

# ELITE PLASMA DISPLAY

RS-232C Control

PRO-1120HD & PRO-920HD

March 2005

# RS232C Control for Pioneer Plasma Displays

## 1. Communication conditions

### 1.1 Communication mode

The default communication mode for many of the newer displays is SR+ mode. In this mode the display will not receive RS232C commands.

Before using RS232C control you must set the communication mode.

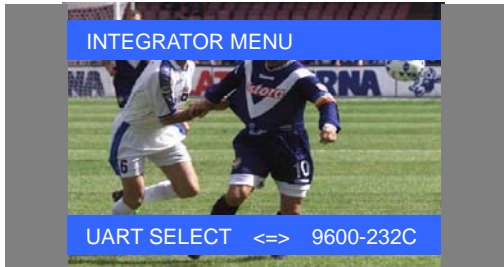
The remote control can be used to change the communication mode.

(Note) RS232C control and SR+ function cannot be used simultaneously.

### 1.2 Communication mode and baud rate selection

#### 1.2.1 Communication mode and baud rate selected by Integrator menu

Push Menu key then push Power key within 3 seconds. The Integrator Menu will appear similar to this picture.



In this menu the user can change the communication mode and baud rate using the Left and Right keys.  
 UART SELECT: 9600bps(SR+)/1200bps/2400bps4800bps/9600bps(232C)/19200bps/38400bps

Push the Menu key to close the Integrator Menu and return to normal operation.

### 1.3 RS-232C Cable & Communication Settings

**All plasma display models EXCEPT the PRO-1410HD use a Straight or Pass-Through Cable**

1) Connector  
D-sub 9 pins

2) Pin layout  
(NOTE) Plasma is a DCE device.

| Pin No. | Signal                |
|---------|-----------------------|
| 1       | NC (not connected)    |
| 2       | TxD (Transmit Data)   |
| 3       | RxD (Receive Data)    |
| 4       | NC (not connected)    |
| 5       | GND                   |
| 6       | NC (not connected)    |
| 7       | NC (not connected)    |
| 8       | RTS (Request To Send) |
| 9       | NC (not connected)    |

3) Baud Rate  
4800 bps (standard)  
(switch-able to 1200, 2400, 9600, 19200 bps)  
(NOTE) Set the baud rate to match that of the computer presently in use. Moreover, in the case that the RS-232C cable is very long, we recommend that you make the baud rate lower.

4) Data Format  
Start: 1-bit  
Data: 8-bit  
Parity: 0 (no parity)  
Stop: 1-bit

5) Connection

Control PC  
(with D25 serial port)

RXD 3 → 2 TXD  
TXD 2 → 3 RXD  
CTS 5 → 8 RTS  
GND 7 → 5 GND

Control PC  
(with D9 serial port)

RXD 2 → 2 TXD  
TXD 3 → 3 RXD  
CTS 8 → 8 RTS  
GND 5 → 5 GND

Straight Cable

\* D-sub 9-pin/D-sub 25-pin conversion tables are now available on the market.

(NOTE) As computer manufactures may not use the same pin assignments. In case of communication difficulties, please check pin functions not just pin numbers.

## 2. Communication procedure

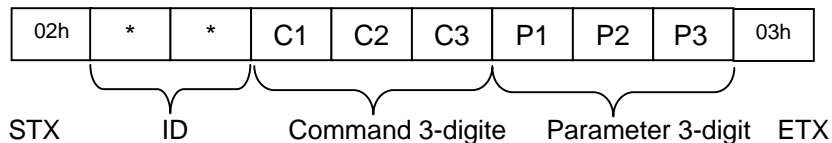
Send control commands from a compute via the RS-232C connection.

The display operates according to the received command and sends a response message to the computer.

Do not send multiple commands at the same time. Wait until the computer receives the OK response before sending the next command.

### 2.1 Command Format with parameter

**These are examples and may not apply specifically to the model that you are controlling: please check the model specific control charts that follow.**



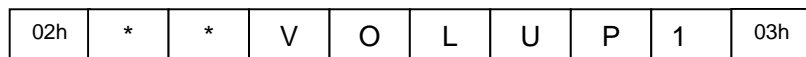
|           |                                   |
|-----------|-----------------------------------|
| STX       | Start condition (fixed value 02h) |
| ID        | Fixed value **                    |
| Command   | 3byte (ASCII)                     |
| Parameter | 3byte (ASCII)                     |
| ETX       | Stop condition (fixed value 03h)  |

Parameter

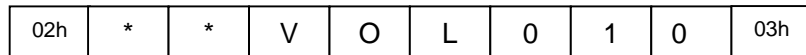
| Parameter | Description |
|-----------|-------------|
| 000~999   |             |
| Upn       | Up n step   |
| DWn       | Down n step |

Command example

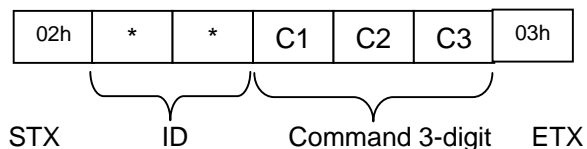
Up volume 1 step: 02, \*\*, VOL, UP1, 03



Set volume at 10: 02, \*\*, VOL, 010, 03



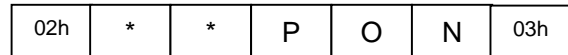
### 2.2 Command Format without parameter



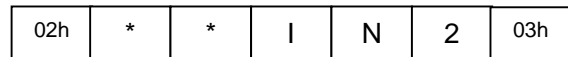
|         |                                   |
|---------|-----------------------------------|
| STX     | Start condition (fixed value 02h) |
| ID      | Fixed value **                    |
| Command | 3byte (ASCII)                     |
| ETX     | Stop condition (fixed value 03h)  |

Command example

Power On: 02, \*\*, PON, 03



Select INPUT 2: 02, \*\*, IN2, 03



### 2.5 Restriction

1. GUI is not displayed about the operation when using RS232C.
2. Last memory is not carried out about the operation by RS232C.
3. When input selection is performed by RS232C command (IN1...IN5/INA) PIP is canceled and the single screen display of the input that was chosen appears..

### 3. Commands for PRO-1120/920HD

| Command Parameter |           | Function                                      | Notes   |
|-------------------|-----------|---|---|
| PON               |           | Power ON                                      |   |
| POF               |           | Power Off                                     |   |
| INP               | S01       | Input 1                                       | <b>No space required between commands and parameters.</b><br><b>Example: INPS01 = Input 1</b> |
| ↓                 | S02       | Input 2                                       |   |
| ↓                 | S03       | Input 3                                       |   |
| ↓                 | S04       | Input 4                                       |   |
| ↓                 | S05       | Input 5                                       |   |
| INA               | ***(+***) | Input Antenna A***ch (for Digital Cable also) | <b>Major ch + Minor ch (DTV=Antena A)</b>   |
| INB               | ***       | Input Antenna B***ch (example INB005)         | <b>INA***** ***</b>   |
| ING               |           | Input ILINK                                   | <b>If you want to select DTV KSL:5.001,</b>   |
| VOL               | ***       | Volume*** <b>(Example – VOL033)</b>           | <b>major CH is "5" and minor CH is "001",</b>   |
| VOL               | UP*       | Volume Up * (* = 1, 2, 3, etc.)               | <b>So RS-232 = "INA000005001"</b>   |
| VOL               | DW*       | Volume Down* (* = 1, 2, 3, etc.)              | <b>For analog CH 38, there is no minor CH</b>   |
| AMT               | S00       | Mute Off                                      | <b>So RS-232 = "INA000038000"</b>   |
| ↓                 | S01       | Mute On                                       |   |
| CHN               | FWD       | Preset Channel Up                             |   |
| CHN               | REV       | Preset Channel Down                           |   |
| SZM               | S00       | Screen Size: DOT BY DOT                       | For PC  |
| ↓                 | S01       | Screen Size: 4:3                              |   |
| ↓                 | S02       | Screen Size: FULL                             |   |
| ↓                 | S03       | Screen Size ^: ZOOM                           |   |
| ↓                 | S04       | Screen Size: CINEMA                           |   |
| ↓                 | S05       | Screen Size ^: WIDE                           |   |
| ↓                 | S08       | Screen Size: FULL2                            | For PC  |
| OSD               | S00       | OSD display OFF                               |   |
| ↓                 | S01       | OSD display ON                                |   |
| AVS               | S01       | AV Selection: STANDARD                        |   |
| AVS               | S02       | AV Selection: DYNAMIC                         |   |
| AVS               | S03       | AV Selection: MOVIE                           |   |
| AVS               | S04       | AV Selection: GAME                            |   |
| AVS               | S07       | AV Selection: USER                            |   |
| AVS               | S08       | AV Selection: ISF-DAY                         | After calibration only.   |
| AVS               | S09       | AV Selection: ISF-NIGHT                       | After calibration only.   |
| SZM               |           | Display Current Screen Size Setting           |   |
| GDI               |           | Acquire Current Status Command                | Not On-screen, May be useful for feedback   |
| INP               |           | Display Input for Current Main Picture        | On-Screen Input, Size, & A/V Mode   |