

- * A USB cable is supplied as standard with the MT860/1060/1065/1075.
- * The GT5000/6000 does not come with a USB cable.
- * Note that a connection method using the supplied USB cable is not supported for the LT220/240/260.
- * The serial cable, LAN card and LAN cable are separately sold.
- * The WT610 replaced the WT610 and uses the same command set.

(CAUTION)

Before making connections, be sure to invalidate the standby mode of the projector and set the "idle mode".
The projector cannot use the control commands in the standby mode.

Setting method: Under projector [Projector Options] --> [Setup], enter a check for [Idle Mode] on Page 4.

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3. Interface Conditions

Serial connection

The communications method conforms to the RS-232C standard.

Baud rate:	38400 bps (NP600 series, VT70/VT80/VT90 series: 19200bps)
Data length:	8 bits
Parity bit:	No parity
Stop bits:	1 bit
Communications mode:	Full duplex

The control connector is described below.

[HT/LT/NP40/VT70/VT80/VT90/WT]

The PC CONTROL connector is a mini DIN 8-pin connector.

- 1 To TxD of PC
- 2
- 3
- 4 To GND of PC
- 5
- 6
- 7 To RxD of PC
- 8

* 2, 3, 5, 6, and 8 are used inside the projector.

[GT/LT80/MT/NP1000/VT (except VT70/VT80/VT90)]

The PC CONTROL connector is a D-SUB 9-pin connector.

- 1
- 2 To TxD of PC
- 3 To RxD of PC
- 4
- 5 To GND of PC
- 6
- 7 To CTS of PC
- 8 To RTS of PC
- 9

[Port Number]

The TCP port number used is "7142".

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4. List of Commands

* Example for command

Command name	Example
006. RUNNING SENSE	00H 81H 00H 00H 00H 81H
007. COMMON DATA REQUEST	00H C0H 00H 00H 00H C0H
009. ERROR STATUS REQUEST	00H 88H 00H 00H 00H 88H
015. POWER ON	02H 00H 00H 00H 00H 02H
016. POWER OFF	02H 01H 00H 00H 00H 03H
018. INPUT SW CHANGE	02H 03H 00H 00H 02H <DATA> CKS
020. PICTURE MUTE ON	02H 10H 00H 00H 00H 12H
021. PICTURE MUTE OFF	02H 11H 00H 00H 00H 13H
022. SOUND MUTE ON	02H 12H 00H 00H 00H 14H
023. SOUND MUTE OFF	02H 13H 00H 00H 00H 15H
024. ONSCREEN MUTE ON	02H 14H 00H 00H 00H 16H
025. ONSCREEN MUTE OFF	02H 15H 00H 00H 00H 17H
030. GAIN ADJUST	03H 10H 00H 00H 05H <DATA> CKS
030-2. VOLUME ADJUST	03H 10H 00H 00H 05H 05H <DATA> CKS
030-12. IMAGE MODE ADJUST	03H 10H 00H 00H 05H <DATA> CKS
037. INFORMATION REQUEST	03H 8AH 00H 00H 00H 8DH
037-1. LAMP INFORMATION REQUEST	03H 8CH 00H 00H 00H 8FH
037-2. LAMP INFORMATION REQUEST 2	03H 94H 00H 00H 00H 97H
037-4. LAMP INFORMATION REQUEST 3	03H 96H 00H 00H 02H <DATA> CKS
038. LAMP MODE REQUEST	03H B0H 00H 00H 01H 07H BBH
039. LAMP MODE SET	03H B1H 00H 00H 02H 07H 00H BDH
046. WXGA MODE SETTING REQUEST	03H B0H 00H 00H 01H DATA1 CKS
049. WXGA MODE SETTING SET	03H B1H 00H 00H 02H DATA1 DATA2 CKS
050. REMOTE KEY CODE	02H 0FH 00H 00H 02H 00H 00H 13H
060. GAIN PARAMETER REQUEST 2	03H 04H 00H 00H 03H <DATA> CKS
077. MUTE CONTROL	02H 1AH 00H 00H 02H <DATA> CKS
078-1. SETTING REQUEST	00H 85H 00H 00H 01H 00H CKS
078-2. RUNNING STATUS REQUEST	00H 85H 00H 00H 01H 01H CKS
078-3. INPUT STATUS REQUEST	00H 85H 00H 00H 01H 02H CKS
078-4. MUTE STATUS REQUEST	00H 85H 00H 00H 01H 03H CKS
078-5. MODEL NAME REQUEST	00H 85H 00H 00H 01H 04H CKS
078-6. MIRROR COVER STATUS REQUEST	00H 85H 00H 00H 01H 05H CKS
079. FREEZE CONROL	01H 98H 00H 00H 01H DATA01 CKS
097-198. PIP/SIDE BY SIDE REQUEST	03H B0H 00H 00H 02H C5H DATA CKS
098-198. PIP/SIDE BY SIDE SET	03H B1H 00H 00H 03H C5H <DATA> CKS
110. AUTO FUNCTIONS EXECUTE	03H B6H 00H 00H 01H <DATA> CKS
111. AUTO ADJUST EXECUTE2	03H BAH 00H 00H 01H <DATA> CKS
305-1. BASE MODEL TYPE REQUEST	00H BFH 00H 00H 01H <DATA> CKS
305-3. PROJECTOR INFORMATION REQUEST	00H BFH 00H 00H 01H <DATA> CKS

* Availability by Model

015. POWER ON

Function:

This command switches on the main power of the projector.

Command:

02H 00H 00H 00H 00H 02H

Response: At the time of a success

22H 00H 01H xxH 00H CKS
(*1) (*2) (*3)

Response: At the time of a failure

A2H 00H 01H xxH 02H DATA01 DATA02 CKS
(*1) (*2) (*4) (*3)

Supplement:

The projector does not accept the other command during power on processing.

016. POWER OFF

Function:

This command switches off the main power of the projector.

Command:

02H 01H 00H 00H 00H 03H

Response: At the time of a success

22H 01H 01H xxH 00H CKS
(*1) (*2) (*3)

Response: At the time of a failure

A2H 01H 01H xxH 02H DATA01 DATA02 CKS
(*1) (*2) (*4) (*3)

Supplement:

The projector doesn't accept the other command during power off processing. (It contains a cooling period.)

018. INPUT SW CHANGE

Function:

This command switches the input terminal or the entry list.

Command:

02H 03H 00H 00H 02H DATA01 DATA02 CKS
(*3)

Data Portion Contents

DATA01 Switching object
00H : Entry List
01H : Input terminal

DATA02 Switching number

When the switching object is the "Signal list", the signal list number is specified. (0...99)

When the switching object is the "Input connector", the input connector number is specified.

Terminal Number	Terminal Name	MT	LT	LT180	LT80	HT	GT	WT	VT	NP1000/3150	HT10	LT30	NP40	NP4000	NP905	NP600	NP62
01H	RGB1(RGB)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02H	RGB2 (!1)	*	*	x	*	x	*	x	*	*	x	x	x	*	*	x	x
02H	DVI(ANALOG) (!2)	x	x	x	x	x	x	*	x	x	x	x	x	x	x	*	x
06H	Video	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
0BH	S-Video	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10H	Component	x	x	*	*	*	x	x	x	*	x	x	x	*	x	x	x
11H	Component	x	x	*	x	*	x	x	x	x	*	x	x	x	x	x	x
12H	Component	x	x	x	x	x	x	x	*	x	x	x	x	x	x	*	x
1AH	DVI (*6) (!2)	*	x	*	x	*	x	x	*	x	x	x	x	*	x	*	x
1AH	DVI(DIGITAL)(*6)	x	x	x	*	x	*	*	x	*	x	x	x	x	x	x	x
1AH	HDMI	x	x	x	x	x	x	x	x	x	x	x	x	x	*	x	x
1FH	Viewer	*	*	*	*	*	*	*	*	*	x	x	x	x	*	*	*
20H	LAN	*	*	x	*	x	*	*	x	*	x	x	x	x	*	x	x
07H	RGB(Video)	x	x	x	x	x	*	x	x	x	x	x	x	x	x	x	x
0CH	RGB(S-Video)	x	x	x	x	x	*	x	x	x	x	x	x	x	x	x	x
24H	SLOT1-1	x	x	x	x	x	*	x	x	x	x	x	x	x	x	x	x
25H	SLOT1-2	x	x	x	x	x	*	x	x	x	x	x	x	x	x	x	x
29H	SLOT2-1	x	x	x	x	x	*	x	x	x	x	x	x	x	x	x	x
2AH	SLOT2-2	x	x	x	x	x	*	x	x	x	x	x	x	x	x	x	x

* : Supported

x : Not supported

(!): The MT860/LT280 does not support a DVI connector.

(!!) HT1000

(!!!) HT410/HT510/HT1100

(!!!!) VT770 support Component and Viewer

(!1) VT470/VT470JY/VT570/VT670/VT575/VT676/VT480/VT580

(!2) VT595/VT695/VT700/NP300/NP400/NP500/NP500W/NP600

Response: At the time of a success

22H 03H 01H xxH 01H DATA01 CKS
(*1) (*2) (*3)

Data Portion Contents

DATA01 Results

00H : Normal

FFH : Error

Response: At the time of a failure

A2H 03H 01H xxH 02H DATA01 DATA02 CKS
(*1) (*2) (*4) (*3)

Command example:

* When switch to the Video connector

02H 03H 00H 00H 02H 01H 06H 0EH

020. PICTURE MUTE ON

Function:

This command blanks the picture.

Command:

02H 10H 00H 00H 00H 12H

6. Response

* At the time of a success(ACK)

This returns ACK without adding data portion to the command that does not request data.

This returns ACK with adding data to the data portion for the command that requests data.

* At the time of a failure(NAK)

This adds a cause of not accepting the command to data portion to return it.

(Example) Power On

Command:

02H 00H 00H 00H 00H CKS

Response:

A2H 00H 01H 40H 02H DATA01 DATA02 CKS

7. Table of Response Error Codes

DATA01	DATA2	
Error Types	Error description	Error contents
00H	00H	Unknown command.
00H	01H	This current model does not support this function.
01H	00H	Invalid values specified.
01H	01H	Specified terminal is unavailable or cannot be selected.
02H	03H	Setting not possible.
02H	0DH	Power Off inhibited.

050. REMOTE KEY CODE

Function:

This command sends remote control key codes of projector.

Command:

02H 0FH 00H 00H 02H DATA01 DATA02 CKS
(*3)

Data Portion Contents

DATA01 .. 02 : Remote control key code (Word type)
Key number DATA01 DATA02 Key name

1	01H	00H	POWER
2	02H	00H	POWER ON (!!)
3	03H	00H	POWER OFF (!!)
4	04H	00H	SOURCE (AUTO) (!!)
5	05H	00H	AUTO (!) (!!)
6	06H	00H	MENU (!) (!!!)
7	07H	00H	UP (!) (!!!)
8	08H	00H	DOWN (!) (!!!)
9	09H	00H	RIGHT (!) (!!!)
10	0AH	00H	LEFT (!) (!!!)
11	0BH	00H	ENTER (!) (!!!)
12	0CH	00H	CANCEL (!) (!!!)
13	0DH	00H	HELP (!) (!!!)
14	0EH	00H	POINTER
15	0FH	00H	MAGNIFY UP
16	10H	00H	MAGNIFY DOWN
17	11H	00H	PICTURE MUTE
18	12H	00H	SOUND MUTE
19	13H	00H	MUTE (!!)
20	14H	00H	FOCUS UP
21	15H	00H	FOCUS DOWN
22	16H	00H	ZOOM UP
23	17H	00H	ZOOM DOWN
30	1EH	00H	STORE
31	1FH	00H	MUTE ALL OFF
37	25H	00H	R
38	26H	00H	G
39	27H	00H	B
40	28H	00H	OSD MUTE
41	29H	00H	PICTURE
42	2AH	00H	WHITE BAL
43	2BH	00H	IMAGE
44	2CH	00H	TEST
45	2DH	00H	UNDO
46	2EH	00H	1
47	2FH	00H	2
48	30H	00H	3
49	31H	00H	4
50	32H	00H	5
51	33H	00H	6
52	34H	00H	7
53	35H	00H	8
54	36H	00H	9
55	37H	00H	0
56	38H	00H	POSITION
57	39H	00H	INFO.
58	3AH	00H	PIXEL
59	3BH	00H	KEYSTONE
60	3CH	00H	AMPLITUDE
61	3DH	00H	INPUT LIST
71	47H	00H	PICMUTE ON (!!)
72	48H	00H	PICMUTE OFF (!!)
73	49H	00H	SNDMUTE ON (!!)
74	4AH	00H	SNDMUTE OFF (!!)
75	4BH	00H	RGB1(*5) (!!)
76	4CH	00H	RGB2(*5)
77	4DH	00H	RGB3
78	4EH	00H	YCBCR

79	4FH	00H	VIDEO1 (!!)
80	50H	00H	VIDEO2
81	51H	00H	S-VIDEO1 (!!)
82	52H	00H	S-VIDEO2
83	53H	00H	DIGITAL1
84	54H	00H	DIGITAL2
85	55H	00H	PC CARD
96	60H	00H	BS
132	84H	00H	VOLUME UP (!!)
133	85H	00H	VOLUME DOWN (!!)
134	86H	00H	KEYSTONE UP (!!)
135	87H	00H	KEYSTONE DOWN (!!)
136	88H	00H	SLIDE UP
137	89H	00H	SLIDE DOWN
138	8AH	00H	FREEZE (!!)
158	9EH	00H	FILE
159	9FH	00H	PAGE
163	A3H	00H	ASPECT (!!)
164	A4H	00H	VIDEO3
165	A5H	00H	VIDEO4
166	A6H	00H	S-VIDEO3
167	A7H	00H	S-VIDEO4
200	C8H	00H	ZOOM
201	C9H	00H	FOCUS
214	D6H	00H	3D REFORM
215	D7H	00H	SOURCE (!!)
216	D8H	00H	RGB(*5) oggle (!!)
217	D9H	00H	VIDEO Toggle (!!)
218	DAH	00H	3D REFORM RESET
221	DDH	00H	AUTO (SHORT)
222	DEH	00H	AUTO (LONG)
223	DFH	00H	PICTURE MANAGEMENT (!!)
225	E1H	00H	COMPONENT (!!)
226	E2H	00H	ZOOM POS UP (HT)
227	E3H	00H	ZOOM POS DOWN (HT)
228	E4H	00H	DVI/DVI (DIGITAL) (*6) (!!)
229	E5H	00H	LAN
232	E8H	00H	D ZOOM UP (WT)
233	E9H	00H	D ZOOM DOWN (WT)
237	EDH	00H	PSCODE(Passcode screen will be displayed at once)
238	EEH	00H	LAMP MODE (!!!)

Response: At the time of a success

22H 0FH 01H xxH 01H DATA01 CKS
 (*1) (*2) (*3)

Data Portion Contents

 DATA01 Results
 00H : Normal
 FFH : Error

Response: At the time of a failure

A2H 0FH 01H xxH 02H DATA01 DATA02 CKS
 (*1) (*2) (*4) (*3)

(!) About AUTO key