

# 70W Hybrid Stereo Power Amplifier

This complete high quality, low noise stereo audio power amplifier is based around the Hybrid Integrated Circuit STK4432 manufactured by Sanyo. The circuit incorporates volume and balance controls and has a maximum music output power of 55W per channel (35W per channel RMS). The circuit incorporates an on board power supply; therefore, only an appropriate transformer is required to power the circuit.

## Step-by-step Assembly

Refer to the **General Assembly Guide** included with the kit for detailed instructions on installation of each component.

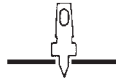
### 1 Resistors:

<input type="checkbox"/> R1, R8, R9, R14	220 K $\Omega$	Red, Red, Yellow
<input type="checkbox"/> R2, R13	390 K $\Omega$	Orange, White, Yellow
<input type="checkbox"/> R3, R12	220 $\Omega$	Red, Red, Brown
<input type="checkbox"/> R4, R15	1 K $\Omega$	Brown, Black, Red
<input type="checkbox"/> R5, R11	12 K $\Omega$	Brown, Red, Orange
<input type="checkbox"/> R6	100 $\Omega$	Brown, Black, Brown
<input type="checkbox"/> R7, R10	4.7 $\Omega$	Yellow, Violet, Gold



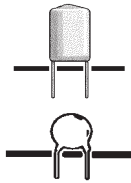
### 2 Terminals:

- Install the terminals at locations marked "A1", "A2", "L-SPK", "R-SPK", "R-IN", "G", and "L-IN".



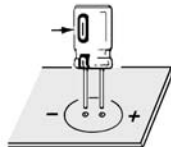
### 3 Ceramic Disc & Polyester Capacitors:

<input type="checkbox"/> C3, C14	121 / 120 pF
<input type="checkbox"/> C8, C11	224 / 0.22 $\mu$ F / 220nF



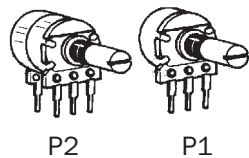
### 4 Electrolytic Capacitors:

<input type="checkbox"/> C2, C16	1 $\mu$ F / 63 V
<input type="checkbox"/> C4, C13	220 $\mu$ F / 16 V
<input type="checkbox"/> C5, C15	10 $\mu$ F / 50 V
<input type="checkbox"/> C7, C10	47 $\mu$ F / 50 V
<input type="checkbox"/> C9	330 $\mu$ F / 50 V
<input type="checkbox"/> C6, C12	1000 $\mu$ F / 35 V
<input type="checkbox"/> C1	3300 $\mu$ F / 63 V



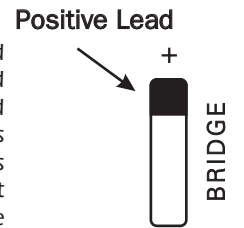
### 5 Potentiometer:

- Install the two potentiometers at locations marked "P1" and "P2".



### 6 4A Bridge:

- Install the **4A** bridge at location marked "BRIDGE". Make sure that the positive lead of the bridge (the longer lead) is inserted into the hole marked with a "+" sign as shown in the illustration at right. It is recommended to leave a space of about 3/4" (20 mm) between the bridge and the PC board for better heat dissipation.



### 7 Hybrid Integrated Circuit:

- Mount the STK4432 Hybrid IC on the heat sink so that the metallic back of the Hybrid faces the heat sink using the two screws provided. Then install the Hybrid on the PC board at location marked "U1". Make sure that pin 1 of the Hybrid (indicated with a dot on the body) is inserted in the hole marked "1" on the PC board.

## Testing

Before testing the kit, It is highly recommended to inspect the PC board carefully as explained below:

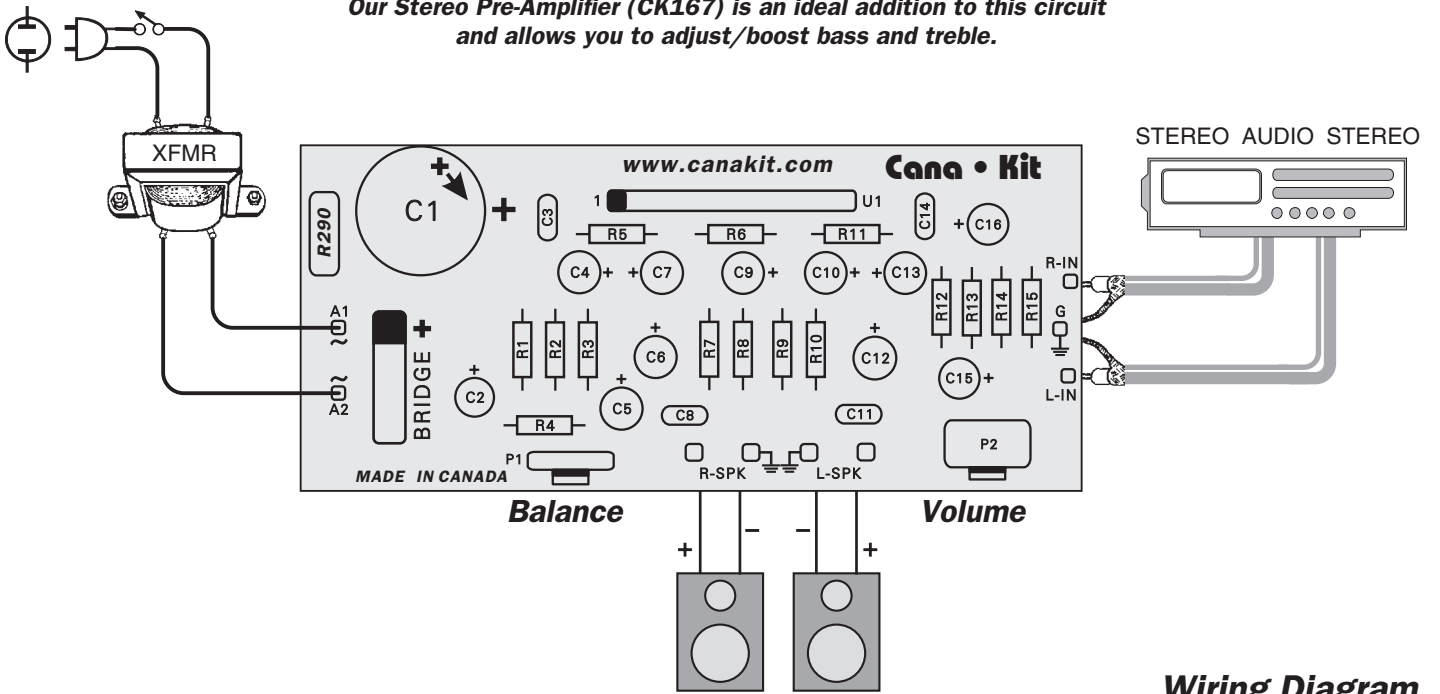
- Check for proper placement of all components.
- Check for proper orientation of electrolytic capacitors and diodes.
- Check for proper orientation of the Hybrid.
- Check for protruding leads which could touch other leads or adjacent pads.
- Check all solder connections for cold solder joints.
- Examine the PC board solder side to see that there are no solder bridges causing shorts between tracks.

Once you are satisfied that everything is correct, proceed to do the test as follows: **(Refer to wiring diagram.)**

1. Connect the outputs of a stereo audio source to the points marked "L-IN" and "R-IN". **Make sure you connect the negative or ground to the point marked "G"**. (It is recommended to use shielded wire to make these connections, connecting the shield strands to the point marked "G").
2. Connect two 30W+ speakers to the points marked "L-SPK" and "R-SPK". **Note that you must connect the negative terminals of your speakers to the terminals marked "⊥"**.
3. Turn the volume control potentiometer "P2" on its minimum position and the balance control potentiometer "P1" on its middle position.
4. Connect a 30 to 33V AC / 2 to 3A transformer to the points marked "A1" and "A2".
5. Now increase the volume control ("P2") to your desired level.

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Our Stereo Pre-Amplifier (CK167) is an ideal addition to this circuit and allows you to adjust/boost bass and treble.



Wiring Diagram

**Cana Kit**  
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Schematic Diagram