

ELITE

**VSX-54TX**

**RS-232C Protocol**

## Physical Cable Connection

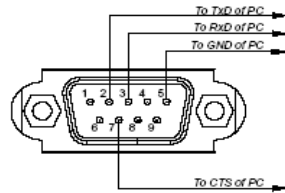
### Connector

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-54TX 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

### 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 MUT0<CR+LF>

Request Mute Status.  
Mute is On.

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

00FN<CR>	LINE
01FN<CR>	CD
02FN<CR>	TUNER
03FN<CR>	CDR
07FN<CR>	VCR1
08FN<CR>	VCR2
10FN<CR>	VIDEO or VIDEO1

04FN<CR>	MD
05FN<CR>	DVD
06FN<CR>	TV

**Example3**

Command 05FN<CR>  
Answer FUN05<CR+LF>

Change to source 05(DVD).

**Example4**

Command in respect of "?F<CR>"  
Answer FUN05<CR+LF>

Request Current Source.  
Source 05 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<CR>  
 Answer PRA04<CR+LF>  
 PRC00<CR+LF>

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<CR>  
 Answer FRA00890<CR+LF>  
 FRF08010<CR+LF>

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<CR>  
 Answer AC1<CR+LF>

Change the ACOUSTIC CALIBRATION setting.  
 ACOUSTIC CALIBRATION is set to ALL CHANNEL ADJUST

**\*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 5.1
0128SR<CR>	PRO LOGIC II MUSIC 5.1
0001SR<CR>	PRO LOGIC 5.1
0002SR<CR>	Neo:6 CINEMA 5.1
0129SR<CR>	Neo:6 MUSIC 5.1
0003SR<CR>	PRO LOGIC II MOVIE 7.1
0130SR<CR>	PRO LOGIC II MUSIC 7.1
0004SR<CR>	PRO LOGIC 7.1
0005SR<CR>	Neo:6 CINEMA 7.1
0131SR<CR>	Neo:6 MUSIC 7.1
0006SR<CR>	PRO LOGIC II MOVIE AUTO
0132SR<CR>	PRO LOGIC II MUSIC AUTO
0007SR<CR>	PRO LOGIC AUTO
0008SR<CR>	Neo:6 CINEMA AUTO
0133SR<CR>	Neo:6 MUSIC AUTO

## ADVANCED CINEMA

0032SR<CR>	ACTION 5.1
0033SR<CR>	SCI FI 5.1
0034SR<CR>	DRAMA 5.1
0035SR<CR>	MUSICAL 5.1
0036SR<CR>	MONOFILM 5.1
0037SR<CR>	5D-THEATER 5.1
0038SR<CR>	ACTION 7.1
0039SR<CR>	SCI FI 7.1
0040SR<CR>	DRAMA 7.1
0041SR<CR>	MUSICAL 7.1
0042SR<CR>	MONOFILM 7.1
0043SR<CR>	5D-THEATER 7.1
0044SR<CR>	ACTION AUTO
0045SR<CR>	SCI FI AUTO
0046SR<CR>	DRAMA AUTO
0047SR<CR>	MUSICAL AUTO
0048SR<CR>	MONOFILM AUTO
0049SR<CR>	XD-THEATER AUTO

## THX

0064SR<CR>	THX CINEMA
0065SR<CR>	THX SURR. EX
0066SR<CR>	THX AUTO

## ADVANCED CONCERT

0096SR<CR>	CLASSICAL 5.1
0097SR<CR>	CHAMBER 5.1
0098SR<CR>	JAZZ 5.1
0099SR<CR>	ROCK 5.1
0100SR<CR>	DANCE 5.1
0101SR<CR>	5CH-STEREO 5.1
0102SR<CR>	CLASSICAL 7.1
0103SR<CR>	CHAMBER 7.1
0104SR<CR>	JAZZ 7.1
0105SR<CR>	ROCK 7.1
0106SR<CR>	DANCE 7.1
0107SR<CR>	7CH-STEREO 7.1
0108SR<CR>	CLASSICAL AUTO
0109SR<CR>	CHAMBER AUTO
0110SR<CR>	JAZZ AUTO
0111SR<CR>	ROCK AUTO
0112SR<CR>	DANCE AUTO
0113SR<CR>	XCH-STEREO AUTO

## STEREO

0192SR<CR>	STEREO
0193SR<CR>	DIRECT

## MULTI-CH

0512SR<CR>	MULTI-CH INPUT
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## STREAM DIRECT

0140SR<CR>	OFF
0141SR<CR>	ON

[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 065.

0	SURROUND EX
1	PRO LOGIC II x MOVIE

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

**\*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
LM129	DIRECT
LM130	96KHz STEREO
LM131	96KHz DIRECT
LM132	88KHz STEREO
LM133	88KHz DIRECT

**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

LM031	PCM
LM300	PCM 88.2KHz
LM015	PCM 96KHz
LM302	PCM 176.4KHz
LM303	PCM 192KHz

LM016	DOLBY DIGITAL
LM017	DOLBY DIGITAL EX

LM019	DTS
LM022	DTS-ES DISC 6.1
LM023	DTS-ES MTRX 6.1
LM030	DTS 96/24
LM324	DTS + Neo:6

LM027	MPEG-2 AAC
LM028	MPEG-2 AAC EX

LM029	DTS 88KHz
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**VIRTUAL SURROUND BACK**

LM018	Neo:6+V. SB
LM024	DOLBY DIGITAL+V. SB
LM025	DTS+V. SB
LM026	MPEG2 AAC+V. SB

**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
LM080	THX CINEMA
LM081	THX SURROUND EX
LM085	DTS + Neo6 + THX
LM083	ES MTRX6.1+THX
LM084	ES DISC6.1+THX

**MULTI-CH / USB**

LM200	MULTI-CH IN
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**STANDARD(DVD-A, SACD)**

LM120	DVD-AUDIO
LM121	DVD-AUDIO 88.2KHz
LM122	DVD-AUDIO 96KHz
LM124	SACD MULTI

**STEREO/DIRECT(DVD-A, SACD)**

LM134	DVD-AUDIO
LM135	DVD-AUDIO 88.2KHz
LM136	DVD-AUDIO 96KHz
LM137	DVD-AUDIO 176.4KHz
LM138	DVD-AUDIO 192KHz
LM139	SACD