2009 ELITE Receivers
RS-232C Command list
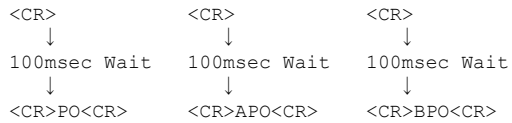

For models **SC-27**
SC-25
VSX-23TXH
VSX-21TXH

Notice

Notice1

This equipment save the power consumption (less than 1W) during the standby mode.
To achieve this, main CPU doesn't operate during standby mode.
For this reason, this equipment can not receive the 1st command from rs-232c port.
But main CPU will be waked up by this 1st command.
This equipment is using 1st command "<CR>" as only a trigger to wake up the main CPU
and can not decode 1st command.
Please send command as bellow.
Please make sure to have at least 100msec. Interval between the 1st command and the second command.

```
        <CR>          <CR>          <CR>
         ↓             ↓             ↓
    100msec Wait   100msec Wait   100msec Wait
         ↓             ↓             ↓
    <CR>PO<CR>     <CR>APO<CR>    <CR>BPO<CR>
```

Notice2

It may happen to take time for the set product to respond to the command from your remote controlling system.

Notice3

After set to PANEL LOCK or REMOTE LOCK mode,
"PANEL LOCK" or "REMOTE LOCK" message appear on FL display
when a front panel key or remote control button pushed.

Physical Connection

Connector

RS232C DB9 Male, Crossover Cable

Pin	AV Receiver
1	*1
2	RXD
3	TXD
4	*1
5	GND
6	*1
7	RTS(BUSY)
8	NC
9	NC

*1 Pin 1&4&6 are shorted each other.

Communication

Communication Speed : 9600bps
Character length : 8bits
Parity:None
Start bit:1bits
Stop bit:1bit

Pioneer   AV Receiver Control Commands List

About Automatic Feedback

When the customer changes the status using key on the front panel or the remote controller of AV receiver,
AV receiver send new status automatically.
(For ex.) The user changes function on the front panel.
Response from AV receiver : FN**<CR+LF>

Other Automatic Feedback status table.

AV Receiver status	Response
POWER	PWR*<CR+LF>
VOLUME	VOL**<CR+LF>
MUTE	MUT*<CR+LF>
INPUT SOURCE	FN**<CR+LF>
LISTENING MODE SET	SR****<CR+LF>
LISTENING MODE	LM***<CR+LF>
SPEAKERS	SPK*<CR+LF>
HDMI OUTPUT SELECT	HO*<CR+LF>
SBch PROCESSING	EX*<CR+LF>
MCACC MEMORY	MC*<CR+LF>
PHASE CONTROL	IS*<CR+LF>
TONE	TO*<CR+LF>
BASS	BA**<CR+LF>
TREBLE	TR**<CR+LF>
HDMI AUDIO	HA*<CR+LF>
TUNER PRESET	PR***<CR+LF>
TUNER FREQUENCY	FR*****<CR+LF>
XM CHANNEL	XM***<CR+LF>
SIRIUS CHANNEL	SIR***<CR+LF>
ZONE 2 POWER	APR*<CR+LF>
ZONE 3 POWER	BPR*<CR+LF>
ZONE 2 VOLUME	ZV**<CR+LF>
ZONE 3 VOLUME	YV**<CR+LF>
ZONE 2 MUTE	Z2MUT*<CR+LF>
ZONE 3 MUTE	Z3MUT*<CR+LF>
ZONE 2 INPUT	Z2F**<CR+LF>
ZONE 3 INPUT	Z3F**<CR+LF>
PQLS	PQ*<CR+LF>

POWER

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
PO<CR>	POWER ON	PWR*<CR+LF>	0: ON		o	o	o	o
PF<CR>	POWER OFF		1: OFF		o	o	o	o
?P<CR>	Request POWER status.			Command:?P<CR> Response:PWR0<CR+LF> (now POWER ON)	o	o	o	o

VOLUME

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
VU<CR>	VOLUME UP	VOL***<CR+LF>	***: 000 to 185 by ASCII code.		o	o	o	o
VD<CR>	VOLUME DOWN		(1step = 0.5dB)		o	o	o	o
***VL<CR>	VOLUME SET		185 : +12.0dB 184 : +11.5dB 161 : 0.0dB 001 : -80.0dB 000 : ---.-dB (MIN)	061VL<CR> (set to -50.0dB.)	o	o	o	o
?V<CR>	Request VOLUME LEVEL.			Command:?V<CR> Response:VOL160<CR+LF> (VOLUME is set to 0.0dB)	o	o	o	o

MUTE

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
MO<CR>	MUTE ON	MUT*<CR+LF>	0: ON		o	o	o	o
MF<CR>	MUTE OFF		1: OFF		o	o	o	o
?M<CR>	Request MUTE ststus.			Command:?M<CR> Response:MUT1<CR+LF> (MUTE OFF)	o	o	o	o

INPUT

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
**FN<CR>	INPUT CHANGE	FN**<CR+LF>	04: DVD	15FN<CR> (set to DVR.)	o	o	o	o
			25: BD		o	o	o	o
			05: TV/SAT		o	o	o	o
			15: DVR		o	o	o	o
			10: VIDEO 1		o	o	o	o
			14: VIDEO 2		o	o	x	o front
			19: HDMI 1		o	o	o	o
			20: HDMI 2		o	o	o	o
			21: HDMI 3		o	o	o	o
			22: HDMI 4		o Front	o Front	o Front	x
			26: HOME MEDIA GALLERY		o	o	x	x
			17: iPod/USB		o	o	o	o
			18: XM RADIO		o	o	o	o
			27: SIRIUS		o	o	o	o
			01: CD		o	o	o	o
			03: CD-R/TAPE		o	o	o	o
			02: TUNER		o	o	o	o

Command	Function	Parameter	Example				
		29: AUX		×	×	×	×
		00: PHONO		o	o	×	×
		12: MULTI CH IN		o	o	o	o
		31: HDMI (cyclic)		o	o	o	o
FU<CR>	INPUT CHANGE (cyclic)			o	o	o	o
?F<CR>	Request INPUT source		Command:?F<CR> Response:FN05<CR+LF> (TV/SAT is selected.)	o	o	o	o

LISTENING MODE

There are some modes which is not available depending on the input signal.

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
****SR<CR>	LISTENING MODE SET	SR****<CR+LF>	0001: STEREO (cyclic)	0102SR<CR>	o	o	o	o
			0009: STEREO (direct set)	(set to SCI-FI mode.)	o	o	o	o
			0151: Auto Level Control (A.L.C.)		×	×	×	×
			0003: Front Stage Surround Advance Focus	0008SR<CR>	o	o	o	o
			0004: Front Stage Surround Advance Wide	(set to PURE DIRECT	o	o	o	o
			0010: STANDARD	mode.)	o	o	o	o
			0011: (2ch source)		o	o	o	o
			0013: PRO LOGIC2 MOVIE		o	o	o	o
			0018: PRO LOGIC2x MOVIE		o	o	o	o
			0014: PRO LOGIC2 MUSIC		o	o	o	o
			0019: PRO LOGIC2x MUSIC		o	o	o	o
			0015: PRO LOGIC2 GAME		o	o	o	o
			0020: PRO LOGIC2x GAME		o	o	o	o
			0012: PRO LOGIC		o	o	o	o
			0016: Neo:6 CINEMA		o	o	o	o
			0017: Neo:6 MUSIC		o	o	o	o
			0029: NEURAL THX		o	o	o	o
			0028: XM HD SURROUND		o	o	o	o
			0021: (Multi ch source)		o	o	o	o
			0022: (Multi ch source)+DOLBY EX		o	o	o	o
			0023: (Multi ch source)+PRO LOGIC2x MOVIE		o	o	o	o
			0024: (Multi ch source)+PRO LOGIC2x MUSIC		o	o	o	o
			0025: DTS-ES Neo:6		o	o	o	o
			0026: DTS-ES matrix		o	o	o	o
			0027: DTS-ES discrete		o	o	o	o
			0030: DTS-ES 8ch discrete		o	o	o	o
			0100: ADVANCED SURROUND (cyclic)		o	o	o	o
			0101: ACTION		o	o	o	o
			0103: DRAMA		o	o	o	o
			0102: SCI-FI		o	o	o	o
			0105: MONO FILM		o	o	o	o
			0104: ENTERTAINMENT SHOW		o	o	o	o
			0106: EXPANDED THEATER		o	o	o	o
			0116: TV SURROUND		o	o	o	o
			0118: ADVANCED GAME		o	o	o	o
			0117: SPORTS		o	o	o	o
			0107: CLASSICAL		o	o	o	o
			0110: ROCK/POP		o	o	o	o
			0109: UNPLUGGED		o	o	o	o
			0112: EXTENDED STEREO		o	o	o	o
			0113: PHONES SURROUND		o	o	o	o
			0050: THX (cyclic)		o	o	o	o
			0051: PROLOGIC + THX CINEMA		o	o	o	o
			0052: PL2 MOVIE + THX CINEMA		o	o	o	o
			0053: Neo:6 CINEMA + THX CINEMA		o	o	o	o
			0054: PL2x MOVIE + THX CINEMA		o	o	o	o
			0055: THX SELECT2 GAMES		×	o	o	o
			0068: THX CINEMA (for 2ch)		o	o	o	o
			0069: THX MUSIC (for 2ch)		o	o	o	o
			0070: THX GAMES (for 2ch)		o	o	o	o
			0071: PL2 MUSIC + THX MUSIC		o	o	o	o
			0072: PL2x MUSIC + THX MUSIC		o	o	o	o
			0073: Neo:6 MUSIC + THX MUSIC		o	o	o	o
			0074: PL2 GAME + THX GAMES		o	o	o	o
			0075: PL2x GAME + THX GAMES		o	o	o	o
			0076: THX ULTRA2 GAMES		o	×	×	×
			0077: PROLOGIC + THX MUSIC		×	×	×	×
			0078: PROLOGIC + THX GAMES		×	×	×	×
			0056: THX CINEMA (for multi ch)		o	o	o	o
			0057: THX SURROUND EX		o	o	o	o
			0058: PL2x MOVIE + THX CINEMA		o	o	o	o
			0059: ES Neo:6 + THX CINEMA		o	o	o	o
			0060: ES MATRIX + THX CINEMA		o	o	o	o
			0061: ES DISCRETE + THX CINEMA		o	o	o	o
			0067: ES 8ch DISCRETE + THX CINEMA		o	o	o	o
			0062: THX SELECT2 CINEMA		×	o	o	o
			0063: THX SELECT2 MUSIC		×	o	o	o
			0064: THX SELECT2 GAMES		×	o	o	o
			0065: THX ULTRA2 CINEMA		o	×	×	×
			0066: THX ULTRA2 MUSIC		o	×	×	×
			0079: THX ULTRA2 GAMES		o	×	×	×
			0080: THX MUSIC (for multi ch)		o	o	o	o
			0081: THX GAMES (for multi ch)		o	o	o	o
			0082: PLIIx MUSIC + THX MUSIC		o	o	o	o
			0083: EX + THX GAMES		o	o	o	o
			0084: Neo:6 + THX MUSIC		o	o	o	o
			0085: Neo:6 + THX GAMES		o	o	o	o
			0086: ES MATRIX + THX MUSIC		o	o	o	o
			0087: ES MATRIX + THX GAMES		o	o	o	o
			0088: ES DISCRETE + THX MUSIC		o	o	o	o
			0089: ES DISCRETE + THX GAMES		o	o	o	o

Command	Description	Response format	Code	Command/Response example				
			0090: ES 8CH DISCRETE + THX MUSIC		o	o	o	o
			0091: ES 8CH DISCRETE + THX GAMES		o	o	o	o
			0005: AUTO SURR/STREAM DIRECT (cyclic)		o	o	o	o
			0006: AUTO SURROUND		o	o	o	o
			0152: OPTIMUM SURROUND		o	o	×	×
			0151: Auto Level Control (A.L.C.)		o	o	o	o
			0007: DIRECT		o	o	o	o
			0008: PURE DIRECT		o	o	o	o
?S<CR>	Request LISTENING MODE setting.			Command:?S<CR> Response:SR0013<CR+LF> (PRO LOGIC2 MOVIE is selected.)	o	o	o	o
?L<CR>	Request PLAYING LISTENING MODE information. (for display)	LM***<CR+LF>	000: PRO LOGICII MOVIE	Command:?L<CR> Response:LM017<CR+LF> (now DOLBY DIGITAL EX mode.)	o	o	o	o
			001: PRO LOGICII MUSIC		o	o	o	o
			002: PRO LOGIC		o	o	o	o
			003: Neo:6 CINEMA	Command:?L<CR> Response:LM032<CR+LF> (now ACTION mode)	o	o	o	o
			004: Neo:6 MUSIC		o	o	o	o
			005: PRO LOGICII GAME		o	o	o	o
			008: 96kHz PRO LOGIC		o	o	o	o
			009: 96kHz PRO LOGICII MOVIE		o	o	o	o
			010: 96kHz PRO LOGICII MUSIC		o	o	o	o
			011: 96kHz PRO LOGICII GAME		o	o	o	o
			016: DOLBY DIGITAL		o	o	o	o
			017: DOLBY DIGITAL EX		o	o	o	o
			019: DTS		o	o	o	o
			027: MPEG-2 AAC		o	o	o	o
			028: MPEG-2 AAC EX		o	o	o	o
			030: DTS 96/24		o	o	o	o
			031: PCM		o	o	o	o
			032: ACTION		o	o	o	o
			033: SCIFI		o	o	o	o
			034: DRAMA		o	o	o	o
			035: ENTERTAINMENT SHOW		o	o	o	o
			036: MONO FILM		o	o	o	o
			043: EXPANDED THEATER		o	o	o	o
			050: PRO LOGICIIx MOVIE		o	o	o	o
			051: PRO LOGICIIx MUSIC		o	o	o	o
			052: Neo:6 96K CINEMA		o	o	o	o
			053: Neo:6 96K MUSIC		o	o	o	o
			056: PRO LOGICIIx GAME		o	o	o	o
			057: 96kHz PRO LOGICIIx MOVIE		o	o	o	o
			058: 96kHz PRO LOGICIIx MUSIC		o	o	o	o
			059: 96kHz PRO LOGICIIx GAME		o	o	o	o
			080: THX CINEMA		o	o	o	o
			081: THX SURROUND EX		o	o	o	o
			082: THX ULTRA2 CINEMA		o	×	×	×
			085: DTS + Neo:6 + THX CINEMA		o	o	o	o
			087: PRO LOGICIIx MOVIE + THX CINEMA		o	o	o	o
			090: THX MUSIC		o	o	o	o
			091: THX GAMES		o	o	o	o
			092: THX SELECT2 MUSIC		×	o	o	o
			093: THX SELECT2 GAMES		×	o	o	o
			094: THX ULTRA2 MUSIC		o	×	×	×
			096: CLASSICAL		o	o	o	o
			098: UNPLUGGED		o	o	o	o
			099: ROCK/POP		o	o	o	o
			107: EXTENDED STEREO		o	o	o	o
			122: NEURAL THX		o	o	o	o
			123: XM HD SURROUND		o	o	o	o
			124: SACD DIRECT		o	o	o	o
			125: PCM DIRECT		o	o	o	o
			126: ANALOG DIRECT		o	o	o	o
			128: STEREO		o	o	o	o
			130: 96KHz STEREO		o	o	o	o
			134: 192kHz STEREO		o	o	×	×
			135: FRONT STAGE SURROUND ADVANCE FOCUS		o	o	o	o
			136: FRONT STAGE SURROUND ADVANCE WIDE		o	o	o	o
			137: AUTO LEVEL CONTROL		o	o	o	o
			154: DOLBY DIGITAL + PRO LOGICIIx MOVIE		o	o	o	o
			155: DOLBY DIGITAL + PRO LOGICIIx MUSIC		o	o	o	o
			156: DTS + PROLIGICIIx MOVIE		o	o	o	o
			157: DTS + PROLIGICIIx MUSIC		o	o	o	o
			158: MPEG-2 AAC + PROLIGICIIx MOVIE		o	o	o	o
			159: MPEG-2 AAC + PROLIGICIIx MUSIC		o	o	o	o
			166: DTS Express		o	o	o	o
			167: DTS-HD HIGH RESOLUTION		o	o	o	o
			168: DTS-HD MASTER AUDIO		o	o	o	o
			169: DOLBY DIGITAL PLUS		o	o	o	o
			170: DOLBY DIGITAL PLUS EX		o	o	o	o
			171: DOLBY D PLUS +PLIIx MOVIE		o	o	o	o
			172: DOLBY D PLUS +PLIIx MUSIC		o	o	o	o
			173: DOLBY D PLUS +PLIIx MOVIE +THX CINEMA		o	o	o	o
			174: DOLBY TrueHD		o	o	o	o
			175: DOLBY TrueHD EX		o	o	o	o
			176: DOLBY TrueHD +PLIIx MOVIE		o	o	o	o
			177: DOLBY TrueHD +PLIIx MUSIC		o	o	o	o
			178: DOLBY TrueHD +PLIIx MOVIE +THX CINEMA		o	o	o	o
			179: DTS-(HD)ES 8ch Discrete		o	o	o	o
			181: TV SURROUND		o	o	o	o
			182: SPORTS		o	o	o	o
			183: ADVANVED GAME		o	o	o	o
			185: PHONES SURROUND		o	o	o	o
			213: MULTI CH IN		o	o	o	o
			214: PRO LOGICIIx GAME + THX GAMES		o	o	o	o

Mode	SC-27	SC-25	VSX-23TXH	VSX-21TXH
215: THX ULTRA2 GAMES	o	×	×	×
216: PRO LOGIC Ⅱ GAME + THX GAMES	o	o	o	o
219: HDMI THROUGH	o	o	o	o
220: PRO LOGIC + THX CINEMA	o	o	o	o
221: PRO LOGIC Ⅱ MOVIE + THX CINEMA	o	o	o	o
222: Neo:6 CINEMA + THX CINEMA	o	o	o	o
224: THX SELECT2 GAMES (for 2ch)	×	o	o	o
225: PRO LOGIC Ⅱ MUSIC + THX MUSIC	o	o	o	o
226: PRO LOGIC Ⅱx MUSIC + THX MUSIC	o	o	o	o
227: Neo:6 MUSIC + THX MUSIC	o	o	o	o
228: PRO LOGIC + THX MUSIC	o	o	o	o
229: PRO LOGIC + THX GAMES	o	o	o	o
230: DOLBY D + PLⅡx MOVIE + THX CINEMA	o	o	o	o
231: DTS + PⅡx MOVIE + THX CINEMA	o	o	o	o
232: DTS-ES MATRIX6.1 + THX CINEMA	o	o	o	o
233: DTS-ES DISCRETE6.1 + THX CINEMA	o	o	o	o
234: MPEG-2 AAC + PLⅡx MOVIE + THX CINEMA	o	o	o	o
235: WMA 9 Pro + PLⅡx MOVIE + THX CINEMA	o	o	o	o
236: THX SELECT2 CINEMA	×	o	o	o
237: THX SELECT2 GAMES	×	o	o	o
238: PCM + PLⅡx MOVIE + THX CINEMA	o	o	o	o
239: DTS-(HD)ES 8ch Discrete +THX CINEMA	o	o	o	o
240: DTS-(HD)ES Discrete +THX CINEMA	o	o	o	o
241: DTS-(HD)ES Matrix +THX CINEMA	o	o	o	o
242: PCM + PLⅡx MUSIC + THX MUSIC	o	o	o	o
243: PCM + DOLBY EX + THX GAMES	o	o	o	o
244: DOLBY D + PLⅡx MUSIC + THX MUSIC	o	o	o	o
245: DOLBY DIGITAL EX + THX GAMES	o	o	o	o
246: DTS + PLⅡx MUSIC + THX MUSIC	o	o	o	o
248: DTS-(HD)ES Matrix	o	o	o	o
249: DTS-(HD)ES Discrete	o	o	o	o
280: SACD + PRO LOGIC	o	o	o	o
281: SACD + PRO LOGIC Ⅱ MOVIE	o	o	o	o
282: SACD + PRO LOGIC Ⅱ MUSIC	o	o	o	o
283: SACD + PRO LOGIC Ⅱ GAME	o	o	o	o
284: SACD + PRO LOGIC Ⅱx MOVIE (for 2ch)	o	o	o	o
285: SACD + PRO LOGIC Ⅱx MUSIC (for 2ch)	o	o	o	o
286: SACD + PRO LOGIC Ⅱx GAME	o	o	o	o
287: SACD + PRO LOGIC Ⅱx MOVIE (for multi ch)	o	o	o	o
288: SACD + PRO LOGIC Ⅱx MUSIC (for multi ch)	o	o	o	o
322: DTS 96/24 STEREO	o	o	o	o
324: DTS + Neo:6	o	o	o	o
330: PCM +EX	o	o	o	o
333: PCM + PRO LOGIC Ⅱx MOVIE (for multi ch)	o	o	o	o
334: PCM + PRO LOGIC Ⅱx MUSIC (for multi ch)	o	o	o	o
340: SACD	o	o	o	o
342: SACD STEREO	o	o	o	o
344: SACD +EX	o	o	o	o
371: DTS 96/24 + Neo:6	o	o	o	o
372: DTS 96/24 ES MATRIX	o	o	o	o
380: WMA 9 PRO	o	o	o	o
382: WMA 9 PRO + EX	o	o	o	o
384: WMA 9 Pro + PRO LOGIC Ⅱx MOVIE	o	o	o	o
385: WMA 9 Pro + PRO LOGIC Ⅱx MUSIC	o	o	o	o
390: DTS + Neo:6 + THX MUSIC	o	o	o	o
391: DTS + Neo:6 + THX GAMES	o	o	o	o
392: DTS-ES MATRIX6.1 + THX MUSIC	o	o	o	o
393: DTS-ES MATRIX6.1 + THX GAMES	o	o	o	o
394: DTS-ES DISCRETE6.1 + THX MUSIC	o	o	o	o
395: DTS-ES DISCRETE6.1 + THX GAMES	o	o	o	o
396: DTS-(HD)ES 8ch Discrete +THX MUSIC	o	o	o	o
397: DTS-(HD)ES 8ch Discrete +THX GAMES	o	o	o	o
398: DTS-(HD)ES Discrete +THX MUSIC	o	o	o	o
399: DTS-(HD)ES Discrete +THX GAMES	o	o	o	o
400: DTS-(HD)ES Matrix +THX MUSIC	o	o	o	o
401: DTS-(HD)ES Matrix +THX GAMES	o	o	o	o
402: MPEG-2 AAC + PLⅡx MUSIC + THX MUSIC	o	o	o	o
403: MPEG-2 AAC + DOLBY EX + THX GAMES	o	o	o	o
404: WMA 9 Pro + PLⅡx MUSIC + THX MUSIC	o	o	o	o
405: WMA 9 Pro + DOLBY EX + THX GAMES	o	o	o	o
408: DOLBY D PLUS +PLⅡx MUSIC +THX MUSIC	o	o	o	o
409: DOLBY D PLUS + DOLBY EX + THX GAMES	o	o	o	o
410: DOLBY True HD + PLⅡx MUSIC +THX MUSIC	o	o	o	o
411: DOLBY True HD + DOLBY EX + THX GAMES	o	o	o	o

TONE CONTROL

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
TO<CR>	TONE ON/BYPASS	TO*<CR+LF>	0: BYPASS		o	o	o	o
?TO<CR>	Request TONE status		1: ON	Command:?TO<CR> Response:TO0<CR+LF> (now TONE BYPASS.)	o	o	o	o
BI<CR>	BASS INCREMENT	BA**<CR+LF>			o	o	o	o
BD<CR>	BASS DECREMENT		**: 00 to 12 by ASCII code. (1step=1dB)		o	o	o	o
?BA<CR>	Request BASS status		00: +6dB 06: 0dB 12: -6dB	Command:?BA<CR> Response:BA02<CR+LF> (BASS is set to +4dB.)	o	o	o	o
TI<CR>	TREBLE INCREMENT	TR**<CR+LF>			o	o	o	o
TD<CR>	TREBLE DECREMENT				o	o	o	o
?TR<CR>	Request TREBLE status			Command:?TR<CR> Response:TR10<CR+LF> (TREBLE is set to -4dB.)	o	o	o	o

DSP FUNCTION

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
*MC<CR>	MCACC MEMORY SET	MC*<CR+LF>			o	o	o	o
?MC<CR>	Request MCACC MEMORY status		0: MCACC MEMORY (cyclic) 1: MEMORY 1 2: MEMORY 2 3: MEMORY 3 4: MEMORY 4 5: MEMORY 5 6: MEMORY 6	Command:?MC<CR> Response:MC3<CR+LF> (now MEMORY 3 is selected.)	o	o	o	o
*EX<CR>	SBch PROCESSING SET	EX*<CR+LF>			o	o	o	o
?EX<CR>	Request SBch PROCESSING status		0: OFF 1: ON 2: AUTO	Command:?EX<CR> Response:EX2<CR+LF> (now AUTO is selected.)	o	o	o	o
*IS<CR>	PHASE CONTROL	IS*<CR+LF>			o	o	o	o
?IS<CR>	Request PHASE CONTROL status		0: PHASE CONTROL OFF 1: PHASE CONTROL ON 2: FULL BAND PHASE CONTROL ON	Command:?IS<CR> Response:IS1<CR+LF> (now PHASE CONTROL ON is selected.)	o	o	o	o

AMP FUNCTION

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
*SPK<CR>	SPEAKERS	SPK*<CR+LF>			o	o	o	o
?SPK<CR>	Request SPEAKERS status		0: SPEAKER OFF 1: SPEAKER A ON 2: SPEAKER B ON 3: SPEAKER A+B ON	Command:?SPK<VR> Response:SPK1<CR+LF> (now SPEAKER A ON.)	o	o	o	o
*HO<CR>	HDMI OUTPUT SELECT	HO*<CR+LF>			o	o	o	x
?HO<CR>	Request HDMI OUTPUT status		0: HDMI OUT ALL 1: HDMI OUT 1 2: HDMI OUT 2	Command:?HO<CR> Response:HO0<CR+LF> (now HDMI OUT ALL is selected.)	o	o	o	x
*HA<CR>	HDMI AUDIO	HA*<CR+LF>			o	o	o	o
?HA<CR>	Request HDMI AUDIO status		0: AMP 1: THROUGH	Command:?HA<CR> Response:HA0<CR+LF> (now AMP is selected.)	o	o	o	o
*PQ<CR>	PQLS	PQ*<CR+LF>			o	o	o	o
?PQ<CR>	Request PQLS setting status		0: OFF 1: AUTO	Command:?PQ<CR> Response:PQ0<CR+LF> (now PQLS setting OFF is selected.)	o	o	o	o

KEY LOCK

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
*PKL<CR>	PANEL KEY LOCK	PKL*<CR+LF>		*PKL<CR>	o	o	o	o
?PKL<CR>	Request PANEL KEY LOCK status		0: PANEL KEY LOCK (& VOLUME) OFF 1: PANEL KEY LOCK ON 2: PANEL KEY & VOLUME LOCK ON	Command:?PKL<CR> Response:PKL1<CR+LF> (now PANEL KEY LOCK ON.)	o	o	o	o
*RML<CR>	REMOTE LOCK	RML*<CR+LF>		*RML<CR>	o	o	o	o
?RML<CR>	Request REMOTE LOCK status		0: REMOTE LOCK OFF 1: REMOTE LOCK ON	Command:?RML<CR> Response:PKL1<CR+LF> (now REMOTE LOCK ON.)	o	o	o	o

CURSOR OPERATION

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
STS<CR>	STATUS DISPLAY	R<CR+LF>			o	o	o	o
CUP<CR>	AMP CURSOR UP	R<CR+LF>			o	o	o	o
CDN<CR>	AMP CURSOR DOWN	R<CR+LF>			o	o	o	o
CRI<CR>	AMP CURSOR RIGHT	R<CR+LF>			o	o	o	o
CLE<CR>	AMP CURSOR LEFT	R<CR+LF>			o	o	o	o
CEN<CR>	AMP CURSOR ENTER	R<CR+LF>			o	o	o	o
CRT<CR>	AMP RETURN	R<CR+LF>			o	o	o	o
APA<CR>	AUDIO PARAMETER	R<CR+LF>			o	o	o	o
VPA<CR>	VIDEO PARAMETER	R<CR+LF>			o	o	o	o
KOF<CR>	KEY OFF (for iPod, NETWORK)	R<CR+LF>	When this equipment continue command mode after sending the operation command, it needs to send "KOF" command.		o	o	o	o

About "KOF<CR>" command :

ZONE POWER

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
APO<CR>	ZONE 2 POWER ON	APR*<CR+LF>	0: ON		o	o	o	o
APF<CR>	ZONE 2 POWER OFF		1: OFF		o	o	o	o
?AP<CR>	Request ZONE 2 POWER status			Command:?AP<CR> Response:APR0<CR+LF> (ZONE 2 POWER ON)	o	o	o	o
BPO<CR>	ZONE 3 POWER ON	BPR*<CR+LF>			o	o	o	x
BPF<CR>	ZONE 3 POWER OFF				o	o	o	x
?BP<CR>	Request ZONE 3 POWER status			Command:?BP<CR> Response:BPR1<CR+LF> (ZONE 3 POWER OFF)	o	o	o	x

ZONE INPUT

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
**ZS<CR>	ZONE 2 INPUT CHANGE	Z2F**<CR+LF>	04: DVD	02ZS<CR>	o	o	o	o

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
			05: TV/SAT	(change to TUNER INPUT.)	o	o	o	o
			15: DVR		o	o	o	o
			10: VIDEO 1		o	o	o	o
			14: VIDEO 2		o	o	x	o front
			26: HOME MEDIA GALLERY		o	o	x	x
			17: iPod/USB		o	o	o	o
			18: XM RADIO		o	o	o	o
			27: SIRIUS		o	o	o	o
			01: CD		o	o	o	o
			03: CD-R/TAPE		o	o	o	o
			02: TUNER		o	o	o	o
			29: AUX		x	x	x	x
?ZS<CR>	Request ZONE 2 INPUT			Command:?ZS<CR> Response:Z2F04<CR+LF> (DVD is selected.)	o	o	o	o
**ZT<CR>	ZONE 3 INPUT CHANGE	Z3F**<CR+LF>	04: DVD	03TS<CR> (change to CD-R	o	o	o	x
			05: TV/SAT		o	o	o	x
			15: DVR		o	o	o	x
			10: VIDEO 1		o	o	o	x
			14: VIDEO 2		o	o	x	x
			26: HOME MEDIA GALLERY		o	o	x	x
			17: iPod/USB		o	o	x	x
			18: XM RADIO		o	o	x	x
			27: SIRIUS		o	o	x	x
			01: CD		o	o	o	x
			03: CD-R/TAPE		o	o	o	x
			02: TUNER		o	o	o	x
			29: AUX		x	x	x	x
?ZT<CR>	Request ZONE 3 INPUT			Command:?ZT<CR> Response:Z2F01<CR+LF> (CD is selected.)	o	o	o	x

ZONE VOLUME

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
ZU<CR>	ZONE 2 VOLUME UP	ZV**<CR+LF>			o	o	o	o
ZD<CR>	ZONE 2 VOLUME DOWN		**: 00 to 81 by ASCII code. (1step=1dB)		o	o	o	o
**ZV<CR>	ZONE 2 VOLUME SET			14ZV<CR> (set ZONE 2 VOLUME to -67.0dB)	o	o	o	o
?ZV<CR>	Request ZONE 2 VOLUME LEVEL.		81: 0.0dB 01: -80.0dB 00: ---dB(MIN)	Command:?ZV<CR> Response:ZV14<CR+LF> (ZONE 2 VOLUME is set to -67.0dB)	o	o	o	o
YU<CR>	ZONE 3 VOLUME UP	YV**<CR+LF>			o	o	o	x
YD<CR>	ZONE 3 VOLUME DOWN				o	o	o	x
**YV<CR>	ZONE 3 VOLUME SET			25YV<CR> (set ZONE 3 VOLUME -56.0dB)	o	o	o	x
?YV<CR>	Request ZONE 3 VOLUME LEVEL.			Command:?YV<CR> Response:YV25<CR+LF> (ZONE 3 VOLUME is set to -56.0dB)	o	o	o	x

ZONE MUTE

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
Z2MO<CR>	ZONE 2 MUTE ON	Z2MUT*<CR+LF>	0: ON		o	o	o	o
Z2MF<CR>	ZONE 2 MUTE OFF		1: OFF		o	o	o	o
?Z2M<CR>	Request ZONE 2 MUTE status			Command:?Z2M<CR> Response:Z2MUT1<CR+LF> (now ZONE 2 MUTE OFF)	o	o	o	o
Z3MO<CR>	ZONE 3 MUTE ON	Z3MUT*<CR+LF>			o	o	o	x
Z3MF<CR>	ZONE 3 MUTE OFF				o	o	o	x
?Z3M<CR>	Request ZONE 2 MUTE status			Command:?Z3M<CR> Response:Z3MUT0<CR+LF> (now ZONE 3 MUTE ON)	o	o	o	x

TUNER

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
TFI<CR>	TUNER FREQ INCREMENT	FR*****<CR+LF>			o	o	o	o
TFD<CR>	TUNER FREQ DECREMENT				o	o	o	o
?FR<CR>	Request TUNER FREQUENCY		A: AM F: FM FREQUENCY: 0 to 9 by ASCII code A00530=AM 530kHz A01700=AM 1700kHz F08750=FM 87.50MHz F10800=FM 108.00MHz	Command:?FR<CR> Response:FRF08800<CR+LF> (now FM 88.00MHz)	o	o	o	o
TB<CR>	TUNER BAND				o	o	o	o
*TP<CR>	TUNER PRESET	PR***<CR+LF>	*: 0 to 9 by ASCII code.	8TP<CR> (set to preset number 8.)	o	o	o	o
TC<CR>	TUNER CLASS change		A01: CLASS "A",NUMBER 1		o	o	o	o
TPI<CR>	TUNER PRESET INCREMENT		… …		o	o	o	o
TPD<CR>	TUNER PRESET DECREMENT		G09: CLASS "G",NUMBER 9		o	o	o	o
?PR<CR>	Request TUNER PRESET No.		(CLASS = A to G, NUMBER = 01 to 09	Command:?PR<CR> Response:PRB04<CR+LF> (now tuner preset No. is B4)	o	o	o	o

XM radio Operation (USA model only)

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
00XM	0 (number key)	XM***<CR+LF>	***: Channel number by ASCII code.		○	○	○	○
01XM	1 (number key)	(↑when change channel)			○	○	○	○
02XM	2 (number key)				○	○	○	○
03XM	3 (number key)				○	○	○	○
04XM	4 (number key)				○	○	○	○
05XM	5 (number key)				○	○	○	○
06XM	6 (number key)				○	○	○	○
07XM	7 (number key)				○	○	○	○
08XM	8 (number key)				○	○	○	○
09XM	9 (number key)				○	○	○	○
10XM	CH + / Cursol DOWN↓				○	○	○	○
11XM	CH – / Cursol UP↑				○	○	○	○
12XM	PRESET ST + (→)				○	○	○	○
13XM	PRESET ST – (←)				○	○	○	○
14XM	DISPLAY				○	○	○	○
15XM	PRESET				○	○	○	○
16XM	CLASS				○	○	○	○
17XM	DIRECT ACCESS(CH)				○	○	○	○
18XM	MEMORY (EDIT)				○	○	○	○
19XM	MENU				○	○	○	○
21XM	ENTER				○	○	○	○
22XM	RETURN				○	○	○	○
23XM	CATEGORY				○	○	○	○
?XM<CR>	Request XM channel No.			Command:?XM<CR> Response:XM025<CR+LF> (now channel 25 is selected.)	○	○	○	○

Sirius Operation (USA model only)

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
00SI	0 (number key)	SIR***<CR+LF>	***: Channel number by ASCII code.		○	○	○	○
01SI	1 (number key)	(↑when change channel)			○	○	○	○
02SI	2 (number key)				○	○	○	○
03SI	3 (number key)				○	○	○	○
04SI	4 (number key)				○	○	○	○
05SI	5 (number key)				○	○	○	○
06SI	6 (number key)				○	○	○	○
07SI	7 (number key)				○	○	○	○
08SI	8 (number key)				○	○	○	○
09SI	9 (number key)				○	○	○	○
10SI	CH + / Cursol DOWN↓				○	○	○	○
11SI	CH – / Cursol UP↑				○	○	○	○
12SI	PRESET ST + (→)				○	○	○	○
13SI	PRESET ST – (←)				○	○	○	○
14SI	DISPLAY				○	○	○	○
15SI	PRESET				○	○	○	○
16SI	CLASS				○	○	○	○
17SI	DIRECT ACCESS(CH)				○	○	○	○
18SI	MEMORY (EDIT)				○	○	○	○
19SI	MENU				○	○	○	○
21SI	ENTER				○	○	○	○
22SI	RETURN				○	○	○	○
23SI	CATEGORY				○	○	○	○
?SIR<CR>	Request SIRIUS channel No.			Command:?SIR<CR> Response:SIR019<CR+LF> (now channel 19 is selected.)	○	○	○	○

iPod Operation

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
00IP	PLAY	R<CR+LF>			○	○	○	○
01IP	PAUSE				○	○	○	○
02IP	STOP※		※note:		○	○	○	○
03IP	PREVIOUS (|<|<|)		Almost iPod cannot correspond stop function,		○	○	○	○
04IP	NEXT (|>|>|)		in this case, no response.		○	○	○	○
05IP	REV (<|<|)			05IP<CR> (start REV) KOF<CR> (stop REV)	○	○	○	○
06IP	FWD (|>|>)			06IP<CR> (start FWD) KOF<CR> (stop FWD)	○	○	○	○
07IP	REPEAT				○	○	○	○
08IP	SHUFFLE				○	○	○	○
09IP	DISPLAY				○	○	○	○
10IP	iPod CONTROL				○	○	○	○
13IP	Cursor UP				○	○	○	○
14IP	Cursor DOWN				○	○	○	○
15IP	Cursor RIGHT				○	○	○	○
16IP	Cursor LEFT				○	○	○	○
17IP	ENTER				○	○	○	○
18IP	RETURN				○	○	○	○
19IP	TOP MENU				○	○	○	○

Home Media Gallery Operation

Command	Function	Response	Parameter	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX 23TXH /CUXJCA	VSX 21TXH /CUXJCA
00NW	0 (number key)	R<CR+LF>			○	○	×	×
01NW	1 (number key)				○	○	×	×
02NW	2 (number key)				○	○	×	×
03NW	3 (number key)				○	○	×	×
04NW	4 (number key)				○	○	×	×
05NW	5 (number key)				○	○	×	×
06NW	6 (number key)				○	○	×	×

07NW	7 (number key)				○	○	×	×
08NW	8 (number key)				○	○	×	×
09NW	9 (number key)				○	○	×	×
10NW	PLAY				○	○	×	×
11NW	PAUSE				○	○	×	×
12NW	PREVIOUS (|<|<|)				○	○	×	×
13NW	NEXT (|>|>|)				○	○	×	×
18NW	DISPLAY				○	○	×	×
20NW	STOP				○	○	×	×
26NW	UP				○	○	×	×
27NW	DOWN				○	○	×	×
28NW	RIGHT				○	○	×	×
29NW	LEFT				○	○	×	×
30NW	ENTER				○	○	×	×
31NW	RETURN				○	○	×	×
32NW	PROGRAM				○	○	×	×
33NW	CLEAR				○	○	×	×
34NW	REPEAT				○	○	×	×
35NW	RANDOM				○	○	×	×
36NW	MENU				○	○	×	×
37NW	EDIT				○	○	×	×
38NW	CLASS				○	○	×	×

Error message

Error Mess	Error Name	Meaning	Example	SC-27 /CUXJCA	SC-25 /CUXJCA	VSX-23TXH /CUXJCA	VSX-21TXH /CUXJCA
E04<CR+LF>	COMMAND ERROR	Detect inappropriate Command line.	Command:ABCD<CR> Response:E04<CR+LF> (unknown "ABCD" Command.)	○	○	○	○
E06<CR+LF>	PARAMETER ERROR	Detect inappropriate Parameter.	Command:99FN<CR> Response:E06<CR+LF> (unknown "99" Parameter.)	○	○	○	○
B00<CR+LF>	BUSY	Now AV Receiver is Busy. Please wait few seconds.		○	○	○	○