

DB37 Ribbon Cable Assembly Rework Instructions

Issue

The DB37 ribbon cable assembly included in your team's 2012 Kickoff Kit may have been assembled incorrectly. The FRC Kit of Parts staff sincerely apologizes for this inconvenience.

Does this affect you?

A quick and easy way to check your team's cable is to mate the two ends of the cable together. If the cable has to do a $\frac{1}{2}$ twist in order for the connectors to mate properly, as in Figure 1, then the cable was assembled incorrectly and you will need to rework the cable per the instructions below for it to work with your 2012 control system. If there is no twist in the cable, as in Figure 2, then your cable is fine and you can ignore this document.

Note that you can also use the process below if you'd like to decrease the length of the cable.

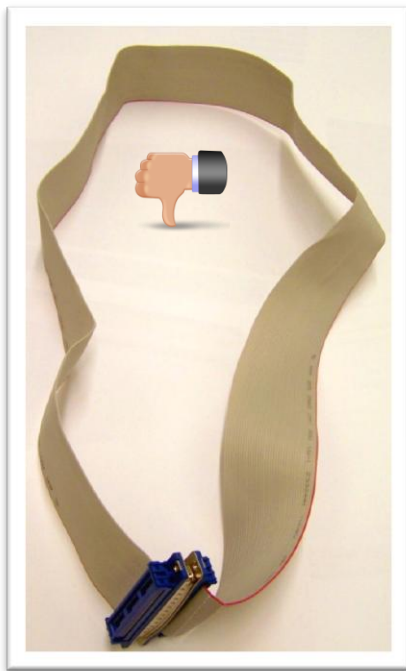


Figure 1: If your cable has to do a $\frac{1}{2}$ twist to mate the connectors, then you will need to rework your cable for the cable to work with your control system

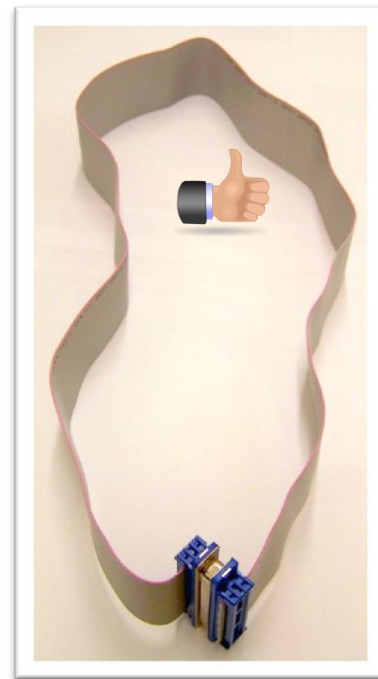


Figure 2: If your cable doesn't have to twist in order for the connectors to mate, then it's correctly assembled.

Pre-requisites

To fix your cable, you'll need the following tools:

- The DB37 flat ribbon cable assembly from your kit
- a standard vice
- cutters

The Steps

- 1) On the male connector, shown in Figure 3, gently pull apart side retainers to release connector backing, Figure 4 and Figure 5. Once this is done, your connector should look like Figure 6.

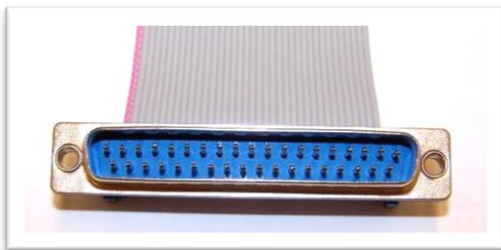


Figure 3: The male end of the cable assembly

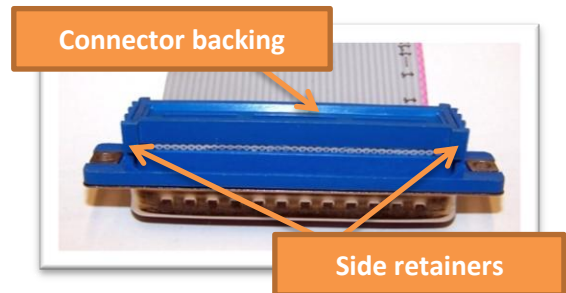


Figure 4: Connector backing and side retainers



Figure 5: Gently pull side retainers away from the connector to release the connector backing



Figure 6: The connector with the connector backing removed.

- 2) Once backing is removed, peel the cable off of the pins.

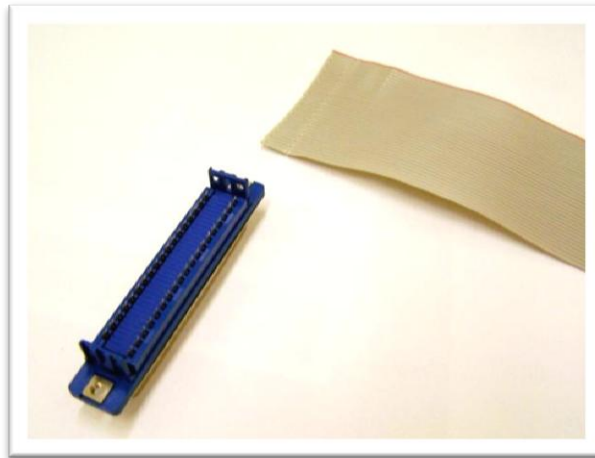


Figure 7: The ribbon cable removed from the connector.

- 3) Flip the cable over (i.e. rotate 180°) and advance it so that when reassembled, the connector pins bite down on un-crimped cable, as shown in Figure 8. Make sure that the conductors are aligned with the pins before proceeding, Figure 9.



Figure 8: This cable has been flipped and positioned for crimping

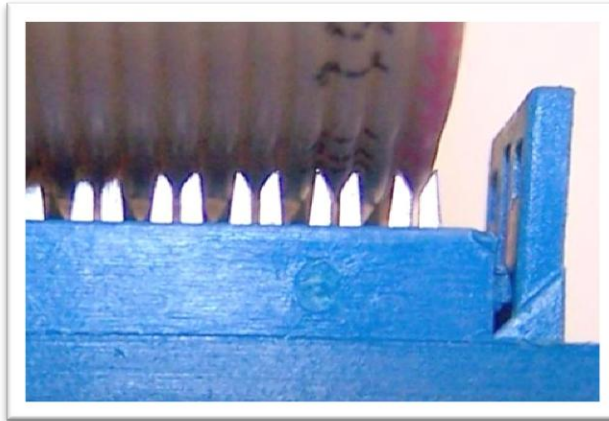


Figure 9: The teeth must be centered below the cable's conductors.

- 4) Put connector backing back over cable and, using your fingers, gently press the cable on to the pins, and secure the assembly in the vice, Figure 10.

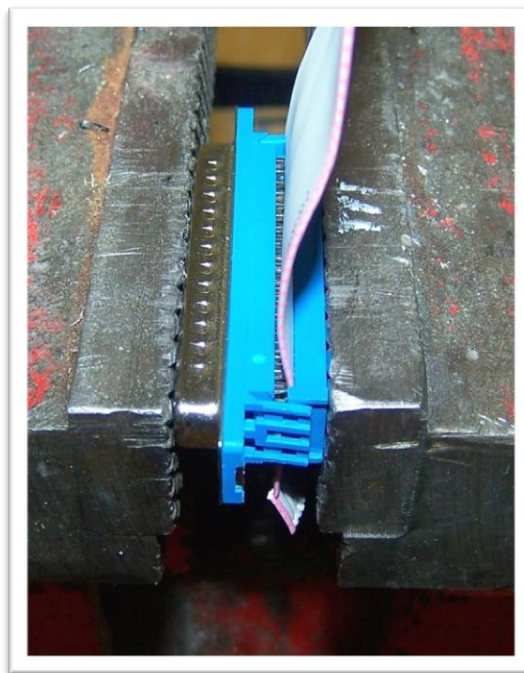


Figure 10: Connector assembly in the vice.

- 5) Gently close the vice to press the backing onto the connector until the side retainers clip back on, Figure 11. There is no need to press the connector any further than the point at which the side retainers engage, and you will risk damaging the connector.

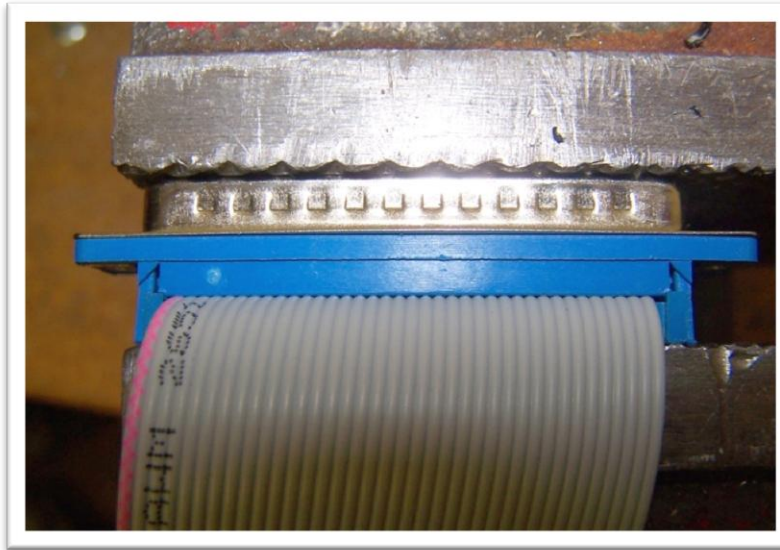


Figure 11: The side retainers have clipped on to the connector backing.

- 6) Remove the connector assembly from vice and trim extra cable length, Figure 12.

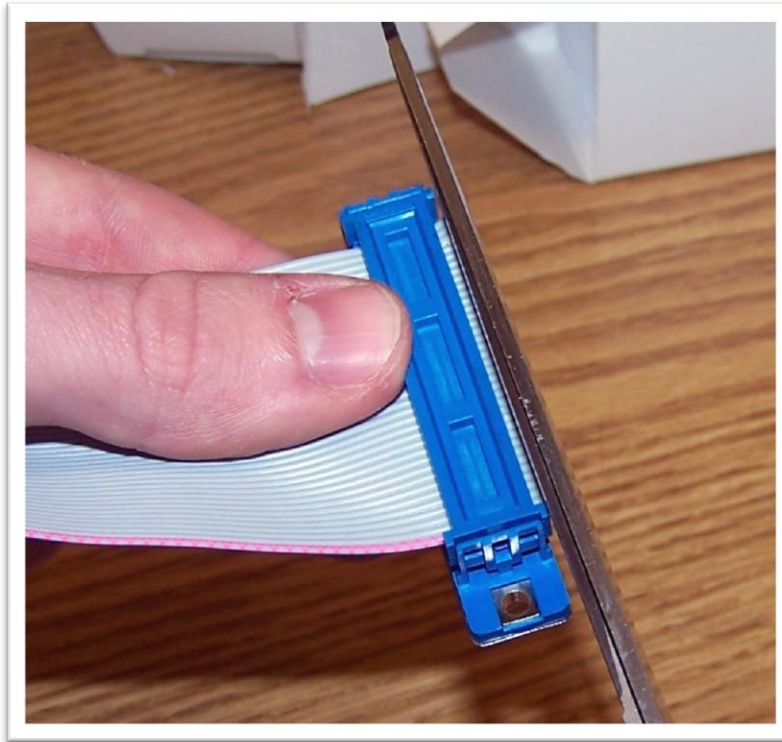


Figure 12: Trim the excess cable.