Cary Audio Design
CD 303/300 HDCD Player
RS-232 Protocol and Control Details

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	02A	0x30,0x32,0x41	Tray open	102A	0x31,0x30,0x32,0x41
TRAY CLOSE	02B	0x30,0x32,0x42	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
TUBE	30	0x33,0x30,0x0d	Tube	130	0x31,0x33,0x30
PROGRAM	31	0x33,0x31,0x0d	Program	131	0x31,0x33,0x31
DELETE	32	0x33,0x32,0x0d	Delete	132	0x31,0x33,0x32
CLEAN	33	0x33,0x33,0x0d	Clean	133	0x31,0x33,0x33
TIME	34	0x33,0x34,0x0d	Time	134	0x31,0x33,0x34
BRIGHT-H	35	0x33,0x35,0x0d	Bright-H	135	0x31,0x33,0x35
BRIGHT-M	36	0x33,0x36,0x0d	Bright-M	136	0x31,0x33,0x36
BRIGHT-L	37	0x33,0x37,0x0d	Bright-L	137	0x31,0x33,0x37
UPSAMPLING-96	38	0x33,0x38,0x0d	Upsampling-96	138	0x31,0x33,0x38
UPSAMPLING-192	39	0x33,0x39,0x0d	Upsampling-192	139	0x31,0x33,0x39
UPSAMPLING-384	40	0x34,0x30,0x0d	Upsampling-384	140	0x31,0x34,0x30
UPSAMPLING-512	41	0x34,0x31,0x0d	Upsampling-512	141	0x31,0x34,0x31
UPSAMPLING-768	42	0x34,0x32,0x0d	Upsampling-768	142	0x31,0x34,0x32
UPSAMPLING-OFF	43	0x34,0x33,0x0d	Upsampling-off	143	0x31,0x34,0x33