

# RS232 Specification for Classe Audio SSP-300/SSP-600

Rev 1.7      2 May 2007

## History:

- 1.1    changed IRC code to 3 digit
- 1.2    added video board testing commands (internal) and tape monitor functions
- 1.3    removed relative volume commands (ElemenTool Issue #449)
- 1.4    added ZMUT and ZUMT commands
- 1.41   added the SY PWRUP and SY OPER notifications
- 1.5    Updated and added any missing information.
- 1.6    Added post processing mode descriptions.
- 1.7    Added STAT MODE command.

## Data format

The RS232 communication with the SSP-300/600 operates with a UART configuration for 9600 baud, 8 bits, no parity, with one stop bit. System setup for the SSP-300/600 allows for other baud selections. There is no minimum time between bytes required, as the SSP-300/600 allows for a 16 byte FIFO. The PC or home controller system similarly must accept status data without delays between bytes from the SSP-300/600. 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-300, the address field is "S300". For the SSP-600, the address field is "S600". The address data and the period delimiter may be omitted if the controller/PC uniquely connects to the SSP-300/600. 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 list of commands are recognized by the SSP-300/600:

MAIN n	change main input to input number n
ZONE n	change zone input to input number n
MINP+	steps to the next input on main zone
MINP-	steps to the previous input on main zone
ZINP+	steps to the next input on zone
ZINP-	steps to the previous input on zone
ZUMT	turns zone on (unmute)
ZMUT	turns zone off (standby/mute)
LPSN m	sets the current listening position to position m
VOLA vv	sets volume to absolute vv, or the nearest possible value, mute disengaged
VOLZ vv	sets zone output volume to vv, or the nearest possible value. 00 is off.
MVOL+	(*) steps the main volume up from current, mute disengaged

MVOL-	(*) steps the main volume down from current, mute disengaged
ZON	Turns Zone ON.
ZOFF	Turns Zone OFF.
ZVOL+	(*) steps the zone volume up from current
ZVOL-	(*) steps the zone volume down from current
MUTE	if not muted, engage mutes and adjusts volume for main outputs
UNMT	if muted, disengages mute and returns to premute volume level at main outs
BALL	shift balance 1 dB to left
BALC	recenter to even balance
BALR	shift balance 1 dB to the right
SUB+	adds 1dB to temporary sub trim
SUB-	subtracts 1dB to temporary sub 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-300/600 into standby.
OPER	puts SSP-300/600 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-300/600 IR code table
TAP0	turns off the tape monitor output
TAP1	turns on the tape monitor output
STAT MAIN	request for main volume and input selection
STAT AUTO	status requests for automatic status updates
STAT OFF	disables automatic status updates
CSK n	Sets skin to ‘n’ (1 = Classe, .... 5 = Green)
DBGBALCON n m	Sets input ‘n’ to balanced mode ‘m’ (0:off, 1:on) SSP600 only
DBGVIDOUT n m	Sets output video out ‘n’ to state ‘m’ (0:off, 1:on)
STAT MODE	requests the current post processing mode.

(\*) 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-300/600 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-300/600 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-300/600:

SY PWRUP	SSP-300/600 has completed power up
SY STBY	SSP-300/600 is in standby
SY OPER	SSP-300/600 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 THX level
SY MAIN n NN	SSP-300/600 is selected to input number n, named NN
SY MODE n	SSP-300/600 sends the current post processing mode as selected in the main menu's MODE screen. Numeric values are returned in the range of 0 – 34 representing the mode. The modes are listed below. If automatic status updates are turned on (STAT AUTO) will automatically be sent if mode changes. If a request is made (STAT MODE) the current mode will be sent.

## Post Processing Modes

multi-channel	SY_MODE 0
multi-channel+THX	SY_MODE 1
Dolby Pro Logic	SY_MODE 2
Dolby Pro Logic+THX	SY_MODE 3
music mode club	SY_MODE 4
music mode natural	SY_MODE 5
music mode concert	SY_MODE 6
music mode party	SY_MODE 7
music mode stadium	SY_MODE 8
music mode 6	SY_MODE 9
music mode 7	SY_MODE 10
mono	SY_MODE 11
mono+THX	SY_MODE 12
custom	SY_MODE 13
surround 6.1	SY_MODE 14

stereo	SY_MODE 15
stereo+THX	SY_MODE 16
Dolby PLII Movie	SY_MODE 17
Dolby PLII Movie+THX	SY_MODE 18
Dolby PLII Music	SY_MODE 19
Dolby PLIIx Music	SY_MODE 20
Dolby PLIIx Movie	SY_MODE 21
Dolby PLIIx Movie+THX	SY_MODE 22
Dolby Digital EX	SY_MODE 23
THX Ultra2 Music	SY_MODE 24
THX Ultra2 Cinema	SY_MODE 25
THX Surround EX	SY_MODE 26
DTS Neo:6+THX	SY_MODE 28
DTS Neo:6 Cinema	SY_MODE 29
DTS Neo:6 Cinema+THX	SY_MODE 30
DTS Neo:6 Music	SY_MODE 31
DTS Matrix 6.1	SY_MODE 32
DTS Matrix 6.1+THX	SY_MODE 33
stereo 24/96	SY_MODE 34

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