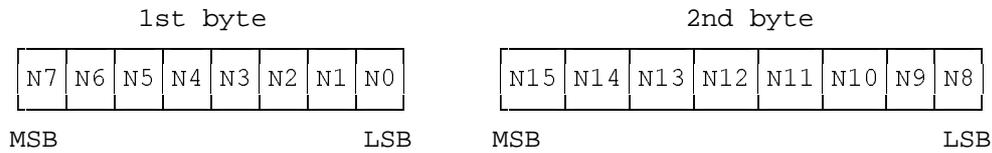


PROTOCOL USED FOR VS-1202N COMMUNICATION (RS-232)

Communication between the PC and the master VS-1202N is done using 2 bytes of information, as defined below. The rate of data transfer is 1200 baud, with no parity, 8 data bits and one stop bit.



where

N7 = 0 (continue bit).

N6N5N4N3 = 0111. These bits are only relevant for transmission from the machine to the PC, but are not required when transmitting from the PC to the machine.

N2N1N0 is the binary value of the machine being addressed (or of the machine sending its data) minus one, eg. N2N1N0=000 to address machine #1 (the master); N2N1N0=101 to address machine #6.

N15 = 1 (continue bit).

N14 = 0 for all communication to and from the PC.

N13 is to be high if the data N12N11N10N9N8 is an opcode (see below).

N12N11N10N9N8 is data related to the status of the machine (for the case where N13 is low). When the machine sends its status, the value of the presently selected input is sent; when the PC instructs the machine to change state, the value of the input to be selected is sent.

The value is calculated using the formula:

$$N12N11N10N9N8 = 2 * INPUT + OUTPUT - 2$$

To disconnect input 1, N12N11N10N9N8 = 11001;

to disconnect input 2, N12N11N10N9N8 = 11010.

For example, to connect input 5 to output 1,

$$N12N11N10N9N8 = 2 * 5 + 1 - 2 = 9 \quad (\text{ie. } 01001 \text{ binary})$$

To connect input 8 to output 2,

$$N12N11N10N9N8 = 2 * 8 + 2 - 2 = 16 \quad (\text{ie. } 10000 \text{ binary})$$

When N13 is high, the following opcodes are defined:

N12N11N10N9N8 = 00001 instructs machine to send its present status.

N12N11N10N9N8 = 00010 success code (change in status was performed).

N12N11N10N9N8 = 00011 non-successful (change in status was not performed).

NB: The success/non-success codes are only used when instructing a machine which is present to change its status. The code returned in this case depends on whether the operation requested is valid or not.

VS-1202N DIP SWITCH SETTINGS

MACHINE NUMBER	SWITCH NUMBER		
	3	2	1
1	ON	ON	ON
2	ON	ON	OFF
3	ON	OFF	ON
4	ON	OFF	OFF
5	OFF	ON	ON
6	OFF	ON	OFF
7	OFF	OFF	ON
8	OFF	OFF	OFF

SWITCH NUMBER 6 - OFF - FOR SLAVE.
ON - FOR MASTER (MACHINE NUMBER 1).

SWITCH NUMBER 7 - OFF - FOR SLAVE.
ON - FOR MASTER (MACHINE NUMBER 1).

SWITCH NUMBER 8 - OFF - FOR SLAVE.
ON - FOR MASTER (MACHINE NUMBER 1).