

Small AV RACK GUIDE

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December 30, 2020

ISCT - AVDE

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**Equipment List**

**Crestron DMPS: DMPS3-4K-350-C**

**Crestron DSP: DSP-860**

**Crestron AMP: AMP-2100**

**Crestron AirMedia: AM-200**

**Crestron Touch Panel: TSW-760**

**Crestron Scaler: DM-RMC-4K-SCALER-C**

**Crestron 5 Port PoE Swtch: CEN-SW-POE-5**

**Shure Mic Receivers: ULXD4 (H50), BLX4R (H9)**

**BIC Speakers: DV62si**

**Sony Blu Ray Player: BDPS3700**

**Connections**

**\*NOTE: If AirMedia is connected to PoE do not use power supply**

**DMPS**

**Digital Media**

DM Output 3 🡪 Scaler DM IN

**LAN**

LAN 🡪 5 Port PoE

**HDMI**

HDMI 1 🡨 User

HDMI 2 🡨 Blu Ray Player

HDMI 3 🡨 Air Media

**Aux**

Aux Out 1 🡪 **DSP** Mic/Line Input 1+2

Aud In 1 🡨 User

Mic 1 🡨 ULXD4 Mic Receiver

Mic 2 🡨 BLX4R Mic Receiver

**IR**

IR 1 🡪 TV

**DSP**

**Line Outputs**

1+2 🡪 **AMP** Audio In 1+2

**AMP**

**Speaker Out**

Left -> Right Speaker

Right -> Left Speaker

**Switch**

**Touch Panel**

**AirMedia** LAN PoE

**DMPS** LAN

**DSP** LAN

**Service Cable for maintenance**

**IP Settings**

192.168.0.5 – Touch Panel

192.168.0.10 – DSP

192.168.0.20 – DMPS

192.168.0.25 – Air Media

DHCP – Scaler

**VTPro Signals**

**Welcome**

1. Press to start your class

**Home**

1. Program volume gauge

3. Pause class

4. Program volume mute

5. Lower program volume

6. Raise program volume

16. HDMI

17. Blu-Ray

18. AirMedia

19. Source audio

20. Audio cable

21. TV power

**Blu-Ray**

1. Direction pad

2. Keypad

29. Power

30. Eject

31. Rewind

32. Stop

33. Play

34. Fast Forward

35. Back

36. Skip back

37. Pause

38. Skip Forward

**Microphone**

2. Master microphone volume gauge

3. Microphone 1 volume gauge

4. Microphone 4 volume gauge

7. Master microphone mute

8. Lower master microphone volume

9. Raise master microphone volume

10. Microphone 1 mute

11. Lower microphone 1 volume

12. Raise microphone 1 volume

13. Microphone 2 mute

14. Lower microphone 2 volume

15. Raise microphone 2 volume

**Password**

1. Password display

4. Password keypad

**DSP**

22. Page visibility join

**DSP 2**

No Signals

**Exit Confirmation**

2. End Class

**SIMPL Signals**

**Central Control Modules**

**Slot-02 IR Outputs**

**Port-01: IR Device**

1 -> **[enable]**

tv\_pwr -> **Power**

**IP-ID-03: TSW-760**

Found in Central Control Modules 🡪 Slot-07

(Signal Number). (Signal)

**Touch Panel Inputs**

**Digital**

1. tp\_class\_end\_fb
2. src\_paused
3. src\_muted
4. src\_mic\_muted
5. src\_mic1\_muted
6. src\_mic2\_muted
7. src\_hdmi
8. src\_bluray
9. src\_dcam
10. src\_program
11. src\_aux
12. pass\_correct
13. timeout\_true
14. src\_bluray
15. bluray\_on\_fb

**Analog**

1. src\_scaled
2. src\_mic\_scaled
3. src\_mic1\_scaled
4. src\_mic2\_scaled

**Serial**

1. tp\_pass\_text

**Touch Panel Outputs**

**Digital**

1. tp\_class\_start
2. tp\_class\_end
3. tp\_class\_pause
4. tp\_src\_mute
5. tp\_src-
6. tp\_src+
7. tp\_mic\_mute
8. tp\_mic-
9. tp\_mic+
10. tp\_mic1\_mute
11. tp\_mic1-
12. tp\_mic1+
13. tp\_mic2\_mute
14. tp\_mic2-
15. tp\_mic2+
16. tp\_hdmi
17. tp\_bluray
18. tp\_dcam
19. tp\_program
20. tp\_aux
21. tp\_tv\_pwr
22. tp\_bluray\_pwr
23. tp\_bluray\_eject
24. tp\_bluray\_rew
25. tp\_bluray\_stop
26. tp\_bluray\_play
27. tp\_bluray\_ffw
28. tp\_bluray\_exit
29. tp\_bluray\_skipback
30. tp\_bluray\_pause
31. tp\_bluray\_skipfwd
32. tp\_bluray\_media\_top
33. tp\_menu\_contents
34. tp\_menu\_root
35. tp\_menu\_setup

**Touch Panel Objects**

**Slot-01: TSW-760 Buttons**

Currently has no signals, allows you to use side buttons

**IP-ID-03.2 DPad**

Up – tp\_bluray\_up

Down – tp\_bluray\_down

Left – tp\_bluray\_left

Right – tp\_bluray\_right

Center – tp\_bluray\_select

**IP-ID-03.3 Simple Keypad**

1 – tp\_bluray\_1

2 – tp\_bluray\_2

3 – tp\_bluray\_3

4 – tp\_bluray\_4

5 – tp\_bluray\_5

6 – tp\_bluray\_6

7 – tp\_bluray\_7

8 – tp\_bluray\_8

9 – tp\_bluray\_9

0 – tp\_bluray\_0

Misc\_1 – tp\_bluray\_numpad\_clear

Misc\_2 – tp\_bluray\_numpad\_enter

**IP-ID-03.4 860**

DSP signals automatically handled by Crestron

**IP-ID-0.35 Simple Keypad**

1 – tp\_pass\_1

2 – tp\_pass\_2

3 – tp\_pass\_3

4 – tp\_pass\_4

5 – tp\_pass\_5

6 – tp\_pass\_6

7 – tp\_pass\_7

8 – tp\_pass\_8

9 – tp\_pass\_9

0 – tp\_pass\_0

Misc\_1 – tp\_pass\_clear

Misc\_2 – tp\_pass\_enter

**IP-ID-04: DSP-860**

DSP signals automatically handled by Crestron

**Slot-02: AV Control**

Found in Central Control Modules 🡪 Slot-11: DMPS3 Control

src\_audio 🡪 Audio\_Source\_Aux1

src\_video 🡪 Video\_Source\_DM3

src\_dm\_audio 🡪 Audio\_Source\_DM3

**Logic**

**Passing variable value to symbol field**

**Symbol 🡪 Field**

**Setting variable value from symbol output**

**Symbol 🡨 Field**

**S-1: Constants**

**S-1.1 Analog Initialize**

src\_dm\_audio = 2d

**S-2: Source Selection**

**S-2.1 Audio Selection**

**S-2.1.1 Interlock**

src\_clear 🡪 **[clear]**

tp\_program 🡪 **i1**

tp\_aux 🡪 **i2**

src\_program 🡨 **o1**

src\_aux 🡨 **o2**

**S-2.2 Video Selection**

**S-2.2.1 Interlock**

src\_clear 🡪 **[clear]**

tp\_hdmi 🡪 **i1**

tp\_dcam 🡪 **i2**

tp\_bluray 🡪 **i3**

src\_hdmi 🡨 **o1**

src\_dcam 🡨 **o2**

src\_bluray 🡨 **o3**

**S-2.3 Source Calculation**

src\_change 🡪 **src\_change**

src\_hdmi 🡪 **hdmi**

src\_bluray 🡪 **bluray**

src\_dcam 🡪 **dcam**

src\_aux 🡪 **aux**

src\_program 🡪 **program**

src\_video 🡨 **video**

src\_audio 🡨 **audio**

**S-2.4: OR**

tp\_aux 🡪 **i1**

tp\_program 🡪 **i2**

tp\_hdmi 🡪 **i3**

tp\_bluray 🡪 **i4**

tp\_dcam 🡪 **i5**

tp\_class\_start 🡪 **i6**

tp\_class\_end 🡪 **i7**

timeout\_true 🡪 **i8**

src\_change 🡨 **out**

**S-2.5: OR**

tp\_class\_start 🡪 **i1**

tp\_class\_end 🡪 **i1**

timeout\_true 🡪 **i1**

src\_clear 🡨 **out**

**S-3: Blank Screen**

**S-3.1: Toggle**

src\_pause\_set 🡪 **[set]**

src\_pause\_reset 🡪 **[reset]**

tp\_pause 🡪 **clock**

src\_paused 🡪 **out**

**S-3.2: NOT**

src\_paused 🡪 **i1**

src\_unpaused 🡪 **out**

**S-3.3: OR**

tp\_class\_start 🡪 **i1**

src\_paise\_reset 🡪 **out**

**S-3.4: OR**

tp\_class\_end 🡪 **i1**

src\_pause\_set 🡪 **out**

**S-4: Program Volume**

**S-4.1 Mute**

**S-4.1.1: Toggle**

src\_mute\_set 🡪 **[set]**

src\_mute\_reset 🡪 **[reset]**

tp\_src\_mute 🡪 **clock**

src\_mute 🡨 **out**

**S-4.1.2: NOT**

src\_muted 🡪 **i1**

src\_unmuted 🡨 **out**

**S-4.1.3: AND**

tp\_pause 🡪 **i1**

src\_unpaused 🡪 **i2**

src\_pause\_mute\_reset 🡨 **out**

**S-4.1.4: AND**

tp\_pause 🡪 **i1**

src\_paused 🡪 **i2**

src\_pause\_mute\_set 🡨 **out**

**S-4.1.5: OR**

tp\_src- 🡪 **i1**

tp\_src+ 🡪 **i2**

src\_pause\_mute\_reset 🡪 **i3**

tp\_class\_start 🡪 **i4**

src\_mute\_reset 🡨 **out**

**S-4.1.6: OR**

tp\_class\_end 🡪 **i1**

timeout\_true 🡪 **i2**

src\_pause\_mute\_set 🡪 **i3**

src\_mute\_set 🡨 **out**

**S-4.2 Level**

**S-4.2.1 Analog Ramp**

tp\_src+ 🡪 **up**

tp\_src- 🡪 **down**

src\_muted 🡪 **[mute]**

src\_ramp 🡨 **aout**

**ramp\_time: 2.0s**

**S-4.2.2 Analog Scaler with I/O Limits**

src\_ramp 🡪 **ain1**

src\_scaled 🡨 **aout**

**InputLowerLimit: 0d**

**InputUpperLimit: 65535d**

**OutputLowerLimit: 0d**

**OutputUpperLimit: 100d**

**Format: 0d**

**S-4.2.3 Analog Scaler with I/O Limits**

src\_scaled 🡪 **ain1**

src\_level 🡨 **aout**

**InputLowerLimit: 0d**

**InputUpperLimit: 100d**

**InputLowerLimit: -800d**

**InputUpperLimit: 100d**

**Format: 0d**

**S-5: Microphones**

**S-5.1 Master**

**S-5.1.1 Mute**

**S-5.1.1.1: Toggle**

src\_mic\_mute\_set 🡪 **[set]**

src\_mic\_mute\_reset 🡪 [**reset]**

tp\_mic\_mute 🡪 **clock**

src\_mic\_muted 🡨 **out**

**S-5.1.1.2: OR**

tp\_mic+ 🡪 **i1**

tp\_mic- 🡪 **i2**

tp\_class\_start 🡪 **i3**

src\_mic\_mute\_reset 🡨 **out**

**S-5.1.1.3: OR**

tp\_class\_end 🡪 **i1**

timeout\_true 🡪 **i2**

src\_mic\_mute\_set 🡨 **out**

**S-5.1.1.4: NOT**

src\_mic\_muted 🡪 **i1**

src\_mic\_unmuted 🡨 **out**

**S-5.1.2 Level**

**S-5.1.2.1: Analog Ramp**

tp\_mic+ 🡪 **up**

tp\_mic- 🡪 **down**

src\_mic\_muted 🡪 **[mute]**

src\_mic\_ramp 🡨 **aout**

**ramp\_time: 2.0s**

**S-5.1.2.2: Analog Scaler with I/O Limits**

src\_mic\_ramp 🡪 **ain1**

src\_mic\_scaled 🡨 **aout1**

**InputLowerLimit: 0d**

**InputUpperLimit: 65535d**

**OutputLowerLimit: 0d**

**OutputUpperLimit: 100d**

**Format: 0d**

**S-5.1.2.3: Analog Scaler with I/O Limits**

src\_mic\_scaled 🡪 **ain1**

src\_mic\_level 🡪 **aout1**

**InputLowerLimit: 0d**

**InputUpperLimit 100d**

**OutputLowerLimit: -800d**

**OutputUpperLimit: 100d**

**Format: 0d**

**S-5.2 Mic 1**

**S-5.2.1 Mute**

**S-5.2.1.1: Toggle**

src\_mic1\_mute\_set 🡪 **[set]**

src\_mic1\_mute\_reset 🡪 [**reset]**

tp\_mic1\_mute 🡪 **clock**

src\_mic1\_muted 🡨 **out**

**S-5.2.1.2: OR**

tp\_mic1+ 🡪 **i1**

tp\_mic1- 🡪 **i2**

tp\_class\_start 🡪 **i3**

src\_mic1\_mute\_reset 🡨 **out**

**S-5.2.1.3: OR**

tp\_class\_end 🡪 **i1**

timeout\_true 🡪 **i2**

src\_mic1\_mute\_set 🡨 **out**

**S-5.2.1.4: NOT**

src\_mic1\_muted 🡪 **i1**

src\_mic1\_unmuted 🡨 **out**

**S-5.2.2 Level**

**S-5.2.2.1: Analog Ramp**

tp\_mic1+ 🡪 **up**

tp\_mic1- 🡪 **down**

src\_mic1\_muted 🡪 **[mute]**

src\_mic1\_ramp 🡨 **aout**

**ramp\_time: 2.0s**

**S-5.2.2.2: Analog Scaler with I/O Limits**

src\_mic1\_ramp 🡪 **ain1**

src\_mic1\_scaled 🡨 **aout1**

**InputLowerLimit: 0d**

**InputUpperLimit: 65535d**

**OutputLowerLimit: 0d**

**OutputUpperLimit: 100d**

**Format: 0d**

**S-5.2.2.3: Analog Scaler with I/O Limits**

src\_mic1\_scaled 🡪 **ain1**

src\_mic1\_level 🡪 **aout1**

**InputLowerLimit: 0d**

**InputUpperLimit 100d**

**OutputLowerLimit: -800d**

**OutputUpperLimit: 100d**

**Format: 0d**

**S-5.3 Mic 2**

**S-5.3.1 Mute**

**S-5.3.1.1: Toggle**

src\_mic2\_mute\_set 🡪 **[set]**

src\_mic2\_mute\_reset 🡪 [**reset]**

tp\_mic2\_mute 🡪 **clock**

src\_mic2\_muted 🡨 **out**

**S-5.3.1.2: OR**

tp\_mic2+ 🡪 **i1**

tp\_mic2- 🡪 **i2**

tp\_class\_start 🡪 **i3**

src\_mic2\_mute\_reset 🡨 **out**

**S-5.3.1.3: OR**

tp\_class\_end 🡪 **i1**

timeout\_true 🡪 **i2**

src\_mic2\_mute\_set 🡨 **out**

**S-5.3.1.4: NOT**

src\_mic2\_muted 🡪 **i1**

src\_mic2\_unmuted 🡨 **out**

**S-5.3.2 Level**

**S-5.3.2.1: Analog Ramp**

tp\_mic2+ 🡪 **up**

tp\_mic2- 🡪 **down**

src\_mic2\_muted 🡪 **[mute]**

src\_mic2\_ramp 🡨 **aout**

**ramp\_time: 2.0s**

**S-5.3.2.2: Analog Scaler with I/O Limits**

src\_mic2\_ramp 🡪 **ain1**

src\_mic2\_scaled 🡨 **aout1**

**InputLowerLimit: 0d**

**InputUpperLimit: 65535d**

**OutputLowerLimit: 0d**

**OutputUpperLimit: 100d**

**Format: 0d**

**S-5.3.2.3: Analog Scaler with I/O Limits**

src\_mic2\_scaled 🡪 **ain1**

src\_mic2\_level 🡪 **aout1**

**InputLowerLimit: 0d**

**InputUpperLimit 100d**

**OutputLowerLimit: -800d**

**OutputUpperLimit: 100d**

**Format: 0d**

**S-6: Startup Volume**

**S-6.1 Program Volume**

**S-6.1.1: Analog Initialize**

startup\_src 🡪 **35000d** 🡪 src\_ramp

**S-6.1.2: AND**

tp\_class\_start 🡪 **i1**

src\_unmuted 🡪 **i2**

startup\_src 🡨 **out**

**S-6.2 Microphones**

**S-6.2.1 Master**

**S-6.2.1.1: Analog Initialize**

startup\_mic 🡪 **60000d** 🡪 src\_mic\_ramp

**S-6.2.1.2: AND**

tp\_class\_start 🡪 **i1**

src\_mic\_unmuted 🡪 **i2**

startup\_mic 🡨 **out**

**S-6.2.2 Mic 1**

**S-6.2.2.1: Analog Initialize**

startup\_mic1 🡪 **50000d** 🡪 src\_mic1\_ramp

**S-6.2.2.2: AND**

tp\_class\_start 🡪 **i1**

src\_mic1\_unmuted 🡪 **i2**

startup\_mic1 🡨 **out**

**S-6.2.3 Mic 2**

**S-6.2.3.1: Analog Initialize**

startup\_mic2 🡪 **50000d** 🡪 src\_mic2\_ramp

**S-6.2.3.2: AND**

tp\_class\_start 🡪 **i1**

src\_mic2\_unmuted 🡪 **i2**

startup\_mic2 🡨 **out**

**S-7: Device Control**

**S-7.1 Blu-Ray**

**S-7.1.1: Generic CEC Source**

src\_bluray 🡪 **Power\_On\_RCP**

bluray\_off 🡪 **Power\_Off\_RCP**

tp\_bluray\_pwr 🡪 **Power\_Toggle**

tp\_menu\_root 🡪 **Root\_Menu**

tp\_menu\_setup 🡪 **Setup\_Menu**

tp\_menu\_contents 🡪 **Contents\_Menu**

tp\_menu\_media\_top 🡪 **Media\_Top\_Menu**

tp\_bluray\_up 🡪 **Up**

tp\_bluray\_down 🡪 **Down**

tp\_bluray\_left 🡪 **Left**

tp\_bluray\_right 🡪 **Right**

tp\_bluray\_select 🡪 **Select**

tp\_bluray\_exit 🡪 **Exit**

tp\_bluray\_play 🡪 **Play**

tp\_bluray\_stop 🡪 **Stop**

tp\_bluray\_pause 🡪 **Pause**

tp\_bluray\_rew 🡪 **Rewind**

tp\_bluray\_ffw 🡪 **Forward**

tp\_bluray\_skipfwd 🡪 **Chapter/Track\_Fwd**

tp\_bluray\_skipback 🡪 **Chapter/Track\_Rev**

tp\_bluray\_1 🡪 **Number\_1**

tp\_bluray\_2 🡪 **Number\_2**

tp\_bluray\_3 🡪 **Number\_3**

tp\_bluray\_4 🡪 **Number\_4**

tp\_bluray\_5 🡪 **Number\_5**

tp\_bluray\_6 🡪 **Number\_6**

tp\_bluray\_7 🡪 **Number\_7**

tp\_bluray\_8 🡪 **Number\_8**

tp\_bluray\_9 🡪 **Number\_9**

tp\_bluray\_0 🡪 **Number\_0\_or\_Number\_10**

tp\_bluray\_numpad\_enter 🡪 **Enter**

tp\_bluray\_numpad\_clear 🡪 **Clear**

tp\_bluray\_eject 🡪**Eject**

cecfb 🡪 **From\_Device**

cec\_transmit 🡨 **To\_Device**

bluray\_on\_fb 🡨 **bluray\_on\_fb**

**Address: 4 – Playback Device 1**

**S-7.1.2: OR**

tp\_class\_end 🡪 **i1**

timeout\_true 🡪 **i2**

bluray\_off 🡪 **out**

**S-7.2 TV**

**S-7.2.1: OR**

tp\_tv\_pwr 🡪 **i1**

tp\_class\_start 🡪 **i2**

tp\_class\_end 🡪 **i3**

timeout\_true 🡪 **i4**

tv\_pwr 🡨 **out**

**S-8: Password**

**S-8.1: Password v1.1**

tp\_pass\_enter 🡪 **Enter**

tp\_pass\_clear 🡪 **Clear**

0 🡪 **Enable\_Backdoor\_Pass**

tp\_pass\_0 🡪 **Digit\_0**

tp\_pass\_1 🡪 **Digit\_1**

tp\_pass\_2 🡪 **Digit\_2**

tp\_pass\_3 🡪 **Digit\_3**

tp\_pass\_4 🡪 **Digit\_4**

tp\_pass\_5 🡪 **Digit\_5**

tp\_pass\_6 🡪 **Digit\_6**

tp\_pass\_7 🡪 **Digit\_7**

tp\_pass\_8 🡪 **Digit\_8**

tp\_pass\_9 🡪 **Digit\_9**

pass\_correct 🡨 **Password\_Correct**

tp\_pass\_text 🡨 **Password**

**Default Password: 1299**

**Backdoor Password: 1299**

**Max Password Length: 7d**

**S-9: End Class Flicker**

**S-9.1: Simple Timer**

timer\_not\_waiting 🡪 **start**

tp\_class\_end\_fb 🡨 **timer\_active**

timer\_not\_holding 🡨 **timer\_expired**

**time: 1s**

**S-9.2: Simple Timer**

timer\_wait 🡪 **start**

timer\_not\_waiting 🡨 **timer\_expired**

**time: 1.1s**

**S-9.3: OR**

tp\_class\_start 🡪 **i1**

timer\_not\_holding 🡪 **i2**

timer\_wait 🡨 **out**

**S-10: Class Timeout**

**S-10.1: class timeout**

tp\_class\_start 🡪 **class\_start**

timeout\_activity 🡪 **activity**

tp\_class\_end 🡪 **class\_end**

timeout\_true 🡨 **timeout**

**S-10.2: OR**

**List of signals that reset the timeout timer**

timeout\_activity 🡨 **out**

**S-11: Smart Graphics Modules**

**S-11.1 Crestron DSP Routing Module**

DSP signals automatically handled by Crestron

**Code Explanation**

**Central Control Modules**

**Slot-02 IR Outputs**

**Port-01: IR Device**

To configure the IR device, you will need access to a USB IR Learner or IR codes for your device and Toolbox. After you successfully train an IR model you will need to use the configure view and add the new model to an IR output on the DMPS.

**Slot-7 Ethernet Devices**

To connect the touch panel to your system you will need to configure the IP settings, to do this in SIMPL go to the configuration view, add your touch panel as an ethernet device and note the IP ID in the IP Net Address menu. To configure the IP address in the touch panel repeatedly press the top 4 buttons on the touch panel to open the settings menu. Make sure the CID is set to the same ID as the configuration view IP ID and make sure the host IP matches the DMPS IP address, you should also be able to configure the IP in Toolbox. If you see a green dot next to the IP address, then you connected successfully. Next you will want to repeat these steps with the DSP to connect it to your system. You will not have an interface to work with so you will need to connect to it through Toolbox this time.

**IP-ID-03: TSW-760**

This module interacts directly with the VTPro interface on the touch panel. The join numbers on VTPro correspond with the join numbers on this module. You can also send signals back to the touch panel through this module. A few examples of this are using digital signals to let the interface know when a button should be highlighted (such as a selected source) or an analog signal for displaying something such as sound levels.

**Touch Panel Objects**

**Slot-01: TSW-760 Buttons**

Currently has no signals, allows you to use side buttons.

**IP-ID-03.2 DPad**

Direction pad found on Bluray settings page, sends digital signals corresponding to whichever button is pressed.

**IP-ID-03.3 Simple Keypad**

Numpad found on Bluray settings page, sends digital signals corresponding to whichever button is pressed.

**IP-ID-03.4 860**

DSP signals automatically handled by Crestron, see the Avia DSP tool for more info.

**IP-ID-0.35 Simple Keypad**

Numpad found on DSP password page, sends digital signals corresponding to whichever button is pressed

**IP-ID-04: DSP-860**

DSP signals automatically handled by Crestron, see the Avia DSP tool for more info.

**Slot-02: AV Control**

Found in Central Control Modules 🡪 Slot-11: DMPS3 Control

This module is crucial to directing traffic between inputs and outputs

**Logic**

**S-1: Constants**

**S-1.1 Analog Initialize**

Sets a signal to 2d, this hardcodes the digital media output audio to digital mixer 2, which is muted. This is intended to prevent the scaler from sending audio.

**S-2: Source Selection**

**S-2.1 Audio Selection**

An interlock used to determine what the active source is for audio and sets the corresponding value to active.

**S-2.2 Video Selection**

An interlock is used to determine what the active source is for video and sets the corresponding value to active.

**S-2.3 Source Calculation**

Sends the correct analog variables to the AV control to set sources based on the active digital variables. **Custom SIMPL+ Module**

**S-2.4: OR**

Sets a digital variable to high whenever a source is changed, triggers the source calculation.

**S-2.5: OR**

Sends a signal to clear interlocks on certain conditions.

**S-3: Blank Screen**

Uses a toggle to determine when the scaler should blank the screen

**S-4: Program Volume**

**S-4.1 Mute**

Uses a toggle to determine when the program audio should be muted.

**S-4.2 Level**

Uses a ramp and a series of scalers to adjust the program volume based on the user’s input.

**S-5: Microphones**

**S-5.1 Master**

**S-5.1.1 Mute**

Uses a toggle to determine when all the microphones should be muted.

**S-5.1.2 Level**

Uses a ramp and a series of scalers to adjust the master microphone volume based on the user’s input.

**S-5.2 Mic 1**

**S-5.2.1 Mute**

Uses a toggle to determine when microphone 1 should be muted.

**S-5.2.2 Level**

Uses a ramp and a series of scalers to adjust the microphone 1 volume based on the user’s input.

**S-5.3 Mic 2**

**S-5.3.1 Mute**

Uses a toggle to determine when microphone 2 should be muted.

**S-5.3.2 Level**

Uses a ramp and a series of scalers to adjust the microphone 2 volume based on the user’s input.

**S-6: Startup Volume**

**S-6.1 Program Volume**

On startup set the program volume using analog initialization.

**S-6.2 Microphones**

**S-6.2.1 Master**

On startup set the master microphone volume using analog initialization.

**S-6.2.2 Mic 1**

On startup set the microphone 1 volume using analog initialization.

**S-6.2.3 Mic 2**

On startup set the microphone 2 volume using analog initialization.

**S-7: Device Control**

**S-7.1 Blu-Ray**

**S-7.1.1: Generic CEC Source**

Uses a Crestron Module (found in Symbol Library) to send commands to the Blu Ray player.

**S-7.2 TV**

**S-7.2.1: OR**

Uses a series of conditions to determine when to send a power signal.

**S-8: Password**

**S-8.1: Password v1.1**

Uses a Crestron Module (found in Symbol Library) for password protecting the DSP settings page on the touch panel.

**S-9: End Class Flicker**

Uses two timers that alternate to cause the end class button to blink.

**S-10: Class Timeout**

**S-10.1: class timeout**

Turns the system off after a set time without activity. **Custom SIMPL+ Module**

**S-10.2: OR**

List of signals that reset the timeout timer

**S-11: Smart Graphics Modules**

**S-11.1 Crestron DSP Routing Module**

DSP signals automatically handled by Crestron