New MRF581A Transformer Feedback Amplifiers

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The new MRF581A transformer feedback amplifiers described here were developed for use with insensitive low impedance antennas when used with relatively insensitive receivers, and for DXing situations where a high intercept preamplifier with more than normal gain is needed. The single MRF581A amplifier at right was used with an LC tuned MW whip antenna with low impedance output together with a Grundig G5 portable radio to determine man made noise levels at remote sites. For that application a high Q inductor consisting of 54 turns of #22 enameled copper wire on an Amidon FT-82-61 toroid with a four turn link was used. For broadband antennas a push-pull implementation using two of these amplifiers is recommended in order to obtain higher 2nd order intercepts. Substituting BJT's is not recommended. Sensitivity to DC coupled man made noise was observed when using an AC-DC power supply and was subsequently eliminated by a common mode choke consisting of 30 bifilar turns of #22 enameled copper wire on an Amidon FT-114-75 or -J at the DC input to the amplifier.