

Modifications to GE Exec II 40 Watt PA for 420-440 MHz

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Remove Antenna Relay

- Remove low pass filter – antenna relay board from heat sink.
- Use solder sucker to remove solder from 8 pins on relay.
- Use two large soldering irons to unsolder relay from board.
- Add jumper from low pass filter output to receive connector (this is now transmit output).



Replace Power Control Transistor and Power Control Pot

- Replace original power control transistor with TIP120 darlington transistor.
- Check power control pot and replace with 5K ohm pot if original is dirty or bad.
- Add heat sink on TO5 transistor (first stage from exciter).



Add Capacitors on Driver and Final Transistors

- Set up PA on workbench using talkie in low power (less than 300 milliwatts) as driver.
- Monitor current drawn by PA.
- Monitor output power.
- Use 3 pf to 15 pf disk ceramic capacitors with 0.1 inch leads.
- Experiment by placing capacitor from base to ground and collector to ground on driver and final transistors.
- Also try capacitors across the coax output at the board and on the stripline between the driver and final.
- Determine which locations increase the gain and efficiency.
- Efficiency should be at least 33 percent over the desired frequency range.

Check for Other Problems

- Check collectors of final and driver for cold solder joints. Clean and resolder with silver solder as necessary.
- Check for broken mounting stud on second stage.
- Inspect for any other possible problems.