70 MILLIWATT FM BUG SIGNAL BOOSTER AMPLIFIER

DO NOT MAKE THIS AMPLIFIER, IT IS ILLEGAL IN THE UNITED STATES AND MAY BE ILLEGAL IN OTHER COUNTRIES. UUE IS NOT LIABLE FOR YOUR ACTIONS IN OR OUT OF THE UNITED STATES.

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70 MILLIWATTS WILL GET YOUR SIGNAL FAR WITH THE CORRECT ANTENNA CONFIGURATION. HERE IS THE FORMULA FOR FIGURING OUT YOUR ANTENNA LENGTH:

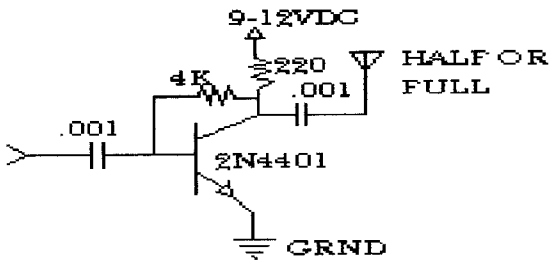
QUARTER WAVE: LENGTH IN FEET = 234 / FREQUENCY IN MEGAHERTZ
HALF WAVE: LENGTH IN FEET OF WIRE = 468 / FREQ IN MEGAHERTZ

SO: 100MHZ WILL TRANSMIT OPTIMALLY BY USING A 16 INCH ANTENNA.

THIS VERY SIMPLE CIRCUIT USES A SINGLE TRANSISTOR WITH VERY HIGH BETA AND HIGH GAIN TO AMPLIFY YOUR FM SIGNAL UPTO 70MILLIWATTS RF OUTPUT. NOTE THE SIGNAL FROM YOUR BUG MUST COME FROM THE COLLECTOR OF THE FINAL STAGE AMP OF THE OSCILLATOR AND FEED INTO A DC FILTER CAPACITOR AND INTO THE BOOSTER, NOTE THE BOOSTER HAS C1 AS A DC FILTER. YOU WILL ONLY NEED ONE DC FILTER CAPACITOR.

C1 IS EITHER .01uF OR .001uF RATED AT 20-1000V
NOTE: ALL RESISTORS ARE RATED ½ WATT.

THE INPUT VOLTAGE CAN VARY BETWEEN 9-12VDC BUT IF YOU ARE GOING TO OPERATE IT AT A CONSTANT 9VDC YOU WILL NEED TO CHANGE THE COLLECTOR RESISTOR TO 150 OHMS INSTEAD OF 220 OHMS AND CHANGE THE BASE TO COLLECTOR RESISTOR TO 3.3K INSTEAD OF 4K OHMS.



2N4401 OR MPS2222A