

however R_e was chosen as 4.7 ohms giving $R_f = 510$ as a good compromise between gain and impedance match.

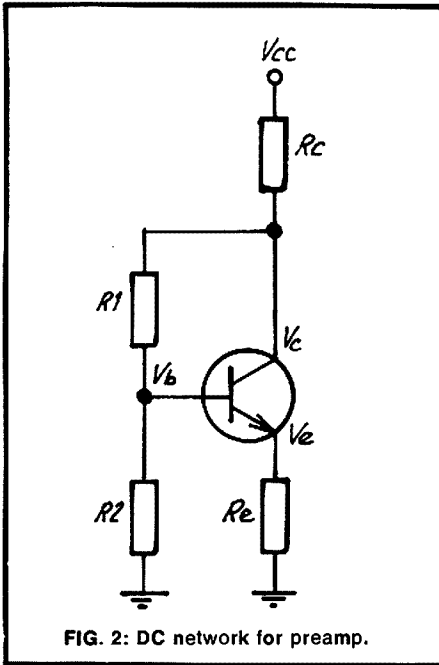


FIG. 2: DC network for preamp.

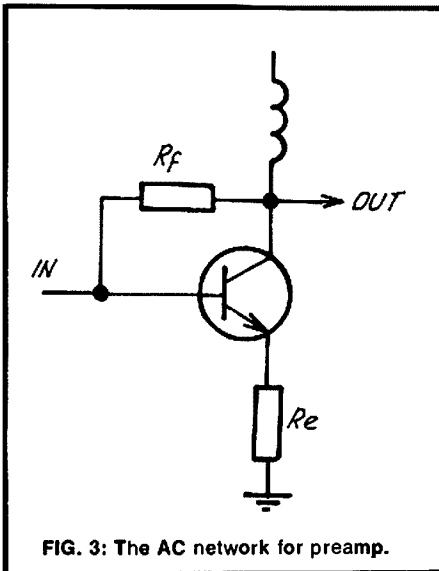


FIG. 3: The AC network for preamp.

Gain ~ 19 dB
 Input ~ 50 ohms
 Output ~ 75 ohms
 BW ~ 200 kHz — 50 MHz

The performance of this amplifier was measured using a single generator and attenuator driving the amplifier into a resistive load — however at VHF the amplifier was tried out as a preamplifier for a TV set.

Since we live in a fringe area for channel 6 and channel 8, Lismore, I was able to use these signals and a colour TV set to perform the gain measurements in the VHF region. The amplifier was preceded

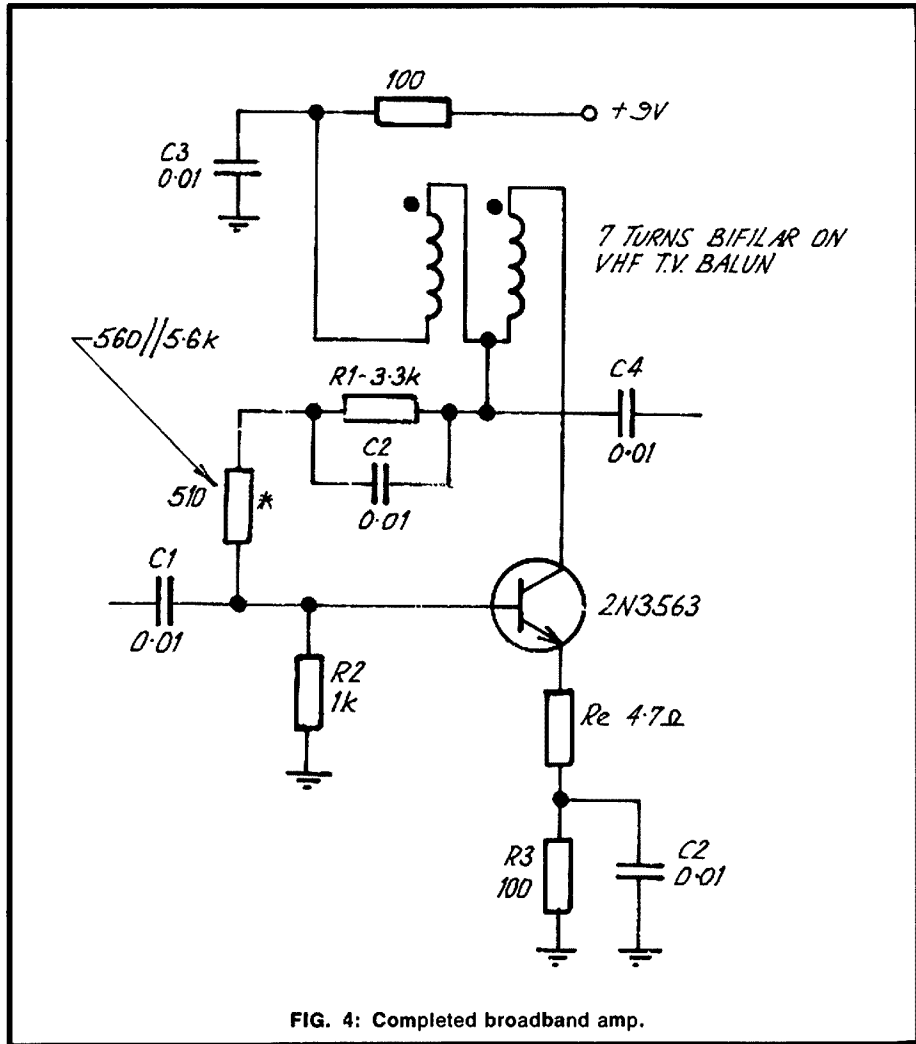


FIG. 4: Completed broadband amp.

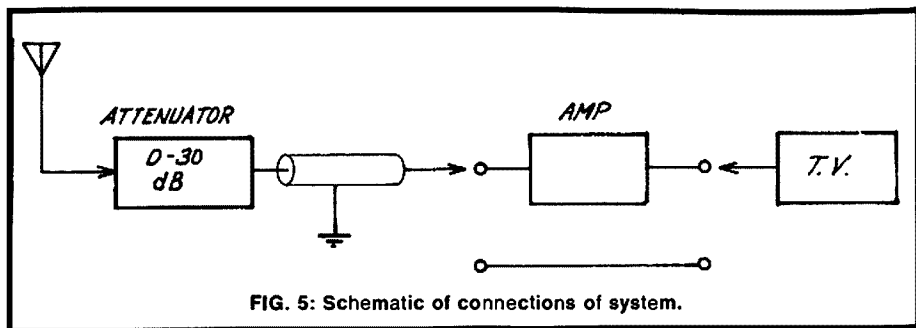


FIG. 5: Schematic of connections of system.

by a step attenuator 0-30 dB and followed by a TV set. The attenuator was adjusted for colour dropout with and without the amplifier present. (All signals were along 75 ohm coax.) This provided a rough estimate of 6 dB gain at 178 MHz and 3 dB gain at 192 MHz.

A special thanks to my father, Rev. Bruce Holland VK2ZAD, for the opportunity to use his reference library and the use of his test equipment.

Thanks also to Nathan VK2DDT for providing me with the original initiative to build the probe and amplifier.

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