Rev History:
1.00 Initial specification.

The Classe Sigma SSP MkII has the ability to be remote controlled in various ways. This document describes the three most common methods (RS-232, IR and IP) and commands to accomplish this.

Classé IP Automation Control

Classé products equipped for digital audio streaming via Ethernet (AirPlay and DLNA) are also capable of remote control over Ethernet.

To take advantage of this feature several requirements need to be met.

1. The Classé product should have the appropriate firmware installed and be attached to your local area network and have a valid IP address for that network. The Classé product IP address can be viewed on the front panel touch screen by pressing the 'Menu' hard key on the left side of the screen followed by 'System Setup' and then the 'Network' buttons on the touch screen. Please check the Classé web site for details about products and firmware versions that support Ethernet remote control.

2. The remote control or automation device needs to be able to transmit and receive Ethernet packets using TCP protocol and be attached to the same physical network as the Classé product and be addressed on the same sub-net.

The port that Classé products use for TCP control is 50001.

Commands used are the same as used for RS-232 control and the documents describing those commands and replies should be consulted, the current versions are available on the Classé web site.

Control is simply sending a TCP packet to the Classé product at its IP address and port number (50001) with the message or payload being the RS-232 command. Only one command should be issued per packet, a valid reply should be received before a new command is issued.

Any replies to the command or status messages will be sent back to the originating IP address (the remote control devices IP) and same port number (50001).

RS232 Specification for Classé Audio Sigma SSP MkII

Data format

The RS232 communication with the Sigma SSP MkII operates with a PC UART configured for 19200 baud, 8 bits, no parity, with one stop bit.
There is no minimum time between bytes required, as the Sigma SSP MkII allows for a 16 byte FIFO. The PC or home controller system similarly must accept status data without delays between bytes from the Sigma SSP MkII. All command and status data are ASCII bytes.

Command structure

All commands are terminated with an ASCII carriage return.
All Status strings are terminated with an ASCII carriage return and line feed.

Command strings

The command strings consist of all ASCII characters and carriage return.
The following is a list of commands that are recognized by the Sigma SSP MkII:

MAIN nn	Change main input to input number nn, so input #2 is MAIN 02 (unit will turn on if in standby)
INP+	Steps to the next input
INP-	Steps to the previous input
OUTP n	Output configuration n
VOLM vv.v	Sets volume to vv.v, or the nearest possible value, mute disengaged
VOL+	Steps the volume up from current, mute disengaged
VOL-	Steps the volume down from current, mute disengaged
MUTE	If not muted, engage mutes and adjusts volume
UNMT	If muted, disengages mute and returns to premute volume level
BALL	Shift balance ½ dB to left
BALC	Re-center to even balance
BALR	Shift balance ½ dB to the right
LSY+	Adds 1ms to lip sync
LSY-	Subtracts 1ms from lip sync
LSY0	Restores to no added lip sync delay
NMON	Engages Night Mode compression
NMOFF	Turns off Night Mode compression
STBY	Puts Sigma SSP MkII into standby.
OPER	Puts Sigma SSP MkII into operate mode
LCD0	Sets the front panel LCD to low power "screen saver" mode
LCD1	Sets the front panel LCD to high intensity
LCD2	Sets the front panel LCD to medium intensity
LCD3	Sets the front panel LCD to low intensity
IRC xxx	Passes IR code xxx (See Sigma SSP MkII IR Code document for details)
AMX	Requests the AMX Beacon
EQON	Activates all defined Room EQ filters
EQOFF	Deactivates all defined Room EQ filters as a temporary trim
TCDIS	Disable tone control
TCEN	Enable tone control
TTCW	Tone tilt clockwise (bass cut, treble boost), must be in tilt mode
TTCCW	Tone tilt counter clockwise (bass boost, treble cut), must be in tilt mode
TCB+	Tone control bass boost, must be in discrete tone control mode

TCB-	Tone control bass cut, must be in discrete tone control mode
TCT+	Tone control treble boost, must be in discrete tone control mode
TCT-	Tone control treble cut, must be in discrete tone control mode
VERS	Returns the device name, version and serial number.
STAT MAIN	Request for main volume and input selection
STAT AUTO	Status requests for automatic status updates, volume relative display (--- : +14.0)
STAT AUTA	Same as STAT AUTO but volume will be shown as absolute (0.0 : 100.0)
STAT OUTP	Request for output status
STAT OFF	Disables automatic status updates
STAT PWR	Request for standby status
STAT MODE	Request for the current audio processing mode
STAT AUDIO	Request for the current audio stream, channel configuration and sample rate
STAT VIDEO	Request for the current video format and resolution
STAT VOL	Request for the current volume setting (returns SY VOLM message)

Replies and Status

The Sigma SSP MkII will send a 3 character reply to acknowledge each recognized command. The acknowledgement character is an exclamation point (!) followed by a carriage return and line feed. There is no leading address field for this reply. If the command received by the Sigma SSP MkII is not recognized, a question mark character replaces the exclamation point. The reply is generated within 100ms of the receipt of the last command termination character (line feed). If no reply is received at the PC/controller host after 100ms., the command should be reissued.

The following status strings are returned by the Sigma SSP MkII:

SY PWRUP	Sigma SSP MkII has completed power up
SY STBY	Sigma SSP MkII is in standby
SY OPER	Sigma SSP MkII is in operate
SY PWR xxx	xxx = ON (unit operational) or OFF (unit in standby)
SY VOLM xx.x	Volume is at xx.x. If mute engaged the string "muted" is appended.
SY MAIN xx	Sigma SSP MkII has source number xx selected.

SY AUDIO xx yy zz
xx is a numeric value indicating the received audio stream
yy is a numeric value indicating the decoded channel configuration
zz is a numeric value indicating the received sample rate
(see Sigma SSP MkII Status Messages document for details)

SY VIDEO xx xx is a numeric value indicating the received video signal
(see Sigma SSP MkII Status Messages document for details)

SY OUTP n Sigma SSP MkII has output number n selected.
SY MODE x x = Current Post Processing Mode
(see Sigma SSP MkII Status Messages document for details)
SY TONE xxx B:y.y T:z.z
xxx = EN or DIS B:y.y = bass cut or boost T:z.z treble cut or boost
SY VERS xxx xxx is a string showing the software version information
ST PWR xxx xxx is either ON or OFF.
AMXB xxx xxx is the AMX auto discovery beacon string.

Sigma SSP MkII Status Messages

SY AUDIO returns 3 values describing the incoming audio stream.

First is the stream type, second is the channel configuration, the third is the streams sample rate.

Stream types:	
Unknown	1
Pass	2
Noise	3
Auto	4
BitStream	5
PCM	6
Dolby Digital	7
DTS	8
AAC	9
MPEG	10
WMP	11
MP3	12
DSD	13
Dolby Digital Plus	14
DTS MA	15
Dolby TrueHD	16
DTS LBR	17
WAV	18
AIFF	19
ALAC	20
FLAC	21
WMA	22
MP3	23
OGG_VORBIS	24
Analog	25
Dolby Atmos	26
DTS: X	27

Channel Configuration:	
Unknown	0
1.0	1
1.1	2
2.0	3
2.1	4
3.0	5
3.1	6
4.0	7
4.1	8
5.0	9
5.1	10
6.0	11
6.1	12
7.0	13
7.1	14

Sample Rates:	
32kHz	1
44.1kHz	2
48kHz	3
88.2kHz	4
96kHz	5
176.4kHz	6
192kHz	7

SY VIDEO returns a comma delimited text string indicating the resolution, refresh rate and format.

Examples:
STAT VIDEO
SY VIDEO 1080p,60,2D

STAT VIDEO
SY VIDEO 2160p,24,2D

SY MODE returns a single value for the audio mode currently in use.

Mode types:	
MONO	1
STEREO	2
STEREO+SUB	3
PARTY	4
DISCRETE	5
AUTO	6
DOLBY ATMOS	7
DTS NEURAL-X	8

IR code list for Classé Audio Sigma SSP MkII

Source 01	2
Source 02	3
Source 03	4
Source 04	5
Source 05	6
Source 06	7
Source 07	8
Source 08	9
Source UP	10
Source DOWN	11
Standby Toggle	12
Mute Toggle	13
Status	14
Display Brightness Toggle	15
Volume Up (+)	16
Volume Down (-)	17
Tone	18
Night Mode Toggle	19
Balance	21
Fkey 1	56
Fkey 2	57
PP Mode Up	68
Menu	84
Home	85
Step Up (+)	88
Step Down (-)	89
Step Left	90
Step Right	91
Enter	92
Source 09	120
Source 10	121
Source 11	122
Source 12	123
Source 13	124
Source 14	125
Source 15	126
Source 16	127
Source 17	128
Source 18	129
Fkey 3	134
Fkey 4	135
Fkey 5	136
Fkey 6	137
Fkey 7	138
Fkey 8	139

Operate	150
Standby	151
Mute	152
Unmute	153
Night Mode_on	160
Night Mode_off	161
Mode Down	167
Configuration 1	185
Configuration 2	186
Configuration 3	187
Configuration 4	188
Configuration 5	189
Configuration 6	190
Dolby Volume (on/off)	216
Lipsync (Page Access)	217
Mode01: Mono	220
Mode02: Stereo	221
Mode03: Stereo+Sub	222
Mode04: Party	223
Mode05: Discrete	224
Mode06: Auto	225
Mode07: Dolby Atmos	226
Mode08: DTS Neural-X	227
Room EQ Toggle	247