instruction manual

Standard NetLinx API (SNAPI) R 1.0.1

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Interfacing with Standard NetLinx API (SNAPI)

The Standard NetLinx API (SNAPI) maps function and feedback calls in Duet modules to ICSP channels, levels and commands. SNAPI allows NetLinx programmers to utilize Duet modules in their NetLinx programs and access the function and feedback of those modules through programming similar to programming they would use on an AMX device, such as a volume box. While each Duet module may support advanced functions via channels, levels and commands (see specific module documentation for the channels, levels and commands supported by that module), the SNAPI mappings apply to the Standard API supported by each module.

Overview

Channels

In SNAPI, there are three kinds of channels: Momentary Function Channels, Discrete Function Channels and Feedback Channels.

Momentary function channels are used for momentary type functions and do not provide discrete feedback. For instance, channel 9 is the momentary function channel for cyclePower(). When pulsed, the channel cycles the state of power on the device and only provides momentary feedback, i.e. the channel is on only while this function is activated.

Discrete function channels are used for discrete type functions and usually provide discrete feedback. For instance, channel 255 is the discrete function channel for setPower(); When turned on, this channel sets the state of the power on the device to on. When turned off, this channel sets the state of the power on the device to off. This channel provides discrete feedback as well; this channel is on if and only if the state of the power on the device is on. In most cases, the channel is listed as a Discrete function channel next to the function the channel controls and as a Feedback channel next to the feedback function that controls this channel.

Feedback channels provide discrete feedback only. For instance, channel 251 is the feedback channel of Communication Active. This channel is on if and only if the module is able to communicate to the device.

Levels

Levels in SNAPI are used for both function and feedback. In some cases, a level is only used for feedback, such as temperature, while some levels are used for function and feedback, such a volume. In most cases, level ranges are from 0-255. All exceptions to this rule are noted, and are only used when the level range is not bounded by a minimum and a maximum, such as temperature.

Commands

Commands in SNAPI are used for discrete and momentary functions when the function requires textual information, multiple parameters, or the functions are not commonly used. For instance, Temperature scale is set via a command because this is usually done only once in a control system program. Other functions, such as adding and removing lighting and keypad addresses, requires more information than a channel or level alone can convey. All commands start with a command header, followed by a "-" to separate the command from the data, and data arguments are usually separated by ","s.

Commands used to query for the status of a property start with a "?". Query commands cause the module to respond with a response command.

Programming

Channels

Momentary function channels are used to activate functions when the channels change from an OFF state to an ON state. For instance, channel 9 cycles the state of the power on the device when it turns on. No change occurs when the channels change from an ON state to an OFF state. You should activate Momentary function channels using the PULSE, TO or MIN_TO keywords:

```
PULSE[dvDevice,9]// Cycle the state of power
TO[dvDevice,9]// Cycle the state of power
MIN_TO[dvDevice,9]// Cycle the state of power
```

Discrete function channels are used to activate functions when the channel changes from an OFF state to an ON state and from an ON to an OFF state. For instance, channel 255 sets the state of the power on the device when it turns on and off. You should activate discrete function channels using the ON and OFF keywords, or any syntax that changes the state of the channel such as a feedback assignment:

```
ON[dvDevice,255]    // Turn the power on
OFF[dvDevice,255]  // Turn the power off
[dvDevice,255] = ![dvDevice,255]  // Cycle the state of power
```

Feedback channels do not active function and should only be used for feedback. These channels can be used in CHANNEL_EVENTs or feedback assignment statements to read the status of the channel:

```
bCommunicationActive = [dvDevce,251]
CHANNEL_EVENT[dvDevice,251]
{
  ON:
    ON[bCommunicationActive]
  OFF:
    OFF[bCommunicationActive]
}
```

Ramping Channels

Some channels in SNAPI provide ramping functionality and some provide adjust "stepping" functionality. Since ramping on a device is only provided if the device supports ramping, a channel that causes ramping on one device may not cause ramping on another device. The following syntax can be used universally for all ramping functionality:

```
BUTTON_EVENT[dvTP,1]
{
  PUSH:
    TO[dvDevice,24]
  HOLD[3 , REPEAT]:
    ON[dvDevce,24]
}
```

The PUSH: TO part of the button event causes ramping to start and continue until the button is released. If the device does not support ramping, the device adjusts the desired parameter either up or down one step and stops. The HOLD: ON part of the button event causes the step adjustment to repeat, at a rate specified by the HOLD repeat time, until the button is released. The HOLD: ON part of the button event has no effect if the device supports ramping.

Levels

Levels in SNAPI are used for both function and feedback. For feedback levels, the level value can be captured in a LEVEL_EVENT, with CREATE_LEVEL or sent directly to a touch panel display bargraph using DEFINE_CONNECT_LEVEL:

```
LEVEL_EVENT[dvDevice,1]
{
  // LEVEL.VALUE holds the new level value
}
CREATE_LEVEL dvDevice,1,nMyVariable // nMyVariable will hold the
// latest value of the level
DEFINE_CONNECT_LEVEL(dvDevice,1,dvTp,1)
```

Levels used for functions can be set by calling SEND_LEVEL or by connecting to a touch panel active bargraph using DEFINE_CONNECT_LEVEL:

```
SEND_LEVEL dvDevice,1,nNewLevelValue
DEFINE_CONNECT_LEVEL(dvDevice,1,dvTp,1)
```

Commands

Commands in SNAPI are sent like commands to other devices, using the SEND_COMMAND keyword:

```
SEND_COMAND dvDevice,'?VERSION'
```

Commands used to query for the status of a property start with a "?". Query commands cause the module to respond with a response command. Note that this response is a command, not a string and can be captured in a DATA_EVENT in the COMMAND sub-section:

```
DATA_EVENT[dvDevice]
{
  COMMAND:
  {
    // DATA.TEXT holds the response to a query command
  }
}
```

Standard NetLinx API (SNAPI): Components/Listeners

Audio Tuner Device

Component				
Name: Audio Tuner Device				
Interface: IAudioTunerDeviceComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				
Listener				
Name: Audio Tuner Device Listener				
Interface: IAudioTunerDeviceComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				

Digital Satellite System

Component				
Name: Digital Satellite System				
Interface: IDigitalSatelliteSystemComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				
Listener				
Name: Digital Satellite System Listener				
Interface: IDigitalSatelliteSystemComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				

Display

Component				
Name: Display				
Interface: IDisplayComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
adjustBrightness(1)	148			Momentary Function Channel: Brightness is incremented when channel is activated
adjustBrightness(-1)	149			Momentary Function Channel: Brightness is decremented when channel is activated
adjustColor(1)	150			Momentary Function Channel: Color is incremented when channel is activated
adjustColor(-1)	151			Momentary Function Channel: Color is decremented when channel is activated
adjustContrast(1)	152			Momentary Function Channel: Contrast is incremented when channel is activated
adjustContrast(-1)	153			Momentary Function Channel: Contrast is decremented when channel is activated
adjustSharpness(1)	154			Momentary Function Channel: Sharpness is incremented when channel is activated
adjustSharpness(-1)	155			Momentary Function Channel: Sharpness is decremented when channel is activated
adjustTint(1)	156			Momentary Function Channel: Tint is incremented when channel is activated
adjustTint(-1)	157			Momentary Function Channel: Tint is decremented when channel is activated
cycleAspectRatio()	142			Momentary Function Channel: Cycle aspect ratios when channel is activated
cycleFreeze()	213			Momentary Function Channel: Cycle freeze when channel is activated
cyclePictureMute()	210			Momentary Function Channel: Cycle picture mute when channel is activated
cyclePIP()	194			Momentary Function Channel: Cycle PIP when channel is activated
cyclePIPPosition()	191			Momentary Function Channel: Cycle PIP positions when channel is activated
getActiveWindow()			?ACTIVEWINDOW	Query active window, responds with ACTIVEWINDOW-<window>, where <window> is LEFT,RIGHT,MAIN,SUB
getAspectRatio()			?ASPECT	Query aspect ratio, responds with ASPECT-<ratio>, where <ratio> is ANAMORPHIC,WIDESCREEN,NORMAL
getVideoType()			?VIDEOTYPE	Query video type, responds with VIDEOTYPE-<type>, where <type> is AUTO,NTSC,PAL,SECAM
setActiveWindow(mss)			ACTIVEWINDOW-<mss>	Set active window, where <mss> is LEFT,RIGHT,MAIN,SUB
setAspectRatio(aspectRatio)			ASPECT-<aspectRatio>	Set aspect ratio, where <aspectRatio> is ANAMORPHIC,WIDESCREEN,NORMAL
setBrightness(level)		10		Set brightness level, range is 0-255
setColor(level)		11		Set color level, range is 0-255
setContrast(level)		12		Set contrast level, range is 0-255
setFreezeOn(state)	214			Discrete Function Channel: Freeze is on while channel is active
setPictureMuteOn(state)	211			Discrete Function Channel: Picture Mute is on while channel is active
setPIPOn(state)	195			Discrete Function Channel: PIP is on while channel is active
setSharpness(level)		13		Set sharpness level, range is 0-255
setTint(level)		14		Set tint level, range is 0-255

Component Functions (Cont.):				
setVideoType(vt)			VIDEOTYPE-<vt>	Set video type, where <vt> is AUTO,NTSC,PAL,SECAM
swapPIP()	193			Momentary Function Channel: Swap PIP when channel is activated

Listener				
Name: Display Listener				
Interface: IDisplayComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processActiveWindowEvent			ACTIVEWINDOW-<window>	Active window changed, where <window> is LEFT,RIGHT,MAIN,SUB
processAspectRatioEvent			ASPECT-<ratio>	Aspect ratio changed, where <ratio> is ANAMORPHIC,WIDESCREEN,NORMAL
processBrightnessEvent		10		Brightness changed, range is 0-255
processColorEvent		11		Color changed, range is 0-255
processContrastEvent		12		Contrast changed, range is 0-255
processFreezeEvent	214			Feedback Channel: Freeze is on if channel is on
processPictureMuteEvent	211			Feedback Channel: Picture is muted if channel is on
processPIPEvent	195			Feedback Channel: PIP is on if channel is on
processSharpnessEvent		13		Sharpness changed, range is 0-255
processTintEvent		14		Tint changed, range is 0-255
processVideoTypeEvent			VIDEOTYPE-<type>	Video type changed, where <type> is AUTO,NTSC,PAL,SECAM

Gain

Component				
Name: Gain				
Interface: IGainComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
cycleGainMute()	142			Momentary Function Channel: Cycle gain mute when channel is activated
setGain(level)		5		Set gain, range is 0-255
setGainMuteOn(state)	143			Discrete Function Channel: Gain mute is on while channel is active
setGainRamp(UP)	140			Discrete Function Channel: Gain is ramped up while channel is active
setGainRamp(DOWN)	141			Discrete Function Channel: Gain is ramped down while channel is active
Listener				
Name: Gain Listener				
Interface: IGainComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processGainEvent		5		Gain changed, range is 0-255
processGainMuteEvent	143			Feedback Channel: Gain is muted if channel is on
processGainRampEvent	140			Feedback Channel: Gain is ramping up while channel is on
processGainRampEvent	141			Feedback Channel: Gain is ramping down while channel is on

HVAC

Component				
Name: HVAC				
Interface: IHVACComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
addHVACComponent(index,hvacAddress)			HVACADD-<index>,<hvacAddress>	Add a thermostat at a given index, where <index> is 1-x and <address> is a thermostat address and x is the maximum supported thermostat index (see specific module documentation).
cycleFanState()	213			Momentary Function Channel: Cycle the fan state when channel is activated
cycleHVACState()	218			Momentary Function Channel: Cycle the HVAC state when channel is activated
decrementCoolSetpoint()	141			Momentary Function Channel: Decrement the cool setpoint when channel is activated
decrementDehumidifySetpoint()	151			Momentary Function Channel: Decrement the dehumidify setpoint when channel is activated
decrementHeatSetpoint()	144			Momentary Function Channel: Decrement the heat setpoint when channel is activated
decrementHumidifySetpoint()	149			Momentary Function Channel: Decrement the humidify setpoint when channel is activated
getHumidifyState()			?HVACHUMID	Query for the humidify state, responds with HVACHUMID-<state> where <state> is OFF,HUMIDIFY,DEHUMIDIFY,AUTO
getHumidifyStatus()			?HVACHUMIDSTATUS	Query for the humidify status, responds with HVACHUMIDSTATUS-<status> where <status> is OFF,HUMIDIFY,DEHUMIDIFY
getHVACComponentAddress(index)			?HVACADDR-<index>	Query for the address of the thermostat at index <index>, responds with HVACADDR-<index>,<hvacAddress>
getHVACComponentIndex(hvacAddress)			?HVACIDX-<hvacAddress>	Query for the index of the thermostat with address <hvacAddress>, responds with HVACADDR-<index>,<hvacAddress>
getTemperatureScale()			?HVACSCALE	Query for the temperature scale, responds with HVACSCALE-<scale> where <scale> is FAHRENHEIT,CELSIUS
incrementCoolSetpoint()	140			Momentary Function Channel: Increment the cool setpoint when channel is activated
incrementDehumidifySetpoint()	150			Momentary Function Channel: Increment the dehumidify setpoint when channel is activated
incrementHeatSetpoint()	143			Momentary Function Channel: Increment the heat setpoint when channel is activated
incrementHumidifySetpoint()	148			Momentary Function Channel: Increment the humidify setpoint when channel is activated
removeHVACComponent(index)			HVACREMOVEIDX-<index>	Remove the thermostat at index <index>, where <index> is 1-x and x is the maximum supported thermostat index (see specific module documentation).
removeHVACComponent(hvacAddress)			HVACREMOVEADDR-<hvacAddress>	Remove the thermostat with address <hvacAddress>, where <hvacAddress> is a thermostat address
setCoolSetpoint(setpoint)		31		Set the cool setpoint, value is in degrees C or F depending on temperature scale
setDehumidifySetpoint(setpoint)		38		Set the dehumidify setpoint, value is in percent
setFanState(AUTO)	215			Discrete Function Channel: Fan state is auto while channel is active
setFanState(ON)	214			Discrete Function Channel: Fan state is on while channel is active
setHeatSetpoint(setpoint)		32		Set the heat setpoint, value is in degrees C or F depending on temperature scale

Component Functions (Cont.):				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
setHoldOn(state)	211			Discrete Function Channel: Thermostat hold mode is on while channel is active
setHumidifySetpoint(setpoint)		37		Set the humidify setpoint, value is in percent
setHumidifyState(hs)			HVACHUMID-<hs>	Set the humidify state, where <hs> is OFF,HUMIDIFY,DEHUMIDIFY,AUTO
setHVACState(OFF)	222			Discrete Function Channel: HVAC state is off while channel is active
setHVACState(HEAT)	221			Discrete Function Channel: HVAC state is heat while channel is active
setHVACState(EMERGENCY_HEAT)	223			Discrete Function Channel: HVAC state is emergency heat while channel is active
setHVACState(COOL)	220			Discrete Function Channel: HVAC state is cool while channel is active
setHVACState(AUTO)	219			Discrete Function Channel: HVAC state is auto while channel is active
setLockOn(state)	212			Discrete Function Channel: Thermostat is locked while channel is active
setTemperatureScale(ts)			HVACSCALE-<ts>	Set the temperature scale, where <ts> is FAHRENHEIT,CELSIUS
Listener				
Name: HVAC Listener				
Interface: IHVACComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processCoolSetpointEvent		31		Cool setpoint changed, value is in degrees C or F depending on temperature scale
processDehumidifySetpointEvent		38		Dehumidify setpoint changed, value is in percent
processFanStateEvent	215			Feedback Channel: Fan state is Auto while channel is on
processFanStateEvent	214			Feedback Channel: Fan state is on while channel is on
processFanStatusEvent	216			Feedback Channel: Fan status is on while channel is on
processHeatSetpointEvent		32		Heat setpoint changed, value is in degrees C or F depending on temperature scale
processHoldEvent	211			Feedback Channel: Thermostat hold mode is on while channel is on
processHumidifySetpointEvent		37		Humidify setpoint changed, value is in percent
processHumidifyStateEvent			HVACHUMID-<state>	Humidify state changed, <state> is OFF,HUMIDIFY,DEHUMIDIFY,AUTO
processHumidifyStatusEvent			HVACHUMIDSTATUS-<status>	Humidify status changed, <status> is OFF,HUMIDIFY,DEHUMIDIFY
processHVACStateEvent	222			Feedback Channel: HVAC state change (see chart below)
processHVACStateEvent	221			Feedback Channel: HVAC state change (see chart below)
processHVACStateEvent	223			Feedback Channel: HVAC state change (see chart below)
processHVACStateEvent	220			Feedback Channel: HVAC state change (see chart below)
processHVACStateEvent	219			Feedback Channel: HVAC state change (see chart below)
processHVACStatusEvent	225			Feedback Channel: HVAC status change (see chart below)
processHVACStatusEvent	227			Feedback Channel: HVAC status change (see chart below)

Listener Functions (Cont.):				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processHVACStatusEvent	224			Feedback Channel: HVAC status change (see chart below)
processHVACStatusEvent	226			Feedback Channel: HVAC status change (see chart below)
processIndoorHumidityEvent		35		Indoor humidity changed, value is in percent
processIndoorTemperatureEvent		33		Indoor temperature changed, value is in degrees C or F depending on temperature scale
processLockEvent	212			Feedback Channel: Thermostat is locked while channel is on
processOutdoorHumidityEvent		36		Outdoor humidity changed, value is in percent
processOutdoorTemperatureEvent		34		Outdoor temperature changed, value is in degrees C or F depending on temperature scale
processTemperatureScaleEvent			HVACSCALE-<scale>	HVAC scale changed, <scale> is FAHRENHEIT,CELSIUS

processFanStateEvent

processFanStateEvent		
State	**Channel 214**	**Channel 215**
AUTO	OFF	ON
ON	ON	OFF

processFanStatusEvent

processFanStatusEvent	
State	**Channel 216**
ON	ON
OFF	OFF

processHVACStateEvent

processHVACStateEvent					
State	**Channel 219**	**Channel 220**	**Channel 221**	**Channel 222**	**Channel 223**
OFF	OFF	OFF	OFF	ON	OFF
HEAT	OFF	OFF	ON	OFF	OFF
EMERGENCY_HEAT	OFF	OFF	OFF	OFF	ON
COOL	OFF	ON	OFF	OFF	OFF
AUTO	ON	OFF	OFF	OFF	OFF

processHVACStatusEvent

processHVACStatusEvent				
State	**Channel 224**	**Channel 225**	**Channel 226**	**Channel 227**
HEAT	OFF	ON	OFF	OFF
EMERGENCY_HEAT	OFF	OFF	OFF	ON
COOL	ON	OFF	OFF	OFF
COOL_2	OFF	OFF	ON	OFF
OFF	OFF	OFF	OFF	OFF

Lamp

Component				
Name: Lamp				
Interface: ILampComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
cycleLampPower()	9			Momentary Function Channel: Cycle lamp power when channel is activated
getCoolDownTime()			?COOLDOWN	Query for cool down time, responds with COOLDOWN-<time> where <time> is in seconds
getLampTime()			?LAMPTIME	Query for lamp time, responds with LAMPTIME-<time> where <time> is in hours
getWarmUpTime()			?WARMUP	Query for warm up time, responds with WARMUP-<time> where <time> is in seconds
setCoolDownTime(secs)			COOLDOWN-<time>	Set cool down time where <time> is in seconds
setCounterNotificationOn(state)			COUNTERNOTIFY-<state>	Turn counter notification on or off, where <state> is 1 or 0
setLampPower(ps)	255			Discrete Function Channel: Lamp power is on while channel is active
setLampPower(OFF)	28			Momentary Function Channel: Lamp power is turned off when channel is activated
setLampPower(ON)	27			Momentary Function Channel: Lamp power is turned on when channel is activated
setLampTime(hours)			LAMPTIME-<time>	Set lamp time where <time> is in hours
setWarmUpTime(secs)			WARMUP-<time>	Set warm up time where <time> is in seconds

Listener				
Name: Lamp Listener				
Interface: ILampComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processCoolDownCounterEvent			COOLING-<time>	Cool down counter time, <time> is seconds remaining
processLampPowerEvent	255			Feedback Channel: Channel for Warming/Cooling. Indicates Lamp is warming/cooling and cannot accept commands. (see chart below)
processLampPowerEvent	253			Feedback Channel: Channel for Warming/Cooling. Indicates Lamp is warming/cooling and cannot accept commands. (see chart below)
processLampTimeEvent			LAMPTIME-<time>	Lamp time, <time> is elapsed hours
processWarmUpCounterEvent			WARMING-<time>	Warm up counter time, <time> is seconds remaining

processLampPowerEvent

processLampPowerEvent		
State	**Channel 255**	**Channel 253**
OFF	OFF	OFF
ON	ON	OFF
WARM	ON	ON
COOL	OFF	ON

Menu

Component				
Name: Menu				
Interface: IMenuComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
moveMenuCursor(UP)	45			Momentary Function Channel: Move menu cursor UP
moveMenuCursor(DOWN)	46			Momentary Function Channel: Move menu cursor DOWN
moveMenuCursor(LEFT)	47			Momentary Function Channel: Move menu cursor LEFT
moveMenuCursor(RIGHT)	48			Momentary Function Channel: Move menu cursor RIGHT
moveMenuCursor(UP_LEFT)	51			Momentary Function Channel: Move menu cursor UP_LEFT
moveMenuCursor(UP_RIGHT)	52			Momentary Function Channel: Move menu cursor UP_RIGHT
moveMenuCursor(DOWN_LEFT)	53			Momentary Function Channel: Move menu cursor DOWN_LEFT
moveMenuCursor(DOWN_RIGHT)	54			Momentary Function Channel: Move menu cursor DOWN_RIGHT
pressMenuButton(A)			ALPHA-A	Press menu button A
pressMenuButton(ADVANCE)	83			Momentary Function Channel: Press menu button ADVANCE
pressMenuButton(ASTERISK)	91			Momentary Function Channel: Press menu button ASTERISK
pressMenuButton(AUDIO)	118			Momentary Function Channel: Press menu button AUDIO
pressMenuButton(B)			ALPHA-B	Press menu button B
pressMenuButton(BACK)	81			Momentary Function Channel: Press menu button BACK
pressMenuButton(C)			ALPHA-C	Press menu button C
pressMenuButton(CANCEL)	43			Momentary Function Channel: Press menu button CANCEL
pressMenuButton(CLEAR)	80			Momentary Function Channel: Press menu button CLEAR
pressMenuButton(COMMA)	94			Momentary Function Channel: Press menu button COMMA
pressMenuButton(D)			ALPHA-D	Press menu button D
pressMenuButton(DASH)	90			Momentary Function Channel: Press menu button DASH
pressMenuButton(DIGIT_0)	10			Momentary Function Channel: Press menu button DIGIT_0
pressMenuButton(DIGIT_1)	11			Momentary Function Channel: Press menu button DIGIT_1
pressMenuButton(DIGIT_2)	12			Momentary Function Channel: Press menu button DIGIT_2
pressMenuButton(DIGIT_3)	13			Momentary Function Channel: Press menu button DIGIT_3
pressMenuButton(DIGIT_4)	14			Momentary Function Channel: Press menu button DIGIT_4
pressMenuButton(DIGIT_5)	15			Momentary Function Channel: Press menu button DIGIT_5

Component Functions (Cont.):				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
pressMenuButton(DIGIT_6)	16			Momentary Function Channel: Press menu button DIGIT_6
pressMenuButton(DIGIT_7)	17			Momentary Function Channel: Press menu button DIGIT_7
pressMenuButton(DIGIT_8)	18			Momentary Function Channel: Press menu button DIGIT_8
pressMenuButton(DIGIT_9)	19			Momentary Function Channel: Press menu button DIGIT_9
pressMenuButton(DIMMER)	84			Momentary Function Channel: Press menu button DIMMER
pressMenuButton(DISPLAY)	99			Momentary Function Channel: Press menu button DISPLAY
pressMenuButton(DOT)	92			Momentary Function Channel: Press menu button DOT
pressMenuButton(E)			ALPHA-E	Press menu button E
pressMenuButton(ENTER)	21			Momentary Function Channel: Press menu button ENTER
pressMenuButton(EXIT)	50			Momentary Function Channel: Press menu button EXIT
pressMenuButton(F)			ALPHA-F	Press menu button F
pressMenuButton(FAVORITES)	102			Momentary Function Channel: Press menu button FAVORITES
pressMenuButton(FLASH)	203			Momentary Function Channel: Press menu button FLASH
pressMenuButton(FORWARD)	82			Momentary Function Channel: Press menu button FORWARD
pressMenuButton(G)			ALPHA-G	Press menu button G
pressMenuButton(GUIDE)	105			Momentary Function Channel: Press menu button GUIDE
pressMenuButton(H)			ALPHA-H	Press menu button H
pressMenuButton(HELP)	113			Momentary Function Channel: Press menu button HELP
pressMenuButton(HOLD)	85			Momentary Function Channel: Press menu button HOLD
pressMenuButton(I)			ALPHA-I	Press menu button I
pressMenuButton(INFO)	101			Momentary Function Channel: Press menu button INFO
pressMenuButton(INSTANT_REPLAY)	218			Momentary Function Channel: Press menu button INSTANT_REPLAY
pressMenuButton(J)			ALPHA-J	Press menu button J
pressMenuButton(K)			ALPHA-K	Press menu button K
pressMenuButton(L)			ALPHA-L	Press menu button L
pressMenuButton(LEFT_PAREN)	87			Momentary Function Channel: Press menu button LEFT_PAREN
pressMenuButton(LIST)	86			Momentary Function Channel: Press menu button LIST
pressMenuButton(LIVE_TV)	62			Momentary Function Channel: Press menu button LIVE_TV
pressMenuButton(M)			ALPHA-M	Press menu button M
pressMenuButton(MENU)	44			Momentary Function Channel: Press menu button MENU
pressMenuButton(N)			ALPHA-N	Press menu button N
pressMenuButton(O)			ALPHA-O	Press menu button O
pressMenuButton(P)			ALPHA-P	Press menu button P

Component Functions (Cont.):				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
pressMenuButton(PAGE_DOWN)	107			Momentary Function Channel: Press menu button PAGE_DOWN
pressMenuButton(PAGE_UP)	106			Momentary Function Channel: Press menu button PAGE_UP
pressMenuButton(PLUS_10)	20			Momentary Function Channel: Press menu button PLUS_10
pressMenuButton(PLUS_100)	97			Momentary Function Channel: Press menu button PLUS_100
pressMenuButton(PLUS_1000)	98			Momentary Function Channel: Press menu button PLUS_1000
pressMenuButton(POUND)	93			Momentary Function Channel: Press menu button POUND
pressMenuButton(Q)			ALPHA-Q	Press menu button Q
pressMenuButton(R)			ALPHA-R	Press menu button R
pressMenuButton(RECORD_SPEED)	63			Momentary Function Channel: Press menu button RECORD_SPEED
pressMenuButton(RESET)	215			Momentary Function Channel: Press menu button RESET
pressMenuButton(RETURN)	104			Momentary Function Channel: Press menu button RETURN
pressMenuButton(RIGHT_PAREN)	88			Momentary Function Channel: Press menu button RIGHT_PAREN
pressMenuButton(S)			ALPHA-S	Press menu button S
pressMenuButton(SUBTITLE)	100			Momentary Function Channel: Press menu button SUBTITLE
pressMenuButton(T)			ALPHA-T	Press menu button T
pressMenuButton(THUMBS_DOWN)	58			Momentary Function Channel: Press menu button THUMBS_DOWN
pressMenuButton(THUMBS_UP)	59			Momentary Function Channel: Press menu button THUMBS_UP
pressMenuButton(TV_VCR)	29			Momentary Function Channel: Press menu button TV_VCR
pressMenuButton(U)			ALPHA-U	Press menu button U
pressMenuButton(UNDER_SCORE)	89			Momentary Function Channel: Press menu button UNDER_SCORE
pressMenuButton(V)			ALPHA-V	Press menu button V
pressMenuButton(W)			ALPHA-W	Press menu button W
pressMenuButton(X)			ALPHA-X	Press menu button X
pressMenuButton(Y)			ALPHA-Y	Press menu button Y
pressMenuButton(Z)			ALPHA-Z	Press menu button Z
selectMenuItem()	49			Momentary Function Channel: Select current menu item

Listener				
Name: Menu Listener				
Interface: IMenuComponentListener				
Listener Functions				
Name	**Channel**	**Level**	**Command**	**Notes**
Intentionally left blank				

Module

Component				
Name: Module				
Interface: IModuleComponent				
Component Functions:				
Name	**Channel**	**Level**	**Command**	**Notes**
getDebugState()			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getProperty(key)			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
getVersion()			?VERSION	Query for the module version, responds with VERSION-<version>
passThru(buffer)			PASSTHRU-<buffer>	Send a message directly to the device
reinitialize()			REINIT	Reinitialize communication with the device
setDebugState(state)			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
setDeviceDateTime(date)			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
setProperty(key,value)			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
Listener				
Name: Module Listener				
Interface: IModuleComponentListener				
Listener Functions				
Name	**Channel**	**Level**	**Command**	**Notes**
processDataInitializedEvent	252			Feedback Channel: Module data is synchronized with device while channel is on
processDebugEvent			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDeviceOnLineEvent	251			Feedback Channel: Communication is established with device while channel is on

Monitor

Component				
Name: Monitor				
Interface: IMonitorComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				
Listener				
Name: Monitor Listener				
Interface: IMonitorComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				

Power

Component				
Name: Power				
Interface: IPowerComponent				
Component Functions				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
cyclePower()	9			Momentary Function Channel: Cycle power when channel is activated
setPower(ps)	255			Discrete Function Channel: Power is on while channel is active
setPower(OFF)	28			Momentary Function Channel: Power is turned off when channel is activated
setPower(ON)	27			Momentary Function Channel: Power is turned on when channel is activated
Listener				
Name: Power Listener				
Interface: IPowerComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processPowerEvent	255			Feedback Channel: Power state changed, power is on while channel is on

Pre Amp

Component				
Name: Pre Amp				
Interface: IPreAmpComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
adjustBalance(1)	164			Momentary Function Channel: Balance is incremented when channel is activated
adjustBalance(-1)	165			Momentary Function Channel: Balance is decremented when channel is activated
adjustBass(1)	166			Momentary Function Channel: Bass is incremented when channel is activated
adjustBass(-1)	167			Momentary Function Channel: Bass is decremented when channel is activated
adjustTreble(1)	168			Momentary Function Channel: Treble is incremented when channel is activated
adjustTreble(-1)	169			Momentary Function Channel: Treble is decremented when channel is activated
cycleLoudness()	206			Momentary Function Channel: Cycle loudness when channel is activated
getSurroundMode()			?SURROUND	Query surround mode, responds with SURROUND-<mode>, where <mode> is MOVIE,MUSIC,OFF
nextSurroundMode()	170			Momentary Function Channel: Next surround mode is selected when channel is activated
previousSurroundMode()	171			Momentary Function Channel: Previous surround mode is selected when channel is activated
setBalance(balance)		2		Set balance level, range is 0-255, 0 is left and 255 is right
setBass(bass)		3		Set bass level, range is 0-255
setLoudnessOn(state)	207			Discrete Function Channel: Loudness is on while channel is active
setSurroundMode(sm)			SURROUND-<mode>	Set surround mode, where <mode> is MOVIE,MUSIC,OFF
setTreble(treble)		4		Set treble level, range is 0-255

Listener				
Name: Pre Amp Listener				
Interface: IPreAmpComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processBalanceEvent		2		Balance changed, range is 0-255, 0 is left and 255 is right
processBassEvent		3		Bass changed, range is 0-255
processLoudnessEvent	207			Feedback Channel: Loudness is on if channel is on
processSurroundModeEvent			SURROUND-<mode>	Surround mode changed, where <mode> is MUSIC,MOVIE,OFF
processTrebleEvent		4		Treble changed, range is 0-255

PreAmp Surround Sound Processor

Component				
Name: PreAmp Surround Sound Processor				
Interface: IPreAmpSurroundSoundProcessorComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				
Listener				
Name: PreAmp Surround Sound Processor Listener				
Interface: IPreAmpSurroundSoundProcessorComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				

Receiver

Component				
Name: Receiver				
Interface: IReceiverComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				
Listener				
Name: Receiver Listener				
Interface: IReceiverComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				

Settop Box

Component				
Name: Settop Box				
Interface: ISettopBoxComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
cycleABSwitch()	42			Momentary Function Channel: Cycle AB switch when channel is activated
setBSwitchOn(state)	212			Discrete Function Channel: AB switch set to B when channel is
Listener				
Name: Settop Box Listener				
Interface: ISettopBoxComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processBSwitchEvent	212			Feedback Channel: AB switch set to B when channel is on

Source Select

Component				
Name: Source Select				
Interface: ISourceSelectComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
getInputSource()			?INPUT	Query current input, responds with INPUT-<sourceSelect>,<inputNumber> where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,SDI,VGA,AUDIO,AUXILIARY,CABLE, CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO, SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setInputSource(sourceSelect,inputNumber)			INPUT-<sourceSelect>,<inputNumber>	Set the current input, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT, DVI,SDI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE, MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setInputSource(TAPE,1)	34			Momentary Function Channel: Selects input TAPE,1 when channel is activated
setInputSource(TAPE,2)	35			Momentary Function Channel: Selects input TAPE,2 when channel is activated
setInputSource(VIDEO,1)	31			Momentary Function Channel: Selects input VIDEO,1 when channel is activated
setInputSource(VIDEO,2)	32			Momentary Function Channel: Selects input VIDEO,2 when channel is activated
setInputSource(VIDEO,3)	33			Momentary Function Channel: Selects input VIDEO,3 when channel is activated
setInputSource(AUXILIARY,1)	39			Momentary Function Channel: Selects input AUXILIARY,1 when channel is activated
setInputSource(CD,1)	36			Momentary Function Channel: Selects input CD,1 when channel is activated
setInputSource(PHONO,1)	38			Momentary Function Channel: Selects input PHONO,1 when channel is activated
setInputSource(TUNER,1)	37			Momentary Function Channel: Selects input TUNER,1 when channel is activated
setInputSource(TV,1)	30			Momentary Function Channel: Selects input TV,1 when channel is activated
Listener				
Name: Source Select Listener				
Interface: ISourceSelectComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processInputSourceEvent			INPUT-<sourceSelect>,<inputNumber>	Current input has changed, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,SDI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select

Switcher

Component				
Name: Switcher				
Interface: ISwitcherComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
getInput(sl,output)			?INPUT-sl,output	Query for the input connected to an output, respond with SWITCH-<sl>,<input>,<output>,<output>… where <sl> is ALL, VIDEO, or AUDIO and <input> is 0 if there is no connection.
getOutput(sl,input)			?OUTPUT-sl,input	Query for the outputs connected to an input, respond with SWITCH-<sl>,<input>,<output>,<output>… where <sl> is ALL, VIDEO, or AUDIO and <input> is 0 if there is no connection.
getSwitcherPreset()			?SWITCHPRESET	Query for switcher preset, responds with SWITCHPRESET-<preset>
setSwitcherPreset(preset)			SWITCHPRESET-<preset>	Set switcher preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
switchInputToOutput(sl,input,output[])			CL<sl>I<input>O<output,output…>	Switch <input> to one or more <output>s where <sl> is ALL, VIDEO, or AUDIO. Use <input> 0 for disconnect.
switchInputToOutput(ALL,input,output[])			CI<input>O<output,output…>	Switch <input> to one or more <output>s for switcher level All. Use <input> 0 for disconnect.
switchInputToOutput(VIDEO,input,output[])			VI<input>O<output,output,…>	Switch <input> to one or more <output>s for switcher level Video. Use <input> 0 for disconnect.
switchInputToOutput(AUDIO,input,output[])			AI<input>O<output,output,…>	Switch <input> to one or more <output>s for switcher level Audio. Use <input> 0 for disconnect.
Listener				
Name: Switcher Listener				
Interface: ISwitcherComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processSwitcherPresetEvent			PRESET-<preset>	Switcher preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processSwitchEvent			SWITCH-L<sl>I<input>O<output,output,...>	Switch connections changed, where <sl> is ALL, VIDEO, or AUDIO and <input> is 0 if there is no connection.

Tuner Station

Component				
Name: Tuner Station				
Interface: ITunerStationComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
cycleBand()	40			Momentary Function Channel: Cycle tuner band when channel is activated
cycleDisplayInfo()	234			Momentary Function Channel: Cycle display info when channel is activated
cycleStationPresetGroup()	224			Momentary Function Channel: Cycle station preset group/bank when channel is activated
decrementStation()	226			Momentary Function Channel: Station is decremented when channel is activated
getBand()			?BAND	Query for band, responds with BAND-<tb> where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
getStation()			?XCH	Query for station, responds with XCH-<station> where <station> is a station string such as "501", "103.7" or "5.1
getStationPreset()			?TUNERPRESET	Query for tuner preset, responds with TUNERPRESET-<preset>
gotoPreviousStation()	235			Momentary Function Channel: Previous station is selected when channel is activated
incrementStation()	225			Momentary Function Channel: Station is incremented when channel is activated
nextStationPreset()	22			Momentary Function Channel: Next station preset is selected when channel is activated
previousStationPreset()	23			Momentary Function Channel: Previous station preset is selected when channel is activated
scanStation(FORWARD)	227			Momentary Function Channel: Scans for next station while channel is activate.
scanStation(BACKWARD)	228			Momentary Function Channel: Scans for previous station while channel is activate
seekStation(FORWARD)	229			Momentary Function Channel: Seeks for next station while channel is activate
seekStation(BACKWARD)	230			Momentary Function Channel: Seeks for previous station while channel is activate
setBand(tb)			BAND-<tb>	Set band, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
setStation(station)			XCH-<station>	Set station, where <station> is a station string such as "501", "103.7" or "5.1
setStationPreset(preset)			TUNERPRESET-<preset>	Set tuner preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
Listener				
Name: Tuner Station Listener				
Interface: ITunerStationComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processBandEvent			BAND-<band>	Band changed, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
processStationEvent			XCH-<station>	Station changed, where <station> is a station string such as "501", "103.7" or "5.1"
processStationPresetEvent			TUNERPRESET-<int>	Tuner preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).

TV

Component				
Name: TV				
Interface: ITVComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				
Listener				
Name: TV Listener				
Interface: ITVComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
Intentionally left blank.				

Video Projector

Component				
Name: Video Projector				
Interface: IVideoProjectorComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
getProjectorPreset()			?VPROJPRESET	Query for projector preset, responds with VPROJPRESET-<preset>
setProjectorPreset(preset)			VPROJPRESET-<preset>	Set projector preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
Listener				
Name: Video Projector Listener				
Interface: IVideoProjectorComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
ProcessProjectorPresetEvent			VPROJPRESET-<int>	Projector preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).

Volume

Component				
Name: Volume				
Interface: IVolumeComponent				
Component Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
cycleVolumeMute()	26			Momentary Function Channel: Cycle volume mute when channel is activated
getVolumePreset()			?VOLPRESET	Query for volume preset, responds with VOLPRESET-<preset>
setVolume(level)		1		Set volume, range is 0-255
setVolumeMuteOn(state)	199			Discrete Function Channel: Volume mute is on while channel is active
setVolumePreset(preset)			VOLPRESET-<preset>	Set volume preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolumeRamp(UP)	24			Discrete Function Channel: Volume is ramped up while channel is active
setVolumeRamp(DOWN)	25			Discrete Function Channel: Volume is ramped down while channel is active
Listener				
Name: Volume Listener				
Interface: IVolumeComponentListener				
Listener Functions:				
Name:	**Channel:**	**Level:**	**Command:**	**Notes:**
processVolumeEvent		1		Volume changed, range is 0-255
processVolumeMuteEvent	199			Feedback Channel: Volume is muted if channel is on
processVolumePresetEvent			VOLPRESET-<preset>	Volume preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processVolumeRampEvent	24			Feedback Channel: Volume is ramping up while channel is on
processVolumeRampEvent	25			Feedback Channel: Volume is ramping down while channel is on

Standard NetLinx API (SNAPI): Devices

Audio Tuner Device

IAudioTunerDeviceComponent
IAudioTunerDeviceComponentListener
IModuleComponent
IModuleComponentListener
IPowerComponent
IPowerComponentListener
ITunerStationComponent
ITunerStationComponentListener

Name: Audio Tuner Device					
Interface: IAudioTunerDevice					
Audio Tuner Device Functions					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
setPower(ps)	IPowerComponent	255			Discrete Function Channel: Power is on while channel is active

Audio Tuner Device Functions (Cont.)

Name	Component	Channel	Level	Command	Notes
setPower(ON)	IPowerComponent	27			Momentary Function Channel: Power is turned off when channel is activated
setPower(OFF)	IPowerComponent	28			Momentary Function Channel: Power is turned on when channel is activated
cyclePower()	IPowerComponent	9			Momentary Function Channel: Cycle power when channel is activated
processPowerEvent(PowerState)	IPowerComponentListener	255			Feedback Channel: Power state changed, power is on while channel is on
setBand(tb)	ITunerStationComponent			BAND-<tb>	Set band, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
setStation(station)	ITunerStationComponent			XCH-<station>	Set station, where <station> is a station string such as "501", "103.7" or "5.1"
setStationPreset(preset)	ITunerStationComponent			TUNERPRESET-<preset>	Set tuner preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
scanStation(FORWARD)	ITunerStationComponent	227			Momentary Function Channel: Scans for next station while channel is activate.
seekStation(FORWARD)	ITunerStationComponent	229			Momentary Function Channel: Seeks for next station while channel is activate
scanStation(BACKWARD)	ITunerStationComponent	228			Momentary Function Channel: Scans for previous station while channel is activate
seekStation(BACKWARD)	ITunerStationComponent	230			Momentary Function Channel: Seeks for previous station while channel is activate
cycleBand()	ITunerStationComponent	40			Momentary Function Channel: Cycle tuner band when channel is activated
cycleDisplayInfo()	ITunerStationComponent	234			Momentary Function Channel: Cycle display info when channel is activated
cycleStationPresetGroup()	ITunerStationComponent	224			Momentary Function Channel: Cycle station preset group/bank when channel is activated
decrementStation()	ITunerStationComponent	226			Momentary Function Channel: Station is decremented when channel is activated
getBand()	ITunerStationComponent			?BAND	Query for band, responds with BAND-<tb> where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
getStation()	ITunerStationComponent			?XCH	Query for station, responds with XCH-<station> where <station> is a station string such as "501", "103.7" or "5.1"
getStationPreset()	ITunerStationComponent			?TUNERPRESET	Query for tuner preset, responds with TUNERPRESET-<preset>
gotoPreviousStation()	ITunerStationComponent	235			Momentary Function Channel: Previous station is selected when channel is activated

Audio Tuner Device Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
incrementStation()	ITunerStationComponent	225			Momentary Function Channel: Station is incremented when channel is activated
nextStationPreset()	ITunerStationComponent	22			Momentary Function Channel: Next station preset is selected when channel is activated
previousStationPreset()	ITunerStationComponent	23			Momentary Function Channel: Previous station preset is selected when channel is activated
processBandEvent(TunerBand)	ITunerStationComponentListener			BAND-<band>	Band changed, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
processStationEvent(String)	ITunerStationComponentListener			XCH-<station>	Station changed, where <station> is a station string such as "501", "103.7" or "5.1"
processStationPresetEvent(int)	ITunerStationComponentListener			TUNERPRESET-<int>	Tuner preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).

Digital Satellite System

IDigitalSatelliteSystemComponent
IDigitalSatelliteSystemComponentListener
IMenuComponent
IModuleComponent
IModuleComponentListener
IPowerComponent
IPowerComponentListener
ITunerStationComponent
ITunerStationComponentListener

Name: Digital Satellite System					
Interface: IDigitalSatelliteSystem					
Digital Satellite System Functions					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(ZOOM)	IMenuComponent	116			Momentary Function Channel: Press menu button ZOOM
pressMenuButton(Z)	IMenuComponent			ALPHA-Z	Press menu button Z
pressMenuButton(Y)	IMenuComponent			ALPHA-Y	Press menu button Y
pressMenuButton(X)	IMenuComponent			ALPHA-X	Press menu button X
pressMenuButton(W)	IMenuComponent			ALPHA-W	Press menu button W
pressMenuButton(V)	IMenuComponent			ALPHA-V	Press menu button V
moveMenuCursor(UP_RIGHT)	IMenuComponent	52			Momentary Function Channel: Move menu cursor UP_RIGHT
moveMenuCursor(UP_LEFT)	IMenuComponent	51			Momentary Function Channel: Move menu cursor UP_LEFT
moveMenuCursor(UP)	IMenuComponent	45			Momentary Function Channel: Move menu cursor UP
pressMenuButton(UNDER_SCORE)	IMenuComponent	89			Momentary Function Channel: Press menu button UNDER_SCORE
pressMenuButton(U)	IMenuComponent			ALPHA-U	Press menu button U
pressMenuButton(TV_VCR)	IMenuComponent	29			Momentary Function Channel: Press menu button TV_VCR
pressMenuButton(TOP_MENU)	IMenuComponent	115			Momentary Function Channel: Press menu button TOP_MENU
pressMenuButton(TITLE)	IMenuComponent	114			Momentary Function Channel: Press menu button TITLE
pressMenuButton(THUMBS_UP)	IMenuComponent	59			Momentary Function Channel: Press menu button THUMBS_UP

Digital Satellite System Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(THUMBS_DOWN)	IMenuComponent	58			Momentary Function Channel: Press menu button THUMBS_DOWN
pressMenuButton(T)	IMenuComponent			ALPHA-T	Press menu button T
pressMenuButton(SUBTITLE)	IMenuComponent	100			Momentary Function Channel: Press menu button SUBTITLE
pressMenuButton(S)	IMenuComponent			ALPHA-S	Press menu button S
pressMenuButton(RIGHT_PAREN)	IMenuComponent	88			Momentary Function Channel: Press menu button RIGHT_PAREN
moveMenuCursor(RIGHT)	IMenuComponent	48			Momentary Function Channel: Move menu cursor RIGHT
pressMenuButton(RETURN)	IMenuComponent	104			Momentary Function Channel: Press menu button RETURN
pressMenuButton(RESET)	IMenuComponent	215			Momentary Function Channel: Press menu button RESET
pressMenuButton(RECORD_SPEED)	IMenuComponent	63			Momentary Function Channel: Press menu button RECORD_SPEED
pressMenuButton(R)	IMenuComponent			ALPHA-R	Press menu button R
pressMenuButton(Q)	IMenuComponent			ALPHA-Q	Press menu button Q
pressMenuButton(POUND)	IMenuComponent	93			Momentary Function Channel: Press menu button POUND
pressMenuButton(PLUS_1000)	IMenuComponent	98			Momentary Function Channel: Press menu button PLUS_1000
pressMenuButton(PLUS_100)	IMenuComponent	97			Momentary Function Channel: Press menu button PLUS_100
pressMenuButton(PLUS_10)	IMenuComponent	20			Momentary Function Channel: Press menu button PLUS_10
pressMenuButton(PAGE_UP)	IMenuComponent	106			Momentary Function Channel: Press menu button PAGE_UP
pressMenuButton(PAGE_DOWN)	IMenuComponent	107			Momentary Function Channel: Press menu button PAGE_DOWN
pressMenuButton(P)	IMenuComponent			ALPHA-P	Press menu button P
pressMenuButton(O)	IMenuComponent			ALPHA-O	Press menu button O
pressMenuButton(N)	IMenuComponent			ALPHA-N	Press menu button N
pressMenuButton(MENU)	IMenuComponent	44			Momentary Function Channel: Press menu button MENU
pressMenuButton(M)	IMenuComponent			ALPHA-M	Press menu button M
pressMenuButton(LIVE_TV)	IMenuComponent	62			Momentary Function Channel: Press menu button LIVE_TV

Digital Satellite System Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(LIST)	IMenuComponent	86			Momentary Function Channel: Press menu button LIST
pressMenuButton(LEFT_PAREN)	IMenuComponent	87			Momentary Function Channel: Press menu button LEFT_PAREN
moveMenuCursor(LEFT)	IMenuComponent	47			Momentary Function Channel: Move menu cursor LEFT
pressMenuButton(L)	IMenuComponent			ALPHA-L	Press menu button L
pressMenuButton(K)	IMenuComponent			ALPHA-K	Press menu button K
pressMenuButton(J)	IMenuComponent			ALPHA-J	Press menu button J
pressMenuButton(INSTANT_REPLAY)	IMenuComponent	218			Momentary Function Channel: Press menu button INSTANT_REPLAY
pressMenuButton(INFO)	IMenuComponent	101			Momentary Function Channel: Press menu button INFO
pressMenuButton(I)	IMenuComponent			ALPHA-I	Press menu button I
pressMenuButton(HOLD)	IMenuComponent	85			Momentary Function Channel: Press menu button HOLD
pressMenuButton(HELP)	IMenuComponent	113			Momentary Function Channel: Press menu button HELP
pressMenuButton(H)	IMenuComponent			ALPHA-H	Press menu button H
pressMenuButton(GUIDE)	IMenuComponent	105			Momentary Function Channel: Press menu button GUIDE
pressMenuButton(G)	IMenuComponent			ALPHA-G	Press menu button G
pressMenuButton(FORWARD)	IMenuComponent	82			Momentary Function Channel: Press menu button FORWARD
pressMenuButton(FLASH)	IMenuComponent	203			Momentary Function Channel: Press menu button FLASH
pressMenuButton(FAVORITES)	IMenuComponent	102			Momentary Function Channel: Press menu button FAVORITES
pressMenuButton(F)	IMenuComponent			ALPHA-F	Press menu button F
pressMenuButton(EXIT)	IMenuComponent	50			Momentary Function Channel: Press menu button EXIT
pressMenuButton(ENTER)	IMenuComponent	21			Momentary Function Channel: Press menu button ENTER
pressMenuButton(E)	IMenuComponent			ALPHA-E	Press menu button E
moveMenuCursor(DOWN_RIGHT)	IMenuComponent	54			Momentary Function Channel: Move menu cursor DOWN_RIGHT
moveMenuCursor(DOWN_LEFT)	IMenuComponent	53			Momentary Function Channel: Move menu cursor DOWN_LEFT

Digital Satellite System Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
moveMenuCursor(DOWN)	IMenuComponent	46			Momentary Function Channel: Move menu cursor DOWN
pressMenuButton(DOT)	IMenuComponent	92			Momentary Function Channel: Press menu button DOT
pressMenuButton(DISPLAY)	IMenuComponent	99			Momentary Function Channel: Press menu button DISPLAY
pressMenuButton(DIMMER)	IMenuComponent	84			Momentary Function Channel: Press menu button DIMMER
pressMenuButton(DIGIT_9)	IMenuComponent	19			Momentary Function Channel: Press menu button DIGIT_9
pressMenuButton(DIGIT_8)	IMenuComponent	18			Momentary Function Channel: Press menu button DIGIT_8
pressMenuButton(DIGIT_7)	IMenuComponent	17			Momentary Function Channel: Press menu button DIGIT_7
pressMenuButton(DIGIT_6)	IMenuComponent	16			Momentary Function Channel: Press menu button DIGIT_6
pressMenuButton(DIGIT_5)	IMenuComponent	15			Momentary Function Channel: Press menu button DIGIT_5
pressMenuButton(DIGIT_4)	IMenuComponent	14			Momentary Function Channel: Press menu button DIGIT_4
pressMenuButton(DIGIT_3)	IMenuComponent	13			Momentary Function Channel: Press menu button DIGIT_3
pressMenuButton(DIGIT_2)	IMenuComponent	12			Momentary Function Channel: Press menu button DIGIT_2
pressMenuButton(DIGIT_1)	IMenuComponent	11			Momentary Function Channel: Press menu button DIGIT_1
pressMenuButton(DIGIT_0)	IMenuComponent	10			Momentary Function Channel: Press menu button DIGIT_0
pressMenuButton(DASH)	IMenuComponent	90			Momentary Function Channel: Press menu button DASH
pressMenuButton(D)	IMenuComponent			ALPHA-D	Press menu button D
pressMenuButton(COMMA)	IMenuComponent	94			Momentary Function Channel: Press menu button COMMA
pressMenuButton(CLEAR)	IMenuComponent	80			Momentary Function Channel: Press menu button CLEAR
pressMenuButton(CANCEL)	IMenuComponent	43			Momentary Function Channel: Press menu button CANCEL
pressMenuButton(C)	IMenuComponent			ALPHA-C	Press menu button C
pressMenuButton(BACK)	IMenuComponent	81			Momentary Function Channel: Press menu button BACK
pressMenuButton(B)	IMenuComponent			ALPHA-B	Press menu button B

Digital Satellite System Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(AUDIO)	IMenuComponent	118			Momentary Function Channel: Press menu button AUDIO
pressMenuButton(ASTERISK)	IMenuComponent	91			Momentary Function Channel: Press menu button ASTERISK
pressMenuButton(ANGLE)	IMenuComponent	117			Momentary Function Channel: Press menu button ANGLE
pressMenuButton(ADVANCE)	IMenuComponent	83			Momentary Function Channel: Press menu button ADVANCE
pressMenuButton(AB_REPEAT)	IMenuComponent	124			Momentary Function Channel: Press menu button AB_REPEAT
pressMenuButton(A)	IMenuComponent			ALPHA-A	Press menu button A
selectMenuItem()	IMenuComponent	49			Momentary Function Channel: Select current menu item
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
setPower(ps)	IPowerComponent	255			Discrete Function Channel: Power is on while channel is active
setPower(ON)	IPowerComponent	27			Momentary Function Channel: Power is turned off when channel is activated
setPower(OFF)	IPowerComponent	28			Momentary Function Channel: Power is turned on when channel is activated

Digital Satellite System Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
cyclePower()	IPowerComponent	9			Momentary Function Channel: Cycle power when channel is activated
processPowerEvent(PowerState)	IPowerComponentListener	255			Feedback Channel: Power state changed, power is on while channel is on
setBand(tb)	ITunerStationComponent			BAND-<tb>	Set band, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
setStation(station)	ITunerStationComponent			XCH-<station>	Set station, where <station> is a station string such as "501", "103.7" or "5.1"
setStationPreset(preset)	ITunerStationComponent			TUNERPRESET-<preset>	Set tuner preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
scanStation(FORWARD)	ITunerStationComponent	227			Momentary Function Channel: Scans for next station while channel is activate.
seekStation(FORWARD)	ITunerStationComponent	229			Momentary Function Channel: Seeks for next station while channel is activate
scanStation(BACKWARD)	ITunerStationComponent	228			Momentary Function Channel: Scans for previous station while channel is activate
seekStation(BACKWARD)	ITunerStationComponent	230			Momentary Function Channel: Seeks for previous station while channel is activate
cycleBand()	ITunerStationComponent	40			Momentary Function Channel: Cycle tuner band when channel is activated
cycleDisplayInfo()	ITunerStationComponent	234			Momentary Function Channel: Cycle display info when channel is activated
cycleStationPresetGroup()	ITunerStationComponent	224			Momentary Function Channel: Cycle station preset group/bank when channel is activated
decrementStation()	ITunerStationComponent	226			Momentary Function Channel: Station is decremented when channel is activated
getBand()	ITunerStationComponent			?BAND	Query for band, responds with BAND-<tb> where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
getStation()	ITunerStationComponent			?XCH	Query for station, responds with XCH-<station> where <station> is a station string such as "501", "103.7" or "5.1"
getStationPreset()	ITunerStationComponent			?TUNERPRESET	Query for tuner preset, responds with TUNERPRESET-<preset>
gotoPreviousStation()	ITunerStationComponent	235			Momentary Function Channel: Previous station is selected when channel is activated
incrementStation()	ITunerStationComponent	225			Momentary Function Channel: Station is incremented when channel is activated
nextStationPreset()	ITunerStationComponent	22			Momentary Function Channel: Next station preset is selected when channel is activated

Digital Satellite System Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
previousStationPreset()	ITunerStationComponent	23			Momentary Function Channel: Previous station preset is selected when channel is activated
processBandEvent(TunerBand)	ITunerStationComponentListener			BAND-<band>	Band changed, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
processStationEvent(String)	ITunerStationComponentListener			XCH-<station>	Station changed, where <station> is a station string such as "501", "103.7" or "5.1"
processStationPresetEvent(int)	ITunerStationComponentListener			TUNERPRESET-<int>	Tuner preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).

HVAC

IHVACComponent
IHVACComponentListener
IModuleComponent
IModuleComponentListener

Name: HVAC

Interface: IHVAC

HVAC Functions

Name	Component	Channel	Level	Command	Notes
setTemperatureScale(ts)	IHVACComponent			HVACSCALE-<ts>	Set the temperature scale, where <ts> is FAHRENHEIT,CELSIUS
setHoldOn(state)	IHVACComponent	211			Discrete Function Channel: Thermostat hold mode is on while channel is active
setLockOn(state)	IHVACComponent	212			Discrete Function Channel: Thermostat is locked while channel is active
setCoolSetpoint(setpoint)	IHVACComponent		31		Set the cool setpoint, value is in degrees C or F depending on temperature scale
setDehumidifySetpoint(setpoint)	IHVACComponent		38		Set the dehumidify setpoint, value is in percent
setHeatSetpoint(setpoint)	IHVACComponent		32		Set the heat setpoint, value is in degrees C or F depending on temperature scale
setHumidifySetpoint(setpoint)	IHVACComponent		37		Set the humidify setpoint, value is in percent
setFanState(ON)	IHVACComponent	214			Discrete Function Channel: Fan state is on while channel is active
setHVACState(OFF)	IHVACComponent	222			Discrete Function Channel: HVAC state is off while channel is active
addHVACComponent(index,hvacAddress)	IHVACComponent			HVACADD-<index>,<hvac-Address>	Add a thermostat at a given index, where <index> is 1-x and <address> is a thermostat address and x is the maximum supported thermostat index (see specific module documentation).
getHVACComponentAddress(index)	IHVACComponent			?HVACADDR-<index>	Query for the address of the thermostat at index <index>, responds with HVACADDR-<index>,<hvacAddress>
removeHVACComponent(index)	IHVACComponent			HVACREMOVEIDX-<index>	Remove the thermostat at index <index>, where <index> is 1-x and x is the maximum supported thremostat index (see specific module documentation).
getHVACComponentIndex(hvacAddress)	IHVACComponent			?HVACIDX-<hvacAddress>	Query for the index of the thermostat with address <hvacAddress>, responds with HVACADDR-<index>,<hvacAddress>
removeHVACComponent(hvacAddress)	IHVACComponent			HVACREMOVEADDR-<hvacAddress>	Remove the thermostat with address <hvacAddress>, where <hvacAddress> is a thermostat address
setHumidifyState(hs)	IHVACComponent			HVACHUMID-<hs>	Set the humidify state, where <hs> is OFF,HUMIDIFY,DEHUMIDIFY,AUTO
setHVACState(HEAT)	IHVACComponent	221			Discrete Function Channel: HVAC state is heat while channel is active
setHVACState(EMERGENCY_HEAT)	IHVACComponent	223			Discrete Function Channel: HVAC state is emergency heat while channel is active
setHVACState(COOL)	IHVACComponent	220			Discrete Function Channel: HVAC state is cool while channel is active
setFanState(AUTO)	IHVACComponent	215			Discrete Function Channel: Fan state is auto while channel is active

HVAC Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setHVACState(AUTO)	IHVACComponent	219			Discrete Function Channel: HVAC state is auto while channel is active
cycleFanState()	IHVACComponent	213			Momentary Function Channel: Cycle the fan state when channel is activated
cycleHVACState()	IHVACComponent	218			Momentary Function Channel: Cycle the HVAC state when channel is activated
decrementCoolSetpoint()	IHVACComponent	141			Momentary Function Channel: Decrement the cool setpoint when channel is activated
decrementDehumidifySetpoint()	IHVACComponent	151			Momentary Function Channel: Decrement the dehumidify setpoint when channel is activated
decrementHeatSetpoint()	IHVACComponent	144			Momentary Function Channel: Decrement the heat setpoint when channel is activated
decrementHumidifySetpoint()	IHVACComponent	149			Momentary Function Channel: Decrement the humidify setpoint when channel is activated
getHumidifyState()	IHVACComponent			?HVACHUMID	Query for the humidify state, responds with HVACHUMID-<state> where <state> is OFF,HUMIDIFY,DEHUMIDIFY,AUTO
getHumidifyStatus()	IHVACComponent			?HVACHUMIDSTATUS	Query for the humidify status, responds with HVACHUMIDSTATUS-<status> where <status> is OFF,HUMIDIFY,DEHUMIDIFY
getTemperatureScale()	IHVACComponent			?HVACSCALE	Query for the temperature scale, responds with HVACSCALE-<scale> where <scale> is FAHRENHEIT,CELSIUS
incrementCoolSetpoint()	IHVACComponent	140			Momentary Function Channel: Increment the cool setpoint when channel is activated
incrementDehumidifySetpoint()	IHVACComponent	150			Momentary Function Channel: Increment the dehumidify setpoint when channel is activated
incrementHeatSetpoint()	IHVACComponent	143			Momentary Function Channel: Increment the heat setpoint when channel is activated
incrementHumidifySetpoint()	IHVACComponent	148			Momentary Function Channel: Increment the humidify setpoint when channel is activated
processTemperatureScaleEvent(TemperatureScale)	IHVACComponentListener			HVACSCALE-<scale>	HVAC scale changed, <scale> is FAHRENHEIT,CELSIUS
processFanStatusEvent(PowerState)	IHVACComponentListener	216			Feedback Channel: Fan status is on while channel is on
processFanStateEvent(ON)	IHVACComponentListener	214			Feedback Channel: Fan state is on while channel is on
processHVACStateEvent(OFF)	IHVACComponentListener	222			Feedback Channel: HVAC state change (see chart below)
processCoolSetpointEvent(int)	IHVACComponentListener		31		Cool setpoint changed, value is in degrees C or F depending on temperature scale
processDehumidifySetpointEvent(int)	IHVACComponentListener		38		Dehumidify setpoint changed, value is in percent
processHeatSetpointEvent(int)	IHVACComponentListener		32		Heat setpoint changed, value is in degrees C or F depending on temperature scale
processHumidifySetpointEvent(int)	IHVACComponentListener		37		Humidify setpoint changed, value is in percent
processHumidifyStatusEvent(HumidifyStatus)	IHVACComponentListener			HVACHUMIDSTATUS-<status>	Humidify status changed, <status> is OFF,HUMIDIFY,DEHUMIDIFY

HVAC Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
processHumidifyStateEvent(HumidifyState)	IHVACComponentListener			HVACHUMID-<state>	Humidify state changed, <state> is OFF,HUMIDIFY,DEHUMIDIFY,AUTO
processHVACStateEvent(HEAT)	IHVACComponentListener	221			Feedback Channel: HVAC state change (see chart below)
processHVACStatusEvent(HEAT)	IHVACComponentListener	225			Feedback Channel: HVAC status change (see chart below)
processIndoorHumidityEvent(float)	IHVACComponentListener		35		Indoor humidity changed, value is in percent
processIndoorTemperatureEvent(float)	IHVACComponentListener		33		Indoor temperature changed, value is in degrees C or F depending on temperature scale
processOutdoorHumidityEvent(float)	IHVACComponentListener		36		Outdoor humidity changed, value is in percent
processOutdoorTemperatureEvent(float)	IHVACComponentListener		34		Outdoor temperature changed, value is in degrees C or F depending on temperature scale
processHVACStateEvent(EMERGENCY_HEAT)	IHVACComponentListener	223			Feedback Channel: HVAC state change (see chart below)
processHVACStatusEvent(EMERGENCY_HEAT)	IHVACComponentListener	227			Feedback Channel: HVAC status change (see chart below)
processHVACStatusEvent(COOL_2)	IHVACComponentListener	226			Feedback Channel: HVAC status change (see chart below)
processHVACStateEvent(COOL)	IHVACComponentListener	220			Feedback Channel: HVAC state change (see chart below)
processHVACStatusEvent(COOL)	IHVACComponentListener	224			Feedback Channel: HVAC status change (see chart below)
processHoldEvent(boolean)	IHVACComponentListener	211			Feedback Channel: Thermostat hold mode is on while channel is on
processLockEvent(boolean)	IHVACComponentListener	212			Feedback Channel: Thermostat is locked while channel is on
processFanStateEvent(AUTO)	IHVACComponentListener	215			Feedback Channel: Fan state is Auto while channel is on
processHVACStateEvent(AUTO)	IHVACComponentListener	219			Feedback Channel: HVAC state change (see chart below)
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on

HVAC Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on

processFanStateEvent

processFanStateEvent		
State	**Channel 214**	**Channel 215**
AUTO	OFF	ON
ON	ON	OFF

processFanStatusEvent

processFanStatusEvent	
State	**Channel 216**
ON	ON
OFF	OFF

processHVACStateEvent

processHVACStateEvent					
State	**Channel 219**	**Channel 220**	**Channel 221**	**Channel 222**	**Channel 223**
OFF	OFF	OFF	OFF	ON	OFF
HEAT	OFF	OFF	ON	OFF	OFF
EMERGENCY_HEAT	OFF	OFF	OFF	OFF	ON
COOL	OFF	ON	OFF	OFF	OFF
AUTO	ON	OFF	OFF	OFF	OFF

processHVACStatusEvent

processHVACStatusEvent				
State	**Channel 224**	**Channel 225**	**Channel 226**	**Channel 227**
HEAT	OFF	ON	OFF	OFF
EMERGENCY_HEAT	OFF	OFF	OFF	ON
COOL	ON	OFF	OFF	OFF
COOL_2	OFF	OFF	ON	OFF
OFF	OFF	OFF	OFF	OFF

Monitor

IDisplayComponent
IDisplayComponentListener
IMenuComponent
IModuleComponent
IModuleComponentListener
IMonitorComponent
IMonitorComponentListener
IPowerComponent
IPowerComponentListener
ISourceSelectComponent
ISourceSelectComponentListener
IVolumeComponent
IVolumeComponentListener

Name: Monitor

Interface: IMonitor

Monitor Functions

Name	Component	Channel	Level	Command	Notes
setVideoType(vt)	IDisplayComponent			VIDEOTYPE-<vt>	Set video type, where <vt> is AUTO,NTSC,PAL,SECAM
setFreezeOn(state)	IDisplayComponent	214			Discrete Function Channel: Freeze is on while channel is active
setPictureMuteOn(state)	IDisplayComponent	211			Discrete Function Channel: Picture Mute is on while channel is active
setPIPOn(state)	IDisplayComponent	195			Discrete Function Channel: PIP is on while channel is active
setActiveWindow(mss)	IDisplayComponent			ACTIVEWINDOW-<mss>	Set active window, where <mss> is LEFT,RIGHT,MAIN,SUB
setBrightness(level)	IDisplayComponent		10		Set brightness level, range is 0-255
setColor(level)	IDisplayComponent		11		Set color level, range is 0-255
setContrast(level)	IDisplayComponent		12		Set contrast level, range is 0-255
setSharpness(level)	IDisplayComponent		13		Set sharpness level, range is 0-255
setTint(level)	IDisplayComponent		14		Set tint level, range is 0-255
setAspectRatio(aspectRatio)	IDisplayComponent			ASPECT-<aspectRatio>	Set aspect ratio, where <aspectRatio> is ANAMORPHIC,WIDE-SCREEN,NORMAL
adjustBrightness(1)	IDisplayComponent	148			Momentary Function Channel: Brightness is incremented when channel is activated
adjustColor(1)	IDisplayComponent	150			Momentary Function Channel: Color is incremented when channel is activated
adjustContrast(1)	IDisplayComponent	152			Momentary Function Channel: Contrast is incremented when channel is activated
adjustSharpness(1)	IDisplayComponent	154			Momentary Function Channel: Sharpness is incremented when channel is activated

Monitor Functions (Cont.)

Name	Component	Channel	Level	Command	Notes
adjustTint(1)	IDisplayComponent	156			Momentary Function Channel: Tint is incremented when channel is activated
adjustBrightness(-1)	IDisplayComponent	149			Momentary Function Channel: Brightness is decremented when channel is activated
adjustColor(-1)	IDisplayComponent	151			Momentary Function Channel: Color is decremented when channel is activated
adjustContrast(-1)	IDisplayComponent	153			Momentary Function Channel: Contrast is decremented when channel is activated
adjustSharpness(-1)	IDisplayComponent	155			Momentary Function Channel: Sharpness is decremented when channel is activated
adjustTint(-1)	IDisplayComponent	157			Momentary Function Channel: Tint is decremented when channel is activated
cycleAspectRatio()	IDisplayComponent	142			Momentary Function Channel: Cycle aspect ratios when channel is activated
cycleFreeze()	IDisplayComponent	213			Momentary Function Channel: Cycle freeze when channel is activated
cyclePictureMute()	IDisplayComponent	210			Momentary Function Channel: Cycle picture mute when channel is activated
cyclePIP()	IDisplayComponent	194			Momentary Function Channel: Cycle PIP when channel is activated
cyclePIPPosition()	IDisplayComponent	191			Momentary Function Channel: Cycle PIP positions when channel is activated
getActiveWindow()	IDisplayComponent			?ACTIVEWINDOW	Query active window, responds with ACTIVEWINDOW-<window>, where <window> is LEFT,RIGHT,MAIN,SUB
getAspectRatio()	IDisplayComponent			?ASPECT	Query aspect ratio, responds with ASPECT-<ratio>, where <ratio> is ANAMORPHIC,WIDESCREEN,NORMAL
getVideoType()	IDisplayComponent			?VIDEOTYPE	Query video type, responds with VIDEOTYPE-<type>, where <type> is AUTO,NTSC,PAL,SECAM
swapPIP()	IDisplayComponent	193			Momentary Function Channel: Swap PIP when channel is activated
processVideoTypeEvent(VideoType)	IDisplayComponentListener			VIDEOTYPE-<type>	Video type changed, where <type> is AUTO,NTSC,PAL,SECAM
processActiveWindowEvent(MultiScreenSelect)	IDisplayComponentListener			ACTIVEWINDOW-<window>	Active window changed, where <window> is LEFT,RIGHT,MAIN,SUB
processBrightnessEvent(int)	IDisplayComponentListener		10		Brightness changed, range is 0-255
processColorEvent(int)	IDisplayComponentListener		11		Color changed, range is 0-255
processContrastEvent(int)	IDisplayComponentListener		12		Contrast changed, range is 0-255
processSharpnessEvent(int)	IDisplayComponentListener		13		Sharpness changed, range is 0-255
processTintEvent(int)	IDisplayComponentListener		14		Tint changed, range is 0-255
processFreezeEvent(boolean)	IDisplayComponentListener	214			Feedback Channel: Freeze is on if channel is on
processPictureMuteEvent(boolean)	IDisplayComponentListener	211			Feedback Channel: Picture is muted if channel is on
processPIPEvent(boolean)	IDisplayComponentListener	195			Feedback Channel: PIP is on if channel is on

Monitor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
processAspectRatioEvent(AspectRatio)	IDisplayComponentListener			ASPECT-<ratio>	Aspect ratio changed, where <ratio> is ANAMORPHIC,WIDE-SCREEN,NORMAL
pressMenuButton(ZOOM)	IMenuComponent	116			Momentary Function Channel: Press menu button ZOOM
pressMenuButton(Z)	IMenuComponent			ALPHA-Z	Press menu button Z
pressMenuButton(Y)	IMenuComponent			ALPHA-Y	Press menu button Y
pressMenuButton(X)	IMenuComponent			ALPHA-X	Press menu button X
pressMenuButton(W)	IMenuComponent			ALPHA-W	Press menu button W
pressMenuButton(V)	IMenuComponent			ALPHA-V	Press menu button V
moveMenuCursor(UP_RIGHT)	IMenuComponent	52			Momentary Function Channel: Move menu cursor UP_RIGHT
moveMenuCursor(UP_LEFT)	IMenuComponent	51			Momentary Function Channel: Move menu cursor UP_LEFT
moveMenuCursor(UP)	IMenuComponent	45			Momentary Function Channel: Move menu cursor UP
pressMenuButton(UNDER_SCORE)	IMenuComponent	89			Momentary Function Channel: Press menu button UNDER_SCORE
pressMenuButton(U)	IMenuComponent			ALPHA-U	Press menu button U
pressMenuButton(TV_VCR)	IMenuComponent	29			Momentary Function Channel: Press menu button TV_VCR
pressMenuButton(TOP_MENU)	IMenuComponent	115			Momentary Function Channel: Press menu button TOP_MENU
pressMenuButton(TITLE)	IMenuComponent	114			Momentary Function Channel: Press menu button TITLE
pressMenuButton(THUMBS_UP)	IMenuComponent	59			Momentary Function Channel: Press menu button THUMBS_UP
pressMenuButton(THUMBS_DOWN)	IMenuComponent	58			Momentary Function Channel: Press menu button THUMBS_DOWN
pressMenuButton(T)	IMenuComponent			ALPHA-T	Press menu button T
pressMenuButton(SUBTITLE)	IMenuComponent	100			Momentary Function Channel: Press menu button SUBTITLE
pressMenuButton(S)	IMenuComponent			ALPHA-S	Press menu button S
pressMenuButton(RIGHT_PAREN)	IMenuComponent	88			Momentary Function Channel: Press menu button RIGHT_PAREN
moveMenuCursor(RIGHT)	IMenuComponent	48			Momentary Function Channel: Move menu cursor RIGHT
pressMenuButton(RETURN)	IMenuComponent	104			Momentary Function Channel: Press menu button RETURN
pressMenuButton(RESET)	IMenuComponent	215			Momentary Function Channel: Press menu button RESET
pressMenuButton(RECORD_SPEED)	IMenuComponent	63			Momentary Function Channel: Press menu button RECORD_SPEED
pressMenuButton(R)	IMenuComponent			ALPHA-R	Press menu button R
pressMenuButton(Q)	IMenuComponent			ALPHA-Q	Press menu button Q
pressMenuButton(POUND)	IMenuComponent	93			Momentary Function Channel: Press menu button POUND
pressMenuButton(PLUS_1000)	IMenuComponent	98			Momentary Function Channel: Press menu button PLUS_1000
pressMenuButton(PLUS_100)	IMenuComponent	97			Momentary Function Channel: Press menu button PLUS_100
pressMenuButton(PLUS_10)	IMenuComponent	20			Momentary Function Channel: Press menu button PLUS_10
pressMenuButton(PAGE_UP)	IMenuComponent	106			Momentary Function Channel: Press menu button PAGE_UP
pressMenuButton(PAGE_DOWN)	IMenuComponent	107			Momentary Function Channel: Press menu button PAGE_DOWN

Monitor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(P)	IMenuComponent			ALPHA-P	Press menu button P
pressMenuButton(O)	IMenuComponent			ALPHA-O	Press menu button O
pressMenuButton(N)	IMenuComponent			ALPHA-N	Press menu button N
pressMenuButton(MENU)	IMenuComponent	44			Momentary Function Channel: Press menu button MENU
pressMenuButton(M)	IMenuComponent			ALPHA-M	Press menu button M
pressMenuButton(LIVE_TV)	IMenuComponent	62			Momentary Function Channel: Press menu button LIVE_TV
pressMenuButton(LIST)	IMenuComponent	86			Momentary Function Channel: Press menu button LIST
pressMenuButton(LEFT_PAREN)	IMenuComponent	87			Momentary Function Channel: Press menu button LEFT_PAREN
moveMenuCursor(LEFT)	IMenuComponent	47			Momentary Function Channel: Move menu cursor LEFT
pressMenuButton(L)	IMenuComponent			ALPHA-L	Press menu button L
pressMenuButton(K)	IMenuComponent			ALPHA-K	Press menu button K
pressMenuButton(J)	IMenuComponent			ALPHA-J	Press menu button J
pressMenuButton(INSTANT_REPLAY)	IMenuComponent	218			Momentary Function Channel: Press menu button INSTANT_REPLAY
pressMenuButton(INFO)	IMenuComponent	101			Momentary Function Channel: Press menu button INFO
pressMenuButton(I)	IMenuComponent			ALPHA-I	Press menu button I
pressMenuButton(HOLD)	IMenuComponent	85			Momentary Function Channel: Press menu button HOLD
pressMenuButton(HELP)	IMenuComponent	113			Momentary Function Channel: Press menu button HELP
pressMenuButton(H)	IMenuComponent			ALPHA-H	Press menu button H
pressMenuButton(GUIDE)	IMenuComponent	105			Momentary Function Channel: Press menu button GUIDE
pressMenuButton(G)	IMenuComponent			ALPHA-G	Press menu button G
pressMenuButton(FORWARD)	IMenuComponent	82			Momentary Function Channel: Press menu button FORWARD
pressMenuButton(FLASH)	IMenuComponent	203			Momentary Function Channel: Press menu button FLASH
pressMenuButton(FAVORITES)	IMenuComponent	102			Momentary Function Channel: Press menu button FAVORITES
pressMenuButton(F)	IMenuComponent			ALPHA-F	Press menu button F
pressMenuButton(EXIT)	IMenuComponent	50			Momentary Function Channel: Press menu button EXIT
pressMenuButton(ENTER)	IMenuComponent	21			Momentary Function Channel: Press menu button ENTER
pressMenuButton(E)	IMenuComponent			ALPHA-E	Press menu button E
moveMenuCursor(DOWN_RIGHT)	IMenuComponent	54			Momentary Function Channel: Move menu cursor DOWN_RIGHT
moveMenuCursor(DOWN_LEFT)	IMenuComponent	53			Momentary Function Channel: Move menu cursor DOWN_LEFT
moveMenuCursor(DOWN)	IMenuComponent	46			Momentary Function Channel: Move menu cursor DOWN
pressMenuButton(DOT)	IMenuComponent	92			Momentary Function Channel: Press menu button DOT
pressMenuButton(DISPLAY)	IMenuComponent	99			Momentary Function Channel: Press menu button DISPLAY
pressMenuButton(DIMMER)	IMenuComponent	84			Momentary Function Channel: Press menu button DIMMER

Monitor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(DIGIT_9)	IMenuComponent	19			Momentary Function Channel: Press menu button DIGIT_9
pressMenuButton(DIGIT_8)	IMenuComponent	18			Momentary Function Channel: Press menu button DIGIT_8
pressMenuButton(DIGIT_7)	IMenuComponent	17			Momentary Function Channel: Press menu button DIGIT_7
pressMenuButton(DIGIT_6)	IMenuComponent	16			Momentary Function Channel: Press menu button DIGIT_6
pressMenuButton(DIGIT_5)	IMenuComponent	15			Momentary Function Channel: Press menu button DIGIT_5
pressMenuButton(DIGIT_4)	IMenuComponent	14			Momentary Function Channel: Press menu button DIGIT_4
pressMenuButton(DIGIT_3)	IMenuComponent	13			Momentary Function Channel: Press menu button DIGIT_3
pressMenuButton(DIGIT_2)	IMenuComponent	12			Momentary Function Channel: Press menu button DIGIT_2
pressMenuButton(DIGIT_1)	IMenuComponent	11			Momentary Function Channel: Press menu button DIGIT_1
pressMenuButton(DIGIT_0)	IMenuComponent	10			Momentary Function Channel: Press menu button DIGIT_0
pressMenuButton(DASH)	IMenuComponent	90			Momentary Function Channel: Press menu button DASH
pressMenuButton(D)	IMenuComponent			ALPHA-D	Press menu button D
pressMenuButton(COMMA)	IMenuComponent	94			Momentary Function Channel: Press menu button COMMA
pressMenuButton(CLEAR)	IMenuComponent	80			Momentary Function Channel: Press menu button CLEAR
pressMenuButton(CANCEL)	IMenuComponent	43			Momentary Function Channel: Press menu button CANCEL
pressMenuButton(C)	IMenuComponent			ALPHA-C	Press menu button C
pressMenuButton(BACK)	IMenuComponent	81			Momentary Function Channel: Press menu button BACK
pressMenuButton(B)	IMenuComponent			ALPHA-B	Press menu button B
pressMenuButton(AUDIO)	IMenuComponent	118			Momentary Function Channel: Press menu button AUDIO
pressMenuButton(ASTERISK)	IMenuComponent	91			Momentary Function Channel: Press menu button ASTERISK
pressMenuButton(ANGLE)	IMenuComponent	117			Momentary Function Channel: Press menu button ANGLE
pressMenuButton(ADVANCE)	IMenuComponent	83			Momentary Function Channel: Press menu button ADVANCE
pressMenuButton(AB_REPEAT)	IMenuComponent	124			Momentary Function Channel: Press menu button AB_REPEAT
pressMenuButton(A)	IMenuComponent			ALPHA-A	Press menu button A
selectMenuItem()	IMenuComponent	49			Momentary Function Channel: Select current menu item
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO

Monitor Functions (Cont.)

Name	Component	Channel	Level	Command	Notes
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
setPower(ps)	IPowerComponent	255			Discrete Function Channel: Power is on while channel is active
setPower(ON)	IPowerComponent	27			Momentary Function Channel: Power is turned off when channel is activated
setPower(OFF)	IPowerComponent	28			Momentary Function Channel: Power is turned on when channel is activated
cyclePower()	IPowerComponent	9			Momentary Function Channel: Cycle power when channel is activated
processPowerEvent(PowerState)	IPowerComponentListener	255			Feedback Channel: Power state changed, power is on while channel is on
setInputSource(VIDEO,3)	ISourceSelectComponent	33			Momentary Function Channel: Selects input VIDEO,3 when channel is activated
setInputSource(VIDEO,2)	ISourceSelectComponent	32			Momentary Function Channel: Selects input VIDEO,2 when channel is activated
setInputSource(VIDEO,1)	ISourceSelectComponent	31			Momentary Function Channel: Selects input VIDEO,1 when channel is activated
setInputSource(TV,1)	ISourceSelectComponent	30			Momentary Function Channel: Selects input TV,1 when channel is activated
setInputSource(TUNER,1)	ISourceSelectComponent	37			Momentary Function Channel: Selects input TUNER,1 when channel is activated
setInputSource(TAPE,2)	ISourceSelectComponent	35			Momentary Function Channel: Selects input TAPE,2 when channel is activated
setInputSource(TAPE,1)	ISourceSelectComponent	34			Momentary Function Channel: Selects input TAPE,1 when channel is activated
setInputSource(sourceSelect,inputNumber)	ISourceSelectComponent			INPUT-<sourceSelect>,<inputNumber>	Set the current input, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setInputSource(PHONO,1)	ISourceSelectComponent	38			Momentary Function Channel: Selects input PHONO,1 when channel is activated
setInputSource(CD,1)	ISourceSelectComponent	36			Momentary Function Channel: Selects input CD,1 when channel is activated

Monitor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setInputSource(AUXILIARY,1)	ISourceSelectComponent	39			Momentary Function Channel: Selects input AUXILIARY,1 when channel is activated
getInputSource()	ISourceSelectComponent			?INPUT	Query current input, responds with INPUT-<sourceSelect>,<inputNumber> where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
processInputSourceEvent(InputSourceSelectInfo)	ISourceSelectComponentListener			INPUT-<sourceSelect>,<inputNumber>	Current input has changed, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setVolumeRamp(UP)	IVolumeComponent	24			Discrete Function Channel: Volume is ramped up while channel is active
setVolumeMuteOn(state)	IVolumeComponent	199			Discrete Function Channel: Volume mute is on while channel is active
setVolumePreset(preset)	IVolumeComponent			VOLPRESET-<preset>	Set volume preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolume(level)	IVolumeComponent		1		Set volume, range is 0-255
setVolumeRamp(DOWN)	IVolumeComponent	25			Discrete Function Channel: Volume is ramped down while channel is active
cycleVolumeMute()	IVolumeComponent	26			Momentary Function Channel: Cycle volume mute when channel is activated
getVolumePreset()	IVolumeComponent			?VOLPRESET	Query for volume preset, responds with VOLPRESET-<preset>
processVolumeRampEvent(UP)	IVolumeComponentListener	24			Feedback Channel: Volume is ramping up while channel is on
processVolumeEvent(int)	IVolumeComponentListener		1		Volume changed, range is 0-255
processVolumePresetEvent(int)	IVolumeComponentListener			VOLPRESET-<preset>	Volume preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processVolumeRampEvent(DOWN)	IVolumeComponentListener	25			Feedback Channel: Volume is ramping down while channel is on
processVolumeMuteEvent(boolean)	IVolumeComponentListener	199			Feedback Channel: Volume is muted if channel is on

Pre Amp Surround Sound Processor

IMenuComponent
IModuleComponent
IModuleComponentListener
IPowerComponent
IPowerComponentListener
IPreAmpComponent
IPreAmpComponentListener
IPreAmpSurroundSoundProcessorComponent
IPreAmpSurroundSoundProcessorComponentListener
ISourceSelectComponent
ISourceSelectComponentListener
IVolumeComponent
IVolumeComponentListener

Name: Pre Amp Surround Sound Processor					
Interface: IPreAmpSurroundSoundProcessor					
Pre Amp Surround Sound Processor Functions					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(ZOOM)	IMenuComponent	116			Momentary Function Channel: Press menu button ZOOM
pressMenuButton(Z)	IMenuComponent			ALPHA-Z	Press menu button Z
pressMenuButton(Y)	IMenuComponent			ALPHA-Y	Press menu button Y
pressMenuButton(X)	IMenuComponent			ALPHA-X	Press menu button X
pressMenuButton(W)	IMenuComponent			ALPHA-W	Press menu button W
pressMenuButton(V)	IMenuComponent			ALPHA-V	Press menu button V
moveMenuCursor(UP_RIGHT)	IMenuComponent	52			Momentary Function Channel: Move menu cursor UP_RIGHT
moveMenuCursor(UP_LEFT)	IMenuComponent	51			Momentary Function Channel: Move menu cursor UP_LEFT
moveMenuCursor(UP)	IMenuComponent	45			Momentary Function Channel: Move menu cursor UP
pressMenuButton(UNDER_SCORE)	IMenuComponent	89			Momentary Function Channel: Press menu button UNDER_SCORE
pressMenuButton(U)	IMenuComponent			ALPHA-U	Press menu button U
pressMenuButton(TV_VCR)	IMenuComponent	29			Momentary Function Channel: Press menu button TV_VCR
pressMenuButton(TOP_MENU)	IMenuComponent	115			Momentary Function Channel: Press menu button TOP_MENU
pressMenuButton(TITLE)	IMenuComponent	114			Momentary Function Channel: Press menu button TITLE
pressMenuButton(THUMBS_UP)	IMenuComponent	59			Momentary Function Channel: Press menu button THUMBS_UP
pressMenuButton(THUMBS_DOWN)	IMenuComponent	58			Momentary Function Channel: Press menu button THUMBS_DOWN
pressMenuButton(T)	IMenuComponent			ALPHA-T	Press menu button T
pressMenuButton(SUBTITLE)	IMenuComponent	100			Momentary Function Channel: Press menu button SUBTITLE

Pre Amp Surround Sound Processor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(S)	IMenuComponent			ALPHA-S	Press menu button S
pressMenuButton(RIGHT_PAREN)	IMenuComponent	88			Momentary Function Channel: Press menu button RIGHT_PAREN
moveMenuCursor(RIGHT)	IMenuComponent	48			Momentary Function Channel: Move menu cursor RIGHT
pressMenuButton(RETURN)	IMenuComponent	104			Momentary Function Channel: Press menu button RETURN
pressMenuButton(RESET)	IMenuComponent	215			Momentary Function Channel: Press menu button RESET
pressMenuButton(RECORD_SPEED)	IMenuComponent	63			Momentary Function Channel: Press menu button RECORD_SPEED
pressMenuButton(R)	IMenuComponent			ALPHA-R	Press menu button R
pressMenuButton(Q)	IMenuComponent			ALPHA-Q	Press menu button Q
pressMenuButton(POUND)	IMenuComponent	93			Momentary Function Channel: Press menu button POUND
pressMenuButton(PLUS_1000)	IMenuComponent	98			Momentary Function Channel: Press menu button PLUS_1000
pressMenuButton(PLUS_100)	IMenuComponent	97			Momentary Function Channel: Press menu button PLUS_100
pressMenuButton(PLUS_10)	IMenuComponent	20			Momentary Function Channel: Press menu button PLUS_10
pressMenuButton(PAGE_UP)	IMenuComponent	106			Momentary Function Channel: Press menu button PAGE_UP
pressMenuButton(PAGE_DOWN)	IMenuComponent	107			Momentary Function Channel: Press menu button PAGE_DOWN
pressMenuButton(P)	IMenuComponent			ALPHA-P	Press menu button P
pressMenuButton(O)	IMenuComponent			ALPHA-O	Press menu button O
pressMenuButton(N)	IMenuComponent			ALPHA-N	Press menu button N
pressMenuButton(MENU)	IMenuComponent	44			Momentary Function Channel: Press menu button MENU
pressMenuButton(M)	IMenuComponent			ALPHA-M	Press menu button M
pressMenuButton(LIVE_TV)	IMenuComponent	62			Momentary Function Channel: Press menu button LIVE_TV
pressMenuButton(LIST)	IMenuComponent	86			Momentary Function Channel: Press menu button LIST
pressMenuButton(LEFT_PAREN)	IMenuComponent	87			Momentary Function Channel: Press menu button LEFT_PAREN
moveMenuCursor(LEFT)	IMenuComponent	47			Momentary Function Channel: Move menu cursor LEFT
pressMenuButton(L)	IMenuComponent			ALPHA-L	Press menu button L
pressMenuButton(K)	IMenuComponent			ALPHA-K	Press menu button K
pressMenuButton(J)	IMenuComponent			ALPHA-J	Press menu button J
pressMenuButton(INSTANT_REPLAY)	IMenuComponent	218			Momentary Function Channel: Press menu button INSTANT_REPLAY
pressMenuButton(INFO)	IMenuComponent	101			Momentary Function Channel: Press menu button INFO
pressMenuButton(I)	IMenuComponent			ALPHA-I	Press menu button I
pressMenuButton(HOLD)	IMenuComponent	85			Momentary Function Channel: Press menu button HOLD
pressMenuButton(HELP)	IMenuComponent	113			Momentary Function Channel: Press menu button HELP
pressMenuButton(H)	IMenuComponent			ALPHA-H	Press menu button H
pressMenuButton(GUIDE)	IMenuComponent	105			Momentary Function Channel: Press menu button GUIDE

Pre Amp Surround Sound Processor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(G)	IMenuComponent			ALPHA-G	Press menu button G
pressMenuButton(FORWARD)	IMenuComponent	82			Momentary Function Channel: Press menu button FORWARD
pressMenuButton(FLASH)	IMenuComponent	203			Momentary Function Channel: Press menu button FLASH
pressMenuButton(FAVORITES)	IMenuComponent	102			Momentary Function Channel: Press menu button FAVORITES
pressMenuButton(F)	IMenuComponent			ALPHA-F	Press menu button F
pressMenuButton(EXIT)	IMenuComponent	50			Momentary Function Channel: Press menu button EXIT
pressMenuButton(ENTER)	IMenuComponent	21			Momentary Function Channel: Press menu button ENTER
pressMenuButton(E)	IMenuComponent			ALPHA-E	Press menu button E
moveMenuCursor(DOWN_RIGHT)	IMenuComponent	54			Momentary Function Channel: Move menu cursor DOWN_RIGHT
moveMenuCursor(DOWN_LEFT)	IMenuComponent	53			Momentary Function Channel: Move menu cursor DOWN_LEFT
moveMenuCursor(DOWN)	IMenuComponent	46			Momentary Function Channel: Move menu cursor DOWN
pressMenuButton(DOT)	IMenuComponent	92			Momentary Function Channel: Press menu button DOT
pressMenuButton(DISPLAY)	IMenuComponent	99			Momentary Function Channel: Press menu button DISPLAY
pressMenuButton(DIMMER)	IMenuComponent	84			Momentary Function Channel: Press menu button DIMMER
pressMenuButton(DIGIT_9)	IMenuComponent	19			Momentary Function Channel: Press menu button DIGIT_9
pressMenuButton(DIGIT_8)	IMenuComponent	18			Momentary Function Channel: Press menu button DIGIT_8
pressMenuButton(DIGIT_7)	IMenuComponent	17			Momentary Function Channel: Press menu button DIGIT_7
pressMenuButton(DIGIT_6)	IMenuComponent	16			Momentary Function Channel: Press menu button DIGIT_6
pressMenuButton(DIGIT_5)	IMenuComponent	15			Momentary Function Channel: Press menu button DIGIT_5
pressMenuButton(DIGIT_4)	IMenuComponent	14			Momentary Function Channel: Press menu button DIGIT_4
pressMenuButton(DIGIT_3)	IMenuComponent	13			Momentary Function Channel: Press menu button DIGIT_3
pressMenuButton(DIGIT_2)	IMenuComponent	12			Momentary Function Channel: Press menu button DIGIT_2
pressMenuButton(DIGIT_1)	IMenuComponent	11			Momentary Function Channel: Press menu button DIGIT_1
pressMenuButton(DIGIT_0)	IMenuComponent	10			Momentary Function Channel: Press menu button DIGIT_0
pressMenuButton(DASH)	IMenuComponent	90			Momentary Function Channel: Press menu button DASH
pressMenuButton(D)	IMenuComponent			ALPHA-D	Press menu button D
pressMenuButton(COMMA)	IMenuComponent	94			Momentary Function Channel: Press menu button COMMA
pressMenuButton(CLEAR)	IMenuComponent	80			Momentary Function Channel: Press menu button CLEAR
pressMenuButton(CANCEL)	IMenuComponent	43			Momentary Function Channel: Press menu button CANCEL
pressMenuButton(C)	IMenuComponent			ALPHA-C	Press menu button C
pressMenuButton(BACK)	IMenuComponent	81			Momentary Function Channel: Press menu button BACK
pressMenuButton(B)	IMenuComponent			ALPHA-B	Press menu button B
pressMenuButton(AUDIO)	IMenuComponent	118			Momentary Function Channel: Press menu button AUDIO

Pre Amp Surround Sound Processor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(ASTERISK)	IMenuComponent	91			Momentary Function Channel: Press menu button ASTERISK
pressMenuButton(ANGLE)	IMenuComponent	117			Momentary Function Channel: Press menu button ANGLE
pressMenuButton(ADVANCE)	IMenuComponent	83			Momentary Function Channel: Press menu button ADVANCE
pressMenuButton(AB_REPEAT)	IMenuComponent	124			Momentary Function Channel: Press menu button AB_REPEAT
pressMenuButton(A)	IMenuComponent			ALPHA-A	Press menu button A
selectMenuItem()	IMenuComponent	49			Momentary Function Channel: Select current menu item
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
setPower(ps)	IPowerComponent	255			Discrete Function Channel: Power is on while channel is active
setPower(ON)	IPowerComponent	27			Momentary Function Channel: Power is turned off when channel is activated
setPower(OFF)	IPowerComponent	28			Momentary Function Channel: Power is turned on when channel is activated
cyclePower()	IPowerComponent	9			Momentary Function Channel: Cycle power when channel is activated
processPowerEvent(PowerState)	IPowerComponentListener	255			Feedback Channel: Power state changed, power is on while channel is on
setTreble(treble)	IPreAmpComponent		4		Set treble level, range is 0-255
setLoudnessOn(state)	IPreAmpComponent	207			Discrete Function Channel: Loudness is on while channel is active
setSurroundMode(sm)	IPreAmpComponent			SURROUND-<mode>	Set surround mode, where <mode> is MOVIE,MUSIC,OFF
setBass(bass)	IPreAmpComponent		3		Set bass level, range is 0-255

Pre Amp Surround Sound Processor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setBalance(balance)	IPreAmpComponent		2		Set balance level, range is 0-255, 0 is left and 255 is right
adjustBalance(1)	IPreAmpComponent	164			Momentary Function Channel: Balance is incremented when channel is activated
adjustBass(1)	IPreAmpComponent	166			Momentary Function Channel: Bass is incremented when channel is activated
adjustTreble(1)	IPreAmpComponent	168			Momentary Function Channel: Treble is incremented when channel is activated
adjustBalance(-1)	IPreAmpComponent	165			Momentary Function Channel: Balance is decremented when channel is activated
adjustBass(-1)	IPreAmpComponent	167			Momentary Function Channel: Bass is decremented when channel is activated
adjustTreble(-1)	IPreAmpComponent	169			Momentary Function Channel: Treble is decremented when channel is activated
cycleLoudness()	IPreAmpComponent	206			Momentary Function Channel: Cycle loudness when channel is activated
getSurroundMode()	IPreAmpComponent			?SURROUND	Query surround mode, responds with SURROUND-<mode>, where <mode> is MOVIE,MUSIC,OFF
nextSurroundMode()	IPreAmpComponent	170			Momentary Function Channel: Next surround mode is selected when channel is activated
previousSurroundMode()	IPreAmpComponent	171			Momentary Function Channel: Previous surround mode is selected when channel is activated
processSurroundModeEvent(SurroundMode)	IPreAmpComponentListener			SURROUND-<mode>	Surround mode changed, where <mode> is MUSIC,MOVIE,OFF
processBalanceEvent(int)	IPreAmpComponentListener		2		Balance changed, range is 0-255, 0 is left and 255 is right
processBassEvent(int)	IPreAmpComponentListener		3		Bass changed, range is 0-255
processTrebleEvent(int)	IPreAmpComponentListener		4		Treble changed, range is 0-255
processLoudnessEvent(boolean)	IPreAmpComponentListener	207			Feedback Channel: Loudness is on if channel is on
setInputSource(VIDEO,3)	ISourceSelectComponent	33			Momentary Function Channel: Selects input VIDEO,3 when channel is activated
setInputSource(VIDEO,2)	ISourceSelectComponent	32			Momentary Function Channel: Selects input VIDEO,2 when channel is activated
setInputSource(VIDEO,1)	ISourceSelectComponent	31			Momentary Function Channel: Selects input VIDEO,1 when channel is activated
setInputSource(TV,1)	ISourceSelectComponent	30			Momentary Function Channel: Selects input TV,1 when channel is activated
setInputSource(TUNER,1)	ISourceSelectComponent	37			Momentary Function Channel: Selects input TUNER,1 when channel is activated
setInputSource(TAPE,2)	ISourceSelectComponent	35			Momentary Function Channel: Selects input TAPE,2 when channel is activated
setInputSource(TAPE,1)	ISourceSelectComponent	34			Momentary Function Channel: Selects input TAPE,1 when channel is activated

Pre Amp Surround Sound Processor Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setInputSource(sourceSelect,inputNumber)	ISourceSelectComponent			INPUT-<sourceSelect>,<inputNumber>	Set the current input, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setInputSource(PHONO,1)	ISourceSelectComponent	38			Momentary Function Channel: Selects input PHONO,1 when channel is activated
setInputSource(CD,1)	ISourceSelectComponent	36			Momentary Function Channel: Selects input CD,1 when channel is activated
setInputSource(AUXILIARY,1)	ISourceSelectComponent	39			Momentary Function Channel: Selects input AUXILIARY,1 when channel is activated
getInputSource()	ISourceSelectComponent			?INPUT	Query current input, responds with INPUT-<sourceSelect>,<inputNumber> where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
processInputSourceEvent(InputSourceSelectInfo)	ISourceSelectComponentListener			INPUT-<sourceSelect>,<inputNumber>	Current input has changed, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setVolumeRamp(UP)	IVolumeComponent	24			Discrete Function Channel: Volume is ramped up while channel is active
setVolumeMuteOn(state)	IVolumeComponent	199			Discrete Function Channel: Volume mute is on while channel is active
setVolumePreset(preset)	IVolumeComponent			VOLPRESET-<preset>	Set volume preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolume(level)	IVolumeComponent		1		Set volume, range is 0-255
setVolumeRamp(DOWN)	IVolumeComponent	25			Discrete Function Channel: Volume is ramped down while channel is active
cycleVolumeMute()	IVolumeComponent	26			Momentary Function Channel: Cycle volume mute when channel is activated
getVolumePreset()	IVolumeComponent			?VOLPRESET	Query for volume preset, responds with VOLPRESET-<preset>
processVolumeRampEvent(UP)	IVolumeComponentListener	24			Feedback Channel: Volume is ramping up while channel is on
processVolumeEvent(int)	IVolumeComponentListener		1		Volume changed, range is 0-255
processVolumePresetEvent(int)	IVolumeComponentListener			VOLPRESET-<preset>	Volume preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processVolumeRampEvent(DOWN)	IVolumeComponentListener	25			Feedback Channel: Volume is ramping down while channel is on
processVolumeMuteEvent(boolean)	IVolumeComponentListener	199			Feedback Channel: Volume is muted if channel is on

Receiver

IMenuComponent
IModuleComponent
IModuleComponentListener
IPowerComponent
IPowerComponentListener
IPreAmpComponent
IPreAmpComponentListener
IReceiverComponent
IReceiverComponentListener
ISourceSelectComponent
ISourceSelectComponentListener
ITunerStationComponent
ITunerStationComponentListener
IVolumeComponent
IVolumeComponentListener

Name: Receiver

Interface: IReceiver

Receiver Functions

Name	Component	Channel	Level	Command	Notes
pressMenuButton(ZOOM)	IMenuComponent	116			Momentary Function Channel: Press menu button ZOOM
pressMenuButton(Z)	IMenuComponent			ALPHA-Z	Press menu button Z
pressMenuButton(Y)	IMenuComponent			ALPHA-Y	Press menu button Y
pressMenuButton(X)	IMenuComponent			ALPHA-X	Press menu button X
pressMenuButton(W)	IMenuComponent			ALPHA-W	Press menu button W
pressMenuButton(V)	IMenuComponent			ALPHA-V	Press menu button V
moveMenuCursor(UP_RIGHT)	IMenuComponent	52			Momentary Function Channel: Move menu cursor UP_RIGHT
moveMenuCursor(UP_LEFT)	IMenuComponent	51			Momentary Function Channel: Move menu cursor UP_LEFT
moveMenuCursor(UP)	IMenuComponent	45			Momentary Function Channel: Move menu cursor UP
pressMenuButton(UNDER_SCORE)	IMenuComponent	89			Momentary Function Channel: Press menu button UNDER_SCORE
pressMenuButton(U)	IMenuComponent			ALPHA-U	Press menu button U
pressMenuButton(TV_VCR)	IMenuComponent	29			Momentary Function Channel: Press menu button TV_VCR
pressMenuButton(TOP_MENU)	IMenuComponent	115			Momentary Function Channel: Press menu button TOP_MENU
pressMenuButton(TITLE)	IMenuComponent	114			Momentary Function Channel: Press menu button TITLE
pressMenuButton(THUMBS_UP)	IMenuComponent	59			Momentary Function Channel: Press menu button THUMBS_UP
pressMenuButton(THUMBS_DOWN)	IMenuComponent	58			Momentary Function Channel: Press menu button THUMBS_DOWN

Receiver Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(T)	IMenuComponent			ALPHA-T	Press menu button T
pressMenuButton(SUBTITLE)	IMenuComponent	100			Momentary Function Channel: Press menu button SUBTITLE
pressMenuButton(S)	IMenuComponent			ALPHA-S	Press menu button S
pressMenuButton(RIGHT_PAREN)	IMenuComponent	88			Momentary Function Channel: Press menu button RIGHT_PAREN
moveMenuCursor(RIGHT)	IMenuComponent	48			Momentary Function Channel: Move menu cursor RIGHT
pressMenuButton(RETURN)	IMenuComponent	104			Momentary Function Channel: Press menu button RETURN
pressMenuButton(RESET)	IMenuComponent	215			Momentary Function Channel: Press menu button RESET
pressMenuButton(RECORD_SPEED)	IMenuComponent	63			Momentary Function Channel: Press menu button RECORD_SPEED
pressMenuButton(R)	IMenuComponent			ALPHA-R	Press menu button R
pressMenuButton(Q)	IMenuComponent			ALPHA-Q	Press menu button Q
pressMenuButton(POUND)	IMenuComponent	93			Momentary Function Channel: Press menu button POUND
pressMenuButton(PLUS_1000)	IMenuComponent	98			Momentary Function Channel: Press menu button PLUS_1000
pressMenuButton(PLUS_100)	IMenuComponent	97			Momentary Function Channel: Press menu button PLUS_100
pressMenuButton(PLUS_10)	IMenuComponent	20			Momentary Function Channel: Press menu button PLUS_10
pressMenuButton(PAGE_UP)	IMenuComponent	106			Momentary Function Channel: Press menu button PAGE_UP
pressMenuButton(PAGE_DOWN)	IMenuComponent	107			Momentary Function Channel: Press menu button PAGE_DOWN
pressMenuButton(P)	IMenuComponent			ALPHA-P	Press menu button P
pressMenuButton(O)	IMenuComponent			ALPHA-O	Press menu button O
pressMenuButton(N)	IMenuComponent			ALPHA-N	Press menu button N
pressMenuButton(MENU)	IMenuComponent	44			Momentary Function Channel: Press menu button MENU
pressMenuButton(M)	IMenuComponent			ALPHA-M	Press menu button M
pressMenuButton(LIVE_TV)	IMenuComponent	62			Momentary Function Channel: Press menu button LIVE_TV
pressMenuButton(LIST)	IMenuComponent	86			Momentary Function Channel: Press menu button LIST
pressMenuButton(LEFT_PAREN)	IMenuComponent	87			Momentary Function Channel: Press menu button LEFT_PAREN
moveMenuCursor(LEFT)	IMenuComponent	47			Momentary Function Channel: Move menu cursor LEFT
pressMenuButton(L)	IMenuComponent			ALPHA-L	Press menu button L
pressMenuButton(K)	IMenuComponent			ALPHA-K	Press menu button K
pressMenuButton(J)	IMenuComponent			ALPHA-J	Press menu button J
pressMenuButton(INSTANT_REPLAY)	IMenuComponent	218			Momentary Function Channel: Press menu button INSTANT_REPLAY
pressMenuButton(INFO)	IMenuComponent	101			Momentary Function Channel: Press menu button INFO
pressMenuButton(I)	IMenuComponent			ALPHA-I	Press menu button I
pressMenuButton(HOLD)	IMenuComponent	85			Momentary Function Channel: Press menu button HOLD
pressMenuButton(HELP)	IMenuComponent	113			Momentary Function Channel: Press menu button HELP

Receiver Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(H)	IMenuComponent			ALPHA-H	Press menu button H
pressMenuButton(GUIDE)	IMenuComponent	105			Momentary Function Channel: Press menu button GUIDE
pressMenuButton(G)	IMenuComponent			ALPHA-G	Press menu button G
pressMenuButton(FORWARD)	IMenuComponent	82			Momentary Function Channel: Press menu button FORWARD
pressMenuButton(FLASH)	IMenuComponent	203			Momentary Function Channel: Press menu button FLASH
pressMenuButton(FAVORITES)	IMenuComponent	102			Momentary Function Channel: Press menu button FAVORITES
pressMenuButton(F)	IMenuComponent			ALPHA-F	Press menu button F
pressMenuButton(EXIT)	IMenuComponent	50			Momentary Function Channel: Press menu button EXIT
pressMenuButton(ENTER)	IMenuComponent	21			Momentary Function Channel: Press menu button ENTER
pressMenuButton(E)	IMenuComponent			ALPHA-E	Press menu button E
moveMenuCursor(DOWN_RIGHT)	IMenuComponent	54			Momentary Function Channel: Move menu cursor DOWN_RIGHT
moveMenuCursor(DOWN_LEFT)	IMenuComponent	53			Momentary Function Channel: Move menu cursor DOWN_LEFT
moveMenuCursor(DOWN)	IMenuComponent	46			Momentary Function Channel: Move menu cursor DOWN
pressMenuButton(DOT)	IMenuComponent	92			Momentary Function Channel: Press menu button DOT
pressMenuButton(DISPLAY)	IMenuComponent	99			Momentary Function Channel: Press menu button DISPLAY
pressMenuButton(DIMMER)	IMenuComponent	84			Momentary Function Channel: Press menu button DIMMER
pressMenuButton(DIGIT_9)	IMenuComponent	19			Momentary Function Channel: Press menu button DIGIT_9
pressMenuButton(DIGIT_8)	IMenuComponent	18			Momentary Function Channel: Press menu button DIGIT_8
pressMenuButton(DIGIT_7)	IMenuComponent	17			Momentary Function Channel: Press menu button DIGIT_7
pressMenuButton(DIGIT_6)	IMenuComponent	16			Momentary Function Channel: Press menu button DIGIT_6
pressMenuButton(DIGIT_5)	IMenuComponent	15			Momentary Function Channel: Press menu button DIGIT_5
pressMenuButton(DIGIT_4)	IMenuComponent	14			Momentary Function Channel: Press menu button DIGIT_4
pressMenuButton(DIGIT_3)	IMenuComponent	13			Momentary Function Channel: Press menu button DIGIT_3
pressMenuButton(DIGIT_2)	IMenuComponent	12			Momentary Function Channel: Press menu button DIGIT_2
pressMenuButton(DIGIT_1)	IMenuComponent	11			Momentary Function Channel: Press menu button DIGIT_1
pressMenuButton(DIGIT_0)	IMenuComponent	10			Momentary Function Channel: Press menu button DIGIT_0
pressMenuButton(DASH)	IMenuComponent	90			Momentary Function Channel: Press menu button DASH
pressMenuButton(D)	IMenuComponent			ALPHA-D	Press menu button D
pressMenuButton(COMMA)	IMenuComponent	94			Momentary Function Channel: Press menu button COMMA
pressMenuButton(CLEAR)	IMenuComponent	80			Momentary Function Channel: Press menu button CLEAR
pressMenuButton(CANCEL)	IMenuComponent	43			Momentary Function Channel: Press menu button CANCEL
pressMenuButton(C)	IMenuComponent			ALPHA-C	Press menu button C
pressMenuButton(BACK)	IMenuComponent	81			Momentary Function Channel: Press menu button BACK

Receiver Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(B)	IMenuComponent			ALPHA-B	Press menu button B
pressMenuButton(AUDIO)	IMenuComponent	118			Momentary Function Channel: Press menu button AUDIO
pressMenuButton(ASTERISK)	IMenuComponent	91			Momentary Function Channel: Press menu button ASTERISK
pressMenuButton(ANGLE)	IMenuComponent	117			Momentary Function Channel: Press menu button ANGLE
pressMenuButton(ADVANCE)	IMenuComponent	83			Momentary Function Channel: Press menu button ADVANCE
pressMenuButton(AB_REPEAT)	IMenuComponent	124			Momentary Function Channel: Press menu button AB_REPEAT
pressMenuButton(A)	IMenuComponent			ALPHA-A	Press menu button A
selectMenuItem()	IMenuComponent	49			Momentary Function Channel: Select current menu item
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
setPower(ps)	IPowerComponent	255			Discrete Function Channel: Power is on while channel is active
setPower(ON)	IPowerComponent	27			Momentary Function Channel: Power is turned off when channel is activated
setPower(OFF)	IPowerComponent	28			Momentary Function Channel: Power is turned on when channel is activated
cyclePower()	IPowerComponent	9			Momentary Function Channel: Cycle power when channel is activated
processPowerEvent(PowerState)	IPowerComponentListener	255			Feedback Channel: Power state changed, power is on while channel is on
setTreble(treble)	IPreAmpComponent		4		Set treble level, range is 0-255
setLoudnessOn(state)	IPreAmpComponent	207			Discrete Function Channel: Loudness is on while channel is active

Receiver Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setSurroundMode(sm)	IPreAmpComponent			SURROUND-<mode>	Set surround mode, where <mode> is MOVIE,MUSIC,OFF
setBass(bass)	IPreAmpComponent		3		Set bass level, range is 0-255
setBalance(balance)	IPreAmpComponent		2		Set balance level, range is 0-255, 0 is left and 255 is right
adjustBalance(1)	IPreAmpComponent	164			Momentary Function Channel: Balance is incremented when channel is activated
adjustBass(1)	IPreAmpComponent	166			Momentary Function Channel: Bass is incremented when channel is activated
adjustTreble(1)	IPreAmpComponent	168			Momentary Function Channel: Treble is incremented when channel is activated
adjustBalance(-1)	IPreAmpComponent	165			Momentary Function Channel: Balance is decremented when channel is activated
adjustBass(-1)	IPreAmpComponent	167			Momentary Function Channel: Bass is decremented when channel is activated
adjustTreble(-1)	IPreAmpComponent	169			Momentary Function Channel: Treble is decremented when channel is activated
cycleLoudness()	IPreAmpComponent	206			Momentary Function Channel: Cycle loudness when channel is activated
getSurroundMode()	IPreAmpComponent			?SURROUND	Query surround mode, responds with SURROUND-<mode>, where <mode> is MOVIE,MUSIC,OFF
nextSurroundMode()	IPreAmpComponent	170			Momentary Function Channel: Next surround mode is selected when channel is activated
previousSurroundMode()	IPreAmpComponent	171			Momentary Function Channel: Previous surround mode is selected when channel is activated
processSurroundModeEvent(SurroundMode)	IPreAmpComponentListener			SURROUND-<mode>	Surround mode changed, where <mode> is MUSIC,MOVIE,OFF
processBalanceEvent(int)	IPreAmpComponentListener		2		Balance changed, range is 0-255, 0 is left and 255 is right
processBassEvent(int)	IPreAmpComponentListener		3		Bass changed, range is 0-255
processTrebleEvent(int)	IPreAmpComponentListener		4		Treble changed, range is 0-255
processLoudnessEvent(boolean)	IPreAmpComponentListener	207			Feedback Channel: Loudness is on if channel is on
setInputSource(VIDEO,3)	ISourceSelectComponent	33			Momentary Function Channel: Selects input VIDEO,3 when channel is activated
setInputSource(VIDEO,2)	ISourceSelectComponent	32			Momentary Function Channel: Selects input VIDEO,2 when channel is activated
setInputSource(VIDEO,1)	ISourceSelectComponent	31			Momentary Function Channel: Selects input VIDEO,1 when channel is activated
setInputSource(TV,1)	ISourceSelectComponent	30			Momentary Function Channel: Selects input TV,1 when channel is activated
setInputSource(TUNER,1)	ISourceSelectComponent	37			Momentary Function Channel: Selects input TUNER,1 when channel is activated

Receiver Functions (Cont.)

Name	Component	Channel	Level	Command	Notes
setInputSource(TAPE,2)	ISourceSelectComponent	35			Momentary Function Channel: Selects input TAPE,2 when channel is activated
setInputSource(TAPE,1)	ISourceSelectComponent	34			Momentary Function Channel: Selects input TAPE,1 when channel is activated
setInputSource(sourceSelect,inputNumber)	ISourceSelectComponent			INPUT-<sourceSelect>,<inputNumber>	Set the current input, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setInputSource(PHONO,1)	ISourceSelectComponent	38			Momentary Function Channel: Selects input PHONO,1 when channel is activated
setInputSource(CD,1)	ISourceSelectComponent	36			Momentary Function Channel: Selects input CD,1 when channel is activated
setInputSource(AUXILIARY,1)	ISourceSelectComponent	39			Momentary Function Channel: Selects input AUXILIARY,1 when channel is activated
getInputSource()	ISourceSelectComponent			?INPUT	Query current input, responds with INPUT-<sourceSelect>,<inputNumber> where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
processInputSourceEvent(InputSourceSelectInfo)	ISourceSelectComponentListener			INPUT-<sourceSelect>,<inputNumber>	Current input has changed, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setBand(tb)	ITunerStationComponent			BAND-<tb>	Set band, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
setStation(station)	ITunerStationComponent			XCH-<station>	Set station, where <station> is a station string such as "501", "103.7" or "5.1"
setStationPreset(preset)	ITunerStationComponent			TUNERPRESET-<preset>	Set tuner preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
scanStation(FORWARD)	ITunerStationComponent	227			Momentary Function Channel: Scans for next station while channel is activate.
seekStation(FORWARD)	ITunerStationComponent	229			Momentary Function Channel: Seeks for next station while channel is activate
scanStation(BACKWARD)	ITunerStationComponent	228			Momentary Function Channel: Scans for previous station while channel is activate
seekStation(BACKWARD)	ITunerStationComponent	230			Momentary Function Channel: Seeks for previous station while channel is activate
cycleBand()	ITunerStationComponent	40			Momentary Function Channel: Cycle tuner band when channel is activated

Receiver Functions (Cont.)

Name	Component	Channel	Level	Command	Notes
cycleDisplayInfo()	ITunerStationComponent	234			Momentary Function Channel: Cycle display info when channel is activated
cycleStationPresetGroup()	ITunerStationComponent	224			Momentary Function Channel: Cycle station preset group/bank when channel is activated
decrementStation()	ITunerStationComponent	226			Momentary Function Channel: Station is decremented when channel is activated
getBand()	ITunerStationComponent			?BAND	Query for band, responds with BAND-<tb> where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
getStation()	ITunerStationComponent			?XCH	Query for station, responds with XCH-<station> where <station> is a station string such as "501", "103.7" or "5.1"
getStationPreset()	ITunerStationComponent			?TUNERPRESET	Query for tuner preset, responds with TUNERPRESET-<preset>
gotoPreviousStation()	ITunerStationComponent	235			Momentary Function Channel: Previous station is selected when channel is activated
incrementStation()	ITunerStationComponent	225			Momentary Function Channel: Station is incremented when channel is activated
nextStationPreset()	ITunerStationComponent	22			Momentary Function Channel: Next station preset is selected when channel is activated
previousStationPreset()	ITunerStationComponent	23			Momentary Function Channel: Previous station preset is selected when channel is activated
processBandEvent(TunerBand)	ITunerStationComponentListener			BAND-<band>	Band changed, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
processStationEvent(String)	ITunerStationComponentListener			XCH-<station>	Station changed, where <station> is a station string such as "501", "103.7" or "5.1"
processStationPresetEvent(int)	ITunerStationComponentListener			TUNERPRESET-<int>	Tuner preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolumeRamp(UP)	IVolumeComponent	24			Discrete Function Channel: Volume is ramped up while channel is active
setVolumeMuteOn(state)	IVolumeComponent	199			Discrete Function Channel: Volume mute is on while channel is active
setVolumePreset(preset)	IVolumeComponent			VOLPRESET-<preset>	Set volume preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolume(level)	IVolumeComponent		1		Set volume, range is 0-255
setVolumeRamp(DOWN)	IVolumeComponent	25			Discrete Function Channel: Volume is ramped down while channel is active
cycleVolumeMute()	IVolumeComponent	26			Momentary Function Channel: Cycle volume mute when channel is activated
getVolumePreset()	IVolumeComponent			?VOLPRESET	Query for volume preset, responds with VOLPRESET-<preset>
processVolumeRampEvent(UP)	IVolumeComponentListener	24			Feedback Channel: Volume is ramping up while channel is on
processVolumeEvent(int)	IVolumeComponentListener		1		Volume changed, range is 0-255

Receiver Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
processVolumePresetEvent(int)	IVolumeComponentListener			VOLPRESET-<preset>	Volume preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processVolumeRampEvent(DOWN)	IVolumeComponentListener	25			Feedback Channel: Volume is ramping down while channel is on
processVolumeMuteEvent(boolean)	IVolumeComponentListener	199			Feedback Channel: Volume is muted if channel is on

Settop Box

IMenuComponent
IModuleComponent
IModuleComponentListener
IPowerComponent
IPowerComponentListener
ISettopBoxComponent
ISettopBoxComponentListener
ITunerStationComponent
ITunerStationComponentListener
IVolumeComponent
IVolumeComponentListener

Name: Settop Box

Interface: ISettopBox

Settop Box Functions

Name	Component	Channel	Level	Command	Notes
pressMenuButton(ZOOM)	IMenuComponent	116			Momentary Function Channel: Press menu button ZOOM
pressMenuButton(Z)	IMenuComponent			ALPHA-Z	Press menu button Z
pressMenuButton(Y)	IMenuComponent			ALPHA-Y	Press menu button Y
pressMenuButton(X)	IMenuComponent			ALPHA-X	Press menu button X
pressMenuButton(W)	IMenuComponent			ALPHA-W	Press menu button W
pressMenuButton(V)	IMenuComponent			ALPHA-V	Press menu button V
moveMenuCursor(UP_RIGHT)	IMenuComponent	52			Momentary Function Channel: Move menu cursor UP_RIGHT
moveMenuCursor(UP_LEFT)	IMenuComponent	51			Momentary Function Channel: Move menu cursor UP_LEFT
moveMenuCursor(UP)	IMenuComponent	45			Momentary Function Channel: Move menu cursor UP
pressMenuButton(UNDER_SCORE)	IMenuComponent	89			Momentary Function Channel: Press menu button UNDER_SCORE
pressMenuButton(U)	IMenuComponent			ALPHA-U	Press menu button U
pressMenuButton(TV_VCR)	IMenuComponent	29			Momentary Function Channel: Press menu button TV_VCR
pressMenuButton(TOP_MENU)	IMenuComponent	115			Momentary Function Channel: Press menu button TOP_MENU
pressMenuButton(TITLE)	IMenuComponent	114			Momentary Function Channel: Press menu button TITLE
pressMenuButton(THUMBS_UP)	IMenuComponent	59			Momentary Function Channel: Press menu button THUMBS_UP
pressMenuButton(THUMBS_DOWN)	IMenuComponent	58			Momentary Function Channel: Press menu button THUMBS_DOWN
pressMenuButton(T)	IMenuComponent			ALPHA-T	Press menu button T
pressMenuButton(SUBTITLE)	IMenuComponent	100			Momentary Function Channel: Press menu button SUBTITLE
pressMenuButton(S)	IMenuComponent			ALPHA-S	Press menu button S
pressMenuButton(RIGHT_PAREN)	IMenuComponent	88			Momentary Function Channel: Press menu button RIGHT_PAREN

Settop Box Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
moveMenuCursor(RIGHT)	IMenuComponent	48			Momentary Function Channel: Move menu cursor RIGHT
pressMenuButton(RETURN)	IMenuComponent	104			Momentary Function Channel: Press menu button RETURN
pressMenuButton(RESET)	IMenuComponent	215			Momentary Function Channel: Press menu button RESET
pressMenuButton(RECORD_SPEED)	IMenuComponent	63			Momentary Function Channel: Press menu button RECORD_SPEED
pressMenuButton(R)	IMenuComponent			ALPHA-R	Press menu button R
pressMenuButton(Q)	IMenuComponent			ALPHA-Q	Press menu button Q
pressMenuButton(POUND)	IMenuComponent	93			Momentary Function Channel: Press menu button POUND
pressMenuButton(PLUS_1000)	IMenuComponent	98			Momentary Function Channel: Press menu button PLUS_1000
pressMenuButton(PLUS_100)	IMenuComponent	97			Momentary Function Channel: Press menu button PLUS_100
pressMenuButton(PLUS_10)	IMenuComponent	20			Momentary Function Channel: Press menu button PLUS_10
pressMenuButton(PAGE_UP)	IMenuComponent	106			Momentary Function Channel: Press menu button PAGE_UP
pressMenuButton(PAGE_DOWN)	IMenuComponent	107			Momentary Function Channel: Press menu button PAGE_DOWN
pressMenuButton(P)	IMenuComponent			ALPHA-P	Press menu button P
pressMenuButton(O)	IMenuComponent			ALPHA-O	Press menu button O
pressMenuButton(N)	IMenuComponent			ALPHA-N	Press menu button N
pressMenuButton(MENU)	IMenuComponent	44			Momentary Function Channel: Press menu button MENU
pressMenuButton(M)	IMenuComponent			ALPHA-M	Press menu button M
pressMenuButton(LIVE_TV)	IMenuComponent	62			Momentary Function Channel: Press menu button LIVE_TV
pressMenuButton(LIST)	IMenuComponent	86			Momentary Function Channel: Press menu button LIST
pressMenuButton(LEFT_PAREN)	IMenuComponent	87			Momentary Function Channel: Press menu button LEFT_PAREN
moveMenuCursor(LEFT)	IMenuComponent	47			Momentary Function Channel: Move menu cursor LEFT
pressMenuButton(L)	IMenuComponent			ALPHA-L	Press menu button L
pressMenuButton(K)	IMenuComponent			ALPHA-K	Press menu button K
pressMenuButton(J)	IMenuComponent			ALPHA-J	Press menu button J
pressMenuButton(INSTANT_REPLAY)	IMenuComponent	218			Momentary Function Channel: Press menu button INSTANT_REPLAY
pressMenuButton(INFO)	IMenuComponent	101			Momentary Function Channel: Press menu button INFO
pressMenuButton(I)	IMenuComponent			ALPHA-I	Press menu button I
pressMenuButton(HOLD)	IMenuComponent	85			Momentary Function Channel: Press menu button HOLD
pressMenuButton(HELP)	IMenuComponent	113			Momentary Function Channel: Press menu button HELP
pressMenuButton(H)	IMenuComponent			ALPHA-H	Press menu button H
pressMenuButton(GUIDE)	IMenuComponent	105			Momentary Function Channel: Press menu button GUIDE
pressMenuButton(G)	IMenuComponent			ALPHA-G	Press menu button G
pressMenuButton(FORWARD)	IMenuComponent	82			Momentary Function Channel: Press menu button FORWARD

Settop Box Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(FLASH)	IMenuComponent	203			Momentary Function Channel: Press menu button FLASH
pressMenuButton(FAVORITES)	IMenuComponent	102			Momentary Function Channel: Press menu button FAVORITES
pressMenuButton(F)	IMenuComponent			ALPHA-F	Press menu button F
pressMenuButton(EXIT)	IMenuComponent	50			Momentary Function Channel: Press menu button EXIT
pressMenuButton(ENTER)	IMenuComponent	21			Momentary Function Channel: Press menu button ENTER
pressMenuButton(E)	IMenuComponent			ALPHA-E	Press menu button E
moveMenuCursor(DOWN_RIGHT)	IMenuComponent	54			Momentary Function Channel: Move menu cursor DOWN_RIGHT
moveMenuCursor(DOWN_LEFT)	IMenuComponent	53			Momentary Function Channel: Move menu cursor DOWN_LEFT
moveMenuCursor(DOWN)	IMenuComponent	46			Momentary Function Channel: Move menu cursor DOWN
pressMenuButton(DOT)	IMenuComponent	92			Momentary Function Channel: Press menu button DOT
pressMenuButton(DISPLAY)	IMenuComponent	99			Momentary Function Channel: Press menu button DISPLAY
pressMenuButton(DIMMER)	IMenuComponent	84			Momentary Function Channel: Press menu button DIMMER
pressMenuButton(DIGIT_9)	IMenuComponent	19			Momentary Function Channel: Press menu button DIGIT_9
pressMenuButton(DIGIT_8)	IMenuComponent	18			Momentary Function Channel: Press menu button DIGIT_8
pressMenuButton(DIGIT_7)	IMenuComponent	17			Momentary Function Channel: Press menu button DIGIT_7
pressMenuButton(DIGIT_6)	IMenuComponent	16			Momentary Function Channel: Press menu button DIGIT_6
pressMenuButton(DIGIT_5)	IMenuComponent	15			Momentary Function Channel: Press menu button DIGIT_5
pressMenuButton(DIGIT_4)	IMenuComponent	14			Momentary Function Channel: Press menu button DIGIT_4
pressMenuButton(DIGIT_3)	IMenuComponent	13			Momentary Function Channel: Press menu button DIGIT_3
pressMenuButton(DIGIT_2)	IMenuComponent	12			Momentary Function Channel: Press menu button DIGIT_2
pressMenuButton(DIGIT_1)	IMenuComponent	11			Momentary Function Channel: Press menu button DIGIT_1
pressMenuButton(DIGIT_0)	IMenuComponent	10			Momentary Function Channel: Press menu button DIGIT_0
pressMenuButton(DASH)	IMenuComponent	90			Momentary Function Channel: Press menu button DASH
pressMenuButton(D)	IMenuComponent			ALPHA-D	Press menu button D
pressMenuButton(COMMA)	IMenuComponent	94			Momentary Function Channel: Press menu button COMMA
pressMenuButton(CLEAR)	IMenuComponent	80			Momentary Function Channel: Press menu button CLEAR
pressMenuButton(CANCEL)	IMenuComponent	43			Momentary Function Channel: Press menu button CANCEL
pressMenuButton(C)	IMenuComponent			ALPHA-C	Press menu button C
pressMenuButton(BACK)	IMenuComponent	81			Momentary Function Channel: Press menu button BACK
pressMenuButton(B)	IMenuComponent			ALPHA-B	Press menu button B
pressMenuButton(AUDIO)	IMenuComponent	118			Momentary Function Channel: Press menu button AUDIO
pressMenuButton(ASTERISK)	IMenuComponent	91			Momentary Function Channel: Press menu button ASTERISK
pressMenuButton(ANGLE)	IMenuComponent	117			Momentary Function Channel: Press menu button ANGLE

Settop Box Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(ADVANCE)	IMenuComponent	83			Momentary Function Channel: Press menu button ADVANCE
pressMenuButton(AB_REPEAT)	IMenuComponent	124			Momentary Function Channel: Press menu button AB_REPEAT
pressMenuButton(A)	IMenuComponent			ALPHA-A	Press menu button A
selectMenuItem()	IMenuComponent	49			Momentary Function Channel: Select current menu item
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
setPower(ps)	IPowerComponent	255			Discrete Function Channel: Power is on while channel is active
setPower(ON)	IPowerComponent	27			Momentary Function Channel: Power is turned off when channel is activated
setPower(OFF)	IPowerComponent	28			Momentary Function Channel: Power is turned on when channel is activated
cyclePower()	IPowerComponent	9			Momentary Function Channel: Cycle power when channel is activated
processPowerEvent(PowerState)	IPowerComponentListener	255			Feedback Channel: Power state changed, power is on while channel is on
setBSwitchOn(state)	ISettopBoxComponent	212			Discrete Function Channel: AB switch set to B when channel is active
cycleABSwitch()	ISettopBoxComponent	42			Momentary Function Channel: Cycle AB switch when channel is activated
processBSwitchEvent(boolean)	ISettopBoxComponentListener	212			Feedback Channel: AB switch set to B when channel is on
setBand(tb)	ITunerStationComponent			BAND-<tb>	Set band, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
setStation(station)	ITunerStationComponent			XCH-<station>	Set station, where <station> is a station string such as "501", "103.7" or "5.1"
setStationPreset(preset)	ITunerStationComponent			TUNERPRESET-<preset>	Set tuner preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
scanStation(FORWARD)	ITunerStationComponent	227			Momentary Function Channel: Scans for next station while channel is activate.
seekStation(FORWARD)	ITunerStationComponent	229			Momentary Function Channel: Seeks for next station while channel is activate
scanStation(BACKWARD)	ITunerStationComponent	228			Momentary Function Channel: Scans for previous station while channel is activate

Settop Box Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
seekStation(BACKWARD)	ITunerStationComponent	230			Momentary Function Channel: Seeks for previous station while channel is activate
cycleBand()	ITunerStationComponent	40			Momentary Function Channel: Cycle tuner band when channel is activated
cycleDisplayInfo()	ITunerStationComponent	234			Momentary Function Channel: Cycle display info when channel is activated
cycleStationPresetGroup()	ITunerStationComponent	224			Momentary Function Channel: Cycle station preset group/bank when channel is activated
decrementStation()	ITunerStationComponent	226			Momentary Function Channel: Station is decremented when channel is activated
getBand()	ITunerStationComponent			?BAND	Query for band, responds with BAND-<tb> where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
getStation()	ITunerStationComponent			?XCH	Query for station, responds with XCH-<station> where <station> is a station string such as "501", "103.7" or "5.1"
getStationPreset()	ITunerStationComponent			?TUNERPRESET	Query for tuner preset, responds with TUNERPRESET-<preset>
gotoPreviousStation()	ITunerStationComponent	235			Momentary Function Channel: Previous station is selected when channel is activated
incrementStation()	ITunerStationComponent	225			Momentary Function Channel: Station is incremented when channel is activated
nextStationPreset()	ITunerStationComponent	22			Momentary Function Channel: Next station preset is selected when channel is activated
previousStationPreset()	ITunerStationComponent	23			Momentary Function Channel: Previous station preset is selected when channel is activated
processBandEvent(TunerBand)	ITunerStationComponentListener			BAND-<band>	Band changed, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
processStationEvent(String)	ITunerStationComponentListener			XCH-<station>	Station changed, where <station> is a station string such as "501", "103.7" or "5.1"
processStationPresetEvent(int)	ITunerStationComponentListener			TUNERPRESET-<int>	Tuner preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolumeRamp(UP)	IVolumeComponent	24			Discrete Function Channel: Volume is ramped up while channel is active
setVolumeMuteOn(state)	IVolumeComponent	199			Discrete Function Channel: Volume mute is on while channel is active
setVolumePreset(preset)	IVolumeComponent			VOLPRESET-<preset>	Set volume preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolume(level)	IVolumeComponent		1		Set volume, range is 0-255
setVolumeRamp(DOWN)	IVolumeComponent	25			Discrete Function Channel: Volume is ramped down while channel is active
cycleVolumeMute()	IVolumeComponent	26			Momentary Function Channel: Cycle volume mute when channel is activated
getVolumePreset()	IVolumeComponent			?VOLPRESET	Query for volume preset, responds with VOLPRESET-<preset>
processVolumeRampEvent(UP)	IVolumeComponentListener	24			Feedback Channel: Volume is ramping up while channel is on
processVolumeEvent(int)	IVolumeComponentListener		1		Volume changed, range is 0-255
processVolumePresetEvent(int)	IVolumeComponentListener			VOLPRESET-<preset>	Volume preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processVolumeRampEvent(DOWN)	IVolumeComponentListener	25			Feedback Channel: Volume is ramping down while channel is on

Settop Box Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
processVolumeMuteEvent(boolean)	IVolumeComponentListener	199			Feedback Channel: Volume is muted if channel is on

Switcher

IGainComponent
IGainComponentListener
IModuleComponent
IModuleComponentListener
ISwitcherComponent
ISwitcherComponentListener
IVolumeComponent
IVolumeComponentListener

Name: Switcher

Interface: ISwitcher

Switcher Functions

Name	Component	Channel	Level	Command	Notes
setGainRamp(UP)	IGainComponent	140			Discrete Function Channel: Gain is ramped up while channel is active
setGainMuteOn(state)	IGainComponent	143			Discrete Function Channel: Gain mute is on while channel is active
setGain(level)	IGainComponent		5		Set gain, range is 0-255
setGainRamp(DOWN)	IGainComponent	141			Discrete Function Channel: Gain is ramped down while channel is active
cycleGainMute()	IGainComponent	142			Momentary Function Channel: Cycle gain mute when channel is activated
processGainRampEvent(UP)	IGainComponentListener	140			Feedback Channel: Gain is ramping up while channel is on
processGainEvent(int)	IGainComponentListener		5		Gain changed, range is 0-255
processGainRampEvent(DOWN)	IGainComponentListener	141			Feedback Channel: Gain is ramping down while channel is on
processGainMuteEvent(boolean)	IGainComponentListener	143			Feedback Channel: Gain is muted if channel is on
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device

Switcher Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
switchInputToOutput(VIDEO,input,output[])	ISwitcherComponent			VI<input>O<output,output,…>	Switch <input> to one or more <output>s for switcher level Video. Use <input> 0 for disconnect.
getInput(sl,output)	ISwitcherComponent			?INPUT-sl,output	Query for the input connected to an output, respond with SWITCH-<sl>,<input>,<output>,<output>… where <sl> is ALL, VIDEO, or AUDIO and <input> is 0 if there is no connection.
switchInputToOutput(sl,input,output[])	ISwitcherComponent			CL<sl>I<input>O<output,output…>	Switch <input> to one or more <output>s where <sl> is ALL, VIDEO, or AUDIO. Use <input> 0 for disconnect.
getOutput(sl,input)	ISwitcherComponent			?OUTPUT-sl,input	Query for the outputs connected to an input, respond with SWITCH-<sl>,<input>,<output>,<output>… where <sl> is ALL, VIDEO, or AUDIO and <input> is 0 if there is no connection.
setSwitcherPreset(preset)	ISwitcherComponent			SWITCHPRESET-<preset>	Set switcher preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
switchInputToOutput(AUDIO,input,output[])	ISwitcherComponent			AI<input>O<output,output,…>	Switch <input> to one or more <output>s for switcher level Audio. Use <input> 0 for disconnect.
switchInputToOutput(ALL,input,output[])	ISwitcherComponent			CI<input>O<output,output…>	Switch <input> to one or more <output>s for switcher level All. Use <input> 0 for disconnect.
getSwitcherPreset()	ISwitcherComponent			?SWITCHPRESET	Query for switcher preset, responds with SWITCHPRESET-<preset>
processSwitchEvent(SwitcherComponentEvent)	ISwitcherComponentListener			SWITCH-L<sl>I<input>O<output,output,...>	Switch connections changed, where <sl> is ALL, VIDEO, or AUDIO and <input> is 0 if there is no connection.
processSwitcherPresetEvent(int)	ISwitcherComponentListener			PRESET-<preset>	Switcher preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolumeRamp(UP)	IVolumeComponent	24			Discrete Function Channel: Volume is ramped up while channel is active
setVolumeMuteOn(state)	IVolumeComponent	199			Discrete Function Channel: Volume mute is on while channel is active
setVolumePreset(preset)	IVolumeComponent			VOLPRESET-<preset>	Set volume preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolume(level)	IVolumeComponent		1		Set volume, range is 0-255
setVolumeRamp(DOWN)	IVolumeComponent	25			Discrete Function Channel: Volume is ramped down while channel is active
cycleVolumeMute()	IVolumeComponent	26			Momentary Function Channel: Cycle volume mute when channel is activated
getVolumePreset()	IVolumeComponent			?VOLPRESET	Query for volume preset, responds with VOLPRESET-<preset>
processVolumeRampEvent(UP)	IVolumeComponentListener	24			Feedback Channel: Volume is ramping up while channel is on
processVolumeEvent(int)	IVolumeComponentListener		1		Volume changed, range is 0-255

Switcher Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
processVolumePresetEvent(int)	IVolumeComponentListener			VOLPRESET-<preset>	Volume preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processVolumeRampEvent(DOWN)	IVolumeComponentListener	25			Feedback Channel: Volume is ramping down while channel is on
processVolumeMuteEvent(boolean)	IVolumeComponentListener	199			Feedback Channel: Volume is muted if channel is on

TV

IDisplayComponent
IDisplayComponentListener
IMenuComponent
IModuleComponent
IModuleComponentListener
IPowerComponent
IPowerComponentListener
ISourceSelectComponent
ISourceSelectComponentListener
ITunerStationComponent
ITunerStationComponentListener
ITVComponent
ITVComponentListener
IVolumeComponent
IVolumeComponentListener

Name: TV

Interface: ITV

TV Functions

Name	Component	Channel	Level	Command	Notes
setVideoType(vt)	IDisplayComponent			VIDEOTYPE-<vt>	Set video type, where <vt> is AUTO,NTSC,PAL,SECAM
setFreezeOn(state)	IDisplayComponent	214			Discrete Function Channel: Freeze is on while channel is active
setPictureMuteOn(state)	IDisplayComponent	211			Discrete Function Channel: Picture Mute is on while channel is active
setPIPOn(state)	IDisplayComponent	195			Discrete Function Channel: PIP is on while channel is active
setActiveWindow(mss)	IDisplayComponent			ACTIVEWINDOW-<mss>	Set active window, where <mss> is LEFT,RIGHT,MAIN,SUB
setBrightness(level)	IDisplayComponent		10		Set brightness level, range is 0-255
setColor(level)	IDisplayComponent		11		Set color level, range is 0-255
setContrast(level)	IDisplayComponent		12		Set contrast level, range is 0-255
setSharpness(level)	IDisplayComponent		13		Set sharpness level, range is 0-255
setTint(level)	IDisplayComponent		14		Set tint level, range is 0-255
setAspectRatio(aspectRatio)	IDisplayComponent			ASPECT-<aspectRatio>	Set aspect ratio, where <aspectRatio> is ANAMORPHIC,WIDE-SCREEN,NORMAL
adjustBrightness(1)	IDisplayComponent	148			Momentary Function Channel: Brightness is incremented when channel is activated
adjustColor(1)	IDisplayComponent	150			Momentary Function Channel: Color is incremented when channel is activated
adjustContrast(1)	IDisplayComponent	152			Momentary Function Channel: Contrast is incremented when channel is activated

TV Functions (Cont.)

Name	Component	Channel	Level	Command	Notes
adjustSharpness(1)	IDisplayComponent	154			Momentary Function Channel: Sharpness is incremented when channel is activated
adjustTint(1)	IDisplayComponent	156			Momentary Function Channel: Tint is incremented when channel is activated
adjustBrightness(-1)	IDisplayComponent	149			Momentary Function Channel: Brightness is decremented when channel is activated
adjustColor(-1)	IDisplayComponent	151			Momentary Function Channel: Color is decremented when channel is activated
adjustContrast(-1)	IDisplayComponent	153			Momentary Function Channel: Contrast is decremented when channel is activated
adjustSharpness(-1)	IDisplayComponent	155			Momentary Function Channel: Sharpness is decremented when channel is activated
adjustTint(-1)	IDisplayComponent	157			Momentary Function Channel: Tint is decremented when channel is activated
cycleAspectRatio()	IDisplayComponent	142			Momentary Function Channel: Cycle aspect ratios when channel is activated
cycleFreeze()	IDisplayComponent	213			Momentary Function Channel: Cycle freeze when channel is activated
cyclePictureMute()	IDisplayComponent	210			Momentary Function Channel: Cycle picture mute when channel is activated
cyclePIP()	IDisplayComponent	194			Momentary Function Channel: Cycle PIP when channel is activated
cyclePIPPosition()	IDisplayComponent	191			Momentary Function Channel: Cycle PIP positions when channel is activated
getActiveWindow()	IDisplayComponent			?ACTIVEWINDOW	Query active window, responds with ACTIVEWINDOW-<window>, where <window> is LEFT,RIGHT,MAIN,SUB
getAspectRatio()	IDisplayComponent			?ASPECT	Query aspect ratio, responds with ASPECT-<ratio>, where <ratio> is ANAMORPHIC,WIDESCREEN,NORMAL
getVideoType()	IDisplayComponent			?VIDEOTYPE	Query video type, responds with VIDEOTYPE-<type>, where <type> is AUTO,NTSC,PAL,SECAM
swapPIP()	IDisplayComponent	193			Momentary Function Channel: Swap PIP when channel is activated
processVideoTypeEvent(VideoType)	IDisplayComponentListener			VIDEOTYPE-<type>	Video type changed, where <type> is AUTO,NTSC,PAL,SECAM
processActiveWindowEvent(MultiScreenSelect)	IDisplayComponentListener			ACTIVEWINDOW-<window>	Active window changed, where <window> is LEFT,RIGHT,MAIN,SUB
processBrightnessEvent(int)	IDisplayComponentListener		10		Brightness changed, range is 0-255
processColorEvent(int)	IDisplayComponentListener		11		Color changed, range is 0-255
processContrastEvent(int)	IDisplayComponentListener		12		Contrast changed, range is 0-255
processSharpnessEvent(int)	IDisplayComponentListener		13		Sharpness changed, range is 0-255
processTintEvent(int)	IDisplayComponentListener		14		Tint changed, range is 0-255
processFreezeEvent(boolean)	IDisplayComponentListener	214			Feedback Channel: Freeze is on if channel is on
processPictureMuteEvent(boolean)	IDisplayComponentListener	211			Feedback Channel: Picture is muted if channel is on

TV Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
processPIPEvent(boolean)	IDisplayComponentListener	195			Feedback Channel: PIP is on if channel is on
processAspectRatioEvent(AspectRatio)	IDisplayComponentListener			ASPECT-<ratio>	Aspect ratio changed, where <ratio> is ANAMORPHIC,WIDE-SCREEN,NORMAL
pressMenuButton(ZOOM)	IMenuComponent	116			Momentary Function Channel: Press menu button ZOOM
pressMenuButton(Z)	IMenuComponent			ALPHA-Z	Press menu button Z
pressMenuButton(Y)	IMenuComponent			ALPHA-Y	Press menu button Y
pressMenuButton(X)	IMenuComponent			ALPHA-X	Press menu button X
pressMenuButton(W)	IMenuComponent			ALPHA-W	Press menu button W
pressMenuButton(V)	IMenuComponent			ALPHA-V	Press menu button V
moveMenuCursor(UP_RIGHT)	IMenuComponent	52			Momentary Function Channel: Move menu cursor UP_RIGHT
moveMenuCursor(UP_LEFT)	IMenuComponent	51			Momentary Function Channel: Move menu cursor UP_LEFT
moveMenuCursor(UP)	IMenuComponent	45			Momentary Function Channel: Move menu cursor UP
pressMenuButton(UNDER_SCORE)	IMenuComponent	89			Momentary Function Channel: Press menu button UNDER_SCORE
pressMenuButton(U)	IMenuComponent			ALPHA-U	Press menu button U
pressMenuButton(TV_VCR)	IMenuComponent	29			Momentary Function Channel: Press menu button TV_VCR
pressMenuButton(TOP_MENU)	IMenuComponent	115			Momentary Function Channel: Press menu button TOP_MENU
pressMenuButton(TITLE)	IMenuComponent	114			Momentary Function Channel: Press menu button TITLE
pressMenuButton(THUMBS_UP)	IMenuComponent	59			Momentary Function Channel: Press menu button THUMBS_UP
pressMenuButton(THUMBS_DOWN)	IMenuComponent	58			Momentary Function Channel: Press menu button THUMBS_DOWN
pressMenuButton(T)	IMenuComponent			ALPHA-T	Press menu button T
pressMenuButton(SUBTITLE)	IMenuComponent	100			Momentary Function Channel: Press menu button SUBTITLE
pressMenuButton(S)	IMenuComponent			ALPHA-S	Press menu button S
pressMenuButton(RIGHT_PAREN)	IMenuComponent	88			Momentary Function Channel: Press menu button RIGHT_PAREN
moveMenuCursor(RIGHT)	IMenuComponent	48			Momentary Function Channel: Move menu cursor RIGHT
pressMenuButton(RETURN)	IMenuComponent	104			Momentary Function Channel: Press menu button RETURN
pressMenuButton(RESET)	IMenuComponent	215			Momentary Function Channel: Press menu button RESET
pressMenuButton(RECORD_SPEED)	IMenuComponent	63			Momentary Function Channel: Press menu button RECORD_SPEED
pressMenuButton(R)	IMenuComponent			ALPHA-R	Press menu button R
pressMenuButton(Q)	IMenuComponent			ALPHA-Q	Press menu button Q
pressMenuButton(POUND)	IMenuComponent	93			Momentary Function Channel: Press menu button POUND
pressMenuButton(PLUS_1000)	IMenuComponent	98			Momentary Function Channel: Press menu button PLUS_1000
pressMenuButton(PLUS_100)	IMenuComponent	97			Momentary Function Channel: Press menu button PLUS_100
pressMenuButton(PLUS_10)	IMenuComponent	20			Momentary Function Channel: Press menu button PLUS_10
pressMenuButton(PAGE_UP)	IMenuComponent	106			Momentary Function Channel: Press menu button PAGE_UP

TV Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(PAGE_DOWN)	IMenuComponent	107			Momentary Function Channel: Press menu button PAGE_DOWN
pressMenuButton(P)	IMenuComponent			ALPHA-P	Press menu button P
pressMenuButton(O)	IMenuComponent			ALPHA-O	Press menu button O
pressMenuButton(N)	IMenuComponent			ALPHA-N	Press menu button N
pressMenuButton(MENU)	IMenuComponent	44			Momentary Function Channel: Press menu button MENU
pressMenuButton(M)	IMenuComponent			ALPHA-M	Press menu button M
pressMenuButton(LIVE_TV)	IMenuComponent	62			Momentary Function Channel: Press menu button LIVE_TV
pressMenuButton(LIST)	IMenuComponent	86			Momentary Function Channel: Press menu button LIST
pressMenuButton(LEFT_PAREN)	IMenuComponent	87			Momentary Function Channel: Press menu button LEFT_PAREN
moveMenuCursor(LEFT)	IMenuComponent	47			Momentary Function Channel: Move menu cursor LEFT
pressMenuButton(L)	IMenuComponent			ALPHA-L	Press menu button L
pressMenuButton(K)	IMenuComponent			ALPHA-K	Press menu button K
pressMenuButton(J)	IMenuComponent			ALPHA-J	Press menu button J
pressMenuButton(INSTANT_REPLAY)	IMenuComponent	218			Momentary Function Channel: Press menu button INSTANT_REPLAY
pressMenuButton(INFO)	IMenuComponent	101			Momentary Function Channel: Press menu button INFO
pressMenuButton(I)	IMenuComponent			ALPHA-I	Press menu button I
pressMenuButton(HOLD)	IMenuComponent	85			Momentary Function Channel: Press menu button HOLD
pressMenuButton(HELP)	IMenuComponent	113			Momentary Function Channel: Press menu button HELP
pressMenuButton(H)	IMenuComponent			ALPHA-H	Press menu button H
pressMenuButton(GUIDE)	IMenuComponent	105			Momentary Function Channel: Press menu button GUIDE
pressMenuButton(G)	IMenuComponent			ALPHA-G	Press menu button G
pressMenuButton(FORWARD)	IMenuComponent	82			Momentary Function Channel: Press menu button FORWARD
pressMenuButton(FLASH)	IMenuComponent	203			Momentary Function Channel: Press menu button FLASH
pressMenuButton(FAVORITES)	IMenuComponent	102			Momentary Function Channel: Press menu button FAVORITES
pressMenuButton(F)	IMenuComponent			ALPHA-F	Press menu button F
pressMenuButton(EXIT)	IMenuComponent	50			Momentary Function Channel: Press menu button EXIT
pressMenuButton(ENTER)	IMenuComponent	21			Momentary Function Channel: Press menu button ENTER
pressMenuButton(E)	IMenuComponent			ALPHA-E	Press menu button E
moveMenuCursor(DOWN_RIGHT)	IMenuComponent	54			Momentary Function Channel: Move menu cursor DOWN_RIGHT
moveMenuCursor(DOWN_LEFT)	IMenuComponent	53			Momentary Function Channel: Move menu cursor DOWN_LEFT
moveMenuCursor(DOWN)	IMenuComponent	46			Momentary Function Channel: Move menu cursor DOWN
pressMenuButton(DOT)	IMenuComponent	92			Momentary Function Channel: Press menu button DOT
pressMenuButton(DISPLAY)	IMenuComponent	99			Momentary Function Channel: Press menu button DISPLAY

TV Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(DIMMER)	IMenuComponent	84			Momentary Function Channel: Press menu button DIMMER
pressMenuButton(DIGIT_9)	IMenuComponent	19			Momentary Function Channel: Press menu button DIGIT_9
pressMenuButton(DIGIT_8)	IMenuComponent	18			Momentary Function Channel: Press menu button DIGIT_8
pressMenuButton(DIGIT_7)	IMenuComponent	17			Momentary Function Channel: Press menu button DIGIT_7
pressMenuButton(DIGIT_6)	IMenuComponent	16			Momentary Function Channel: Press menu button DIGIT_6
pressMenuButton(DIGIT_5)	IMenuComponent	15			Momentary Function Channel: Press menu button DIGIT_5
pressMenuButton(DIGIT_4)	IMenuComponent	14			Momentary Function Channel: Press menu button DIGIT_4
pressMenuButton(DIGIT_3)	IMenuComponent	13			Momentary Function Channel: Press menu button DIGIT_3
pressMenuButton(DIGIT_2)	IMenuComponent	12			Momentary Function Channel: Press menu button DIGIT_2
pressMenuButton(DIGIT_1)	IMenuComponent	11			Momentary Function Channel: Press menu button DIGIT_1
pressMenuButton(DIGIT_0)	IMenuComponent	10			Momentary Function Channel: Press menu button DIGIT_0
pressMenuButton(DASH)	IMenuComponent	90			Momentary Function Channel: Press menu button DASH
pressMenuButton(D)	IMenuComponent			ALPHA-D	Press menu button D
pressMenuButton(COMMA)	IMenuComponent	94			Momentary Function Channel: Press menu button COMMA
pressMenuButton(CLEAR)	IMenuComponent	80			Momentary Function Channel: Press menu button CLEAR
pressMenuButton(CANCEL)	IMenuComponent	43			Momentary Function Channel: Press menu button CANCEL
pressMenuButton(C)	IMenuComponent			ALPHA-C	Press menu button C
pressMenuButton(BACK)	IMenuComponent	81			Momentary Function Channel: Press menu button BACK
pressMenuButton(B)	IMenuComponent			ALPHA-B	Press menu button B
pressMenuButton(AUDIO)	IMenuComponent	118			Momentary Function Channel: Press menu button AUDIO
pressMenuButton(ASTERISK)	IMenuComponent	91			Momentary Function Channel: Press menu button ASTERISK
pressMenuButton(ANGLE)	IMenuComponent	117			Momentary Function Channel: Press menu button ANGLE
pressMenuButton(ADVANCE)	IMenuComponent	83			Momentary Function Channel: Press menu button ADVANCE
pressMenuButton(AB_REPEAT)	IMenuComponent	124			Momentary Function Channel: Press menu button AB_REPEAT
pressMenuButton(A)	IMenuComponent			ALPHA-A	Press menu button A
selectMenuItem()	IMenuComponent	49			Momentary Function Channel: Select current menu item
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device

TV Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
setPower(ps)	IPowerComponent	255			Discrete Function Channel: Power is on while channel is active
setPower(ON)	IPowerComponent	27			Momentary Function Channel: Power is turned off when channel is activated
setPower(OFF)	IPowerComponent	28			Momentary Function Channel: Power is turned on when channel is activated
cyclePower()	IPowerComponent	9			Momentary Function Channel: Cycle power when channel is activated
processPowerEvent(PowerState)	IPowerComponentListener	255			Feedback Channel: Power state changed, power is on while channel is on
setInputSource(VIDEO,3)	ISourceSelectComponent	33			Momentary Function Channel: Selects input VIDEO,3 when channel is activated
setInputSource(VIDEO,2)	ISourceSelectComponent	32			Momentary Function Channel: Selects input VIDEO,2 when channel is activated
setInputSource(VIDEO,1)	ISourceSelectComponent	31			Momentary Function Channel: Selects input VIDEO,1 when channel is activated
setInputSource(TV,1)	ISourceSelectComponent	30			Momentary Function Channel: Selects input TV,1 when channel is activated
setInputSource(TUNER,1)	ISourceSelectComponent	37			Momentary Function Channel: Selects input TUNER,1 when channel is activated
setInputSource(TAPE,2)	ISourceSelectComponent	35			Momentary Function Channel: Selects input TAPE,2 when channel is activated
setInputSource(TAPE,1)	ISourceSelectComponent	34			Momentary Function Channel: Selects input TAPE,1 when channel is activated
setInputSource(sourceSelect,inputNumber)	ISourceSelectComponent			INPUT-<sourceSelect>,<inputNumber>	Set the current input, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setInputSource(PHONO,1)	ISourceSelectComponent	38			Momentary Function Channel: Selects input PHONO,1 when channel is activated

TV Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setInputSource(CD,1)	ISourceSelectComponent	36			Momentary Function Channel: Selects input CD,1 when channel is activated
setInputSource(AUXILIARY,1)	ISourceSelectComponent	39			Momentary Function Channel: Selects input AUXILIARY,1 when channel is activated
getInputSource()	ISourceSelectComponent			?INPUT	Query current input, responds with INPUT-<sourceSelect>,<inputNumber> where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
processInputSourceEvent(InputSourceSelectInfo)	ISourceSelectComponentListener			INPUT-<sourceSelect>,<inputNumber>	Current input has changed, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setBand(tb)	ITunerStationComponent			BAND-<tb>	Set band, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
setStation(station)	ITunerStationComponent			XCH-<station>	Set station, where <station> is a station string such as "501", "103.7" or "5.1"
setStationPreset(preset)	ITunerStationComponent			TUNERPRESET-<preset>	Set tuner preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
scanStation(FORWARD)	ITunerStationComponent	227			Momentary Function Channel: Scans for next station while channel is activate.
seekStation(FORWARD)	ITunerStationComponent	229			Momentary Function Channel: Seeks for next station while channel is activate
scanStation(BACKWARD)	ITunerStationComponent	228			Momentary Function Channel: Scans for previous station while channel is activate
seekStation(BACKWARD)	ITunerStationComponent	230			Momentary Function Channel: Seeks for previous station while channel is activate
cycleBand()	ITunerStationComponent	40			Momentary Function Channel: Cycle tuner band when channel is activated
cycleDisplayInfo()	ITunerStationComponent	234			Momentary Function Channel: Cycle display info when channel is activated
cycleStationPresetGroup()	ITunerStationComponent	224			Momentary Function Channel: Cycle station preset group/bank when channel is activated
decrementStation()	ITunerStationComponent	226			Momentary Function Channel: Station is decremented when channel is activated
getBand()	ITunerStationComponent			?BAND	Query for band, responds with BAND-<tb> where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
getStation()	ITunerStationComponent			?XCH	Query for station, responds with XCH-<station> where <station> is a station string such as "501", "103.7" or "5.1"

TV Functions (Cont.)

Name	Component	Channel	Level	Command	Notes
getStationPreset()	ITunerStationComponent			?TUNERPRESET	Query for tuner preset, responds with TUNERPRESET-<preset>
gotoPreviousStation()	ITunerStationComponent	235			Momentary Function Channel: Previous station is selected when channel is activated
incrementStation()	ITunerStationComponent	225			Momentary Function Channel: Station is incremented when channel is activated
nextStationPreset()	ITunerStationComponent	22			Momentary Function Channel: Next station preset is selected when channel is activated
previousStationPreset()	ITunerStationComponent	23			Momentary Function Channel: Previous station preset is selected when channel is activated
processBandEvent(TunerBand)	ITunerStationComponentListener			BAND-<band>	Band changed, where <tb> is AM,FM,FM_MONO,SATELLITE_RADIO,LONG_WAVE,MEDIUM_WAVE,SHORT_WAVE,TV
processStationEvent(String)	ITunerStationComponentListener			XCH-<station>	Station changed, where <station> is a station string such as "501", "103.7" or "5.1"
processStationPresetEvent(int)	ITunerStationComponentListener			TUNERPRESET-<int>	Tuner preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolumeRamp(UP)	IVolumeComponent	24			Discrete Function Channel: Volume is ramped up while channel is active
setVolumeMuteOn(state)	IVolumeComponent	199			Discrete Function Channel: Volume mute is on while channel is active
setVolumePreset(preset)	IVolumeComponent			VOLPRESET-<preset>	Set volume preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolume(level)	IVolumeComponent		1		Set volume, range is 0-255
setVolumeRamp(DOWN)	IVolumeComponent	25			Discrete Function Channel: Volume is ramped down while channel is active
cycleVolumeMute()	IVolumeComponent	26			Momentary Function Channel: Cycle volume mute when channel is activated
getVolumePreset()	IVolumeComponent			?VOLPRESET	Query for volume preset, responds with VOLPRESET-<preset>
processVolumeRampEvent(UP)	IVolumeComponentListener	24			Feedback Channel: Volume is ramping up while channel is on
processVolumeEvent(int)	IVolumeComponentListener		1		Volume changed, range is 0-255
processVolumePresetEvent(int)	IVolumeComponentListener			VOLPRESET-<preset>	Volume preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processVolumeRampEvent(DOWN)	IVolumeComponentListener	25			Feedback Channel: Volume is ramping down while channel is on
processVolumeMuteEvent(boolean)	IVolumeComponentListener	199			Feedback Channel: Volume is muted if channel is on

Video Projector

IDisplayComponent
IDisplayComponentListener
ILampComponent
ILampComponentListener
IMenuComponent
IModuleComponent
IModuleComponentListener
ISourceSelectComponent
ISourceSelectComponentListener
IVideoProjectorComponent
IVideoProjectorComponentListener
IVolumeComponent
IVolumeComponentListener

Name: Video Projector

Interface: IVideoProjector

Video Projector Functions

Name	Component	Channel	Level	Command	Notes
setVideoType(vt)	IDisplayComponent			VIDEOTYPE-<vt>	Set video type, where <vt> is AUTO,NTSC,PAL,SECAM
setFreezeOn(state)	IDisplayComponent	214			Discrete Function Channel: Freeze is on while channel is active
setPictureMuteOn(state)	IDisplayComponent	211			Discrete Function Channel: Picture Mute is on while channel is active
setPIPOn(state)	IDisplayComponent	195			Discrete Function Channel: PIP is on while channel is active
setActiveWindow(mss)	IDisplayComponent			ACTIVEWINDOW-<mss>	Set active window, where <mss> is LEFT,RIGHT,MAIN,SUB
setBrightness(level)	IDisplayComponent		10		Set brightness level, range is 0-255
setColor(level)	IDisplayComponent		11		Set color level, range is 0-255
setContrast(level)	IDisplayComponent		12		Set contrast level, range is 0-255
setSharpness(level)	IDisplayComponent		13		Set sharpness level, range is 0-255
setTint(level)	IDisplayComponent		14		Set tint level, range is 0-255
setAspectRatio(aspectRatio)	IDisplayComponent			ASPECT-<aspectRatio>	Set aspect ratio, where <aspectRatio> is ANAMORPHIC,WIDE-SCREEN,NORMAL
adjustBrightness(1)	IDisplayComponent	148			Momentary Function Channel: Brightness is incremented when channel is activated
adjustColor(1)	IDisplayComponent	150			Momentary Function Channel: Color is incremented when channel is activated
adjustContrast(1)	IDisplayComponent	152			Momentary Function Channel: Contrast is incremented when channel is activated
adjustSharpness(1)	IDisplayComponent	154			Momentary Function Channel: Sharpness is incremented when channel is activated

Video Projector Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
adjustTint(1)	IDisplayComponent	156			Momentary Function Channel: Tint is incremented when channel is activated
adjustBrightness(-1)	IDisplayComponent	149			Momentary Function Channel: Brightness is decremented when channel is activated
adjustColor(-1)	IDisplayComponent	151			Momentary Function Channel: Color is decremented when channel is activated
adjustContrast(-1)	IDisplayComponent	153			Momentary Function Channel: Contrast is decremented when channel is activated
adjustSharpness(-1)	IDisplayComponent	155			Momentary Function Channel: Sharpness is decremented when channel is activated
adjustTint(-1)	IDisplayComponent	157			Momentary Function Channel: Tint is decremented when channel is activated
cycleAspectRatio()	IDisplayComponent	142			Momentary Function Channel: Cycle aspect ratios when channel is activated
cycleFreeze()	IDisplayComponent	213			Momentary Function Channel: Cycle freeze when channel is activated
cyclePictureMute()	IDisplayComponent	210			Momentary Function Channel: Cycle picture mute when channel is activated
cyclePIP()	IDisplayComponent	194			Momentary Function Channel: Cycle PIP when channel is activated
cyclePIPPosition()	IDisplayComponent	191			Momentary Function Channel: Cycle PIP positions when channel is activated
getActiveWindow()	IDisplayComponent			?ACTIVEWINDOW	Query active window, responds with ACTIVEWINDOW-<window>, where <window> is LEFT,RIGHT,MAIN,SUB
getAspectRatio()	IDisplayComponent			?ASPECT	Query aspect ratio, responds with ASPECT-<ratio>, where <ratio> is ANAMORPHIC,WIDESCREEN,NORMAL
getVideoType()	IDisplayComponent			?VIDEOTYPE	Query video type, responds with VIDEOTYPE-<type>, where <type> is AUTO,NTSC,PAL,SECAM
swapPIP()	IDisplayComponent	193			Momentary Function Channel: Swap PIP when channel is activated
processVideoTypeEvent(VideoType)	IDisplayComponentListener			VIDEOTYPE-<type>	Video type changed, where <type> is AUTO,NTSC,PAL,SECAM
processActiveWindowEvent(MultiScreenSelect)	IDisplayComponentListener			ACTIVEWINDOW-<window>	Active window changed, where <window> is LEFT,RIGHT,MAIN,SUB
processBrightnessEvent(int)	IDisplayComponentListener		10		Brightness changed, range is 0-255
processColorEvent(int)	IDisplayComponentListener		11		Color changed, range is 0-255
processContrastEvent(int)	IDisplayComponentListener		12		Contrast changed, range is 0-255
processSharpnessEvent(int)	IDisplayComponentListener		13		Sharpness changed, range is 0-255
processTintEvent(int)	IDisplayComponentListener		14		Tint changed, range is 0-255
processFreezeEvent(boolean)	IDisplayComponentListener	214			Feedback Channel: Freeze is on if channel is on
processPictureMuteEvent(boolean)	IDisplayComponentListener	211			Feedback Channel: Picture is muted if channel is on
processPIPEvent(boolean)	IDisplayComponentListener	195			Feedback Channel: PIP is on if channel is on

Video Projector Functions (Cont.)

Name	Component	Channel	Level	Command	Notes
processAspectRatioEvent(AspectRatio)	IDisplayComponentListener			ASPECT-<ratio>	Aspect ratio changed, where <ratio> is ANAMORPHIC,WIDE-SCREEN,NORMAL
setCounterNotificationOn(state)	ILampComponent			COUNTERNOTIFY-<state>	Turn counter notification on or off, where <state> is 1 or 0
setCoolDownTime(secs)	ILampComponent			COOLDOWN-<time>	Set cool down time where <time> is in seconds
setWarmUpTime(secs)	ILampComponent			WARMUP-<time>	Set warm up time where <time> is in seconds
setLampPower(ps)	ILampComponent	255			Discrete Function Channel: Lamp power is on while channel is active
setLampPower(ON)	ILampComponent	27			Momentary Function Channel: Lamp power is turned off when channel is activated
setLampPower(OFF)	ILampComponent	28			Momentary Function Channel: Lamp power is turned on when channel is activated
setLampTime(hours)	ILampComponent			LAMPTIME-<time>	Set lamp time where <time> is in hours
cycleLampPower()	ILampComponent	9			Momentary Function Channel: Cycle lamp power when channel is activated
getCoolDownTime()	ILampComponent			?COOLDOWN	Query for cool down time, responds with COOLDOWN-<time> where <time> is in seconds
getLampTime()	ILampComponent			?LAMPTIME	Query for lamp time, responds with LAMPTIME-<time> where <time> is in hours
getWarmUpTime()	ILampComponent			?WARMUP	Query for warm up time, responds with WARMUP-<time> where <time> is in seconds
processLampPowerEvent(PowerState)	ILampComponentListener	255			Feedback Channel: Channel for Warming/Cooling. Indicates Lamp is warming/cooling and cannot accept commands. (see chart below)
processLampPowerEvent(PowerState)	ILampComponentListener	253			Feedback Channel: Channel for Warming/Cooling. Indicates Lamp is warming/cooling and cannot accept commands. (see chart below)
processCoolDownCounterEvent(int)	ILampComponentListener			COOLING-<time>	Cool down counter time, <time> is seconds remaining
processLampTimeEvent(int)	ILampComponentListener			LAMPTIME-<time>	Lamp time, <time> is elapsed hours
processWarmUpCounterEvent(int)	ILampComponentListener			WARMING-<time>	Warm up counter time, <time> is seconds remaining
pressMenuButton(ZOOM)	IMenuComponent	116			Momentary Function Channel: Press menu button ZOOM
pressMenuButton(Z)	IMenuComponent			ALPHA-Z	Press menu button Z
pressMenuButton(Y)	IMenuComponent			ALPHA-Y	Press menu button Y
pressMenuButton(X)	IMenuComponent			ALPHA-X	Press menu button X
pressMenuButton(W)	IMenuComponent			ALPHA-W	Press menu button W
pressMenuButton(V)	IMenuComponent			ALPHA-V	Press menu button V
moveMenuCursor(UP_RIGHT)	IMenuComponent	52			Momentary Function Channel: Move menu cursor UP_RIGHT
moveMenuCursor(UP_LEFT)	IMenuComponent	51			Momentary Function Channel: Move menu cursor UP_LEFT
moveMenuCursor(UP)	IMenuComponent	45			Momentary Function Channel: Move menu cursor UP
pressMenuButton(UNDER_SCORE)	IMenuComponent	89			Momentary Function Channel: Press menu button UNDER_SCORE

Video Projector Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(U)	IMenuComponent			ALPHA-U	Press menu button U
pressMenuButton(TV_VCR)	IMenuComponent	29			Momentary Function Channel: Press menu button TV_VCR
pressMenuButton(TOP_MENU)	IMenuComponent	115			Momentary Function Channel: Press menu button TOP_MENU
pressMenuButton(TITLE)	IMenuComponent	114			Momentary Function Channel: Press menu button TITLE
pressMenuButton(THUMBS_UP)	IMenuComponent	59			Momentary Function Channel: Press menu button THUMBS_UP
pressMenuButton(THUMBS_DOWN)	IMenuComponent	58			Momentary Function Channel: Press menu button THUMBS_DOWN
pressMenuButton(T)	IMenuComponent			ALPHA-T	Press menu button T
pressMenuButton(SUBTITLE)	IMenuComponent	100			Momentary Function Channel: Press menu button SUBTITLE
pressMenuButton(S)	IMenuComponent			ALPHA-S	Press menu button S
pressMenuButton(RIGHT_PAREN)	IMenuComponent	88			Momentary Function Channel: Press menu button RIGHT_PAREN
moveMenuCursor(RIGHT)	IMenuComponent	48			Momentary Function Channel: Move menu cursor RIGHT
pressMenuButton(RETURN)	IMenuComponent	104			Momentary Function Channel: Press menu button RETURN
pressMenuButton(RESET)	IMenuComponent	215			Momentary Function Channel: Press menu button RESET
pressMenuButton(RECORD_SPEED)	IMenuComponent	63			Momentary Function Channel: Press menu button RECORD_SPEED
pressMenuButton(R)	IMenuComponent			ALPHA-R	Press menu button R
pressMenuButton(Q)	IMenuComponent			ALPHA-Q	Press menu button Q
pressMenuButton(POUND)	IMenuComponent	93			Momentary Function Channel: Press menu button POUND
pressMenuButton(PLUS_1000)	IMenuComponent	98			Momentary Function Channel: Press menu button PLUS_1000
pressMenuButton(PLUS_100)	IMenuComponent	97			Momentary Function Channel: Press menu button PLUS_100
pressMenuButton(PLUS_10)	IMenuComponent	20			Momentary Function Channel: Press menu button PLUS_10
pressMenuButton(PAGE_UP)	IMenuComponent	106			Momentary Function Channel: Press menu button PAGE_UP
pressMenuButton(PAGE_DOWN)	IMenuComponent	107			Momentary Function Channel: Press menu button PAGE_DOWN
pressMenuButton(P)	IMenuComponent			ALPHA-P	Press menu button P
pressMenuButton(O)	IMenuComponent			ALPHA-O	Press menu button O
pressMenuButton(N)	IMenuComponent			ALPHA-N	Press menu button N
pressMenuButton(MENU)	IMenuComponent	44			Momentary Function Channel: Press menu button MENU
pressMenuButton(M)	IMenuComponent			ALPHA-M	Press menu button M
pressMenuButton(LIVE_TV)	IMenuComponent	62			Momentary Function Channel: Press menu button LIVE_TV
pressMenuButton(LIST)	IMenuComponent	86			Momentary Function Channel: Press menu button LIST
pressMenuButton(LEFT_PAREN)	IMenuComponent	87			Momentary Function Channel: Press menu button LEFT_PAREN
moveMenuCursor(LEFT)	IMenuComponent	47			Momentary Function Channel: Move menu cursor LEFT
pressMenuButton(L)	IMenuComponent			ALPHA-L	Press menu button L
pressMenuButton(K)	IMenuComponent			ALPHA-K	Press menu button K

Video Projector Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(J)	IMenuComponent			ALPHA-J	Press menu button J
pressMenuButton(INSTANT_REPLAY)	IMenuComponent	218			Momentary Function Channel: Press menu button INSTANT_REPLAY
pressMenuButton(INFO)	IMenuComponent	101			Momentary Function Channel: Press menu button INFO
pressMenuButton(I)	IMenuComponent			ALPHA-I	Press menu button I
pressMenuButton(HOLD)	IMenuComponent	85			Momentary Function Channel: Press menu button HOLD
pressMenuButton(HELP)	IMenuComponent	113			Momentary Function Channel: Press menu button HELP
pressMenuButton(H)	IMenuComponent			ALPHA-H	Press menu button H
pressMenuButton(GUIDE)	IMenuComponent	105			Momentary Function Channel: Press menu button GUIDE
pressMenuButton(G)	IMenuComponent			ALPHA-G	Press menu button G
pressMenuButton(FORWARD)	IMenuComponent	82			Momentary Function Channel: Press menu button FORWARD
pressMenuButton(FLASH)	IMenuComponent	203			Momentary Function Channel: Press menu button FLASH
pressMenuButton(FAVORITES)	IMenuComponent	102			Momentary Function Channel: Press menu button FAVORITES
pressMenuButton(F)	IMenuComponent			ALPHA-F	Press menu button F
pressMenuButton(EXIT)	IMenuComponent	50			Momentary Function Channel: Press menu button EXIT
pressMenuButton(ENTER)	IMenuComponent	21			Momentary Function Channel: Press menu button ENTER
pressMenuButton(E)	IMenuComponent			ALPHA-E	Press menu button E
moveMenuCursor(DOWN_RIGHT)	IMenuComponent	54			Momentary Function Channel: Move menu cursor DOWN_RIGHT
moveMenuCursor(DOWN_LEFT)	IMenuComponent	53			Momentary Function Channel: Move menu cursor DOWN_LEFT
moveMenuCursor(DOWN)	IMenuComponent	46			Momentary Function Channel: Move menu cursor DOWN
pressMenuButton(DOT)	IMenuComponent	92			Momentary Function Channel: Press menu button DOT
pressMenuButton(DISPLAY)	IMenuComponent	99			Momentary Function Channel: Press menu button DISPLAY
pressMenuButton(DIMMER)	IMenuComponent	84			Momentary Function Channel: Press menu button DIMMER
pressMenuButton(DIGIT_9)	IMenuComponent	19			Momentary Function Channel: Press menu button DIGIT_9
pressMenuButton(DIGIT_8)	IMenuComponent	18			Momentary Function Channel: Press menu button DIGIT_8
pressMenuButton(DIGIT_7)	IMenuComponent	17			Momentary Function Channel: Press menu button DIGIT_7
pressMenuButton(DIGIT_6)	IMenuComponent	16			Momentary Function Channel: Press menu button DIGIT_6
pressMenuButton(DIGIT_5)	IMenuComponent	15			Momentary Function Channel: Press menu button DIGIT_5
pressMenuButton(DIGIT_4)	IMenuComponent	14			Momentary Function Channel: Press menu button DIGIT_4
pressMenuButton(DIGIT_3)	IMenuComponent	13			Momentary Function Channel: Press menu button DIGIT_3
pressMenuButton(DIGIT_2)	IMenuComponent	12			Momentary Function Channel: Press menu button DIGIT_2
pressMenuButton(DIGIT_1)	IMenuComponent	11			Momentary Function Channel: Press menu button DIGIT_1
pressMenuButton(DIGIT_0)	IMenuComponent	10			Momentary Function Channel: Press menu button DIGIT_0
pressMenuButton(DASH)	IMenuComponent	90			Momentary Function Channel: Press menu button DASH

Video Projector Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
pressMenuButton(D)	IMenuComponent			ALPHA-D	Press menu button D
pressMenuButton(COMMA)	IMenuComponent	94			Momentary Function Channel: Press menu button COMMA
pressMenuButton(CLEAR)	IMenuComponent	80			Momentary Function Channel: Press menu button CLEAR
pressMenuButton(CANCEL)	IMenuComponent	43			Momentary Function Channel: Press menu button CANCEL
pressMenuButton(C)	IMenuComponent			ALPHA-C	Press menu button C
pressMenuButton(BACK)	IMenuComponent	81			Momentary Function Channel: Press menu button BACK
pressMenuButton(B)	IMenuComponent			ALPHA-B	Press menu button B
pressMenuButton(AUDIO)	IMenuComponent	118			Momentary Function Channel: Press menu button AUDIO
pressMenuButton(ASTERISK)	IMenuComponent	91			Momentary Function Channel: Press menu button ASTERISK
pressMenuButton(ANGLE)	IMenuComponent	117			Momentary Function Channel: Press menu button ANGLE
pressMenuButton(ADVANCE)	IMenuComponent	83			Momentary Function Channel: Press menu button ADVANCE
pressMenuButton(AB_REPEAT)	IMenuComponent	124			Momentary Function Channel: Press menu button AB_REPEAT
pressMenuButton(A)	IMenuComponent			ALPHA-A	Press menu button A
selectMenuItem()	IMenuComponent	49			Momentary Function Channel: Select current menu item
setDebugState(state)	IModuleComponent			DEBUG-<state>	Set the debug state where <state> is 1-4 for ERROR, WARNING, DEBUG INFO
setProperty(key,value)	IModuleComponent			PROPERTY-<key>,<value>	Set the value of property <key> to <value>
getProperty(key)	IModuleComponent			?PROPERTY-<key>	Query for the value of property <key>, respond with PROPERTY-<key>,<value>
setDeviceDateTime(date)	IModuleComponent			CLOCK-<mm/dd/yyyy> <hh:mm:ss>	Set the device date/time.
passThru(buffer)	IModuleComponent			PASSTHRU-<buffer>	Send a message directly to the device
getDebugState()	IModuleComponent			?DEBUG	Query the debug level, responds with DEBUG-<state> where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
getFWVersion()	IModuleComponent			?FWVERSION	Query for the device firmware version, responds with FWVERSION-<version>
getVersion()	IModuleComponent			?VERSION	Query for the module version, responds with VERSION-<version>
reinitialize()	IModuleComponent			REINIT	Reinitialize communication with the device
processDebugEvent(int)	IModuleComponentListener			DEBUG-<state>	Debug state changed where <state> is 1-4 for ERROR, WARNING, DEBUG, INFO
processDataInitializedEvent(boolean)	IModuleComponentListener	252			Feedback Channel: Module data is synchronized with device while channel is on
processDeviceOnLineEvent(boolean)	IModuleComponentListener	251			Feedback Channel: Communication is established with device while channel is on
setInputSource(VIDEO,3)	ISourceSelectComponent	33			Momentary Function Channel: Selects input VIDEO,3 when channel is activated

Video Projector Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setInputSource(VIDEO,2)	ISourceSelectComponent	32			Momentary Function Channel: Selects input VIDEO,2 when channel is activated
setInputSource(VIDEO,1)	ISourceSelectComponent	31			Momentary Function Channel: Selects input VIDEO,1 when channel is activated
setInputSource(TV,1)	ISourceSelectComponent	30			Momentary Function Channel: Selects input TV,1 when channel is activated
setInputSource(TUNER,1)	ISourceSelectComponent	37			Momentary Function Channel: Selects input TUNER,1 when channel is activated
setInputSource(TAPE,2)	ISourceSelectComponent	35			Momentary Function Channel: Selects input TAPE,2 when channel is activated
setInputSource(TAPE,1)	ISourceSelectComponent	34			Momentary Function Channel: Selects input TAPE,1 when channel is activated
setInputSource(sourceSelect,inputNumber)	ISourceSelectComponent			INPUT-<sourceSelect>,<inputNumber>	Set the current input, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setInputSource(PHONO,1)	ISourceSelectComponent	38			Momentary Function Channel: Selects input PHONO,1 when channel is activated
setInputSource(CD,1)	ISourceSelectComponent	36			Momentary Function Channel: Selects input CD,1 when channel is activated
setInputSource(AUXILIARY,1)	ISourceSelectComponent	39			Momentary Function Channel: Selects input AUXILIARY,1 when channel is activated
getInputSource()	ISourceSelectComponent			?INPUT	Query current input, responds with INPUT-<sourceSelect>,<inputNumber> where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
processInputSourceEvent(InputSourceSelectInfo)	ISourceSelectComponentListener			INPUT-<sourceSelect>,<inputNumber>	Current input has changed, where <sourceSelect> is RGB,SVIDEO,COMPOSITE,COMPONENT,DVI,VGA,AUDIO,AUXILIARY,CABLE,CAMERA,CD,DVD,FRONT,HDTV,LASERDISC,LINE,MEDIAPLAYER,MINIDISC,PHONO,SATELLITE,TAPE,TUNER,TV,VCR,VIDEO and <inputNumber> is the instance number of the source select
setProjectorPreset(preset)	IVideoProjectorComponent			VPROJPRESET-<preset>	Set projector preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
getProjectorPreset()	IVideoProjectorComponent			?VPROJPRESET	Query for projector preset, responds with VPROJPRESET-<preset>
setProjectorPreset(preset)	IVideoProjectorComponentListener			VPROJPRESET-<preset>	Set projector preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
getProjectorPreset()	IVideoProjectorComponentListener			?VPROJPRESET	Query for projector preset, responds with VPROJPRESET-<preset>
setVolumeRamp(UP)	IVolumeComponent	24			Discrete Function Channel: Volume is ramped up while channel is active

Video Projector Functions (Cont.)					
Name	**Component**	**Channel**	**Level**	**Command**	**Notes**
setVolumeMuteOn(state)	IVolumeComponent	199			Discrete Function Channel: Volume mute is on while channel is active
setVolumePreset(preset)	IVolumeComponent			VOLPRESET-<preset>	Set volume preset where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
setVolume(level)	IVolumeComponent		1		Set volume, range is 0-255
setVolumeRamp(DOWN)	IVolumeComponent	25			Discrete Function Channel: Volume is ramped down while channel is active
cycleVolumeMute()	IVolumeComponent	26			Momentary Function Channel: Cycle volume mute when channel is activated
getVolumePreset()	IVolumeComponent			?VOLPRESET	Query for volume preset, responds with VOLPRESET-<preset>
processVolumeRampEvent(UP)	IVolumeComponentListener	24			Feedback Channel: Volume is ramping up while channel is on
processVolumeEvent(int)	IVolumeComponentListener		1		Volume changed, range is 0-255
processVolumePresetEvent(int)	IVolumeComponentListener			VOLPRESET-<preset>	Volume preset changed, where <preset> is 1-x and x is the maximum supported preset (see specific module documentation).
processVolumeRampEvent(DOWN)	IVolumeComponentListener	25			Feedback Channel: Volume is ramping down while channel is on
processVolumeMuteEvent(boolean)	IVolumeComponentListener	199			Feedback Channel: Volume is muted if channel is on

processLampPowerEvent

processLampPowerEvent		
State	**Channel 255**	**Channel 253**
OFF	OFF	OFF
ON	ON	OFF
WARM	ON	ON
COOL	OFF	ON

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