LAB#6

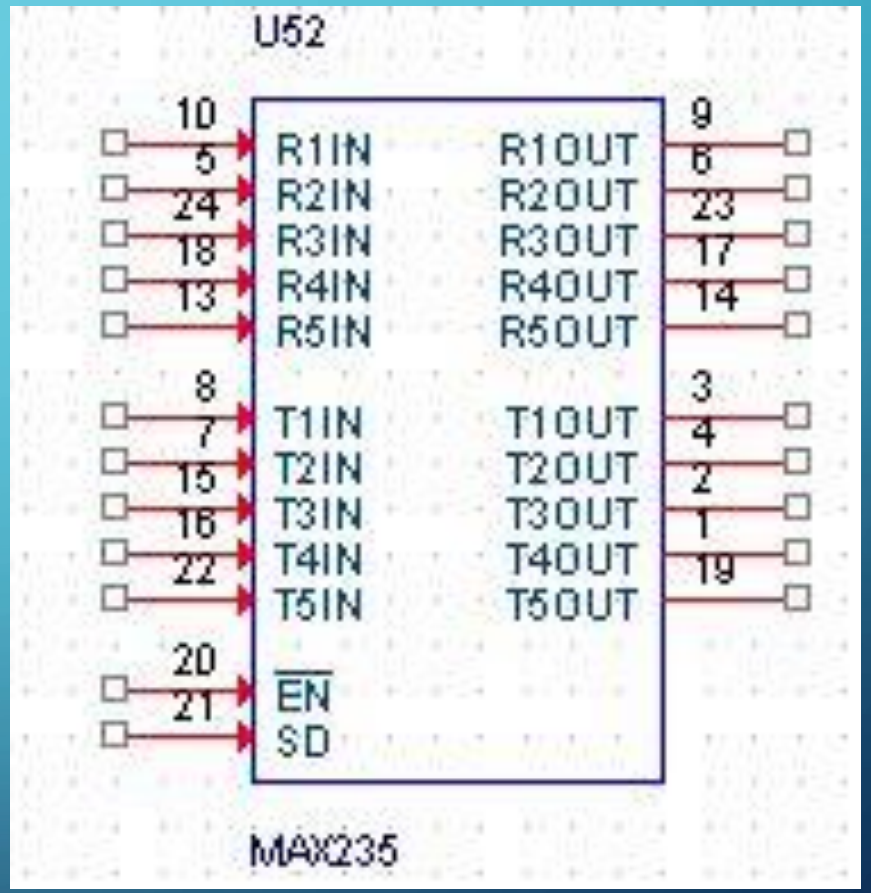
UART, DSUB-9, AND MAX 235

CMPE 310

MICHAEL DAUGHERTY

MAX 235:

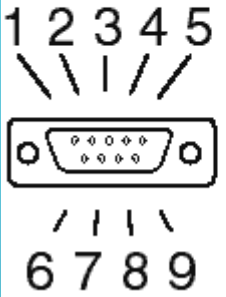
- The MAX 235 (Shown to the right) basically acts in a scaling capacity, either increasing or decreasing the signal voltage amplitude from 5V to 12V, or 12V to 5V. As our Microprocessor board operates on 5V signals, we use the MAX235 as an intermediate step between our board and any outside connections requiring 12V signals. More information can be found in the datasheets.
- Input signals connected to the Receiver pins are scaled down to 5V, and output signals connected to the Transmitter pins are scaled up to 12V.



DSUB-9:

- All of the inputs and output pins of the DSUB-9 are shown in the picture to the right.
- All of the pins of the DSUB-9 match up with pins on the UART (except the GND). Most are called the same names as on the UART, except for these match ups:
  - Format: DSUB-9 – UART
    - RXD – SIN
    - TXD – SOUT
    - CTR – CTS

Serial port
D-SUB 9PIN
female
line side view



Pin	direction	Description	
1.	In	Data Carrier detect	(DCD)
2.	In	Receive Date	(RXD)
3.	Out	Transmit Data	(TXD)
4.	Out	Data Terminal Ready	(DTR)
5.	GND	Signal Ground	(GND)
6.	In	Data Set Ready	(DSR)
7.	Out	Request To Send	(RTS)
8.	In	Clear To Send	(CTR)
9.	In	Ring Indicator	(RI)

THE ARRL HAND BOOK

INTERFACING THE PARTS:

- To interface the three components, make sure you read the pinouts of both the DSUB-9 and UART very carefully, and match them up correctly as well as recognize which signals are outputs and which are inputs.
- If you have any questions, feel free to ask the TA/UTA.