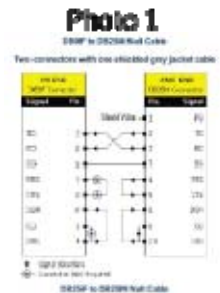# FANUC: RS232 Communication

~Setting up your FANUC control for RS232 Communications~

Setting up RS232 communication with the very popular Fanuc control is quite easy and straight forward. Once you have the correct cabling, all you have to do is match the baud rate and you are off and running….well, mostly!

Here are the steps to your success:

1) You can either build, have us build or we can offer you a standard, off-the-shelf 6' null-modem cable configured as in Photo #1 (10D3-FA: $49.95 Each). From the 25 pin side, you only need a straight through cable to reach your Fadal (or Fanuc Control) and you are now properly connected at whatever length you need. We offer straight through cables in 10', 25', 50' & 100' lengths.

Photo 1

NOTE: We highly recommend that you DO NOT USE A USB TO RS232 converter. The USB communications standard is so much faster than a CNC controls ability to transfer data via the RS232 port, so many errors occur that many times it is impossible to make it work. Do yourself a favor and purchase a 9 pin RS232 expansion board for your PC. This will work perfectly and save days of headaches trying to make your converter to work.

2) At the Fanuc control, make sure you are in MDI mode, then press the SETTINGS key, and soft key SETTINGS to turn the parameter lock to 1. See photo #2. The control will immediately throw you to the alarm page. This is normal (see photo #3). Go back to this settings page and make sure your I/O setting is set to zero. See photo #4.

Photo 2

Photo 3

Photo 4

3) Now press your SYSTEM hard key to take you to your parameters. See photo #5. This is likely the page you land on, but press the parameter soft key to be sure you get into the parameters for changing/verifying your communication parameters. Press the down arrow key until you get to parameter #101. See photo #6. Make sure your parameters are set the same, in particular parameter 101 with the exception of SB2 which you can set for either 1 or 2 stop bits (Ex. 7-E-1 OR 7-E-2). Most Fanuc users set this parameter to 1 stop bit, or SB2 = 0, but the choice is yours.

Photo 5

Photo 6

4) Okay, you are set. Go back to your settings page and make your parameter lock = zero again. Power down your control and power back up for the changes to be permanent. Your changes will not take effect until you power down and back up again.

5) Hook up your cables, open your communications software (we recommend FadalCNC-DNC), open the file you want to send and you are nearly done. Make sure you have configured your communications software for the same protocol you set in the Fanuc parameters such as 7-E-1 or 2 and the baud rate. Also, make sure you chose XON/XOFF for proper communication handshaking in your communications software.

6) You must now set up your Fanuc control to receive. This is very simple. Place your control in edit mode, then press the options soft key on the right side below the monitor in the row of soft keys. You will now see soft key options for READ and PUNCH. Reading is for uploading into the Fanuc control and Punching is for sending a program from the Fanuc control to your PC. Press READ then EXEC (controls vary slightly) and you should see a blinking LSK at the bottom of your screen if your cabling is correct. If not correct, you will not see this and you will not be able to send or receive until this is fixed.

7) Return to your PC and press the big SEND button. The Fanuc control should take your program fine and have it stored in immediate memory for use so long as the file is not too large for the internal Fanuc memory. The program must adhere to this format for the Fanuc to take it into internal memory:

%
O1234 (Program description 1st digit is the letter "o", not zero.
BLOCK OF CODE
BLOCK OF CODE
BLOCK OF CODE
ENDING COMMANDS
%

If you are still not communicating with your Fanuc control, please call our office @ 208-855-9426 and one of our technicians can easily help you with what may be going wrong.