

## PROTOCOL USED FOR BC-2066 RS-232 COMMUNICATION

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RS-232 communication between the PC and the BC-2066 matrix switcher is done using one byte of information according to the protocol below.

Data transfer is at 9600 baud, no parity, 8 data bits and 1 stop bit.

N7	N6	N5	N4	N3	N2	N1	N0
MSB							LSB

For N7=0, a connection is made between input number N2N1N0 and output number N5N4N3. For example 00110001 connects input 1 to output 6.

To disconnect an output, the input number (ie. N2N1N0) is set to zero. For example 00011000 disconnects output 3.

To connect all outputs, the output number (ie. N5N4N3) is set to zero, and N2N1N0 is set to the value of the input to be connected to all the outputs. For example 00000100 will connect input 4 to all the outputs.

The above codes (for N7=0) are valid for both sending an instruction to the BC-2066, (ie. instructing it to make a connection), and for informing the PC that a connection was made using the front panel switches.

For N7=1, N2N1N0 is defined as an opcode, as follows :-

N2N1N0=1 - instructs the BC-2066 to download the present status of output number N5N4N3. The BC-2066 returns a byte having the value of the input connected to this output. For example, if input 5 is connected to output 3, then the response to 10011001 would be 00000101.

N2N1N0=2 - instructs the BC-2066 to download the status of all the outputs. 6 bytes of information are returned, the first having the value of output number 1; the second, of output 2, etc.

N2N1N0=3 - this is an OK (acknowledge) from the BC-2066. After the BC-2066 receives and implements a valid instruction to make a connection, (or disconnection), it acknowledges by returning this opcode.

N2N1N0=4 - this is an error opcode, returned by the BC-2066 when a code with invalid parameters is sent to it.

N2N1N0=5 - resets the BC-2066 / informs the PC that the BC-2066 was reset.

N2N1N0=6 - disables handshaking. After receiving this opcode, the 2066 will not return opcodes 3 (OK) and 4 (error), until opcode 7 is received or until the machine is reset.

N2N1N0=7 - enables handshaking (default). Instructs the machine to return opcodes 3 (OK) and 4 (error) at the appropriate times.

## Swich Matrix Coding for the 2066

	Output #1	Output #2	Output #3	Output #4	Output #5	Output #6	All Output
Input #1	9 H	11 H	19 H	21 H	29 H	31 H	1 H
Input #2	A H	12 H	1A H	22 H	2A H	32 H	2 H
Input #3	B H	13 H	1B H	23 H	2B H	33 H	3 H
Input #4	C H	14 H	1C H	24 H	2C H	34 H	4 H
Input #5	D H	15 H	1D H	25 H	2D H	35 H	5 H
Input #6	E H	16 H	1E H	26 H	2E H	36 H	6 H
OFF	8 H	10 H	18 H	20 H	28 H	30 H	0 H