

## Avenue 5600 SD Embedder/Disembedder

### Command Set Protocol

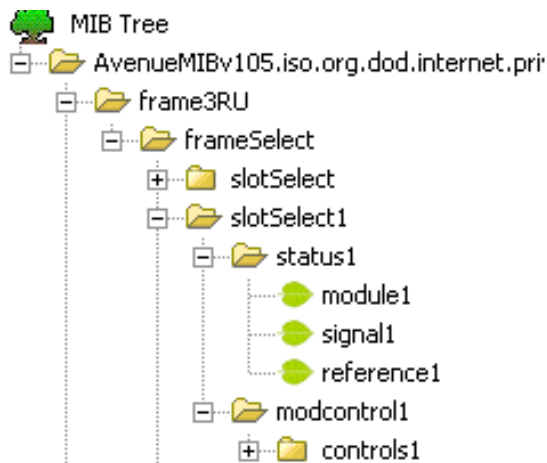
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Module Software Ver: 2.2.1

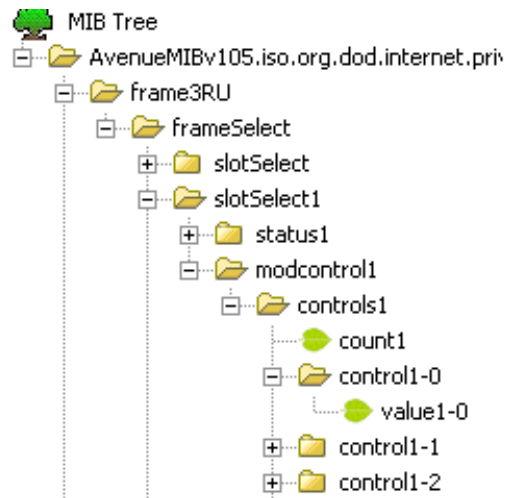
This document details the control numbers and descriptions that can be accessed through the command set to monitor and control an Ensemble Designs Avenue System 5600 SD Embedder/Disembedder. The information provided herein can be used in tcp/ip interfaces that follow the Avenue Serial Control Protocol, and in systems using SNMP interfaces to the Avenue System.

For each module there are two types of Controls, Status and Modcontrols. The Status is generic to each module and gives the status of the modules CPU, Input Signal and Reference Status, these are read-back controls only. Modcontrols are specific controls that relate directly to individual cards or modules and can be read or read/write.

### Status Read-backs



### Modcontrols



## Status Read-Backs

**StatusX** - X relates to the slot number of the module. There are 3 status read-backs available for each module.

Name: ModuleX - Indicates status of modules CPU. X = slot the module is in.  
Type: Read Only  
Min/Max: 1/3  
Reports: 1 - normal  
          2 - kernel  
          3- not installed

Name: SignalX - Signal input or output Status. X = slot the module is in.  
Type: Read Only  
Min/Max: 1/3  
Reports: 1 - normal  
          2 - faulted  
          3 - unknown

Name: ReferenceX - Status of module reference. X = slot the module is in.  
Type: Read Only  
Min/Max: 1/3  
Reports: 1 - normal  
          2 - faulted  
          3 - unknown

## ModControls

**CountX:** Total count of controls used on Module. X = Module Slot number.

### Control 0

Name: Video Out -  
Menu: Mode  
Type: Scroll List - Read/Write  
Min/Max: 0/3  
Reports: 0 - "Bypass"  
          1 - "Mux Out"  
          2 - "Loopthru"  
          3 - "Aud Delete"  
Control: Write corresponding value to set to desired setting.  
Special: Mode must be set to Mux - See Control 5

### Control 1

Name: Input Select  
Menu: Vid In  
Type: Scroll List - Read/Write  
Min/Max: 0/1  
Reports: 0 - "Video In"  
          1 - "Int Test Gen "  
Control: Write corresponding value to set input.  
Special: Int Test Gen is not enabled with this version of software.

### **Control 2**

Name: Test Signal  
Menu: Vid In  
Type: Scroll List - Read/Write.  
Min/Max: 0/1  
Reports: 0 - Color Bars  
1 - Black  
Control: Write corresponding value to set Test Signal Generator  
Special: Works in correlation with Control 1 - not enables at this time.

### **Control 3**

Name: AES Out A  
Special: Not a user control.

### **Control 4**

Name: AES Out B  
Special: Not a user control.

### **Control 5**

Name: Mode  
Menu: Mode  
Type: Scroll List - Read/Write.  
Min/Max: 0/1  
Reports: 0 - Mux  
1 - DeMux  
Control: Write corresponding value to set Mode.

### **Control 6**

Name: Mux Position  
Menu: Config  
Type: Scroll List - Read/Write  
Min/Max: 0/2  
Reports: 0 - Wrong Mode \*Read back only not a write value.  
1 - Cascade  
2 - Replace  
Control: Write corresponding value to set Mux Position.

### **Control 7**

Name: Group Select  
Menu: Config  
Type: Scroll List - Read/Write  
Min/Max: 0/3  
Reports: 0 - Group 1  
1 - Group 2  
2 - Group 3  
3 - Group 4  
Control: Write corresponding value to set Group.

### Control 8

Name: Audio Width  
Menu: Config  
Type: Scroll List - Read/Write  
Min/Max: 0/2  
Reports: 0 - Wrong Mode \*Read back only not a write value.  
1 - 20 Bits  
2 - 24 Bits  
Control: Write corresponding value to set Bit Width.

### Control 9

Name: Ref Select  
Menu: Video Input  
Type: Scroll List - Read/Write  
Min/Max: 0/2  
Reports: 0 - Video In  
1 - External  
2 - Master  
Control: Write corresponding value to set Reference.

### Control 10

Name: Input Status  
Menu: Vid Input  
Type: LED - Read Only  
Min/Max: 0/682 \* Decimal Value read-back.  
Reports: This control provides status information on the Input Status.

Video - Decimal value  
0 - Not On \*No audio in Group 1  
2 - On

Group 1 - Decimal value  
0 - Not On  
4 - Blue \*20 Bit  
8 - Green \* 24 Bit

Group 2 - Decimal value  
0 - Not On \*No audio in Group 2  
16 - Blue \*20 Bit  
32 - Green \*24 Bit

Group 3 - Decimal value  
0 - Not On \*No audio in Group 3  
64 - Blue \*20 Bit  
128 - Green \*24 Bit

Group 4 - Decimal value  
0 - Not On \*No Audio in Group 4  
256 - Blue \*20 Bit  
512 - Green \*24 Bit

Example: If "Video In" is present and Group 1 & 2 are present with 24 Bit Audio you would get a value of 42. If all 4 groups were present with 24 bit audio you would get a 682 returned.

**Control 11 \* Same as 10 - Duplicate**

Name: Input Status  
Menu: Vid Input

**Control 12**

Name: AES A Input  
Menu: Audio I/O  
Type: Text Box - Read Only  
Min/Max: 0/1  
Reports: 0 - No Input  
          1 - Input Locked  
Control: Read Only

**Control 13**

Name: AES B Input  
Menu: Audio I/O  
Type: Text Box - Read Only  
Min/Max: 0/1  
Reports: 0 - No Input  
          1 - Input Locked  
Control: Read Only

**Control 14**

Name: Ref Detect  
Menu: Vid Input  
Type: Text Box - Read Only  
Min/Max: 0/3  
Reports: 0 - None  
          1 - 525  
          2 - 625  
Control: Read Only

**Control 15**

Name: In 1/2 Sel  
Menu: Aud I/O  
Type: Scroll List - Read/Write  
Min/Max: 0/2  
Reports: 0 - AES A  
          1 - Anlg 1/2  
          2 - Anlg 3/4  
Control: Write corresponding value to set what input is set for In 1/2.

**Control 16**

Name: In 3/4 Sel  
Menu: Aud I/O  
Type: Scroll List - Read/Write  
Min/Max: 0/2  
Reports: 0 - AES B  
1 - Anlg 1/2  
2 - Anlg 3/4

Control: Write corresponding value to set what input is set for In 3/4.

**Control 17**

Name: Anlg 1 Lvl  
Menu: Aud I/O  
Type: Scroll List - Read/Write  
Min/Max: 0/5  
Reports: 0 - (-10dB)  
1 - (-6dB)  
2 - (-4dB)  
3 - 0dB  
4 - +4dB  
5 - +8dB

Control: Write corresponding value to set Analog reference level.

**Control 18**

Name: Anlg 2 Lvl  
Menu: Aud I/O  
Type: Scroll List - Read/Write  
Min/Max: 0/5  
Reports: 0 - (-10dB)  
1 - (-6dB)  
2 - (-4dB)  
3 - 0dB  
4 - +4dB  
5 - +8dB

Control: Write corresponding value to set Analog reference level.

**Control 19**

Name: Anlg 3 Lvl  
Menu: Aud I/O  
Type: Scroll List - Read/Write  
Min/Max: 0/5  
Reports: 0 - (-10dB)  
1 - (-6dB)  
2 - (-4dB)  
3 - 0dB  
4 - +4dB  
5 - +8dB

Control: Write corresponding value to set Analog reference level.

### **Control 20**

Name: Anlg 4 Lvl  
Menu: Aud I/O  
Type: Scroll List - Read/Write  
Min/Max: 0/5  
Reports: 0 - (-10dB)  
1 - (-6dB)  
2 - (-4dB)  
3 - 0dB  
4 - +4dB  
5 - +8dB

Control: Write corresponding value to set Analog reference level.

### **Control 21**

Name: Option  
Menu: Config  
Type: Text Box - Read Only  
Min/Max: 0/3  
Reports: 0 - "5610 4 In"  
1 - "5611 4 Out"  
3 - "5612 2 In/2 Out"

Control: Read Only

### **Control 27**

Name: Input Ch 1  
Menu: Aud Mix  
Type: Text Box - Read/Write  
Min/Max: -700/60 \* Default 0  
Reports: Report or sets value of fader level in tenths.  
Control Write value to channel one level. Example write a 55 to set level to 5.5dB. A read back of -405 equals -40.5dB.

### **Control 28**

Name: Ch 1 Bits  
Menu: Aud Mix  
Type: LED Push Button - Read/Write  
Min/Max: 0/63  
Reports: Report or sets Output Bus Assinment.  
Ch 1 - Decimal Value 1  
Ch 2 - Decimal Value 2  
Ch 3 - Decimal Value 4  
Ch 4 - Decimal Value 8  
Tie - Decimal Value 16  
Invert - Decimal Value 32

Control: To set Input Channel 1 to output buses 1 & 3 write 5.

### **Control 29**

Name: Input Ch 2  
Menu: Aud Mix  
Type: Text Box - Read/Write  
Min/Max: -700/60 \* Default 0  
Reports: Report or sets value of fader level in tenths.  
Control Write value to channel two level. Example write a 55 to set level to 5.5dB. A read back of -405 equals -40.5dB.

### **Control 30**

Name: Ch 2 Bits  
Menu: Aud Mix  
Type: LED Push Button - Read/Write  
Min/Max: 0/63  
Reports: Report or sets Output Bus Assinment.  
Ch 1 - Decimal Value 1  
Ch 2 - Decimal Value 2  
Ch 3 - Decimal Value 4  
Ch 4 - Decimal Value 8  
Tie - Decimal Value 16  
Invert - Decimal Value 32

Control: To set Input Channel 2 to output buses 2 & 4 write 10.

### **Control 31**

Name: Input Ch 3  
Menu: Aud Mix  
Type: Text Box - Read/Write  
Min/Max: -700/60 \* Default 0  
Reports: Report or sets value of fader level in tenths.  
Control Write value to channel three level. Example write a 55 to set level to 5.5dB. A read back of -405 equals -40.5dB.

### **Control 32**

Name: Ch 3 Bits  
Menu: Aud Mix  
Type: LED Push Button - Read/Write  
Min/Max: 0/63  
Reports: Report or sets Output Bus Assinment.  
Ch 1 - Decimal Value 1  
Ch 2 - Decimal Value 2  
Ch 3 - Decimal Value 4  
Ch 4 - Decimal Value 8  
Tie - Decimal Value 16  
Invert - Decimal Value 32

Control: To set Input Channel 3 to output buses 1 & 3 write 5.



### **Control 33**

Name: Input Ch 4  
Menu: Aud Mix  
Type: Text Box - Read/Write  
Min/Max: -700/60 \* Default 0  
Reports: Report or sets value of fader level in tenths.  
Control Write value to channel four level. Example write a 55 to set level to 5.5dB. A read back of -405 equals -40.5dB.

### **Control 34**

Name: Ch 4 Bits  
Menu: Aud Mix  
Type: LED Push Button - Read/Write  
Min/Max: 0/63  
Reports: Report or sets Output Bus Assinment.  
Ch 1 - Decimal Value 1  
Ch 2 - Decimal Value 2  
Ch 3 - Decimal Value 4  
Ch 4 - Decimal Value 8  
Tie - Decimal Value 16  
Invert - Decimal Value 32

Control: To set Input Channel 4 to output buses 2 & 4 write 10.

### **Control 35**

Name: A Chan Mode  
Menu: Mode  
Type: Scroll List - Read/Write  
Min/Max: 0/2  
0 - Auto  
1 - Audio  
2 - Data  
Reports: Write corresponding value to set A Channel Mode.

### **Control 36**

Name: B Chan Mode  
Menu: Mode  
Type: Scroll List - Read/Write  
Min/Max: 0/2  
0 - Auto  
1 - Audio  
2 - Data  
Reports: Write corresponding value to set B Channel Mode.

### **Control 37**

Name: A Status  
Menu: Mode  
Type: Text Box - Read Only  
Min/Max: 0/3  
Reports: 0 - "None"  
1 - "Audio"  
2 - "Data"  
3 - "Analog"  
Control: Read Only.

### **Control 38**

Name: B Status  
Menu: Mode  
Type: Text Box - Read Only  
Min/Max: 0/3  
Reports: 0 - "None"  
1 - "Audio"  
2 - "Data"  
3 - "Analog"  
Control: Read Only.

NOTE: Controls 39 through 44 work together to provide Save and Recall of module configurations to/from five internal memory registers. The 'Save' function is modal, when it is 'Set', it arms the memory system so that the current configuration will be saved into the next register to be selected. When the 'Save' function is NOT set, selecting a register will cause a recall of its contents to be loaded as the current configuration of the module. Because these are the same controls that map to the user control surfaces, the Save function has an automatic timeout which also affects control through the command set interface. Once the memory system has been armed (Save is 'Set'), the target register for the save must be selected within 10 seconds. After that time, the memory system will automatically revert to recall mode. When a register is successfully selected while in Save mode, the mode will automatically revert to Recall after the save executes.

### **Control 39**

Name: Save  
Menu: Memory  
Type: Toggle Push Button Read/Write  
Min/Max: 0/1  
Reports: 0 - Module is not in SAVE mode.  
1 - Module is in SAVE mode.  
Change: Write 0 to this control to toggle status.  
NOTE: Once Save mode is set, it will clear automatically in 10 seconds if no register has been selected.

**Control 40**

Name: Reg 1

Menu: Memory

Type: Push Button Read/Write

Min/Max: 0/1

Reports: 0 - Not selected

1 - Selected

Change: Write 0 to this control to select this memory register.

**Controls 41 through 44**

Identical to Control 46 for remaining registers

Name: Reg 2, 3, 4, 5