

# KIT 90. STEREO 3W AMPLIFIER MODULE

This Kit contains the essential components to build a low voltage, high power stereo 3W amplifier module using the Rohm 12V Dual Power Amplifier, BA5406. **Not included** are speakers or speaker cables. This is not only to save weight in the Kit but also because such items are often a matter of personal preference by the user. Some users may choose to spend money to buy the top quality speaker cables, connectors and speakers. While others may have all these items already in their junk box

The kit is constructed on single-sided printed circuit boards. Protel Autotrax & Schematic were used.

## Construction.

Add the lowest height components to the board first - the resistors. Be careful to get the electrolytic capacitors in the correct way around. The positive lead is marked on the overlay. The negative lead is marked on the body of each capacitor. The four MPE (metallized polyester) capacitors can go in either way around. You can use your own heatsink if less than 8 °C/W. **Never** operate the amplifier without a heatsink attached.

The following items have to be **supplied by you**:

- suitable 3, 4 or 8 ohm speakers
- suitable cables

Solder the power & audio cables direct to the pads provided on the PCB.

## Operation.

The BA5406 contains two sets of AF power amplifiers. It delivers 5W x 2 into 3 ohm loads with a 12V supply. It has minimal power-on pop noise and has immunity to supply voltage drop. It also has minimal RF radiation.

Recommended supply voltage: 515V max. Typical 12V. Ideally the power supply should be able to deliver over 2.5Amps. This means that a typical 'cheap' plugin power

supply (wall wart) will **not** be good enough. The power supply leads should be as short as possible. Quiescent current 20-70mA, typically 40mA.

COMPONENTS			
Resistors 1/2W or 1W carbon film, 5%:			
2R2 red red gold	R3 R4		2
120R brown red brown	R1 R2		2
Capacitors:			
0.22uF, 224 MPE	C1 C2 C11 C12		4
47uF/16V ecap	C3 C4 C5 C6 C7 C8		6
470uF/16V ecap	C9 C10		2
Heatsink HS-210			1
12mm screw & nut			2sets
BA5406 IC			1
K90 PCB			1

You may obtain the Data Sheet for the BA5406 from the software download page on my website

<http://kitsrus.com/soft.html>

## Web Address & Email

You can email us at [peter@kitsrus.com](mailto:peter@kitsrus.com) if you have any problems or requests. See our Web page at:

<http://kitsrus.com>

