RS232 Specification for Classe Audio SSP-800
Rev 1.5 6 July 2010

History:
1.00 Imported from SSP-900
1.10 Corrected some typos, added additional status commands.
1.20 Added commands to enable and disable the Room EQ system.
1.30 Added commands SCSM and AMX.
1.4 Added Post Processing Modes
1.5 Added Appendixes for Audio & Video signals, Dolby Late Night and Subwoofer Trim

Data Format
The RS232 communication with the SSP-800 operates with a UART configuration for 9600
baud, 8 bits, no parity, with one stop bit. System setup for the SSP-800 allows for other baud
selections. There is no minimum time between bytes required, as the SSP-800 allows for a 16
byte FIFO. The PC or home controller system similarly must accept status data without delays
between bytes from the SSP-800. All command and status data are ASCII bytes.

Command Structure
All commands and status strings follow a format, which include 4 leading bytes, which serve as
the address of the command. The address and command fields are separated by a period and zero
or more space characters. The end of the command line is identified by a carriage return/line
feed.

For the SSP-800, the address field is “S800”. The address data and the period delimiter may be
omitted if the controller/PC uniquely connects to the SSP-800. Any commands that are received
without an address field are interpreted for local operation.

Command Strings
The command strings consist of all ASCII characters between the period and carriage return.
Leading blanks in the command string are ignored. The following is the list of commands
recognized by the SSP-800:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN n</td>
<td>change main input to input number n</td>
</tr>
<tr>
<td>MINP+</td>
<td>steps to the next input.</td>
</tr>
<tr>
<td>MINP-</td>
<td>steps to the previous input.</td>
</tr>
<tr>
<td>LPSN c</td>
<td>sets the current configuration to configuration c</td>
</tr>
<tr>
<td>VOLA vv</td>
<td>sets volume to absolute vv, or the nearest possible value, mute disengaged</td>
</tr>
<tr>
<td>MVOL+ (*)</td>
<td>steps the main volume up from current, mute disengaged</td>
</tr>
<tr>
<td>MVOL- (*)</td>
<td>steps the main volume down from current, mute disengaged</td>
</tr>
<tr>
<td>MUTE</td>
<td>if not muted, engage mutes and adjusts volume for main outputs</td>
</tr>
<tr>
<td>UNMT</td>
<td>if muted, un-mutes and returns to pre-mute volume level at main outs</td>
</tr>
<tr>
<td>BALL</td>
<td>shift balance 1 dB to left</td>
</tr>
<tr>
<td>BALT C</td>
<td>re-center to even balance</td>
</tr>
<tr>
<td>BALR</td>
<td>shift balance 1 dB to the right</td>
</tr>
</tbody>
</table>
SUB+  adds 1dB to temporary sub trim
SUB-  subtracts 1dB to temporary sub trim
SUB2+ adds 1dB to temporary sub2 trim
SUB2-  subtracts 1dB to temporary sub2 trim
SUB3+ adds 1dB to temporary sub3 trim
SUB3-  subtracts 1dB to temporary sub3 trim
CNT+  adds 1dB to temporary center trim
CNT-  subtracts 1dB to temporary center trim
SRN+  adds 1dB to temporary surround trim
SRN-  subtracts 1dB to temporary surround trim
BAK+  adds 1dB to temporary back trim
BAK-  subtracts 1dB to temporary back trim
LSY+  adds 1ms to lip sync
LSY-  subtracts 1ms from lip sync
LSY0  restores to no added lip sync delay
TRM0  resets temporary channel offset trims to zero
DDLN  engages Dolby Digital late night compression
DDNC  turns off Dolby Digital late night compression
STBY  puts SSP-800 into standby.
OPER  puts SSP-800 into operate mode
T1_0  turns off trigger 1
T1_1  turns on trigger 1
T2_0  turns off trigger 2
T2_1  turns on trigger 2
LCD0  sets the front panel LCD to low power “screen saver” mode
LCD1  sets the front panel LCD to low intensity
LCD2  sets the front panel LCD to medium intensity
LCD3  sets the front panel LCD to high intensity
IRC nnn passes IR code nnn, where nnn is the code identified in the SSP-800 IR code table
CSK n Sets skin to ‘n’ (1 = Classe, …. 5 = Green)
EQON  Activates all defined Room EQ filters
EQOFF Deactivates all defined Room EQ filters as a temporary trim
STAT MAIN request for main volume and input selection
STAT AUTO status requests for automatic status updates
STAT OFF disables automatic status updates
STAT MODE request the current post processing mode.
STAT AUDIO requests current audio signal status
STAT VIDEO requests current video signal status
STAT TEMP requests current internal temperature
STAT VERS requests software version information
STAT AC requests current AC voltage sense information
SCSM requests an e-mail test transmission
AMX AMX auto discovery beacon request
(*) note that in order to use the system acceleration mode, the xVOL +/- commands must be received within 200ms of the system’s reply (see below)
Replies and Status
The SSP-800 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 SSP-800 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 SSP-800:

- **SY PWRUP** — SSP-800 has completed power up
- **SY STBY** — SSP-800 is in standby
- **SY OPER** — SSP-800 is in operate
- **SY VOLA vv** — Volume is at vv. If mute engaged the string “muted” is appended.
- **SY VOLR +/- vv** — same as above, with volume displayed relative to unity gain
- **SY MAIN n NN** — SSP-800 is selected to input number n, named NN
- **SY AUDIO yy zz** — yy is a numeric value indicating the received audio stream, zz is a numeric value indicating the received sample rate
- **SY VIDEO zz** — zz is a numeric value indicating the received video signal
- **SY TEMP xx** — xx is the SSP800 internal temperature (degrees Centigrade)
- **SY AC zzz** — zzz current AC line voltage
- **SY VERS vvv** — vvv is a string showing the software version information
- **SY MODE n** — n is a numeric value representing the mode.
- **SY DLN n** — n is a numeric value representing Dolby Late Night (0 off, 1 on)
- **SY SUB10 n** — n is a numeric value representing the status of the LFE 10dB offset
  - 0 = 0dB, 1 = -10dB
- **AMXB str** — str is the AMX auto discovery beacon string.

Refer to the appendixes below for more details on SY AUDIO, SY VIDEO and SY MODE strings.
Appendix A: Audio Streams

SY AUDIO returns 2 numeric values – the first is the stream type, the second is the sample rate.

Stream types are:
- RESERVED
- DIGITAL_ZERO_SIGNAL
- DIGITAL_PCM
- DOLBY_DIGITAL
- DTS
- MPEG
- NOISE
- ANALOG
- DIGITAL_ERROR
- DTS_ES_MATRIX
- DTS_ES_DISCRETE
- DTS96_51
- DTS96_MATRIX
- DTS96_DISCRETE
- HDMI_AUDIO_MCH
- DTS96_24
- DIGITAL_PCM_STEREO
- DIGITAL_PCM_MCH
- DIGITAL_PCM_96_24
- AAC
- AAC_STEREO
- AAC_MCH
- MP2
- MP3
- DOLBY_DIGITAL_PLUS
- DOLBY_TRUE_HD
- DTS_MASTER_AUDIO
- DTS_HIGH_RESOLUTION
- NONE

Sample Rates are:
- 32k
- 44k
- 48k
- 88k
- 96k
- 192k
- 176k
Appendix B: Video Streams

SY VIDEO returns a single value for the video resolution detected

- No Signal: SY VIDEO 0
- 480i 4:3: SY VIDEO 1
- 576i 4:3: SY VIDEO 2
- 480p 4:3: SY VIDEO 3
- 576p 4:3: SY VIDEO 4
- 480i 16:9: SY VIDEO 5
- 576i 16:9: SY VIDEO 6
- 480p 16:9: SY VIDEO 7
- 576p 16:9: SY VIDEO 8
- 720p 60Hz: SY VIDEO 9
- 720p 50Hz: SY VIDEO 10
- 768p 60Hz: SY VIDEO 11
- 1080i 60Hz: SY VIDEO 12
- 1080i 50Hz: SY VIDEO 13
- 1080p 60Hz: SY VIDEO 14
- 1080p 50Hz: SY VIDEO 15
- 1080p 24Hz: SY VIDEO 16
- Unsupported: SY VIDEO 17
- VGA: SY VIDEO 18

Appendix C: Post Processing Modes

- Mono: SY MODE 0
- Stereo: SY MODE 1
- Music Mode Party: SY MODE 2
- Mono Plus: SY MODE 3
- Movie Plus: SY MODE 4
- Music Plus: SY MODE 5
- Dolby Pro Logic: SY MODE 6
- Dolby PLIIx Music: SY MODE 7
- Dolby PLIIx Movie: SY MODE 8
- Dolby PLIIx Matrix: SY MODE 9
- Dolby PLIIx Game: SY MODE 10
- DTS Neo:6: SY MODE 11
- DTS Neo:6 Cinema: SY MODE 12
- DTS Neo:6 Music: SY MODE 13
- Discrete: SY MODE 14
- DTS Neo:6 Cinema ES: SY MODE 15
DTS Neo:6 Music ES    SY MODE 16
Dolby Digital EX     SY MODE 17

The modes available for use at any one time are dependent on the source stream.