8050/55 RS 232 SETUP AND ANALYSIS

SETUP FOR FAGOR DNC 50/55

8050 T/TC/M/MC

P0=7 (9600 baudrate)
P1=1 (8 data bits)
P2=0 (no parity)
P3=0 (1stop bit)
P4=1 (dnc protocol)
P5=YES (dnc active on power up)
P6=NO (debug feature not active)
P7=0 (CAN - abort character)
P8=0 (LF-end of line character)
P9=0 (EOT-end of file character)
P10=ON (Xon-Xoff)

note: The debug feature can be activated once communication is established

SETUP FOR DNC
(other than Fagor)
8050 T/TC/M/MC

P0=..6,7,8..(4800,9600, etc baudrate)
P1=0,1 (8 or 7 data bits)
P2=0,1,2 (no,odd,even parity)
P3= 0,1 (1 or 2 stop bits)
P4=0 (general device)
P5=NO (fagor dnc not active)
P6, P7, P8, P9, P10 are the same

note: ALT P will open the menu to select the machine type and baudrate
ALT L will select another comport

sending and receiving: To send a program, go to **utilities,** copy the program to serial line 2. Make sure the computer is waiting to receive. To receive, copy serial line2 to the program number

SYMPTOM: ***After connecting the cnc, (computer numerical control), to another external device there is no communication.***

ANALYSIS: Step 1: Both devices must be correctly configured.

1) Make sure that both devices are on.
2) Check the list of machine parameters in the cnc related with the RS 232. Please look at the RS 232 parameter list depending on the cnc model.
3) Check the configuration of the peripheral. Make sure that both devices have the same baud rate, number of bits, stop bits, parity, etc.
4) If communication is through DNC, (Fagor communication software), make sure that:
   a) the cnc machine parameters are activated for DNC.
   b) the configuration in DNC is setup according to the machine type.
   c) the correct serial line is selected in the DNC software.

If the problem still persist,

STEP 2: The cable must be properly connected.

1) Make sure that the connectors are plugged in the proper place in both sides
2) Check the pin out of the cable. Refer to the installation manual about the RS 232 configuration.
3) Make sure that the cable is less than 49 ft. and it is not run through power lines or transformers. This can cause interference with communications.

STEP 3: Detect which device is defective.

1) **Always try to receive at the computer first.**

2) If another peripheral or cnc is available, try to establish communication. If this is not possible, a check out of the equipment will be needed.

Analysis for Fagor DNC

SYMPTOM: ***The cnc does not say that the program is received.***
ANALYSIS: In general, it is due to the END OF FILE or END OF TRANSMISSION ASCII character that the peripheral has to send in the part program. Without it the cnc does not know when to stop sending the program.

SYMPTOM: ***The software gives a no reply within time limit.***
ANALYSIS: Make sure that you are using the right com port in the software. ALT L changes the com port. Check the parameters and make sure the cable follows our specifications.

SYMPTOM: ***In the pc, there are part programs but they do not appear on the screen.***
ANALYSIS: Make sure you are in the correct directory. Also check if the files have the correct extensions. For mills, the part program must end with a *.pim extension and for lathes must end with a *.pit extension. These extensions help the cnc recognize what type of part program you have.

SYMPTOM: ***There is communication between the peripheral and the cnc, but it is not possible to load a part program to from to peripheral into the cnc.***
ANALYSIS: Check that the first character of the part program has a "%" symbol next to the program number followed by ,MX,.

SYMPTOM: ***While loading a long part program from a peripheral into the cnc, the cnc will give a "syntax error" message.***
ANALYSIS: In order to know exactly what the line is, it is recommended to cut the program into two sections and transmit each section separately. Repeat this process until the error is found.

SYMPTOM: ***When transmitting or receiving a long program, (digitizing, tracing or infinite program execution), sometimes the communication is interrupted with an error.***
ANALYSIS:
1) Check to see if the devices are grounded properly.
2) Electrical noise in the cable or it is greater than 49 ft. Try with a shorter cable and make sure that the shield is connected on the cnc side only.
3) Try with a lower baud rate.

About this matter, the RS 232 has limitations from the length point of view.

Serial Port Cable Connection CNC - PC