VSX-94TXH

RS232C Protocol

June 2007

Revision 1.0

For Custom Installation

Physical Cable Connection

Connector

RS232C DB9 Male

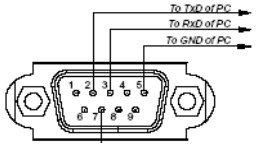
Pioneer A/V Receivers use a "crossover" (aka/"null modem" or "twisted pair") cable.

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

Pin	Computer/Controller
1	*1
2	RXD
3	TXD
4	*1
5	GND
6	*1
7	NC
8	NC
9	NC

*PinS 1, 4, & 6 are shorted to each other.

RECEIVER PINOUTS



Communication

Communication Speed : 9600bps

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

Notice1

To meet stringent power conservation measures Pioneer A/V receivers consume less
than 1 Watt when in the "Standby" or "Off" mode.
To achieve this the main CPU doesn't operate in Standby/Off.
For this reason the receiver may not understand the first command send to it's the RS-232C port
but the main CPU will "wake up" with the first command.
In other words, the receiver is using the first command as a trigger to wake up the main CPU
and may not respond correctly to it.
For the proper execution of the first command please send the command twice.

Also, please make sure to have at least a 100msec. interval between the first and second command.

Example1

PO<CR>
↓
100msec Wait
↓
PO<CR>

Notice2

It takes a brief amount of time for the receiver to respond to a command like "Surround Mode"
from your control system.
When the receiver receives a command it writes that information to the EEPROM.
Accordingly, you have to keep at least 100msec. before you do a "TIMEOUT" after sending the command to the receiver.

Example2
SR: The receiver's response to the command for PRO LOGIC II MUSIC.

Control System		Receiver
014SR<CR>	→	Receives the command and writes the info to the EEPROM.
		↓
		↓ 100msec
		↓
Confirmation	←	SR014<CR+LF>

Notice3

The interval between each response sent from the receiver is 20msec.
Therefore you have to wait at least 20msec. before a "TIMEOUT".

Example3
?F: Responding to a request for the current function (input).

Control System		Receiver
?F<CR>	→	Receives the command and processes a response.
		↓ 20msec
		F
		↓ 20msec
		N
		↓ 20msec
		0
		↓ 20msec
		4
		↓ 20msec
		CR
		↓ 20msec
Confirmation	←	LF

Commands List

Automatic Feedback

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

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

X:Argument:ASCⅡ code

Status Request Command

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	FNXX<CR+LF> *3
?S<CR>	LISTENING MODE SETTING REQUEST		Return the L.M SETTING	SRXXXX<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 Leve	BAXX<CR+LF> *7
?TR<CR>	TREBLE STATUS REQUEST		Return the TREBLE Leve	TRXX<CR+LF> *8
?PR<CR>	TUNER PRESET REQUEST		Return the PRESET numbe	PRXXX<CR+LF> *9
?FR<CR>	TUNER FREQ REQUEST		Return the FREQ numbe	FRXXXXX<CR+LF> *10
?AP<CR>	ZONE 2 POWER STATUS REQUEST		Return the POWER status	APRX<CR+LF> *2
?BP<CR>	ZONE 3 POWER STATUS REQUEST		Return the POWER status	BPRX<CR+LF> *2
?ZS<CR>	ZONE 2 FUNCTION STATUS REQUEST		Return the FUNCTION MODE	Z2FXX<CR+LF> *3
?ZT<CR>	ZONE 3 FUNCTION STATUS REQUEST		Return the FUNCTION MODE	Z3FXX<CR+LF> *3
?ZV<CR>	ZONE 2 VOLUME STATUS REQUEST		Return the VOLUME LEVEL	ZVXX<CR+LF> *1
?MC<CR>	MCACC POSITION REQUEST		Return the MCACC POSITION status	MCX<CR+LF> *15
?EX<CR>	SBch PROCESSING STATUS REQUEST		Return the SBch PROCESSING status	EXXX<CR+LF> *14
?XM<CR>	XM channel REQUEST	000-255	Return XM channe	XMXXX<CR+LF>
?IS<CR>	PHASE CONTROL STATUS REQUEST		Return PHASE CONTROL STATUS	ISX<CR+LF>*16
?SI<CR>	Sirius channel REQUEST	000-255	Return Sirius channe	SIXXX<CR+LF>

Operation command

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	FNXX<CR+LF> *3
FU<CR>	FUNCTION MODE UP		Change the FUNCTION MODE	FNXX<CR+LF> *3
XXX(X)SR<C	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
XXZS<CR>	ZONE2 FUNCTION MODE SET	*3	Set the FUNCTION MODE	Z2FXX<CR+LF> *3
XXZT<CR>	ZONE3 FUNCTION MODE SET	*3	Set the FUNCTION MODE	Z3FXX<CR+LF> *3
ZU<CR>	ZONE2 VOLUME UP		VOLUME UP	ZVXX<CR+LF> *1
ZD<CR>	ZONE2 VOLUME DOWN		VOLUME DOWN	ZVXX<CR+LF> *1
XXZV<CR>	ZONE2 VOLUME SET	00-80	Set the VOLUME level	ZVXX<CR+LF> *1
APO<CR>	ZONE2 POWER ON		ZONE2 POWER ON	APRX<CR+LF> *2
APF<CR>	ZONE2 POWER OFF		ZONE2 POWER OFF	APRX<CR+LF> *2
BPO<CR>	ZONE3 POWER ON		ZONE3 POWER ON	BPRX<CR+LF> *2
BPF<CR>	ZONE3 POWER OFF		ZONE3 POWER OFF	BPRX<CR+LF> *2
XMC<CR>	MCACC POSITION	0,1,2,3,4,5,6	change the MCACC POSITION	MCX<CR+LF> *15
XXEX<CR>	SBch PROCESSING SET	0,1,2	Change EXTENDED MODE	EXXX<CR+LF> *14
STS<CR>	STATUS DISPLAY		to see OSD display	R
XIS<CR>	PHASE CONTROL	0,1,2	PHASE CONTROL ON/OFF	ISX<CR+LF>*16
CUP<CR>	AMP CURSOR UP		AMP CURSOR UP	R
CDN<CR>	AMP CURSOR DOWN		AMP CURSOR DOWN	R
CRI<CR>	AMP CURSOR RIGHT		AMP CURSOR RIGHT	R
CLE<CR>	AMP CURSOR LEFT		AMP CURSOR LEFT	R
CEN<CR>	AMP CURSOR ENTER		AMP CURSOR ENTER	R
CRT<CR>	AMP RETURN		AMP RETURN	R
APA<CR>	AUDIO PARAMETER		AUDIO PARAMETER	R
VPA<CR>	VIDEO PARAMETER		VIDEO PARAMETER	R
KOF<CR>	KEY OFF (for USB, NETWORK)		KEY OFF	R

iPod Operation

Command	Command Name	Argument	Operation	Answer
00IP<CR>	PLAY	-	to see OSD display	R
01IP<CR>	PAUSE	-	to see OSD display	R
02IP<CR>	STOP	-	to see OSD display	R
03IP<CR>	PREVIOUS (|<|<|)	-	to see OSD display	R
04IP<CR>	NEXT (|>|>|)	-	to see OSD display	R
05IP<CR>	REV (<|<|)	-	to see OSD display	R
06IP<CR>	FWD (|>|>)	-	to see OSD display	R
07IP<CR>	REPEAT	-	to see OSD display	R
08IP<CR>	SHUFFLE	-	to see OSD display	R
09IP<CR>	DISPLAY	-	to see OSD display	R
10IP<CR>	OSD ON/OFF	-	to see OSD display	R
13IP<CR>	Cursor UP	-	to see OSD display	R
14IP<CR>	Cursor DOWN	-	to see OSD display	R
15IP<CR>	Cursor RIGHT	-	to see OSD display	R
16IP<CR>	Cursor LEFT	-	to see OSD display	R
17IP<CR>	ENTER	-	to see OSD display	R
18IP<CR>	RETURN	-	to see OSD display	R
19IP<CR>	CATEGORY	-	to see OSD display	R

XM radio Operation (USA model only)

Command	Command Name	Argument	Operation	Answer
00XM<CR>	STATION 10	-	to see OSD display	XM***<CR+LF>
01XM<CR>	1	-	to see OSD display	XM***<CR+LF>
02XM<CR>	2	-	to see OSD display	XM***<CR+LF>
03XM<CR>	3	-	to see OSD display	XM***<CR+LF>
04XM<CR>	4	-	to see OSD display	XM***<CR+LF>
05XM<CR>	5	-	to see OSD display	XM***<CR+LF>
06XM<CR>	6	-	to see OSD display	XM***<CR+LF>
07XM<CR>	7	-	to see OSD display	XM***<CR+LF>
08XM<CR>	8	-	to see OSD display	XM***<CR+LF>
09XM<CR>	9	-	to see OSD display	XM***<CR+LF>
10XM<CR>	CH + / Cursol DOWN↓	-	to see OSD display	XM***<CR+LF>
11XM<CR>	CH - / Cursol UP↑	-	to see OSD display	XM***<CR+LF>
12XM<CR>	PRESET ST + (→)	-	to see OSD display	XM***<CR+LF>
13XM<CR>	PRESET ST - (←)	-	to see OSD display	XM***<CR+LF>
14XM<CR>	DISPLAY	-	to see OSD display	XM***<CR+LF>
15XM<CR>	PRESET	-	to see OSD display	XM***<CR+LF>
16XM<CR>	CLASS	-	to see OSD display	XM***<CR+LF>
17XM<CR>	DIRECT ACCESS(CH)	-	to see OSD display	XM***<CR+LF>
18XM<CR>	MEMORY (EDIT)	-	to see OSD display	XM***<CR+LF>
19XM<CR>	MENU	-	to see OSD display	XM***<CR+LF>
21XM<CR>	ENTER	-	to see OSD display	XM***<CR+LF>
22XM<CR>	RETURN	-	to see OSD display	XM***<CR+LF>
23XM<CR>	CATEGORY	-	to see OSD display	XM***<CR+LF>

(↑ when change channel

Sirius Operation (USA model only)

Command	Command Name	Argument	Operation	Answer
00SI<CR>	STATION 10	-	to see OSD display	SI***<CR+LF>
01SI<CR>	1	-	to see OSD display	SI***<CR+LF>
02SI<CR>	2	-	to see OSD display	SI***<CR+LF>
03SI<CR>	3	-	to see OSD display	SI***<CR+LF>
04SI<CR>	4	-	to see OSD display	SI***<CR+LF>
05SI<CR>	5	-	to see OSD display	SI***<CR+LF>
06SI<CR>	6	-	to see OSD display	SI***<CR+LF>
07SI<CR>	7	-	to see OSD display	SI***<CR+LF>
08SI<CR>	8	-	to see OSD display	SI***<CR+LF>
09SI<CR>	9	-	to see OSD display	SI***<CR+LF>
10SI<CR>	CH + / Cursol DOWN↓	-	to see OSD display	SI***<CR+LF>
11SI<CR>	CH - / Cursol UP↑	-	to see OSD display	SI***<CR+LF>
12SI<CR>	PRESET ST + (→)	-	to see OSD display	SI***<CR+LF>
13SI<CR>	PRESET ST - (←)	-	to see OSD display	SI***<CR+LF>
14SI<CR>	DISPLAY	-	to see OSD display	SI***<CR+LF>
15SI<CR>	PRESET	-	to see OSD display	SI***<CR+LF>
16SI<CR>	CLASS	-	to see OSD display	SI***<CR+LF>
17SI<CR>	DIRECT ACCESS(CH)	-	to see OSD display	SI***<CR+LF>
18SI<CR>	MEMORY (EDIT)	-	to see OSD display	SI***<CR+LF>
19SI<CR>	MENU	-	to see OSD display	SI***<CR+LF>
21SI<CR>	ENTER	-	to see OSD display	SI***<CR+LF>
22SI<CR>	RETURN	-	to see OSD display	SI***<CR+LF>
23SI<CR>	CATEGORY	-	to see OSD display	SI***<CR+LF>

(↑ when change channel

Network Operation

Command	Command Name	Argument	Operation	Answer
00NW<CR>	0	-	to see OSD display	R
01NW<CR>	1	-	to see OSD display	R
02NW<CR>	2	-	to see OSD display	R
03NW<CR>	3	-	to see OSD display	R
04NW<CR>	4	-	to see OSD display	R
05NW<CR>	5	-	to see OSD display	R
06NW<CR>	6	-	to see OSD display	R
07NW<CR>	7	-	to see OSD display	R
08NW<CR>	8	-	to see OSD display	R
09NW<CR>	9	-	to see OSD display	R
10NW<CR>	PLAY	-	to see OSD display	R
11NW<CR>	PAUSE	-	to see OSD display	R
12NW<CR>	PREVIOUS (|<|<|)	-	to see OSD display	R
13NW<CR>	NEXT (|>|>|)	-	to see OSD display	R
18NW<CR>	DISPLAY	-	to see OSD display	R
20NW<CR>	STOP	-	to see OSD display	R
26NW<CR>	UP	-	to see OSD display	R
27NW<CR>	DOWN	-	to see OSD display	R
28NW<CR>	RIGHT	-	to see OSD display	R
29NW<CR>	LEFT	-	to see OSD display	R
30NW<CR>	ENTER	-	to see OSD display	R
31NW<CR>	RETURN	-	to see OSD display	R
32NW<CR>	PROGRAM	-	to see OSD display	R
33NW<CR>	CLEAR	-	to see OSD display	R
34NW<CR>	REPEAT	-	to see OSD display	R
35NW<CR>	RANDOM	-	to see OSD display	R
36NW<CR>	MENU	-	to see OSD display	R
37NW<CR>	EDIT	-	to see OSD display	R
38NW<CR>	CLASS	-	to see OSD display	R

Error message

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

Explanation of argumen

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

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

Example1

Command	?V<CR>	Request Volume Level
Answer	VOL93<CR+LF>	Volume is set to +12dB.

*2 **ON/OFF** [1byte]

0	ON
1	OFF

Example2

Command	?M<CR>	Request Mute Status
Answer	MUT0<CR+LF>	Mute On.

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

00FN<CR>	PHONO
01FN<CR>	CD
02FN<CR>	TUNER
03FN<CR>	CDR
04FN<CR>	DVD
05FN<CR>	TV
10FN<CR>	VIDEO or VIDEO1
12FN<CR>	Multi CH
14FN<CR>	VIDEO2
15FN<CR>	DVR or DVR1
16FN<CR>	DVR2
17FN<CR>	iPod
18FN<CR>	XM
19FN<CR>	HDMI1
20FN<CR>	HDMI2
21FN<CR>	HDMI3
22FN<CR>	HDMI4
25FN<CR>	BDP
26FN<CR>	HOME MEDIA GALLARY
27FN<CR>	SIRIUS
31FN<CR>	HDMI (cyclic)

Example3

Command	04FN<CR>	Change to source 04(DVD)
Answer	FN04<CR+LF>	

Example4

Command	in respect of "?F<CR>"	Request Current Source
Answer	FN04<CR+LF>	Source 04 is selected(DVD)

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

0	BYPASS
1	ON

Example1

Command	?TO<CR>	Request TONE Status.
Answer	TO1<CR+LF>	Tone On.

*7 **BASS status** [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>	Request BASS Level.
Answer	BA02<CR+LF>	BASS is set to +4dB.

*8 **TREBLE status** [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>	Request TREBLE Level.
Answer	TR02<CR+LF>	TREBLE is set to +4dB.

*9 **PRESET number** [3byte]

*01	1
*02	2
*03	3
*04	4
*05	5
*06	6
*07	7
*08	8
*09	9
*10	0

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

Example4

Command	?PR<CR>	Request PRESET number
Answer	PRA04<CR+LF>	PRESET number is set to class A 4
	PRC10<CR+LF>	PRESET number is set to class C 10

*10 **FREQ number** [7byte]

A0****	
F*****	

A is AM
F is FM
* is ASCⅡ code 0 - 9

Example5

Command	?FR<CR>	Request FREQ number
Answer	FRA00890<CR+LF>	FREQ number is set to AM 890 kHz
	FRF08010<CR+LF>	FREQ number is set to FM 80.10 MHz

*14 **SBch PROCESSING** [1byte]

0EX<CR>	OFF
1EX<CR>	ON
2EX<CR>	AUTO

*15 **MCACC POSITION** [1byte]

0MC<CR>	MCACC OFF
1MC<CR>	MEMORY 1
2MC<CR>	MEMORY 2
3MC<CR>	MEMORY 3
4MC<CR>	MEMORY 4
5MC<CR>	MEMORY 5
6MC<CR>	MEMORY 6

*16 **PHASE CONTROL** [1byte]

0IS<CR>	OFF
1IS<CR>	ON
2IS<CR>	FULL BAND PHASE CONTROL ON

*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 CH SELECT"button
Depending on the source signal there are some modes which are not available. There i
automatic detection for 2ch and 6.1ch, but that too is source dependent (flags

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 receiver 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

NEW version (from '05 model) [3byte]
[1-3byte]:data for mode setting
Indicating below the combination of the modes selected by LISTENING MODE
Example

Command	001SR<CR>	set STEREO mode.
Answer	SR001<CR+LF>	current status STEREO mode.
Answer	LM130<CR+LF>	current status 96kHz STEREO play
Command	?S<CR>	LISTENING mode current status?
Answer	SR031<CR+LF>	ACTION mode.

XXXSR<CR>	Set Listening Mode	Group	Comment
001SR<CR>	STEREO(cyclic)	STEREO	
003SR<CR>	FRONT STAGE SURROUND ADVANCE FOCUS	STEREO	
004SR<CR>	FRONT STAGE SURROUND ADVANCE WIDE	STEREO	
005SR<CR>	AUTO SURROUND/STREAM DIRECT (same as key)	AUTO SURR	
006SR<CR>	AUTO SURROUND	AUTO SURR	
007SR<CR>	NORMAL DIRECT	AUTO SURR	
008SR<CR>	PURE DIRECT	AUTO SURR	
009SR<CR>	STEREO(direct command)	STEREO	
010SR<CR>	STANDARD SELECTION (same as key)	STANDARD	
012SR<CR>	PRO LOGIC	STANDARD	for 2ch Source
013SR<CR>	PRO LOGIC Ⅱ MOVIE	STANDARD	for 2ch Source
014SR<CR>	PRO LOGIC Ⅱ MUSIC	STANDARD	for 2ch Source
015SR<CR>	PRO LOGIC Ⅱ GAME	STANDARD	for 2ch Source
016SR<CR>	Neo:6 CINEMA	STANDARD	for 2ch Source
017SR<CR>	Neo:6 MUSIC	STANDARD	for 2ch Source
018SR<CR>	PRO LOGIC Ⅱx MOVIE	STANDARD	for 2ch Source
019SR<CR>	PRO LOGIC Ⅱx MUSIC	STANDARD	for 2ch Source
020SR<CR>	PRO LOGIC Ⅱx GAME	STANDARD	for 2ch Source
021SR<CR>	Deponding on Source (for Multi-ch)	STANDARD	for Multi-ch Source
022SR<CR>	(Multi-Channel Source) + EX	STANDARD	for Multi-ch Source
023SR<CR>	(Multi-Channel Source) + PRO LOGIC Ⅱx MOVIE	STANDARD	for Multi-ch Source
024SR<CR>	(Multi-Channel Source) + PRO LOGIC Ⅱx MUSIC	STANDARD	for Multi-ch Source
025SR<CR>	DTS + Neo:6	STANDARD	for Multi-ch Source
026SR<CR>	DTS-ES matrix6.1	STANDARD	for Multi-ch Source
027SR<CR>	DTS- ES discrete6.1	STANDARD	for Multi-ch Source
028SR<CR>	XM HD SURROUND	STANDARD	for 2ch Source
029SR<CR>	NEURAL THX	STANDARD	for Multi-ch Source
030SR<CR>	DTS- ES 8ch discrete	STANDARD	for Multi-ch Source
050SR<CR>	THX SELECTION (same as key)	HOME THX	
051SR<CR>	PRO LOGIC + THX	HOME THX	for 2ch Source
052SR<CR>	PRO LOGIC Ⅱ MOVIE + THX	HOME THX	for 2ch Source
053SR<CR>	Neo:6 CINEMA + THX	HOME THX	for 2ch Source
054SR<CR>	PRO LOGIC Ⅱx MOVIE + THX	HOME THX	for 2ch Source
055SR<CR>	THX GAMES MODE	HOME THX	for 2ch Source
056SR<CR>	THX Depending on Source (for Multi-ch)	HOME THX	for Multi-ch Source
057SR<CR>	THX SURROUND EX	HOME THX	for Multi-ch Source
058SR<CR>	PRO LOGIC Ⅱx MOVIE + THX	HOME THX	for Multi-ch Source
059SR<CR>	DTS + Neo:6 + THX	HOME THX	for Multi-ch Source
060SR<CR>	DTS-ES MATRIX + THX	HOME THX	for Multi-ch Source
061SR<CR>	DTS-ES DISCRETE6.1 + THX	HOME THX	for Multi-ch Source
062SR<CR>	THX SELECT2	HOME THX	for Multi-ch Source
063SR<CR>	THX MUSICMODE SELECT	HOME THX	for Multi-ch Source
064SR<CR>	THX GAMES MODE (for multi-ch)	HOME THX	for Multi-ch Source
067SR<CR>	DTS-ES 8ch DISCRETE + THX	HOME THX	for Multi-ch Source
100SR<CR>	ADVANCED SURROUND SELECTION (same as key)	ADV.SURR	
101SR<CR>	ACTION	ADV.SURR	
102SR<CR>	SCI-FI	ADV.SURR	
103SR<CR>	DRAMA	ADV.SURR	
104SR<CR>	ENTERTAINMENT SHOW (MUSICAL)	ADV.SURR	
105SR<CR>	MONO FILM	ADV.SURR	
106SR<CR>	EXPANDED THEATER (7-D THEATER)	ADV.SURR	
107SR<CR>	CLASSICAL	ADV.SURR	
109SR<CR>	UNPLUGGED (JAZZ)	ADV.SURR	
110SR<CR>	ROCK/POP (ROCK)	ADV.SURR	
112SR<CR>	EXTENDED STEREO (7CH-STEREO)	ADV.SURR	
113SR<CR>	PHONES SURROUND	ADV.SURR	
116SR<CR>	TV SURROUND	ADV.SURR	
117SR<CR>	SPORTS	ADV.SURR	
118SR<CR>	ADV.GAME	ADV.SURR	

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

Below is the list Indicating the combination of the LISTENING MODE selected by "SR" command an
the LISTENING MODE determined by the input source signa

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 sigr

LM***

LMXXX	Listenning Mode Name	Group	Comment
LM000	PRO LOGIC Ⅱ MOVIE	STANDARD	
LM001	PRO LOGIC Ⅱ MUSIC	STANDARD	
LM002	PRO LOGIC	STANDARD	
LM003	NEO6 CINEMA	STANDARD	
LM004	NEO6 MUSIC	STANDARD	
LM005	PRO LOGIC Ⅱ GAME	STANDARD	
LM008	96kHz PRO LOGIC	STANDARD	
LM009	96kHz PRO LOGIC Ⅱ MOVIE	STANDARD	
LM010	96kHz PRO LOGIC Ⅱ MUSIC	STANDARD	
LM011	96kHz PRO LOGIC Ⅱ GAME	STANDARD	
LM015	PCM 96KHz	STANDARD	
LM016	DOLBY DIGITAL	STANDARD	
LM017	DOLBY DIGITAL EX	STANDARD	
LM019	DTS	STANDARD	
LM022	DTS-ES DISC 6.1	STANDARD	
LM023	DTS-ES MTRX 6.1	STANDARD	
LM028	MPEG-2 AAC EX	STANDARD	
LM030	DTS 96/24	STANDARD	
LM031	PCM	STANDARD	
LM032	ACTION	ADV.SURR	
LM033	SCIFI	ADV.SURR	
LM034	DRAMA	ADV.SURR	
LM035	ENTERTAINMENT SHOW (MUSICAL)	ADV.SURR	
LM036	MONOFILM	ADV.SURR	
LM043	EXPANDED THEATER (7-D THEATER)	ADV.SURR	
LM050	PRO LOGIC Ⅱx MOVIE	STANDARD	
LM051	PRO LOGIC Ⅱx MUSIC	STANDARD	
LM052	NEO6 96K CINEMA	STANDARD	
LM053	NEO6 96K MUSIC	STANDARD	
LM054	NEO6 88K CINEMA	STANDARD	
LM055	NEO6 88K MUSIC	STANDARD	
LM056	PRO LOGIC Ⅱx GAME	STANDARD	
LM057	96kHz PRO LOGIC Ⅱx MOVIE	STANDARD	
LM058	96kHz PRO LOGIC Ⅱx MUSIC	STANDARD	
LM059	96kHz PRO LOGIC Ⅱx GAME	STANDARD	
LM080	THX CINEMA	THX	
LM081	THX SURROUND EX	THX	
LM083	THX MUSIC MODE SELECT	THX	
LM085	DTS + Neo6 + THX	THX	
LM087	PRO LOGIC Ⅱx MOVIE + THX	THX	
LM096	CLASSICAL	ADV.SURR	
LM098	UNPLUGGED (JAZZ)	ADV.SURR	
LM099	ROCK/POP (ROCK)	ADV.SURR	
LM107	EXTENDED STEREO (7CH-STEREO)	ADV.SURR	
LM122	NEURAL THX	etc.	
LM123	XM HD SURROUND	etc.	
LM124	SACD DIRECT	etc.	
LM125	PCM DIRECT	etc.	
LM126	ANALOG DIRECT	etc.	
LM128	STEREO	STEREO	
LM134	192kHz STEREO	STEREO	
LM135	FRONT STAGE SURROUND ADVANCE FOCUS	STEREO	
LM136	FRONT STAGE SURROUND ADVANCE WIDE	STEREO	
LM140	PCM88.2kHz + PRO LOGIC	STANDARD	
LM141	PCM88.2kHz + PRO LOGIC Ⅱ MOVIE	STANDARD	
LM142	PCM88.2kHz + PRO LOGIC Ⅱ MUSIC	STANDARD	
LM143	PCM88.2kHz + PRO LOGIC Ⅱ GAME	STANDARD	
LM144	PCM88.2kHz + PRO LOGIC Ⅱx MOVIE (for 2ch)	STANDARD	
LM145	PCM88.2kHz + PRO LOGIC Ⅱx MUSIC (for 2ch)	STANDARD	
LM146	PCM88.2kHz + PRO LOGIC Ⅱx GAME	STANDARD	
LM154	DOLBY DIGITAL + PRO LOGIC Ⅱx MOVIE	STANDARD	
LM155	DOLBY DIGITAL + PRO LOGIC Ⅱx MUSIC	STANDARD	
LM156	DTS + PROLIGIC Ⅱx MOVIE	STANDARD	
LM157	DTS + PROLIGIC Ⅱx MUSIC	STANDARD	
LM158	MPEG-2 AAC + PROLIGIC Ⅱx MOVIE	STANDARD	
LM159	MPEG-2 AAC + PROLIGIC Ⅱx MUSIC	STANDARD	
LM162	PCM88.2kHz + PRO LOGIC Ⅱx MOVIE (for multichannel	STANDARD	
LM163	PCM88.2kHz + PRO LOGIC Ⅱx MUSIC (for multichannel	STANDARD	
LM164	PCM96kHz + PRO LOGIC Ⅱx MOVIE (for multichannel	STANDARD	
LM165	PCM96kHz + PRO LOGIC Ⅱx MUSIC (for multichannel	STANDARD	
LM166	DTS Express	STANDARD	
LM167	DTS-HD HIGH RESOLUTION	STANDARD	
LM168	DTS-HD MASTER AUDIO	STANDARD	
LM169	DOLBY DIGITAL PLUS	STANDARD	
LM170	DOLBY DIGITAL PLUS EX	STANDARD	
LM171	DOLBY DIGITAL PLUS +PRO LOGIC Ⅱx MOVIE	STANDARD	
LM172	DOLBY DIGITAL PLUS +PRO LOGIC Ⅱx MUSIC	STANDARD	
LM173	DOLBY DIGITAL PLUS +PRO LOGIC Ⅱx MOVIE +THX	STANDARD	
LM174	DOLBY trueHD	STANDARD	
LM175	DOLBY TrueHD EX	STANDARD	
LM176	DOLBY TrueHD +PRO LOGIC Ⅱx MOVIE	STANDARD	
LM177	DOLBY TrueHD +PRO LOGIC Ⅱx MUSIC	STANDARD	
LM178	DOLBY TrueHD +PRO LOGIC Ⅱx MOVIE +THX	STANDARD	
LM179	DTS-(HD)ES 8ch Discrete	STANDARD	
LM181	TV SURROUND	ADV.SURR	
LM182	SPORTS	ADV.SURR	
LM183	GAME	ADV.SURR	
LM185	PHONES SURROUND	ADV.SURR	
LM213	MULTI-CH IN	STANDARD	
LM219	HDMI THROUGH	etc.	
LM220	PRO LOGIC + THX	THX	
LM221	PRO LOGIC Ⅱ MOVIE + THX	THX	
LM222	Neo:6 CINEMA + THX	THX	
LM223	THX GAMES MODE (for 2ch)	THX	
LM230	DOLBY DIGITAL + PRO LOGIC Ⅱx MOVIE + THX	THX	
LM231	DTS + PRO LOGIC Ⅱx MOVIE + THX	THX	
LM232	DTS-ES MATRIX6.1 + THX	THX	
LM233	DTS-ES DISCRETE6.1 + THX	THX	
LM234	MPEG-2 AAC + PRO LOGIC Ⅱx MOVIE + THX	THX	
LM235	WMA 9 Pro + PRO LOGIC Ⅱx MOVIE + THX	THX	
LM236	THX SELECT2 CINEMA	THX	
LM237	THX GAMES MODE (for multichannel)	THX	
LM238	PCM + PRO LOGIC Ⅱx MOVIE + THX	THX	

LM239	DTS-(HD)ES 8ch Discrete +THX	THX	
LM240	DTS-(HD)ES Discrete +THX	THX	
LM241	DTS-(HD)ES Matrix +THX	THX	
LM248	DTS-(HD)ES Matrix	STANDARD	
LM249	DTS-(HD)ES Discrete	STANDARD	
LM250	DVD-AUDIO + PRO LOGIC	STANDARD	
LM251	DVD-AUDIO + PRO LOGICⅡ MOVIE	STANDARD	
LM252	DVD-AUDIO + PRO LOGICⅡ MUSIC	STANDARD	
LM253	DVD-AUDIO + PRO LOGICⅡ GAME	STANDARD	
LM254	DVD-AUDIO + PRO LOGICⅡx MOVIE (for 2ch)	STANDARD	
LM255	DVD-AUDIO + PRO LOGICⅡx MUSIC (for 2ch)	STANDARD	
LM256	DVD-AUDIO + PRO LOGICⅡx GAME	STANDARD	
LM257	DVD-AUDIO + PRO LOGICⅡx MOVIE (for multichannel	STANDARD	
LM258	DVD-AUDIO + PRO LOGICⅡx MUSIC (for multichannel	STANDARD	
LM260	DVD-AUDIO 88.2k + PRO LOGIC	STANDARD	
LM270	DVD-AUDIO 96k + PRO LOGIC	STANDARD	
LM280	SACD + PRO LOGIC	STANDARD	
LM281	SACD + PRO LOGICⅡ MOVIE	STANDARD	
LM282	SACD + PRO LOGICⅡ MUSIC	STANDARD	
LM283	SACD + PRO LOGICⅡ GAME	STANDARD	
LM284	SACD + PRO LOGICⅡx MOVIE (for 2ch)	STANDARD	
LM285	SACD + PRO LOGICⅡx MUSIC (for 2ch)	STANDARD	
LM286	SACD + PRO LOGICⅡx GAME	STANDARD	
LM287	SACD + PRO LOGICⅡx MOVIE (for multichannel	STANDARD	
LM288	SACD + PRO LOGICⅡx MUSIC (for multichannel	STANDARD	
LM300	PCM 88.2KHz	STANDARD	
LM302	PCM 176.4KHz	STANDARD	
LM303	PCM 192KHz	STANDARD	
LM304	PCM 88.2KHz STEREO	STEREO	
LM305	PCM 96KHz STEREO	STEREO	
LM306	PCM 176.4KHz STEREO	STEREO	
LM307	PCM 192KHz STEREO	STEREO	
LM322	DTS 96/24 STEREO	STEREO	
LM324	DTS + Neo:6	STANDARD	
LM330	PCM +EX	STANDARD	
LM331	PCM 88.2 +EX	STANDARD	
LM332	PCM 96 +EX	STANDARD	
LM333	PCM + PRO LOGICⅡx MOVIE (for multichannel	STANDARD	
LM334	PCM + PRO LOGICⅡx MUSIC (for multichannel	STANDARD	
LM340	SACD	STANDARD	
LM342	SACD STEREO	STEREO	
LM344	SACD +EX	STANDARD	
LM350	DVD-AUDIO	STANDARD	
LM351	DVD-AUDIO 88.2KHz	STANDARD	
LM356	DVD-AUDIO STEREO	STEREO	
LM358	DVD-AUDIO 88.2KHz STEREO	STEREO	
LM360	DVD-AUDIO 96KHz STEREO	STEREO	
LM362	DVD-AUDIO 176KHz STEREO	STEREO	
LM363	DVD-AUDIO 192KHz STEREO	STEREO	
LM366	DVD AUDIO +EX	STANDARD	
LM367	DVD-AUDIO 88.2KHz +EX	STANDARD	
LM368	DVD-AUDIO 96KHz +EX	STANDARD	
LM371	DTS 96/24 + Neo:6	STANDARD	
LM372	DTS 96/24 ES MATRIX	STANDARD	
LM380	WMA 9 PRO	STANDARD	
LM382	WMA 9 PRO + EX	STANDARD	
LM384	WMA 9 Pro + PRO LOGICⅡx MOVIE	STANDARD	
LM385	WMA 9 Pro + PRO LOGICⅡx MUSIC	STANDARD	

Example8

Command ?L<CR>

Answer LM001<CR+LF> now PRO LOCICⅡ MUSIC playing.