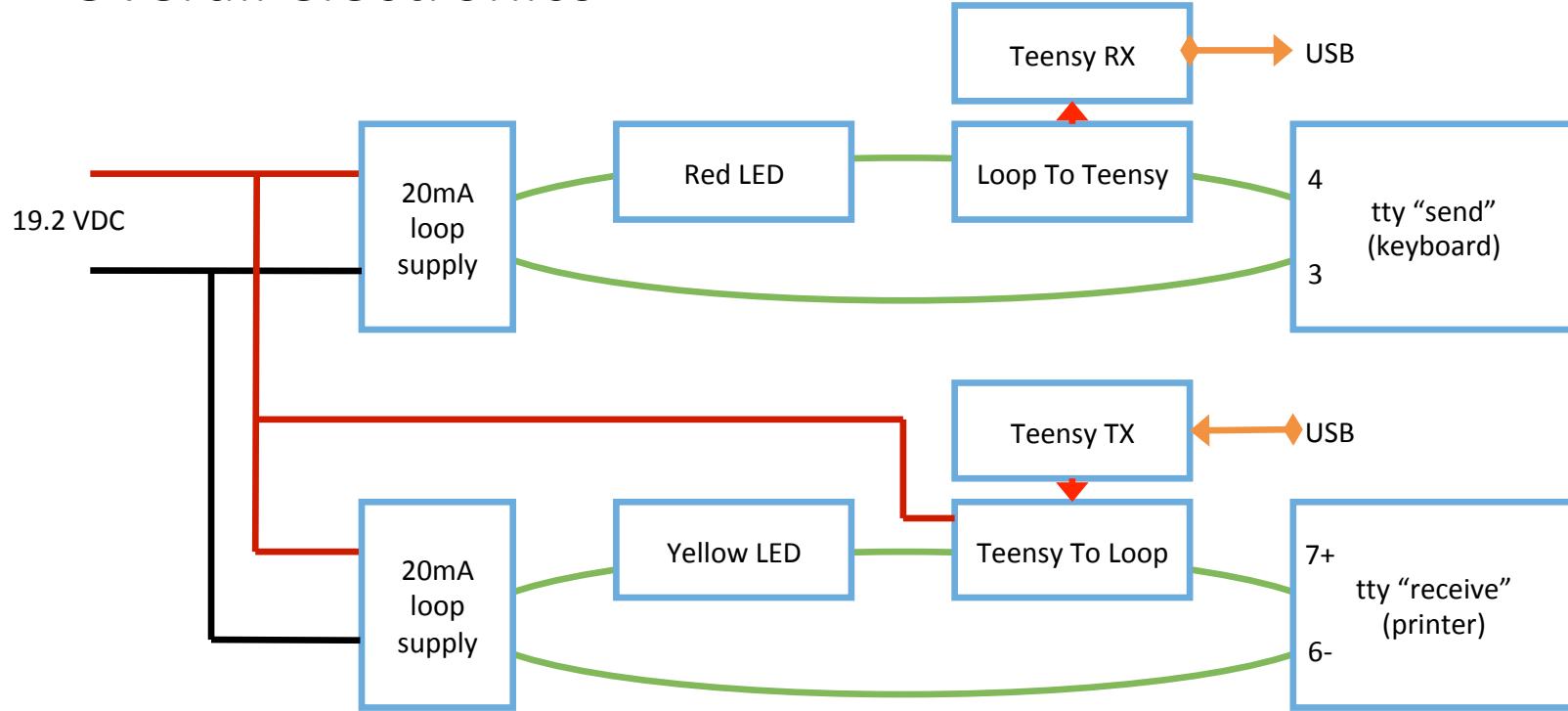


# tty/usb

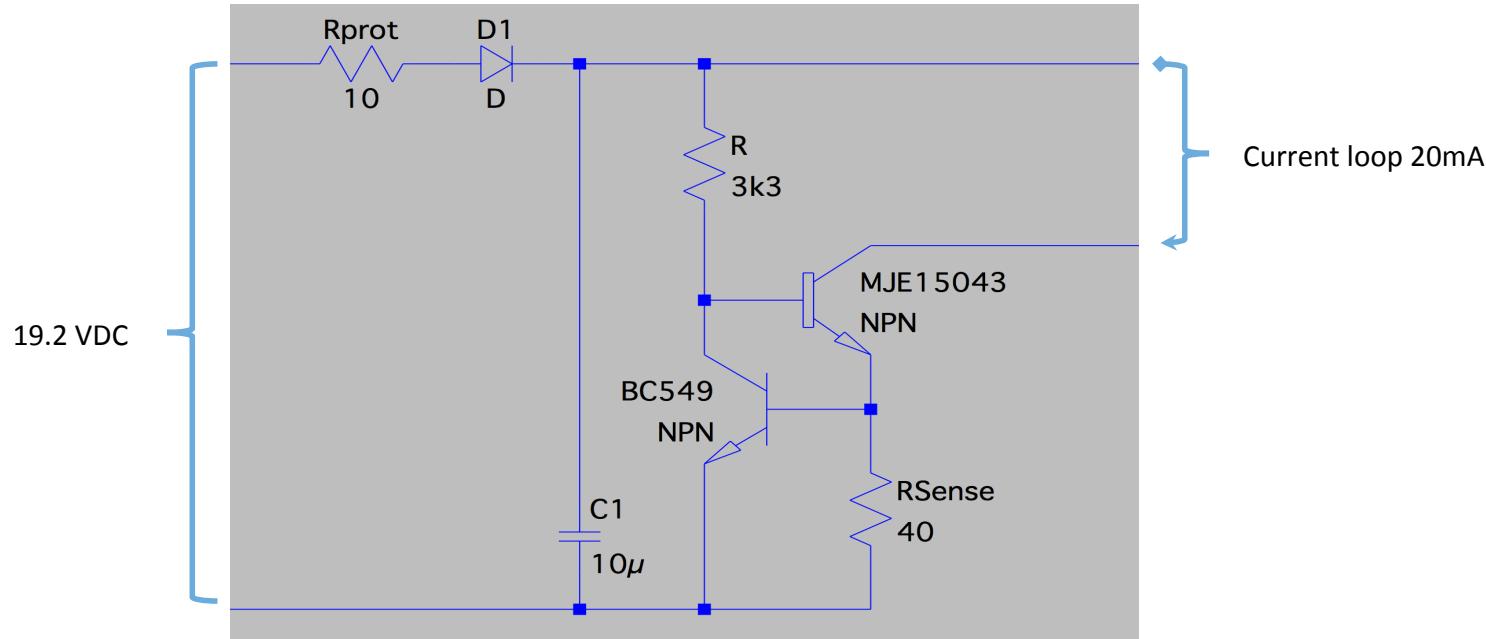
- 20mA loop USB interface for ASR33 teletype
- Duplex (separate transmit and receive loops)
- Active (integrated current source, since ASR33 is passive)
- Monitor activity with LEDs
- 110 baud loop data
- Some translation and processing in Teensy firmware (switchable)
  - Uppercase → lowercase
  - ASCII-63 special characters to Unicode
  - Delay after CR, LF



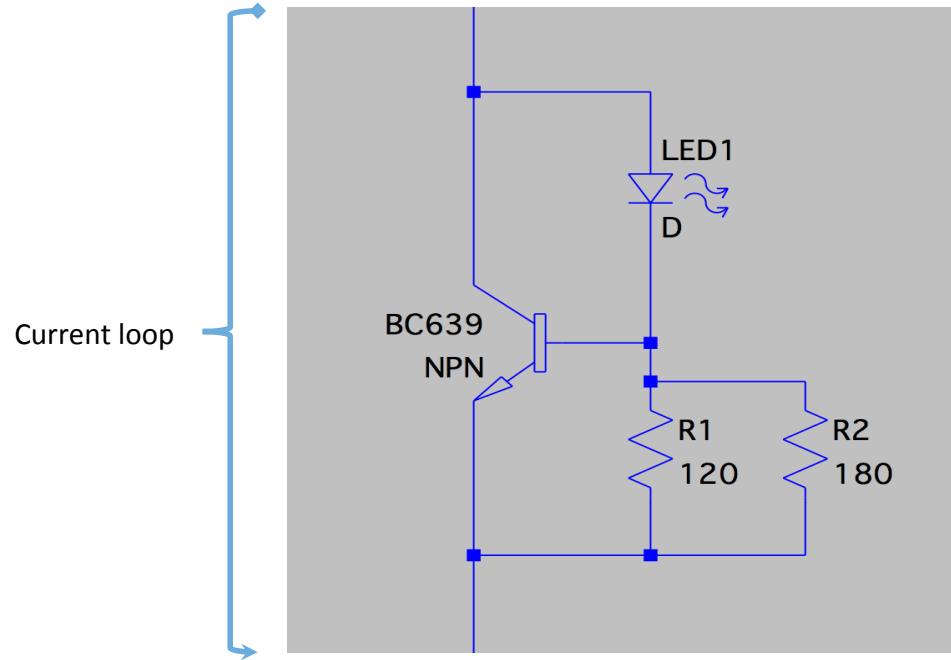
# Overall electronics



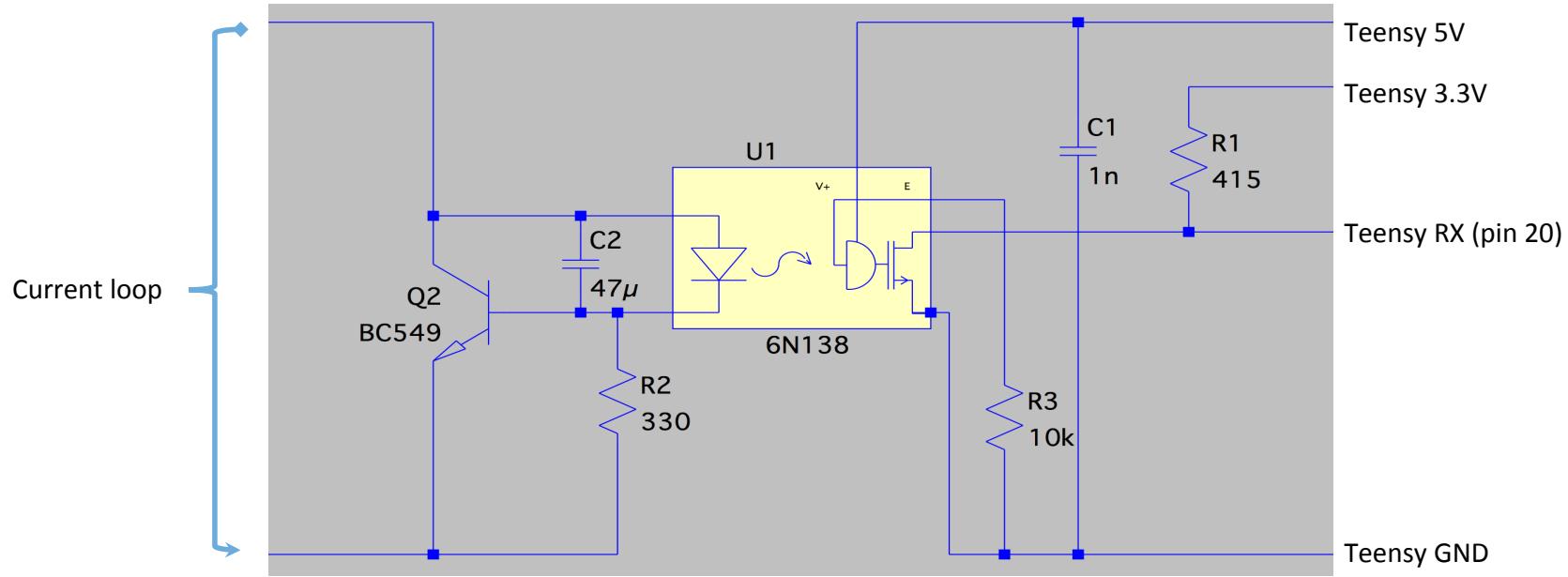
# 20mA loop supply



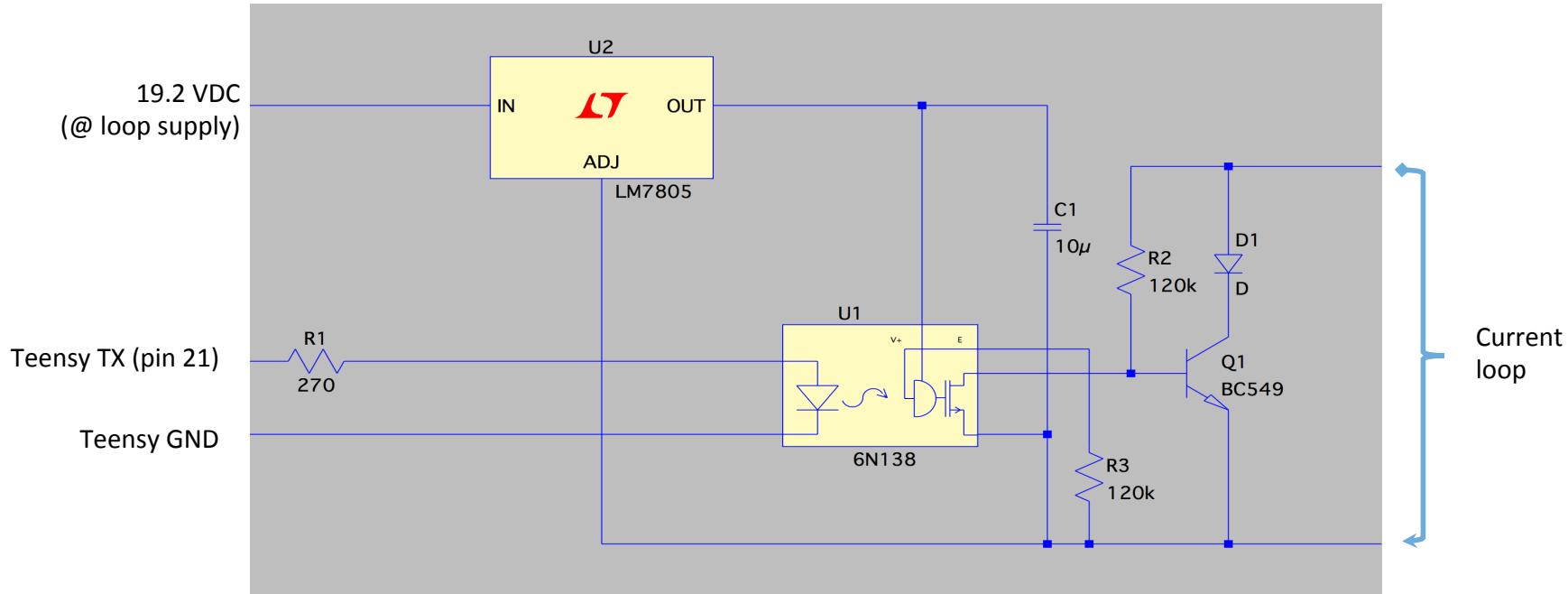
# LED driver (~10mA)

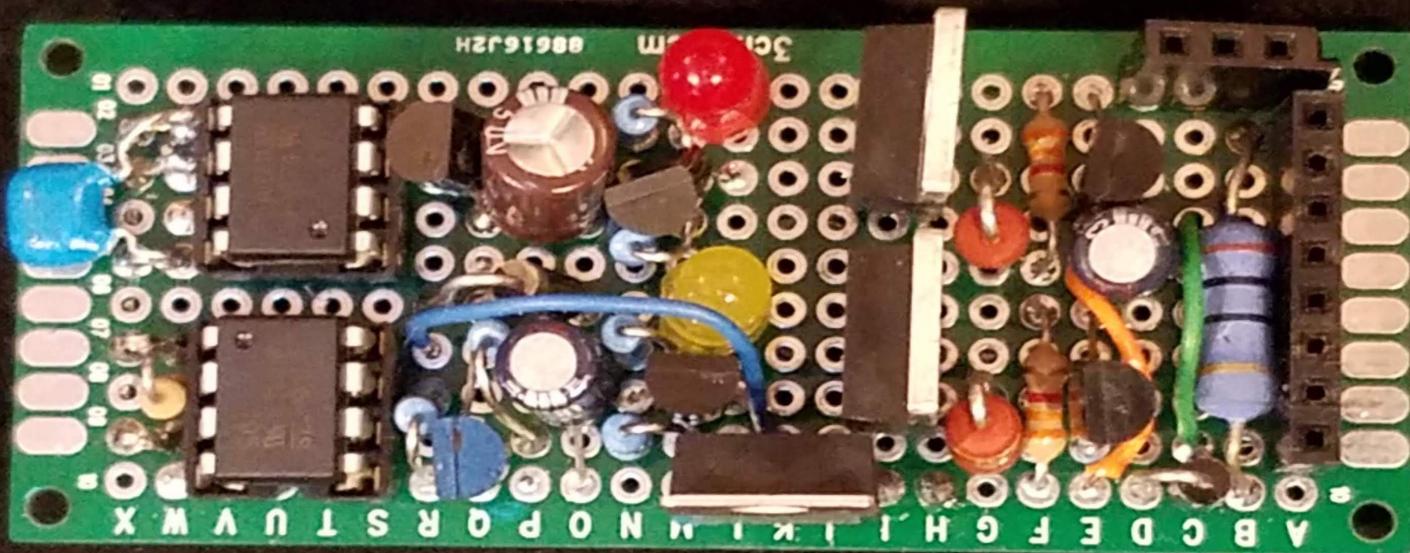


# Loop to Teensy

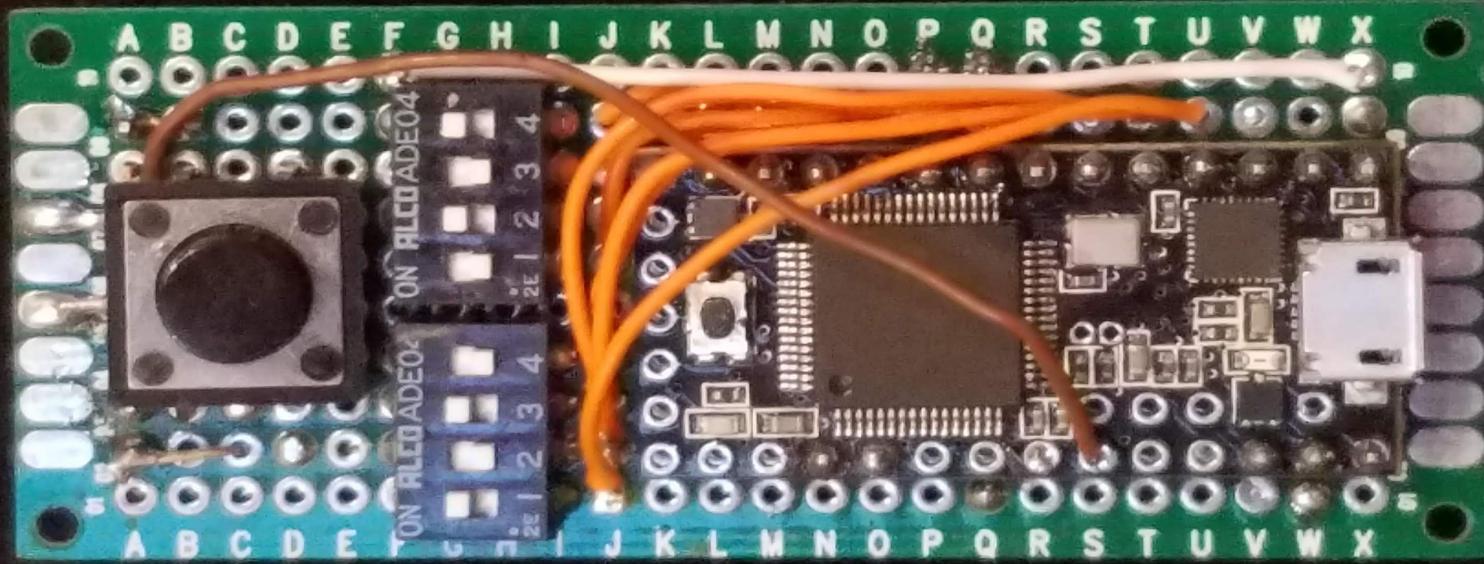


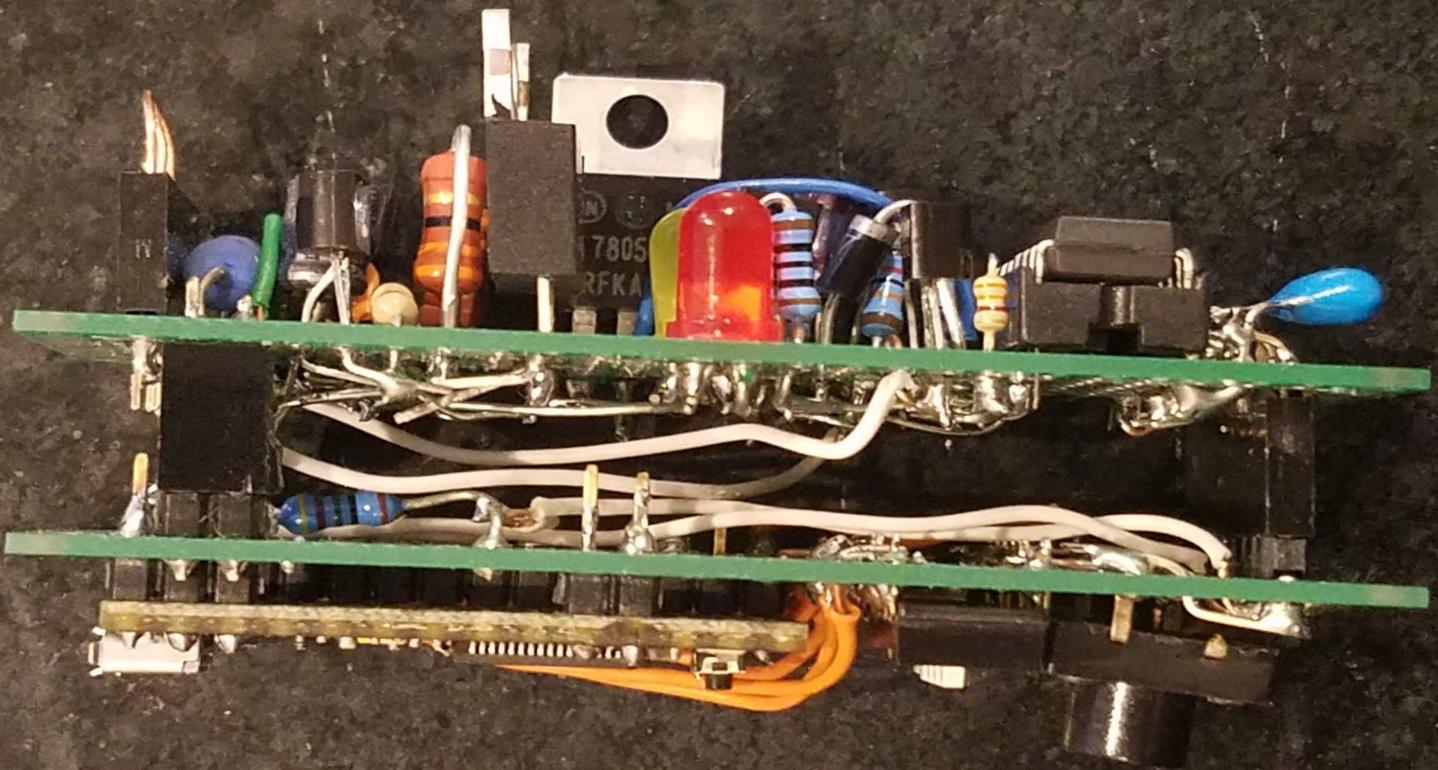
# Teensy To Loop

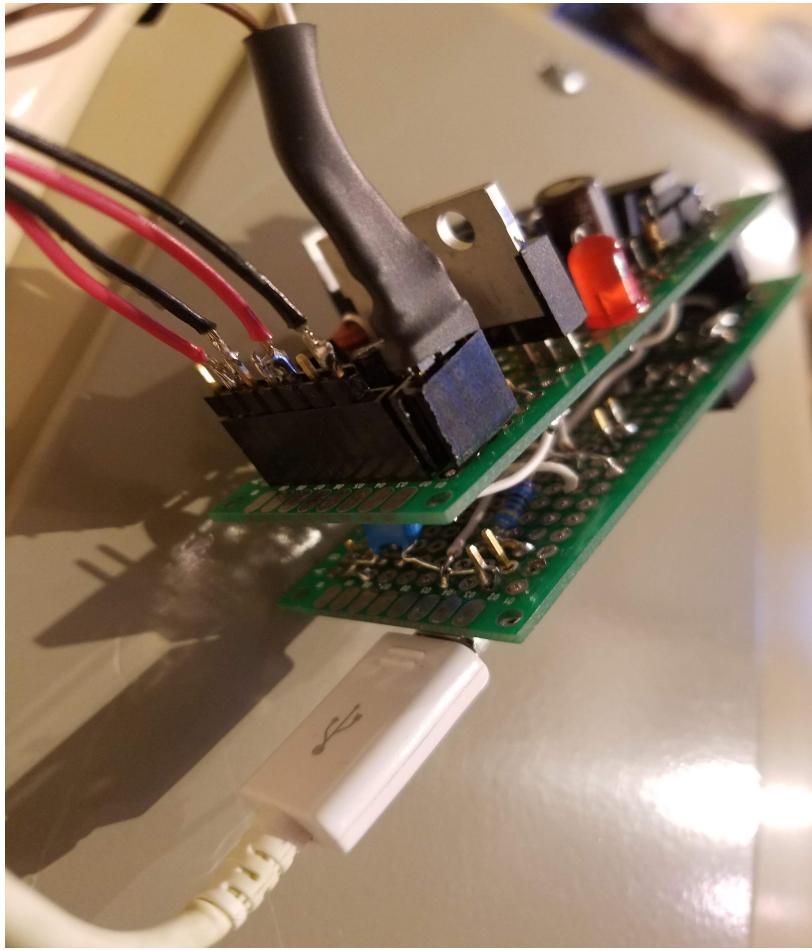




VIN +19.2  
TTY 7 +RECEIVE  
VIN GND  
TTY 6 -RECEIVE  
n/c  
TTY 3 SEND  
TTY 4 SEND  
VIN GND







LAST LOGIN: TUE SEP 25 16:51:11 ON CU-USBMODEM12391  
WELCOME.

\* XS  
-KSH: XS: NOT FOUND

\* LS  
DESKTOP DOWNLOADS MOVIES PICTURES  
DOCUMENTS LIBRARY MUSIC PUBLIC

\* PWD  
/USERS/FOO

\* WHOAMI  
33

\* UNAME -A

DARWIN HMAC 17.7.0 DARWIN KERNEL VERSION 17.7.0: THU JUN 21 22:53:14

\* STTY -A

SPEED 115200 BAUD; 0 ROWS; 0 COLUMNS;

LFLAGS: ICANON ISIG IEXTEN ECHO ECHOE -ECHOK ECHOKE -ECHONL ECHOCTL  
-ECHOPRT -ALTWERASE -NOFLSH -TOSTOP -FLUSHO PENDIN -NOKERNIN  
-EXTPROC

IFLAGS: -ISTRIP ICRNL INLCR -IGNCR -IXON -IXOFF -IXANY IMAXBEL -IUTF  
-IGNBRK BRKINT -INPCK -IGNPAR -PARMRK

OFLAGS: OPOST ONLCR OXTABS ONOCR ONLRET

CFLAGS: CREAD CS8 -PAREN8 -PARODD HUPCL CLOCAL -CSTOPB CRTSCTS -DSRF  
-DTRFLOW -MDMBUF

CCHARS: DISCARD = ^O; DSUSP = ^Y; EOF = ^D; EOL = <UNDEF>;  
EOL2 = <UNDEF>; ERASE = ^?; INTR = ^C; KILL = ^U; LNEXT = ^V;  
MIN = ^Q; QUIT = ^X; REPRINT = ^R; START = ^Q; STATUS = ^I;  
STOP = ^S; SUSP = ^Z; TIME = ^D; WERASE = ^W;