

XNB4000/XNB3500/WNB3000 RS-232 Communication Format

1. Communication Protocol

Standard Baud rate: 9600 bps or 19200 bps (Selectable on some models)
 Data length: 8 bits
 Parity: None
 Stop bit: 1 bit
 Flow Control: None

2. RS-232 Cable Define for Seattle series Projectors (RX and TX specified here are in respect of PC)

(PC side with D-sub 9pin female) (Projector side with D-sub 9pin female)

| | | | | |
|-----|---|---|---|-----|
| RX | 2 | → | 2 | RX |
| TX | 3 | → | 3 | TX |
| GND | 5 | → | 5 | GND |

3. Communication

3.1 The Projector command is defined one command/one line that starts " C" and ends carriage return CR .

3.2 There are two types of command, functional execution commands and status read commands

3.3 Response for status read command after accepting has different characters.

Example:

- A. Functional execution command:
Power ON command is sent to the projector with " C00" CR, the projector returns a *ACK CR or NAK CR code

PC → Projector "C" "0" "0" CR

Projector → PC processing command ACK (or NAK) CR

- B. Status read command:
Power Status command is sent to the projector with " CR0" CR, the projector returns a power status plus CR or NAK CR code

PC → Projector "C" "R" "0" CR

Projector → PC processing command "0" "0" "0" (or NAK) CR

4. Command List

| Command (HEX+CR) | Function | Remarks |
|-------------------|------------|---------------------------|
| C00(43 30 30 0D)# | POWER ON | Used at standby mode only |
| C01(43 30 31 0D) | POWER OFF | |
| C02(43 30 32 0D) | COMPUTER1 | |
| C04(43 30 34 0D) | COMPUTER2 | |
| C03(43 30 33 0D) | YPBPR | No use in Boston series |
| C05(43 30 35 0D) | HDMI | |
| C06(43 30 36 0D) | VIDEO | |
| C07(43 30 37 0D) | S-VIDEO | |
| C08(43 30 38 0D) | COMPONENT | |
| C09(43 30 39 0D) | VOLUME + | |
| C0A(43 30 41 0D) | VOLUME - | |
| C1D(43 31 44 0D) | MENU | |
| C30(43 33 30 0D) | UP | |
| C31(43 33 31 0D) | DOWN | |
| C32(43 33 32 0D) | LEFT | |
| C33(43 33 33 0D) | RIGHT | |
| C34(43 33 34 0D) | MUTE | |
| C0B(43 30 42 0D) | MUTE ON | |
| C0C(43 30 43 0D) | MUTE OFF | |
| C43(43 34 33 0D) | FREEZE | |
| C44(43 34 34 0D) | FREEZE ON | |
| C45(43 34 35 0D) | FREEZE OFF | |
| C80(43 38 30 0D) | ZOOM+ | |
| C81(43 38 31 0D) | ZOOM- | |

| | | |
|--------------------|--------------------------------------|--|
| C90(43 39 30 0D) | ESC | |
| C91(43 39 31 0D) | SOURCE | |
| C92(43 39 32 0D) | AUTO | |
| C93(43 39 33 0D) | CONTRAST+ | |
| C94(43 39 34 0D) | CONTRAST- | |
| C95(43 39 35 0D) | BRIGHTNESS+ | |
| C96(43 39 36 0D) | BRIGHTNESS- | |
| C97(43 39 37 0D) | BLANK | |
| C9A(43 39 41 0D) | BLANK ON | |
| C9B(43 39 42 0D) | BLANK OFF | |
| C98(43 39 38 0D) | KEYSTONE+ | |
| C99(43 39 39 0D) | KEYSTONE- | |
| C51(43 35 31 0D) | USB | |
| C52(43 35 32 0D) | USB-UP | For USB source only |
| C53(43 35 33 0D) | USB-DOWN | For USB source only |
| C54(43 35 34 0D) | USB-LEFT | For USB source only |
| C55(43 35 35 0D) | USB_RIGHT | For USB source only |
| C56(43 35 36 0D) | USB-ENTER | For USB source only |
| C57(43 35 37 0D) | USB-ESC | For USB source only |
| CR0(43 52 30 0D) # | POWER-STATUS | STATUS feedback "000" - projector is on "800" - projector is standby "200" - projector is cooling down " 500" - Projector is warming up |
| CR1(43 52 31 0D) | SOURCE-STATUS | STATUS feedback "001" – RGB1 "002" – HDMI "003" – RGB2 "005" – USB "010" – VIDEO "020" – S-VIDEO |
| CR2(43 52 32 0D) # | LAMP TIMER-STATUS | STATUS feedback "X,XXX,XXX Mins"-- Lamp usage timer in minutes |
| CR3(43 52 33 0D) # | FILTER TIMER-STATUS | STATUS feedback "X,XXX,XXX Mins"-- Filter usage timer in minutes |
| CR9(43 52 39 0D) # | SYSTEM ERROR CODE | A: Lamp temperature switch fail B: Lamp cover switch fail C: Lamp/Ballast fail D: Fan: Exhaust fan fail E: Fan: Lamp blower fail F: Fan: Image blower fail G: Inlet temp sensor fail H: Image Temp sensor fail I: Lamp Temp sensor fail J: Over temp: Inlet Temp sensor K: Over temp: Image Temp sensor* L: Over temp: Lamp Temp sensor M: Blank feature time out N: No Signal time out |
| CRA(43 52 41 0D) # | SYSTEM ERROR CODE (10 last codes) | I,X,XXX,XXX,XXX I will be 0 to 9 to indicate the index position of upcoming error code. |
| CLN(43 4C 4E 0D)# | Set LAN POWER ON | |
| CLF(43 4C 46 0D)# | Set LAN POWER OFF | |

*ACK (acknowledge) is 0x06 in hexadecimal

*NAK (negative acknowledge) is 0x15 in hexadecimal

*CR (carriage return) is 0x0D in hexadecimal.

At standby mode, only these commands can be accepted. (All the above commands are available at normal operation mode except the "POWER ON" command.

*The temperature of Image temp sensor - Inlet temp sensor is greater than 18 degrees Celsius