
S P E C F I L E



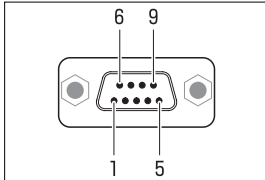
Product Number : **PT-AE7000**

Product Name : Full High-Definition Home Cinema Projector

Serial connector

The serial connector complies with RS-232C. To control the projector from a personal computer, commands must be input through communication software, based on the format and satisfying the communication conditions shown below.

Pin assignments and signal names



D-sub 9-pin (female) Serial input

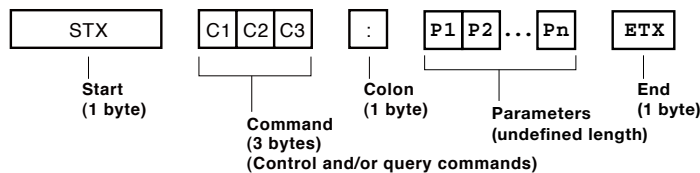
No.	Signal name	Description	No.	Signal name	Description
1	-	NC	6	-	NC
2	TXD	Transmitted data	7	RTS	Connected internally
3	RXD	Received data	8	CTS	Connected internally
4	-	NC	9	-	NC
5	GND	Ground			

Communication conditions (factory setting)

Signal level	RS-232C-compliant
Synchronization method	Start-stop synchronization
Baud rate	9,600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
X parameter	None
S parameter	None

Basic format

Transmission from the computer begins with STX, then command, parameter, and ETX are sent in this order. Add parameters according to the details of control.



CAUTION

- When sending multiple commands, be sure to send the next command after receiving a response from the projector.
- STX and ETX are character codes. Expressed in hexidecimals, STX is 02 and ETX is 03.

Cable specifications

Projector		PC (DTE)	
1	NC	NC	1
2			2
3			3
4	NC	NC	4
5			5
6	NC	NC	6
7			7
8			8
9	NC	NC	9

Control commands

Command	Function	Parameter
PON*1	Standby power on	-
POF*1	Standby power off	-
IIS	Input signal selection	CP1, SVD, VID, HD1, HD2, HD3, RG1
OMN	Menu	-
OEN	Enter	-
OBK	Return	-
OCU	Cursor up	-
OCD	Cursor down	-
OCL	Cursor left	-
OCR	Cursor right	-
OLE	The same function as "LENS" button	-
OST	Default	-
O3D	The same function as "3D" button	-
OFZ	Freeze	0, 1
FC1	The same function as "FUNCTION" button	-
OSH*2	Blank on/off	-
OVM	Picture mode switch	-
OWM	Waveform monitor activate/off	0, 1, 2, 3, 4, 5, 6, 7, 8
VS1	Aspect switch	-
VPM	Picture mode	NOR, DYN, 709, DCN, CN1, CN2, GM1
OOT	Off timer	0, 1, 2, 3, 4, 5, 6, 7
OMM	The same function as "MEMORY LOAD" button	-
DPA	The same function as "PICTURE ADJUSTMENT" button	-
DCM	Color management menu	-
OVL	The same function as "VIERA Link" button	-
OSM	The same function as "SUB MENU" button	-

Option Menu Command

VXX	Lens memory	LMLI0=+00000 - LMLI0=+00005
	Gamma output level (Y)	AGOS0=010000 - AGOS0=090255
	Gamma output level (R)	AGOS1=010000 - AGOS1=090255
	Gamma output level (G)	AGOS2=010000 - AGOS2=090255
	Gamma output level (B)	AGOS3=010000 - AGOS3=090255
	Gamma input level	AGIS0=01000 - AGOS0=09100
	Trigger 1 output	TROI0=+00000 - TROI0=+00001
	Trigger 2 output	TROI1=+00000 - TROI1=+00001

*1 PON is the only command that is effective in standby mode; all other commands are invalid. The PON command is not accepted during lamp on control. After the lamp has been turned off and while the cooling fan is still operating, lamp on control will not be activated for about 85 seconds in order to protect the lamp.

*2 Do not send OSH commands continuously in a short period of time. Doing so may burst the lamp or shorten the lamp replacement cycle.

Control command parameters

Command	Size (Byte)	Parameter
IIS	3	CP1 = component, SVD = S-video, VID = video, HD1 = HDMI1, HD2 = HDMI2, HD3 = HDMI3, RG1 = computer
OFZ	1	0 = off, 1 = on
OWM	1	0 = off, 1 = full scan (Y), 2 = full scan (R), 3 = full scan (G), 4 = full scan (B), 5 = single line scan (Y), 6 = single line scan (R), 7 = single line scan (G), 8 = single line scan (B)
VPM	3	NOR = normal, DYN = dynamic, 709 = Rec. 709, DCN = D-cinema, CN1 = cinema 1, CN2 = cinema 2, GM1 = game
OOT	1	4 = 150 min, 5 = 180 min, 6 = 210 min, 7 = 240 min
QVX:LMLI0	6	LMLI0=+00000 = lens memory 1, LMLI0=+00001 = lens memory 2, LMLI0=+00002 = lens memory 3, LMLI0=+00003 = lens memory 4, LMLI0=+00004 = lens memory 5, LMLI0=+00005 = lens memory 6
AGOS0	6	AGOS0=p1p2d1d2d3d4 p1p2 = point number: 01 - 09, d1d2d3d4 = output: 0000 - 0255
AGOS1	6	AGOS1=p1p2d1d2d3d4 p1p2 = point number: 01 - 09, d1d2d3d4 = output: 0000 - 0255
AGOS2	6	AGOS2=p1p2d1d2d3d4 p1p2 = point number: 01 - 09, d1d2d3d4 = output: 0000 - 0255
AGOS3	6	AGOS3=p1p2d1d2d3d4 p1p2 = point number: 01 - 09, d1d2d3d4 = output: 0000 - 0255
AGIS0	5	AGIS0=p1p2d1d2d3 p1p2 = point number: 01 - 09, d1d2d3 = output: 001 - 099
TROI0	6	TROI0=+00000 = low, TROI0=+00001 = high
TROI1	6	TROI1=+00000 = low, TROI1=+00001 = high

Status request commands

Command	Description	Parameter
QPW	Standby power status	000 = off, 001 = on
QIN	Input signal status	CP1 = component, SVD = S-video, VID = video, HD1 = HDMI1, HD2 = HDMI2, HD3 = HDMI3, RG1 = computer
QPM	Picture mode status	NOR = normal, DYN = dynamic, 709 = Rec. 709, DCN = D-cinema, CN1 = cinema 1, CN2 = cinema 2, GM1 = game
QSH	Blank function status	0 = off, 1 = on
QFZ	Freeze function status	0 = off, 1 = on
QOT	Off timer status	0 = off, 1 = 60 min, 2 = 90 min, 3 = 120 min, 4 = 150 min, 5 = 180 min, 6 = 210 min, 7 = 240 min
QWM	Waveform monitor statusutton	0 = off, 1 = full scan (Y), 2 = full scan (R), 3 = full scan (G), 4 = full scan (B), 5 = single line scan (Y), 6 = single line scan (R), 7 = single line scan (G), 8 = single line scan (B)

Option Menu Command

QVX: AGOS0=p1p2	Gamma output level (Y)	AGOS0= p1p2d1d2d3d4 p1p2 = point number: 01 - 09 d1d2d3d4 = output: 0000 - 0255
AGOS1=p1p2	Gamma output level (R)	AGOS1= p1p2d1d2d3d4 p1p2 = point number: 01 - 09 d1d2d3d4 = output: 0000 - 0255
AGOS2=p1p2	Gamma output level (G)	AGOS2= p1p2d1d2d3d4 p1p2 = point number: 01 - 09 d1d2d3d4 = output: 0000 - 0255
AGOS3=p1p2	Gamma output level (B)	AGOS3= p1p2d1d2d3d4 p1p2 = point number: 01 - 09 d1d2d3d4 = output: 0000 - 0255
AGIS0=p1p2	Gamma input level	AGIS0= p1p2d1d2d3 p1p2 = point number: 01 - 09 d1d2d3 = input: 001 - 099

NOTE: If a wrong command is received, the projector will send an ER401 or ER402 command to the computer.

Command example

To set the input to HDMI 1, send the command as shown below.

```

STX   IIS   :   HD1   ETX
  |       |       |       |
  Start  Command Parameter End
    
```

NOTE: When sending commands without parameters, a colon (:) is not necessary.