

2400 Baud Cassette, 300 Baud TTY for N2

Here is a very simple mod for Nascom 2 owners to give cassette I/O at 2400 Baud.

Connect TP20 to TP4 and TP21 to TP5. If you now select external UART clock you have the cassette interface running at 2400 Baud. The switch settings of LSW2 are :-

Switch -	1	2	3	4	5	6
Setting -	either	up	up	either	up	up

where switches 1, 2 and 3 select the transmission speed to the cassette and 4, 5 and 6 the receiving speed from the cassette. Switch 7 should be down to select cassette input. (Up selects TTY input.)

To make 300 Baud TTY available is a little more difficult but since many acoustic couplers and teletype devices work at this speed it may be necessary. Transmission is the easiest since only the clock speed of the transmission side of the UART needs setting and this is readily achieved by the existing switches on LSW2.

	1	2	3
110 Baud	either	up	down
300 Baud	down	down	either
1200 Baud	up	down	either

and with the mod above

2400 Baud	either	up	up
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Reception cannot be achieved in the same way because the UART receive clock for tape is derived from a Phase Lock Loop (PLL). The TTY input must have a 'hard' clock, as the PLL can not regenerate the clock from the incoming TTY signal. Therefore, to get different receive speeds for TTY input the appropriate clock signals must be gathered from various places and applied to the UART. This may be done by connecting the required clock from the input side of the transmit speed selection switches to the external receive clock input (TP5). The most usual TTY speed required is 300 Baud and the clock for this may be picked up from IC32 Pin 4 with LSW2 switch 1 down or from IC31 Pin 9. A switch will then be required to select between the 2400 Baud cassette clock (coming from the PLL circuit) and the 300/1200/2400 Baud TTY clock going into the external receive clock input (TP5).

Happy switching!

