

ADDING FERRITE CHOKES TO THE CONSOLE'S USB CABLE

1500MX

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This document provides instructions on resolving an issue related to excessive electromagnetic interference (EMI) noise that could affect your machine's controller. We've identified that certain machines may experience performance degradation due to EMI. You can effectively reduce EMI noise by installing two ferrite chokes on the USB cable inside the operator console.

Tools and Materials Needed

- Ferrite choke, 2
- Phillips screwdriver

Procedure

⚠ WARNING! Electrical Shock Hazard: You must power off the machine before making any electrical connections. If you don't, there's a risk of electrocution or shock.

1. Power off the machine and the PathPilot controller.
 - a. Push in the machine's red Emergency Stop button, which removes power to motion control.
 - b. From the PathPilot interface, select **Exit**.
 - c. Turn the Main Disconnect switch to **OFF** on the side of the electrical cabinet.
2. Remove and set aside the three screws securing the operator console's front panel with a Phillips screwdriver.



Figure 1: Screws securing the operator console's front panel.

3. Open the operator console's hinged front panel, and identify the USB cable that's connected to the daughter board and the controller.

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4. Place one ferrite choke on either end of the USB cable, making sure to loop the cable around each choke once for best performance:
 - a. Place one ferrite choke on the USB cable nearest to the controller.
 - b. Place the remaining ferrite choke on the USB cable nearest to the daughter board.

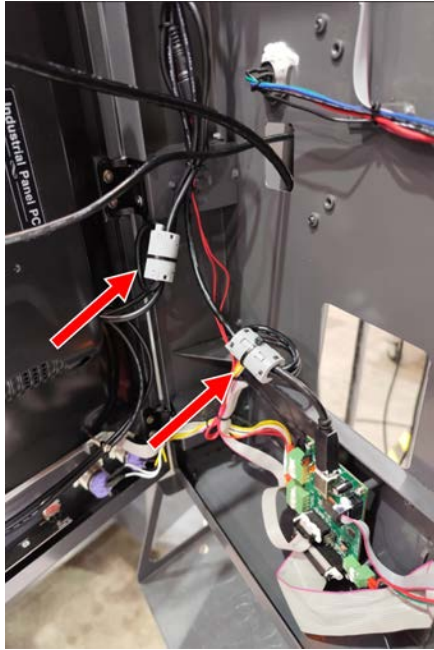


Figure 2: Ferrite chokes installed onto the USB cable.

5. Close the operator console's front panel. Then, fasten using the three fasteners that you previously set aside.
6. Power on the machine and the PathPilot controller.
 - a. Turn the Main Disconnect switch to **ON** on the side of the electrical cabinet.
 - b. Twist out the machine's red Emergency Stop button, which enables movement to the machine axes and the spindle.
 - c. Press the Reset button.
 - d. Bring the machine out of reset and reference it.