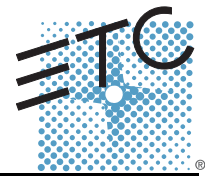# ETC® Service Note

Element Console DMX Chip Replacement Instructions

Overview

This document contains instructions for removing and replacing the DMX chip in an Element console.

DMX driver chips may fail when subjected to excessively high voltage. This can be caused by a power event such as a lightning strike.

You may need to replace the DMX driver chip if the console is not sending DMX, lights flicker, or if the chip appears burnt or damaged.

Difficulty of Repair

Easy

Estimated time to complete

15-30 minutes

Before you begin

Setup a clean, well-lit work area and take appropriate ESD (Electro-Static Discharge) precautions.
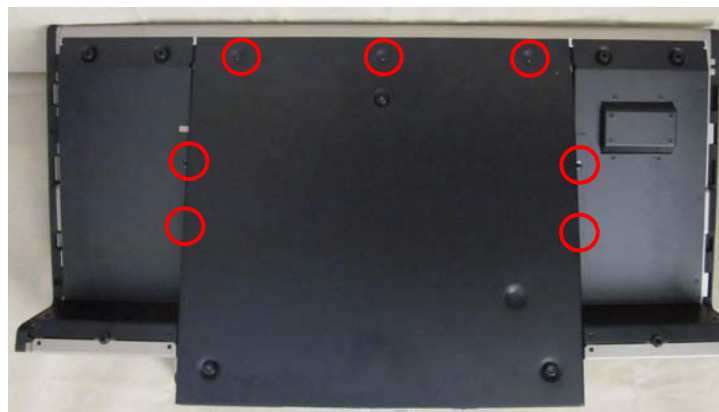
Tools Needed

- Phillips #0 Screwdriver
- Phillips #1 Screwdriver
- Phillips #2 Screwdriver
- 5/16" Nut driver
- Dual-In Line (DIL) Chip Puller
- DMX Transceiver Chip - ETC Part # Z1458-F

Procedure

Step 1: **Disconnect power and all other connections from the console before performing any service work.**

Step 2: Place the unit on a clean, stable work surface.

Step 3: Place the console upside down on a flat stable surface and remove the (7) circled screws. There are (3) on the front bottom lip and (2) on each side.
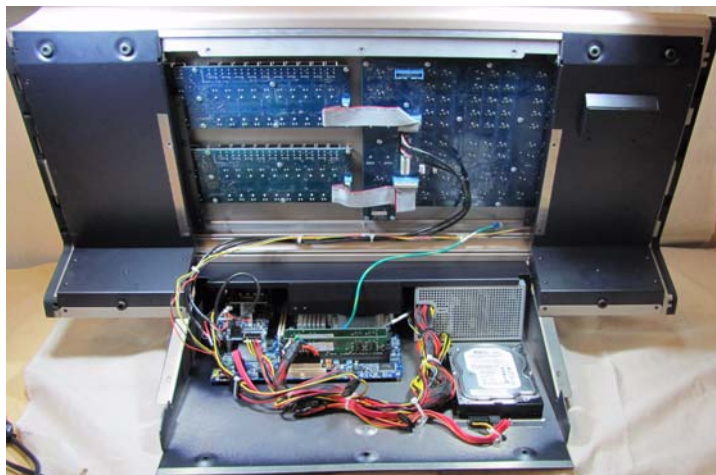
ETC Service Note
Element Console DMX Chip Replacement Instructions

Step 4: Turn the console over so that it is upright, and remove the circled screw on both sides of the console. This will release the face panel from the bottom wrapper.
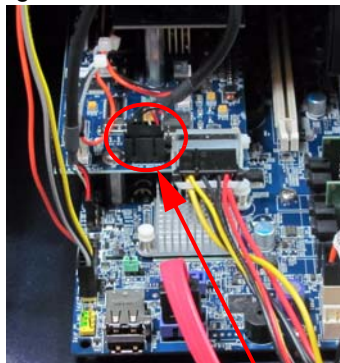

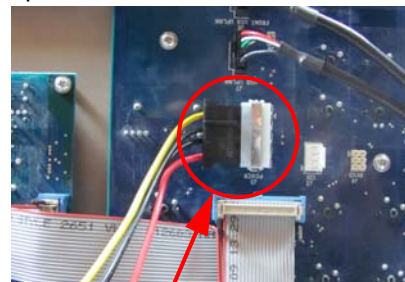Step 5: Carefully open the console and hold or prop open.

Step 6: Remove the following connections to free the face panel from the bottom chassis.

Grounding screw from the bottom chassis
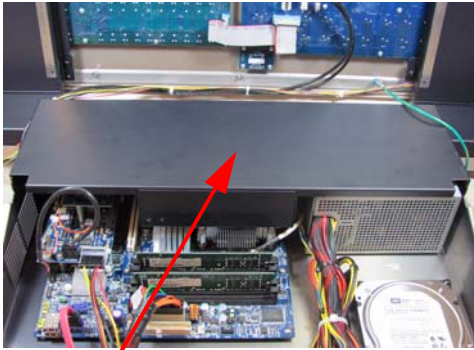
USB connection on the MIDI PCB
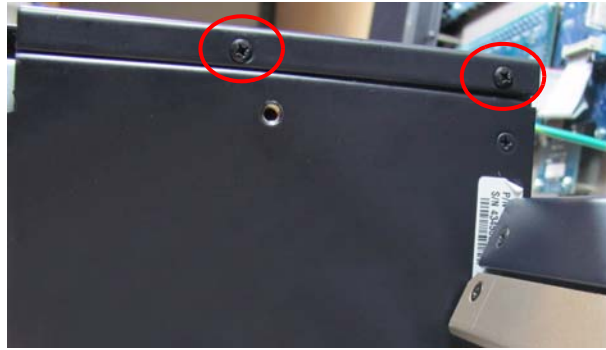
Power connection on the face panel

ETC Service Note
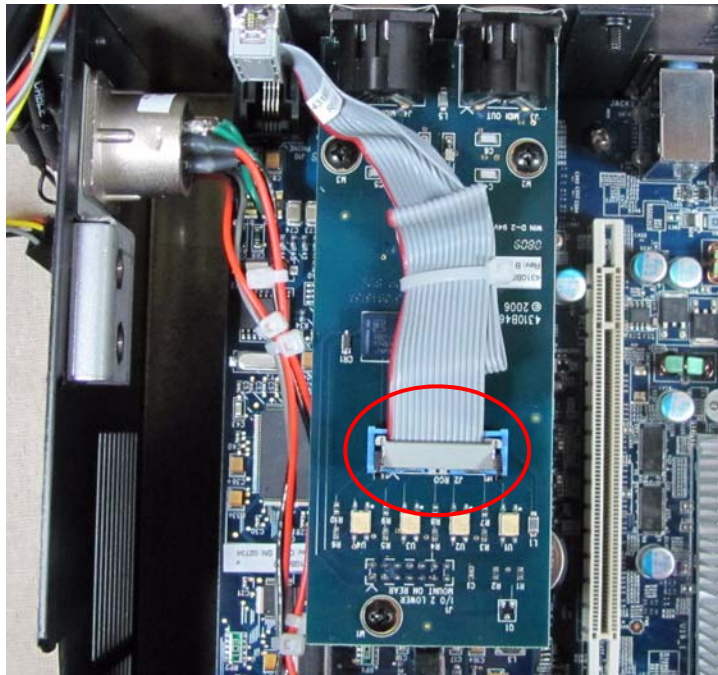## Element Console DMX Chip Replacement Instructions

Step 7: Remove the (2) circled screws on both sides of the housing and remove the bracket over the fan housing.
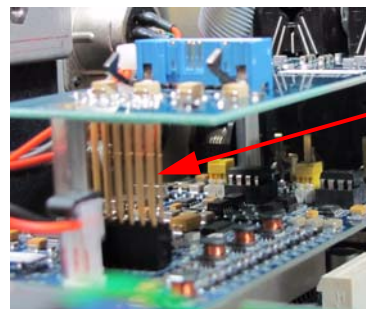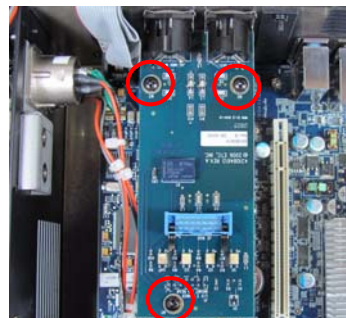

Fan Housing

Step 8: Disconnect the ribbon connection on the MIDI PCB by pulling the black tabs toward the front of the console.

Step 9: Remove the (3) circled screws and remove the PCB. There are long header pins connecting the two boards; be careful not to bend the pins.
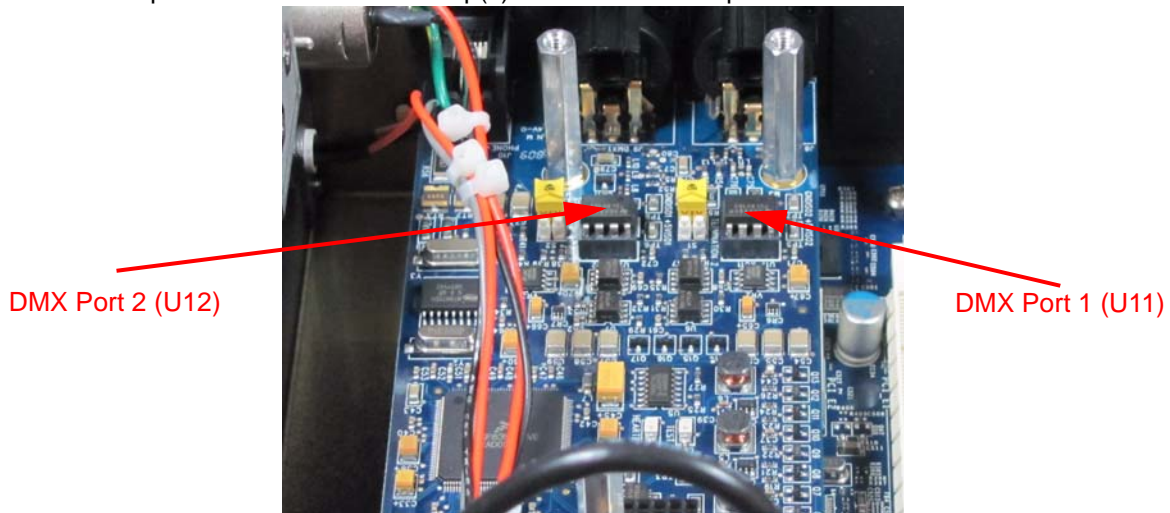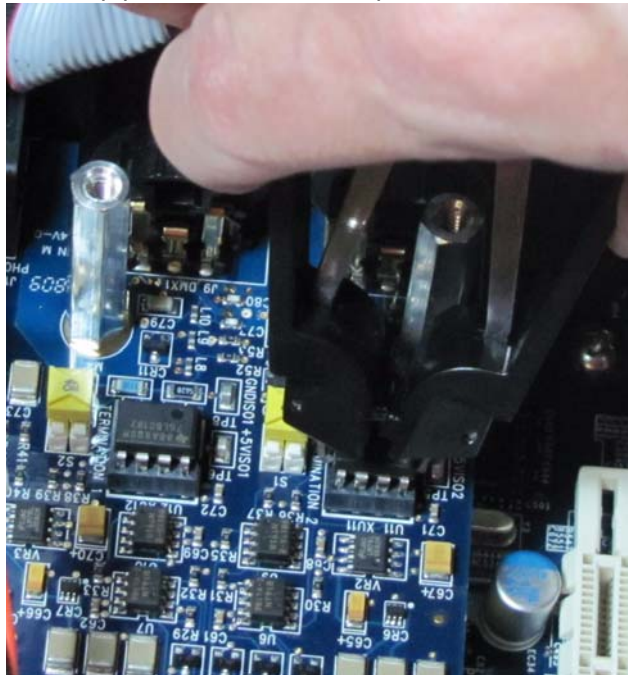

Header Pins

ETC Service Note

Element Console DMX Chip Replacement Instructions

Step 10:   Locate the DMX chip(s) that need to be replaced.

DMX Port 2 (U12)   DMX Port 1 (U11)
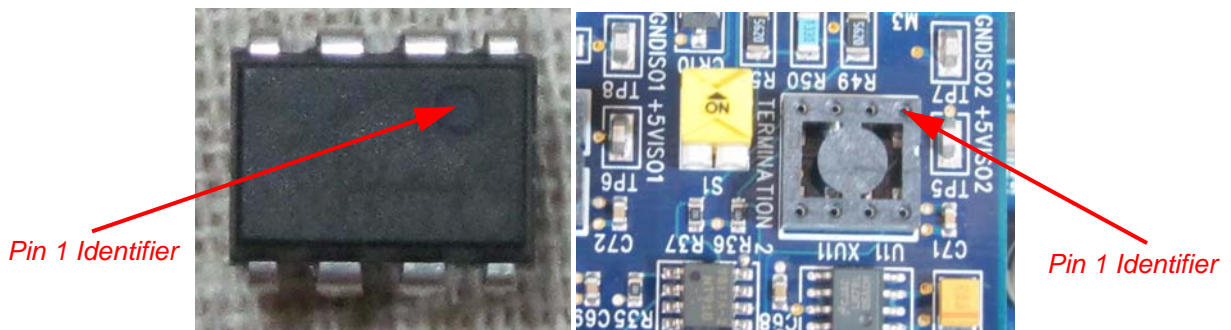
Step 11:   With the chip puller, remove the chip.

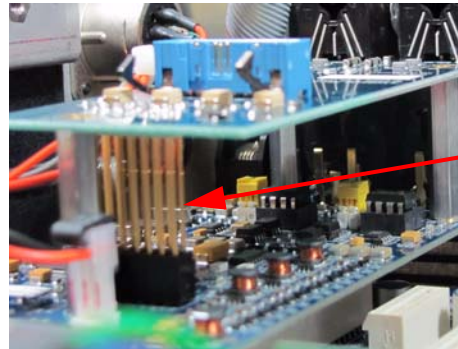Step 12:   Insert the replacement chip in the socket so that pin one is in the correct location.

Note: *Pin one is marked with a recessed circle.*

Pin 1 Identifier   *Pin 1 Identifier*
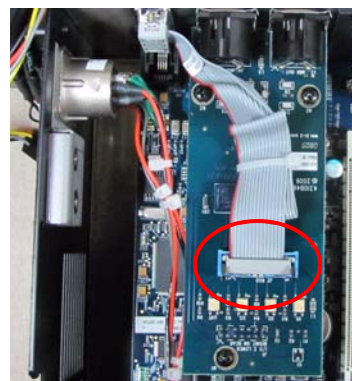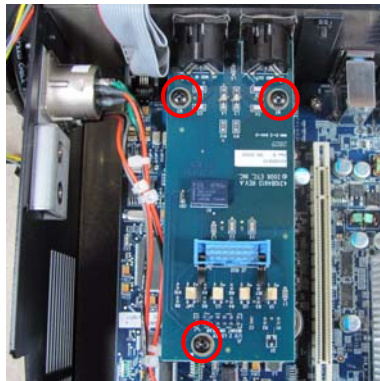
ETC Service Note
Element Console DMX Chip Replacement Instructions

Step 13: Replace the MIDI PCB, being careful not to bend the header pins.
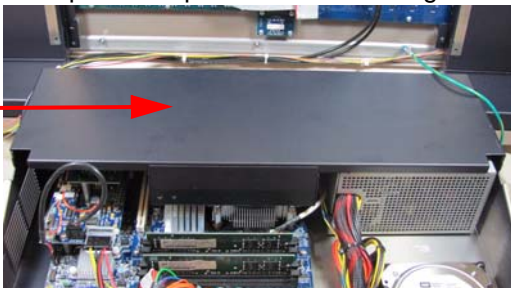
Header pins

Step 14: Insert the (3) circled screws, and connect the ribbon cable.

Step 15: Replace the fan housing bracket and the (4) screws that hold it in place.

Fan Housing

Step 16: Carefully attach the face panel to the bottom wrapper; hold or prop open
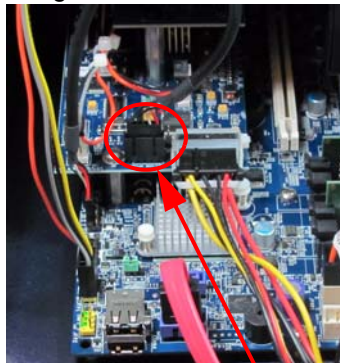
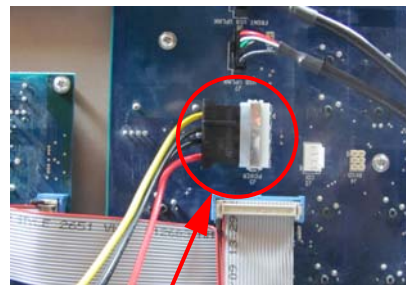## Element Console DMX Chip Replacement Instructions

Step 17: Re-connect the following connections.

Grounding screw from the bottom chassis
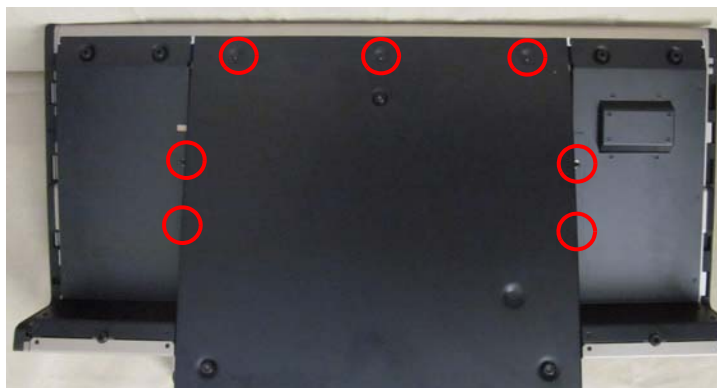
USB connection on the MIDI PCB

Power connection on the face panel

Step 18: Close the console. Holding the bottom and top lids together, turn the console over onto its face.

Step 19: Replace the circled screw on both sides of the console. This will attach the face panel to the bottom wrapper

Step 20: Reattach the (7) circled screws. There are (3) on the front bottom lip and (2) on each side.

Step 21: Turn the console back over, and reconnect all power and connections.

Step 22: Boot the console.

Step 23: Test the console for desired functionality.

ETC Service Note

Additional Information

If you have additional questions about this procedure, please contact Technical Services.