# U.S. Robotics 56K External Modem set up procedure.

1. Set the dipswitch switch on the modem, switch 3 and 8 down all others up.
2. Connect the modem to your computer using a standard computer-to-modem cable.
3. Run Hyper Terminal program.
4. Set up Hyper Terminal to communicate to the com port that the external modem is connected to, 9600 baud, no parity, 8 data bits, 1 stop bit. The baud rate from the controller is 9600 and this cannot be changed.
5. Power the modem.
6. Type "AT", the modem should respond with "OK" if you do not get a response, do not proceed. You need to get the modem to respond before you continue. Check the cable, com port and switch settings.
7. Type "AT&F1&W0" (last digit is zero, not oh) this restores the factory defaults and saves these defaults to the eeprom, the modem will respond with "OK"
8. Type "ATI4" the modem should respond with the following information. Confirm that everything is set correctly set.

```
U.S. Robotics 56K FAX EXT Settings...

   B0  E0  F1  M1  Q1  V1  X1  Y0
   BAUD=9600  PARITY=N  WORDLEN=8
   DIAL=TONE    ON HOOK   CID=0

   &A1  &B0  &C1  &D2  &G0  &H0  &I0  &K1
   &M4  &N0  &P0  &R1  &S0  &T5  &U0  &Y1

   S00=001  S01=000  S02=043  S03=013  S04=010  S05=008  S06=002
   S07=060  S08=002  S09=006  S10=014  S11=070  S12=050  S13=000
   S15=000  S16=000  S18=000  S19=000  S21=010  S22=017  S23=019
   S25=005  S27=000  S28=008  S29=020  S30=000  S31=128  S32=002
   S33=000  S34=000  S35=000  S36=014  S38=000  S39=000  S40=001
   S41=000  S42=000

   LAST DIALED #:
```

9. If you plan on using the Ring Delay method to connect to your modem, do the following
   a. To change the number of rings on which to auto answer, to 4 rings, type "ATS0=4&W0" and the modem should respond with "OK". You can replace the "4" value with any value that will work for you application.
   b. Turn the power to your external modem off and then on
   c. Type "ATI4" to confirm that your new settings are now permanently saved.
10. Turn off the modem and disconnect it from your computer.
11. Change the modem dipswitch settings, switch 4 down all others up.
12. Attach the modem to the controller using the modem-to-modem cable you built and the programming cable.
13. Apply power to the modem, you are now ready to use the programming software to connect to your controller using the modem.

**MODEM TROUBLE SHOOTING:** If you are still having problems connecting to your modem, try the following:

1. Restart Hyper Terminal, but set it to communicate to the com port that is attached to your internal mode.
2. Set Hyper Terminal to connect at 9600 baud, no parity, 8 data bits, 1 stop bit.
3. Type "AT" and the internal modem should respond with "OK".
4. Type "ATD[telephone number]", replace [telephone number] with the telephone number that the controller is connected to.
5. After the modem connects, you should see the following message:

```
CONNECT 9600/ARQ/V32/LAPM

>10CG00GJ
>10CG00GJ
```

6. The ">10CG00GJ" is a message from the controller and should repeat every 2 seconds.
7. If the modem will not answer, check your dipswitch settings and modem-to-modem cable.
8. When the modem is idle (not connected) you should see the following LED status:
   AA = ON  CD=OFF  RD=OFF  SD=Flash every 2 seconds  TR=ON  CS=ON  ARQ=OFF
9. When the modem is connected you should see the following LED status:
   AA = ON  CD=ON  RD=OFF  SD=Flash every 2 seconds  TR=ON  CS=ON  ARQ=ON
10. If you do not see the controller message, check the modem-to-modem cable and the programming cable.