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QST Issue: Sep 1977

Title: QRP with the HW-12

Author: Dale Hunt, WB6BYU

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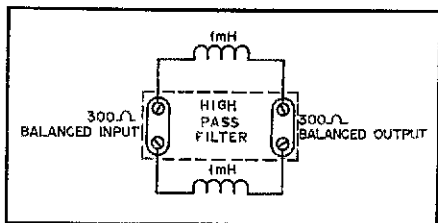
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Modification of a high-pass TV filter for use with a vhf/uhf amplifier.

ANOTHER TVI HINT

I have a high-gain transistorized vhf/uhf amplifier located at the antenna for my TV system. With a high-pass filter at the input of this amplifier, fundamental overloading was still evident when operating my transmitter on any band higher than 40 meters. While I wanted to install a high-pass filter on the output of the amplifier, that was not practical since the leads from the amplifier carried 60-Hz ac.

My alternative was to place two Miller no. 4652 1-mH rf chokes across the high-pass filter as shown in the diagram. This arrangement permitted the installation of the filter at the output of the amplifier and at the same time the ac power could be passed to the amplifier. Troublesome rf interference was then adequately controlled. — *John C. Pelham, W1JA*

ADDITIONAL RF CONTROL FOR THE DRAKE R-4C

Fingering the little metal rf-gain lever on the Drake R-4C receiver is troublesome at times for persons with large hands. This problem may be avoided by installing an extra gain control. No drilling is necessary nor is there any other mechanical work that would mar the appearance of the unit. The new control may be installed in place of the headphone jack. Low-impedance phones may then be plugged into the speaker jack.

For the new control, obtain a Mallory U-19 Midgetrol with a resistance of 10 kΩ and a no. 2 taper. If this control is not available locally, it may be ordered from Newark Electronics, 500 N. Pulaski Rd., Chicago, IL 60624. The part stock number is 9F088.

To install the control, remove the top and bottom covers of the receiver. Turn the preselector fully cw or ccw. Pull off all knobs. Loosen the headphone-jack nut and remove the front panel. After disconnecting the headphone jack, solder the ground wire of the disconnected leads to the nearest ground. The two remaining leads are soldered together and covered with a small sleeve of spaghetti.

Cut the shaft of the U-10 potentiometer so that it extends 1/2 inch from the beginning of the threaded portion. Insert the potentiometer in the hole for the headphone jack. A 1/8-inch spacer should be used when the potentiometer is fastened in place. Next, remove the leads to R54 (the rf gain control). This potentiometer is the front unit of the dual gain control. The leads are connected in a similar fashion to the new control. Reassemble the receiver and the work is done. — *Klaus Doering, DL1RK*

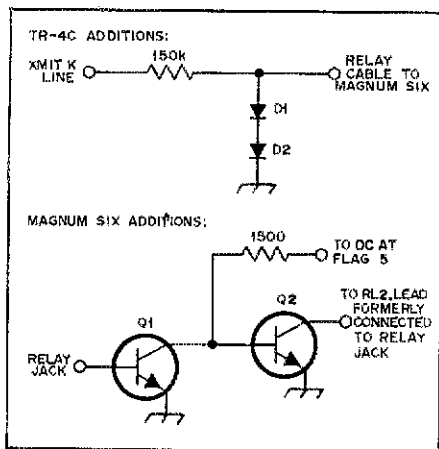
THOSE SMALL DRILLS

In QST for January, 1977, Glenn Jacobs suggested the use of a sewing machine needle for drilling small holes. I believe this method is impractical and potentially dangerous. Well stocked hobby shops and hardware stores have drill bits as small as No. 60 (0.04 inches diameter) and even No. 80 (0.0135 inches diameter). These are usually priced at less than a dollar. — *James Donohue*

IMPROVING THE TEMPO ONE S-METER CIRCUIT

Pinned S-meters during warm-up and poor meter sensitivity are two problems that I have experienced with several Tempo One sets that I have owned. This modification eliminates the initial pinning when the power is turned on and provides a greater meter movement to aid in pointing a beam antenna in the best direction for a weak signal.

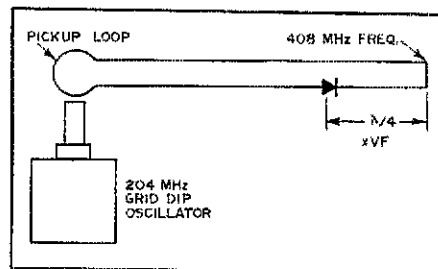
To make the circuit changes, remove R151 (47 kΩ). A lead is then connected between the zero control, R105, and the cathode of the audio output tube, V101 (6BM8). It is convenient to solder the new lead to the foil that originally connected R151 with R105. Remove R145 (330 ohms) and replace it with a jumper. After allowing the set to warm up, adjust R105 for zero meter reading with no signal input. Then set the sensitivity control, R104, for S9 + 40 dB while receiving a very strong, preferably local signal. — *Lyle T. Dysinger, W2JVO/WR4AYM*



A simple way to avoid an extra relay when using a Magnum Six with the Drake-TR-4C.

ELIMINATING RELAY WHEN USING THE MAGNUM SIX

When installed with certain transmitters, the Magnum Six speech processor requires an external relay for send/receive switching. This transistor switching circuit eliminates the need for the extra relay when the Magnum Six is used with the Drake TR-4C. A similar circuit could be used with any transmitter that keys a transmitting tube cathode. — *Mark Mandelker, K6BE*



This circuit extends the tuning range of a grid-dip oscillator.

EXTENDING GRID-DIP-METER RANGE

My interferometer radio telescope is designed to operate on 408 MHz. That is beyond the range of my grid-dip oscillator. I overcame this handicap (the upper limit of the GDO is 250 MHz) by inserting a 1N914 silicon diode in a length of 300-ohm Twin Lead at a point from one end determined by multiplying 1/4 of the wavelength of the desired frequency by the velocity factor. The procedure provided the necessary frequency doubling by means of which I was able to set the GDO to 204 MHz and get an indication at 408 MHz.

Other amateurs may find this idea useful for checking other frequencies beyond the range of a GDO by multiplying by 3 or a higher number. — *John McGhe, WA3YWX*

A SOURCE FOR NICADS

Tired of replacing "flashlight" style cells in equipment that uses this type of battery? Then pay a visit to the photography department the next time you're in a big discount store. NiCad replacements are available for the more popular sizes such as AA, C and D, along with holders that permit them to be connected to a single charger. (Cells are also available without holder.) Similar products are sold by large electronic outlets such as Radio Shack.

While the cost of such cells is not low (approximately \$2.50 apiece), the convenience of having the proper supply voltage at all times is worth the added expense. Also, in equipment that gets heavy usage, the initial cost of a rechargeable system is made up in a very short time. — *K1FM*

QRP WITH THE HW-12

Owners of Heathkit HW-12 transceivers who want low-power output for driving a transverter or running QRP will find this method simple and easily reversible. Remove both 6GE5 final-amplifier tubes. Plug the antenna into the receiver antenna jack. With the antenna connected in this manner the driver output is fed to the antenna through L3 which serves as the driver plate-load circuit and the receiver rf amplifier input coil.

An additional harmonic filter, however, should be provided. Avoid overdriving the stage, inasmuch as the alc circuit is disabled. This is a convenient way to keep on the air if your HW-12 final amplifier tubes blow out or if there is a failure in your high-voltage supply. — *Dale Hunt, WB6BYU*