

**ELITE**

**VSX-59TXi**

**RS-232C Protocol**

## Physical Cable Connection

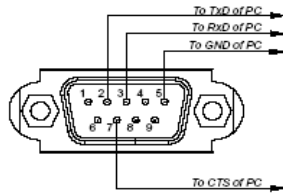
### Connector

RS232C DB9 Male

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.

PC Control Connector (D-Sub 9P)



### Communication

Communication Speed : 9600bps

Protocol type : 8data bits,1stop bit,no parity

## VSX-59TXi RS-232C Commands List

### Automatic Feedback

When the input or function status is changed using knobs on the front panel or the remote control of the receiver, the receiver will send it's new status automatically. (VOLXX,PQRX,MUTX,FUNXX,SRXXXX,LMXXX

(For example) The user changes a function on the front panel.  
Receiver sends: FUNXX<CR+LF>

X:Argument:ASCII code

### Status Request Commands

Command	Command Name	Argument	operation	Answer
?V<CR>	VOLUME LEVEL STATUS REQUEST		Return the VOLUME LEVEL	VOLXX<CR+LF> *1
?P<CR>	POWER STATUS REQUEST		Return the POWER status	PWRX<CR+LF> *2
?M<CR>	MUTE STATUS REQUEST		Return the MUTE status	MUTX<CR+LF> *2
?F<CR>	FUNCTION MODE REQUEST		Return the FUNCTION MODE	FUNXX<CR+LF> *3
?S<CR>	LISTENING MODE SETTING REQUEST		Return the L.M SETTING	SRXXX<CR+LF> *4
?L<CR>	LISTENING MODE REQUEST		Return the L.M	LMXXX<CR+LF> *5
?TO<CR>	TONE STATUS REQUEST		Return the TONE status	TOX<CR+LF> *6
?BA<CR>	BASS STATUS REQUEST		Return the BASS Level	BAXX<CR+LF> *7
?TR<CR>	TREBLE STATUS REQUEST		Return the TREBLE Level	TRXX<CR+LF> *8
?PR<CR>	TUNER PRESET REQUEST		Return the PRESET number	PRXXX<CR+LF> *9
?FR<CR>	TUNER FREQ REQUEST		Return the FREQ number	FRXXXXX<CR+LF> *10
?AC<CR>	ACOUSTIC CAL REQUEST		Return the ACOUSTIC CAL. status	ACX<CR+LF> *11
?UI<CR>	USB INPUT CH REQUEST		Return the USB INPUT CH. status	UIX<CR+LF> *12
?MI<CR>	MULTI INPUT CH REQUEST		Return the MULTI INPUT CH. status	MIX<CR+LF> *13

### Operation Commands

Command	Command Name	Argument	Operation	Answer
VU<CR>	VOLUME UP		VOLUME UP	VOLXX<CR+LF> *1
VD<CR>	VOLUME DOWN		VOLUME DOWN	VOLXX<CR+LF> *1
XXVL<CR>	VOLUME SET	00-93 *1	Set the VOLUME level	VOLXX<CR+LF> *1
PO<CR>	POWER ON		POWER ON	PWRX<CR+LF> *2
PF<CR>	POWER OFF		POWER OFF	PWRX<CR+LF> *2
MO<CR>	MUTE ON		MUTE ON	MUTX<CR+LF> *2
MF<CR>	MUTE OFF		MUTE OFF	MUTX<CR+LF> *2
XXFN<CR>	FUNCTION MODE SET	*3	Set the FUNCTION MODE	FUNXX<CR+LF> *3
FU<CR>	FUNCTION MODE UP		Change the FUNCTION MODE	FUNXX<CR+LF> *3
XXX(X)SR<CR>	LISTENING MODE SET	*4	Change the LISTENING MODE	SRXXX(X)<CR+LF> *4
TO<CR>	TONE ON/BYPASS		TONE ON or BYPASS	TOX<CR+LF>
BI<CR>	BASS INCREMENT		BASS INCREMENT	BAXX<CR+LF> *7
BD<CR>	BASS DECREMENT		BASS DECREMENT	BAXX<CR+LF> *7
TI<CR>	TREBLE INCREMENT		TREBLE INCREMENT	TRXX<CR+LF> *8
TD<CR>	TREBLE DECREMENT		TREBLE DECREMENT	TRXX<CR+LF> *8
TB<CR>	TUNER BAND		change the BAND (AM/FM)	FRXXXXX<CR+LF> *10
XTP<CR>	TUNER PRESET	0-9	change the TUNER PRESET	PRXXX<CR+LF> *9
TC<CR>	TUNER CLASS		change the TUNER CLASS	PRXXX<CR+LF> *9
TPI<CR>	TUNER PRESET INCREMENT		TUNER PRESET INCREMENT	PRXXX<CR+LF> *9
TPD<CR>	TUNER PRESET DECREMENT		TUNER PRESET DECREMENT	PRXXX<CR+LF> *9
TFI<CR>	TUNER FREQ INCREMENT		TUNER FREQ INCREMENT	FRXXXXX<CR+LF> *10
TFD<CR>	TUNER FREQ DECREMENT		TUNER FREQ DECREMENT	FRXXXXX<CR+LF> *10
XAC<CR>	ACOUSTIC CAL	0,1,2,3,4	change the ACOUSTIC CAL.	ACX<CR+LF> *11
XUI<CR>	USB INPUT CH	0,1,2,3	change the USB INPUT CHANNEL	UIX<CR+LF> *12
XMI<CR>	MULTI INPUT CH	0,1,2,3	change the MULTI INPUT CHANNEL	MIX<CR+LF> *13

### Error message

Error Message	Error Name	Meaning
E04<CR+LF>	COMMAND ERROR	Inappropriate Command line detected
E06<CR+LF>	ARGUMENT ERROR	Inappropriate Factor

### Explanation of arguments

#### \*1 VOLUME LEVEL [2byte]

93VL<CR>	+12dB
81VL<CR>	0dB
01VL<CR>	-80dB
00VL<CR>	-- (same as mute)

#### Example1

Command ?V<CR>  
Answer VOL93<CR+LF>

Request Volume Level.  
Volume is set to +12dB.

**\*2 ON/OFF Status Reply [1byte]**

0	ON
1	OFF

**Example2**

Command ?M<CR>  
 Answer MUTO<CR+LF>

Request Mute Status.  
 Mute is On.

**\*3 FUNCTION MODE Command NO. [2byte]**

00FN<CR>	PHONO
01FN<CR>	CD
02FN<CR>	TUNER
03FN<CR>	CDR
04FN<CR>	DVD
05FN<CR>	TV
06FN<CR>	SAT
07FN<CR>	VCR1
08FN<CR>	VCR2
09FN<CR>	VCR3
10FN<CR>	VIDEO or VIDEO1
11FN<CR>	i.LINK UNASSIGNED DEVICE
12FN<CR>	Multi CH
13FN<CR>	USB

**Example3**

Command 04FN<CR>  
 Answer FUN04<CR+LF>

Change to source 04(DVD).

**Example4**

Command in respect of "?F<CR>"  
 Answer FUN04<CR+LF>

Request Current Source.  
 Source 04 is selected(DVD).

**\*6 TONE STATUS Reply[1byte]**

0	BYPASS
1	ON

**Example1**

Command ?TO<CR>  
 Answer TO1<CR+LF>

Request TONE Status.  
 Tone On.

**\*7 BASS STATUS Reply [2byte]**

00	+6
01	+5
02	+4
03	+3
04	+2
05	+1
06	0
07	-1
08	-2
09	-3
10	-4
11	-5
12	-6

**Example2**

Command ?BA<CR>  
 Answer BA02<CR+LF>

Request BASS Level.  
 BASS is set to +4dB.

**\*8 TREBLE STATUS Reply [2byte]**

00	+6
01	+5
02	+4
03	+3
04	+2
05	+1
06	0
07	-1
08	-2
09	-3
10	-4
11	-5
12	-6

**Example3**

Command ?TR<CR>  
 Answer TR02<CR+LF>

Request TREBLE Level.  
 TREBLE is set to +4dB.

## \*9 PRESET Tuner Number Status Reply [3byte]

*00	10
*01	1
*02	2
*03	3
*04	4
*05	5
*06	6
*07	7
*08	8
*09	9

\* = A : class A  
 \* = B : class B  
 \* = C : class C

## Example4

Command ?PR&lt;CR&gt;

Answer PRA04&lt;CR+LF&gt;

PRC00&lt;CR+LF&gt;

Request PRESET number

PRESET number is set to class A 4

PRESET number is set to class C 10

## \*10 FREQUENCY Number Status Reply [7byte]

A0****	
F*****	

A is AM

F is FM

\* is ASC II code 0 - 9

## Example5

Command ?FR&lt;CR&gt;

Answer FRA00890&lt;CR+LF&gt;

FRF08010&lt;CR+LF&gt;

Request FREQ number

FREQ number is set to AM 890 kHz

FREQ number is set to FM 80.10 MHz

## \*11 ACOUSTIC CALIBRATION COMMAND [1byte]

0AC<CR>	OFF
1AC<CR>	ALL CH ADJ
2AC<CR>	F ALIGN
3AC<CR>	COUSTOM1
4AC<CR>	COUSTOM2

## Example6

Command 1AC&lt;CR&gt;

Answer AC1&lt;CR+LF&gt;

change the ACOUSTIC CAL.

ACOUSTIC CAL. is set to ALL CH ADJ

## \*12 USB INPUT CHANNEL COMMAND [1byte]

0USB<CR>	2 CHANNEL
1USB<CR>	6 CHANNEL
2USB<CR>	7 CHANNEL
3USB<CR>	8 CHANNEL

## Example8

Command 1USB&lt;CR&gt;

Answer USB1&lt;CR+LF&gt;

change the USB INPUT CHANNEL

USB INPUT CHANNEL is set to 2 CHANNEL

## \*13 MULTI INPUT CHANNEL COMMAND [1byte]

0MCH<CR>	2 CHANNEL
1MCH<CR>	6 CHANNEL
2MCH<CR>	7 CHANNEL
3MCH<CR>	8 CHANNEL

## Example9

Command 1MCH&lt;CR&gt;

Answer MCH1&lt;CR+LF&gt;

change the MULTI INPUT CHANNEL

MULTI INPUT CHANNEL is set to 2 CHANNEL

#### \*4 LISTENING MODE SET, LISTENING MODE SETTING REQUEST [4byte]

When you set the "Listening Mode" with the receiver's front panel keys and knobs, you use the "LISTENING MODE SELECTOR" knob along with "LISTENING CH SELECT" button. Depending on the source signal there are some modes which are not available. There is automatic detection for 2ch and 6.1ch, but that too is source dependent (flags) and may not appear to work properly

With the "SR" command, you can select whichever mode you wish. Also, you can confirm your selection with the "SR" command by using "?S" command query.

When a LISTENING MODE is changed, the set will dispatch an ANSWER to let the controller know the current set status automatically without receiving a LISTENING MODE SETTING REQUEST. (Automatic Feedback)

[2-4byte]: data for mode setting.

Below the are the commands for selecting a LISTENING MODE.

##### STANDARD

0000SR<CR>	PRO LOGIC II MOVIE + SB CH OFF	"+ SB CH OFF" is the same as "5.1ch".
0001SR<CR>	PRO LOGIC II MUSIC + SB CH OFF	
0002SR<CR>	PRO LOGIC + SB CH OFF	
0003SR<CR>	Neo:6 CINEMA + SB CH OFF	
0004SR<CR>	Neo:6 MUSIC + SB CH OFF	"+ SB CH ON" is the same as "7.1ch".
0005SR<CR>	PRO LOGIC II x MOVIE + SB CH ON	
0006SR<CR>	PRO LOGIC II x MUSIC + SB CH ON	
0007SR<CR>	PRO LOGIC/7CH SURROUND + SB CH ON	
0008SR<CR>	Neo:6 CINEMA + SB CH ON	"+ SB CH AUTO" is the same as "AUTO".
0009SR<CR>	Neo:6 MUSIC + SB CH ON	
0010SR<CR>	PRO LOGIC II x MOVIE + SB CH AUTO	
0011SR<CR>	PRO LOGIC II x MUSIC + SB CH AUTO	
0012SR<CR>	PRO LOGI + SB CH AUTO	
0013SR<CR>	Neo:6 CINEMA + SB CH AUTO	
0014SR<CR>	Neo:6 MUSIC + SB CH AUTO	

##### ADVANCED CINEMA

0032SR<CR>	ACTION + SB CH OFF	"+ SB CH OFF" is the same as "5.1ch".
0033SR<CR>	SCIFI + SB CH OFF	
0034SR<CR>	DRAMA + SB CH OFF	
0035SR<CR>	MUSICAL + SB CH OFF	
0036SR<CR>	MONOFILM + SB CH OFF	"+ SB CH ON" is the same as "7.1ch".
0037SR<CR>	5D-THEATER + SB CH OFF	
0038SR<CR>	ACTION + SB CH ON	
0039SR<CR>	SCIFI + SB CH ON	
0040SR<CR>	DRAMA + SB CH ON	"+ SB CH AUTO" is the same as "AUTO".
0041SR<CR>	MUSICAL + SB CH ON	
0042SR<CR>	MONOFILM + SB CH ON	
0043SR<CR>	7D-THEATER + SB CH ON	
0044SR<CR>	ACTION + SB CH AUTO	
0045SR<CR>	SCIFI + SB CH AUTO	
0046SR<CR>	DRAMA + SB CH AUTO	
0047SR<CR>	MUSICAL + SB CH AUTO	
0048SR<CR>	MONOFILM + SB CH AUTO	
0049SR<CR>	XD-THEATER + SB CH AUTO	

##### THX

0064SR<CR>	PRO LOGIC II MOVIE + SB CH OFF	"+ SB CH OFF" is the same as "5.1ch".
0065SR<CR>	PRO LOGIC + SB CH OFF	
0066SR<CR>	Neo:6 CINEMA + SB CH OFF	"+ SB CH ON" is the same as "7.1ch".
0067SR<CR>	PRO LOGIC II MOVIE + SB CH ON	
0068SR<CR>	PRO LOGIC + SB CH ON	"+ SB CH AUTO" is the same as "AUTO".
0069SR<CR>	Neo:6 CINEMA + SB CH ON	
0070SR<CR>	PRO LOGIC II MOVIE + SB CH AUTO	
0071SR<CR>	PRO LOGIC + SB CH AUTO	
0072SR<CR>	Neo:6 CINEMA + SB CH AUTO	

VSX-52TX need 1or 4 to 1byte figure.

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## ADVANCED CONCERT

0096SR<CR>	CLASSICAL + SB CH OFF	"+ SB CH OFF" is the same as "5.1ch".
0097SR<CR>	CHAMBER + SB CH OFF	
0098SR<CR>	JAZZ + SB CH OFF	
0099SR<CR>	ROCK + SB CH OFF	
0100SR<CR>	DANCE + SB CH OFF	
0101SR<CR>	5CH-STEREO + SB CH OFF	"+ SB CH ON" is the same as "7.1ch".
0102SR<CR>	CLASSICAL + SB CH ON	
0103SR<CR>	CHAMBER + SB CH ON	
0104SR<CR>	JAZZ + SB CH ON	
0105SR<CR>	ROCK + SB CH ON	
0106SR<CR>	DANCE + SB CH ON	"+ SB CH AUTO" is the same as "AUTO".
0107SR<CR>	5CH-STEREO + SB CH ON	
0108SR<CR>	CLASSICAL + SB CH AUTO	
0109SR<CR>	CHAMBER + SB CH AUTO	
0110SR<CR>	JAZZ + SB CH AUTO	
0111SR<CR>	ROCK + SB CH AUTO	
0112SR<CR>	DANCE + SB CH AUTO	
0113SR<CR>	XCH-STEREO + SB CH AUTO	

## STEREO

0128SR<CR>	STEREO
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## STREAM DIRECT

0130SR<CR>	OFF
0131SR<CR>	NORMAL
0132SR<CR>	2CH => DIRECT
0133SR<CR>	ANALOG => DIRECT

[1byte]:2-4byte is for the additional selection available only in THX or STANDARD or MULTI-CH setting.

Additional Setting for THX mode:Only applicable 2-4byte is 067-069

0	CINEMA
1	SURROUND EX
2	THX ULTRA2 CINEMA
3	MUSIC
4	PRO LOGIC II x MOVIE

Additional Setting for STANDARD mode:Only applicable 2-4byte is 005-009

0	STANDARD EX
1	STANDARD SX
2	PRO LOGIC II x MOVIE
3	PRO LOGIC II x MUSIC

Additional Setting for MOVIE mode:Only applicable 2-4byte is 003-005

0	STANDARD EX
2	PRO LOGIC II x MOVIE

Additional Setting for MUSIC mode:Only applicable 2-4byte is 130,131

3	PRO LOGIC II x MUSIC
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## Example5

Command 0006SR<CR>  
Answer SR0006<CR+LF>

0 : STANDARD EX  
006 : PRO LOGIC II MUSIC

## Example6

Command ?S<CR>  
Answer SR2067<CR+LF>

2 :THX ULTRA2 CINEMA  
067 :PRO LOGIC II MOVIE

## Example7

Answer SR1512<CR+LF>

1 :MULTI-CH 2ch  
512 :MULTI-CH ADJUST

**\*5 LISTENING (DECODE) MODE REQUEST [3byte]**

Below is the list indicating the combination of the LISTENING MODE selected by "SR" command and the LISTENING MODE determined by the input source signal.

When the LISTENING MODE is set and the format for the source signal is confirmed, the receiver will send an ANSWER COMMAND to the controller to let it know the LISTENING MODE status. It replies automatically and does not need to receive a LISTENING MODE REQUEST.

(Automatic Feedback)

LISTENING MODE shows the current signal format the receiver is detecting or the surround mode which has been added to the original signal  
LM\*\*\*

**STEREO**

LM128	STEREO
LM304	PCM 88.2KHz STEREO
LM305	PCM 96KHz STEREO
LM306	PCM 176.4KHz STEREO
LM307	PCM 192KHz STEREO
LM322	DTS 96/24 STEREO
LM356	DVD-AUDIO STEREO
LM358	DVD-AUDIO 88.2KHz STEREO
LM360	DVD-AUDIO 96KHz STEREO
LM362	DVD-AUDIO 176KHz STEREO
LM363	DVD-AUDIO 192KHz STEREO
LM342	SACD STEREO
LM312	A/D 96KHz STEREO
LM313	A/D 192KHz STEREO

**STANDARD**

LM002	PRO LOGIC
LM000	PRO LOGIC II MOVIE
LM001	PRO LOGIC II MUSIC
LM003	Neo:6 CINEMA
LM004	Neo:6 MUSIC
LM050	PRO LOGIC II x MOVIE
LM051	PRO LOGIC II x MUSIC
LM054	Neo:6 88K CINEMA
LM055	Neo:6 88K MUSIC
LM052	Neo:6 96K CINEMA
LM053	Neo:6 96K MUSIC
LM031	PCM
LM300	PCM 88.2KHz
LM015	PCM 96KHz
LM302	PCM 176.4KHz
LM303	PCM 192KHz
LM327	PCM +SX
LM328	PCM 88.2 +SX
LM329	PCM 96 +SX
LM330	PCM +EX
LM331	PCM 88.2 +EX
LM332	PCM 96 +EX
LM016	DOLBY DIGITAL
LM017	DOLBY DIGITAL EX
LM018	DOLBY DIGITAL SX
LM019	DTS
LM020	DTS-ES
LM021	DTS-SX
LM022	DTS-ES DISC 6.1
LM023	DTS-ES MTRX 6.1
LM030	DTS 96/24
LM321	DTS 96/24 +SX
LM324	DTS + Neo:6
LM325	DTS 96/24 + Neo:6
LM326	DTS 96/24 ES MTRX



LM027	MPEG-2 AAC
LM028	MPEG-2 AAC EX
LM029	MPEG-2 AAC SX

LM380	WMA 9 PRO
LM381	WMA 9 PRO +SX
LM382	WMA 9 PRO + EX

LM350	DVD-AUDIO
LM351	DVD-AUDIO 88.2KHz
LM352	DVD-AUDIO 96KHz
LM353	DVD-AUDIO SX
LM354	DVD-AUDIO 88.2KHz SX
LM355	DVD-AUDIO 96KHz SX
LM366	DVD AUDIO +EX
LM367	DVD-AUDIO 88.2KHz +EX
LM368	DVD-AUDIO 96KHz +EX

LM340	SACD
LM341	SACD SX
LM344	SACD +EX

#### VIRTUAL SURROUND BACK

LM065	Neo:6 CINEMA + VSB
LM066	Neo:6 MUSIC + VSB
LM067	DOLBY DIGITAL + VSB
LM068	MPEG-2 AAC + VSB
LM069	DTS + VSB
LM070	PCM + VSB
LM071	PCM 88.2 + VSB
LM072	PCM 96 + VSB
LM073	5CH SURROUND + VSB
LM074	5CH MOVIE + VSB
LM075	5CH MUSIC + VSB
LM383	WMA 9 PRO + VSB
LM369	DVD-AUDIO 88.2KHz +VSB
LM370	DVD-AUDIO 96KHz +VSB
LM345	SACD + VSB

#### ADVANCED CINEMA

LM032	ACTION
LM033	SCIFI
LM034	DRAMA
LM035	MUSICAL
LM036	MONOFILM
LM037	5D-THEATER
LM043	7D-THEATER

LM044	ACTION+V.SB
LM045	SCIFI+V.SB
LM046	DRAMA+V.SB
LM047	MUSICAL+V.SB
LM048	MONOFILM+V.SB
LM049	5D-THEATER+V.SB

**ADVANCED CONCERT**

LM096	CLASSICAL
LM097	CHAMBER
LM098	JAZZ
LM099	ROCK
LM100	DANCE
LM101	5CH-STEREO
LM107	7CH-STEREO

LM108	CLASSICAL+V.SB
LM109	CHAMBER+V.SB
LM110	JAZZ+V.SB
LM111	ROCK+V.SB
LM112	DANCE+V.SB
LM113	5CH-STEREO+V.SB

**THX**

LM087	PRO LOGIC II x MOVIE + THX
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LM080	THX CINEMA
LM081	THX SURROUND EX
LM085	DTS + Neo6 + THX
LM082	THX ULTRA2 CINEMA
LM083	THX MUSIC MODE
LM086	DTS96/24 + Neo6 + THX
LM088	7CH IN + THX
LM089	8CH IN + THX

**MULTI-CH / USB**

LM200	6CH IN
LM201	6CH IN + SX
LM202	6CH IN + EX
LM203	6CH IN + VSB
LM204	7CH IN
LM205	7CH IN + VSB
LM206	8CH IN
LM207	8CH IN + VSB