Panasonic ideas for life

SPEC FILE

Product Number : PT-**EX16K**

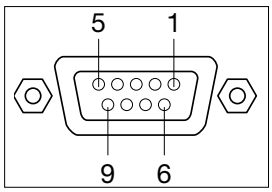
Product Name : LCD Projector

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

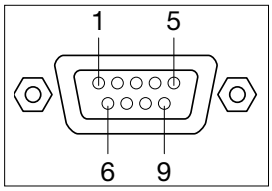
Serial input



D-sub 9-pin (male)

No.	Signal name	Description	No.	Signal name	Description
1	–	NC	6	–	NC
2	RXD	Received data	7	–	NC
3	TXD	Transmitted data	8	–	NC
4	–	NC	9	–	NC
5	GND	Ground			

Serial output



D-sub 9-pin (male)

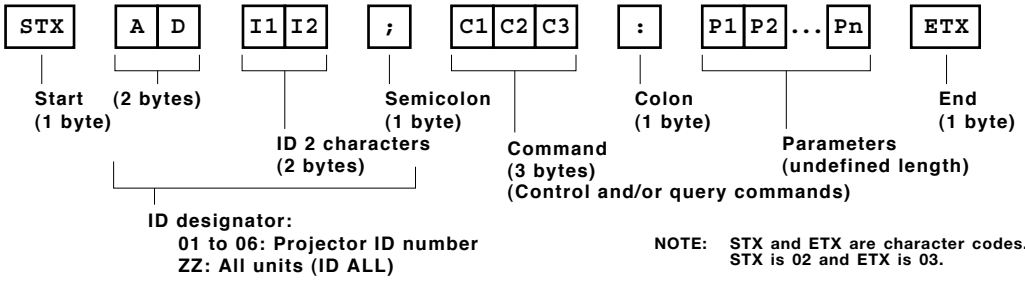
No.	Signal name	Description	No.	Signal name	Description
1	–	NC	6	–	NC
2	RXD	Received data	7	–	NC
3	TXD	Transmitted data	8	–	NC
4	–	NC	9	–	NC
5	GND	Ground			

Communication conditions (factory setting)

Signal level	RS-232C-compliant
Synchronization method	Start-stop synchronization
Baud rate	19,200 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 the ID, command, parameter, and ETX are sent in this order. Add parameters according to the details of control.

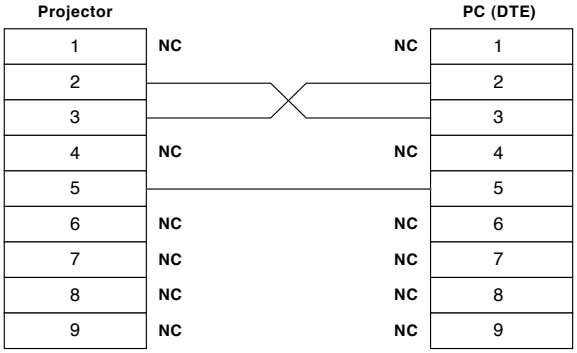


NOTE: STX and ETX are character codes. Expressed in hexidecimals, STX is 02 and ETX is 03.

CAUTION

- It may not be possible to send or receive commands for about 10 to 60 seconds when the lamp is first turned on. If this occurs, wait for 60 seconds, then try sending or receiving again.
- When sending multiple commands, be sure to wait for at least 0.5 second after receiving a response from the projector before sending the next command.
- Additional time is sometimes required for response due to processing inside the projector. Set the time-out period for command response to 10 seconds or more.
- When using two or more units, set different IDs for each unit.

Cable specifications



Control commands

Command : Parameter	Function		Callback
PON	Standby power	On	PON
POF		Off	POF
IIS:HD1	Input	Input 1 [HDMI]	IIS:HD1
IIS:DVI		Input 1 [DVI (PC)]	IIS:DVI
IIS:DVI		Input 1 [DVI (AV HDCP)]	IIS:DVI
OED:1			OED:1
IIS:RG1		Input 1 [RGB (PC)]	IIS:RG1
IIS:SCT		Input 1 [RGB (Scart)]	IIS:SCT
IIS:RG2		Input 2 [RGB]	IIS:RG2
IIS:RG2		Input 2 [RGB(Y·P_B (C_B)·P_R (C_R))]	IIS:RG2
ORF:1			ORF:1
IIS:VID		Input 2 [Video]	IIS:VID
IIS:SVD		Input 2 [S-Video]	IIS:SVD
IIS:AU1,SD1		Input 3 [SDI1] * with the ET-MD16SD1 only	IIS:AU1,SD1
IIS:AU1,SD2		Input 3 [SDI2] * with the ET-MD16SD1 only	IIS:AU1,SD2
IIS:AU2,SD1		Input 4 [SDI1] * with the ET-MD16SD1 only	IIS:AU2,SD1
IIS:AU2,SD2		Input 4 [SDI2] * with the ET-MD16SD1 only	IIS:AU2,SD2
LPM:0	Lamp mode	Four lamps	LPM:0
LPM:3		Two lamps (auto)	LPM:3
LPM:2		Two lamps (lamp 2 + 3)	LPM:2
LPM:1		Two lamps (lamp 1 + 4)	LPM:1
OLP:2	Lamp power	Auto	OLP:2
OLP:0		Normal	OLP:0
OLP:3		Eco 1	OLP:3
OLP:4		Eco 2	OLP:4
OSH:0	Shutter	Off	OSH:0
OSH:1		On	OSH:1
OFZ:1	Freeze	On	OFZ:1
OFZ:0		Off	OFZ:0
OAS	Auto setup		OAS
VSE:0	Screen (aspect)	Normal	VSE:0
VSE:6		Full	VSE:6
VSE:2		Wide (16:9)	VSE:2
VSE:40		Zoom	VSE:40
VSE:5		Real	VSE:5
VSE:50		Custom	VSE:50
VPM:STD	Picture	Standard	VPM:STD
VPM:DYN		Dynamic	VPM:DYN
VPM:CIN		Cinema	VPM:CIN
VPM:REA		Real	VPM:REA

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

***2 When a command that cannot be executed during standby mode is sent, the projector will send an ER401 command in reply.**

Status request commands

Command:Parameter	Function	Callback	Description
QPW	Main power status	000	Off
		001	On
QIN	Input signal status	HD1	Input 1 [HDMI]
QIN QED		DVI 2	Input 1 [DVI (PC)]
		DVI 1	Input 1 [DVI (AV HDCP)]
QIN		RG1	Input 1 [RGB (PC)]
		SCT	Input 1 [RGB (Scart)]
QIN QED		RG2 0	Input 2 [RGB]
		RG2 1	Input 2 [RGB(Y・P_B (C_B)・P_R (C_R))]
QIN		VID	Input 2 [Video]
		SVD	Input 2 [S-Video]
		AU1,SD1	Input 3 [SDI1] * with the ET-MD16SD1 only
		AU1,SD2	Input 3 [SDI2] * with the ET-MD16SD1 only
		AU2,SD1	Input 4 [SDI1] * with the ET-MD16SD1 only
		AU2,SD2	Input 4 [SDI2] * with the ET-MD16SD1 only
QSL	Lamp operation mode status	0	Four lamps
		3	Two lamps (auto)
		2	Two lamps (lamp 2 + 3)
		1	Two lamps (lamp 1 + 4)
QLP	Lamp power mode status	2	Auto
		0	Normal
		3	Eco 1
		4	Eco 2
QSH	Shutter function status	0	Off
		1	On
QFZ	Freeze function status	0	On
		1	Off
QSE	Aspect mode status	0	Normal
		6	Full
		2	Wide (16:9)
		40	Zoom
		5	Real
		50	Custom
		0	Normal
		6	Full
QPM	Picture mode status	STD	Standard
		DYN	Dynamic
		CIN	Cinema
		REA	Real
QST	Projector run time	p1p2p3p4p5	00000 – 99999 hours
Q$L:1	Lamp 1 run time	p1p2p3p4	0000 – 9999 hours
Q$L:2	Lamp 2 run time	p1p2p3p4	0000 – 9999 hours
Q$L:3	Lamp 3 run time	p1p2p3p4	0000 – 9999 hours
Q$L:4	Lamp 4 run time	p1p2p3p4	0000 – 9999 hours
QTM:0	Temperature status	p1p2p3p4/p5p6p7p8 *1	Air intake
QTM:2		p1p2p3p4/p5p6p7p8 *1	Panel section

*1 p1p2p3p4 = Celsius (°C), p5p6p7p8 = Fahrenheit (°F)

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

Command example

To set the shutter function on, send the command as shown below.

STX ADZZ ; OSH : 1 ETX

Start	ID Address	Command	Parameter	End
Character code 02	ZZ: ID ALL			Character code 03

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