, output 88, levels: 1
RCP4 take	1/6/2011	8:12:33	IP address 192.168.4.165, input 173, output 153, levels: 1
UTAH router take	1/6/2011	8:12:33	Input 41, output 89, levels: 1
SCP panel take	1/7/2011	6:26:17	Panel node 69, input 6, output 176, levels: 1
UTAH router take	1/7/2011	6:26:17	Input 6, output 78, levels: 1
SCP panel take	1/7/2011	6:27:05	Panel node 69, input 144, output 176, levels: 1
UTAH router take	1/7/2011	6:27:05	Input 66, output 78, levels: 1
SCP panel take	1/7/2011	6:27:13	Panel node 69, input 145, output 177, levels: 1
UTAH router take	1/7/2011	6:27:13	Input 67, output 79, levels: 1
SCP panel take	1/7/2011	6:27:20	Panel node 69, input 6, output 177, levels: 1
UTAH router take	1/7/2011	6:27:20	Input 6, output 79, levels: 1
SCP panel take	1/7/2011	6:27:54	Panel node 69, input 6, output 154, levels: 1
UTAH router take	1/7/2011	6:27:54	Input 6, output 90, levels: 1
SCP panel take	1/18/2011	1:20:07	Panel node 69, input 146, output 192, levels: 1
UTAH router take	1/18/2011	1:20:07	Input 56, output 76, levels: 1
SCP panel take	1/18/2011	1:20:09	Panel node 69, input 147, output 193, levels: 1
UTAH router take	1/18/2011	1:20:09	Input 57, output 77, levels: 1
RCP4 lock cmd	1/21/2011	9:55:11	IP address 192.168.6.211, lock 0, output 148, levels: 1-16
RCP4 lock cmd	1/21/2011	9:55:51	IP address 192.168.6.211, lock 1, output 152, levels: 1-16
RCP4 lock clear cmd	1/21/2011	10:02:18	IP address 192.168.6.211, output 148, levels: 1
RCP4 lock clear cmd	1/21/2011	10:02:25	IP address 192.168.6.211, output 152, levels: 1-16
RCP4 lock clear cmd	1/21/2011	10:02:32	IP address 192.168.6.211, output 148, levels: 1-16
Board Presense Change	1/22/2011	4:29:58	brd 31, now 1
Board Presense Change	1/22/2011	4:36:33	brd 31, now 0
Alarm triggered	1/22/2011	4:36:36	Loss of signal alarm status minor

This log will show the time and date of events along with details of that event and uses the time that is set in the SC4. **NOTE:** The SC4 cannot be used with a system clock and will drift over time. Therefore logs are not exact times on the system.

**'Event'** – This column will display all activities or 'Events', that are seen by the SC4. This will include the most common event type, which is takes that occur whenever a switch is made on the system as well as any other events such as bus locks and alarms that are triggered. When a take occurs it will status both the take that was requested and what actually occurred. There will always be a request displayed prior to the actual event. Requested takes will display as 'SCP Panel Takes', which come from UCP or SCP style of control panels, 'CSP Takes', which come from party line control panel types, 'Serial Takes', which come from the serial port takes such as from automation, and as 'RCP4 Takes', which come from Ethernet takes which happen from soft panels or the SC4 web panel. The event will display the type of take that is requested first, followed by 'Utah Router Take', which is the physical take that happens on that router level.

Event
UTAH router take
SCP panel take
UTAH router take
SCP panel take
UTAH router take
RCP4 take
UTAH router take

**'Date'** – This is the date the event occurred. The date is set in the SC4/SC400 using the terminal command 'settime' from the diagnostics menu. Follow the details after typing the command.

Date
1/6/2011
1/6/2011
1/6/2011
1/6/2011
1/6/2011
1/6/2011
1/6/2011
1/6/2011

**'Time'** – This is the time the event occurred. The time is set in the SC4/SC400 using the terminal command 'settime' from the diagnostics menu. Follow the details after typing the command.

Time
8:09:51
8:10:05
8:10:05
8:11:19
8:11:19
8:12:28
8:12:28

**'Details'** – Every event that happens will have details, which end up in this table. There will be descriptions of items such as locks and protects as well as other error messages, however the most common details will be of router takes that are made. These include takes that are requested and takes that actually happen. Whenever a take is requested from a panel, a serial port or over Ethernet, it will display details which will status the node number of the panel or the port number of the serial request as well as the input and output number and the level number. There are four types of take requests that come from different devices:

1. 'SCP panel take' – this will appear when a take is issued from the UNET protocol from an SCP, UCP or MCP panel. The details will show the panel node number that issued the take (this is the dip switch setting on the panel) followed by the level, input and output that was requested. These numbers actually come from the index number in the SC4 table and NOT the router numbers in the I/O table.
2. 'RCP4 take' – this will appear when a take is issued from the Ethernet protocol from SP1, SP2, Ethernet Automation or the SC4 virtual panel. The details will show the IP address of the computer that issued the take followed by the level, input and output that was requested. These numbers actually come from the index number in the SC4 table and NOT the router numbers in the I/O table.
3. 'UDI take' – this will appear when a take is issued from the serial port using the RCP-1 protocol which is most common from automation systems. The details will show the serial port of the SC4 that issued the take followed by the level, input and output that was requested. These numbers actually come from the index number in the SC4 table and NOT the router numbers in the I/O table.
4. 'CSP panel take' – this will appear when a take is issued from the party line protocol from a CSP control panel. The details will show the panel number that issued the take followed by the level, input and output that was requested. These numbers actually come from the index number in the SC4 table and NOT the router numbers in the I/O table.

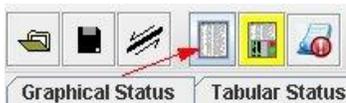
The inputs and outputs numbers come from the source and destination table and the level is read back from the physical router.

Details
Input 40, output 77, levels: 1
Panel node 69, input 173, output 193, levels: 1
Input 41, output 77, levels: 1
Panel node 69, input 172, output 192, levels: 1
Input 40, output 76, levels: 1
IP address 192.168.4.165, input 172, output 144, levels: 1
Input 40, output 88, levels: 1

There are two ways to access the event log. One way is to click on the menu at the top called 'View' and select the item called 'Event Log' from the drop down list.



The second way is to click the icon that looks like a sheet of paper with lines on it, just below the menu.



The log will open in minimized mode but works best with it maximized to full screen. Events will appear in the log at the bottom of the view as they happen, which is in real time.

Sorting each column can be done by clicking on the top of that column. An up arrow indicates that it sorts from bottom to top. The time column will sort everything in the order that events have been occurring. All other columns will sort alphabetically and by date so these are useful if you want to view all takes or all panels or all events in their groups. Time is the best real time view.

Events will be added in real time so if you are trying to view the log and move the cursor up and down it will automatically drop to the bottom every time a new event happens. To stop the real time you can click on the top of the log on the bar called 'Pause Auto-Scroll'. It will toggle to 'Start Auto-Scroll'.

Reading the log – there will always be several error codes that appear in the log such as 'error in src file' and 'error parsing' which are normal. Ignore these. They are mismatches in the SC4 code and the log.

Actual takes will always appear in the log as a 'UTAH router take'. These are literally takes that happen and are reported back as to which physical levels and cross points were switched. The level is read back from the physical dip switch.

## VIEW HARDWARE LOG

This log will show any type of chassis alarms with the details associated to the events that happen. These will include fan, temperature, power, router alarms, tie lines and redundancy error.

**'Alarms'** – these would include router type alarms such as I/O card failures and xpoint card alarms, fan alarms, PSU alarms and all SMPTE alarms.

Alarm
Power
Fan
Temperature
Power
Fan
Temperature
Power
Router Alarm
Power
Fan
Temperature
Power
Fan
Temperature
Power
Router Alarm

id	Hardware Log alarm type
0	Fan
1	Temperature
2	Power
3	Router Alarm
4	Tie-line
5	Redundancy
6	New

Alarm type id number and description

**'Details'** – this describes the details of the alarm condition.

Details
KUSI-SC4

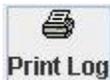
**'Status'** – this will show the status of the alarm such as if it is a major or minor alarm and if it has been acknowledged and cleared.

Status
cleared

**'Date and Time'** – this is the date and time that the alarm occurred. THIS OF THE SC4 TIME

Date	Time
1/31/2011	17:10:32
1/31/2011	17:10:32
1/31/2011	17:10:32
1/31/2011	17:10:32
1/31/2011	17:10:32
1/31/2011	17:10:32
1/31/2011	17:10:35
1/31/2011	17:10:35
2/16/2011	16:25:21
2/16/2011	16:25:21
2/16/2011	16:25:21
2/16/2011	16:25:21
2/16/2011	16:25:21
2/16/2011	16:25:21
2/16/2011	16:25:24
2/16/2011	16:25:25

**'Print Log'** – This will send the log to desired printer



**'Acknowledge'** – This will acknowledge all alarms.



**'Clear Log'** – This will clear the entire log. **NOTE: this will not ask if it is OK before clearing and the log is not saved anywhere so make sure it is OK or print before clearing.**



## VIEWING ACTIVE HARDWARE ALARMS SUMMARY

This summary will show active real time details of the physical hardware that has tripped the alarm.

**'Level'** – This is the router level, displayed by the name of that level.

Level
<b>SC4</b>

**'Chassis Pos'** – This will indicate which position from bottom to top of chassis that are stacked on top of each other, such as the series 1 UT400 576 router, which made up multiple frames for a single level. In most cases there will be a single chassis only, but if there are more than one for any single level, this number is for the position number of each chassis.

Chassis Pos.
<b>1</b>

**'Chassis ID'** – this is the chassis ID number which is the same as from the Hardware Info table. This is of the SC4 and won't have an ID as there is only one type.

ChassisID

**'Chassis Name'** – this is the chassis name which is the same as from the Hardware Info table.

Chassis name
<b>KUSI-SC4</b>

**'Status'** – this will typically display red and state that there is an error.

Status
 <b>Error</b>

**'Print Summary'** – This will send the log to desired printer.



## PRINTING HARDWARE INFO

Push this printer button to print the information in the hardware summary sheet.



## CONFIGURING ALARM SOUNDS

Configuring alarms – these alarms are related to the SC4 only. This table is used to assign sounds to each alarm type of which will play when the alarm is triggered.

Configured Alarm	Enabled?	Sound File Name	Repeat #	Delay	Test Sound File
Redundant_Alarm	<input type="checkbox"/>		1	0	Play
Tieline_Alarm	<input checked="" type="checkbox"/>		1	0	Play
LOS_Alarm	<input type="checkbox"/>		1	0	Play
Power_Alarm	<input type="checkbox"/>		3	0	Play
Temp_Alarm	<input type="checkbox"/>		1	0	Play
Fan_Alarm	<input type="checkbox"/>		1	0	Play

OK

**'Configured Alarm'** – This column lists the various types of alarms.

Configured Alarm
Redundant_Alarm
Tieline_Alarm
LOS_Alarm
Power_Alarm
Temp_Alarm
Fan_Alarm

**'Enabled?'** – Check the box to turn the alarm on. Unchecked will disable the alarm.

Enabled?
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

**'Sound File Name'** – Double click on this window for the alarm and it will bring up a windows explorer browser list. Browse to the desired location for the WAV file and select it and then click the OK button.

Sound File Name

**'Repeat #'** – Double click this box and type the desired number in for how many times this alarm sound should be repeated.

Repeat #
1
1
1
3
1
1

**'Delay'** – This is set to the number of seconds it will wait between repeats of the sound.

Delay
0
0
0
0
0
0

**'Test Sound File'** – After a file has been chosen, click 'Play' to test the sound.

Test Sound File
Play

## ***DESCRIPTION OF ALARMS***

**'Redundant\_Alarm'** – this is for the backup card and any alarms it has

**'Tieline\_Alarm'** – the tie line tables have a threshold number that is placed on each tie pool. This number is called the threshold and is generally set just below the maximum tie line number for that pool. When it is reached, it sets off an alarm indicating that that tie pool is about to reach it's maximum capacity.

**'LOS\_Alarm'** – This can be configured for specific signals. When these signals are lost this alarm will be triggered.

**'Power\_Alarm'** – any voltage power supply alarms from the SC4/400 cards and power supplies will set this alarm off.

**'Temp\_Alarm'** – when the power supply temperature alarm exceeds the threshold it will trigger the alarm.

**'Fan\_Alarm'** – this is for fan failures on the power supplies such as complete failure or if either fan is not spinning at the normal revolutions.

## SETTING TIME AND DATE IN THE SC4/SC400

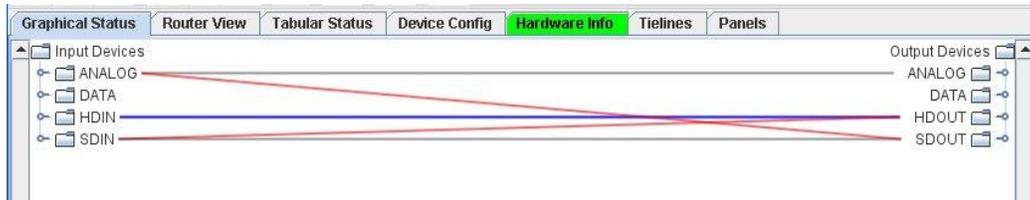
Setting the time and date is used solely for marking events that occur in the event log with the time and date. It is not capable of being used with time code from the house clock. This setup can be done from the front panel of the SC4 chassis but is difficult. Therefore, we recommend that you use the diagnostic command from the terminal to perform this task.

Each SC4/SC400 card stores the time individually and the two cards will not be in sync with each other. This means that in order for the time to be the same on both cards, it will require accurate setup from the terminal. The best way to do this is to unseat the backup SC4 card and perform this to one card at a time. **NOTE: make sure that the 'Ready' LED is lit on both cards before unplugging the backup.** The active card will have the 'Active' LED lit and Ethernet LEDs lit, if it is on a network. If the ready LED is not lit then either there is a mismatch of versions between both cards or they are not syncing properly. Try and reset both cards at the same time and releasing the backup reset button first and then wait 2-5 minutes to see if the ready LED's come on. If so, proceed. If not, then call Utah Scientific Customer Service for help. Use the following procedure for setting the time and date.

1. Launch Tera Term and connect to the SC4 IP address. This can also be performed serially if you are using the serial cable to the diagnostics port.
2. At the prompt type 'settime' and hit return.
3. Type the time in 24 hour format with a colon between each entry. Doesn't have to be exact but try and make it close to the actual time. Example 13:23:00 would be 1:23pm. Then hit return.
4. Next type the month, day, year and day of the week with a forward slash / between each entry. The day of the week starts with Monday as a 1. Example 11/17/10/3 would be November 17, 2010 and is a Wednesday. Then hit return.
5. It will next prompt for a reset of the SC4 to activate the new date. Press the reset button. Then look at the display on the front of the SC4 chassis and it should be the new time.
6. Unseat the SC4 card and then push the other card in.
7. Repeat the steps above on the second card.
8. After the second card is complete you will then push the other card in so they are both installed. Watch for the ready LED's to both light again. Could take 2-5 minutes.

## HTML FOLDER VIEW

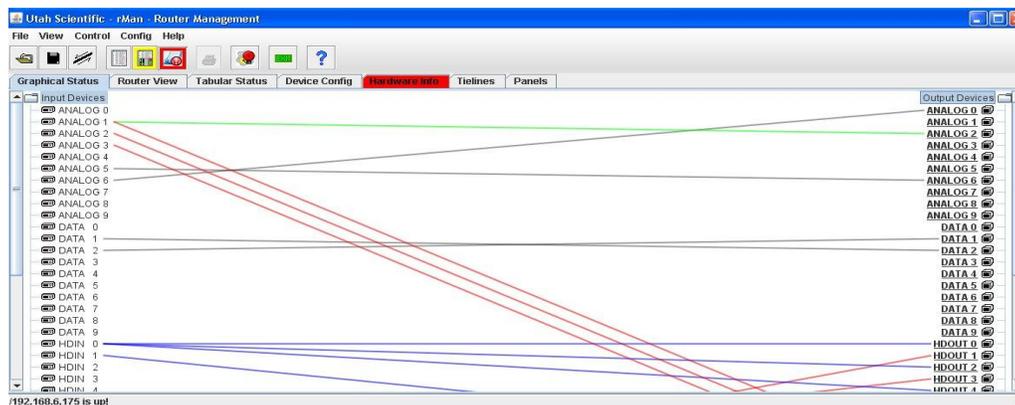
The default graphical view lists all of the I/O's in one entire list. This folder view gives the ability to see groups of I/O's as folders, with the names of the devices listed within each group instead of the entire list, similar to windows explorer folders.



Folder View in Closed Mode

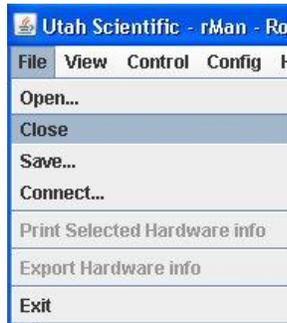
This folder view is not an option in the rMan application that can be turned on or off and is a bit difficult to create. However, for those individuals who like a challenge, this is a nice orderly way to view all of the sources and destinations. **NOTE: Because this is not an option that can be turned on and off, once the folder view is created and sources or destinations are added or removed, these will need to be manually corrected in the folder view using the steps described below.**

1. Launch rMan and click on the 'Graphical View' button. RMan reads the source and destination list from the SC4 and prints it in the graphical view tab in the order it is loaded in the SC4. This cannot be sorted with this version.
2. After the graphical status view opens, double click the word 'Input Devices' and 'Output Devices' in the window in order to open the view. The names will appear as they were created in the SC4 tables and cannot be sorted. This is called the 'Flat View'.
- 3.

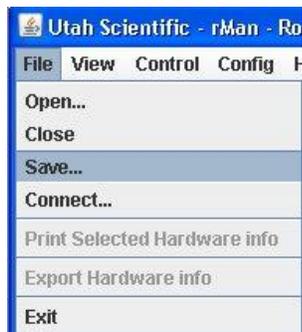


Flat View with no Folders

- You must save the list and edit it in html format in order to read it back in the way you want it to be viewed. To save the list, go to the top menu item called 'File' and then click on 'Close'.



- Then go to 'File' and click on 'Save'. This will open another window where you will be able to navigate to any location you would like to save the file in. Choose the location and then give the file a name followed by the extension .xml.



- Close rMan and then open the file you saved in step 5 in a text editor such as notepad or WordPad. This can be done by right clicking on the file and either click the option called 'Edit' or the option called 'Open With' and then selecting Notepad or Wordpad.
- The following is how the file will look and is called the flat view. It begins with a header of <input> and then all of the device names as seen below. The end of the list will have an entry of </input>. **NOTE: Outputs are done exactly the same only using the name output.**

```
<?xml version="1.0" encoding="ISO8859-1" ?>
<rMan type="statusview">
  <input>
    <device name="ANALOG 0" />
    <device name="ANALOG 1" />
    <device name="ANALOG 2" />
    <device name="DATA 0" />
    <device name="DATA 1" />
    <device name="DATA 2" />
    <device name="DATA 3" />
    <device name="DATA 4" />
    <device name="HDIN 0" />
    <device name="HDIN 1" />
  </input>
```

```

        <device name="HDIN  2" />
        <device name="HDIN  3" />
        <device name="SDIN  0" />
        <device name="SDIN  1" />
        <device name="SDIN  2" />
    </input>
    <output>
        <device name="ANALOG 0" />
        <device name="ANALOG 1" />
        <device name="ANALOG 2" />
        <device name="ANALOG 3" />
        <device name="DATA  0" />
        <device name="DATA  1" />
        <device name="DATA  2" />
        <device name="DATA  3" />
        <device name="HDOUT 0" />
        <device name="HDOUT 1" />
        <device name="HDOUT 2" />
        <device name="SDOUT 0" />
        <device name="SDOUT 1" />
        <device name="SDOUT 2" />
    </output>
</rMan>

```

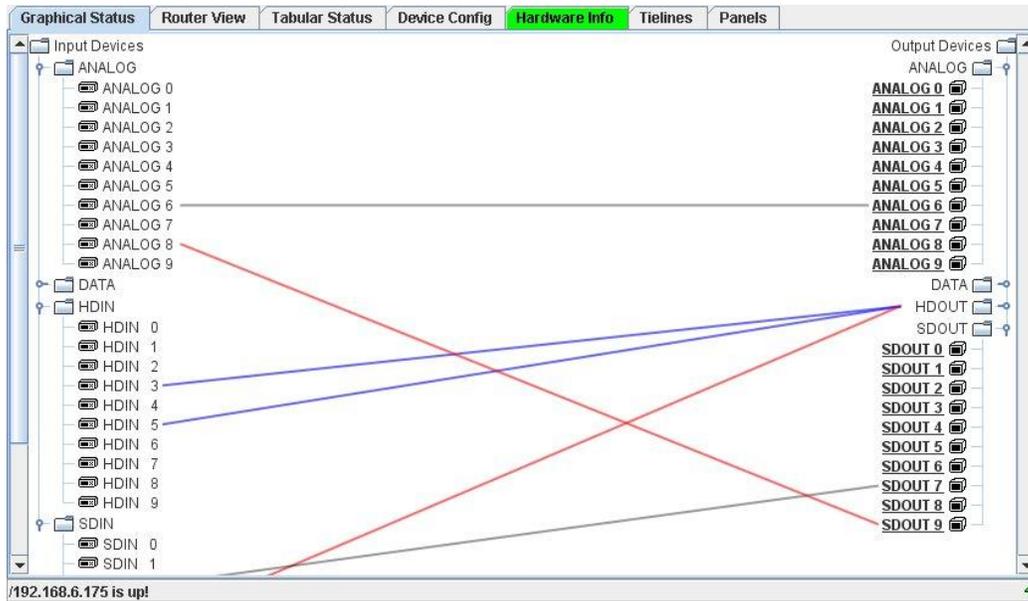
8. To put any and all the devices into groups, you will need to add a line called `<group name="xxxxx" >` below the `<input>` line. Enter the desired name of the group in place of the x's. This will be followed by all the device names that are to be in that category which must be entered as `<device name="xxxx"/>`. Again, replace the x's with the device name. The last entry must be `</group>`. Add this for every group of devices that will be in the view. **NOTE: Do not change any other lines other than the ones spoken of in this procedure or it will not work.**
9. The following is what it will look like after the groups are added.

```

<?xml version="1.0" encoding="ISO8859-1" ?>
<rMan type="statusview">
    <input>
        <group name="ANALOG">
            <device name="ANALOG 0" />
            <device name="ANALOG 1" />
            <device name="ANALOG 2" />
            <device name="ANALOG 3" />
            <device name="ANALOG 4" />
            <device name="ANALOG 5" />
        </group>
        <group name="DATA">
            <device name="DATA  0" />
            <device name="DATA  1" />
            <device name="DATA  2" />
            <device name="DATA  3" />
        </group>
    </input>

```

10. After the file has been edited, save and close the file.
11. In rMan, go to 'File' and then select 'Open'. Browse to the location where the new file exists and click on it. Then click 'Open' and the graphical view will now show the folders for the destinations and sources. The folders will all be closed, similar to the look in windows explorer. To open folders, click on the icon next to the folder name and it will open that folder name.



Folder View in Open Mode

**NOTE:** any devices left off the list will not be seen in the view. And any additions or removals of devices will need to be updated in this file before they will be seen in rMan.

**CONSIDERATIONS:**

To revert back to the default 'Flat View', go to 'File' at the top of rMan and click 'Close'. This will close the view. Then double click the word 'Input Devices' and 'Output Devices' in the window and it will open the lists.

Also, each time rMan is closed and reopened, it will be necessary to open the file as in step 10 above in order to access the folder view.

## WEB PANEL FROM rMan and BROWSER

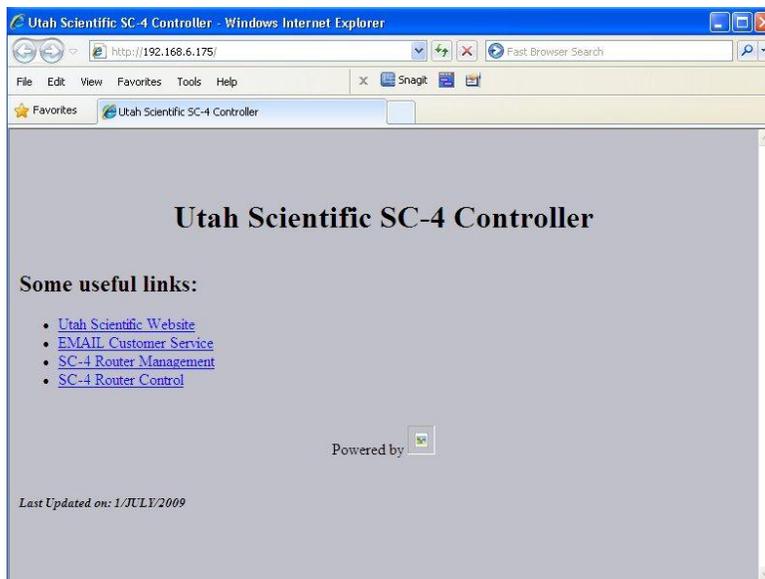
The SC4/SC400 has a web page of which one of the items is a full XY control panel. This panel shows inputs and outputs that are in the SC4 as well as the levels that they are assigned to each output. It also has a Take button which will allow a new switch to be made.

### TO ACCESS WEB PANEL FROM BROWSER

There are two ways to access the web panel. The first is to open an internet session and type the IP address of the SC4/SC400 in the URL address line at the top of the browser and then press Enter.



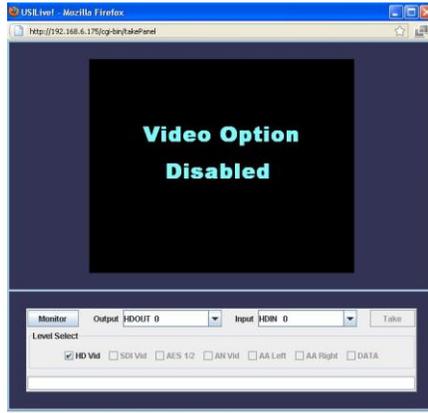
After the web page comes up click on the item on the screen called 'SC-4 Router Control'.



When the screen opens prompting for a username and password, they are both the same, which is the name 'admin' in lower case. **NOTE: you are not able to change the username or password in this version. It will prompt you to remember the username and password and you can confirm this if you choose to.**

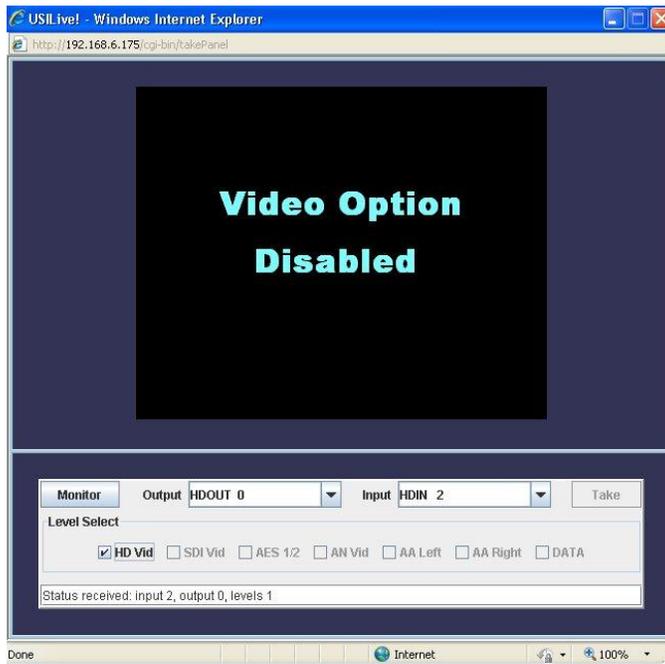


The Video option that appears is not usable. Just below the video option screen you will see a selection list for destinations and sources. Select the desired destination and you will see the source appear in the list that is currently connected to that destination.



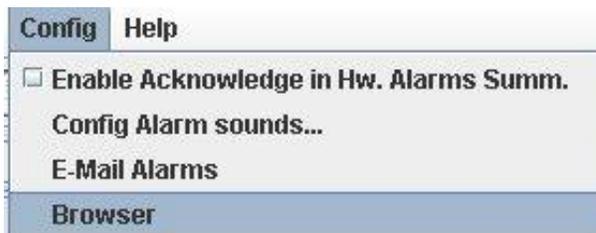
Select a new source from the drop down list and then if you wish to select a specific level or break away level then click on the level boxes below. The levels that are usable for any output will automatically show as usable below the drop down lists.

After a source and level is selected then click the Take button. When the new source shows solid in the window and the levels are also set it will indicate that the take was successful. You will also see status at the very bottom of the window of the event that just took place.

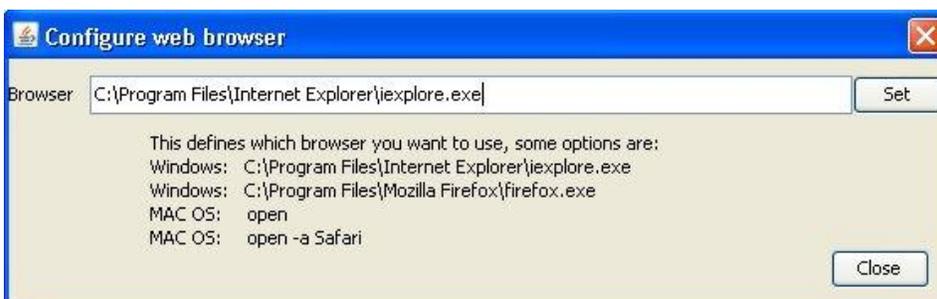


### ***TO ACCESS WEB PANEL FROM rMan***

This application allows for a choice between two internet browsers for viewing the web panel. Internet Explorer and Mozilla Firefox. To set the desired type, go to the top menu item in rMan called 'Config' and select 'Browser'.



The following window will appear. In the browser line, type the exact line shown in the lines below the browser line. If it is to be Internet Explorer, then type C:\Program Files\Internet Explorer\iexplore.exe. And for the other, type C:\Program Files\Mozilla Firefox\firefox.exe. After typing in the browser type, click the 'Set' button to the right and then click 'Close'.



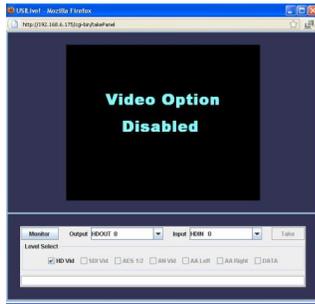
From the menu item called 'Control' at the top of the rMan application, click on the only item in the list titled 'Web Panel'. After the web page comes up click on the item on the screen called 'SC-4 Router Control'.



When the screen opens prompting for a username and password, they are both the same, which is the name 'admin' in lower case. **NOTE: you are not able to change the username or password in this version. It will prompt you to remember the username and password and you can confirm this if you choose to.**

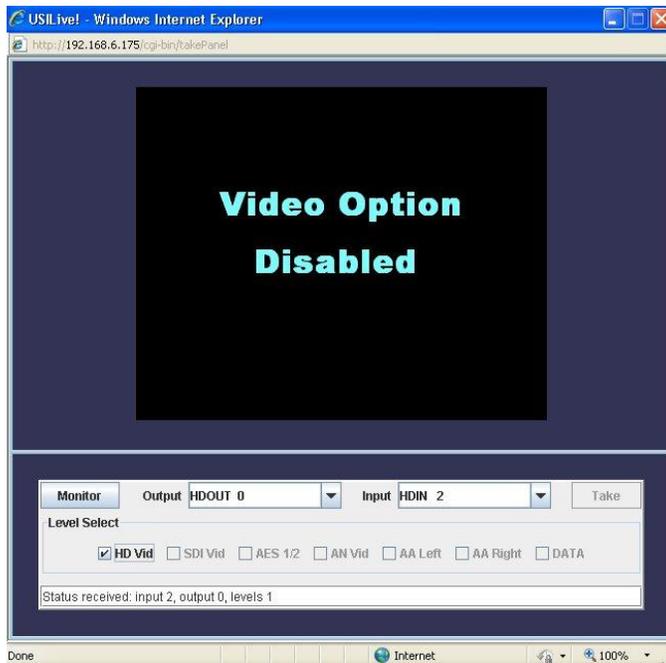


The Video option that appears is not usable. Just below the video option screen you will see a selection list for destinations and sources. Select the desired destination and you will see the source appear in the list that is currently connected to that destination.



Select a new source from the drop down list and then if you wish to select a specific level or break away level then click on the level boxes below. The levels that are usable for any output will automatically show as usable below the drop down lists.

After a source and level is selected then click the Take button. When the new source shows solid in the window and the levels are also set it will indicate that the take was successful. You will also see status at the very bottom of the window of the event that just took place.



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