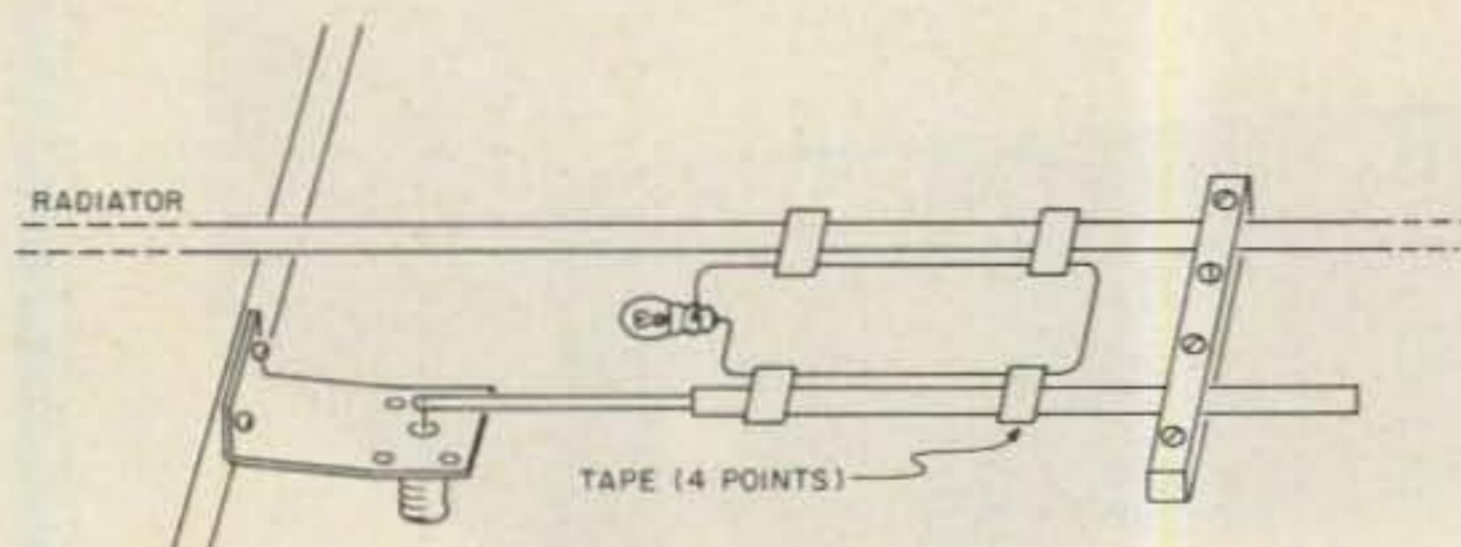
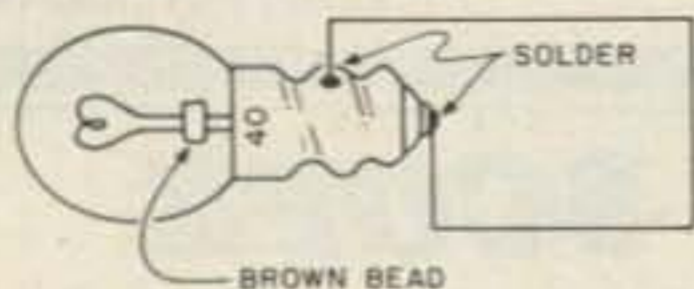


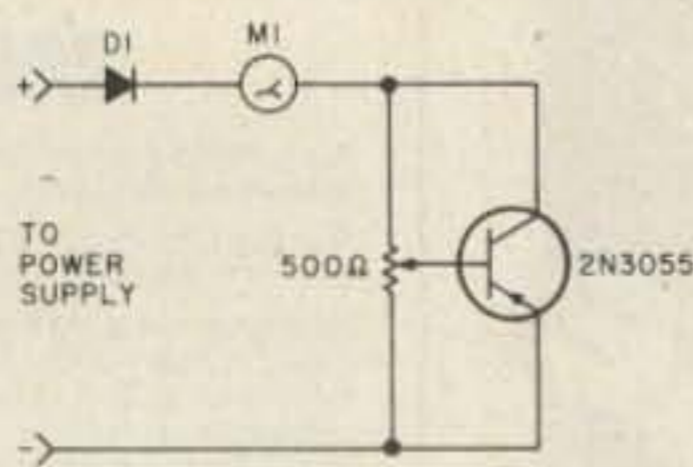
CIRCUITS

Do you have a technique, modification, or easy-to-duplicate circuit that your fellow readers might be interested in? If so, send us a concise description of it (under two pages, double-spaced) and include a clear diagram or schematic if needed.

In exchange for these technical gems, 73 offers you the choice of a book from the Radio Bookshop, to be sent upon publication. Submit your idea (and book choice) to: Circuits, Editorial Offices, 73 Magazine, Peterborough NH 03458. Submissions not selected for publication will be returned if an SASE is enclosed.



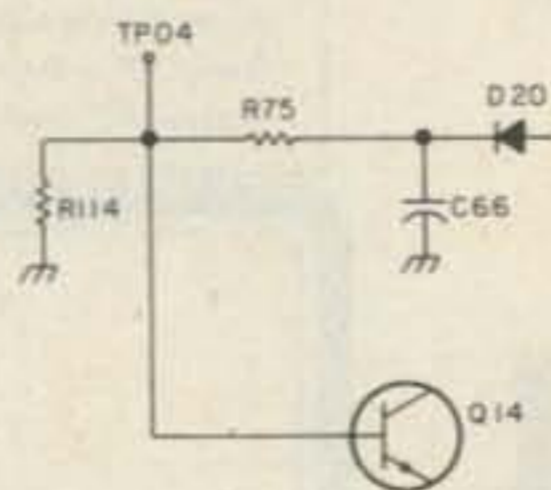
VISUAL ADJUST FOR GAMMA MATCH: In an emergency or when you don't have your swr meter handy, you can still adjust a gamma match with good results by doing the following: Make a rectangular "Hertz loop" (see diagram) by soldering a piece of solid hookup wire to a 6.3-V, 150-mA, no. 40 pilot lamp. You may use a socket if desired. The loop is the same height as the gamma and about half the width. If the exciter is QRP, it may be necessary to increase the width of the loop a bit. Fix it to the gamma with masking tape and excite the antenna with about 10 Watts (or enough power for the lamp to start to glow). Adjust the gamma for maximum brightness of the lamp. If the lamp becomes too bright, you may decrease the coupling between the Hertz loop and the gamma by bending one end of the loop slightly away from the match. Caution: Do not touch the antenna with the power on. After adjusting for maximum brightness, remove the loop and the antenna is matched. Even if you use an swr meter at the transmitter end of the scale, it may falsely indicate a perfect match with certain lengths of coax. However, if you also use the Hertz loop, it quickly verifies that the gamma is adjusted for maximum power transfer.—Jose Vicente PY2AUC, Campinas, SP, Brazil.



DUMMY LOAD FOR POWER

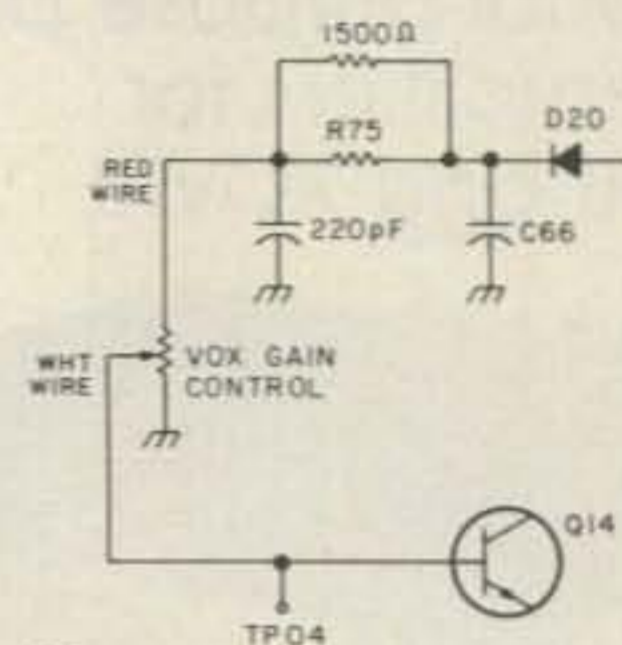
SUPPLIES: The series pass transistor is used as a variable resistor and will handle up to 15 Amperes or 115 Watts. The base bias is set by the resistor so that the conduction can be varied. The transistor will get rather hot. It must be mounted on a heat sink and should have forced cooling if heavy loading is anticipated.—Glen Delbart, APO NY.

ORIGINAL CIRCUIT



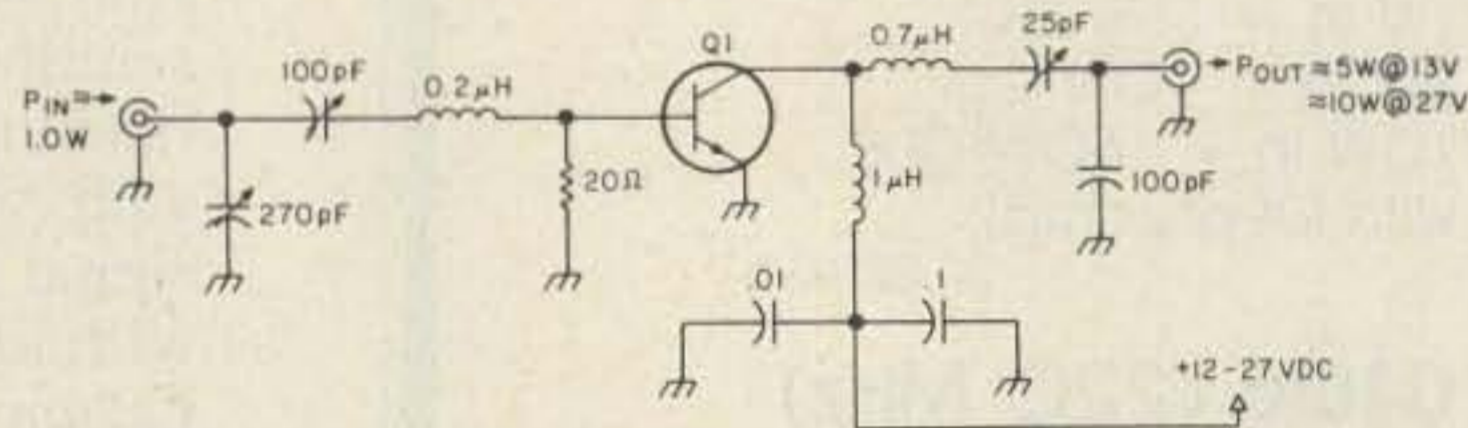
a)

NEW CIRCUIT

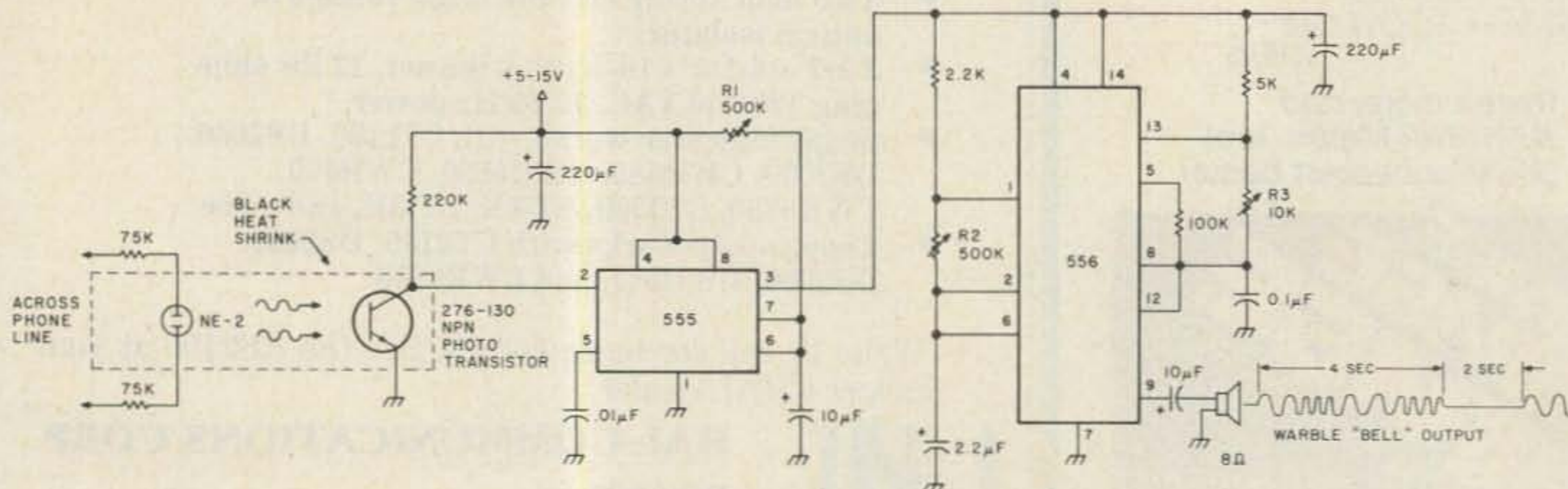


b)

NOISE-BLANKER MODIFICATION FOR THE YAESU FT-707: Fig. (a) is the original circuit in which full gating is used. Fig. (b) shows the new circuit which employs variable gating on Q14, improving the suppression of ignition noise. I had no need for the VOX control, so I disabled it and used the potentiometer for the noise-blanker gate control. Results were very good; adjust the control until the ignition noise and strong adjacent signals disappear.—Carl Weihe W5NLB, Tulsa OK.



SIX-METER AMPLIFIER: This class C six-meter amplifier produces a respectable signal when driven with about one Watt from a military GRC or PRC FM transceiver or a conventional amateur transmitter. The CB transistor operates only slightly warm with two square inches of heat sink. The Q of the output network is 7 when operated at 13 volts. The input network Q is 3.5.—Al McKenna WB6BSP, Healdsburg CA.



ELECTRONIC PHONE BELL: The speaker emits a distinctive warble tone when ring pulses are applied to the phone line. Use this circuit as a remote bell or disconnect the phone's ringer for direct use. R1 adjusts the duration of the output; R2 and R3 control the tone's duty cycle and frequency. The transistor is a general-purpose NPN photodevice. The neon bulb and transistor are coupled with the heat-sink tubing to form an optoisolator.—John Mairs AA4DX, Springfield VA.