

Installation Instructions

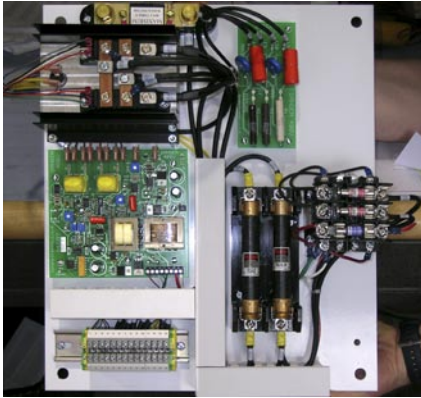


Figure 1. Full view of DS507

Mounting the Eddy Current Power Amplifier Unit

Mount the ECPA's Cabinet to the wall, using the four bolt holes that are located in the back of the box.

Next, punch four holes for the electrical conduit. The first conduit is for your AC power input (240 or 480 VAC). The second is for the field power transformer, the third one goes to the eddy current dynamometer for the field connections, and the fourth is for control signals.

Reconnect the transformer for the supply voltage you are using. **WARNING:** If you are using 208 Volts AC power, you will need to replace the transformer. Contact DyneSystems for a suitable replacement. Figure 2 shows jumper placement for 240VAC. Figure 3 shows jumper placement for 480VAC.

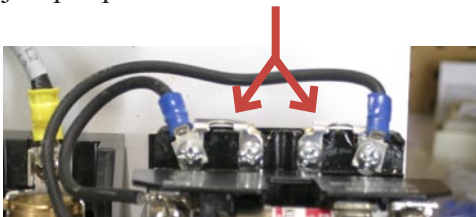


Figure 2
Jumper
placement for
240 VAC

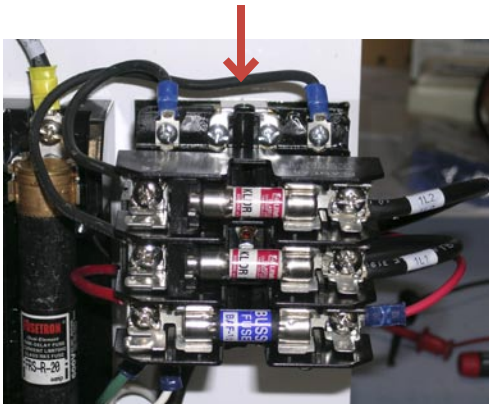


Figure 3
Jumper
placement for
480 VAC

Safety Warning:

You must disconnect AC input power when doing any connections or moving any meter leads, due to the dangerous voltages that are present inside the ECPA cabinet.



Figure 4.
The terminal blocks on the 15 and 25 Amp power amplifiers will accept wires as large as 10ga.

Power Wire Connections

Strip off about 1/4 to 3/8 inch of insulation from the ends of each of the power wires. Terminal block positions 5 and 6 are for input power from the circuit breaker. The circuit breaker cannot be bigger than 30 amps.

Terminals 7 and 8 feed the primary side of the field isolation transformer. Connect the secondary of the field isolation transformer to terminals 9 and 10. Connect terminals 13 and 14 to the dynamometer's field coil.

After each wire is installed, pull on it to check for a positive connection. Check the terminal blocks for wires with any stray copper strands that could short out the amplifier.

Signal Wire Connections

Terminal 1	Common
Terminal 2	0 to 10 Volt current command signal
Terminal 3	15 Volts output
Terminal 4	Enable
Terminal 11	Thermal overload switch*
Terminal 12	Thermal overload switch*

*Switch opens when the ECPA gets too hot

Setting Field Current

****Remember to disconnect any AC input power while making meter or wire connections.**

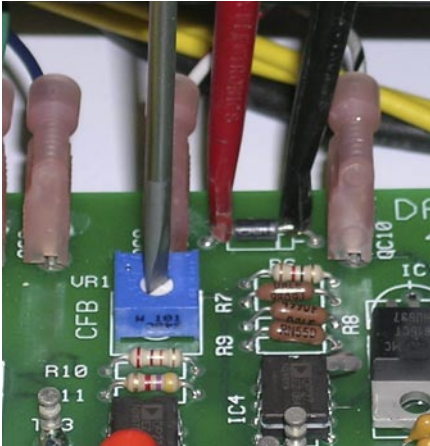


Figure 5.

Shows clip leads from digital voltmeter (black and red leads) connected to diode D1.

Method 1

Connect a digital voltmeter across diode D1 as shown in Figure 5. Set the meter to the DC millivolt scale.

Make sure the CFB pot is turned all the way counter-clockwise.

Apply 10 volts to terminal 2 and the Enable signal to terminal 4. This will excite the dynamometer field coil.

Turning the CFB pot clockwise will increase dynamometer field current.

For the 25 Amp ECPA, every 2 mV = 1 Amp.

For the 15 Amp ECPA, every 3.33 mV = 1 Amp.

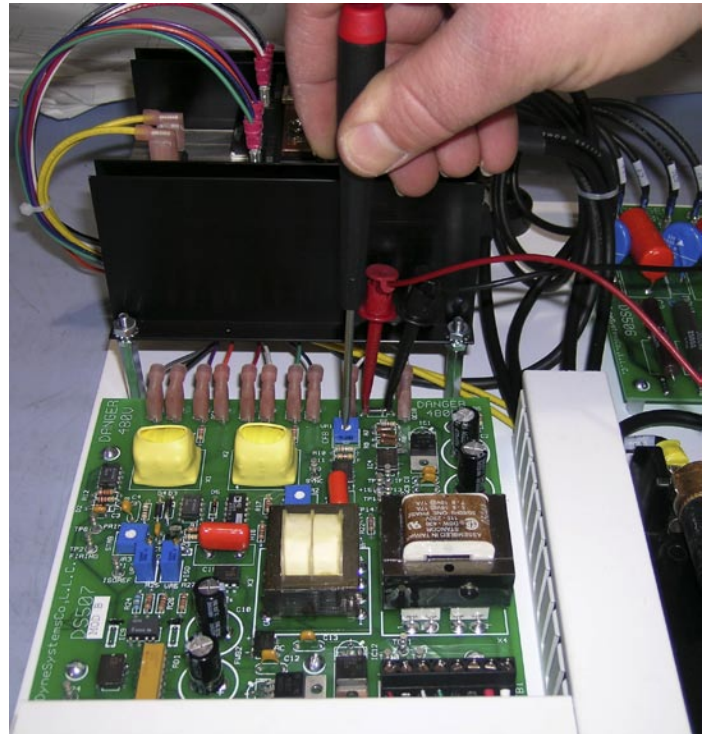
Method 2

A second method is to measure the DC voltage on terminals 13 and 14, then adjust the CFB pot to get the desired voltage.

Maintenance Note:

This ECPA (Eddy Current Power Amplifier) utilizes forced air cooling. Air is moved through the box by an electric fan. Under the grill vents are air filters that will need periodic cleaning at intervals determined by the dustiness of the ECPA's environment.

Figure 6. Wide view of current adjustment



Questions?

Call toll-free for technical support: (800)657-0726

Safety First!

DyneSystems Co. assumes no responsibility for accident or injury sustained while following these instructions. Do not attempt to perform this work if you are not qualified. Always follow standard safety precautions as well as the safety warnings in this document.