ELITE PLASMA DISPLAY

RS-232C Control

PRO-1410HD

March 2005

Parameters and Commands for PRO-1410HD

The PRO-1410HD RS-232 port is configured as a DTE device. When connected to another DTE device (such as a computer's RS-232 port) a Cross/Reverse/Null Modem Cable must be used.

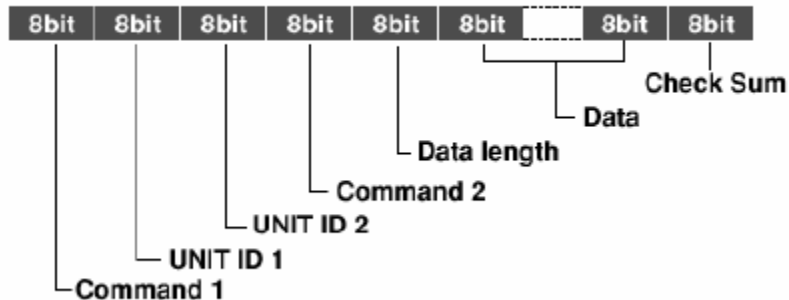## Cable Connection

Communication Protocol:

Interface:	RS-232C	Parity:	**None**
Communication:	Asynchronous	Stop Bit:	1 bit
Baud Rate:	9600 bps	Communication Code:	Hex
Data Length:	8 bits		

PC Control Connector (D-Sub 9P)
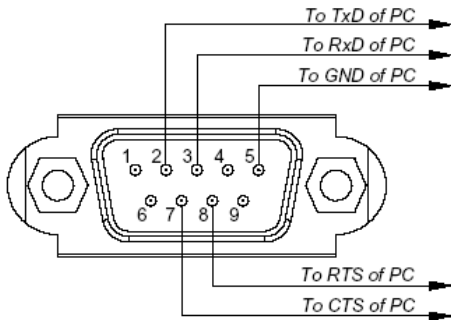
NOTE: Jumper "Request to send" and "Clear to Send" together on both ends of the cable to simplify cable connection.

Communication Format

All commands are listed in Hexadecimal (HEX) format of XXH, where XX is the data command value and H denotes HEX. The hexadecimal system (hex for short) uses numbers from 0 to 15. It starts off like the decimal system: 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 but then comes A which equals 10 and then B, C, D, E and F (which of course equals 15). The next number is 10, which is actually 16 in decimal and so on....

Because it can be impossible to distinguish between a HEX and a decimal number (is that 25 a decimal 25 or is it 25 in HEX which equals 37 decimal?) it is customary to put an H after each hex number. In the first command of the following example "DFH", DF is the HEX data value and H is a reminder that the value is in HEX. The H should not be sent as part of the command.

Check Sum (CKS), Error Processing, and ACK

The check sum described below and RS-232C parity are used together for a check of the received data. The check sum is the lower order 8 bits of one frame of sent or received data comprising the sum total of Command 1, Unit ID 1 and 2, Command 2, Data Length, and Data.

A simple way to find the Check SUM is to use the MS Windows Calculator set to Scientific View. Check the HEX box and add Command 1, Unit ID 1 and 2, Command 2, Data Length, and Data together (don't use the "H" HEX reminder). The Check Sum will be the lower order 8 bits.

Check Sum Example

DFH	80H	60H	47H	01H	01H	08H
Command1	Unit ID1	Unit ID2	Command2	Data Length	Data	Check Sum

Total 208H
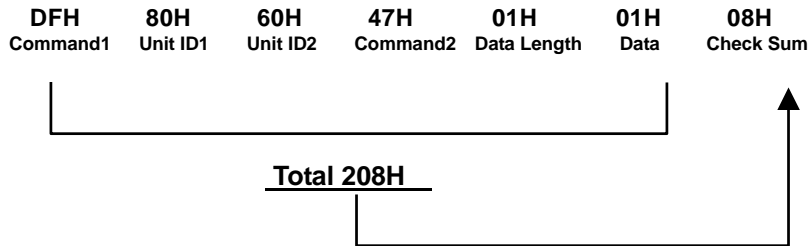
Commands for PRO-1410HD

Function		CODE DATA							
		Com1: Unit ID1: Unit ID2: Com2: Data Length: Data: Checksum							
Power	ON	9FH	80H	60H	4EH	00H	CDH		
	OFF	9FH	80H	60H	4FH	00H	CEH		
INPUT SWITCH	VIDEO 1	DFH	80H	60H	47H	01H	01H	08H	
	VIDEO 2	DFH	80H	60H	47H	01H	02H	09H	
	Video 3	DFH	80H	60H	47H	01H	03H	0AH	
	COMPONENT 1	DFH	80H	60H	47H	01H	05H	0CH	
	COMPONENT 2	DFH	80H	60H	47H	01H	06H	0DH	
	PC1/D-SUB	DFH	80H	60H	47H	01H	07H	0EH	
	PC2/BNC	DFH	80H	60H	47H	01H	08H	0FH	
	HDMI	DFH	80H	60H	47H	01H	0EH	15H	
	DVI (PDP614MX)	DFH	80H	60H	47H	01H	0CH	13H	
	Input Mode Request	1FH	80H	60H	41H	00H	40H		
AUDIO MUTE	ON	9FH	80H	60H	3EH	00H	BDH		
	OFF	9FH	80H	60H	3FH	00H	BEH		
VOLUME	Preset Level (00H-2AH = Decimal 0 – 42)	DFH	80H	60H	7FH	03H	05H	01H	0AH	51H
PICTURE MODE	STANDARD	DFH	80H	60H	0AH	01H	01H	CBH	
	MOVIE 1	DFH	80H	60H	0AH	01H	02H	CCH	
	MOVIE 2	DFH	80H	60H	0AH	01H	03H	CDH	
	DEFAULT	DFH	80H	60H	0AH	01H	04H	CEH	
	DYNAMIC	DFH	80H	60H	0AH	01H	05H	CFH	
SCREEN MODE	WIDE	DFH	80H	60H	51H	01H	02H	13H	
	ZOOM	DFH	80H	60H	51H	01H	03H	14H	
	4:3	DFH	80H	60H	51H	01H	04H	15H	
	FULL	DFH	80H	60H	51H	01H	05H	16H	
	2.35:1	DFH	80H	60H	51H	01H	09H	1AH	
	14:9	DFH	80H	60H	51H	01H	0AH	1BH	
AUTO PICTURE	ON	DFH	80H	60H	7FH	03H	03H	09H	00H	4DH
(PC Screen Centering)	OFF	DFH	80H	60H	7FH	03H	03H	09H	01H	4EH
PURECINEMA	ON	DFH	80H	60H	C1H	01H	01H	82H	
	OFF	DFH	80H	60H	C1H	01H	02H	83H	