media:scape® Technology Manual

TECHNICAL SUPPORT

For the most current technical support documents and files, please visit http://techsupport.Steelcase.com

In the Americas, contact Steelcase USA Technical Support:

- PHONE: 1.800.334.4922
  24 -hour support Monday through Friday
- EMAIL: techsupport@Steelcase.com

Outside the Americas, contact Steelcase Europe/Asia Technical Support:

- PHONE: +33 3 88 13 36 36
  Support available in English, French and German. Monday through Friday 7:30 to 18:30 US Central Time
- EMAIL: emea.techsupport@Steelcase.com

This user guide is compatible with 2.0.8 firmware

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Welcome!
We greatly appreciate your purchase. We are sure you will find it reliable and easy to use. Superior performance for the right price, backed by solid technical and customer support is what Steelcase has to offer. We are committed to providing Signal Management Solutions® to the most demanding audiovisual installations at competitive pricing. We welcome you to join the ranks of our many satisfied customers worldwide.

1. Precautions and Safety Warnings
Please read this manual before using your SP106-201/202 and keep it handy for future reference. These safety instructions are to ensure the long life of your SP106-201/202 and to prevent fire and shock hazards.

1.1 Handling
- Handle the SP106-201/202 carefully. Dropping or jarring can cause damage.
- To prevent fire or shock, do not expose this unit to water or moisture. Do not place the SP106-201/202 in direct sunlight, near heaters, or heat-radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Do not pull any cables that are attached to the SP106-201/202.
- If the SP106-201/202 is not used for an extended period, disconnect the power adapter from the wall to avoid damage.

1.2 Cleaning
- Unplug the SP106-201/202 adapter before cleaning.
- Clean only with a dry cloth. Never use detergents or solvents. Do not use a wet cloth or water to clean.

1.3 FCC Notice
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. 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 instructions found herein, 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 expense.
- Any changes or modifications to the unit not expressly approved by Steelcase, Inc. could void the user's authority to operate the equipment

2. Installation Procedures

> **NOTE:** PUCK inputs are not HDMI compatible. Do not plug anything into these ports except PUCKs. Metal tabs are provided to prevent use of standard HDMI connectors. Do not mend or break metal tabs!

Step 1. Read the entire manual to become familiar with the SP106-201/202, its features and documentation.

Step 2. Use only Steelcase provided cables or those attached to the PUCKs.

Step 3. Connect external PC or video conferencing equipment to AUX ports.

Step 4. Connect all PUCKs to the switcher. If necessary, use SP106-217 PUCK extension cables.

Step 5. Verify that the wake-up switch is installed in the table and connected to the switcher's CTRL input.

Step 6. Connect the switcher to the DC power adapter provided. The switcher is ready to use.
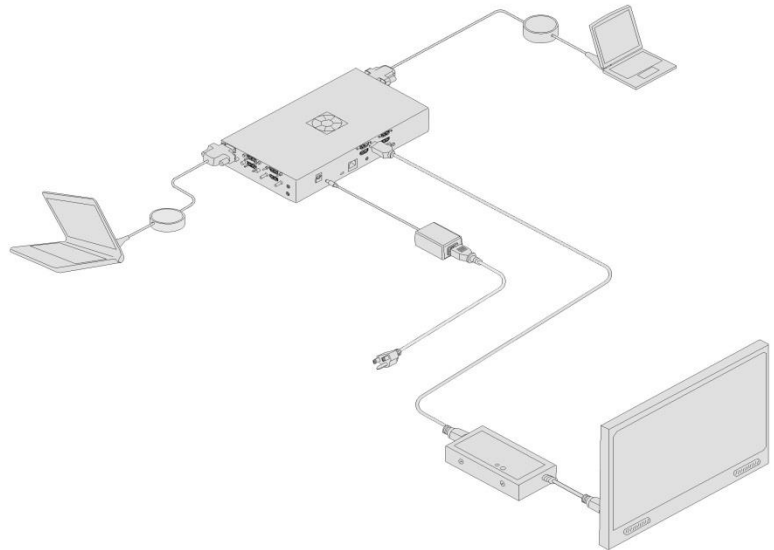
3. Limited Warranty/Return Policies
Please contact Steelcase for details on warranty and return policies.

Americas Tech Support: PHONE: 1.800.334.4922 / EMAIL: techsupport@Steelcase.com

EMEA Tech Support: PHONE: +33 3 88 13 36 36 / EMAIL: emea.techsupport@steelcase.com

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4. Technical Specifications

Specifications are subject to change. See www.Steelcase.com for up-to-date information.

Features/Description	SP106-201/202
Input Connectors	(first # applies to 201/202)
Video, Audio and Power (PUCK)	HDMI F, Type A (8/4)
PC/Videoconference Video	HDMI F, Type A (3/2)
PC/Videoconference Audio	3.5 mm jack (3/2)
DC Power	2.5 mm jack (1)
Output Connectors	
Video/Audio/Control	HDMI F, Type A (4/2)
Compatibility	
Signal Types	VGA, HDMI, DP & MINI DP
Video Signal Resolutions	VGA: up to WUXGA 1920x1200@60Hz HD: up to 1080p 1920x1080@60Hz
Accessories Included	
Power Adapter	Mfr: GlobTek Inc. Model: GT-4113-6012-T3 I/P: 100-240VAC, 50/60Hz, 1.5A O/P: DC12V, 6.0A
115 VAC Power Cord (PC5301US)	Supply: NEMA 5-15P Equip.: IEC60320-C13
Optional Accessories	
HDMI PUCK	SP106-203
VGA PUCK	SP106-204
DP PUCK	SP106-205
MINI DP PUCK	SP106-206
PUCK Extension Cable	SP106-217 (50 inch)
PUCK Extension Cable	SP106-218 (25ft)
On/Off/Standby mode Switch	SP106-105
Replacement Fan for Switcher	SP106-240

Table 1. SP106-201/202 General

Mechanical	SP106-201/202
Material/Color	Aluminum/Black
Length	10.0 in (254 mm)
Width	5.5 in (140 mm)
Height	1.6 in (41 mm)
Net Weight	2.1 lb. (1.0 kg)
Shipping Weight (approx.)	2.8 lb. (1.3 kg)
T° Operating	10°C-35°C
T° Maximum	50°C
Humidity	90% non-condensing

Table 2. SP106-201/202 Mechanical

| Electrical	SP106-201/202
Input to PUCK	Video+Audio
PC/Videoconference Audio Inputs	PC Inputs (1,2,3) for the SP106-201 & PC inputs (1,2) for SP106-202
HDMI with HDCP	HDMI
Main Outputs	Video+Audio+Control
Power Consumption	
External Adapter: 12 VDC	6.0 A (72 W) max.

Table 3. SP106-201/202 Electrical

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Features/Description	SP106-203
Input Cable	
Video	Standard HDMI Type-A (M)
Length	11.02 inches (0.92 ft.)
Output Cable	
Video+ Communication	Custom HDMI Type-A (M)
Length	80.98 inches (6.75 ft.)
Compatibility	
Signal types	HDMI with HDCP Support
Signal resolution	Up to 1080p 1920x1080@60
Switchers	SP106-201/202

Table 4. SP106-203 HDMI PUCK General
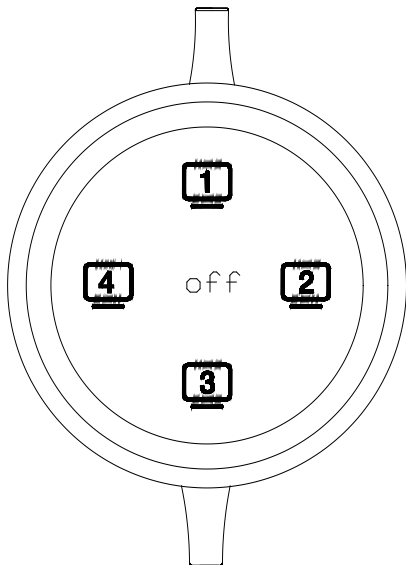
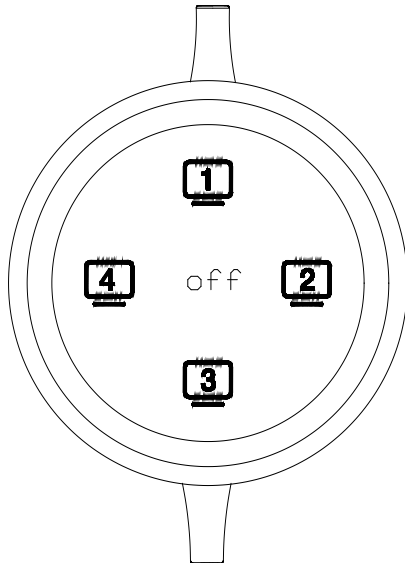| Mechanical	SP106-203 HDMI PUCK
Material	Aluminum/Plastic/Rubber
Color	Silver
Height (body only)	2.56 in (65 mm)
Width (body only)	2.56 in (65 mm)
Depth (body only)	0.93 in (24 mm)
Weight	5 oz. (0.14 kg)
T° Operating	10°C-45°C
T° Maximum	65°C
Humidity	90% non-condensing
MTBF (calc.)	50,000 hrs.

Table 5. SP106-203 HDMI PUCK Mechanical

Electrical	SP106-203 HDMI PUCK
Input Signals	
Video	HDMI Standard
Switcher Side Output Signals	
HDMI	HDMI+ Communication
Signal Level	HD Digital
Power (from switcher)	
+5V	70 mA
Total Power	0.035 W Max

Table 6. SP106-203 HDMI PUCK Electrical

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Features/Description	SP106-204
Input Cable	
Video	15-pin HD (M)
Length	11.02 inches (0.92 ft.)
Output Cable	
Video+ Communication	Custom HDMI Type-A (M)
Length	80.98 inches (6.75 ft.)
Compatibility	
Signal types	RGBHV
Signal resolution	Up to WUXGA 1920x1200@60
Switchers	SP106-201/202

Table 7. SP106-204 VGA PUCK General

Mechanical	SP106-204 VGA PUCK
Material	Aluminum/Plastic/Rubber
Color	Silver
Height (body only)	2.56 in (65 mm)
Width (body only)	2.56 in (65 mm)
Depth (body only)	0.93 in (24 mm)
Weight	5 oz. (0.14 kg)
T° Operating	10°C-45°C
T° Maximum	65°C
Humidity	90% non-condensing
MTBF (calc.)	50,000 hrs.

Table 8. SP106-204 VGA PUCK Mechanical

Electrical	SP106-204 VGA PUCK
Input Signals	
Video (RGB)	1.0 Vp-p max
Horizontal & Vertical Sync	0.5 Vp-p TTL
Analog Audio	1.0 Vp-p max
Switcher Side Output Signals	
HDMI	HDMI+ Communication
Signal Level	HD Digital
Power (from switcher)	
+5V	75 mA
Total Power	0.038 W Max

Table 9. SP106-203 VGA PUCK Electrical

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Features/Description	SP106-205
Input Cable	
Video	Standard Display port (M)
Length	11.02 inches (0.92 ft.)
Output Cable	
Video+ Communication	Custom HDMI Type-A (M)
Length	80.98 inches (6.75 ft.)
Compatibility	
Signal types	Display port with HDCP Support
Signal resolution	Up to 1080p 1920x1080@60
Switchers	SP106-201/202

Table 10. SP106-205 Display Port PUCK General
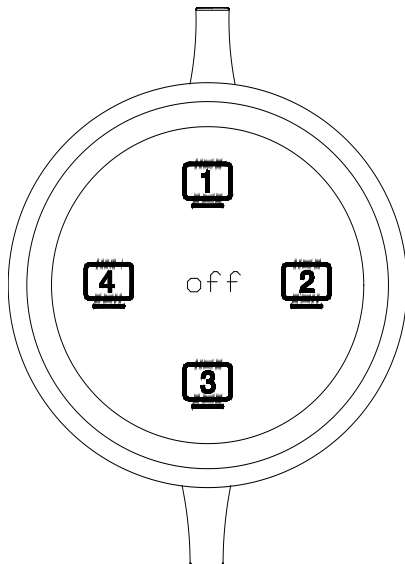
Mechanical	SP106-205 DisplayPort PUCK
Material	Aluminum/Plastic/Rubber
Color	Silver
Height (body only)	2.56 in (65 mm)
Width (body only)	2.56 in (65 mm)
Depth (body only)	0.93 in (24 mm)
Weight	5 oz. (0.14 kg)
T° Operating	10°C-45°C
T° Maximum	65°C
Humidity	90% non-condensing
MTBF (calc.)	50,000 hrs.

Table 11. SP106-205- Display Port PUCK Mechanical

Electrical	SP106-205 Display Port PUCK
Input Signals	
Video	Display Port Standard
Switcher Side Output Signals	
HDMI	HDMI+ Communication
Signal Level	HD Digital
Power (from switcher)	
+5V	70 mA
Total Power	0.035 W Max

Table 12. SP106-205 Display Port PUCK Electrical

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Features/Description	SP106-206
Input Cable	
Video	Standard Mini Display port (M)
Length	11.02 inches (0.92 ft.)
Output Cable	
Video+ Communication	Custom HDMI Type-A (M)
Length	80.98 inches (6.75 ft.)
Compatibility	
Signal types	Mini Display port with HDCP Support
Signal resolution	Up to 1080p 1920x1080@60
Switchers	SP106-201/202

Table 13. SP106-206 Mini Display Port PUCK General

Mechanical	SP106-206 Mini Display Port PUCK
Material	Aluminum/Plastic/Rubber
Color	Silver
Height (body only)	2.56 in (65 mm)
Width (body only)	2.56 in (65 mm)
Depth (body only)	0.93 in (24 mm)
Weight	5 oz. (0.14 kg)
T° Operating	10°C-45°C
T° Maximum	65°C
Humidity	90% non-condensing
MTBF (calc.)	50,000 hrs.

Table 14. SP106-206 Mini-Display Port PUCK Mechanical
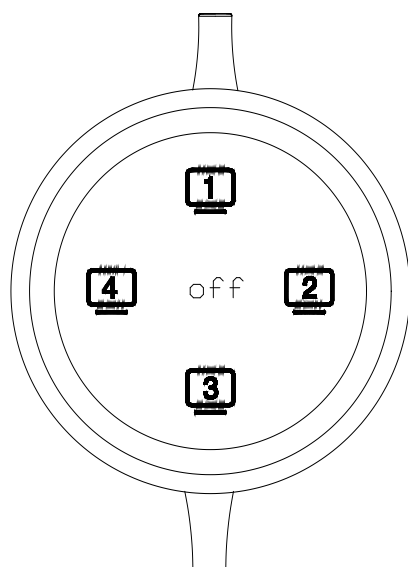
Electrical	SP106-205 Mini Display Port PUCK
Input Signals	
Video	Display Port Standard
Switcher Side Output Signals	
HDMI	HDMI+ Communication
Signal Level	HD Digital
Power (from switcher)	
+5V	70 mA
Total Power	0.035 W Max

Table 15. SP106-206 Mini Display Port PUCK Electrical

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5. About Your 8x4 media:scape System

- Independent control of 4 audio/video outputs
- Built-in walk up video experience
- Auto-shutdown when signal is disconnected
- Up to 8 user interface control units (PUCKs)
- Designed to work with Video Conferencing

The SP106-201 System is an 8x4 Video+Audio Matrix Switcher designed to be used as part of an integrated audiovisual system inside media:scape®.

The PUCKs receive video and audio inputs from laptops or other desktop or mobile devices. Each m:s can accept 8 PUCK inputs from presenters and 3 additional AUX inputs for room PC or video conferencing.

Note: Switching between content protected sources (HDCP) may take 2 to 3 seconds longer than switching between non-protected sources.

Each presenter can select the destination display or override the current presenter. There is no need to disconnect the cables. Switcher control is done through the PUCKs.

8x4 Video + Audio Matrix Switcher

- 8 video + audio PUCK inputs
- 3 AUX inputs for PC and video conferencing
- 4 user-configurable outputs

The SP106-201 Matrix Switcher has 8 PUCK inputs, 3 PC/video conferencing inputs, 4 outputs. The 3 AUX inputs (Inputs 9, 10, and 11) also have associated audio inputs. The switcher provides connectivity of any PUCK input video signal to any of the 4 enabled outputs. It controls the monitor's stand-by mode depending on the system setup.

4 x 2 Video + Audio Matrix Switcher

- 4 Video + audio PUCK inputs
- 2 AUX inputs for PC and video conferencing
- 2 user-configured outputs.

The SP106-202 Matrix Switcher has 4 PUCK inputs, 2 PC/video conferencing inputs and 2 outputs. The 2 AUX inputs (Inputs 9, 10) also have associated audio inputs. The switcher provides connectivity of any PUCK input video signal to any of the 2 enabled outputs. It controls the monitor's stand-by mode depending on the system setup.

Handset (PUCK) Control

- **P**ersonal **U**ser **C**ontrol **K**ey
- Touch-sensitive control surface
- Dual color icon status indicators

Each PUCK has two cables: one is permanently attached to the switcher and the other is used for direct connection to a laptop or other video sources. Each PUCK has audio input that is combined with HDMI signal.

A green icon on the PUCK indicates the PUCK's signal is presently on an output; white indicates there is no connection to an output. As presenters take turns, the previous presenter's connection is broken in favor of the next presenter. If the input device is disconnected, the PUCK enters "Sleep Mode" by turning off all icons. As soon as a video signal is reapplied, the PUCK "wakes up" displaying available outputs.

Power/Stand-by Button

- Power control of switcher
- Display OSD for configuration
- Display firmware upgrade option

If the switcher does not have any active signals applied, the power button resets the standby mode timer and plays the introduction video. When the timer expires, the switcher goes into standby mode. The LED on the switch is white when the system is in standby mode and green during normal operation.

How it works

Media:scape is designed for all around collaboration.

- **Open** the media well and remove a PUCK.
- **Connect** the PUCK to the laptop or mobile device
- **Share** what is on the device by pressing the illuminated icons of available displays. Other users can press the illuminated icons to present as well when connected.
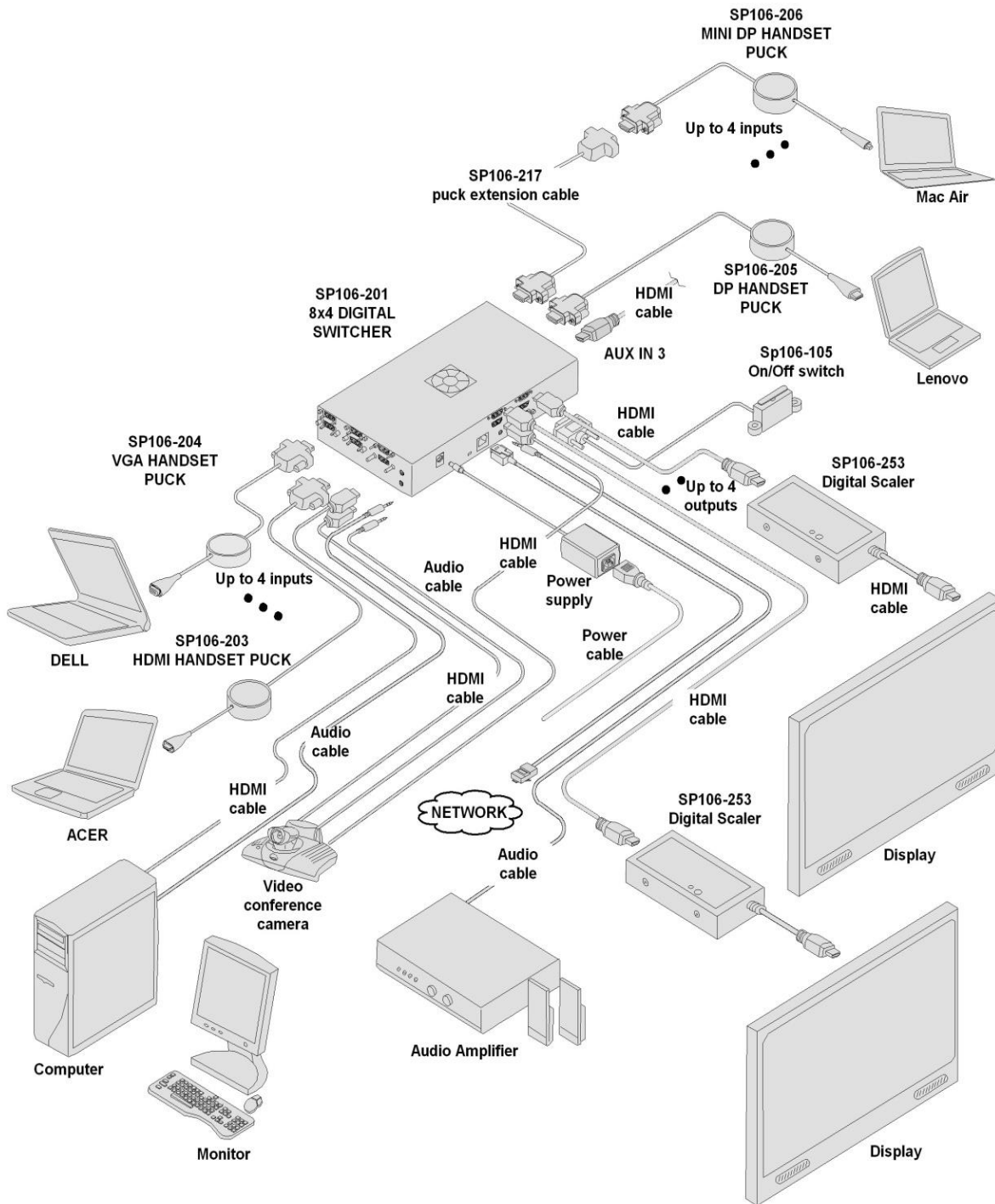
Ways to configure switcher

Easiest way to configure the switcher is through OSD (On Screen Display). Another way to configure the switcher is through use of a terminal program interfacing with the Ethernet port of the media:scape. Both of these methods are explained in detail later in the manual.
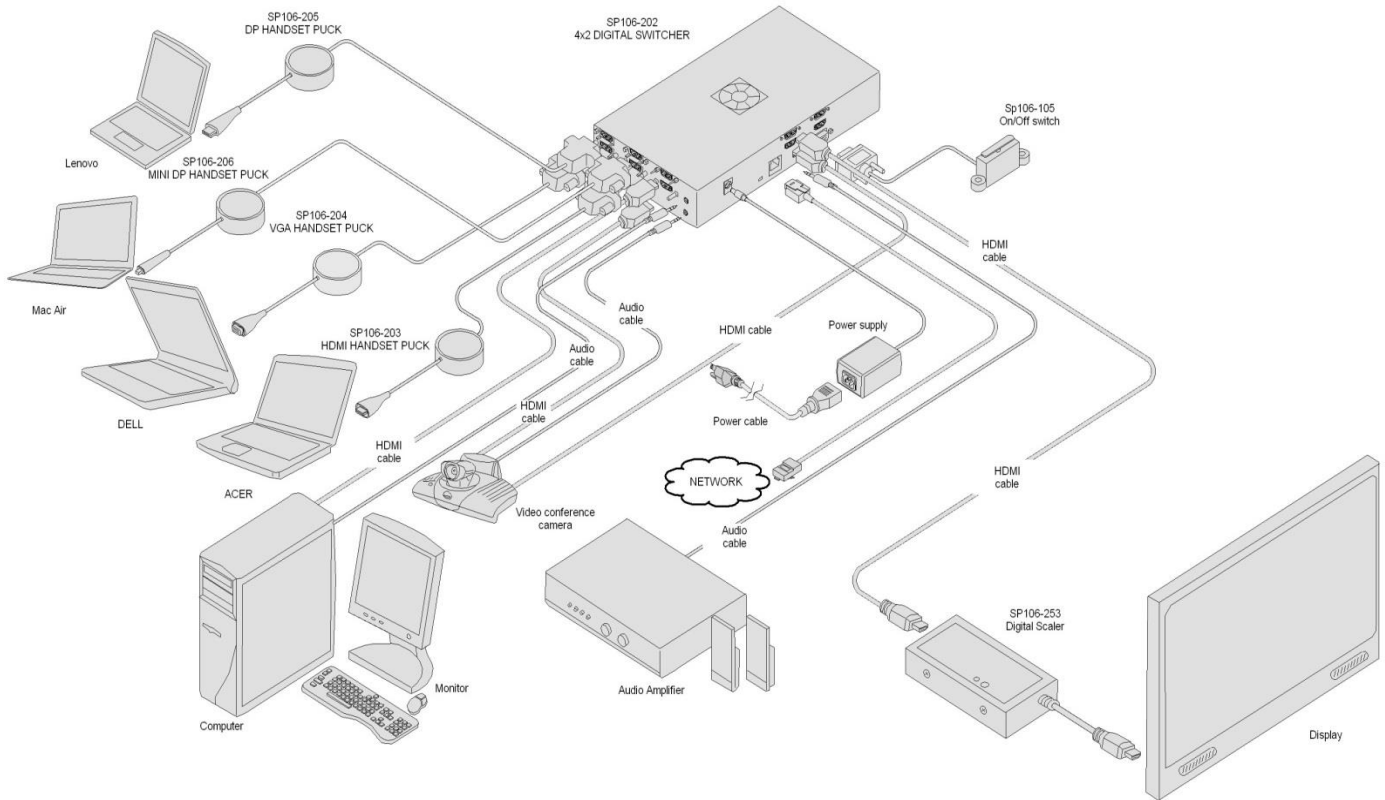
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6. Application Diagrams
Diagram 1: Typical Setup for SP106-201 8x4 switcher

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Diagram 2: Typical Setup for SP106-202 4x2 switcher

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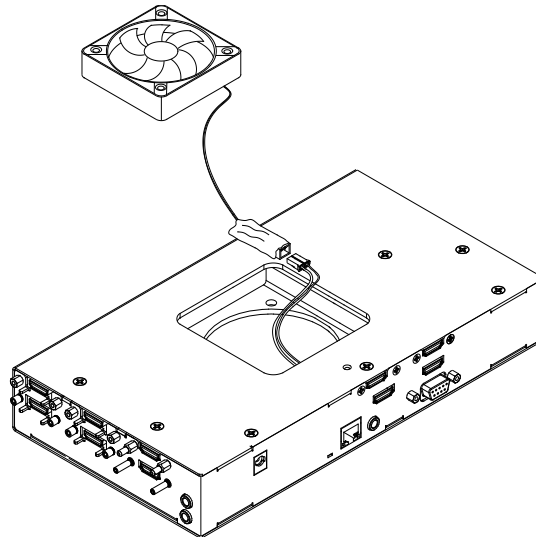**Diagram 3: Block Diagram for SP106-201 8x4 switcher**

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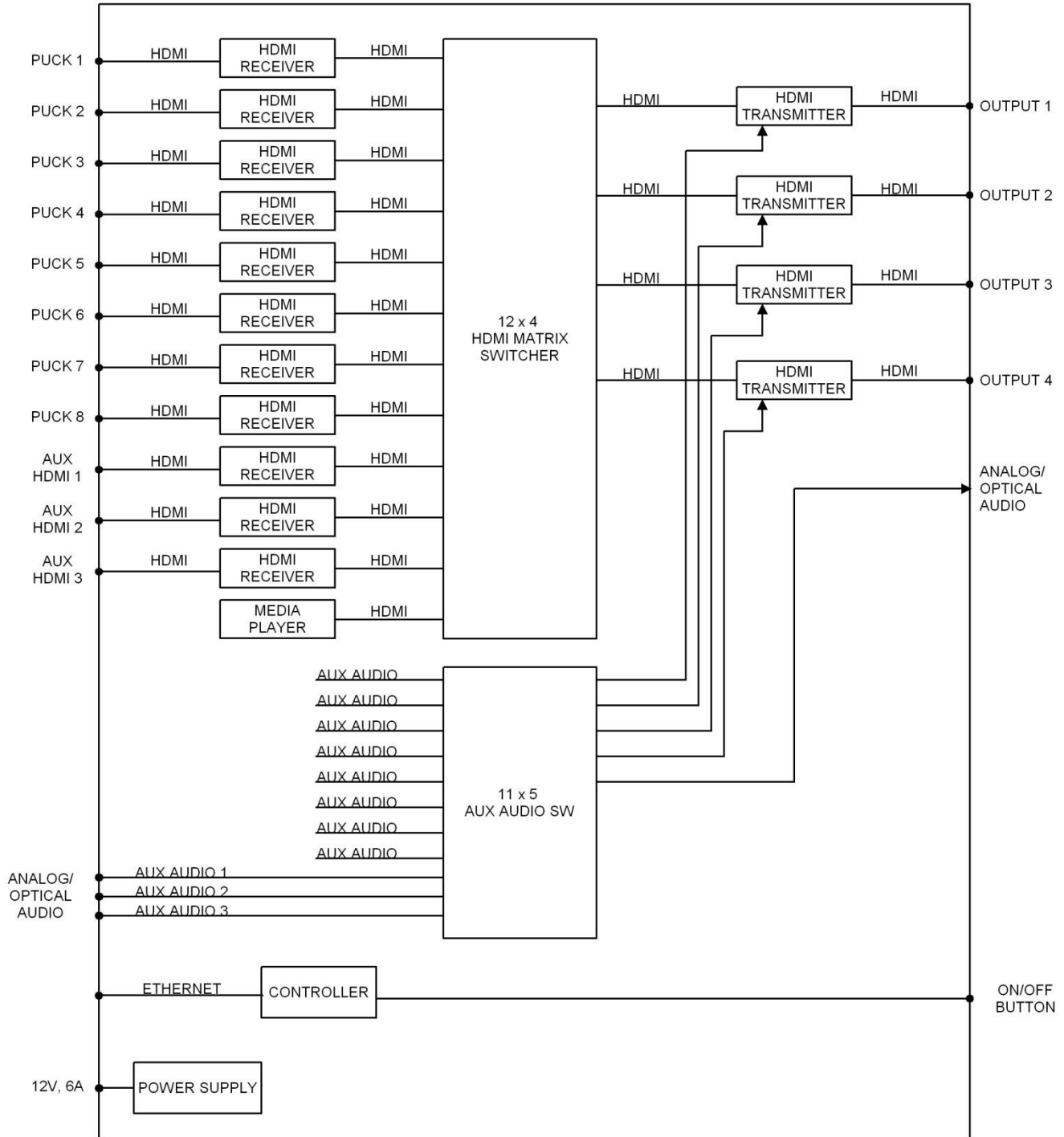
Diagram 4: Fan Replacement for SP106-201/202 switcher

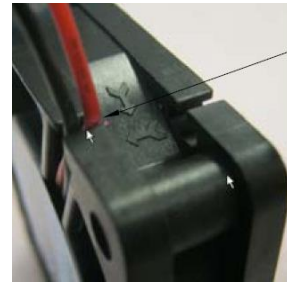## Fan Replacement
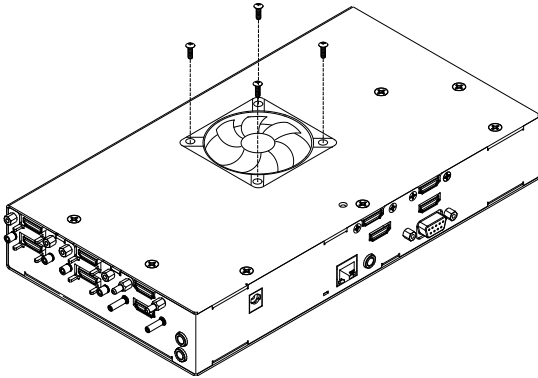
Step 1: Remove the 4 screws using a Phillips screwdriver.
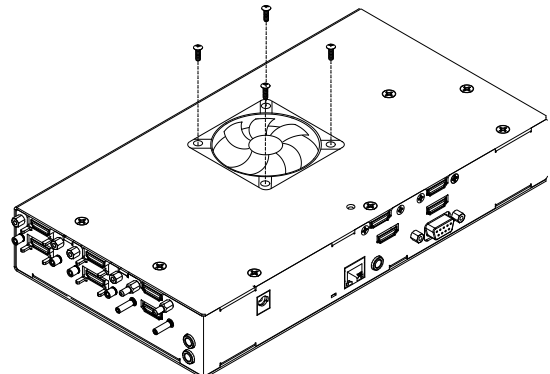

Step 2: Safely pull the fan away from the enclosure.
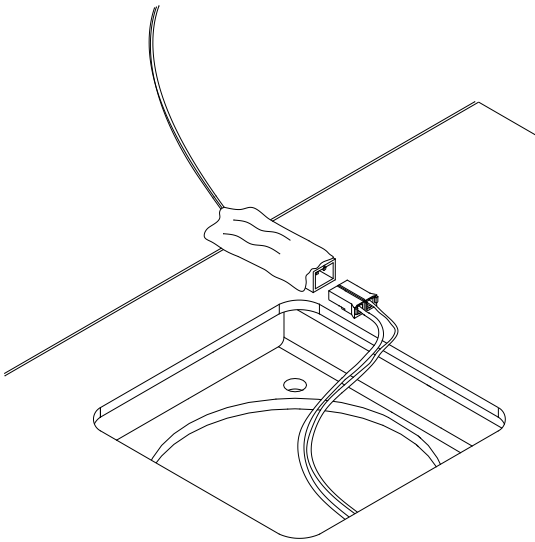
**Step 3:** Disconnect fan at the connector and install with replacement fan

Step 4: During new fan installation install wires of fan between openings in plastic, as shown.


Step 5: After feeding the cable through the square opening, insert fan assembly into position before securing with screws.
Note: During fan replacement make sure that the label of the fan is facing inside of unit.

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Diagram 5: Component View (Right & Left Input side)
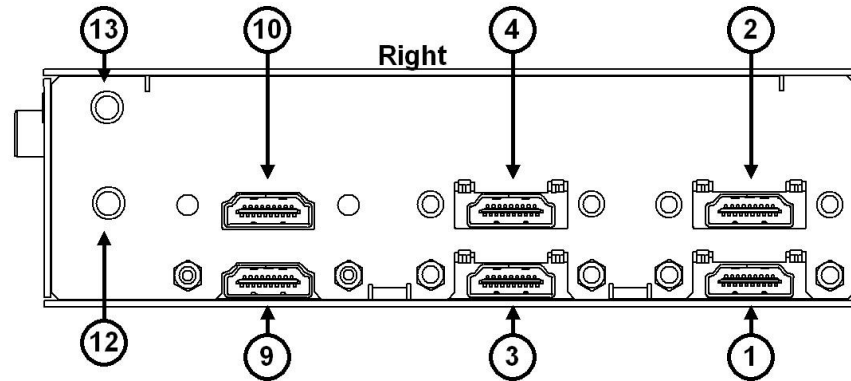
| Number	Port	Description
1	PUCK 1	Digital input for analog/digital PUCKS (Not standard HDMI ports)
2	PUCK 2	Digital input for analog/digital PUCKS (Not standard HDMI ports)
3	PUCK 3	Digital input for analog/digital PUCKS (Not standard HDMI ports)
4	PUCK 4	Digital input for analog/digital PUCKS (Not standard HDMI ports)
9	AUX 1	Standard HDMI Input 9 (labeled as AUX 1 on switcher)
10	AUX 2	Standard HDMI Input 10 (labeled as AUX 2 on switcher)
12	AUX 1 Audio	Analog/Digital 3.5mm jack external AUX audio input
13	AUX 2 Audio	Analog/Digital 3.5mm jack external AUX audio input
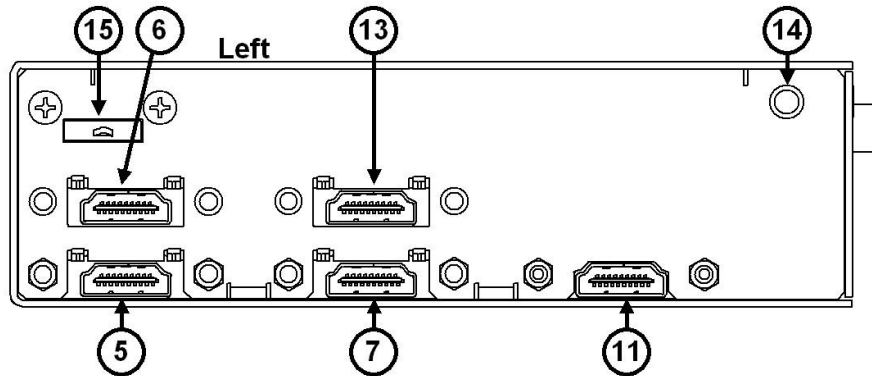
Number	Port	Description
5	PUCK 5	Digital input for analog/digital PUCKS (Not standard HDMI ports)
6	PUCK 6	Digital input for analog/digital PUCKS (Not standard HDMI ports)
7	PUCK 7	Digital input for analog/digital PUCKS (Not standard HDMI ports)
8	PUCK 8	Digital input for analog/digital PUCKS (Not standard HDMI ports)
11	AUX 3	Standard HDMI Input 11 (labeled as AUX 3 on switcher)
14	AUX 3 Audio	Analog/Digital 3.5mm jack external AUX audio input
15	USB Drive	Walk Up Experience Memory

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Diagram 6: Component View (Output side)
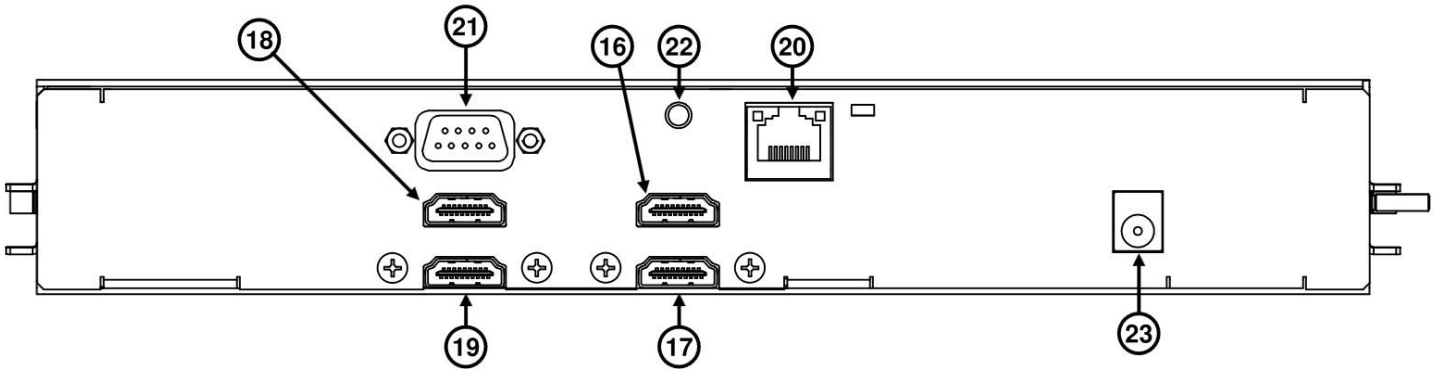
Number	Component	Detail
16	Output 1	Digital HDMI output
17	Output 2	Digital HDMI output
18	Output 3	Digital HDMI output
19	Output 4	Digital HDMI output
20	Ethernet RJ45	Use for maintenance and switcher configuration
21	Female DB9	Control connector for the power button located on the bezel
22	Audio Out	3.5mm jack external audio output
23	DC Power	12V 2.5mm Jack

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7. Operation
7.1 Collaborative (PUCK) Control
7.1.1 PUCK Control
Each PUCK has 5 touch-sensitive keys that are represented by icons illuminated from beneath the PUCK's surface: 1, 2, 3, 4, and Off. The icons are only visible when the PUCK is connected to an active video source, such as a laptop, and represent switcher output states in relation to themselves.
After the PUCK is connected to an active video source, its icons are illuminated in white including the outer ring of the PUCK. Touching the icons connects the PUCK's video signal to one or more outputs. As soon as a PUCK's video signal is connected to an output, its icon turns green along with the PUCK's outer ring. In addition to the LED color changing, the PUCK makes a "clicking" sound. The "clicking" sound notifies the user that a selection has been made.

7.1.2 Preset Inputs
There are 3 AUX inputs (Inputs 9, 10, and 11) for video with audio. These inputs can be used for a dedicated room PC, videoconferencing, etc. These inputs are standard HDMI connections.
Output 1 is the default output for Inputs 9, 10, and 11. These inputs can be configured to display their respective images to one or more of the 4 outputs in place of the walk up experience image.
PUCK inputs have priority over AUX inputs with Input 10 having priority over Input 9, and Input 11 having priority over 10.
Input 11 is Input 10 plus one. That is, if Input 11 is assigned to Output 1, when Input 10 is switched to Output 1, Input 11 is switched to Output 2 if a signal is present on Input 11.
If Input 10 displays on Output 1 - Input 11 displays on Output 2.
If Input 10 displays on Output 2 - Input 11 displays on Output 3.
If Input 10 displays on Output 3 - Input 11 displays on Output 4.
If Input 10 displays on Output 4 - Input 11 is not displayed.

7.1.3 Priority Mode
The switcher can operate in collaborative or priority mode. The default is collaborative mode, which gives PUCKs control of the system and with Inputs 9 and 10 available for preset and data share. In priority mode, the system operates normally until Inputs 9 or 10 are connected, at which time, Inputs 9 and 10 override normal system operation.
In priority mode, the PUCKs are disabled and only the outer ring is turned on and white if a signal is present; all other icons are off. The image from Inputs 9 and 10 are displayed on all 4 outputs, with Input 10 having priority over Input 9. When the video inputs on 9 and 10 are removed, the system returns to normal operation.

7.1.4 Data Sharing
Data sharing is available in single, dual, and triple monitor systems. It allows for one or more available outputs to display the video from the last PUCK selection, while allowing the other outputs to display their default images; other PUCKs, Input 9, Input 10, or Input 11. The default for data sharing is on Output 4, but can be configured for Output 2, 3, and/or 4 depending on the monitor system settings.
In a single monitor system, data sharing can be set to Outputs 2, 3, and/or 4. In a dual monitor system, data sharing can be set for Outputs 3 and/or 4. In a triple monitor system, data sharing can be set to Output 4 only; there is no data sharing available in a quad monitor system.
Press one of the white icons on a PUCK, the icon turns green, and its image is displayed to the selected output overriding whatever is currently being displayed on the selected output. Press "Off" to remove the PUCK image allowing either the HDMI inputs or the Walk up experience image to display.
Data sharing remains active after pressing the green icon of the last PUCK selection. The icon turns white, but the outer ring remains green indicating that PUCK's image is displayed on the data sharing output. The data sharing output remains active until it is overridden by another PUCK selection or until "Off" is pressed on the PUCK.

Example 1: Single Monitor System

The system is configured for single monitor operation with output 4 (default) set for data sharing. Input 9 is the room PC preset for Output 1 (default), and Input 10 is the video conferencing input set to Output 1 (default).

Icon 1 is selected on a PUCK, its icon turns green, and its audio and video are directed to outputs 1-4. Press icon 1 again and the icon turns white but its image remains on Output 4. Output 1 displays AUX Input 9 unless there is a signal on Input 10, in which case AUX Input 10 is displayed. Pressing "Off" in the center of the PUCK disables data sharing and returns Output 4 to the Walk up experience image.

Example 2: Dual Monitor System

The system is configured for dual monitor operation with output 4 (default) set for data sharing. Input 9 is the room PC preset for Output 1 (default), and Input 10 is the video conferencing input preset for Output 1 (default).

Icon 1 is selected on a PUCK, its icon turns green, and its audio and video are directed to outputs 1, 3, and 4 (data share). Press icon 1 again and the icon turns white but its image remains on Output 4. Output 1 displays AUX Input 9 unless there is a signal on Input 10, in which case AUX Input 10 is displayed. Output 3 defaults to the Walk Up experience image. Pressing "Off" in the center of the PUCK disables data sharing and returns Output 4 to the Walk Up experience image.

7.1.5 Check for an Inactive PUCK
No icons are illuminated when there is no video signal going into the PUCK. However, press the center of the PUCK and the PUCK responds with the "clicking" sound. This feature indicates the switcher recognizes the PUCK and the PUCK is responding to basic commands.

7.1.6 Standby Mode
The media:scape automatically displays the Walk Up experience static image when there are no video inputs to the PUCKs and starts the standby mode timers: one for the PUCK inputs and one for the AUX inputs.
After the PUCK timer expires, the switcher enters standby mode unless there is an AUX input. If there is a signal on either AUX input, the switcher does not shut down until the AUX standby timer expires.
In standby mode, the switcher reduces power requirements and turns off external monitors to save power and extend their lifetime.

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7.1.7 Reset Menu
Apply power while holding the bezel power button down until
"RELEASE NOW" text appears on display 1.

Release bezel power button to see OSD. Enter password using PUCK
#1 icons. Password is: 1342. Menu set mode enables user to configure
password reset*, IP address settings, and input equalization.

*Password reset option: not implemented
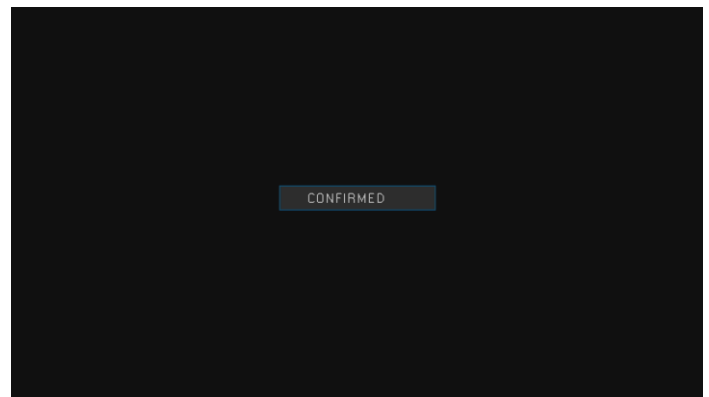
Factory Reset
Factory reset will reset every configurable setting to factory default. To
set configurations back to factory default, press and hold the power
button on the bezel. Keep holding it while the OSD is present for about
20 seconds longer.
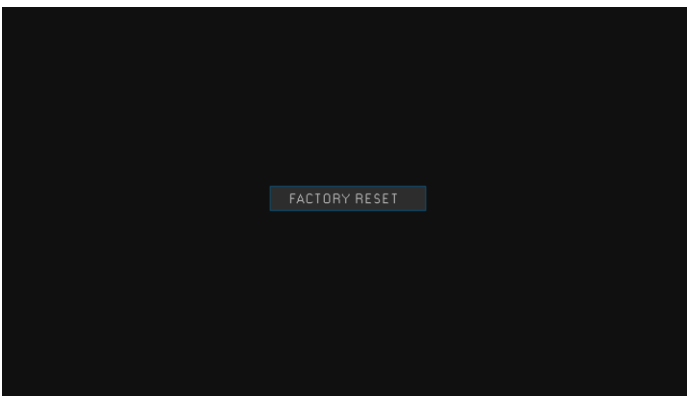
Once this screen is visible on display 1, let go of the power button.
Prompting the switcher to confirm for a factory reset to factory defaults
on all configurable settings.
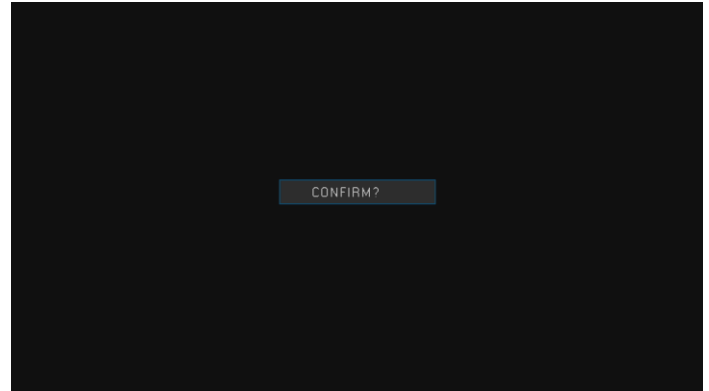
By pressing the power button once it will initiate the factory reset. Display
1 will acknowledge the confirmation with feedback as seen below and go
blank for a second as the switcher resets to factory defaults.

If the confirmation is not done within 2 seconds, the option to factory
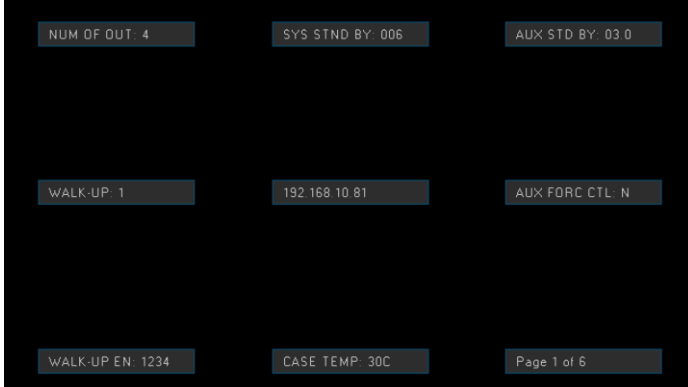reset will go away and switcher will not be reset to factory condition.

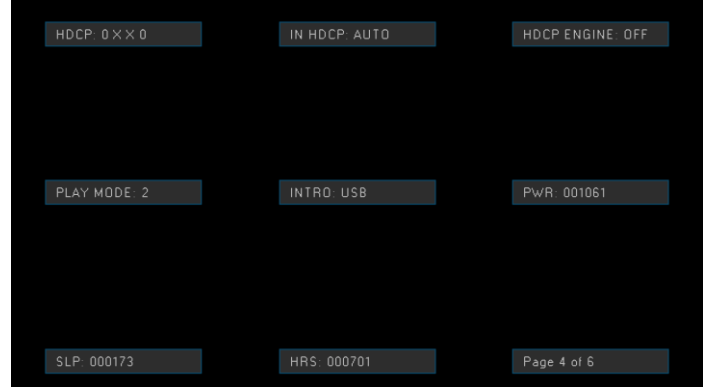**Steelcase**
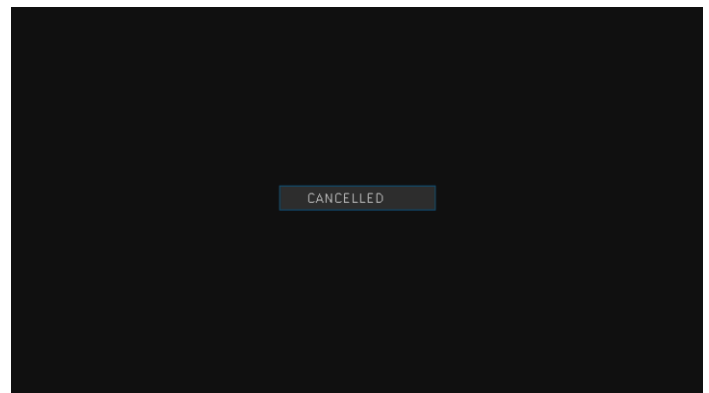
media:scape® Technology Manual

Factory Defaults
Initializing the media:scape to factory defaults results in the 6 page OSD default values shown here. Note that the OSD displays both configuration settings and status readings like software version, serial number, IP address. These are not reset.
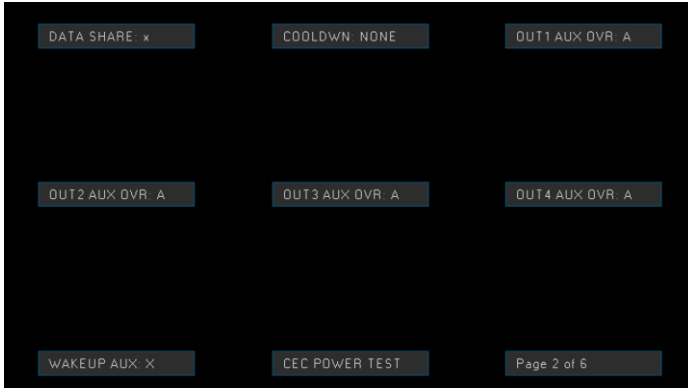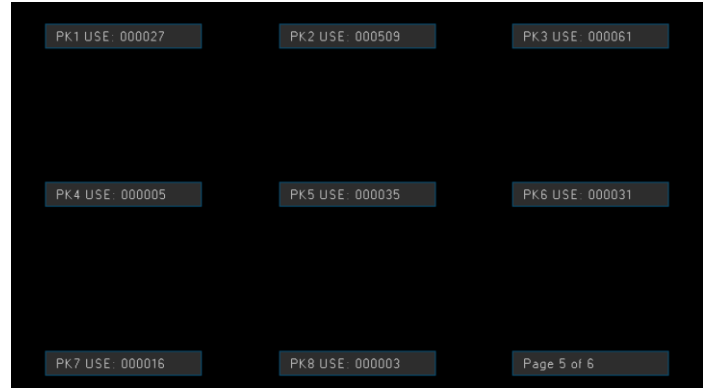
PAGE 1:

NUM OF OUT: 4	SYS STND BY: 006	AUX STD BY: 03.0
WALK-UP: 1	192.168.10.81	AUX FORC CTL: N
WALK-UP EN: 1234	CASE TEMP: 30C	Page 1 of 6

PAGE 2:

DATA SHARE: x	COOLDWN: NONE	OUT1 AUX OVR: A
OUT2 AUX OVR: A	OUT3 AUX OVR: A	OUT4 AUX OVR: A
WAKEUP AUX: X	CEC POWER TEST	Page 2 of 6

PAGE 3:

SOFT VER: 1.1.22	HARDWARE VER: 11	MODE 1: Collab
BIOS:M45 I45 O45	SN:1234567890123	MAC:0004A31018E1
BLK SCR EN:	ECO: 06-24-15	Page 3 of 6

PAGE 4:

HDCP: 0 X X 0	IN HDCP: AUTO	HDCP ENGINE: OFF
PLAY MODE: 2	INTRO: USB	PWR: 001061
SLP: 000173	HRS: 000701	Page 4 of 6

PAGE 5:

PK1 USE: 000027	PK2 USE: 000509	PK3 USE: 000061
PK4 USE: 000005	PK5 USE: 000035	PK6 USE: 000031
PK7 USE: 000016	PK8 USE: 000003	Page 5 of 6

PAGE 6:

PK1:V0 PK2:x	PK3:H0 PK4:x	PK5:x PK6:x
PK7:x PK8:x	AX1:H0 AX2:H0	AX3:H0 HDCP:OFF
TV1:0 TV2:x	TV3:x TV4:0	Page 6 of 6

**Steelcase**

IP Configuration (Reset Menu)
In the Reset Menu, pressing 2 or 4 icons cycles through the password, DHCP, and input equalization option. Pressing 1 or 3 when a property is displayed changes that property. For example, IP addressing can be set to a fixed IP address or one set by the network DHCP server. Pressing 1 or 3 will switch between DCHP and a fixed IP address. Pressing 2 or 4 icons will move onto another setting. To finalize the configuration, press the power button on the bezel.
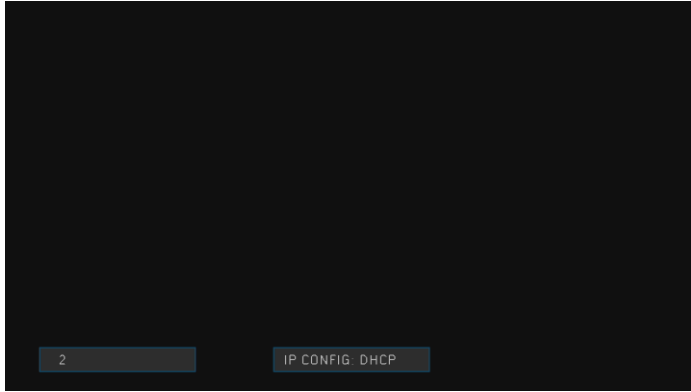
7.1.8 Wake-Up Mode
The switcher exits standby when a source signal is connected to a PUCK or the power button on the bezel is pressed. Once activated, the system will resume normal operation by enabling an icon on a PUCK. The switcher can also be configured to walk up when an AUX source is applied to Input 9, 10, or 11, thus eliminating the need to provide an input to one of the PUCKs.

7.1.9 The Power Button on the Bezel
If the media:scape does not have any active signals applied, the power button resets the standby mode timer and plays the introduction video followed by the static image. When the timer expires, the switcher goes into standby mode. The LED on the switch is white when the system is in standby mode and green during normal operation. The power button is located on the PUCK well, and connects through a DB9 connector on the switcher.

Other Uses of the Power Button:
The switcher can be placed into upgrade mode for firmware upgrades by pressing the power button 5 times rapidly. At this time the switcher stops responding to normal operation and is waiting for the upgrade to start. A message is displayed on the monitor to indicate upgrade mode.

FIRMWARE UPGRADE

The switcher's on-screen display can be activated by pressing and holding the power button for approximately 5 seconds. This is put into detail in the following section.

7.1.9.1 On Screen Display
The switcher's on-screen display can be activated by pressing and holding the power button for approximately 5 seconds.
The following fields will be used to display information on 6 separate pages. Pages can be traversed in ascending or descending order. To navigate between pages, use icons 2 and 4 on the illuminated PUCK in input 1. Pressing icons 1 and 3 will initiate password sequence.

PAGE 1:
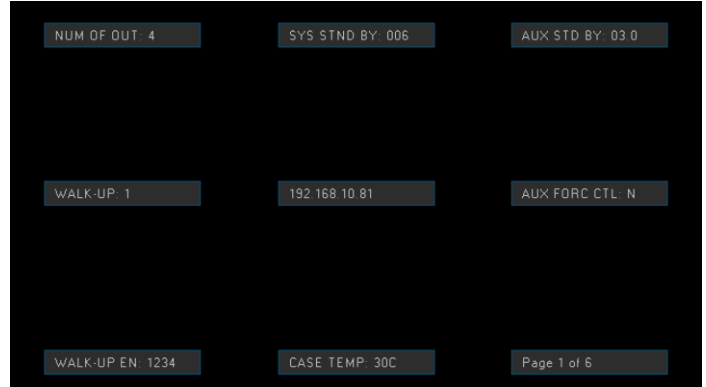
Page 1 is crucial information such as the number of outputs, AUX and system stand by configurable information, the current IP address, and unit temperature in Celsius.

PAGE 2:
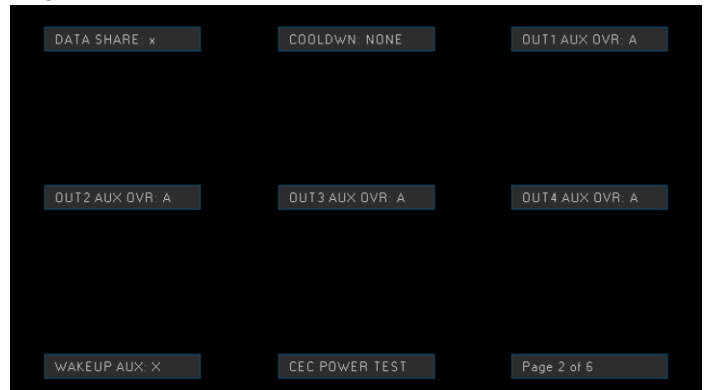
Page 2 is information related to the AUX inputs overriding the Outputs when no signal is present through a PUCK, Data share enabled on the outputs as well as the CEC power test over the CEC command line.

PAGE 3:

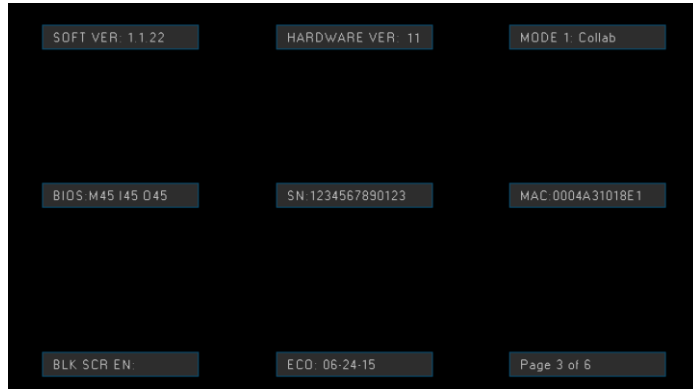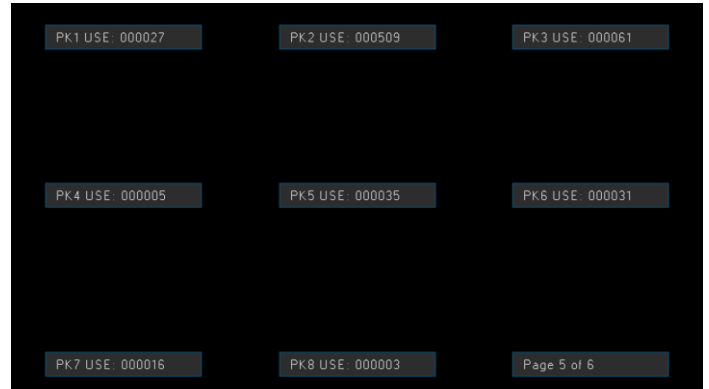|		
SOFT VER: 1.1.22	HARDWARE VER: 11	MODE 1: Collab
BIOS:M45 I45 O45	SN:1234567890123	MAC:0004A31018E1
BLK SCR EN:	ECO: 06-24-15	Page 3 of 6

Page 3 has information related to the software and hardware versions as well as the latest ECO change notice. The page includes the version number of the input, output, and main interface.

PAGE 4:

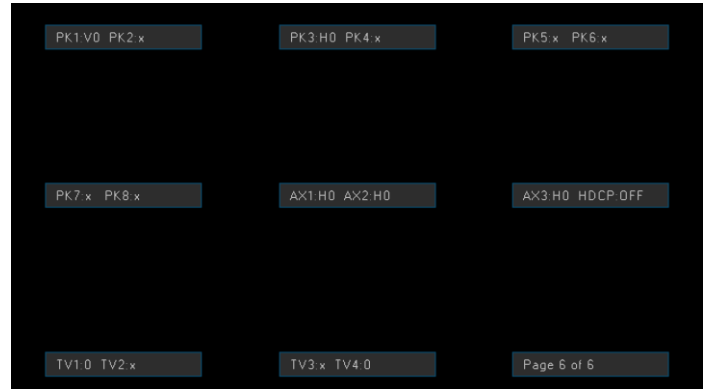|		
HDCP: 0 X X 0	IN HDCP: AUTO	HDCP ENGINE: OFF
PLAY MODE: 2	INTRO: USB	PWR: 001061
SLP: 000173	HRS: 000701	Page 4 of 6

Page 4 is vital information related to the switcher such as Walk Up Experience type, HDCP related information, statistical data such as power (PWR) cycles, Sleep (SLP) cycles, and active/awake hours (HRS).

PAGE 5:

PK1 USE: 000027	PK2 USE: 000509	PK3 USE: 000061
PK4 USE: 000005	PK5 USE: 000035	PK6 USE: 000031
PK7 USE: 000016	PK8 USE: 000003	Page 5 of 6

Page 5 is statistical counters for each time a PUCK is connected to a source. These PUCK connections can be reset by using the command [PKRSTn] where n is the corresponding PUCK.

PAGE 6:

|		
PK1:V0 PK2:x	PK3:H0 PK4:x	PK5:x PK6:x
PK7:x PK8:x	AX1:H0 AX2:H0	AX3:H0 HDCP:OFF
TV1:0 TV2:x	TV3:x TV4:0	Page 6 of 6

Page 6 is a diagnostics page that has information such as PUCK type for each individual PUCK input as well as signal present. For PUCK type, V is VGA, H is for HDMI, and D is Display Port. The Numerical value next to it is if signal is present, x being no PUCK connected, 1 being PUCK is selected, and 0 being not selected. Same values correspond for AUX inputs and Outputs.

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7.1.9.2 On Screen Display (OSD) for basic programming
Primary configuration for media:scape can be accomplished using OSD. To enter configuration mode, press and hold power button for approximately 5 seconds. After that OSD will display the current status of the switcher. In this mode, only PUCK 1 will light up. To enter configuration mode, user needs to enter password: 1342. The PUCK will flash and unit will be ready for configuration. From here there are a total of 19 fields that can changed be either through the OSD or TCP format. Keys 1 and 3 are used to move between fields
Keys 2 and 4 are used to change setting value for that particular setting.

Configurable Field 1: NUM OF OUTS (Number of Outputs): Same as [SMOD] command. Sets number of monitors (1-4) connected to media:scape and also determines the number of illuminated icons on the PUCKs.

NUM OF OUT: 4   192.168.10.81
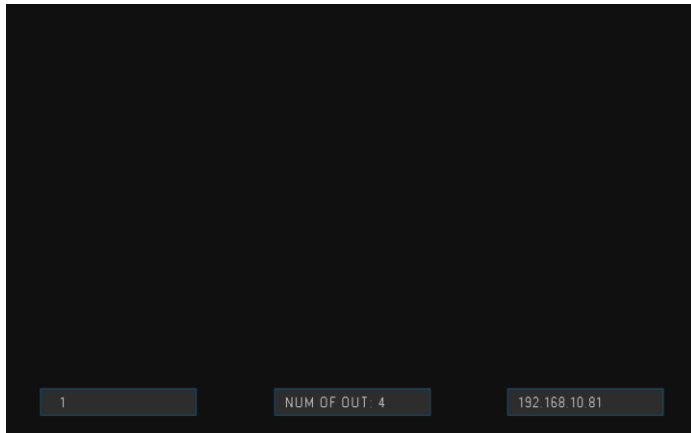
Configurable Field 2: SYS STND BY: Same as [STBM] command but now configured in minute intervals up to 3 hours. The standby mode is how long the switcher displays the walk up experience or AUX inputs before shutting down the media:scape after all (sources) are removed from the inputs

SYS STND BY: 000   192.168.10.81
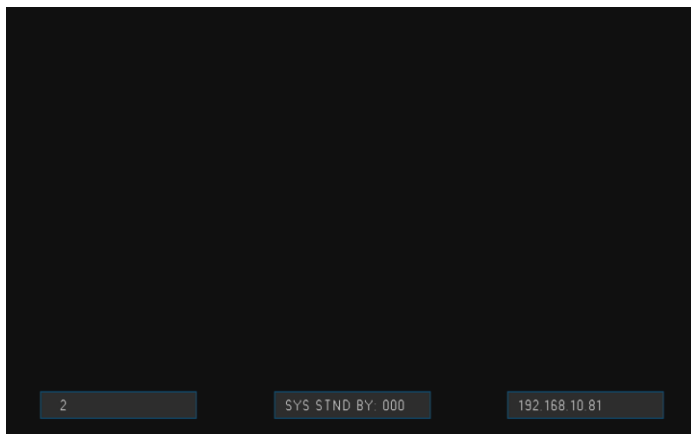
Configurable Field 3: AUX STD BY: Same as [SSDM] command. Set the AUX input standby time up to 12 hrs. in 30 min intervals. The AUX standby mode is how long the switcher displays the walkup experience before shutting down after all PUCK inputs are removed except for when AUX inputs are present.

AUX STD BY: 00.5   192.168.10.81
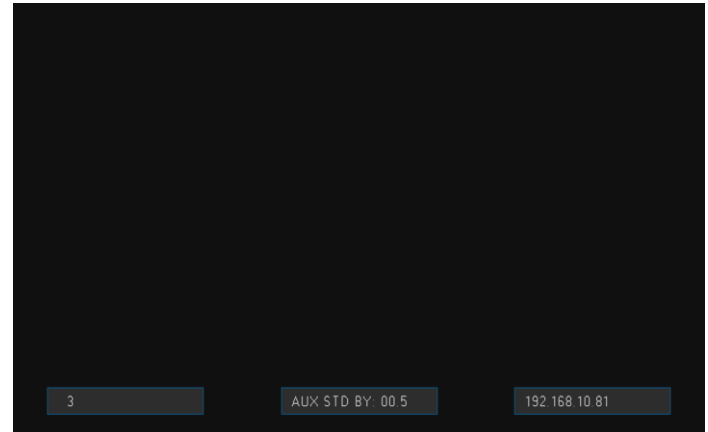
Configurable field 4: WALK-UP: Same as [WLKx] command. Select the default Walk-Up experience for media:scape. Walk up experience 1 is the default.
Option number (x = # from 1-8)
    1 = still #4 plus movie #2 (default)
    2 = still #5 plus movie #1
    3 = still #6 plus movie #3
    4 = still #4 only - no movie
    5 = still #5 only - no movie
    6 = still #6 only - no movie
    7 = still #9 plus movie #8
    8 = still #9 only - no movie

WALK-UP: 1   192.168.10.81
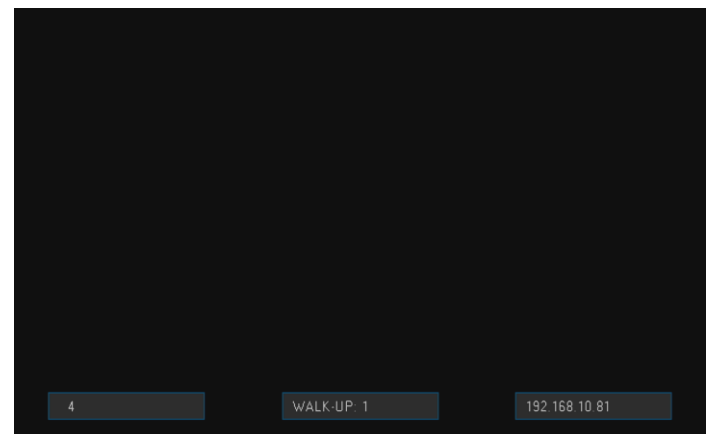
Configurable field 5: AUX FORC CTL: Choice between Yes or No of whether AUX input can override the walk up experience on the outputs.

```
5                 AUX FORC CTL: N          192.168.10.81
```

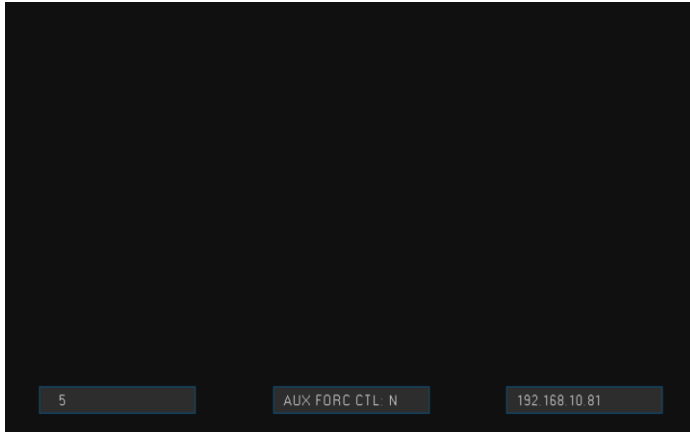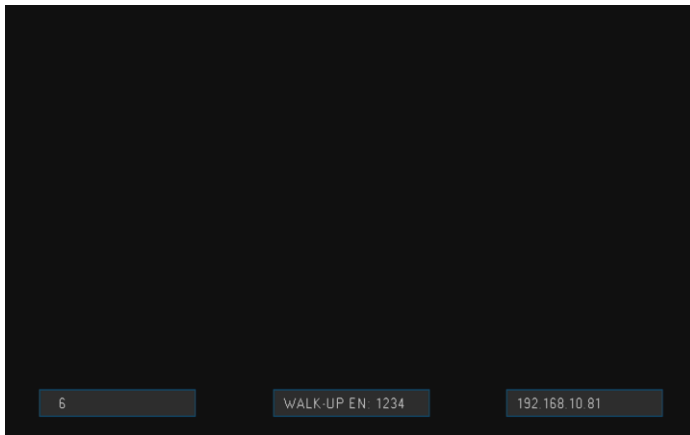**Configurable field 6:** WALK-UP EN: configured with [SMAxxxx] command. Displays outputs with walk up experience enabled. Example below shows all outputs have the walk up experience enabled

```
6                 WALK-UP EN: 1234         192.168.10.81
```

Configurable field 7: DATA SHARE: Configured using [PDOx] command. Displays outputs set for data sharing. X = none, A = All, and # for each output enabled for data sharing. This field is dependent on the first configurable field. For example, Outputs 2, 3, and 4 can be configured for data share option if the number of outputs is set to 1.

```
7                 DATA SHARE: x            192.168.10.81
```
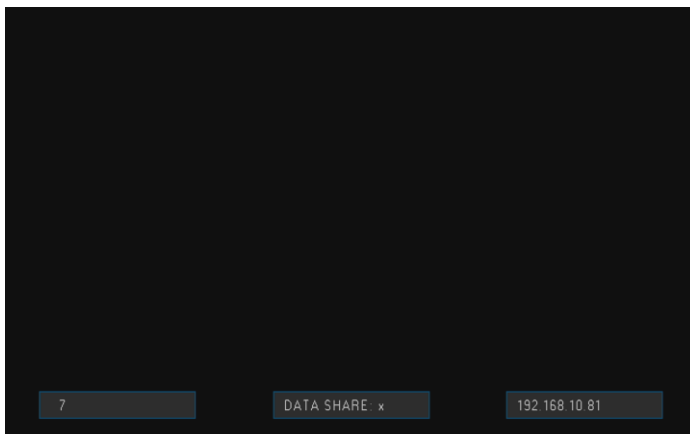
Configurable field 8: COOLDWN: Same as [SOxCDy] command. Set the cool down time for projectors. This delay allows for the outputs to be turned off for up to 15 minutes configurable with 15 second intervals allowing the projector to cool down.

```
8                 COOLDWN: NONE            192.168.10.81
```
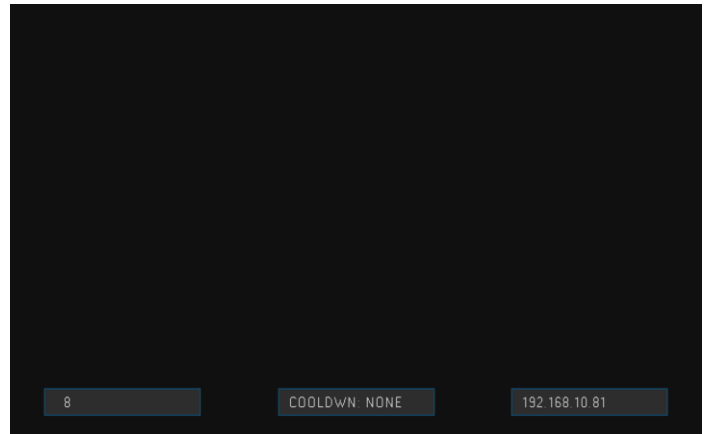
Configurable field 9: OUT1 AUX OVR: Output can be overwritten by either, any or none of the AUX inputs. Configured through [PIxOy], and in this case for Output 1.

Option	Description
1	Input 9
2	Input 10
3	Input 11
X	None
A	Any AUX input

```
9                 OUT1 AUX OVR: A          192.168.10.81
```
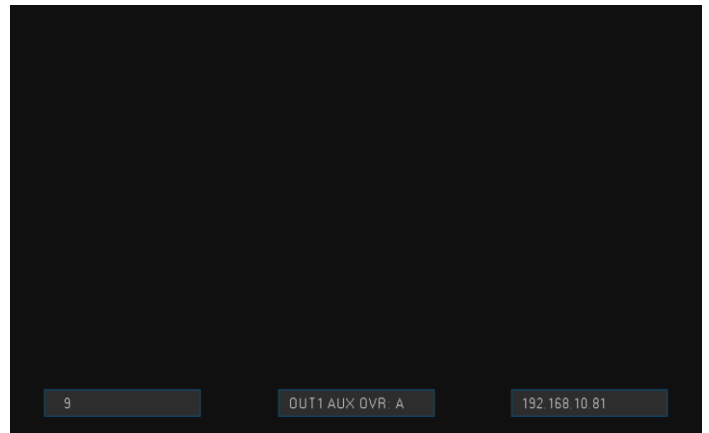
Configurable field 10: OUT2 AUX OVR: Output can be overwritten by either, any or none of the AUX inputs. Configured through [PIxOy], and in this case for Output 2.

Option	Description
1	Input 9
2	Input 10
3	Input 11
X	None
A	Any AUX input

Configurable field 11: OUT3 AUX OVR: Output can be overwritten by either, any or none of the AUX inputs. Configured through [PIxOy], and in this case for Output 3.

Option	Description
1	Input 9
2	Input 10
3	Input 11
X	None
A	Any AUX input
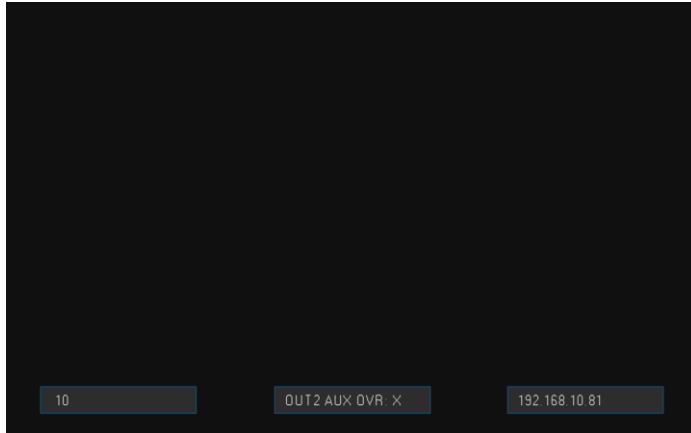
Configurable field 12: OUT4 AUX OVR: Output can be overwritten by either, any or none of the AUX inputs. Configured through [PIxOy], and in this case for Output 4.

Option	Description
1	Input 9
2	Input 10
3	Input 11
X	None
A	Any AUX input
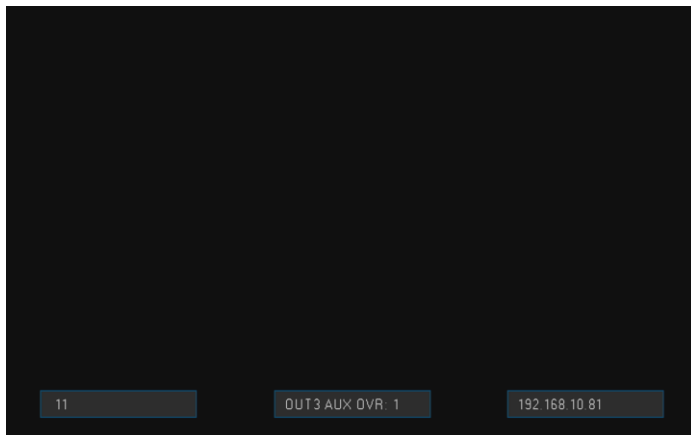
Configurable field 13: WAKEUP AUX: Waking up media:scape system by either, any, or none of the AUX inputs.

Option	Description
1	Input 9
2	Input 10
3	Input 11
X	None
A	Any AUX input

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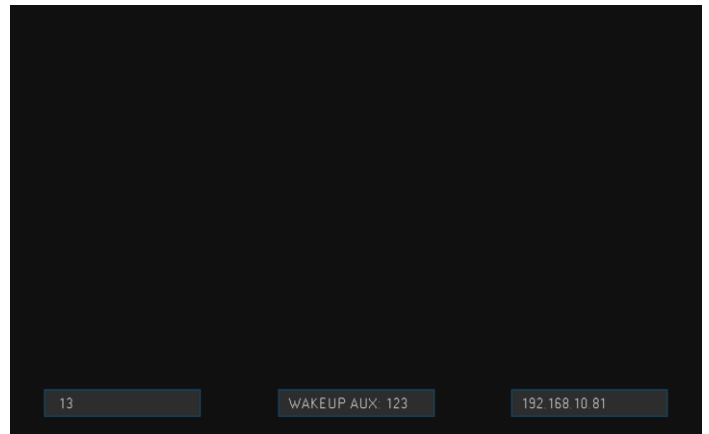
Configurable field 14: CEC POWER TEST: The use of the #2 and #4 icons can be used to determine if a display is a CEC enabled device. Press once to turn off display, and press again to turn back on.

Only outputs not defined for monitors may be selected. For example, in a 2 monitor system, outputs 1 and 2 are always enabled. Outputs 3 and 4 can be enabled or disabled. The CEC on command is sent when the output is enabled after being disabled.

The output scalar must be set for INTR (interrupt) mode for the video to also be disabled on the output of the scalar.

| 14 | | CEC POWER TEST | | 192.168.10.81 |
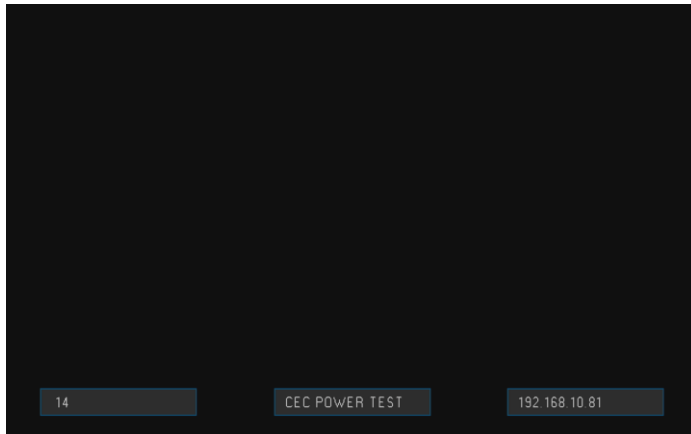
Configurable field 15: MODE 1: Same as [SMCp] command and it configures between control mode and collaborative mode for the switcher.

| 15 | | MODE 1: Collab | | 192.168.10.81 |
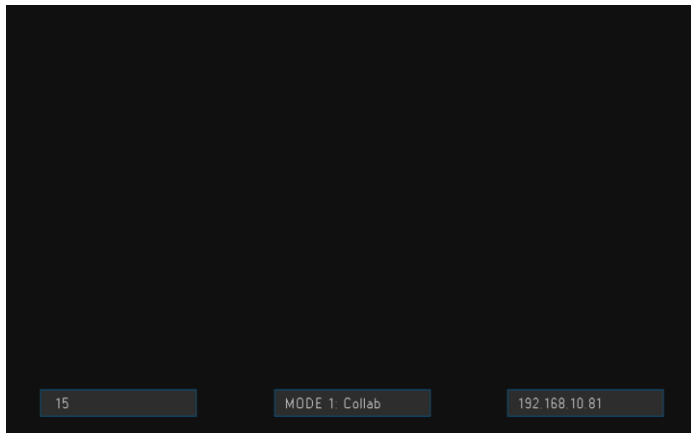
Configurable field 16: BLK SCR EN: configured with [SMBxxxx] command to set the output numbers with black screen enabled. This command works along with the [SMAxxxx] command. If the media player output is disabled, the black screen will play in place of the media player. If the black screen is disabled and the media player is disabled, the output video is turned off when PUCK or AUX video is not present on the output.

| 16 | | BLK SCR EN: 2 | | 192.168.10.81 |
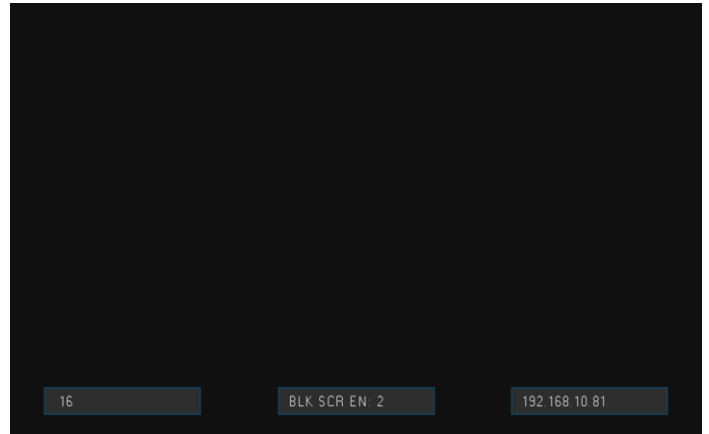
Configurable field 17: IN HDCP: Same as [HDCPx]. Setting this configuration to ON will enable the inputs to be presented with digital content protection. Setting it to off will disable the digital content protection. The setting for AUTO will choose between disabling/enabling HDCP based on the sink device for that output.

| 17 | | IN HDCP: AUTO | | 192.168.10.81 |

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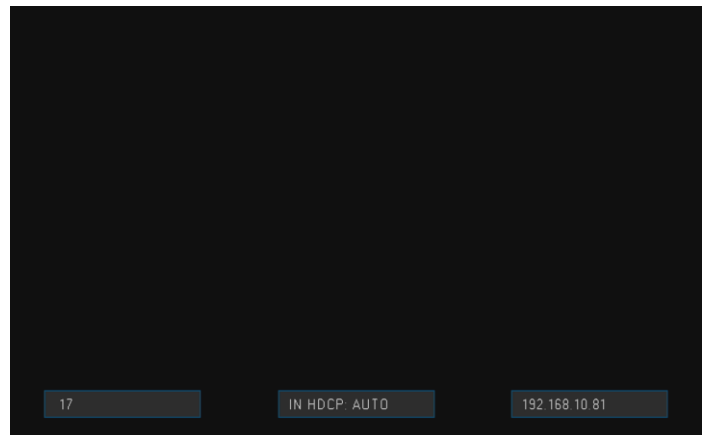
Configurable field 18: WALK UP EXPERIENCE PLAY TIME: Same as [WUPLAYxx]. This field configures the Walk Up Experience movie play time by looping the movie track for a prolonged period of time. Two preset modes are given, Mode 1 sets the track to loop at 19s and Mode 2 sets to loop the selected track at 39s. Starting at 10s and incrementing by 2s all the way to 90s can be set to loop the Walk Up Experience.

| 18 | PLAY MODE: 2 | 192.168.10.81 |
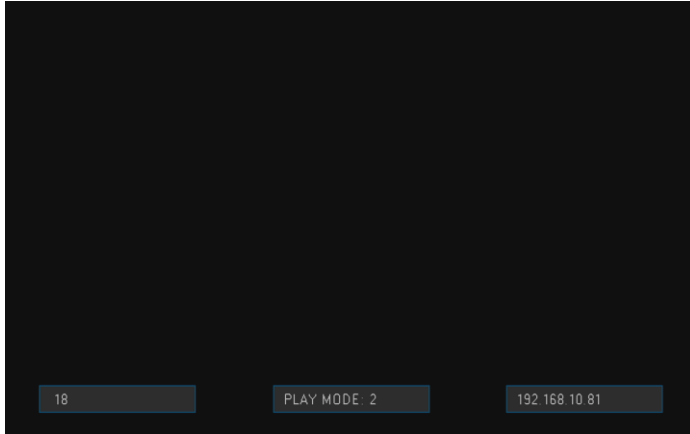
Configurable field 19: WALK UP EXPERIENCE TYPE: Same as [WLKUPx] Configures the Walk Up Experience type by setting it to 4 different types; USB, Video, still, or an OSD message stating "MEDIA:SCAPE."

| 19 | INTRO: USB | 192.168.10.81 |
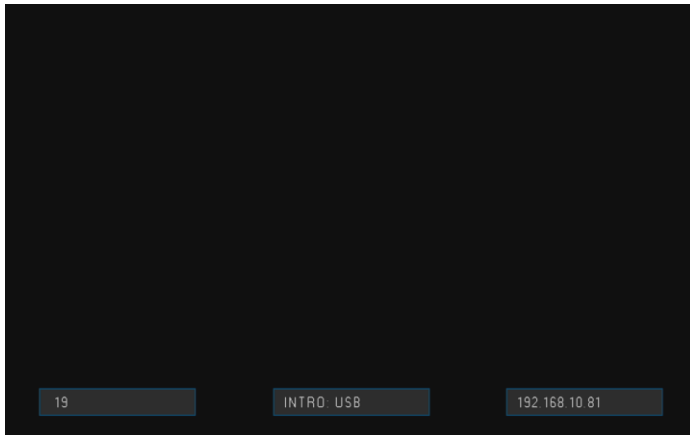
After configuration, press the power button for system to enter normal operation. If nothing is pressed while in the configurable OSD, the system will enter normal operation within 3 minutes

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7.1.9.3 Upgrade Mode
The switcher can be only be placed into upgrade mode using special upgrade software. At this time the switcher stops responding to normal operation and is waiting for the upgrade to start. A message is displayed on the monitor to indicate upgrade mode.
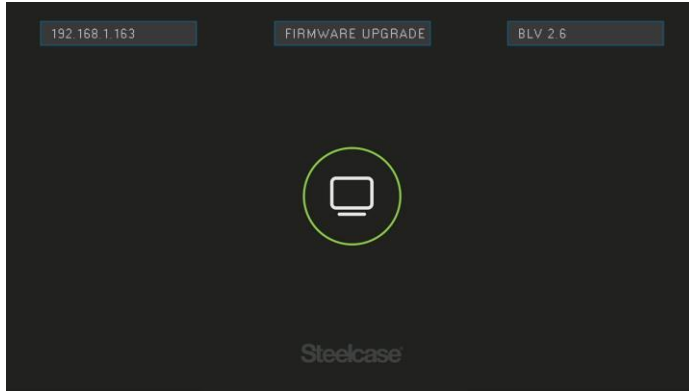
FIRMWARE UPGRADE

Warnings: If activated by accident, simply reset power to the switcher to return to normal operation. However, once the upload of new firmware is initiated, NEVER interrupt the upgrade process once it has been started; always allow the upgrade to finish.
The default IP address of each switcher is 192.168.10.81, port 23. User MUST assign a unique IP to each switcher before connecting to your network or use a cross over network cable between PC and switcher. User MUST disable any unused networks on the PC before upgrading the firmware. Open the Network and Sharing Center and use the change adapter settings tool to view and disable unused networks. The complete upgrade mode can be found in section 7.4

7.2 Control Mode
In control mode, users become observers as the PUCK touch surfaces are disabled and the media:scape system is RS-232 controlled using a third party control device. In this mode, the switcher becomes a straight 12x4 matrix switcher and the control device directs the switching among PUCKs, AUX inputs, and the Walk up experience. The PUCKs provide inputs 1-8, the AUX inputs 9, 10, and 11 and the Walk up experience input 12.

PUCK icons are illuminated in response to the control device switching just as if users make PUCK selections. In this mode the center "Off" icon is not displayed, thus distinguishing it from the normal collaborative mode. The PUCK makes a "click" sound if the center location is pressed but does not respond to the press; all other icons are ignored completely. Control mode is a temporary setting only. Every time the system goes to standby, control mode is disabled.
In control mode any input can be connected to any output; there is no data sharing, there are no AUX presets, and there is no auto-shutdown.

7.2.1 Upon Entering Control Mode
- No I/O switching takes
- Output icons do change color; status remains
- "Off" icon turns off on all PUCKs
- PUCKs with no input are white ring only

7.2.2 During Control Mode
- Only center "Off" button clicks but no effect
- PUCK icons respond to switching
- If PUCK input is applied to unused PUCK, its icons turn on to match switcher configuration (1 monitor, 2monitors, etc.)
- If PUCK input is removed (signal lost), it goes to white ring only

7.2.3 Exiting Control Mode
- Control Mode is disabled when entering Standby
- [SMC1] cancels Control Mode

7.2.4 Single, Dual, Triple, and Quad Systems
Control mode does not change the monitor system settings, even though all inputs and outputs are controlled individually. For example, in a single monitor system, switching Input 1 to Output 1 in control mode makes a single switch only whereas in collaborative mode, pressing icon 1 on a PUCK directs that PUCK's image to all 4 outputs.
> Important: Single, dual, and triple monitor systems do not illuminate all PUCK icons, but control mode allows independent switching of any input to any output. Reset output states upon exiting control mode by connecting Input 12 to all outputs using the "[I12O*]" command; this displays the walk up experience image on all outputs and syncs the PUCKs with the displayed outputs.

The "Off" Icon
- Control Mode - the "Off" is turned off
- Control Mode - the "Off" clicks indicating Control Mode
- If PUCK is not connected when the system is configured, it does not exist. If a PUCK is added and the system is not configured, the "Off" icons is illuminated only; no ring and no other icons.

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7.3 Monitor System Modes
The switcher can be set as a single, dual, triple, or quad monitor system with special functions for AUX inputs. If an external video signal (PUCK or AUX input) is not being routed to an output on the switcher, the switcher displays the Walk up experience still image on the unused output, unless an AUX input has been preset to display on that output. The AUX inputs can be preset to display on any combination of the 4 outputs in all modes with Output 1 the default for both Input 9 and Input 10. The priorities for displaying output images are as follows:

1st PUCKs ....Up to 8 total

2nd Input 10 (AUX preset)...Set in configuration (default=Output 1)

3rd Input 9 (AUX preset).....Set in configuration (default=Output 1)

4th Walk up experience ......Displays on outputs with none of above

The only time a blank screen is present on the output is when the switcher is in standby mode. Otherwise there will always be an image from a PUCK, AUX input, or the Walk up experience.
Single, Dual, and Triple Monitor Systems each support data sharing. Only the Quad Monitor System does not support data sharing.
The number of icons illuminated on the PUCKs identifies the switcher's mode of operation. The different modes illuminate the icons as follows:

Single Monitor System: Illuminates icon #1

Dual Monitor System: Illuminates icons #1 and #2

Triple Monitor System: Illuminates icons #1, #2, and #3

Quad Monitor System: Illuminates icons #1, #2, #3, and #4

WARNING: Priority mode overrides normal operation when Input 9, 10 and/or 11 have video signals present. See 7.1.3 for details.

7.3.1 Single Monitor System
In a single monitor system, only icon 1 is illuminated on the PUCKs. The data share output can be set to any or all of Outputs 2-4 with Output 4 the default. The "Off" icon will illuminate when the allowed output is selected.
Pressing icon 1 on a PUCK (while icon is white) directs that PUCK's video to all 4 outputs. Pressing icon 1 a second time (while the icon is green) removes PUCK's video from all outputs except those defined as data sharing outputs. Pressing "Off' removes the PUCK's video from all outputs regardless of data sharing. The Walk up experience image is displayed on the unused outputs unless AUX presets have been defined and AUX inputs are present.

7.3.2 Dual Monitor System
In a dual monitor system, icons 1 and 2 are illuminated on the PUCKs. The data share output can be set to Outputs 3, Output 4, or both Outputs 3 and 4 with Output 4 the default. The "Off" icon will illuminate when the allowed output is selected.
No Data Sharing
Pressing icon 1 on a PUCK (while icon is white) directs that PUCK's video to Outputs 1 & 3; icon 2 directs video to Outputs 2 & 4. Pressing icon 1 a second time (while the icon is green) removes the PUCK's image from Outputs 1 & 3. Pressing "Off" removes the PUCK's video from all outputs. The Walk up experience image is displayed on any output that does not have a PUCK image unless AUX presets have been defined and AUX inputs are present.
Data Sharing
Pressing icon 1 on a PUCK (while icon is white) directs that PUCK's video to Outputs 1 & 3 plus the data share output; icon 2 directs video to Outputs 2 & 4 plus data share. The image from the last PUCK selection is always displayed on the data share output.
Pressing the last PUCK selection, a second time (while the icon is green) turns the icon white, leaves the outer ring green, and removes the PUCK's image from its associated outputs except those defined as data sharing outputs. Pressing "Off" removes the PUCK's video from all outputs regardless of data sharing. The walk up experience image is displayed on any output that does not have a PUCK image unless AUX presets have been defined and AUX inputs are present.

7.3.3 Triple Monitor System
In a triple monitor system, icons 1, 2, and 3 are illuminated on the PUCKs. The data sharing output can only be set to Output 4. The "Off" icon will illuminate when the allowed output is selected.
No Data Sharing
Pressing icon 1 on a PUCK (while icon is white) directs that PUCK's video to Output 1; icon 2 to Output 2, icon 3 to Output 3. Pressing an icon a second time (while the icon is green) removes the PUCK's image from its output. Pressing "Off" removes the PUCK's video from all outputs. The Walk up experience image is displayed on any output that does not have a PUCK image unless AUX presets have been defined and AUX inputs are present.
Data Sharing
Pressing icon 1 on a PUCK (while icon is white) directs that PUCK's video to Output 1 plus the data share output; icon 2 to Output 2 plus data share and 3 to Output 3 plus data share. The image from the last PUCK selection is always displayed on the data share output.
Pressing the last PUCK selection a second time (while the icon is green) turns the icon white, leaves the outer ring green, and removes the PUCK's image from its associated output except those defined as data sharing outputs.
Pressing "Off" removes the PUCK's video from all outputs regardless of data sharing. The Walk up experience image is displayed on any output that does not have a PUCK image unless AUX presets have been defined and AUX inputs are present.

7.3.4 Quad Monitor System
In a quad monitor system, icons 1, 2, 3, and 4 are illuminated on the PUCKs and there is no data sharing output available. The "Off" icon will illuminate when the allowed output is selected.
Pressing icon 1 on a PUCK (while icon is white) directs that PUCK's video to Output 1; icon 2 to Output 2, 3 to Output 3, and 4 to Output 4. Pressing an icon a second time (while the icon is green) removes the PUCK's image from its output. Pressing "Off" removes the PUCK's video from all outputs. The Walk up experience image is displayed on any output that does not have a PUCK image unless AUX presets have been defined and AUX inputs are present.

7.4 Before Firmware Upgrade Mode
Use the following procedures to set a unique IP address as well as disabling any network communication other than LAN during firmware upgrade.

Set Unique IP
Establish a TCP connection between the switcher and the laptop using a network, crossover cable and communication software like AVSnap or HyperTerminal.
1) Set the IP address of the laptop to 192.168.10.44 using the Change Adapter Settings tool in the Network and Sharing Center.
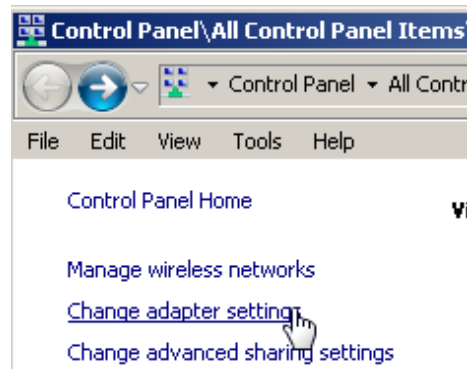
2) Select the Local Area Connection properties.

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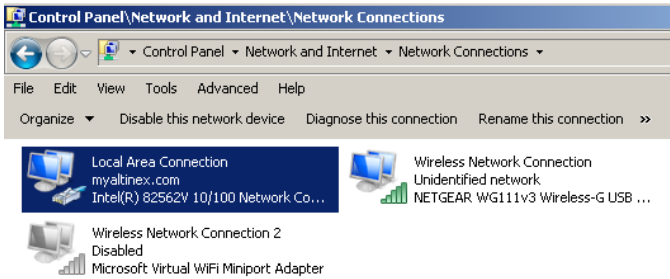
3) Select the Internet Protocol Version 4 (TCP/IPv4) option and click Properties.
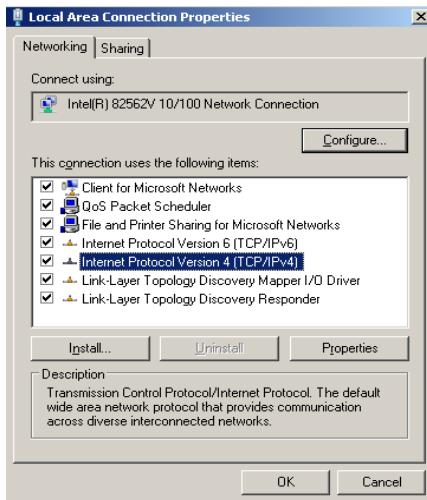
4) This IP address must be on the same network as the switcher. The default switcher IP is 192.168.10.81 so choose something like 192.168.10.44.
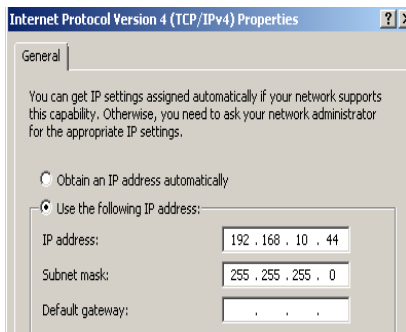
5) Use AVSnap or HyperTerminal to send the commands as described below in order to set a unique IP for your LAN. Each command causes the TCP connection to be broken, so after sending each command, except [CRC], you will have to re-connect a new connection.

Command Description
1) [CRC] Read network settings

Example

[CRC]

Feedback

Returns MAC address, IP address, PORT number, Subnet, and Gateway

Command Description

2) [CSP] Set switcher IP address

Example

 [CSP192.168.1.123]

Feedback

None, disconnects

Command Description

3) [CSB] Set switcher subnet

Example

[CSB255.255.255.0]

Feedback

None, disconnects

Command Description

4) [CSG] Set switcher gateway

Example

[CSG192.168.1.1]

Feedback

None, disconnects

The [CSP] command MUST be sent to provide a unique ID.

The subnet command and gateway commands only need to be sent if required by your network administrator. See Section 7.5 for examples of command lines.

AVSNAP
Download the software readily available at http://avsnap.com/. AVSNAP is a tool that has many uses such as using block diagrams or manufacture libraries for system design, GUI programming for user interfaces, and RS232 communication. Once installed, run the program and click on the communications mode button at the top.
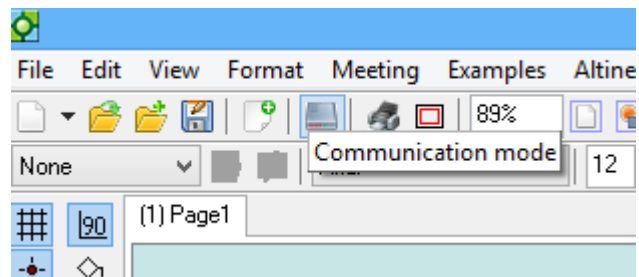
Once in communication mode, in the terminal window double click to set up the communication between computer and media:scape. Refer to the next section on the complete command list. Host address is the IP address assigned earlier.

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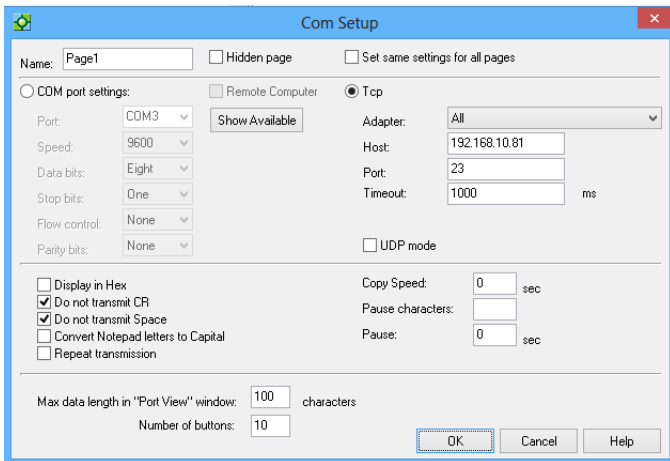
Disable Networks
1) Open the Network and Sharing Center from the Control Panel or taskbar icon.
2) Select the Change Adapter Settings tool.
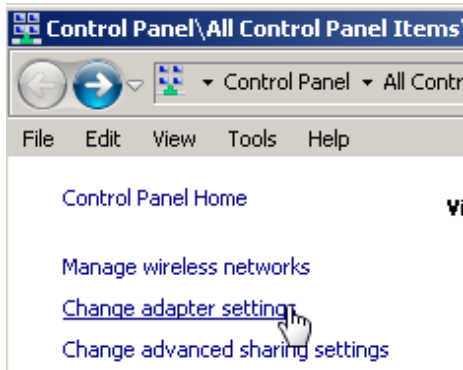
3) Disable all network connections except the Local Area Connection properties. Click on the wireless and Bluetooth connection and then select disable.

Americas Tech Support: PHONE: 1.800.334.4922 / EMAIL: techsupport@Steelcase.com

EMEA Tech Support: PHONE: +33 3 88 13 36 36 / EMAIL: emea.techsupport@steelcase.com

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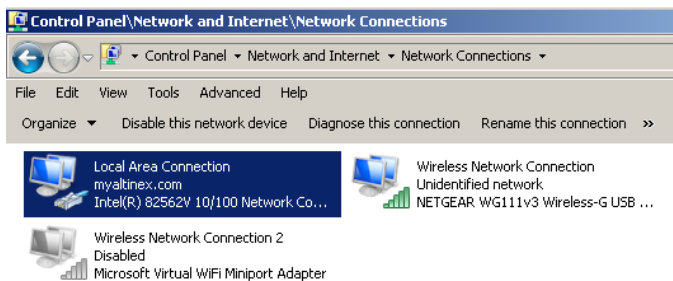
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7.4.2 Entering Firmware Update Mode
This mode is entered using the upgrade software only. Once in this mode, the media:scape displays OSD on the screen that reads as shown with the media:scape's IP address:
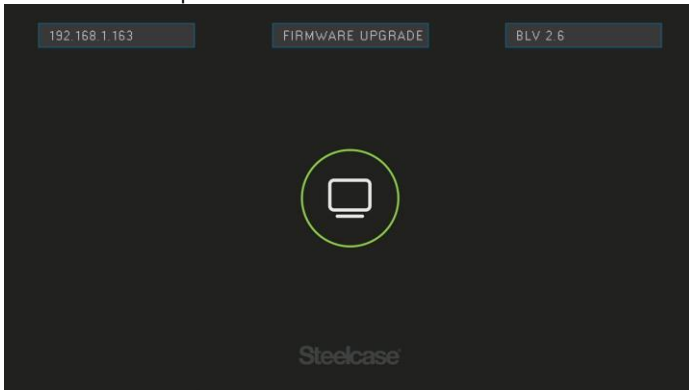
The software upgrade runs on a laptop (or over the network) that will automatically update firmware for media:scape. PUCK in Input 1 is lit while in FIRMWARE UPGRADE mode. Normal operation of the media:scape is non-operational. If firmware fails, restart application firmware, and then repower the media:scape and upload firmware. If firmware fails, media:scape will automatically go into firmware update mode automatically. Now that the media:scape is in upgrade mode follow the process of upgrading to the latest firmware.

Step One: Open the update folder containing the firmware update file and launch the EXE file. Install the software required for firmware upload.
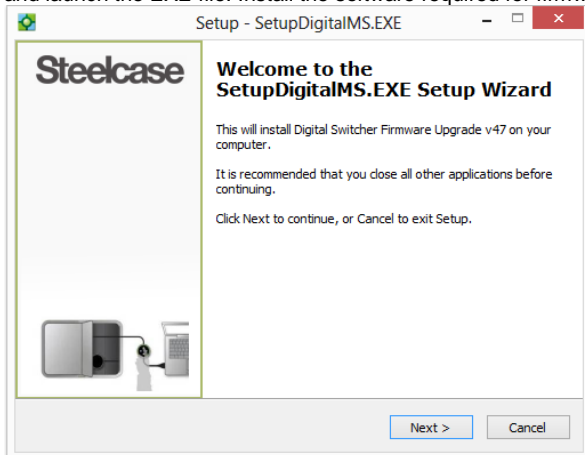
Click Next to continue with the setup and install the upgrade application.

Step 2: Once installed, launch the application using the following shortcut icon.

On startup, the application searches for switchers. If detected, a single switcher IP appears in the text box in the middle of the screen. If this is NOT the correct IP, you change it to the desired IP to upgrade.

Step 3: Now to update the media:scape. Click the GO button; the application runs automatically from this point forward. The following operations are performed: Erase and Program.
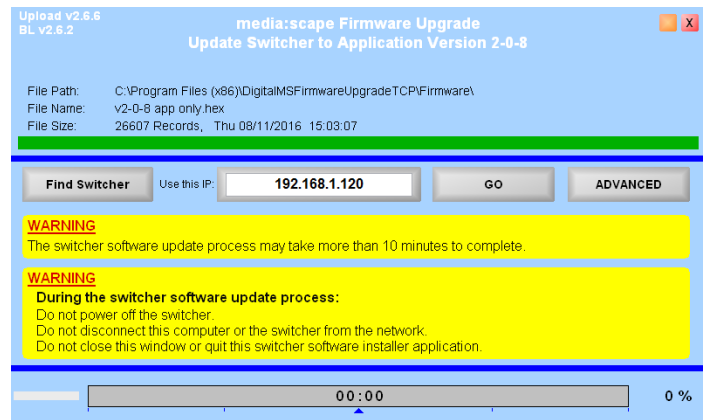
Step 3: After the switcher has been programmed, a success message is displayed. If there was a problem, follow the instruction to achieve a successful upgrade.
Step 4: Close the upgrade application
Step 5: Reset power to the media:scape.
----------------------------- Upgrade is complete -----------------------------

7.4.5 Installation of digital scaler (SP106-253).
Location of Resolution/Mode Button
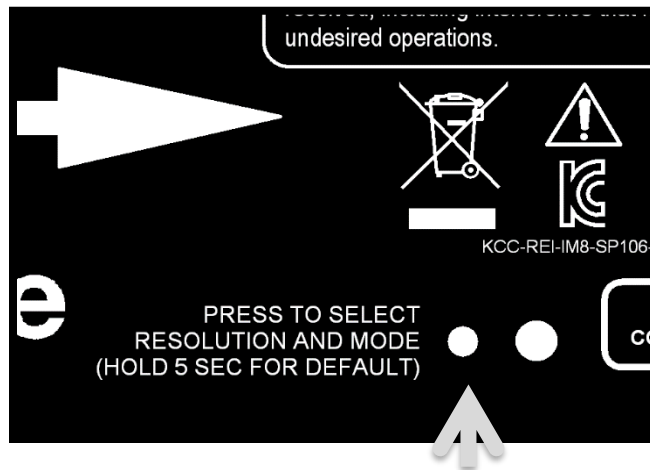
Step 1: Connect the output of the scalar to the display
Step 2: Connect the cable from the output of the media:scape to the input of the scalar.
Step 3: Set the scaler to a known starting resolution holding down the resolution/mode button for 5 seconds and observing power led flashing 2 times.
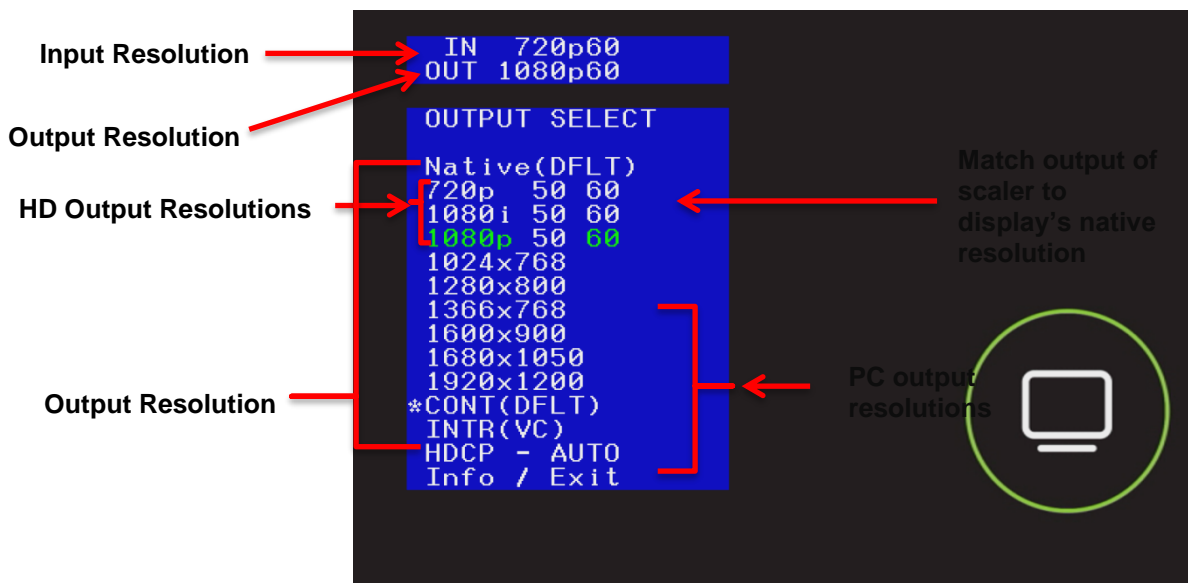
Step 4: Use the resolution/mode button and on-screen display to make further image property changes.

How to make menu adjustments: Press resolution/mode button to show the on-screen menu. Press mode/resolution button again to move the highlighted field to the next field. Once required resolution is selected, wait until the on-screen menu times out. That will set new property or resolution.

If Info option is selected on the OSD, then it will display latest firmware number as well as input/output details. To exit without any adjustments select the Exit option at the bottom of the OSD menu. Once OSD times out, the scaler will return to normal operation.

Modes:
CONT: (continuous) Output generates black screen signal when the input signal is lost. This prevents display's OSD messages from displaying.
INTR: (interrupted) Output won't send signal out when the input signal is lost.

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HDCP Option
Selecting HDCP from the main menu pulls up the HDCP submenu. Press the resolution/mode button to until the desired mode is highlighted.
ON   The scaler passes HDCP protected content
OFF   The scaler passes Non-HDCP content and blocks HDCP protected content.
AUTO   The scaler mirrors the HDCP capability of the sink device.
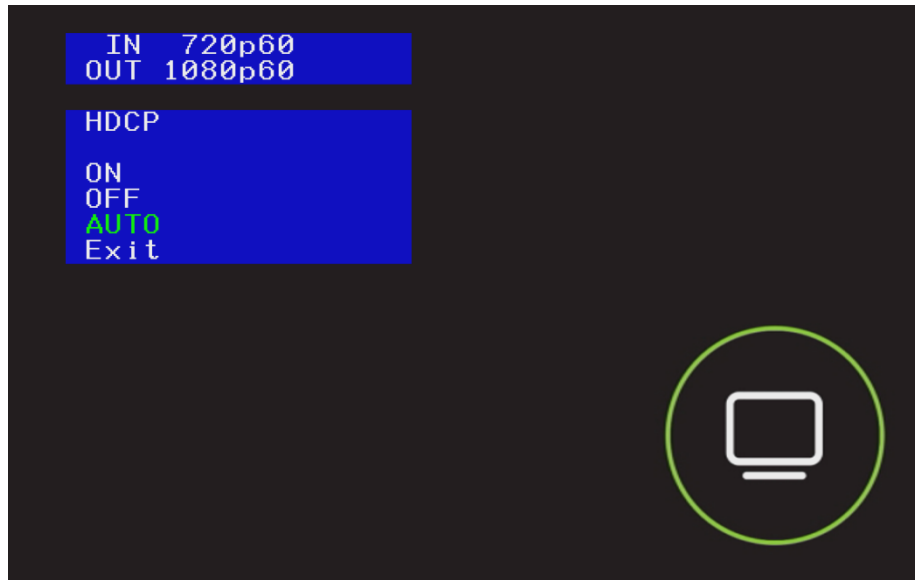
Info
Displays additional scaler information including: incoming resolution, output resolution, source information, sink information, and the unit firmware version
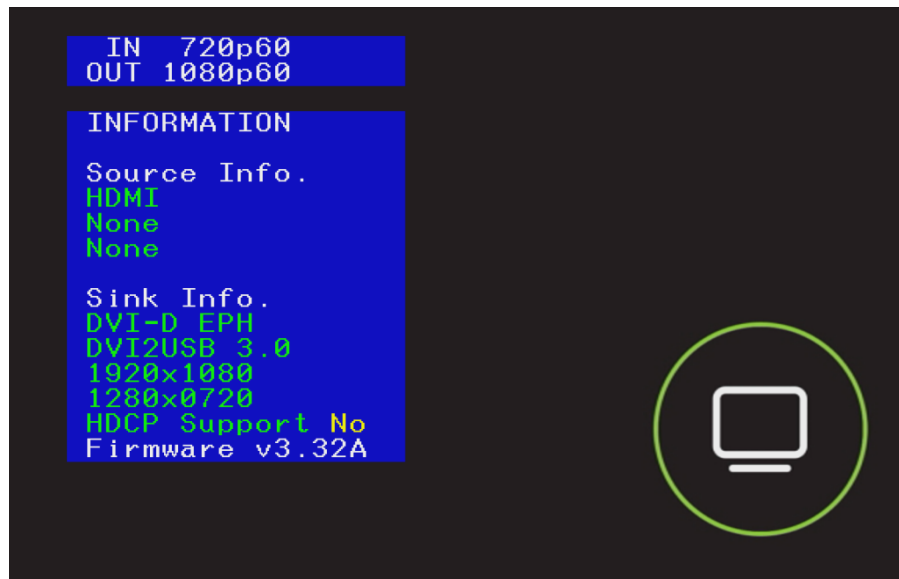
Reset
Press and hold resolution/mode button for 5 seconds to set to factory settings. Power LED will flash two times. If power LED does not flash, the scaler did not reset.

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System Operation with Scaler

PASS   The Media:scape switcher enables the HDCP engine. Sources are able to output protected content. If a non-HDCP sink is used, the scalar displays the "Protected Content" message. This option can be used to display fully protected content, but only to HDCP sinks. Non-HDCP sinks only display the error message.

BLOCK   The Media:scape switcher disables the HDCP engine. Sources only output unprotected content. Depending on the source, this may create confusion as in the examples below.

    Blu-ray   If the HDCP engine is OFF, video output is a black screen and NOT protected. This condition cannot be detected since the screen is black. There is no way to detect this condition and for the scaler to display an error message.

    MacBook   If the HDCP engine is OFF, no protected content is displayed. The MacBook will provide the desktop image but not protected video. For example, a movie playing in iTunes stops playing and the image inside the iTunes window goes black. The window and desktop are still visible.

AUTO   The scaler mirrors the HDCP capability of the sink device. This option lets the Media:scape switcher read the HDCP capability of the sink. If a Non-HDCP sink is detected, the HDCP engine is turned off and sources do not provide protected content. AUTO is the default setting.

System Operation without Scaler

HDCP Engine ON   This option forces the Media:scape switcher HDCP engine to always be enabled. Sources can provide protected content. The "PROTECTED" message is displayed on Non-HDCP sinks.

HDCP Engine OFF   This option forces the Media:scape switcher HDCP engine to always be disabled. No protected content is provided by source.

    Blu-ray   If the HDCP engine is OFF, video output is a black screen and NOT protected. This condition cannot be detected since the screen is black. There is no way to detect this condition and for the scaler to display an error message.

    MacBook   If the HDCP engine is OFF, no protected content is displayed. The MacBook will provide the desktop image but not protected video. For example, a movie playing in iTunes stops playing and the image inside the iTunes window goes black. The window and desktop are still visible.

HDCP Auto   The Media:scape switcher reads the HDCP capability of the sinks connected to the outputs. If any sinks are Non-HDCP, the HDCP engine is disabled; otherwise the HDCP engine is enabled.

7.5 TCP/IP Control

The control commands for the media;scape are in a simple ASCII character format. Commands are software V.49 compatible. Commands are compatible with both the 8x4 and 4x2 digital switcher.

1.	Square brackets "[ ]" are part of the command.
2.	Use uppercase letters for all commands.
3.	Spaces are not legal characters.

1. [ACTIVE]

This command returns the running mode of the M:S. The M:S returns [APP] if the normal application is running or [BL] if in bootloader more.

2. [AUTH]

Force M:S to authenticate all outputs. This is an execute command

Command Format: [AUTH]

Example: [AUTH] command will force switcher to check all outputs to see if they are HDCP compliant destinations.

3. [BLV]

This command returns the bootloader version installed on the switcher. The bootloader must have been run for the main application to know the current bootloader more.

4. [BLS]

This command returns the IP addresses and status of the last bootloader run. The first IP is the IP of the main application upon entering bootloader mode and the second is the IP used in the bootloader, and the final number displayed is the status.

[192.168.1.163,192.168.1.163,2]

Status Values

0=Bootloader ran normally

1=Bootloader IP did not match application IP

2=Bootloader was cancelled before erase operation

3=Bootloader timeout occurred before erase operation

5. [BLS+]

This command is the same as the [BLS] command, but includes text descriptions.

6. [CECx]

Verification of CEC enabled device on all outputs. If destination device is not responsive it is not rated for this HDMI specific feature.

Command Format: [CECx]

(0=TV off, 1=TV on)

Example:

[CEC1] will turn on all TVs while [CEC0] turns off all TVs Media:scape will return [] after execution of command regardless if TV is CEC enabled.

7. [CRC]

Read the complete TCP/IP configuration of the controller that is currently in use on the network.

TCP Feedback: [SRC,SCShsa,i,p,s,g,m]

Command Format: [CRC]

h	= Hardware Version
s	= Software Version
a	= Alias ID (00000) * Not Implemented
i	=Static IP (4 octets)
p	=Port (decimal value from 1 to 65535)
s	=Subnet (4 octets)
g	=Gateway (4 octets)
m	=Mac Address (12 hex characters)

Example:

A Controller has the following settings:

Property	Value
Hardware Version	00
Software Version	47
Alias ID	(00000) * Not Implemented
Static IP:	192.168.1.218
Port:	23
Subnet:	255.255.255.0
Gateway:	192.168.1.254
Mac Address (fixed):	00-04-A3-1D-28

Read the settings for the controller by sending the following:

[CRC]

The media:scape returns the following feedback:

TCP:

[SRC,SCS004700000,192.168.1.218,23,255.255.255.0,192.168.1.254,00-04-A3-10-1D-28]

Important: *Write the new IP address and port number on the label provided on the bottom of the unit. It will be needed to identify the unit.*

Permanently identify the unit

Important: *Write this new IP address on the label provided on the bottom of the unit. It will be needed to identify the unit.*

8. [CRC+]

Same as [CRC], except it displays the saved (an/or changed) settings that take effect after reset of the switcher. Command to read the complete TCP/IP configuration of the controller

Command Format: [CRC+]

Example:

Verify the settings are correct by sending the following command.

[CRC+]

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9. **[CSB]**

Set the subnet of the controller. The subnet should be provided by your IT administrator. The switcher does not send a confirmation after changing the subnet mask, but it does break the TCP/IP connection. A new connection must be established after changing.

   Command Format: [CSBddd.ddd.ddd.ddd]

ddd = Subnet address (4 octets, 001 to 255)

Example:

Set the controller subnet to 255.255.255.0 by sending the following:

   TCP: [CSB255.255.255.0]

10. **[CSB+]**

Same as [CSB], except the changes do not take effect until after reset of the switcher. Set the subnet of the controller. The subnet should be provided by your IT administrator. The switcher does not send a confirmation after changing the subnet mask, but it does break the TCP/IP connection. A new connection must be established after changing.

   Command Format: [CSB+ddd.ddd.ddd.ddd]

ddd= Subnet address (4 octets, 001 to 255)

Example:

Set the controller subnet to 255.255.255.0 after the reset by sending the following:

 [CSB+255.255.255.0] will return feedback as follows: [255.255.255.0]

11. **[CSG]**

Set the gateway of the controller. The gateway should be provided by your IT administrator. The Switcher does not send a confirmation after changing the gateway, but it does break the TCP/IP connection. A new connection must be established after changing.

   Command Format: [CSGddd.ddd.ddd.ddd]

ddd= Gateway address (4 octets, 001 to 255)

Example:

Set the controller gateway to 192.168.1.0 by sending the following:

   TCP: [CSG192.168.1.0]

12. **[CSG+]**

Same as [CSG], except changes do not take effect until after the reset of the switcher. Command to set the gateway of the controller. The gateway should be provided by your IT administrator. The Switcher does not send a confirmation after changing the gateway, but it does break the TCP/IP connection. A new connection must be established after changing.

   Command Format: [CSG+ddd.ddd.ddd.ddd]

ddd= Gateway address (4 octets, 001 to 255)

Example:

Set the controller gateway to 192.168.1.0 by sending the following:

   TCP: [CSG+192.168.1.0]

13. **[CSN]**

Set the switcher alias to be displayed in the discovery feedback.

    Command Format: [CSNaaaaa]

aaa= Alias (12 alphanumeric characters plus dash)

Example:

Set the media:scape address to STEELCASE-MS by sending the following command:

   TCP: [CSNSTEELCASE-MS]

14. **[CSP]**

Set the static IP address of the controller for identification on the LAN. The IP must be unique and reserved for the controller by your IT administrator. The media:scape does not send a confirmation after changing the IP, but it does break the TCP/IP connection. A new connection must be established after changing.

      Command Format: [CSPddd.ddd.ddd.ddd]

ddd= IP address (4 octets, 001 to 255)

Example:

Set the controller IP address to 10.200.2.100 by sending the following:

   TCP: [CSP10.200.2.100]

15. **[CSP+]**

Same as [CSP], except changes do not take effect until after the reset of the switcher. Command to set the static IP address of the controller for identification on the LAN. The IP must be unique and reserved for the controller by your IT administrator. The media:scape does not send a confirmation after changing the IP, but it does break the TCP/IP connection. A new connection must be established after changing.

      Command Format: [CSP+ddd.ddd.ddd.ddd]

ddd= IP address (4 octets, 001 to 255)

Example:

Set the controller IP address to 10.200.2.100 by sending the following:

   TCP: [CSP+10.200.2.100]

16. **[DHCPx]**

Sets up either DHCP or fixed IP address

   Command Format: [DHCPx]

X = configuration protocol select

(1 = DHCP, 0 = fixed IP)

Example:

Use the command [DHCP1] to set a dynamic IP address.

17. **[DRV]**

This command displays current internal main BIOS, input BIOS, and output BIOS

**Note: OSD position and size adjustment commands require minimum version 26.8.37, 27.8.37, and 28.8.37.

   Command Format: [DRV]

Example:

Entering command [DRV] will return feedback in the format [(MAIN:26.8.37)(IN:27.8.37)(OUT:28.8.37)]

18. **[FAN]**

This command returns fan speed setting in percentage 00~100. The speed indicates the calculated value based on system temperature and is not affected by the manual [FANx] commands. The fan speed is ramped up/down incrementally as temperature changes to avoid sudden changes in sound.

Command Format: [FAN]

xx = 0-100, 100 fan is at full speed and 0 fan being at the slowest speed (0 rpm).

Return format = [Fxx]

Example: Use command [FAN] to return feedback [F38] meaning that the fan is running at 38% of maximum.

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19. **[FANx]**

Set the fan speed on a temporary basis to verify operation (This is for testing only). Under normal conditions, the fan only turns on when the internal circuit board is too warm. This test fan speed only remains active until the next automatic fan update.

Command Format: [FANx]

x = Output number (n = # from 0 to 3)

0 = Off/normal operation

1 = Half speed

2 = Full speed

3 = Max speed

Example:

Set the fan to full speed by sending:

[FAN2]

Fan test during power up process.

In order to identify that fan and fan circuit is fully operational we implement the power up fan test. During power up fan will be turned on for 2 seconds on medium speed and then 2 seconds for high speed and then turned off.

20. **[FXDIP]**

Use fixed IP set using [CSP],[CSB],and [CSG] commands.

Command Format: [FXDIPx]

x = Configuration protocol select

(1= fixed, 0=DHCP)

Example:

Use the command [FXDIP1] to set a fixed IP address.

21. **[HDCP]**

Display content protection engine state

Command Format: [HDCP]

Example:

Feedback from command [HDCP] to return

[0] = HDCP ON

[1] = HDCP OFF

22. **[HDCPx]**

Set HDCP engine ON/OFF or AUTO

Command Format: [HDCPx]

x = configuration protocol select

0 = HDCP ON

1 = HDCP OFF

2= HDCP AUTO (Default)

Example:

Use the command [HDCP1] to set HDCP engine off. No HDCP content will display.

23. **[HDCPIx]**

Display content protection of input (x = input number 1~11)

Command Format: [HDCPx]

x = input number

Feedback return:

0 = None

1 = Protected

2 = No input signal

Example:

Command [HDCPI1] will return [1] indicating that the source on input 1 has protected content.

24. **[HDCPM]**

Display saved status in memory of content protection engine.

Command Format: [HDCPM]

Example:

Use the command [HDCPM] to return

[0] = HDCP ON

[1] = HDCP OFF

[2] = HDCP AUTO

25. **[HDCP?]**

Display content protection support for outputs 1~4 in the feedback format [(CP xx)(CP xx)(CP xx)(CP xx) when HDCP engine is set to default

Command Format: [HDCP?]

Example: use command [HDCP?] to return:

CP OK	Sink device supports content protection
CP NS	Sink device does NOT support content protection
OPEN	No sink device connected
CP ER	Content protection status could not be determined

Feedback [(CP OK)(CP OK)(CP OK)(CP OK)] indicates that all 4 outputs have destinations that support HDCP content.

26. **[HW]**

Displays the hardware version of the media:scape.

Command Format: [HW]

Example:

Use the command [HW] to return: [02] (Version 2)

27. **[INEQ]**

This command returns the input equalization setting of the media:scape. The return values are as follows:

0 = Default equalization

1 = Display Port PUCKs have high equalization

2 = PUCKs have high equalization

Note that the media player input is not included.

28. **[INEQB]**

This command returns the setting of all 11 inputs individually.

[0,0,0,0,0,0,0,0,0,0,0] = all standard equalization

[0,0,0,0,0,0,0,0,1,1,0] = Aux inputs 1 and 2 have high equalization

29. **[INEQx]**

This command sets the input equalization. Use a single digit to set all input the same, or 11 digits to set each input individually.

[INEQ0] = all inputs default equalization

[INEQ3,00000000110] = Aux inputs 1 and 2 high equalization, all others default.

Steelcase

30. **[IPL]**

This command returns the IP lease time (in seconds) assigned by the network. For example, if [28800] is received, the lease time is set for 8 hours.

31. **[IPL+]**

This command returns the IP lease time assigned by the network, the renewal time, and the time remaining before the renewal. In the following example, the lease time is 8 hours, the renewal time is 4 hours (half the assigned time) and there are about 3.8 hours remaining until the lease is renewed.

[28800,14400,13640]

32. **[IPR]**

This command forces an immediate lease renewal. In the above example, after sending [IPR], the remaining time would be 14400 seconds.

33. **[IxOy]**

Connect one input to one output, turn on the output, and send acknowledgement "[ ]" feedback. Inputs 1-8 are PUCK inputs, Inputs 9-11 are the AUX inputs, and Input 12 is the Walk up experience. If there is no signal on the input, the command is ignored.

Command Format: [IxOy]

x = Input No. (x # from 1 to 12)

1-8 = PUCK input, 9-11 AUX input, 12 walk up experience.

y = Output No. (1, 2, 3, or 4)

Example:

Connect Input 2 to Output 1 by sending the following command:

[I2O1]

34. **[IPOn]**

This command de-selects an active auxiliary input (input 9, 10,or 11) as though it were a PUCK button being de-selected.

Command Format: [IPOn]

n= Input No. (n # from 9 to 11)

Example:

System Mode = 2 (PUCK icons 1 and 2 illuminated)

[IPO1] [ ]

This command is the same as de-selecting icon 1 of a PUCK. Note that the output must first have been selected using the [ImB1] command.

[IPO3] [ER]

This output selection is not available in a 2 monitor system.

35. **[ImBn]**

This command selects an active auxiliary input (input 9, 10, or 11) as though it were a PUCK button being selected.

Command Format: [ImBn]

m = Input No. (m # from 9 to 11)

n = Output No. (1, 2, 3, or 4)

Example:

System Mode = 2 (PUCK icons 1 and 2 illuminated)

[I10O1] [ ]

This command is the same as selecting icon 1 of a PUCK. An [ER] is received if there is no input signal on In10.

[I11O3] [ER]

This output selection is not available in a 2 monitor system.

36. **[MAT]**

This command returns the model number of the media:scape; either [SP106-201] or [SP106-202].

37. **[MATS]**

This command returns the matrix size of the media:scape; either [12x4] or [6x2].

38. **[OSD]**

Displays settings for the on-screen display for all 4 outputs including horizontal position of text box, vertical position of text box, width of text box, height of text box, horizontal lines on output, vertical lines on output, and display resolution.

Command Format: [OSD]

Example:

Inputting command [OSD] will return feedback on all four outputs as [(90,94,300,76,1280,720,720p)(90,94,300,76,1280,720,720p) (90,94,300,76,0,0,720p) (90,94,300,76,0,0,720p)]

Property:	Value
Horizontal position left side of text box(pixels)	90
Vertical position top side of text box (pixels)	94
Width of text box(pixels)	300
Height of text Box (pixels)	76
Horizontal lines on output	1280
Vertical lines on output	720
Display resolution	720p

39. **[OSDFnmyyyy]**

Display session on-screen.

Command Format: [OSDFnmyyyy]

(n = ON/OFF, delay = N/A, yyyy = 0-9999)

Example:

[OSDF101010] will display 1010 on the OSD on the screen.

[OSDF000000] will turn off the OSD session on-screen.

40. **[OSDNnmdcccc]**

Use this command to set a numeric ID to each individual display or all outputs, enabling OSD, and enabling delay of timeout set by [OSDTxx].The numeric ID is not limited to 4 digits.

Command Format: [OSDNnmdcccc]

n = Output #(0-4, 0= all)

m = On/Off (0=off, 1=on)

d=delay enable for box timeout (0=off, 1=on)

cccc = numeric ID range (16 digits).

Example:

Command [OSDN0101337] will enable the OSD for all four outputs, disable the delay on the timeout, and display the same ID on all four outputs.

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41. [OSDPOSn,xxxx,yyyy]

The OSD alignment is dependent on the set resolution of the display. Default (0,0) will display OSD at upper left corner. The x and y position defines the starting upper left of the OSD text box.

　　Command Format: [OSDPOSn,xxxx,yyyy] or [OSDPOS%n,xxxx,yyyy]

n= Output # (0-4, 0=All)

xxxx = x location of text box upper left corner

yyyy = y location of text box upper left corner

　　　　-　　If % is used, send value in tenth percent's; 50% = 500.

Example:

Set the OSD text box to the upper left corner for all outputs by entering [OSDPOS0,0,0]. Another example would have the text box upper left corner start in the middle of the resolution for display in output 2 with [OSDPOS%2,500,500]. Which would be 50% of a resolution for example at 720p, it would be (640,360).

42. [OSDSZn,www,hhhh]

Configuration of the size of the text box with this command. Default (0,0) will display the default text box size.

　　Command Format: [OSDSZn,wwww,hhhh] or
　　[OSDSZ%n,wwww,hhhh]

n= Output # (0-4, 0=All)

wwww = width of text box

hhhh = height of text box

　　　　-　　If % is used, send value in tenth percent, 10% = 100

Example:

Set the width and height of the text box for all outputs by entering [OSDSZ0,0,0]. Another example; set the text box in output 2 with [OSDSZ%2,130,50].

43. [OSDTxx]

Set the OSD box timeout when delay is enabled. Set this command before displaying numerical OSD.

　　Command Format: [OSDTxx]
xx = number of seconds (01-59)
Example:
Set the command [OSDT10] before enabling delay with [OSDNnmdcccc]. This will remove the OSD on screen after 10 seconds.

44. [OSDXn]
This command will clear the OSD even if delay is disabled.
　　Command Format: [OSDXn]
n = Outputs #1-4 (0= All)
Example:
Command [OSDX0] will clear the OSD on all 4 outputs.

45. [PDOx]
Set the data share output and send acknowledgement "[ ]" feedback. This command sets the output that displays the image from the last selected PUCK and can only be set for one of the unused outputs:

Monitor System	Available Outputs
Single	2, 3, 4
Dual	3, 4
Triple	4
Quad	None

　　Command Format: [PDOx]
x = Output number (x = # from 2 to 4, 0=none)
Example:
Set Output 4 as the data share output by sending the following commands:

　　[PDO0]　　[PDO4]

The command "[PDO0]" insures that any previous data share outputs are removed. Next, "[PDO4]" sets Output 4 as the data share output. It is a good practice to use "[PDO0]" to clear any previous data share outputs if any are set.

46. [PIxOy]
Preset the AUX input connections and send "[ ]" feedback. This command sets the outputs that display the AUX inputs (Input 9, Input 10 and Input 11) when there is no PUCK connected to that output.
　　Command Format: [PIxOy]
x = Input number (m = 9,10,11)
y = Output number (n = # from 1 to 4, 0=none)
Example:
Set Input 9 to display on Output 1 and Output 3 by sending the following commands:
　　[PI9O0]　　[PI9O1]　　[PI9O3]

The command "[PI9O0]" insures that any previous presets are removed. Next, "[PI9O1]" sets Input 9 to display on Output 1, and "[PI9O3]" sets Input 9 to display on Output 3. Good practice is to send command "[PI9O0]" to clear any presets.

47. [PKRSTn]
Reset PUCK connection counters for all 8 PUCKs
　　Command Format: [PKRSTn]
n = PUCKS #1-8
Example:
Reset PUCK connection counter for PUCK #1 to zero with command [PKRST1]

48. [PLM]
Play current walk up experience.
　　Command Format: [PLM]
Example:
Executing command [PLM] will play current walk up experience from the beginning (movie & still).Feedback [] as acknowledgement of command.

49. [SCPx]
This command enables and disables HDMI 5V on the switcher output ports.
　　Command Format: [SCPx]
x = 0,1 (0= disable, 1=enable)
Example:
Turn off 5V on HDMI output by sending [SCP0]. This turns off power to the scaler the same as when the system is sleeping.

50. [SFT]
Soft reset of the unit as though it is powered up.
　　Command Format: [SFT]
Example:
Command [SFT] .A system reset massage is displayed before the TCP connection is broken.
51. [SIB]
Return parsable general system information: IP, temperature, mode, hardware version, ECO date, Main, Input and Output BIOS revisions.
　　Command Format: [SIB]
Example:
Send [SIB] and receive feedback similar to the following:

[1.1.22,11,06-24-15,26.8.45,27.8.45,28.8.45]

1.1.22	Firmware version
06-24-15	ECO date
26.8.45	Input BIOS
27.8.45	Input BIOS
28.8.45	Input BIOS

52. [SIS]

Same as [STS], return parse able SYSTEM and PUCK statistics. This is the same information that is available in the OSD page 5.
　　Command Format: [SIS]

Example:

Send [SIS] and receive feedback similar to the following:
　　[(PWR:001061)(SLP:000174)(HRS:000701)(PK1:000027)(PK2:0005
　　09)(PK3:000061)(PK4:000005)(PK5:000035)(PK6:000031)(PK7:000
　　016)(PK8:000003)]

53. [SIT]

Return parse able system information including puck types, puck signal present, aux signal present, HDCP engine state, and output device type/present.
　　Command Format: [SIT]

Example:

Send [SIT] and receive feedback similar to the following:

[(H,V,H,V,V,V,V,V)(0,0,0,0,0,0,0,0)(1,1,0)(0)(1,1,1,1)]

Grp 1:　　PUCK 1~8 types (H=HDMI, V=VGA, D=Display Port)

Grp 2:　　PUCK 1~8 signal present (1=signal, 0=no signal)

Grp 3:　　AUX 1~3 signal present (1=signal, 0=no signal)

Grp 4:　　HDCP Engine State (1=disabled)

Grp 5:　　Output devices (1=HDCP, 0=Non HDCP, X = none)

54. [SIT+]

Same as [SIT] but puck types are queried before returning results. Querying the PUCKs cause each PUCK to "click" in response.
　　Command Format: [SIT+]

55. [SLEEP]

Shut-down media:scape system. Monitors are turned OFF and video is disabled. The system will not sleep if any PUCKs have signal present .
　　Command Format: [SLEEP]

Example:

Command [SLEEP] will return [S1][] acknowledging the unit went to sleep. Monitors are turned OFF and video is disabled.

56. [SMAxxxx]

Enable or disable the walk-up experience on media:scape outputs. This may be desirable when working with some video conferencing equipment. If disabled, the walk up experience image is not connected to output; there will be no video signal on the disabled output. To display a black/blank screen using the [SMB] command .
　　Command Format: [SMAxxxx]

xxxx = Outputs 1-4 (1=enabled, 0=disabled)
Example:
Disable the walk up experience on output 4:
　　[SMA1110]

57. [SMBxxxx]

Enable/disable output video on removal or de-selection of AUX or PUCK input. This command works with the SMA command. If an output has the Media Player disabled and the black screen disabled, the output video is turned off when PUCK or AUX video is not present.
　　Command Format: [SMBxxxx]

xxxx = Outputs 1-4 (1=enabled, 0=disabled)
Example:
Enable the black screen on output 2 only using [SMA1011] and [SMB0100].

SMA	SMB	Image	Output
1	x	Media Player	ON
0	1	Black Screen	ON
0	0	Monitor default screen with no signal	OFF

58. [SMCx]

Set the switcher's mode of operation to collaborative or control. The default is collaborative giving PUCKs control of the system. In control mode, a third-party control system takes control of switching video inputs and the PUCKs are disabled. The PUCKs display the switching status of the switcher but do not respond to users. In control mode, the center "Off" icon on the PUCKs is not displayed distinguishing it from collaborative mode.

　　Important:　**Single, dual, and triple monitor systems do not illuminate all icons, but control mode allows independent switching of any input to output. Reset output states upon exiting control mode by connecting Input 12 to all outputs, [I12O*]; this displays the walk up experience image on all outputs and syncs the PUCKs with the displayed outputs.**

　　Command Format: [SMCx]
x = Control type (1=collaborative, 2=TCP/IP/control)
Example:
Set the switcher for control by sending:
　　[SMC2]

59. [SMODx]

Sets number of monitors connected to media:scape. That setting determines the number of illuminated icons on the PUCKs. This command resets the media:scape and takes several seconds to complete.
　　Command Format: [SMODx]

x = No. of Outputs (m = 1, 2, 3, or 4)
Example:
Set the number of switcher outputs to 4 by sending:
　　[SMOD4]
All 4-PUCK icons are illuminated.

60. [SMPx]

Set the switcher's mode of operation to collaborative or priority mode. The default is collaborative mode giving PUCKs control of the system and with Inputs 9 and 10 available for preset and data share. In priority mode, the system operates normally until Inputs 9 or 10 are connected at which time Inputs 9 and 10 override normal system operation.
In priority mode, the PUCKs are disabled and only the outer ring is turned on and white. The image from Inputs 9 and 10 are displayed on all 4 outputs, with Input 10 having priority over Input 9. When the video inputs are removed, the system returns to normal operation.
　　Command Format: [SMPx]
x = Control type (0=collaborative, 1=priority)
Example:
Set the switcher for priority mode by sending: [SMP1]

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61. [SN]

Return the 13 digit serial number. This is read only and factory programmable.

    Command Format: [SN]

Example:

Send [SN] and receive feedback similar to the following:

[1234567890123]

62. [SOxCDy]

Set the cool down delay for projectors and send acknowledgement "[ ]" feedback. This delay allows for the outputs to be turned off for up to 15 minutes configurable with 15 second intervals allowing the projector to cool down. Cool down time on any output is the time between issuing the CEC OFF command and allowing CEC ON command. The system is effectively 'locked' during this time. PUCKs outer rings are white and the power button flashes white until fully shutdown.

    Command Format: [SOnCDt]

x = Output number (n = # from 1 to 4)

y = Wait time in ¼ min increments (t= # from 1 to 60,   0=OFF)

Example:

Set Output 1's cool down time to 5 minutes by sending:

    [SO1CD20]

63. [SSDMx]

Set the standby time up to 12 hrs. in 15 min intervals and send acknowledgement "[ ]" feedback. The standby mode is how long the switcher displays the walkup experience before shutting down after all PUCK inputs are removed but AUX inputs are present.

    Command Format: [SSDMx]

x = time for standby mode (m = # from 1 to 48, 0= disabled, 1=15min)

Example:

Set the time for standby mode to display the walkup experience for 3 hours ((3 hours x 60min)/15 min = 12) after the last PUCK video input is disconnected. In order to do this, send the following command:

    [SSDM12]

64. [STBMx]

Set the mode for standby mode from 10s to 3hrs. in 10 second intervals and send acknowledgement "[ ]" feedback. The standby time is how long the switcher displays the Walk up experience or AUX inputs image before shutting down the switcher after all video signals (sources) are removed from the inputs.

    Command Format: [STBMx]

                x = Standby time (x = any number from 1 to 180,
                0= always on, 1 =10sec)

Example:

Set the standby time to display the Walk up experience image for 5 minutes ((5min*60sec)/10 sec = x = 30) after the last PUCK video input is disconnected. In order to do this, send the following command:

    [STBM30]

65. [STDWN]

Force the switcher to standby mode if there are no video inputs to any of the PUCKs. If there is a video input to any of the PUCKs, an error message is displayed.

    Command Format: [STDWN]

Example:

Send [STDWN] and receive one of the two feedback strings:

    [ ]   The switcher in now in standby.

    [PUCK SIGNAL PRESENT]

        There is still an input on one or more PUCKs; therefore, the switcher is still active.

66. [STI]

Input status command from left to right on PUCKs 1-8, preset 9, preset 10, preset 11, and Walk Up Experience

    Command Format: [STI]

Example:

x=No Puck installed

0=PUCK, no signal

1=PUCK+signal

Feedback status [0,x,0,0,0,0,0,0,0,0,0,1] displays a puck present but no source actively connected on all except for input 2. As well as no signal on presets 9-11, and finally an enabled walk up experience.

67. [STM]

Feedback on media player configuration on all 4 outputs grouped in 3 groups. Group 1; Media Player enable/disable status for Output 1-4. Group 2; Black screen enable/disable status for Output 1-4. Group 3; Output result on Output 1-4.

    Command Format: [STM]

Example:

Group 3:

M=Media player

B=Black Screen

x=Output disabled

Feedback status [(1,1,1,1)(0,0,0,0)(M,M,M,M)] from command [STM] means media player is enabled on all outputs and the black screen is disabled.

68. [STO]

Output status command from left to right inputs connected to Out1-4.

    Command Format: [STO]

Example:

Send [STO] and the media;scape returns feedback in [12,12,12,12]

Walk movie is playing on all 4 outputs.

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69. [STP]

Return parse able status of the switcher.
   Command Format: [STP]
 Example:
Send [STP] and the SP106-201/202 returns feedback similar to:
[(12,0,1,1,1,1)(12,0,1,1,1,1)(12,0,1,1,1,1)(12,0,1,1,1,1)(1,4,0,0,1,0,1)(0,0,0,0)(1,238,52,0,46,19)(1,1,1,1)(1)(0,X,1,1)(0,0,1)(8x4)]
The data is divided into 11 groups containing the entire switcher status.

[	Start feedback
(12,0,1,1,1,0)	Output 1 Properties
(12,0,1,1,1,0)	Output 2 Properties
(12,0,1,1,1,0)	Output 3 Properties
(12,0,1,1,1,0)	Output 4 Properties
(1,4,0,0,1,0)	System Configuration Properties
(0,0,0,0)	Switcher Control Properties
(0,240,49,0,47,39)	System State
(1,1,1,1)	Black Screen Status
(1)	HDCP Engine Status
(0,X,1,1)	Individual Sink Type Status
(0,0,1)	Walk Up Status and DHCP
(8x4)	Matrix Size
]	End feedback

Outputs 1-4 (0,0,0,1,1,1) : 6 properties

Each output group lists from left-to-right the 6 properties in the table below. The first property is selection of input for that output. The second property is the cool down period. The next three properties are the preset AUX inputs 9 through 11. Finally the last property is the enabling of the walk up experience for each output.

Property	Range	Description	Command
Input	1-12	1-8=PUCK, 9-11=AUX, 12 Walk Up experience	[InOm]
Cool Down	0-60	0=Off, 1=15 sec, etc.	[SOnCDt]
Preset In 9	0,1	To Out 1: 1=yes, 0=no	[PI9On]
Preset In 10	0,1	To Out 1: 1=yes, 0=no	[PI10On]
Preset In 11	0,1	To Out 1: 1=yes, 0=no	[PI11On]
Walk Up Experience	0,1	0=Disable Walk Up, 1=Enable Walk Up	[SMAxxxx]

System Configuration (1,1,0,0,1,0,1) : 7 properties

The system configuration group lists from left-to-right the 7 properties in the table below. In the above example, the first two values are set to "1" meaning the switcher is in collaborative (PUCK control) mode and the switcher is configured for a single monitor system. The next three values indicate which outputs are configured for data sharing, in this case "0,0,1" meaning Output 2 and 3 are not used for data sharing, but Output 4 is the only data share output.

Property	Range	Description	Command
Mode	1,2	1=Collaborative, 2=Control	[SMCp]
System Monitors	1-4	1=single, 2=dual, 3=triple, 4=quad	[SMODm]
Data Share	0,1	0=Not, 1=Out 2 = share	[PDO2]
Data Share	0,1	0=Not, 1=Out 3 = share	[PDO3]
Data Share	0,1	0=Not, 1=Out 4 = share	[PDO4]
Priority	0,1	0 = Collaborative, 1 = Priority Mode	[SMPp]
Walk Up (default 1)	1-6	1 = movie 1 plus still 1 2 = movie 2 plus still 2 3 = movie 3 plus still 3 4 = still 3 only 5 = still 2 only 6 = still 3 only	[WLKn]

Switcher Control (30,12,3,0) : 4 properties

The switcher control group lists from left-to-right the 4 properties in the table below. In the above example, the standby time is set to 30 or 5 minutes (30 * 10 s intervals). The AUX input standby time is set to 12 or 3 hours (12 * 15 min intervals). The next property is the wake-up on AUX input. The last value will always be 0 because the power save feature is not implemented at this time.

Property	Range	Description	Command
PUCK Standby	0-1080	AUX always on up to 3hrs.	[STBMm]
Standby Mode	0-48	DISABLED to 12 hrs.	[SSDM]
Wake-Up On Preset	0-4	0=None, 1=In9, 2=In10, 3=In11, 4=Any	[SWUm]
Power Save	0	Not Implemented	----

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System State (0,240,50,0,47,19) : 6 properties
The system state group lists from left-to-right the 6 properties in the table below. In the example below, the standby status either in 4 states; awake, in standby countdown, in shutdown countdown, or standby. Next property is fan set value which is different than the fan speed percentage; the percentage is based on the set value. After that is temperature in Celsius. Then the next property is the current hardware version and software version of the unit. After that, the Walk Up movie play time in seconds. Finally, the last property is black screen status for each specific output.

Property	Range	Description	Command
Standby Status	0-3	0=awake, 1=standby countdown, 2=shutdown countdown, 3=standby)	n/a
Fan Set Value	0-3	0=off, 1=low, 2=high 3=max	x
Temperature	varies	Temperature in Celsius	[TEMP]
Hardware	current	Current hardware version	[HW]
Software	current	Current software version	[SW]
Walk Up movie play time	0-99	Walk up movie play time in seconds	[WUPLAYxx]

Black Screen Status (0,0,0,0) : 4 properties
The black screen status lists all four outputs from left being output 1, and the most right being output 4. The black screen status for each individual output has two states,

Property	Range	Description	Command
Black Screen Status Output 1	0-1	1=enabled, 0=disabled	[SMBxxxx]
Black Screen Status Output 2	0-1	1=enabled, 0=disabled	
Black Screen Status Output 3	0-1	1=enabled, 0=disabled	
Black Screen Status Output 4	0-1	1=enabled, 0=disabled	

HDCP Engine Status (0): 1 property
The HDCP engine within the switcher for all 4 outputs can be disabled or enabled

Property	Range	Description	Command
HDCP Engine Status	0-1	0=enabled, 1=disabled	[HDCPx]

Individual Sink Type Status (0,X,1,0): 4 Properties
Setting the HDCP to auto will enable the outputs to determine the type of sink types each destination is. HDCP must be set to Auto to detect the sink if it will allow pass/block HDCP content

Property	Range	Description	Command
Sink type on Output 1	O,1,X	0 = HDCP blocked 1 = HDCP pass X = No sink detected	[HDCP?]
Sink type on Output 2	O,1,X	0 = HDCP blocked 1 = HDCP pass X = No sink detected	[HDCP?]
Sink type on Output 3	O,1,X	0 = HDCP blocked 1 = HDCP pass X = No sink detected	[HDCP?]
Sink type on Output 4	O,1,X	0 = HDCP blocked 1 = HDCP pass X = No sink detected	[HDCP?]

Walk Up Type, USB state and DHCP (0,0,1): 3 Properties
The first parameter in the bracket is the walk up type, the second parameter is the state of the USB stick found within the unit. Lastly the final parameter is the DHCP is on or off.

Property	Range	Description	Command
Walk Up type	0-3	0 = USB, 1 = Video, 2 = Still, 3 = M:S OSD	[WLKUPx]
USB State	0-1	0 = (default) On, 1 = Off	Factory Only
DHCP	0-1	0 = On, 1= Off	[DHCPx] or [FXDIPx]

Matrix: 1 Property
This group lists the matrix size of the media:scape.

Property	Range	Description	Command
Matrix Size	8x4 or 12x4	Inputs X Outputs	[MATS]

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70. **[STP+]**

Return viewable switcher status after power reset
    Command Format: [STP+]

Example:

Command [STP+] returns viewable switcher information. This command returns the same information as [STP] but will added comments: (see below).

```
[STP+]
[
(12,1,0,0,0,0) OUT1: In,Cd,Pi9,Pi10,Pi11,MP Enable
(12,0,0,0,0,1)
(9,0,1,0,0,1)
(10,0,0,1,0,1)
(1,3,0,0,1,0,1) Ctrl,Monitors,DataShare2-3-4,Priority,WlkUp
(30,0,1,0) StbyTime,StdwnTime,WakeOn,Pwsrv
(0,255,32,48,58,19)Stby,Fan,Temp,Hw,Sw,PlayTime
(0,0,0,0) Black screen enable Out 1~4
(0)(1,1,1,1) HDCP engine disabled, sink type 1~4
(0,X,0) WalkUpType, USB (0=default),DHCP
(8x4) Matrix Size
]
```

Grps 1-4	In= Input connected to output	[IxOy]
	Cd= Cool down time	[SOxCDy]
	Pi9= Preset Input 9 on/off	[PI9On]
	Pi10= Preset Input 10 on/off	[PI10On]
	Pi11= Preset Input 11 on/off	[PI11On]
	Media Player enabled/disabled	[SMAxxxx]
Grp 5	Ctrl = control mode on or off	[SMCn]
	Monitors = system mode	[SMODn]
	Data Share on outputs 2,3,4	[PDOn]
	Priority mode on or off	[SMPn]
	Walk up experience that is set	[WLKn]
Grp 6	Standby Time	[STBM]
	Shutdown time	[SSDM]
	Wake on AUX connection..................	[SWU]
	Power save	N/A
Grp 7	The standby mode of switcher	Factory
	Fan set value	N/A
	Temperature	[TEMP]
	Hardware version	[HW]
	Software version	[SW]
	Play time of walk up movie	[WUPLAY]
Grp 8	Black screen enable Out 1~4	[SMBxxxx]
Grp 9	HDCP engine state (1=disabled)	[HDCP]
Grp 10	Walk up experience type	[WLKUPn]
	USB path (0= MPGs,1=IDLE)	Factory
	DHCP on or off (0=use fixed IP)	[DHCPn] or [FXDIPn]
Grp 11	Matrix size	[MATS]

71. **[STS]**

Displays statistic counters

    Command Format: [STS]

Example: Command [STS] returns statistical data that indicates the unit has gone through 26 power cycles, 11 sleep cycles, 6 Hours of active time, and PUCK1- 8 connection counters. PUCK 1 has 9 counts of connecting with a source.
((PWR:000026)(SLP:000011)(HRS:000006)(PK1:000009)……(PK8:000005))

72. **[STV]**

    Data share settings from left to right Outputs 1-4.
    Command Format: [STV]

0=output is not shared

1=output is shared

X=output is not available for sharing in this monitor configuration

Example:

Command [STV] returns feedback [x,x,0,1] which has Out1 and Out2 not configured for data share configuration. Out3 is not shared, and Out4 is shared.

73. **[STVC]**

Display a matrix of the preset inputs and data share settings.

Command Format: [STVC]

Example:

```
OUT: 1 2 3 4
```

09:	–	–	X	–	Preset Input 9 on Output 3	[PI9O3]
10:	–	–	–	X	Preset Input 10 on Output 4	[PI10O4]
11:	–	–	–	–	Preset Input 11 not used.	[PI11O0]
DS:	–	–	–	X	Data share on Output 4	[PDO4]

74. **[SW]**

Command displays the uploaded software version for that unit.

    Command Format: [SW]

Example:

Command [SW] will return [22]   ← Software Version 22

75. **[SWUx]**

Set the wake up on preset input number and send acknowledgement "[x]" (the value you set) feedback. If the system is in standby, applying an AUX signal to this input will "wake up" the system. A PUCK input is not required.

    Command Format: [SWUx]

    x = Preset wake up (m = # from 0 to 4)

        0 = No Wake Up

        1 = Wake Up On Input 9

        2 = Wake Up On Input 10

        3 = Wake Up On Input 11

        4= Wake Up on Any AUX Input

Example:

Set the switcher to wake up when an AUX signal is applied to Input 9 regardless of whether or not PUCKs have inputs.

    [SWU1]. feedback [1]

76. **[TEMP]**

Returns the media:scape internal temperature in Celsius format.

    Command Format: [TEMP]

Example:

Read the temperature for the switcher by sending the following:

[TEMP] and the media:scape will return the following: [32C]

Steelcase

77. **[UFAx]**

The [UFA] command enables unsolicited feedback. This command provides feedback to all events. In addition, it provides feedback on power up, power down (sleep mode) and power button pressed.

Activate/deactivate unsolicited feedback and send acknowledgement "[ ]." Unsolicited feedback reports switching and signal detect events.

    Command Format: [UFAx]

Switching events are reported in the format [xxy].

        [xxy]   xx = 2-digit Input (01-08 PUCKs, 09-10 HDMI, 11 Walk up experience)

                y   = 1-digit Output (y = # from 1 to 4)

Signal detect events are reported in the format [Ixxy].

        [Ixxy]   xx = 2-digit Input (01-08 PUCKs, 09-10 HDMI)

                y   = Detection (0=signal lost, 1=signal detected)

x = UFA mode (m = 0 or 1)

    0 = unsolicited feedback OFF

    1 = unsolicited feedback ON

Example - Activate Feedback:

Activate unsolicited feedback by sending the following command:

    [UFA1]   *Unsolicited feedback activated*

Example - Connect PUCK to Video Signal

The following unsolicited feedback is reported when PUCK 3 is connected to a laptop supplying a HDMI signal:

    [I031]   *New signal detected on Input 3*

Example - Select Output 1 on PUCK

The following unsolicited feedback is reported when the Output 4 icon on PUCK 3 is selected:

    [034]   *Input 03 to Output 4*

[S1] system went to sleep
[S0] system woke up
[P1] power button was pressed
[F0] fan is off
[F1] fan half speed
[F2] fan full speed
[H1] heat alarm activated
[H0] heat alarm is back to normal

78. **[UFS]**

Displays [UFA] status.

    Command Format: [UFS]

Example:

Using command [UFS] while [UFA] is ON will return [1].

79. **[USLEEP]**

Sets the unit to shutdown/sleep until woken up; if no PUCK signals.

    UDP Format: [USLEEP]   (port 30303)

Example:

Command will shut down unit until unit is woken up. If unsolicited feedback is turned ON, it will return [S1].

80. **[UWKUP]**

This command will wake the unit up.

    UDP Format: [UWKUP]   (port 30303)

Example:

Command will wake up the unit. If unsolicited feedback is turned ON, it will return [S0].

81. **[VER]**

This command displays the current version for that particular unit.

    Command Format: [VER]

Example:

Command will return [SP106-20x 1.0.20].

82. **[WKUP]**

Wakes up the system, same as [WKP] command.

    Command Format: [WKUP]

Force the switcher to wake up by sending the following command:

    [WKUP]

*If unsolicited feedback is turned on, will return with:

 [S0] System woke up.

83. **[WKP]**

Force the system to wake up without having to apply a video signal. The system wake up and goes through it normal initialization procedure. Keep in mind that if no inputs are applied to PUCKs the system will go to sleep (shutdown) once the STANDBY and SHUTDOWN timers have timed out. System wake up is about 12-15 seconds.

    Command Format: [WKP]

Example:

Force the switcher to wake up by sending the following command:

    [WKP]

*If unsolicited feedback is turned on, will return with:

 [S0] System woke up .

84. **[WLKx]**

Select the default "walk up" experience for media:scape. Walk up experience 1 is the default.

    Command Format: [WLKx]

x = Option number (x = # from 1-8)

        1 = still #4 plus movie #2 (default)

        2 = still #5 plus movie #1

        3 = still #6 plus movie #3

        4 = still #4 only - no movie

        5 = still #5 only - no movie

        6 = still #6 only - no movie

        7 = still #9 plus movie #8

        8 = still #9 only - no movie

Example:

Set the switcher to display the default "walk up" experience by sending the following command:

    [WLK1]

Steelcase

85. **[WLKPEn]**

Plays selected walk up experience regardless of memory setting.

Command Format: [WLKPEn]

n = Walk up Experience (1-8)

Example:

Inputting command [WLKPE5] will play walk up experience # 5.

86. **[WLKPTn]**

Play walk up track and loops until overwritten.

Command Format: [WLKPTn]

n = Track No. (1-8)

Example:

Command [WLKPT1] will play the default track looped until command is overwritten.

87. **[WLKUPx]**

Set up Walk Up Experience type.

Command Format: [WLKUPx]

x = type (0-3)

Type	Walk Up Experience
0 = USB	Play USB movie + USB still
1 = Video	Play USB movie + MP image
2 = Still	MP image Only
3 = m:s	OSD "MEDIA:SCAPE"

Example: Set up the Walk UP experience to the OSD message "MEDIA:SCAPE" by using command [WLKUP3]. Walk Up Experience will be set to OSD message when Walk Up Experience is enabled.

88. **[WUPLAYxx]**

Set the Walk up movie play time. After this play time expires, the still image is displayed.

Command Format: [WUPLAYxx]

xx = Play time in seconds (xx = 1-99)

Example:

Movie track will play 1 minute every time the WUX is played if command [WUPLAY60] is applied

89. **?Steelcase** (UDP port 30303)

This is a UDP command to find switchers. Each switcher responds to the broadcast with its IP information and MAC address.

Example:

Send ?Steelcase to UDP port 30303 and receive feedback similar to the following:

[SCS116000000,00:04:A3:10:18:E1,00023,192.168.10.81, 255.255.0.0,192.168.1.1, TCP=0,DHCP,IP=AUTO]

SCS116000000 has switcher information or can be a programmed alias name (see [CSN] command).

In the SCS example, the first 2 digits "11" are hardware revision, followed by 2-digit software "60" revision.

The remaining 0s are not implemented.

Next is the network configuration, MAC address, TCP/IP port (always 23), the programmed IP address, the subnet mask, and the gateway.

The next field displays the number of TCP sockets currently open.

The next field is the programmed IP configuration in use, either DHCP or FIXED.

The last field is how the IP in use was derived and can be either AUTO or MEM. Note that the mode can be DHCP, but without a server the IP use the programmed static IP address.

Steelcase

Table List Summary of Commands:

#	Command	Description
1.	**[ACTIVE]**	Displays bootloader or application mode
2.	**[AUTH]**	Manually check HDCP compliance
3.	**[BLV]**	Display bootloader version
4.	**[BLS]**	Display bootloader status
5.	**[BLS+]**	Same as [BLS] with text
6.	**[CECx]**	Verify if display is CEC compatible
7.	**[CRC]**	Read switcher TCP/IP configuration
8.	**[CRC+]**	Read switcher TCP/IP configuration after reset
9.	**[CSB]**	Set subnet of switcher
10.	**[CSB+]**	Set subnet of switcher after reset
11.	**[CSG]**	Set gateway of the switcher
12.	**[CSG+]**	Set gateway of the switcher after reset
13.	**[CSN]**	Set switch alias name for ?Steelcase
14.	**[CSP]**	Set static IP address of switcher
15.	**[CSP+]**	Set static IP address of switcher after reset
16.	**[DHCPx]**	Set up either DHCP or fixed IP address
17.	**[DRV]**	Displays BIOS versions
18.	**[FAN]**	Set to return fan status feedback
19.	**[FANx]**	Set fan speed for troubleshooting
20.	**[FXDIPx]**	Toggle between fixed IP and DHCP
21.	**[HDCP]**	Display content protection engine state
22.	**[HDCPx]**	Set HDCP engine ON/OFF or AUTO
23.	**[HDCPIx]**	Display content protection of input
24.	**[HDCPM]**	Display saved status in memory
25.	**[HDCP?]**	Display content protection support for outputs
26.	**[HW]**	Displays hardware version
27.	**[INEQ]**	Display input equalization (eq) setting
28.	**[INEQB]**	Display input eq. for each input
29.	**[INEQx]**	Set input equalization
30.	**[IPL]**	Display network IP lease time
31.	**[IPL+]**	Display lease, renew, and remaining times
32.	**[IPR]**	Force lease renewal
33.	**[IxOy]**	Connect any input to any output
34.	**[IPOn]**	Deselect AUX like PUCK
35.	**[ImBn]**	Select AUX like PUCKS
36.	**[MAT]**	Display model number
37.	**[MATS]**	Display matrix size
38.	**[OSD]**	Display settings
39.	**[OSDFnmyyyy]**	Display session on-screen
40.	**[OSDNnmdcccc]**	Numeric text box
41.	**[OSDPOSn,x,y]**	Upper right OSD location
42.	**[OSDSZn,w,h]**	Height & width of OSD box
43.	**[OSDTxx]**	OSD box timeout when delay is enabled
44.	**[OSDXn]**	Clear numeric text box properties
45.	**[PDOx]**	Set data share output for video conferencing
46.	**[PIxOy]**	Set AUX inputs to override walk up experience.
47.	**[PKRSTn]**	Reset PUCK connection counters
48.	**[PLM]**	Play current Walk Up experience
49.	**[SCPx]**	Enable/Disable scale power
50.	**[SFT]**	Soft Reset unit as though it is powered up
51.	**[SIB]**	Return parse able general system information
52.	**[SIS]**	Same as [STS]
53.	**[SIT]**	Return parse able system information
54.	**[SIT+]**	Same as [SIT] but PUCKS type is queried
55.	**[SLEEP]**	Shut-down media:scape system
56.	**[SMAxxxx]**	Enable wake up display only for specific output
57.	**[SMBxxxx]**	Enable black screen for specific output
58.	**[SMCx]**	Set control mode of switcher
59.	**[SMODx]**	Set number of displays connected to switcher
60.	**[SMPx]**	Set control mode of switcher
61.	**[SN]**	Return the 13 digits serial number
62.	**[SOxCDy]**	Set cool down time for projector control
63.	**[SSDMx]**	Set switcher shut-down delay time
64.	**[STBMx]**	Set switcher standby delay time no PUCKs
65.	**[STDWN]**	Force the switcher to standby mode
66.	**[STI]**	Input status command
67.	**[STM]**	Feedback on Media Player Configuration
68.	**[STO]**	Output status command
69.	**[STP]**	Return parse able switcher status.
70.	**[STP+]**	Return parse able switcher status after reset
71.	**[STS]**	Displays Statistic Counters
72.	**[STV]**	Data share settings
73.	**[STVC]**	Display matrix of presets
74.	**[SW]**	Display software version within the unit
75.	**[SWUx]**	Enable/disable system wake-up mode
76.	**[TEMP]**	Read switcher temperature
77.	**[UFAx]**	Enable/disable unsolicited feedback.
78.	**[UFSx]**	Displays [UFA] status
79.	**[USLEEP]**	Set the unit to shutdown/sleep until woken up
80.	**[UWKUP]**	Set to wake the unit up
81.	**[VER]**	Displays version for that particular unit
82.	**[WKP]**	Wake-up media:scape system
83.	**[WKUP]**	Wakes up the system, same as [WKP] command
84.	**[WLKx]**	Set walk-up experience used on power-up
85.	**[WLKPEn]**	Play Walk Up experience
86.	**[WLKPTn]**	Play Walk Up track
87.	**[WLKUPx]**	Set Walk Up experience type
88.	**[WUPLAYxx]**	Walk Up movie play time
89.	**?Steelcase**	UDP command to find switcher IP

Steelcase

Firmware Change Log	
Firmware Version	General Description of Change.
2.0.8	New TCP bootloader using port 5023. Clean up [CRC] commands. Add register changes to fix flashing on inputs. Modify fan speed functionality.
1.1.22	Add support for flex and permanent serial number. Modify OSD page 3, combine bios to one block, add serial no and mac address
1.1.21	Replace web busy image.
1.1.20	Modify user movie interrupt to set presets and data share. Add new commands for configuration app: [SIS] [SIB] [SIT]
1.1.19	Fix audio stream, check SPDIF vs. HDMI at each switch. Add missing unsolicited feedback for puck press and data share. New command [STA] - Out Audio (0=none,1=SPDIF,2=HDMI)
1.1.18	If awake and [WKP] then [ACTIVE] Remove UDP unsolicited feedback
1.1.17	Fix multi-socket UNSOL_FDB to all sockets
1.1.16	Turn off scaler power at sleep. Add command [SCPn] scaler power on-off
1.1.15	MULTI-SOCKETS - first release
1.1.14	Add AUX select like PUCK command: [I x B y].Pucks ignore any switch number greater than the system mode
1.1.13	Change switch command to [IPOx]; AUX de-select like PUCK.
1.1.12	Add new switch command [IxOP]; AUX de-select.
1.1.11	Add OSD items and counters for page 5 and diagnostics page 6
1.1.3	FAN reporting adjustment
1.1.2	OSD changes to list DCP as HDCP, by default HDCP is set to AUTO
1.1.1	[CSB+][CSG+][CSP+][CRC+] added commands and OSD fix
1.1.0	HDCP auto detection
1.0.20	Cleanup to OSD
1.0.19	2nd Method for factory reset added, OSD function added
1.0.10	[SMB] defaults to O. Allow full control of [SMB] in OSD
1.0.9	Add USB Commands for MPEG upload. Not implemented
1.0.8	Update TCP/IP stack. Return to AUX after movie, if set as
1.0.8	Preset input. Add [SMB] command for disabling video
1.0.8	Conference outputs. Adjust fan start-stop voltage.
1.0.7	Add independent OSD control for video conferencing
1.0.6	Add status information to [STP] command
1.0.6	Add CEC test command
1.0.6	Add video conference support to multiple monitors

Steelcase
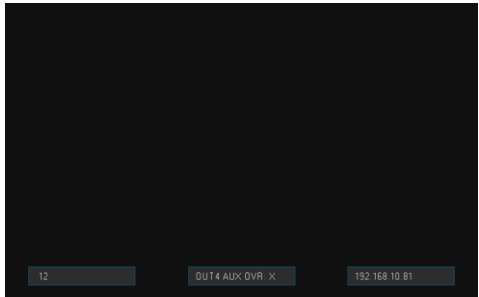
8. Troubleshooting Guide

We have carefully tested and have found no problems in the supplied media:scape. However, we would like to offer suggestions for the following.

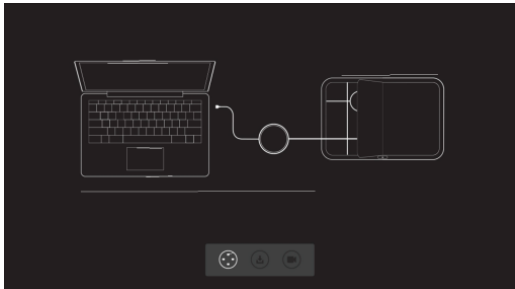| Symptom	Resolution
Cannot Make TCP Connection.	1. Check the LEDs on the Ethernet connector. A green LED indicates the media:scape is recognizing the network and a flashing amber LED indicates communication traffic over the network. 2. Make sure the control application has the correct TCP/IP address for the media:scape. 3. Review the TCP control section of this manual. Check the Ethernet properties for the media:scape. Each media:scape is shipped with the following static IP settings: IP=192.168.10.81, Subnet Mask=255.255.255.0, Gateway=192.168.10.1, and Port=23 but must be configured for use on other networks; reference commands [CSN], [CSP], [CSB], [CSG], and [CRC]. 4. Check with your IT administrator to verify the media:scape was assigned a valid static IP address that is accessible over the LAN and does not conflict with other devices on the network. Each Switcher controller requires its own unique static IP address. The DOS "ping" command can be used to determine if the internal server is up and to verify the assigned IP address is "reachable" on the IP network.
Don't Know or Forgot IP Address.	**UDP Broadcast** 1. Download AVSNAP from http://avsnap.com/ and go into communication mode. 2. Send a UDP broadcast to 255.255.255.255 port 30303. **Figure 1:** AVSNAP Com Setup Using the following data string: **?Steelcase** *UDP commands must be sent from the notepad within AVSNAP to the terminal. 3. The media:scape responds with the following data in a UDP packet to the host IP: [SCS002200000 ,00:04:A3:10:1D:28,00023,192.168.1.228,255.255.255.0,192.168.1.254] The data string contains the hardware/software version, MAC address, TCP port number, IP address, subnet mask, and gateway.
Can establish UDP communication but not TCP communication.	Once UDP communication is established and IP address is given, configure IP address in Local Area connection. Refer to section 7.4.
White screen is displayed instead of the Walkup Experience.	Reset power to the switcher. If problem persists, then internal USB memory failed, replace switcher by contacting Steelcase.
The Media Player menu is displayed after firmware upgrade.	Reset power to the switcher. If problem persists, media player requires firmware update. Replace switcher by contacting Steelcase.

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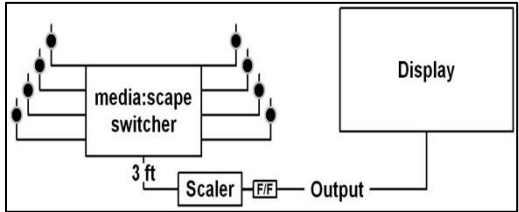|	
Walk-up experience displays only once during power up and then stops.	Switcher is miss-configured. Adjust AUX OVR setting on the OSD for each output using configurable field's #9-#12. Set override to None (X) in each setting. **Figure 2:** Output 4 set to none
Switcher goes into power-up OSD mode after power is applied.	Bezel switch is shorted. Replace bezel switch with SP106-105. Contact Steelcase for all replacement components. Make sure nothing is pressing down bezel button **Figure 3:** Bezel Button pressed down too long
Pressing and holding bezel button does not display OSD menu, PUCK does not light up.	Check that one of the PUCKs is connected to PUCK port #1. Only a PUCK connected into port #1 will light up during OSD configuration.
Unable to get into the firmware upgrade mode.	The only way to get into upgrade mode is using the upgrade application.
Switcher works 5-10 minutes after power up and then stops responding.	Look at the side of the switcher through the open vents and verify that three internal LEDs are flashing fast and one flashing slow. If the LEDs are not flashing, microprocessor is not responding. Upgrade BIOS and switcher firmware to the latest version. If behavior continues, replace switcher.
PUCK flashes all icons white and green.	Reset power to the switcher. If flashing continues, then move PUCK to a different port and reset the power the switcher. If flashing still continues replace the PUCK by contacting Steelcase.
Fan only goes to high speed. The fan is unable to start in low speed.	Upgrade switcher to the latest firmware.
No display on output 1	If display on output 1 is not detected, the other outputs will display the following message "CONNECT OUT 1". If you see this message, make sure that at least one display is connected to output 1 of the switcher.

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Figure 4: Connect Output 1

Unable to reset switcher to factory condition.	Upgrade switcher to the latest firmware. Follow user guide exactly (Download the latest version). On the bottom left corner of each page, there is a 10 digit number, the last three digits is the version of the user guide.
AUX audio is not routed to HDMI output.	AUX audio is only routed to 3.5mm audio jack located next to the 4 HDMI output connectors.
When monitor is connected to the system after it is powered, monitor displays "Not Supported Resolution" message.	Authentication of monitors is done during power up only. Connect the monitor to the switcher and then power up the system.
Protected content is not displayed on the Data Share output when connected to video conference equipment.	Protected output is not allowed to go to VC output based on the HDCP specification. Output from switcher automatically detects non HDCP display and switches to non HDCP mode. Use OSD to force switcher to HDCP or non HDCP mode.
System powers up, then shuts down and powers up again. The cycle continues every 5-10 seconds.	Unplug all PUCKs except PUCK 1. Unplug all scalers and connect display directly to the output 1. Power up the system and check if it still cycles. If it still cycles, then try a different power supply. If it stops cycling, then add one PUCK at a time until the cycle repeats without unplugging the power to the unit. If the system operates properly, but when it is powered it starts cycling again, then replace the power supply.
Monitor only displays 720p resolution.	Check setting on the scaler and adjust to 1080p by pressing resolution/mode button on the scaler to show the on-screen menu. Pressing the mode/resolution button again will move the highlighted field to the next field. Leaving highlighted field selected will switch to the selected resolution within 5 seconds.
Monitor displays OSD when switching between different PUCK inputs.	Reset scaler to default so that output is not interrupted. Press and hold down resolution/mode button for 5 seconds to set scaler to default settings.
Walk Up Experience is pixilated	Contact Steelcase for multiple available solutions. **Figure 5: Pixilated image**

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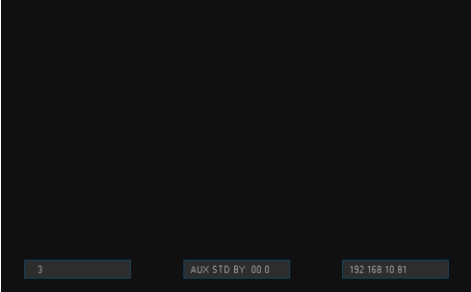| The firmware upgrade program does not find switcher.	Make sure computer is on the same network and has the same IP range as a switcher.
Number of outputs selected is not stored. When switcher is reset, unit returns to 4 outputs.	Update switcher to the latest firmware.
Output intermittently flashes between video and blank screen.	Make sure the switcher is running the latest firmware; minimum v2.0.8. Move PUCK to a different input if available. If flashing continues, then replace switcher.
When computers are connected and power is reset, switcher does not power up.	Unplug all sources (computers) before resetting power to the switcher.
MAC computer takes 10 seconds before it is able to display an image on m:s.	MAC computers have HDCP authentication that sometimes take longer than a PC. Update MAC to the latest software version and operating system.
Switching between MAC and PC produces magenta hue video.	Verify that monitors are capable of both RGB and YPbPr color space. This occurs when a computer monitor and television are installed on the same m:s system. Computer monitors do not have YPbPr color space. Change monitors so that they have the same color space capability.
No video image on one or more monitors, PUCKs work fine.	Remove scaler and connect the output from switcher directly to the display. If the image appears, then replace scaler Verify that there is no ground loop between media scape and the display. Ground loop occurs when the display is connected to a different AC phase than m:s. The only way to fix it is to call the electrician and verify that both m: s and display is connected to the same phase and are grounded to the same location on the electrical panel.
The image disappears when dongle cable is moved.	Replace dongle cable by opening up PUCK. Instructions can be found within the manual.
The image disappears when PUCK cable to the M: S is moved.	Replace PUCK to switcher cable by opening up PUCK. Instructions can be found within the manual.
I bought an HDMI cable to extend the distance to the display and now there is no image.	Move scaler next to switcher using 3 ft. HDMI cable AWG22. Take output from the scaler add gender changer in between, and then connect the cable to the monitor. **Figure 6:** Simple Block Diagram of Solution
We used our own HDMI cables; image is OK without scaler, but no image with a scaler. Cables are 25 ft.	Use only cables from Steelcase. They were designed to provide a proper wire gauge and shielding for scaler operation.
We were trying to extend PUCKs, we could not make them work.	Make sure to use PUCK extension cable before extending PUCK using HDMI cable. Make sure to use only AWG22 HDMI cable. Use only Steelcase supplied PUCK extension cables.
Loosing TCP/IP connection intermittently.	Update switcher to the latest firmware.
Unable to connect two clients to the switcher TCP socket.	Verify the bootloader is not running. Make sure you have the correct IP and select port 23.

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I am trying to switch to the output that does not have a monitor connected and I get an error.	The m:s does not allow switching to outputs that do not have a display connected.
OSD temperature is not displaying correctly.	Update switcher to the latest firmware version.
M:S turns off when left unattended. We use AUX1 to display digital signage.	Adjust AUX input timeout on m:s OSD using configurable field #3. **Figure 7:** Configurable Field 3 set to always on
When PUCK is connected to a source (PC or MAC), PUCK momentarily turns icons ON and then they turn OFF. Unable to select source and display it on the monitor	The m:s sees the plug-in event but is not able to see the video signal. Connect PC directly to TV and see if the image is displayed. If it is displayed, then verify that PC can read EDID. Plug computer into PUCK and then go to control panel, display monitor properties and check if Steelcase m:s is showing as vendor. If Steelcase is not shown as a display, then dongle cable or PUCK to switcher cable is damaged.
Using Command Prompt to ping media:scape	Type in the IP address of the media:scape after the ping command in the command prompt. For example: 192.168.10.81 Verifies communication on the network level between the media:scape and the PC used for configuration. **Figure 8:** Command Prompt Ping

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The media:scape switcher is overheating	Unplug power for a few seconds then plug it in and see if the fan will go to high speed for a few seconds. If it does, then everything is OK with the switcher. Inspect location of the switcher to make sure wires or other item does not impede fan rotation. Inspect location of the switcher to make sure there is access to fresh air. Metal shroud does not count as insulator. Wood panels count as insulator. Open up panels to create venting holes to allow cool air into the switcher location. Make sure to upgrade switcher to the latest version. **Figure 9:** Check Fan Status
Contact Steelcase Technical Support	Type in the IP address of the media:scape into your web browser.

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