

CLASS A PUSH-PULL CIRCUIT WITH 5-WATT RATING

The author holds that 5 watts is sufficient for high-quality reproduction in the average living room, and in a subsequent article will put forward evidence in support of this view.

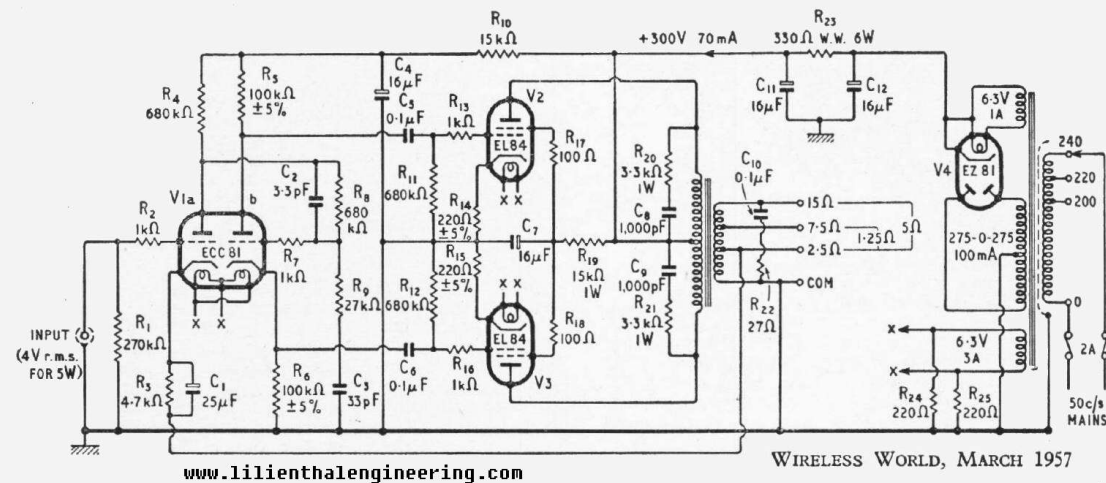
The amplifier is suitable for use with the author's gramophone and microphone pre-amplifier described in *Wireless World* for January and February 1955 or with a simplified pre-amplifier to be described later.

Output Stage.—The most expensive component in a high-quality amplifier is normally the output transformer, on which the outlay is sometimes over £5. The cost of an output transformer is dependent on many factors, but a very high ratio of shunt inductance to leakage inductance is always expensive because it necessarily involves dividing the windings into numerous interleaved sections.

In the present amplifier design, the output valves operate under pure class A conditions, and a clean high-frequency performance can consequently be obtained with quite a simple transformer, since there is no need for the leakage inductance between the two halves of the primary to be as low as is necessary under class AB or class B conditions.

By Peter Baxandall

Complete circuit of amplifier. All resistors $\frac{1}{2}$ watt 20%, except where otherwise specified. All capacitors (other than electrolytic) 20%. Mullard ECC81 may be replaced by 12AT7, Osram B309 or Services type CV455. EL84 may be replaced by Osram N709, and EZ81 by Osram U709.



Baxandall 5W amplifier, EL84PP, 1957

This amplifier is a splendid exploration into minimalistic design. It was published in WW as an “inexpensive high quality amplifier”. These were buzzwords at the time – we keep forgetting just how expensive parts were back then. Baxandall even ran it in class A in order to “remove some stress from the output transformer”. A very different approach from nowadays.

The circuit is an abbreviated Williamson and much care had been implied in order to optimize the amplifier with as few components as possible. It is still a very good bid on a low cost high quality amplifier.

Yes – it IS the very Baxandall behind the tone controls we know as “Baxandalls”.

A GREAT little small design.