OUTPUT TRANSFORMER

Of course the first goal is to get your circuit running. Here are three transformer-less output options that are external to the main board and therefore easily returned to stock.

Version-1: Replaces the xfrmr with a 250-ohm resistor followed by a DC blocking capacitor (not shown but connects across pin-1 and pin-4 of J3).

Version-2: Slightly more elegant (and detailed in the schematic) is the **constant current source** - a very simple transistor circuit designed to behave as a variable impedance. The benefit of this circuit is that you can optimize theload for max headroom and use a smaller resistor (that won't get as hot).

Version-3: A very common 70-volt Line Transformer - used for multi-speaker installations and very cheap (about $5). There are multiple taps on the primary side to optimize the inductance and simulate the transformer as LOAD. Like the resistor and the current source, the signal will be at pin-4 (J3), DC blocked via capacitor and therefore unbalanced. You will be amazed that the transformer allows a voltage swing greater than the power supply rails.

One benefit of the Line tranny is that you can take advantage of the Lo-Z secondary to drive headphones. Notice the 22-ohm "build out" resistors - they keep the load within a narrow window whether headphones are connected or not. Headphones will terminate those resistors and create voltage divider - you'll be amazed how loud the phones will get. When nothing is plugged-in, the jack-normal will let the resistors terminate the transformer so it won't "ring."

Good Luck!