# Collins 30L1 feeds mod

The Collins 30L1 has unsafe wiring in the power line circuits. The wiring suggested by Collins violates wiring codes, and places unnecessary stress on the power transformer.

## Collins violates two rules with their original wiring:

1.) The black cord wire, on 120V, is the "hot" lead. The black wire must always be switched and fused. Collins originally shows the cord wired so the white (neutral) is switched and fused.

2.) Collins grounds the 120V lines from the transformer primaries to the chassis. This is illegal, unsafe, and it can place significant stress on the transformer when on 240VAC system. It can also back-feed the house wiring system if a home breaker or house wiring connection opens, creating a shock and fire hazard.

While not perfect, the simple change in wiring below makes the amplifier much safer, and removes unnecessary stress from the transformer.

**Note:**

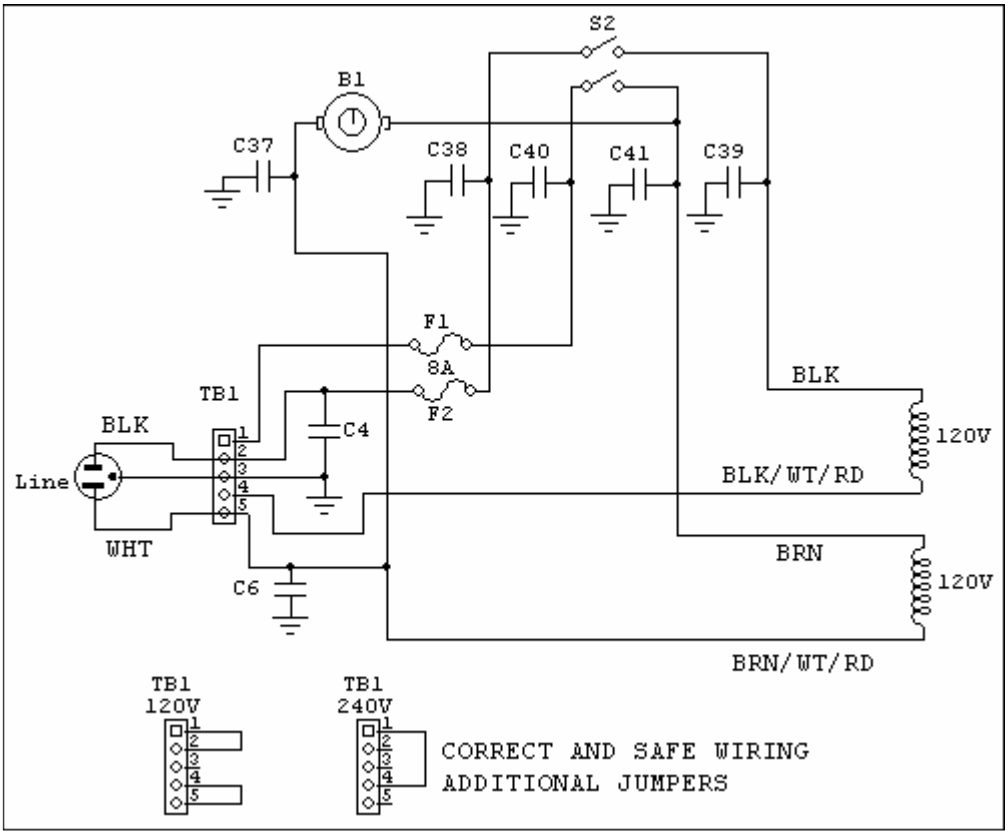
Technically, on 240 volts, both sides of the mains should be fused. Ideally, fuse holder F1 and F2 would be inserted between the power line and TB1.

The ideal solution would require rewiring the entire Collins primary system. This wiring is a compromise based on retaining as much of the original wiring as possible. Despite being less than ideal, this wiring is much safer than Collins original wiring method on TB1, for both the power transformer, the operator, and the dwelling and occupants.

The only worry with this wiring is one side of the 240, the side to the fan and to the white/brown/red transformer lead, is not fused. This means there is no fuse to blow if the side to the fan C37, and to the white/brown/red transformer lead, shorts to chassis.

The power transformer is still protected for overloads.

If it were my amplifier, I would move the fuses to the cord side if I planned on operating it on 240 volts, but this wiring is still much safer than original Collins wiring.


S2
B1
C37
C38
C40
C41
C39
F1
8A
F2
TB1
BLK
Line
WHT
C4
C6
BLK
120V
BLK/WT/RD
BRN
120V
BRN/WT/RD
TB1
120V
TB1
240V
CORRECT AND SAFE WIRING
ADDITIONAL JUMPERS