# Cary Audio <br> CPA 1 \& SLP-03 <br> Preamplifier <br> 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
$\operatorname{Pin} 3=$ 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> $=$ Byyte $>$
$<$ Argument $>=0 \mathrm{x} 0 \mathrm{~d}$
$<$ Byte $\quad=0 \times 33,0 \times 30,0 \times 30$

## Status Byte:

Upon receiving the command and done, a single status byte will be transmitted
Thee format for the status byte is :
$<$ Status Byte $>\quad=<$ Command $>$
$<$ Command $>=0 \times 31,0 \times 33,0 \times 30,0 \times 30$
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>

| Upon Receiving the Command and done |  |  | A Single Status byte will transmitted |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Command description | $\begin{gathered} \text { Rs232 } \\ \text { Command } \end{gathered}$ | ASCII <br> Command | Status Command Description | $\begin{gathered} \text { Rs232 } \\ \text { Command } \end{gathered}$ | ASCII <br> Command |
| POWER ON/OFF | 300 | 0x33,0x30,0x30,0x0d | Power on/off | 1300 | 0x31,0x33,0x30,0x30 |
| POWER ON | 301 | 0x33,0x30,0x31,0x0d | Power on | 1301 | 0x31,0x33,0x30,0x31 |
| POWER OFF | 302 | 0x33,0x30,0x32,0x0d | Power off | 1302 | 0x31,0x33,0x30,0x32 |
| < SELECTOR | 309 | 0x33,0x30,0x39,0x0d | < Selector | 1309 | $0 \times 31,0 \times 33,0 \times 30,0 \times 39$ |
| SELECTOR > | 310 | 0x33,0x31,0x30,0x0d | Selector > | 1310 | 0x31,0x33,0x31,0x30 |
| BALANCE LIFT | 322 | 0x33,0x32,0x32,0x0d | Balance lift | 1322 | $0 \times 31,0 \times 33,0 \times 32,0 \times 32$ |
| BALANCE RIGHT | 323 | 0x33,0x32,0x33,0x0d | Balance right | 1323 | 0x31,0x33, $0 \times 32,0 \times 33$ |
| BRIGHT-OFF | 328 | 0x33,0x32,0x38,0x0d | Bright-off | 1328 | 0x31,0x33,0x32,0x38 |
| BRIGHT-L | 329 | 0x33,0x32,0x39,0x0d | Bright-L | 1329 | 0x31,0x33,0x32,0x39 |
| BRIGHT-M | 330 | 0x33,0x33,0x30,0x0d | Bright-M | 1330 | $0 \times 31,0 \times 33,0 \times 33,0 \times 30$ |
| BRIGHT-H | 331 | 0x33,0x33,0x31,0x0d | Bright-H | 1331 | 0x31,0x33,0x33,0x31 |
| BALANCED | 332 | 0x33,0x33,0x32,0x0d | BALANCED input | 1332 | 0x31,0x33,0x33,0x32 |
| CD | 333 | 0x33,0x33,0x33,0x0d | CD input | 1333 | 0x31,0x33,0x33,0x33 |
| TUNER | 334 | 0x33,0x33,0x34,0x0d | TUNER input | 1334 | $0 \times 31,0 \times 33,0 \times 33,0 \times 34$ |
| AUX 1 | 335 | 0x33,0x33,0x35,0x0d | AUX 1 input | 1335 | $0 \times 31,0 \times 33,0 \times 33,0 \times 35$ |
| AUX 2 | 336 | 0x33,0x33,0x36,0x0d | AUX 2 input | 1336 | $0 \times 31,0 \times 33,0 \times 33,0 \times 36$ |
| CINEMA | 337 | 0x33,0x33,0x37,0x0d | CINEMA input | 1337 | $0 \times 31,0 \times 33,0 \times 33,0 \times 37$ |
| TAPE MONITOR | 343 | 0x33,0x34,0x33,0x0d | TAPE MONITOR input | 1343 | 0x31,0x33,0x34,0x33 |
| MUTE ON | 338 | 0x33,0x33,0x38,0x0d | Mute on | 1338 | $0 \times 31,0 \times 33,0 \times 33,0 \times 38$ |
| MUTE OFF | 342 | 0x33,0x34,0x32,0x0d | Mute off | 1342 | 0x31,0x33,0x34,0x32 |
| VOLUME - | 326 | 0x33,0x32,0x36,0x0d | Volume - | 1326 | 0x31,0x33,0x32,0x36 |
| VOLUME + | 327 | 0x33,0x32,0x37,0x0d | Volume + | 1327 | 0x31,0x33,0x32,0x37 |
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