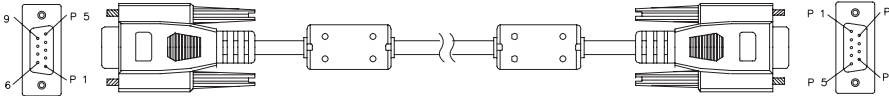


RS232 Commands and Protocol Function List

RS232 Pin Assignments



D-Sub 9 pin

(from the projector side)

| | |
|---|------|
| 1 | 1 CD |
| 2 | RXD |
| 3 | TXD |
| 4 | DTR |
| 5 | GND |
| 6 | DSR |
| 7 | RTS |
| 8 | CTS |
| 9 | RI |

(from the cable side)

| C1 | COLOR | C2 |
|-------|--------|-------|
| 1 | Black | 1 |
| 2 | Brown | 3 |
| 3 | Red | 2 |
| 4 | Orange | 6 |
| 5 | Yellow | 5 |
| 6 | Green | 4 |
| 7 | Blue | 8 |
| 8 | Purple | 7 |
| 9 | White | 9 |
| SHELL | DW | SHELL |

RS232 Protocol Function List

| | |
|-------------------------|---------|
| Baud Rate | 9600 |
| Data Bits | 8 |
| Parity | None |
| Stop Bits | 1 |
| Flow Control | None |
| UART16550 FIFO | Disable |
| Projector Return (Pass) | P |
| Projector Return (Fail) | F |

| Lead Code | Projector ID | | Command ID | | | space | variable | carriage return |
|-----------------------|----------------------------------|---|---|---|---|-----------|------------------------|-----------------------|
| ~ | X | X | X | X | X | | n | CR |
| Fix code One Digit | Set in OSD 00~99 Two Digit | | Defined by Optoma 2 or 3 Digit See the Follow content | | | One Digit | Per item Definition | Fix code One digit |

Note

- *To also include AMX beacon signal in RS232 protocol*
- *In basic terms, AMX controllers will issue a poll periodically to detect 3rd party devices connected to the RS232 port (in this case Optoma). The poll is "AMX" in ASCII followed by a carriage return 'r'.*
- *There is a <CR> after all ASCII commands.*
- *0D is the HEX code for <CR> in ASCII code*

SEND to projector

| 232 ASCII Code | HEX Code | Function | Description |
|----------------|------------------------------|------------------------|--|
| -XX00 1 | 7E 30 30 30 30 20 31 0D | Power ON | |
| -XX00 0 | 7E 30 30 30 30 20 30 0D | Power OFF | (0/2 for backward compatible) |
| -XX00 1 ~nnnn | 7E 30 30 30 30 20 31 20 a 0D | Power ON with Password | ~nnnn = -0000 (a=7E 30 30 30 30) -9999 (a=7E 39 39 39 39) |
| -XX01 1 | 7E 30 30 30 31 20 31 0D | Resync | |
| -XX02 1 | 7E 30 30 30 32 20 31 0D | AV Mute | On |
| -XX02 0 | 7E 30 30 30 32 20 30 0D | | Off (0/2 for backward compatible) |
| -XX03 1 | 7E 30 30 30 33 20 31 0D | Mute | On |
| -XX03 0 | 7E 30 30 30 33 20 30 0D | | Off (0/2 for backward compatible) |
| -XX04 1 | 7E 30 30 30 34 20 31 0D | Freeze | |
| -XX04 0 | 7E 30 30 30 34 20 30 0D | Unfreeze | (0/2 for backward compatible) |
| -XX05 1 | 7E 30 30 30 35 20 31 0D | Zoom Plus | |
| -XX06 1 | 7E 30 30 30 36 20 31 0D | Zoom Minus | |
| -XX12 1 | 7E 30 30 31 32 20 31 0D | Direct Source Commands | HDMI |
| -XX12 3 | 7E 30 30 31 32 20 33 0D | | DVI-I |
| -XX12 5 | 7E 30 30 31 32 20 35 0D | | VGA1 |
| -XX12 6 | 7E 30 30 31 32 20 36 0D | | VGA 2 |
| -XX12 8 | 7E 30 30 31 32 20 38 0D | | VGA 1 Component |
| -XX12 9 | 7E 30 30 31 32 20 39 0D | | S-Video |
| -XX12 10 | 7E 30 30 31 32 20 31 30 0D | | Video |
| -XX12 13 | 7E 30 30 31 32 20 31 33 0D | | VGA 2 Component |
| -XX12 17 | 7E 30 30 31 32 20 31 37 0D | | Flash drive |
| -XX12 18 | 7E 30 30 31 32 20 31 38 0D | | Network Display |
| -XX12 19 | 7E 30 30 31 32 20 31 39 0D | | USB display |
| -XX20 1 | 7E 30 30 32 30 20 31 0D | Display Mode | Presentation |
| -XX20 2 | 7E 30 30 32 30 20 32 0D | | Bright |
| -XX20 3 | 7E 30 30 32 30 20 33 0D | | Movie |
| -XX20 4 | 7E 30 30 32 30 20 34 0D | | sRGB |
| -XX20 5 | 7E 30 30 32 30 20 35 0D | | User |
| -XX20 7 | 7E 30 30 32 30 20 37 0D | | Blackboard |
| -XX20 13 | 7E 30 30 32 30 21 33 0D | | DICOM SIM. |
| -XX20 9 | 7E 30 30 32 30 20 39 0D | | 3D |
| -XX21 n | 7E 30 30 32 31 20 a 0D | Brightness | n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| -XX22 n | 7E 30 30 32 32 20 a 0D | Contrast | n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| -XX23 n | 7E 30 30 32 33 20 a 0D | Sharpness | n = 1 (a=31) ~ 15 (a=31 35) |
| -XX24 n | 7E 30 30 32 34 20 a 0D | Color Settings/White | Red n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| -XX25 n | 7E 30 30 32 35 20 a 0D | | Green n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| -XX26 n | 7E 30 30 32 36 20 a 0D | | Blue n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| -XX33 1 | 7E 30 30 33 33 20 31 0D | | Reset |
| -XX34 n | 7E 30 30 33 34 20 a 0D | BrilliantColor™ | n = 1 (a=31) ~ 10 (a=31 30) |
| -XX35 1 | 7E 30 30 33 35 20 31 0D | Gamma | Film |
| -XX35 2 | 7E 30 30 33 35 20 32 0D | | Video |
| -XX35 3 | 7E 30 30 33 35 20 33 0D | | Graphics |
| -XX35 4 | 7E 30 30 33 35 20 34 0D | | 2.2 |
| -XX35 5 | 7E 30 30 33 35 20 35 0D | | 1.8 |
| -XX35 6 | 7E 30 30 33 35 20 36 0D | | 2.0 |
| -XX35 7 | 7E 30 30 33 35 20 37 0D | | 2.6 |
| -XX36 1 | 7E 30 30 33 36 20 31 0D | Color Temp. | Warm |
| -XX36 2 | 7E 30 30 33 36 20 32 0D | | Medium |
| -XX36 3 | 7E 30 30 33 36 20 33 0D | | Cold |
| -XX37 1 | 7E 30 30 33 37 20 31 0D | Color Space | Auto |
| -XX37 2 | 7E 30 30 33 37 20 32 0D | | RGB(0-255) |
| -XX37 3 | 7E 30 30 33 37 20 33 0D | | YUV |
| -XX37 4 | 7E 30 30 33 37 20 34 0D | | RGB(16 - 235) |
| -XX73 n | 7E 30 30 37 33 20 a 0D | Signal | Frequency n = -5 (a=2D 35) ~ 5 (a=35) By signal |
| -XX91 1 | 7E 30 30 39 31 20 31 0D | | Automatic On |
| -XX91 0 | 7E 30 30 39 31 20 30 0D | | Off |
| -XX74 n | 7E 30 30 37 34 20 a 0D | | Phase n = 0 (a=30) ~ 31 (a=33 31) By signal |
| -XX75 n | 7E 30 30 37 35 20 a 0D | | H. Position n = -5 (a=2D 35) ~ 5 (a=35) By timing |
| -XX76 n | 7E 30 30 37 36 20 a 0D | | V. Position n = -5 (a=2D 35) ~ 5 (a=35) By timing |
| -XX45 n | 7E 30 30 34 34 20 a 0D | Color (Saturation) | n = -50 (a=2D 35 30) ~ 50 (a=35 30) |
| -XX44 n | 7E 30 30 34 35 20 a 0D | Tint | n = -50 (a=2D 35 30) ~ 50 (a=35 30)) |
| -XX60 1 | 7E 30 30 36 30 20 31 0D | Format | 4:3 |
| -XX60 2 | 7E 30 30 36 30 20 32 0D | | 16:9 |
| -XX60 3 | 7E 30 30 36 30 20 33 0D | | 16:10(W501) |
| -XX60 5 | 7E 30 30 36 30 20 35 0D | | LBX |
| -XX60 6 | 7E 30 30 36 30 20 36 0D | | Native |
| -XX60 7 | 7E 30 30 36 30 20 37 0D | | Auto |
| -XX61 n | 7E 30 30 36 31 20 a 0D | Edge mask | n = 0 (a=30) ~ 10 (a=31 30) |
| -XX62 n | 7E 30 30 36 32 20 a 0D | Zoom | n = -5 (a=2D 35) ~ 25 (a=32 35) |
| -XX63 n | 7E 30 30 36 33 20 a 0D | H Image Shift | n = -100 (a=2D 31 30 30) ~ 100 (a=31 30 30) |
| -XX64 n | 7E 30 30 36 34 20 a 0D | V Image Shift | n = -100 (a=2D 31 30 30) ~ 100 (a=31 30 30) |
| -XX66 n | 7E 30 30 36 36 20 a 0D | V Keystone | n = -40 (a=2D 34 30) ~ 40 (a=34 30) |
| -XX69 1 | 7E 30 30 36 39 20 31 0D | Auto Keystone | On |
| -XX69 0 | 7E 30 30 36 39 20 30 0D | Auto Keystone | Off |
| -XX230 1 | 7E 30 30 32 33 30 20 31 0D | 3D Mode | DLP-Link |

| | | | |
|-------------------------------------|-----------------------------|-------------------|---|
| --XX230 3 | 7E 30 30 32 33 30 20 31 0D | 3D Mode | IR |
| --XX400 0 | 7E 30 30 34 30 30 20 30 0D | 3D ~2D | 3D |
| --XX400 1 | 7E 30 30 34 30 30 20 31 0D | | L |
| --XX400 2 | 7E 30 30 34 30 30 20 32 0D | | R |
| --XX405 0 | 7E 30 30 34 30 35 20 30 0D | 3D Format | Auto |
| --XX405 1 | 7E 30 30 34 30 35 20 31 0D | | SBS |
| --XX405 2 | 7E 30 30 34 30 35 20 32 0D | | Top and Bottom |
| --XX405 3 | 7E 30 30 34 30 35 20 33 0D | | Frame sequential |
| --XX231 0 | 7E 30 30 32 33 31 20 30 0D | 3D Sync Invert | On |
| --XX231 1 | 7E 30 30 32 33 31 20 31 0D | 3D Sync Invert | Off |
| <hr/> | | | |
| --XX70 1 | 7E 30 30 37 30 20 31 0D | Language | English |
| --XX70 2 | 7E 30 30 37 30 20 32 0D | | German |
| --XX70 3 | 7E 30 30 37 30 20 33 0D | | French |
| --XX70 4 | 7E 30 30 37 30 20 34 0D | | Italian |
| --XX70 5 | 7E 30 30 37 30 20 35 0D | | Spanish |
| --XX70 6 | 7E 30 30 37 30 20 36 0D | | Portuguese |
| --XX70 7 | 7E 30 30 37 30 20 37 0D | | Polish |
| --XX70 8 | 7E 30 30 37 30 20 38 0D | | Dutch |
| --XX70 9 | 7E 30 30 37 30 20 39 0D | | Swedish |
| --XX70 10 | 7E 30 30 37 30 20 31 30 0D | | Norwegian/Danish |
| --XX70 11 | 7E 30 30 37 30 20 31 31 0D | | Finnish |
| --XX70 12 | 7E 30 30 37 30 20 31 32 0D | | Greek |
| --XX70 13 | 7E 30 30 37 30 20 31 33 0D | | Traditional Chinese |
| --XX70 14 | 7E 30 30 37 30 20 31 34 0D | | Simplified Chinese |
| --XX70 15 | 7E 30 30 37 30 20 31 35 0D | | Japanese |
| --XX70 16 | 7E 30 30 37 30 20 31 36 0D | | Korean |
| --XX70 17 | 7E 30 30 37 30 20 31 37 0D | | Russian |
| --XX70 18 | 7E 30 30 37 30 20 31 38 0D | | Hungarian |
| --XX70 19 | 7E 30 30 37 30 20 31 39 0D | | Czechoslovak |
| --XX70 20 | 7E 30 30 37 30 20 32 30 0D | | Arabic |
| --XX70 21 | 7E 30 30 37 30 20 32 31 0D | | Thai |
| --XX70 22 | 7E 30 30 37 30 20 32 32 0D | | Turkish |
| --XX70 23 | 7E 30 30 37 30 20 32 33 0D | | Farsi |
| --XX70 25 | 7E 30 30 37 30 20 32 33 0D | | Vietnamese |
| --XX70 26 | 7E 30 30 37 30 20 32 33 0D | | Indonesian |
| --XX70 27 | 7E 30 30 37 30 20 32 33 0D | | Romanian |
| <hr/> | | | |
| --XX71 1 | 7E 30 30 37 31 20 31 0D | Projection | Front-Desktop |
| --XX71 2 | 7E 30 30 37 31 20 32 0D | | Rear-Desktop |
| --XX71 3 | 7E 30 30 37 31 20 33 0D | | Front-Ceiling |
| --XX71 4 | 7E 30 30 37 31 20 34 0D | | Rear-Ceiling |
| <hr/> | | | |
| --XX72 1 | 7E 30 30 37 32 20 31 0D | Menu Location | Top Left |
| --XX72 2 | 7E 30 30 37 32 20 32 0D | | Top Right |
| --XX72 3 | 7E 30 30 37 32 20 33 0D | | Centre |
| --XX72 4 | 7E 30 30 37 32 20 34 0D | | Bottom Left |
| --XX72 5 | 7E 30 30 37 32 20 35 0D | | Bottom Right |
| <hr/> | | | |
| (EW501 only) | | | |
| --XX90 1 | 7E 30 30 39 31 20 31 0D | Screen Type | 16:10 |
| --XX90 0 | 7E 30 30 39 31 20 30 0D | | 16:9 |
| <hr/> | | | |
| --XX77 n (aa=31 32) | 7E 30 30 37 37 20 aabccc 0D | Security | Security Timer |
| | | | Month/Day/Hour n = mm/dd/hhmm= 00 (aa=30 30) ~ 12 |
| | | | dd = 00 (bb=30 30) ~ 30 (bb=33 30) |
| | | | hh= 00 (cc=30 30) ~ 24 (cc=32 34) |
| --XX78 1 | 7E 30 30 37 38 20 31 0D | | Security Settings |
| --XX78 0 ~n-1 (a=7E 30 30 30 30) | 7E 30 30 37 38 20 32 a 0D | | Enable |
| | | | Disable(0/2 for backward compatible) ~n-1 = ~0000 |
| | | | ~9999 (a=7E 39 39 39 39) |
| <hr/> | | | |
| --XX79 n | 7E 30 30 37 39 20 a 0D | Projector ID | n = 00 (a=30 30) ~ 99 (a=39 39) |
| <hr/> | | | |
| --XX80 1 | 7E 30 30 38 30 20 31 0D | Mute | On |
| --XX80 0 | 7E 30 30 38 30 20 30 0D | | Off (0/2 for backward compatible) |
| --XX310 0 | 7E 30 33 31 30 20 30 0D | Internal Speaker | Off |
| --XX310 1 | 7E 30 33 31 30 20 31 0D | | On |
| --XX81 n | 7E 30 30 38 31 20 a 0D | Volume(Audio) | n = 0 (a=30) ~ 10 (a=31 30) |
| --XX93 n | 7E 30 30 39 33 20 a 0D | Volume(Mic) | n = 0 (a=30) ~ 10 (a=31 30) |
| --XX89 0 | 7E 30 30 38 39 20 30 0D | Audio Input | Default |
| --XX89 1 | 7E 30 30 38 39 20 31 0D | | Audio1 |
| --XX89 3 | 7E 30 30 38 39 20 33 0D | | Audio2 |
| --XX89 4 | 7E 30 30 38 39 20 34 0D | | Audio3 |
| <hr/> | | | |
| --XX82 1 | 7E 30 30 38 32 20 31 0D | Logo | Default |
| --XX82 2 | 7E 30 30 38 32 20 32 0D | | User |
| --XX82 3 | 7E 30 30 38 32 20 33 0D | | Neutral |
| --XX83 1 | 7E 30 30 38 33 20 31 0D | Logo Capture | |
| --XX88 0 | 7E 30 30 38 38 20 30 0D | Closed Captioning | Off |
| --XX88 1 | 7E 30 30 38 38 20 31 0D | | cc1 |
| --XX88 2 | 7E 30 30 38 38 20 32 0D | | cc2 |
| --XX450 0 | 7E 30 30 34 35 30 20 30 0D | WLAN | Off |
| --XX450 1 | 7E 30 30 34 35 30 20 31 0D | | On |
| --XX454 0 | 7E 30 30 34 35 34 20 30 0D | Crestron | Off |
| --XX454 1 | 7E 30 30 34 35 34 20 31 0D | | On |

| | | | | |
|-------------------------------|-------------------------------|----------------------------|-----------------------------------|--------------------------------------|
| -XX455 0 | 7E 30 30 34 35 35 20 30 0D | Extron | Off | |
| -XX455 1 | 7E 30 30 34 35 35 20 31 0D | | On | |
| -XX456 0 | 7E 30 30 34 35 36 20 30 0D | PJLink | Off | |
| -XX456 1 | 7E 30 30 34 35 36 20 31 0D | | On | |
| -XX457 0 | 7E 30 30 34 35 37 20 30 0D | AMX Device Discovery | Off | |
| -XX457 1 | 7E 30 30 34 35 37 20 31 0D | | On | |
| -XX458 0 | 7E 30 30 34 35 38 20 30 0D | Telnet | Off | |
| -XX458 1 | 7E 30 30 34 35 38 20 31 0D | | On | |
| -XX459 0 | 7E 30 30 34 35 38 20 30 0D | HTTP | Off | |
| -XX459 1 | 7E 30 30 34 35 38 20 31 0D | | On | |
| <hr/> | | | | |
| -XX100 1 | 7E 30 30 31 30 20 31 0D | Source Lock | On | |
| -XX100 0 | 7E 30 30 31 30 20 30 0D | | Off (0/2 for backward compatible) | |
| -XX101 1 | 7E 30 30 31 30 21 0D | High Altitude | On | |
| -XX101 0 | 7E 30 30 31 30 21 20 30 0D | | Off (0/2 for backward compatible) | |
| -XX102 1 | 7E 30 30 31 30 32 20 31 0D | Information Hide | On | |
| -XX102 0 | 7E 30 30 31 30 32 20 30 0D | | Off (0/2 for backward compatible) | |
| -XX103 1 | 7E 30 30 31 30 33 20 31 0D | Keypad Lock | On | |
| -XX103 0 | 7E 30 30 31 30 33 20 30 0D | | Off (0/2 for backward compatible) | |
| -XX195 0 | 7E 30 30 31 39 35 20 30 0D | Test Pattern | None | |
| -XX195 1 | 7E 30 30 31 39 35 20 31 0D | | Grid | |
| -XX195 2 | 7E 30 30 31 39 35 20 32 0D | | White Pattern | |
| -XX192 0 | 7E 30 30 31 39 32 20 30 0D | 12V Trigger | Off | |
| -XX192 1 | 7E 30 30 31 39 32 20 31 0D | | On | |
| -XX192 3 | 7E 30 30 31 39 32 20 33 0D | | Auto 3D | |
| -XX11 0 | 7E 30 30 31 31 20 30 0D | IR Function | Off | |
| -XX11 1 | 7E 30 30 31 31 20 31 0D | | On | |
| -XX11 2 | 7E 30 30 31 31 20 32 0D | | Front | |
| -XX11 3 | 7E 30 30 31 31 20 33 0D | | Back | |
| <hr/> | | | | |
| -XX104 1 | 7E 30 30 31 30 34 20 31 0D | Background Color | Blue | |
| -XX104 2 | 7E 30 30 31 30 34 20 32 0D | | Black | |
| -XX104 3 | 7E 30 30 31 30 34 20 33 0D | | Red | |
| -XX104 4 | 7E 30 30 31 30 34 20 34 0D | | Green | |
| -XX104 5 | 7E 30 30 31 30 34 20 35 0D | | White | |
| <hr/> | | | | |
| -XX105 1 | 7E 30 30 31 30 35 20 31 0D | Advanced | Direct Power On | On |
| -XX105 0 | 7E 30 30 31 30 35 20 30 0D | | Off (0/2 for backward compatible) | |
| -XX113 0 | 7E 30 30 31 31 33 20 30 0D | | Signal Power On | Off |
| -XX113 1 | 7E 30 30 31 31 33 20 31 0D | | | On |
| -XX106 n | 7E 30 30 31 30 36 20 a 0D | | Auto Power Off (min) | n = 0 (a=30) ~ 180 (a=31 38 30) |
| (5 minutes for each step). | | | | |
| -XX107 n | 7E 30 30 31 30 37 20 a 0D | | Sleep Timer (min) | n = 0 (a=30) ~ 990 (a=39 39 30) |
| (30 minutes for each step). | | | | |
| -XX115 1 | 7E 30 30 31 31 35 20 31 0D | | Quick Resume | On |
| -XX115 0 | 7E 30 30 31 31 35 20 30 0D | | | Off (0/2 for backward compatible) |
| -XX114 1 | 7E 30 30 31 31 34 20 31 0D | | Power Mode(Standby) | Eco.(≤0.5W) |
| -XX114 0 | 7E 30 30 31 31 34 20 30 0D | | | Active (0/2 for backward compatible) |
| <hr/> | | | | |
| -XX109 1 | 7E 30 30 31 30 39 20 31 0D | Lamp Reminder | On | |
| -XX109 0 | 7E 30 30 31 30 39 20 30 0D | | Off (0/2 for backward compatible) | |
| -XX110 1 | 7E 30 30 31 31 30 20 31 0D | Brightness Mode | Bright | |
| -XX110 3 | 7E 30 30 31 31 30 20 33 0D | | Eco* | |
| -XX110 4 | 7E 30 30 31 31 30 20 34 0D | | Dynamic | |
| -XX111 1 | 7E 30 30 31 31 31 20 31 0D | Lamp Reset | Yes | |
| -XX111 0 | 7E 30 30 31 31 31 20 30 0D | | No (0/2 for backward compatible) | |
| <hr/> | | | | |
| -XX320 1 | 7E 30 30 33 32 30 20 31 0D | Optional Filter Installed | | Yes |
| -XX320 0 | 7E 30 30 33 32 30 20 30 0D | | | No (0/2 for backward compatible) |
| -XX322 0 | 7E 30 30 33 32 32 20 30 0D | Filter Reminder | | Off |
| -XX322 1 | 7E 30 30 33 32 32 20 31 0D | | | 300 hr |
| -XX322 2 | 7E 30 30 33 32 32 20 32 0D | | | 500 hr |
| -XX322 3 | 7E 30 30 33 32 32 20 33 0D | | | 800 hr |
| -XX322 4 | 7E 30 30 33 32 32 20 34 0D | | | 1000 hr |
| -XX323 1 | 7E 30 30 33 32 33 20 31 0D | Filter Reset | | Yes |
| -XX323 0 | 7E 30 30 33 32 33 20 30 0D | | | No(0/2 for backward compatible) |
| <hr/> | | | | |
| -XX112 1 | 7E 30 30 31 31 32 20 31 0D | Reset | | Yes |
| <hr/> | | | | |
| -XX99 1 | 7E 30 30 39 39 20 31 0D | RS232 Alert Reset | Reset | System Alert |
| -XX210 n | 7E 30 30 32 30 20 n 0D | Display message on the OSD | n: 1-30 characters | |
| <hr/> | | | | |
| SEND to emulate Remote | | | | |
| -XX140 10 | 7E 30 30 31 34 30 20 31 30 0D | | Up | |
| -XX140 11 | 7E 30 30 31 34 30 20 31 31 0D | | Left | |
| -XX140 12 | 7E 30 30 31 34 30 20 31 32 0D | | Enter (for projection MENU) | |
| -XX140 13 | 7E 30 30 31 34 30 20 31 33 0D | | Right | |
| -XX140 14 | 7E 30 30 31 34 30 20 31 34 0D | | Down | |
| -XX140 15 | 7E 30 30 31 34 30 20 31 35 0D | | Keystone + | |
| -XX140 16 | 7E 30 30 31 34 30 20 31 36 0D | | Keystone - | |
| -XX140 17 | 7E 30 30 31 34 30 20 31 37 0D | | Volume - | |

| | | |
|------------|-------------------------------|------------|
| --XX140 18 | 7E 30 30 31 34 30 20 31 38 0D | Volume + |
| --XX140 19 | 7E 30 30 31 34 30 20 31 39 0D | Brightness |
| --XX140 20 | 7E 30 30 31 34 30 20 32 30 0D | Menu |
| --XX140 21 | 7E 30 30 31 34 30 20 32 31 0D | Zoom |
| --XX140 47 | 7E 30 30 31 34 30 20 34 37 0D | Source |

SEND from projector automatically

| 232 ASCII Code | HEX Code | Function | Projector Return | Description |
|----------------|----------|----------|------------------|-------------|
|----------------|----------|----------|------------------|-------------|

when Standby/Warming/Cooling/Out of Range/Lamp fail/Fan Lock/Over Temperature/Lamp Hours Running Out/Cover Open

INFO n : 0/1/2/3/4/6/7/8/ = Standby/Warming/Cooling/Out of Range/Lamp fail/Fan Lock/Over Temperature/Lamp Hours Running Out/Cover Open

READ from projector

| 232 ASCII Code | HEX Code | Function | Projector Return | Description |
|----------------|----------|----------|------------------|-------------|
|----------------|----------|----------|------------------|-------------|

| | | | | |
|--|----------------------------|-----------------------|------------------------|--|
| --XX121 1 | 7E 30 30 31 32 31 20 31 0D | Input Source Commands | OKn | n : 0/1/2/3/4/5/6/7/8/9 = None/VGA1/VGA2/Video/S-Video/HDMI/DVI/Flash drive/Network display/USB display |
| --XX122 1 | 7E 30 30 31 32 32 20 31 0D | Software Version | OKdddd | dddd: FW version |
| --XX123 1 | 7E 30 30 31 32 33 20 31 0D | Display Mode | OKn | n : 0/1/2/3/4/5/6/7/8/ None/Presentation/Bright/Movie/sRGB/User/Blackboard/DICOM SIM./3D |
| --XX124 1 | 7E 30 30 31 32 34 20 31 0D | Power State | OKn | n : 0/1 = Off/On |
| --XX125 1 | 7E 30 30 31 32 35 20 31 0D | Brightness | OKn | |
| --XX126 1 | 7E 30 30 31 32 36 20 31 0D | Contrast | OKn | |
| --XX127 1 | 7E 30 30 31 32 37 20 31 0D | Format | OKn | (W501) n: 0/1/2/3/4/5 = 4:3/16:9/16:10/LBX/Native/AUTO (EH501) n: 0/1/2/3/4 =4:3/16:9/LBX/Native/AUTO (X501) n: 0/1/2/3 =4:3/16:9/Native/AUTO |
| *16:9 or 16:10 depend on Screen Type setting | | | | |
| --XX128 1 | 7E 30 30 31 32 38 20 31 0D | Color Temperature | OKn | n : 0/1/2 = Warm/Medium/Cold |
| --XX129 1 | 7E 30 30 31 32 39 20 31 0D | Projection Mode | OKn | n : 0/1/2/3 = Front-Desktop/ Rear-Desktop/ Front-Ceiling/ Rear-Ceiling |
| --XX150 1 | 7E 30 30 31 35 30 20 31 0D | Information | OKbbbbbccdddde | a : 0/1 = Off/On bbbb: LampHour cc: source 00/01/02/03/04/05/06/07/08/09 = None/VGA1/VGA2/Video/S-Video/HDMI/DVI/Flash Drive/Network display/USBdisplay dddd: FW version e : Display mode 0/1/2/3/4/5/6/7/8/ None/Presentation/Bright/Movie/sRGB/User/Blackboard/ DICOM SIM./3D |
| --XX151 1 | 7E 30 30 31 35 31 20 31 0D | Model name | OKn | n:1/2/3=X501/W501/EH501 |
| --XX108 1 | 7E 30 30 31 30 38 20 31 0D | Lamp Hours | OKbbbb | bbbb: LampHour |
| --XX108 2 | 7E 30 30 31 30 38 20 31 0D | Lamp Hours | Cumulative Lamp Hours | OKbbbbb bbbbbb: (5 digits) Total Lamp Hours |
| --XX321 1 | 7E 30 30 33 32 1 20 31 0D | Filter Usage Hours | OKbbbb | bbbb: Filter Usage Hours |
| --XX87 1 | 7E 30 30 38 37 20 31 0D | Network Status | OKn | n=0/1 Disconnected/Connected |
| --XX87 3 | 7E 30 30 38 37 20 33 0D | IP Address | Okaaa_bbb_ccc_ddd | |
| --XX451 1 | 7E 30 30 34 35 31 20 31 0D | WLAN Network Status | OKn | n=0/1 Disconnected/Connected |
| --XX451 2 | 7E 30 30 34 35 31 20 32 0D | WLAN IP Address | Okaaa_bbb_ccc_ddd | |
| --XX451 3 | 7E 30 30 34 35 31 20 33 0D | SSID | Okaaaaaaaaaaaaaaaaaaaa | |