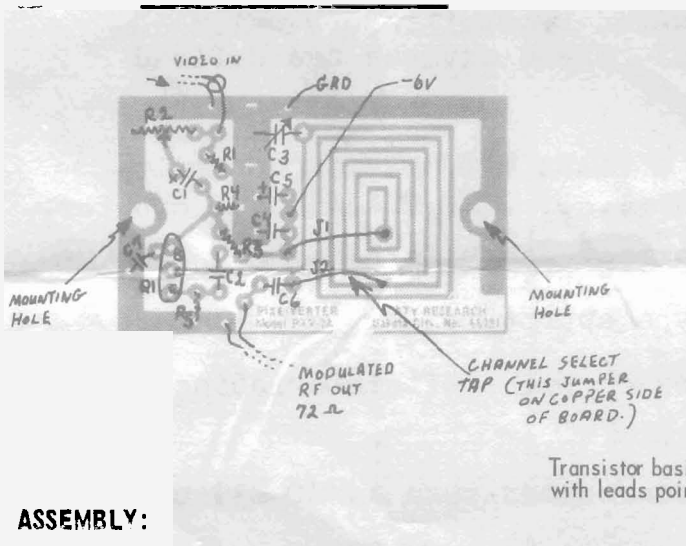
PIXE-VERTER INSTRUCTIONS

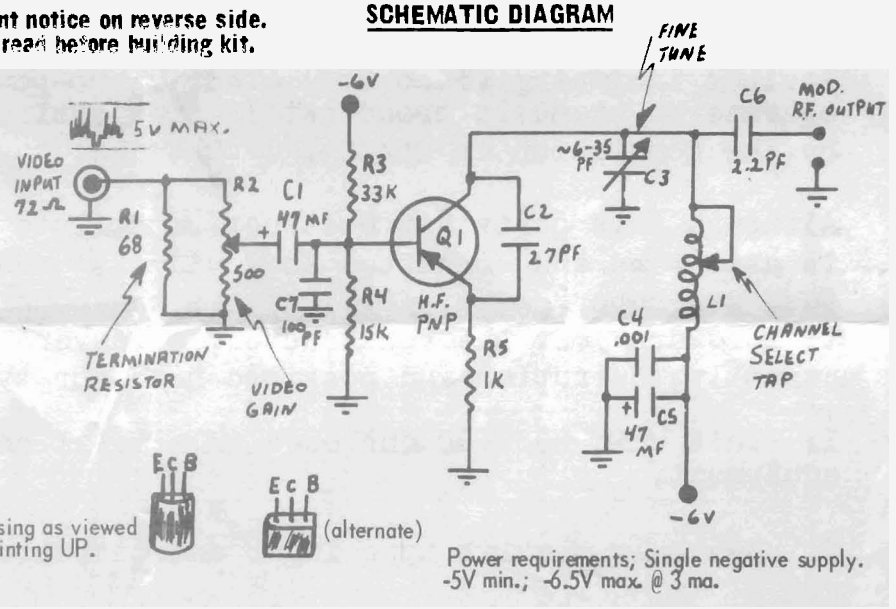
IMPROVED KIT #PXV-2A

PRINTED CIRCUIT LAYOUT
(viewed from copper side)



Important notice on reverse side. Please read before building kit.

SCHEMATIC DIAGRAM

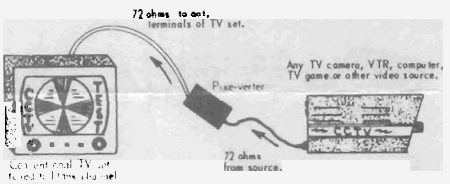


ASSEMBLY:

1. Insert all components on the P.C. board as shown in the layout. Jumper bridge #1 goes on the component side of the board. Jumper #2 goes on the copper side but raised up from the copper foil approx. 1.16" to prevent shorting out the coil. All resistors mount vertically. When soldering be sure to use a low wattage iron. Apply enough heat for good flowing but do not dwell on the joint for more than 5-10 seconds otherwise component damage could result. (Jumpers are made from remaining pigtails of components. See step #2 below.)

2. Clip off all pigtails close to the board. Recheck for possible solder shorts between copper foil points.

3. Jumper #2 is a tap adjustment for coil L1. It is used to set the pixe-verter to the approximate TV channel between 2 and 6. Generally it will solder on the second turn of L1 for channels 2 ugh 4 and on the third turn for channels 4 through 6. Individual component variations will asionally result in slightly different settings. Fine tuning is accomplished with C3. Depending on the channel you have selected temporarily solder it to one of the two points mentioned above.



4. The Pixe-verter is now ready to be mounted in your existing camera, VTR or to the back of your TV receiver...or in a separate mini-type box of its own. Once this has been completed connect the video input, RF output and battery leads to their appropriate external points. NOTE: Due to low current requirements the Pixe-verter can be battery operated if desired, however in most applications low voltage can be obtained from existing power sources. When it is necessary to connect to a voltage higher than 6V use a series dropping resistor to maintain the correct voltage. This is essential for proper oscillation and modulation alike, as well as to prevent damage to the components.

This completes the wiring. Before applying power check once again for any possible shorts, rosin solder joints, correct component placement, polarity of electrolytic capacitors, etc.

TUNE-UP PROCEDURE:

5. Connect the 72 ohm output from your TV camera (etc.) via coax cable (RG-59/U or equiv.) to the video input of the Pixe-verter.

6. Connect the output of the Pixe-verter to any TV receiver via standard RG-59 U coax cable. NOTE: If desired, a 72 ohm to 300 ohm matching transformer can be used at the antenna terminals of the TV receiver however numerous tests have shown this to be unnecessary for most applications except the most critical. On AC/DC sets, for safety purposes, it may be desirable to not make direct connections to the antenna terminals. In these cases a single turn loop (gimmick) between the center lead of the coax and the antenna input (one side only) is usually sufficient.

7. Apply power to the Pixe-Verter, video source and TV receiver and allow a few minutes for everything to warmup. With the video gain set to maximum and the TV receiver set to the desired blank channel begin adjusting C3 for best picture. Reduce video gain control R2 if necessary to prevent overmodulation (bleeding whites).

8. Readjust the camera and Pixe-Verter for optimum performance. This completes the Tune-up. If you are working with a camera or VTR that has exceptionally low video output or if your TV receiver lacks contrast it may be necessary to raise the value of the 68 ohm termination resistor slightly for increased p-p input signal. DO NOT INCREASE IT BEYOND 150 OHMS since quality will suffer considerably on some systems. Should you experience clipping of either blacks or whites in the televised picture try varying the value of R4 slightly while monitoring the results on the receiver.

:PXV-2A 11 19 74
Revised 12 76

13TH & BROADWAY

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* * * * * IMPORTANT NOTICE. READ BEFORE BUILDING THIS KIT * * * * *

For many years the Federal Communications Commission has controlled the generation of electrical interference which interfered with communications. On Oct. 1, 1970, the FCC initiated further control over many types of RF devices including video modulated, micro-powered RF oscillators which operate on standard broadcast TV frequencies. These devices are defined by the Commission as CLASS 1 TV DEVICES.

Although this parts kit does not constitute a CLASS 1 TV DEVICE until it is assembled and connected to a video source (i.e., VTR, TV camera, computer, test generator, game, etc.), it is the considered obligation of this company to forewarn you, the constructor, of several important points concerning assembly, operation and possible need for type approval.

1. This unit MUST BE enclosed in a metal box or built within existing shielded equipment.

2. Use only coaxial type input and output connectors such as SO-239 or BNC.

3. Use only shielded type coaxial cable for connecting to the input and output.

4. Do not operate on a power source greater than 6 volts.

5. NEVER LEAVE THE ANTENNA CONNECTED TO THE TV SET WHEN USING THIS UNIT.

NOTE: To qualify for FCC type approval you will need an antenna changeover switch with at least 60 db attenuation.

6. When initially setting up the unit, be sure to conduct RF radiation tests (using another TV set) throughout your house and grounds. If you are in a congested area such as an apartment complex, be sure to check with local neighbors also. Cease operation at once should interference be present until the problem can be rectified.

7. If this unit is to be used for other than your own private, R/D, experimental, servicing or similar type work, or if it is to be sold, leased or advertised for sale or lease in the ASSEMBLED form in conjunction with a video modulation source, it must have an FCC type approval. Type approvals are not currently being granted to RF oscillators without the video source being attached. Filing requirements, fees, etc can be obtained from the FCC, Washington, D.C.

These kits have been on the market for over 10 years with a perfect record for not causing interference when properly assembled and operated. Protect the rights you have as a home builder of electronic kits. Do not jeopardize our freedom for building and operating micro-power devices. Should you not follow the above mentioned engineering standards and are found to be causing interference you will be requested by the Federal Communications Commission to stop using your unit or correct the problem at once. Thank you for your cooperation.

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