

# *Classé Audio*

## **SSP-25 RS-232 port information**

RS-232 type serial communication connector for controlling the A/V controller with a home automation system.

- 9600 bps
- no parity
- 8 bits
- 1 stop bit
- 9 pin female D-connector, pin 2: receive data, pin 3: transmit data, pin 5: signal ground
- Command set "Winona".
- IR jacks, Xantech compatible IR input and repeater output connectors, 3.5 mm mono phono jacks: Input optocoupled, input impedance 24 ohms, output +5V max.
- D-25 analog output connector, arranged according to THX single-ended output standard: DC trigger connected to pin 13, ground 25 (and 24) level +5 V, impedance 100 ohms.
- XLR balanced outputs for main channels, gain over single-ended outputs is +6dB.

## Classé SSP-25 serial communication command set

Command	Parameter list								
power	<empty string (toggle)>	?	toggle	on	off	factory			
display	<empty string (toggle)>	?	toggle	on	off				
video	<empty string (next)>	?	next	prev	av1	av2	av3	av4	
audio	<empty string (next)>	?	next	prev	video	aud1	aud2	aud3	
mode	<empty string (next)>	?	next	prev	auto	bypass	mono		
mode		stereo	stereosurround	dolbyprologic	dolbydigital	dtscinema	dtsmusic		
mute	<empty string (toggle)>	?	toggle	on	off				
volume	<any string (signed byte)>	?	up	down					
compression	<empty string (toggle)>	?	toggle	on	off				
thx	<empty string (toggle)>	?	toggle	on	off				
button		trim	menu	enter	up	down	left	right	
button		av1	av2	av3	av4	aud1	aud2	aud3	
button		thx	modeprev	modenext	auto	display	standby		
button		compr	mute	volumedown	volumeup				
setup	<any string (signed byte)>								
<2nd parameter>	<any string (signed byte)>	?							
trim		left	center	right	rsurr	lsurr	sub		
<2nd parameter>		?	up	down					
format		?							
hello	<any string (string)>	service							
version		?							
upgrade		download	delete						

"hello service" will enable the servicing mode, which allows program upgrades to be performed

"upgrade download" will download a new microcontroller program code, "upgrade delete" will delete the upgrade

"power factory" will start the original program code without deleting the upgraded code.

There is no need to publish the "service" parameter for the "hello" command, or the "upgrade" command at all, they are meant for Classé service use.

At the moment the program upgrade possibility is untested and not officially announced.

## Classé SSP-25 serial communication examples

**bold lines** are sent to the SSP-25 via the serial link, others are responses from the SSP-25

reset	main power is turned on here
<b>power</b>	microcontroller comes out of reset
power on	turn power on
mute on	
mute off	mute relay activity
video av1	sources are selected
audio av1	
mode stereo	mode is selected
format analog	program format is selected
<b>video av4</b>	select AV4 as audio/video source
video av4	
audio av4	
mode dolbyprologic	mode is selected
format dolbydigital2ch 2/0.0pl	a digital program format was found
display off	display was turned off using the remote
display on	display was again turned on using the remote
<b>display off</b>	turn display off
display off	
<b>display</b>	turn display back on
display on	
<b>display toggle</b>	turn display off again
display off	
<b>display ?</b>	ask display status
display off	
volume -33	volume was adjusted using the remote
volume -34	
volume -36	
volume -38	
<b>setup 11 ?</b>	ask setup item 11 (LFE trim)
setup 11 0	current value is 0 dB
<b>button trim</b>	emulate trim button press, enter trim setup
menu action	
<b>button left</b>	emulate left button, move to LFE trim
menu action	
<b>button down</b>	adjust 1 dB down
menu action	
<b>button down</b>	adjust 1 dB down
menu action	
<b>button down</b>	adjust 1 dB down
menu action	
<b>button trim</b>	exit trim setup
menu action	
<b>setup 11 ?</b>	ask LFE trim again
setup 11 -3	current value is 3 dB lower than before



**trim lfe ?**  
trim lfe -3  
**trim lfe up**  
trim lfe -2  
**trim lfe up**  
trim lfe -1  
**trim lfe up**  
trim lfe 0

alternative way to ask LFE trim

adjust LFE back to 0 dB

**setup 11 -3**  
setup 11 -3

and the quickest way to adjust any setup item

**hello acme\_house\_automation\_xyz-123**  
hello classe\_ssp-25

always a good thing to say hello  
SSP-25 response

**version ?**  
product "Classe SSP-25"  
control software version 23a  
C-library software version 0x000e  
DSP software version 5 rev 16  
DSP product "DD+DTS+THX (Gen 2B)"  
RF-demodulator installed  
serial command set "Winona"

ask information from the SSP

**hello service**  
hello classe\_ssp-25  
service mode enabled

enable service mode needed for upgrading

**upgrade download**  
Flash clear initiated  
Flash cleared

initiate software upgrade, the original SW is left intact

reset  
**power**  
power on  
mute on  
mute off  
video av1  
audio av1  
mode stereo  
format analog

48 kB of new code sent here  
the SSP resets automatically  
turn power back on

**power**  
power off  
reset  
**power factory**  
power on  
mute on  
mute off  
video av4  
audio av4  
mode dolbyprologic  
format dolbydigital2ch 2/0.0pl

turn power off

turn power back on using the original software

**hello service**  
hello classe\_ssp-25  
service mode enabled

enable service mode needed for upgrading

**upgrade delete**  
Flash clear initiated  
Flash cleared  
reset

delete upgraded software, the original SW is left intact

the SSP resets automatically

Classé SSP-25 setup table

No	Setup item	Default value	Possible values	Corresponding real world values
0	MENU_MAIN_MENU	ILLEGAL	none, illegal setup item	
1	MENU_TRIM	ILLEGAL	none, illegal setup item	
2	MENU_MODE_SETUP	ILLEGAL	none, illegal setup item	
3	MENU_SOURCE_SETUP	ILLEGAL	none, illegal setup item	
4	MENU_SYSTEM_SETUP	ILLEGAL	none, illegal setup item	
5	MENU_TRIM_LEFT	0	-16...16	-8.0, -7.5, -7.0 ... 8.0 dB
6	MENU_TRIM_CENTER	0	-16...16	-8.0, -7.5, -7.0 ... 8.0 dB
7	MENU_TRIM_RIGHT	0	-16...16	-8.0, -7.5, -7.0 ... 8.0 dB
8	MENU_TRIM_RSURR	0	-16...16	-8.0, -7.5, -7.0 ... 8.0 dB
9	MENU_TRIM_LSURR	0	-16...16	-8.0, -7.5, -7.0 ... 8.0 dB
10	MENU_TRIM_SUB	0	-16...16	-8.0, -7.5, -7.0 ... 8.0 dB
11	MENU_TRIM_LFE	0	-10 ... 0	-10 ... 0 dB
12	MENU_MODE_MUSIC1_SETUP	ILLEGAL	none, illegal setup item	
13	MENU_MODE_DOLBY_DIGITAL_SETUP	ILLEGAL	none, illegal setup item	
14	MENU_AV1_SETUP	ILLEGAL	none, illegal setup item	
15	MENU_AV2_SETUP	ILLEGAL	none, illegal setup item	
16	MENU_AV3_SETUP	ILLEGAL	none, illegal setup item	
17	MENU_AV4_SETUP	ILLEGAL	none, illegal setup item	
18	MENU_AUD1_SETUP	ILLEGAL	none, illegal setup item	
19	MENU_AUD2_SETUP	ILLEGAL	none, illegal setup item	
20	MENU_AUD3_SETUP	ILLEGAL	none, illegal setup item	
21	MENU_SPEAKER_SETUP	ILLEGAL	none, illegal setup item	
22	MENU_DELAY_SETUP	ILLEGAL	none, illegal setup item	
23	MENU_LEVEL_SETUP	ILLEGAL	none, illegal setup item	
24	MENU_BALANCE_SETUP	ILLEGAL	none, illegal setup item	
25	MENU_FEATURE_SETUP	ILLEGAL	none, illegal setup item	
26	MENU_MUSIC1_TYPE	0	0, 1, 2	Natural, Stadium, Club
27	MENU_MUSIC1_EMPHASIS_CENTER	0	-9 ... 9	-9 ... 9 dB
28	MENU_MUSIC1_EMPHASIS_SURR	0	-9 ... 9	-9 ... 9 dB
29	MENU_DOLBY_DIGITAL_COMPRESSION	0	0, 1	Full, Medium
30	MENU_DOLBY_DIGITAL_PROLOGIC	1	0 ... 3	On, Auto-on, Auto-off, Off
31	MENU_AV1_MODE	0	0, 1	Auto, Man
32	MENU_AV1_INPUT	0	0, 1, 2	Auto, Digital, Analog
33	MENU_AV1_LEVEL	0	-16 ... 16	-16 ... 16 dB
34	MENU_AV1_ANALOG_INPUT_GAIN	0	-16 ... 16	-16 ... 16 dB
35	MENU_AV2_MODE	0	0, 1	Auto, Man
36	MENU_AV2_INPUT	0	0, 1, 2	Auto, Digital, Analog
37	MENU_AV2_LEVEL	0	-16 ... 16	-16 ... 16 dB
38	MENU_AV2_ANALOG_INPUT_GAIN	0	-16 ... 16	-16 ... 16 dB
39	MENU_AV3_MODE	0	0, 1	Auto, Man
40	MENU_AV3_INPUT	0	0, 1, 2	Auto, Digital, Analog
41	MENU_AV3_LEVEL	0	-16 ... 16	-16 ... 16 dB
42	MENU_AV3_ANALOG_INPUT_GAIN	0	-16 ... 16	-16 ... 16 dB
43	MENU_AV4_MODE	0	0, 1	Auto, Man
44	MENU_AV4_INPUT	0	0, 1, 2	Auto, Digital, Analog
45	MENU_AV4_LEVEL	0	-16 ... 16	-16 ... 16 dB
46	MENU_AV4_ANALOG_INPUT_GAIN	0	-16 ... 16	-16 ... 16 dB
47	MENU_AUD1_MODE	0	0, 1	Auto, Man
48	MENU_AUD1_INPUT	0	0, 1, 2	Auto, Digital, Analog
49	MENU_AUD1_LEVEL	0	-16 ... 16	-16 ... 16 dB
50	MENU_AUD1_ANALOG_INPUT_GAIN	0	-16 ... 16	-16 ... 16 dB
51	MENU_AUD2_MODE	0	0, 1	Auto, Man
52	MENU_AUD2_INPUT	0	0, 1, 2	Auto, Digital, Analog
53	MENU_AUD2_LEVEL	0	-16 ... 16	-16 ... 16 dB
54	MENU_AUD2_ANALOG_INPUT_GAIN	0	-16 ... 16	-16 ... 16 dB
55	MENU_AUD3_MODE	0	0, 1	Auto, Man
56	MENU_AUD3_INPUT	0	0, 1, 2	Auto, Digital, Analog
57	MENU_AUD3_LEVEL	0	-16 ... 16	-16 ... 16 dB
58	MENU_AUD3_ANALOG_INPUT_GAIN	0	-16 ... 16	-16 ... 16 dB
59	MENU_SPEAKER_MAIN	0	0, 1	Large, Small
60	MENU_SPEAKER_CENTER	0	0, 1, 2	Large, Small, None
61	MENU_SPEAKER_SURR	0	0, 1, 2	Large, Small, None
62	MENU_SPEAKER_SUB	0	0, 1	Yes, No
63	MENU_DELAY_LEFT	0	0 ... 8	0 ... 8 ft
64	MENU_DELAY_CENTER	0	0 ... 8	0 ... 8 ft
65	MENU_DELAY_RIGHT	0	0 ... 8	0 ... 8 ft
66	MENU_DELAY_RSURR	0	0 ... 15	0 ... 15 ft
67	MENU_DELAY_LSURR	0	0 ... 15	0 ... 15 ft
68	MENU_DELAY_SUB	0	0 ... 8	0 ... 8 ft
69	MENU_BALANCE_LEFT	0	-48 ... 24	-24 ... 12 dB
70	MENU_BALANCE_CENTER	0	-48 ... 24	-24 ... 12 dB
71	MENU_BALANCE_RIGHT	0	-48 ... 24	-24 ... 12 dB
72	MENU_BALANCE_RSURR	0	-48 ... 24	-24 ... 12 dB
73	MENU_BALANCE_LSURR	0	-48 ... 24	-24 ... 12 dB
74	MENU_BALANCE_SUB	0	-48 ... 24	-24 ... 12 dB
75	MENU_LEVEL_SUB_LIMIT	0	-40 ... 0	-40 ... 0 dB
76	MENU_FEATURE_NOISE_GEN	0	0, 1, 2	Auto, Man, Off
77	MENU_FEATURE_LANG	0	0, 1, 2	English, French, Spanish
78	MENU_FEATURE_RESET	ILLEGAL	none, illegal setup item	
79	MENU_FEATURE_VERSION	ILLEGAL	none, illegal setup item	
80	MENU_FACTORY_RESET	ILLEGAL	none, illegal setup item	
81	MENU_SOFTWARE_VERSION	ILLEGAL	none, illegal setup item	