



# FXi 60/250 Exciter

## L1 Field Retrofit Application Guide

597-0541-L1  
Revision B  
January 24, 2012

## **FXi 60/250 Exciter**

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# 1 Preparation

## 1.1 Overview

**Problem:** To improve the reliability of the main FXi 60/250 exciter power supply, it is recommended that L1 be replaced with an enhanced torroid coil. L1 on the power supply can overheat and cause a power failure, damaging the power supply board.

**Affected Units:** All FXi 60 or FXi 250 Exciters manufactured prior to January 1, 2005 will benefit from the L1 retrofit. All FXi exciter power supplies shipped from Broadcast Electronics, or serviced in our Repair Center after January 1, 2005, will be fitted with the enhanced L1.

**Fix:** The upgrade consists of removal of the existing L1, and installing a torroid L1 with a spacer underneath.

## 1.2 Tools / Items Needed

Supplied By Customer:

- 700°F Soldering Iron with 1/10" Pencil Tip
- SN 63PB37 Solder or Equivalent
- General Soldering Tools
- Needle nose pliers
- #2 Philips screwdriver
- .191 inch drill bit
- .109 inch drill bit
- sharp knife or razor tool

Parts needed:

- 979-0540-L1 kit, Application Guide FXi 60/250 Power Supply L1 retrofit

## 1.3 ESD Awareness



During the upgrade process be sure to exercise ESD precautions.

## 1.4 Estimated Time for Replacement

Providing that you have the tools listed and items listed above, it will take approximately 30-35 minutes to retrofit L1 on the Exciter Power Supply Board.

## 2 Remove power supply

2.1 Turn the FXi AC Power Switch to OFF

2.2 Disconnect Cabling from the FXi

2.3 Remove the FXi from the Rack and place on Bench

2.4 Remove Power Supply Hardware

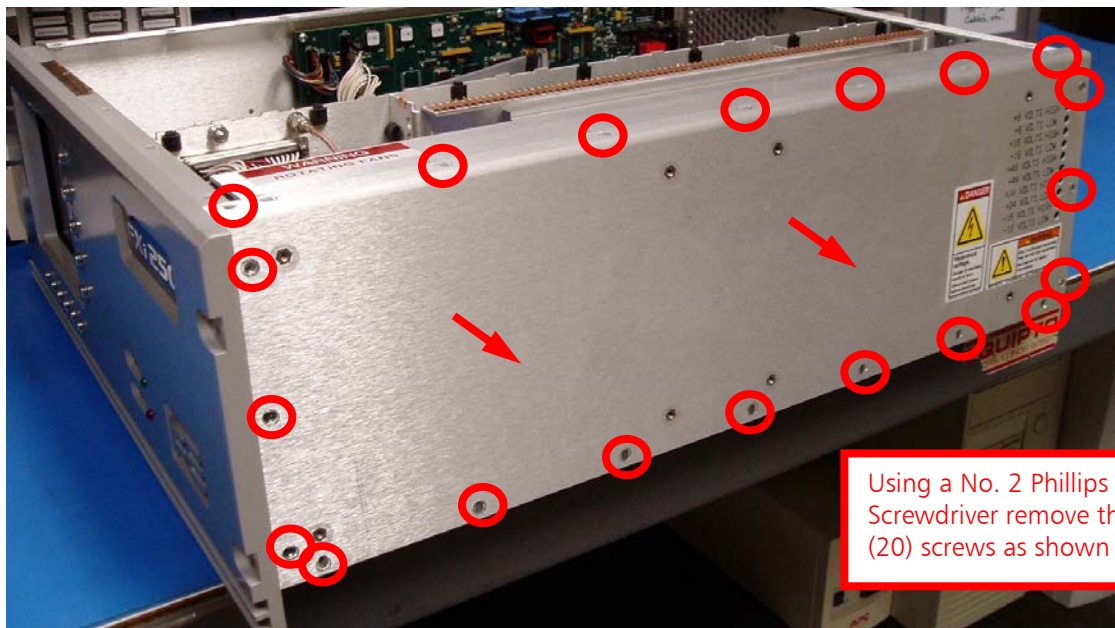


Figure 1 – Power Supply Hardware Removal

2.5 Remove Power Supply

- TO REMOVE POWER SUPPLY PCB:
- 1) REMOVE 22 SCREWS FROM THE PS PANEL.
  - 2) DROP PS PANEL DOWN AND UNPLUG 5 CONNECTORS.
  - 3) REMOVE 8 SCREWS FROM POWER SUPPLY PCB.

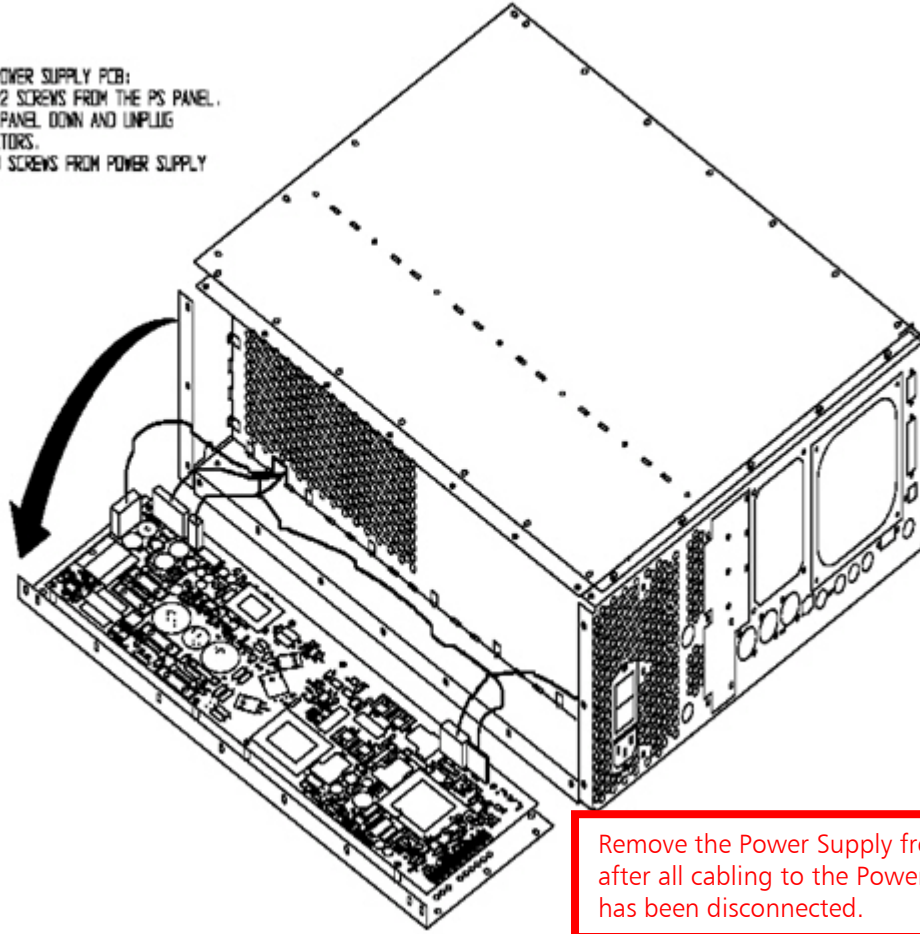
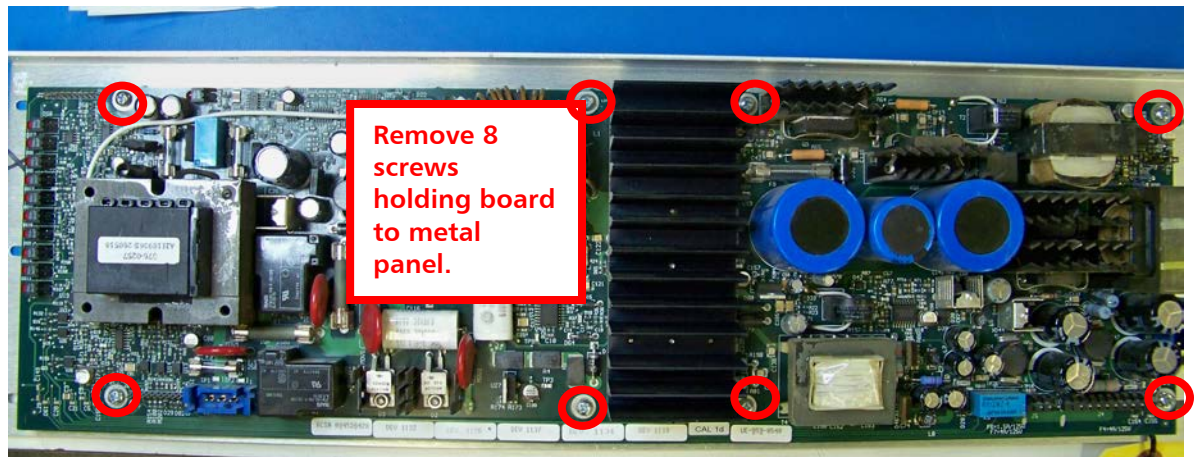


Figure 2 – FXi Power Supply Removal

## 2.6 Remove Power Supply from panel



## 2.7 Remove L1

Locate L1 and de-solder from board.

Power Supplies manufactured, or factory serviced since January 1, 2005 have the torroid style L1, retrofit is not needed on these units.

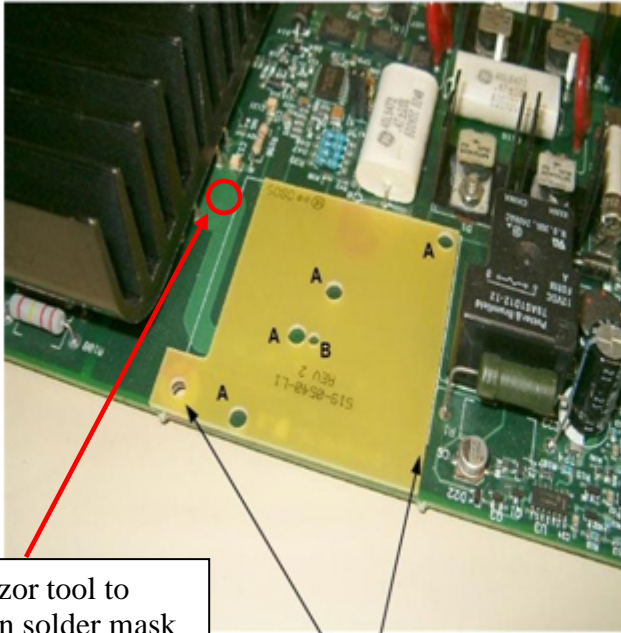


LOCATE L1, DE-SOLDER AND REMOVE

**Figure 3 – Remove old style L1.**



## 2.8 Prepare board



Use knife or razor tool to scrape the green solder mask coating off the trace.

LOCATE PCB 519-0540-L1. ALIGN WITH THIS HOLE AND THIS WHITE LINE. SECURE WITH SCREW AND LOCKNUT FROM KIT 979-0540-L1.

**STEP 2:** USING PCB 519-0540-L1 AS A TEMPLATE, DRILL (4) HOLES .191 DIA. MARKED 'A'.

**STEP 3:** CONTINUE USING PCB AS A TEMPLATE, DRILL (1) HOLE .109 DIA. MARKED 'B'. REMOVE SCREW AND LOCKNUT INSTALLED IN STEP 1.

**Figure 4 – Prepare board by using template and drilling holes in board.**

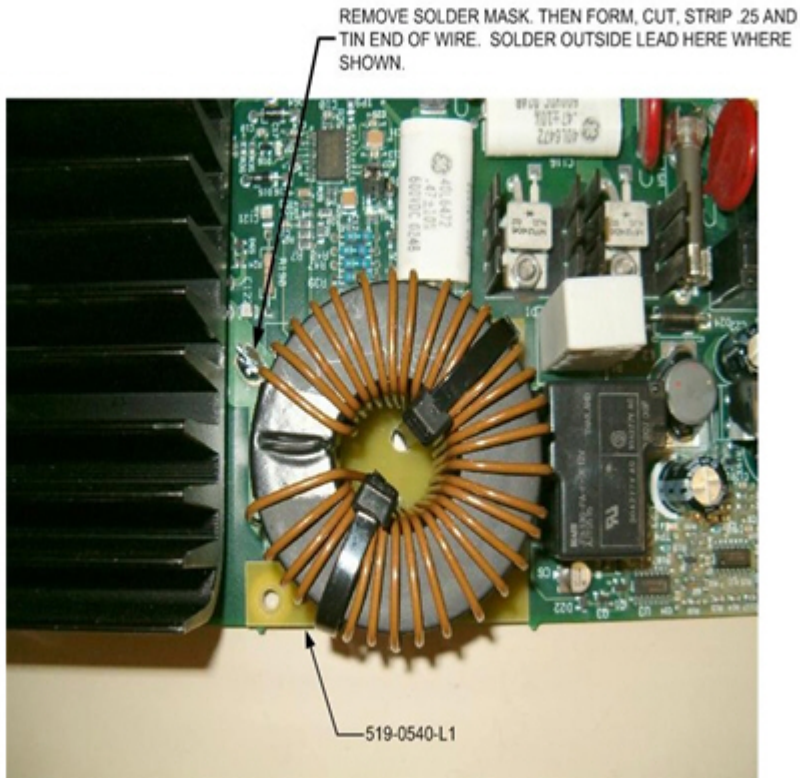
Align the 519-0540-L1 board in the kit using the white line on the Power Supply and the hole identified above.

Using the 519-0540-L1 board as a template; drill 4 holes .191" diameter through the holes labels A in the picture, then drill 1 hole .109" diameter through the hole labeled B in the picture.

Remove as small area of the green solder mask coating with knife or razor being cautious not to damage the trace below.

## 2.9 Install new L1

Leaving the template on the Power Supply board; insert the inside lead from the inductor provided in the kit (360-5812) through the small hole. Bend, form and cut the outside lead to fit onto the surface of the Power Supply board to the area scraped previously, Shown below.

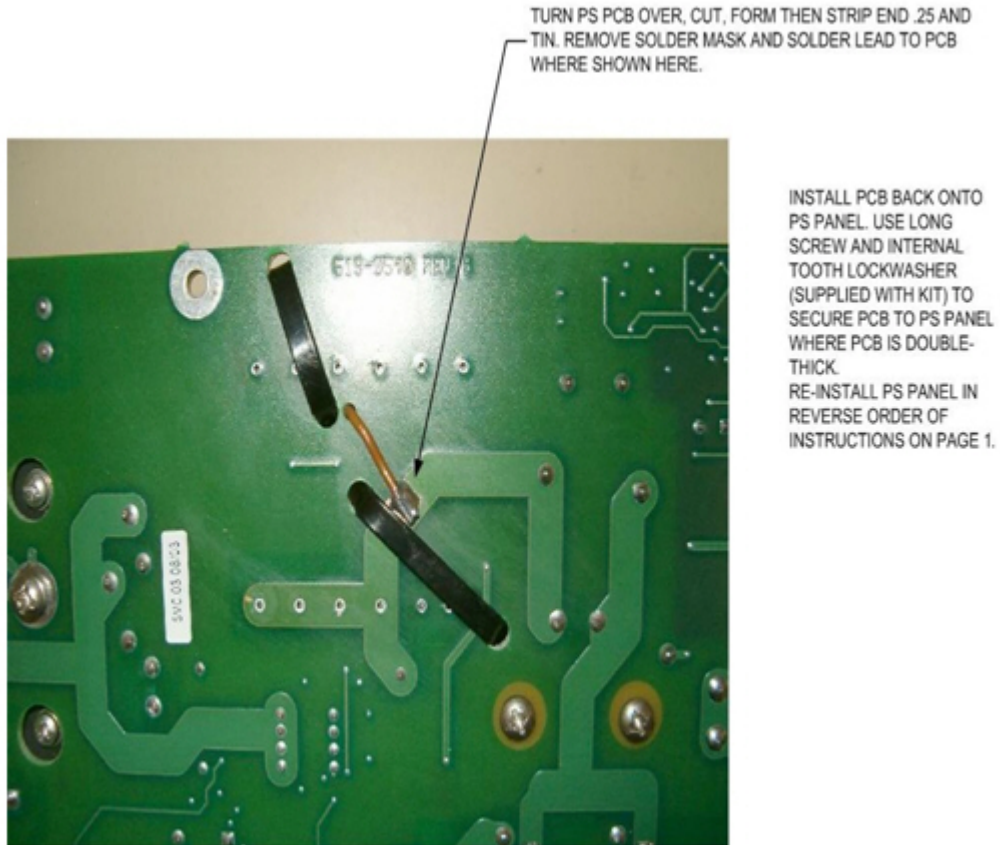


**Figure 5 –Installing new L1ed**

Secure the inductor using two tie wraps 402-0015 from kit. Solder lead to trace on Power supply board.

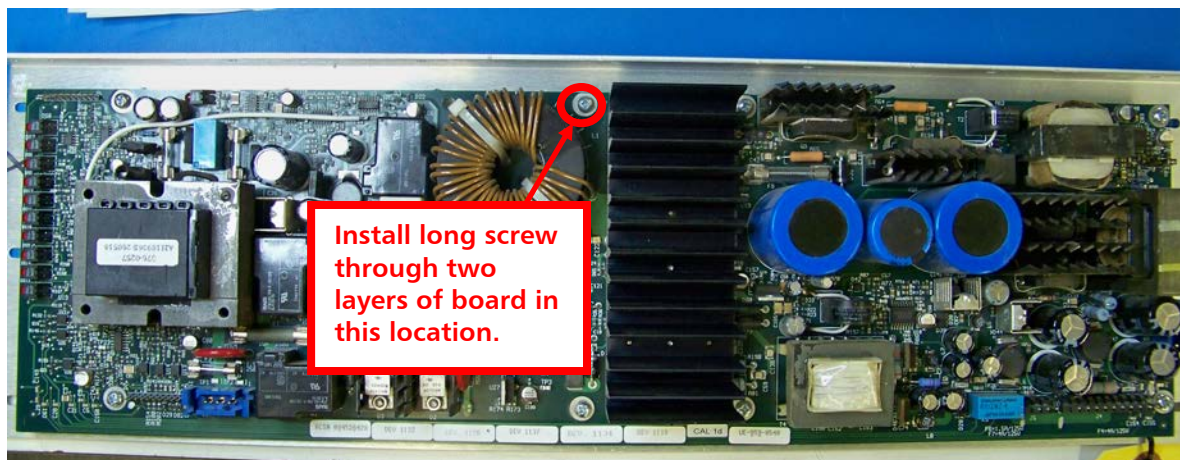
Turn Power Supply board over and scrape solder mask off area shown below.

Bend, form and strip .25" of insulation off end of lead. Solder to area scraped previously.



**Figure 6 – Bottom of Power Supply Board.**

Install the Power Supply board back onto the panel using the existing hardware and one long screw and internal lock washer provided in kit in the hole that is now through the template and the power supply board.



**Figure 7 – Install long screw.**

## 2.1 Re-Install Power Supply

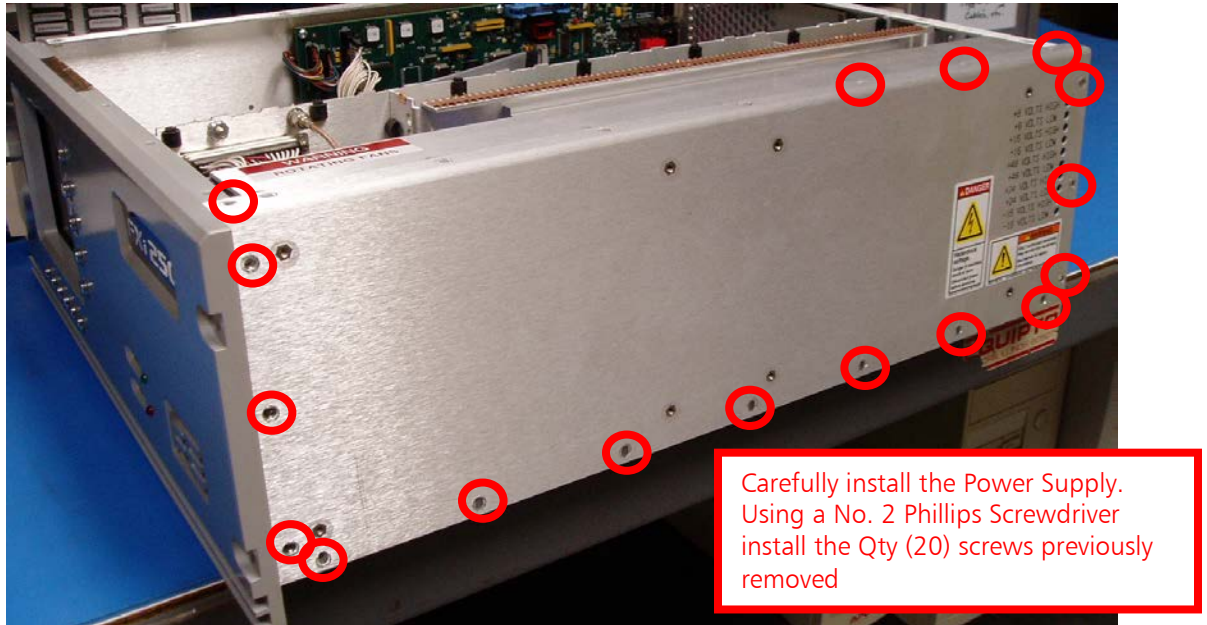


Figure 15 – Fxi Exciter Power Supply Installation

- 2.2 Connect cabling to the chassis
- 2.3 Install screws removed previously
- 2.4 Install Exciter Back Into Rack
- 2.5 Re-Connect All Cabling
- 2.6 Turn AC Power Switch ON

The Exciter should now be Operational.

### 3 RF Technical Service Contact Information

RF Technical Service -

Telephone: (217) 224-9617

E-Mail: [rfservice@bdcast.com](mailto:rfservice@bdcast.com)

Fax: (217) 224-6258

[www.bdcast.com](http://www.bdcast.com)

