

M61-1-1

THE "BARGAIN BASEMENT" - By Leonard Hyde

A few simple modifications for the Autek QF-1.

A Pilot Light - Obtain an LED. The color doesn't matter, use your favorite. Take the cover off your QF-1. Drill a hole in the front panel, just above the word "NOTCH". The hole should be a tiny bit larger than the diameter of the LED. If you have one of the plastic LED bushings, drill the hole to accept it. Either way, the LED should fit snugly. Press in the LED from the rear of the panel. Use a drop of glue if needed. Now, solder a 1000 ohm resistor to one of the LED leads. This prevents the LED from burning out. One of the LED leads will connect to a black diode mounted on the circuit board. The other goes to ground. I hooked the ground wire under the nut securing the transformer. (See diagram.) Make the hook-ups, and turn on the unit. The LED should light. If it doesn't, you have to reverse the two wires. Now, it should work. If it still does not, you have a bad LED. If the LED is too dim, reduce the value of the resistor by 100 ohms, in steps until the LED is of proper brightness. Now it is much easier to tell when the QF-1 is on.

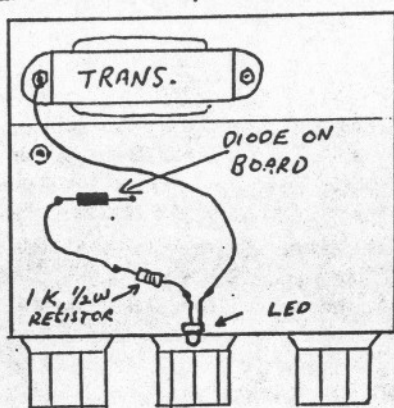
"Straithru" operation - This simple addition allows your headphones to stay ON when the QF-1 is turned OFF. No more unplugging the input cable from the rx each time the unit is not used. You need a DPDT toggle switch to replace the SPST power switch in the QF-1. Obtain from junk equipment, or Radio Shack. Their part # 275-652 has a black paddle lever that makes an attractive replacement. Remove the outer nut from the old switch, and pull it out of the panel from the rear. (We assume you unplugged the unit first, hi!) Clip the old leads off flush with the switch body. Wire the switch as shown in the diagram. Mount the switch. There is not a lot of room, so you may have to mount your switch so that the toggle moves side to side. A small price to pay for the benefits reaped. Try the unit. If all is OK, the unit should work normally with the switch in the ON position. With the switch OFF, the headphones should be on with the unprocessed audio from the rx. If not, check your wiring. Be careful not to cross the POWER side of the switch with the AUDIO side, or you could end up with fried headphones, QF-1 and rx! To say nothing of your ears if you had the headset on!

A Simple RF Preamp - This preamp will boost the signal from any loop or wire. It has been very helpful while using my loop with the DX-440, as it eliminates the need for an indirectly coupled loop. It did not work for my car rx, which has more RF gain than needed anyway. Most well designed rx and loops NEED no preamp. It does help the DX-440, though, which might say something about the set. If you feel you can use more gain, try it. Both transistors are available at Radio Shack for less than \$1 each. NOTE - If you use a wire, you MUST include the coil and capacitor. The amp will not work without them. With a loop, the loop itself is the coil, and it's tuner the variable capacitor.

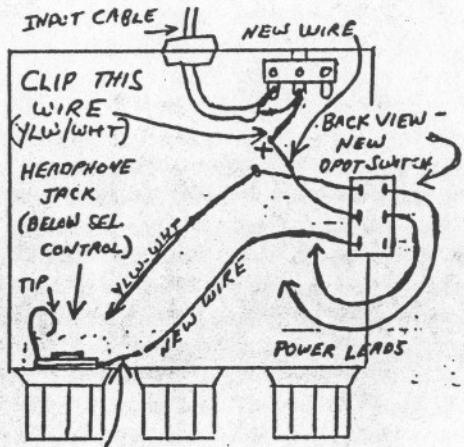
A Simple Longwave Tuner - If you have tried the DX-440 on longwave with a wire, you probably found that you got loads of stations, most of them belonging in the shortwave range! This tuner will solve the problem. Obtain a ferrite bar, size not critical, but at least 5 to 6 inches long, preferably round. Old rx a good place to look. Wind the bar with about #20 enameled wire, once again not critical but not too fine or too large. The wire should be close wound, leaving about 1/2 inch at each end of the bar unwound. Coat the bar with white glue, to secure the wire, and let dry thoroughly. Find a piece of strap iron, or other springy metal strip. It should be at least 5 inches long for a six inch ferrite bar. Put the strap in a vise, longways, and bend it into a shallow "V" shape. (See diagram.) Glue or otherwise mount the ferrite bar to a board, as shown. Ditto the strap, using a screw and a washer. The strap will swivel so as to travel the length of the bar. Mount the strap so that it makes contact at both ends of the bar. The strap should swivel freely, but have sufficient down pressure to make firm contact with the bar. Now, use very fine sandpaper to LIGHTLY sand away the glue and wire enamel along the top of the bar. Don't overdo it! Also sand the bottom of the strap where it will make contact with the bar. A good electrical connection is a must! Wire the unit as shown. By sliding the strap up and down the ferrite bar, you will find a place where the longwave signal will peak. This tuner should work with any rx, down to about 200 kHz or so, depending on the length of your wire. Lower freqs require more bar and wire, and a better way to move the shunt up and down the bar. A good ground is a MUST with the DX-440.

73 for now de LLH.

QF-1 FROM TOP W/ COVER OFF

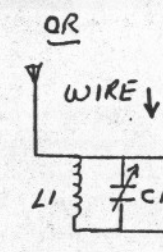
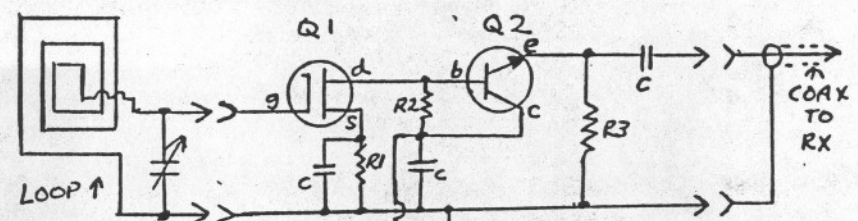


FRONT



CONNECT TO "TIP" LUG ON JACK

A SIMPLE PREAMP



- C - .05 pf, 100 V
- R1 - 1,000 ohms, 1/2 w.
- R2, 3 - 4,700 ohms, 1/2 w.
- Q1 - 2N3819 (RS # 276-2035)
- Q2 - MPS 2222A (RS # 276-2009)
- *C1 - 365 pf. variable - (see text)
- *LI - loopstick or BCB antenna coil - (see text)

A SIMPLE LONGWAVE TUNER

