

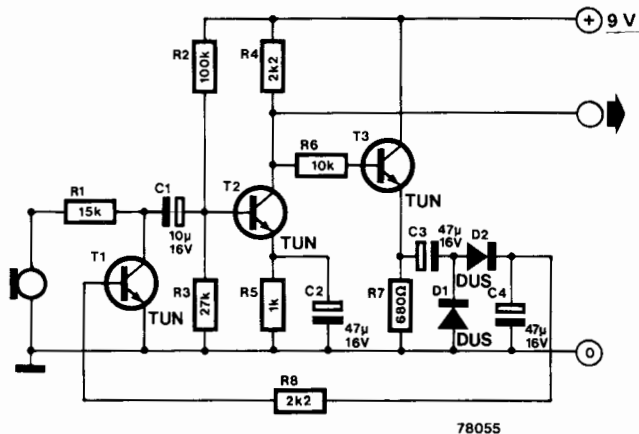
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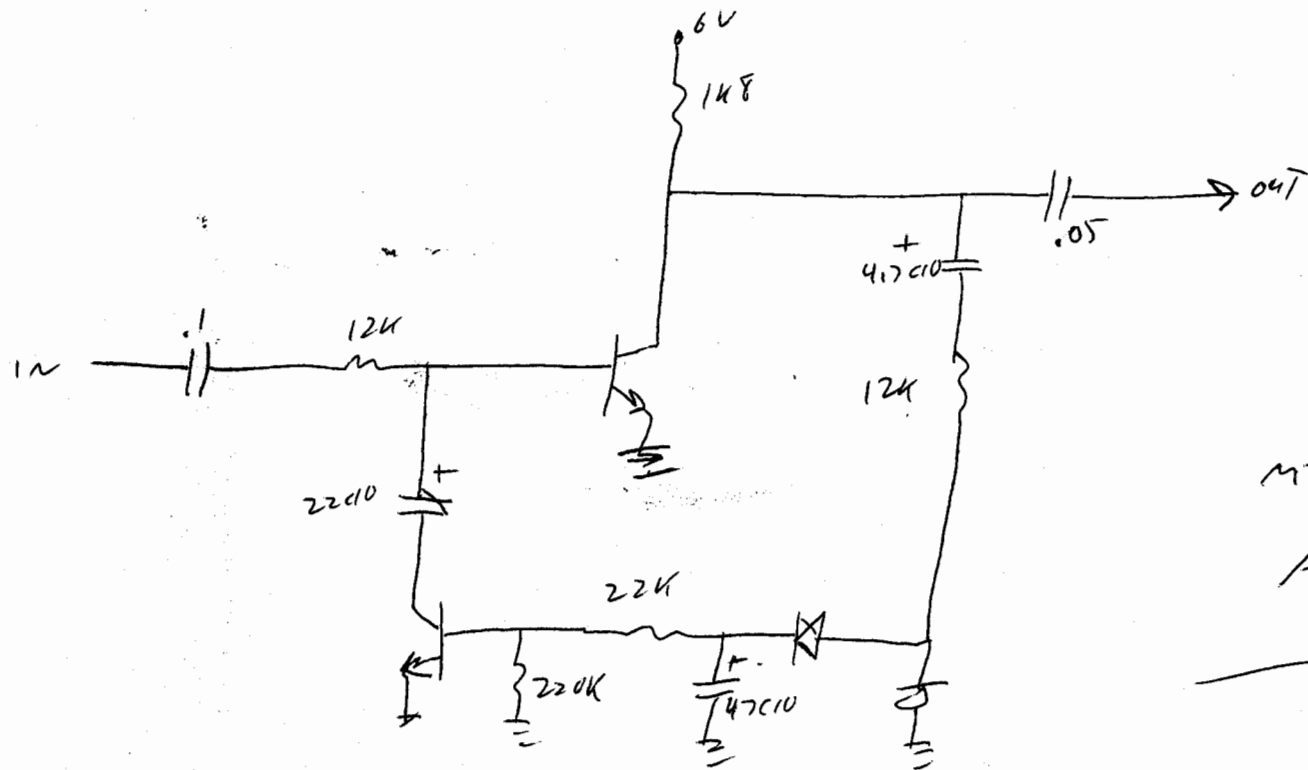
AGC microphone preamp

This microphone preamplifier incorporates automatic gain control, which keeps the output level fairly constant over a wide range of input levels. The circuit is especially suitable for driving the modulator of a radio transmitter and allows a high average modulation index to be achieved. It may also be used in P.A. systems and intercoms to provide greater intelligibility and compensate for variations between speakers (the users of those devices). The actual signal amplifier stage is T2, which operates in common emitter mode, the output signal being taken from its collector. A portion of the output signal is fed through emitter follower T3 to a peak rectifier comprising D1/D2 and C4. The voltage on C4 is used to control the base current of T1, which forms part of the input attenuator. At low signal levels the voltage on C4 is small and T1

draws little current. As the input signal level increases the voltage on C4 rises and T1 turns on more, thus attenuating the input signal. The net result is that as the input signal increases it is subject to a greater and greater degree of attenuation and

the output signal therefore remains fairly constant for a wide range of input levels. The circuit is suitable for signals with a peak input level up to 1 volt. The microphone may be replaced by a small loudspeaker for intercom use.





MTA 22

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