

# Cary Audio Design

## DVD 6 dvd player

### RS-232 Protocol and Control Details

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#### Com Port Setup:

Use standard communications settings. The default that most devices use/accept is:

Baud Rate - 9600

Data Bits - 8

Parity - None

Stop Bits - 1

#### Com Port Pin Configuration:

Use standard pin configuration. A configuration that allows direct connection to a PC via 9-pin straight through serial cable is best. Use of only 3 pins (Transmit, Receive, Ground) is best.

9 pin female D connector

Pin 2 = Transmit

Pin 3 = Receive

Pin 5 = Ground

#### RS-232 interface :

Commands are to be sent to the unit via RS-232 using the following format:

<Command> = <Command ID><Argument>

<Command ID> = <Byte>

<Argument> = 0x0d

<Byte> = 0x30,0x30

#### Status Byte:

Upon receiving the command and done, a single status byte will be transmitted

The format for the status byte is :

<Status Byte> = <Command>

<Command> = 0x31,0x30,0x30

#### RS232-Interface Usage Details:

The RS-232 interface has a first-in-first-out (FIFO) buffer which will allow each commands to be received in direct succession. Commands are executed in the order in which they are received with approximately a 1/2 second delay between each command. If a longer string of commands is necessary, a minimum of 1/2 second delay should be added before sending additional commands.

Example for sending a long string of commands:

[Command 1]

<Delay 1/2 second>

[Command 2]

<Delay 1/2 second>

[Command 3]

<Delay 1/2 second>

If receiving the errors data, a single status byte will be transmitted. The status byte is:

Rs232 = <ERR>

ASCII = <0x45,0x58,0x58>

Upon Receiving the Command and done			a Single Status byte will be transmitted		
Command description	Rs232 Command	ASCII Command	Status Command Description	Rs232 Command	ASCII Command
POWER ON	00	0x30,0x30,0x0d	Take unit out of standby	100	0x31,0x30,0x30
POWER OFF	01	0x30,0x31,0x0d	Put unit in standby	101	0x31,0x30,0x31
TRAY OPEN/CLOSE	02	0x30,0x32,0x0d	Tray open	102a	0x31,0x30,0x32,0x41
			Tray close	102b	0x31,0x30,0x32,0x42
PLAY	03	0x30,0x33,0x0d	Play	103	0x31,0x30,0x33
PREVIOUS	04	0x30,0x34,0x0d	Previous	104	0x31,0x30,0x34
PAUSE	05	0x30,0x35,0x0d	Pause	105	0x31,0x30,0x35
STOP	06	0x30,0x36,0x0d	Stop	106	0x31,0x30,0x36
NEXT	07	0x30,0x37,0x0d	Next	107	0x31,0x30,0x37
REVERSE	08	0x30,0x38,0x0d	Reverse	108	0x31,0x30,0x38
FORWARD	09	0x30,0x39,0x0d	Forward	109	0x31,0x30,0x39
NUMBER KEY PAD 1	0A	0x30,0x41,0x0d	Number Keypad 1	10A	0x31,0x30,0x41
NUMBER KEY PAD 2	0B	0x30,0x42,0x0d	Number Keypad 2	10B	0x31,0x30,0x42
NUMBER KEY PAD 3	0C	0x30,0x43,0x0d	Number Keypad 3	10C	0x31,0x30,0x43
NUMBER KEY PAD 4	0D	0x30,0x44,0x0d	Number Keypad 4	10D	0x31,0x30,0x44
NUMBER KEY PAD 5	0E	0x30,0x45,0x0d	Number Keypad 5	10E	0x31,0x30,0x45
NUMBER KEY PAD 6	0F	0x30,0x46,0x0d	Number Keypad 6	10F	0x31,0x30,0x46
NUMBER KEY PAD 7	10	0x31,0x30,0x0d	Number Keypad 7	110	0x31,0x31,0x30
NUMBER KEY PAD 8	11	0x31,0x31,0x0d	Number Keypad 8	111	0x31,0x31,0x31
NUMBER KEY PAD 9	12	0x31,0x32,0x0d	Number Keypad 9	112	0x31,0x31,0x32
NUMBER KEY PAD 0	13	0x31,0x33,0x0d	Number Keypad 0	113	0x31,0x31,0x33
NUMBER KEY PAD +10	14	0x31,0x34,0x0d	Number Keypad +10	114	0x31,0x31,0x34
GOTO	15	0x31,0x35,0x0d	Goto	115	0x31,0x31,0x35
REPEAT ALL	16	0x31,0x36,0x0d	Repeat All	116	0x31,0x31,0x36
REPEAT A - B	18	0x31,0x38,0x0d	Repeat A - B	118	0x31,0x31,0x38
POWER ON/OFF	2A	0x32,0x41,0x0d	Power on / off	12A	0x31,0x32,0x41
MUTE	19	0x31,0x39,0x0d	Mute	119	0x31,0x31,0x39
VOLUME -	1A	0x31,0x41,0x0d	Volume -	11A	0x31,0x31,0x41
VOLUME +	1B	0x31,0x42,0x0d	Volume +	11B	0x31,0x31,0x42
DVD ANGLE	1C	0x31,0x43,0x0d	DVD Angle	11C	0x31,0x31,0x43
DVD SUB-TITLE	1D	0x31,0x44,0x0d	DVD Sub-title	11D	0x31,0x31,0x44
DVD AUDIO	1E	0x31,0x45,0x0d	DVD Audio	11E	0x31,0x31,0x45
DVD MENU	1F	0x31,0x46,0x0d	DVD Menu	11F	0x31,0x31,0x46
DVD ON SCREEN DISPLAY	20	0x32,0x30,0x0d	DVD on screen displ	120	0x31,0x32,0x30
DVD TITLE	21	0x32,0x31,0x0d	DVD Title	121	0x31,0x32,0x31
SETUP MENU	22	0x32,0x32,0x0d	Setup Menu	122	0x31,0x32,0x32
NAVIGATION UP	23	0x32,0x33,0x0d	Navigation up	123	0x31,0x32,0x33
NAVIGATION DOWN	24	0x32,0x34,0x0d	Navigation Down	124	0x31,0x32,0x34
NAVIGATION LEFT	25	0x32,0x35,0x0d	Navigation Left	125	0x31,0x32,0x35
NAVIGATION RIGHT	26	0x32,0x36,0x0d	Navigation Right	126	0x31,0x32,0x36
NAVIGATION ENTER	27	0x32,0x37,0x0d	Navigation Enter	127	0x31,0x32,0x37
ZOOM -	28	0x32,0x38,0x0d	Zoom -	128	0x31,0x32,0x38
ZOOM +	29	0x32,0x39,0x0d	Zoom +	129	0x31,0x32,0x39