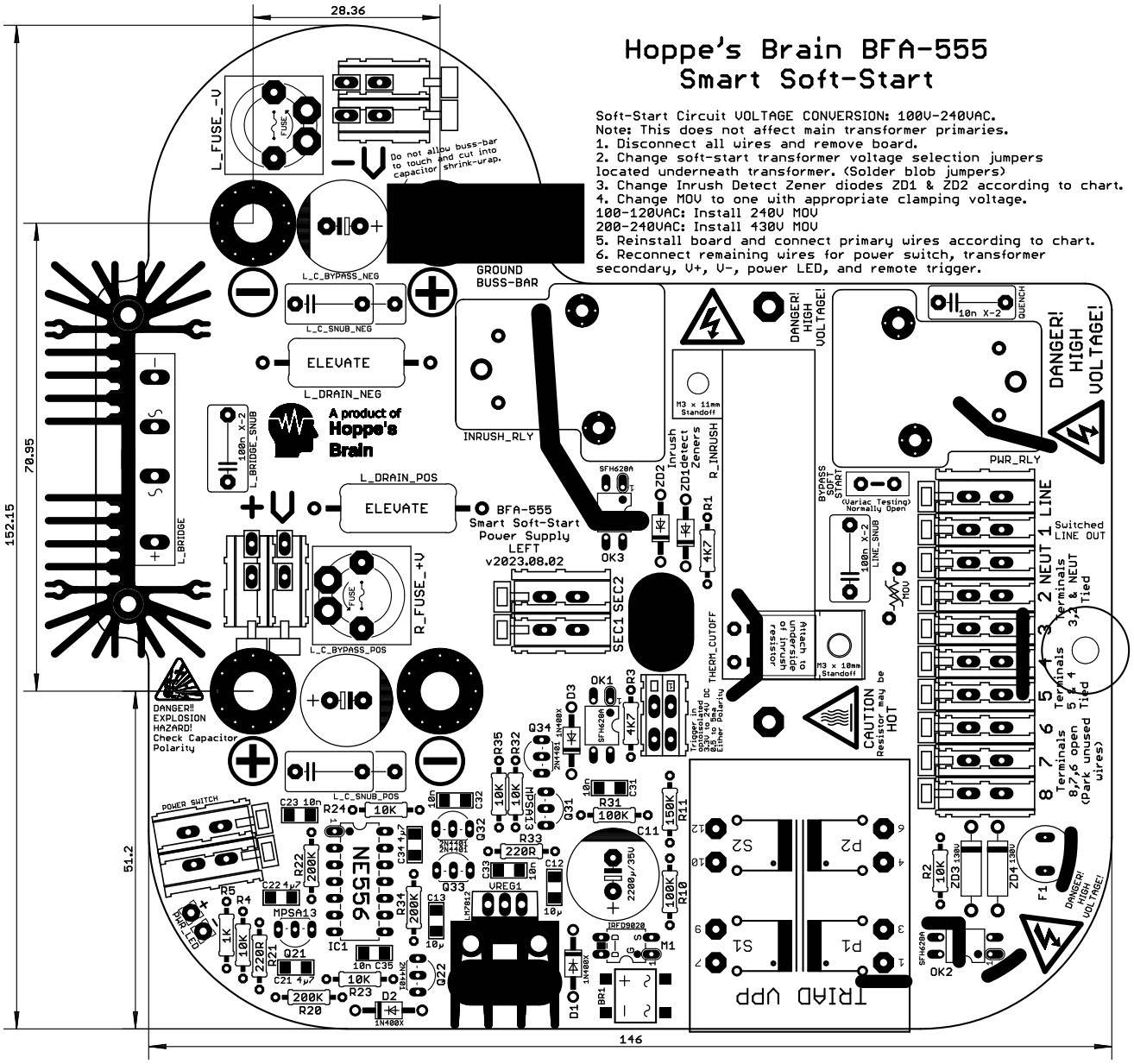
Hoppe's Brain BFA-555
Smart Soft-Start



Soft-Start Circuit VOLTAGE CONVERSION: 100V-240VAC.
Note: This does not affect main transformer primaries.
1. Disconnect all wires and remove board.
2. Change soft-start transformer voltage selection jumpers located underneath transformer. (Solder blob jumpers)
3. Change Inrush Detect Zener diodes ZD1 & ZD2 according to chart.
4. Change MOV to one with appropriate clamping voltage.
100-120VAC: Install 240V MOV
200-240VAC: Install 430V MOV
5. Reinstall board and connect primary wires according to chart.
6. Reconnect remaining wires for power switch, transformer secondary, V+, V-, power LED, and remote trigger.

RECOMMENDED POWER SUPPLY CAPACITORS:
Available from Digikey, Mouser and others.

Kemet ALS70 36,000µF $37.33
ALS70A363MF100
Best value IMO.

Vishay BC Components 101-PHR-ST 22,000µF $39.78
MAL210119223E3
Formerly Mallory brand. Excellent, proven formulation.

Original Adcom Capacitors. Free!
The original capacitors on a MK1 amplifier could be as old as 1985 and as old as 1990 in a MK2. Despite their age, most are actually just fine. I have only ever encountered a few bad power supply capacitors in Adcom amps. These capacitors, due to their large physical size, are actually under very little stress in an audio power amplifier. I would guess they are likely to last another decade or more. But you never know. The consequences of one going bad are not usually catastrophic anyway.

NOT REALLY RECOMMENDED:
United Chemicon U36D Series. (Part numbers starting with E36D.)
Mechanical clearance issue.
These are good quality, excellent value for money, and would work fine, except their terminal posts do not stick up out of the capacitor body far enough to give good clearance to the underside of the board. Pins and wires may poke into the plastic insulated wrapping. You could add washers to the posts if you really wanted to make them work.

Kemet PEH Series: Same physical clearance issue.

OTHER CAPACITORS:

If you have your own capacitors already, or want to use something other than the options listed above, they must meet these physical criteria:

Capacitors must be tall enough so that the bottom of the board clears the top of the power transformer by 11mm. This gives enough room to install the board support feet, which should be adjusted to press gently on the transformer.

Very tall capacitors may require some wires be extended to reach the terminals.

GFA-555 internal case height is 166mm.
Height of MK1 transformer is 58mm.
Height of MK2 transformer is 76mm.
If you plan to utilize the internal fuseholders on GFA-555 MK2, they will be the highest point above the board at 48mm tall. If you do not plan to utilize the internal fuseholders, or have a GFA-555 MK1, then the bridge rectifier heatsinks will be the highest point at 39mm. 2mm is sufficient clearance with the top cover.

Ergo, capacitors heights, measured from the floor of the chassis to the tops of the screw terminals must be between these values:

MK1: 68-124mm
MK2 without internal fuseholders installed: 86-124mm
MK2 with internal fuseholders installed: 86-114mm

Capacitor body diameter should be between 63.5 and 66mm, or 2.5".
Terminal spacing should be 28-28.6mm, or 1.125"
Capacitor terminal posts must be at least least 4mm high to allow clearance beneath the board. (Most are around 5-8mm.)