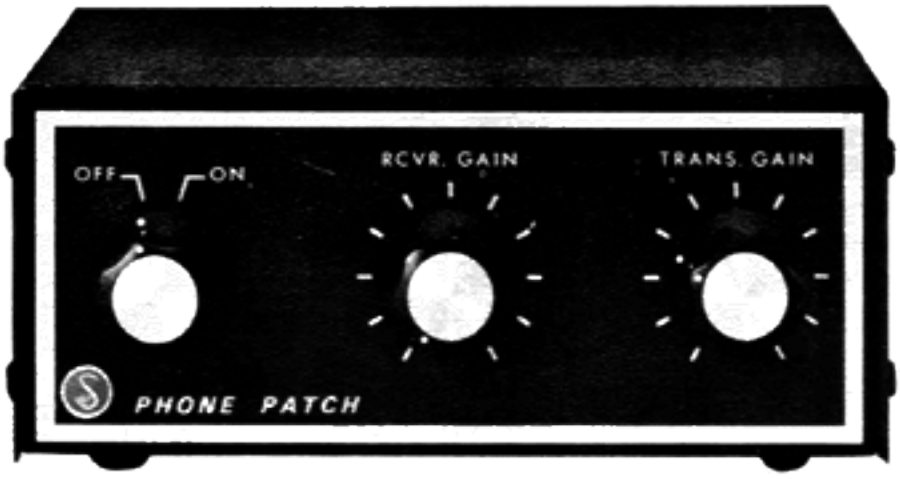
SWAN HYBRID PHONE PATCH



The Model FP-1 Phone Patch is designed to connect a radio receiver and transmitter, or transceiver to a telephone so that the party on the other end of the telephone line can listen and talk over the radio circuit. The Unit is designed specifically to connect easily and quickly to any of the Swan Transceivers, although it can also be used with other transceivers, or with separate receivers and transmitters.

SPECIFICATIONS:

1. "Line" Input Impedance . . . . . 600 ohms
2. Speaker Impedance . . . . . 3 - 4 ohms
3. Receiver Output Impedance . . . . . 3 - 4 ohms
4. Microphone
   (Low Level Output) . . . High Impedance
5. Phone Patch Output
   to Transmitter . . . . . High Impedance
6. Mic. Jack: 3 circuit, Phone Jack Type, 1/4 inch diam.
7. Mic. Plug: 3 circuit, Phone Jack Type, 1/4 inch diam., matches all Swan Transceivers. Includes Press-To-Talk Circuit.
8. Panel Controls: (a) ON-OFF Switch, (b) Receiver Gain, controls volume level of signal going from the radio into the telephone. (c) Transmitter Gain, controls volume level of signal going from the telephone into the transmitter.
9. Rear Control: "NULL" adjustment. Important only during VOX operation. Keeps the received radio signal from tripping the VOX. Factory set, should not require adjustment.
10. Dimensions: 6 in. wide, 2-1/2 in. high, 4-1/2 in. deep.

The FP-1 is a hybrid telephone design, which means that it may be used with VOX, (automatic voice controlled transmit) as well as with manual transmit control. Connections with the Transceiver and telephone have been organized so that once it is installed there is no need to plug or unplug the microphone or cables when using or not using the Phone Patch. The regular station microphone plugs into the back of the Phone Patch, while the shielded cable with plug coming from the phone patch plugs into the Mic. Jack of the Transceiver. When the Phone Patch is turned "OFF", the microphone is connected to the Transceiver for normal operation. When the Phone Patch is turned "ON", the telephone becomes the microphone. However, the press-to-talk switch on the station mike is still operative, and so is still used to switch from receive to transmit, unless VOX is being used.

INSTALLATION:

The pictorial illustrates how the FP-1 connects to a Swan Transceiver. A two foot length of three conductor cable is provided for connecting the Phone Patch to the speaker in the 117XC power supply. It may be helpful to remove the mounting screws which hold the AC supply chassis in place, and move it back a few inches to make it easier getting at the Phone Jack and speaker terminals.

Run a 2 conductor line to the Telephone Junction Box, as shown. This may be a 2 conductor "Zip" cord of the type commonly used for AC line cords, or similar. Do not disconnect the three leads going to the telephone instrument. Simply loosen the terminal screws having green and red leads on them, and add the new leads. There is no need to observe polarity. Spade lugs soldered to the leads will be helpful.

OPERATION:

1. Set the Phone Patch controls to "OFF", and full counterclockwise position.

2. To set the "RCVR. GAIN" control, call a friend on the telephone and ask him to monitor. Tune in a signal on the receiver, and set the receiver volume control for normal volume. Then switch the Phone Patch "ON", and slowly turn the "RCVR. GAIN" up until the radio signal is approximately average telephone volume. **Do not exceed this level,** as cross talk to other telephone circuits will result, along with complaints, and possibly a visit from the telephone company. Always keep RCVR. GAIN set for just average telephone volume. Remember that turning the volume control on the radio receiver up to a higher level will also increase it on the telephone line, so reduce RCVR. GAIN on the Phone Patch accordingly.

3. Turn the Phone Patch to "OFF", and check transmitter tuning. Make certain that MIC. GAIN on the transmitter is set correctly for your station microphone. Before switching the Phone Patch "ON", call a friend on the telephone for cooperation in setting TRANS. GAIN to the correct position. Then switch the Phone Patch "ON" and have the person at the other end of the line speak as you advance the TRANS. GAIN control. Set it for recommended meter swing on the Transmitter.

4. If VOX is not being used, you will still use the press-to-talk switch on your station microphone for switching to transmit mode. You can hold the telephone handset in one hand to monitor the conversation, and use the other hand for manual switching as the parties say "OVER".

5. If VOX is used, first adjust RCVR. GAIN and TRANS. GAIN on the Phone Patch as outlined in steps 2 and 3. Then adjust the VOX controls for proper voice controlled operation.

OPTIONAL SPEAKER CONNECTION:

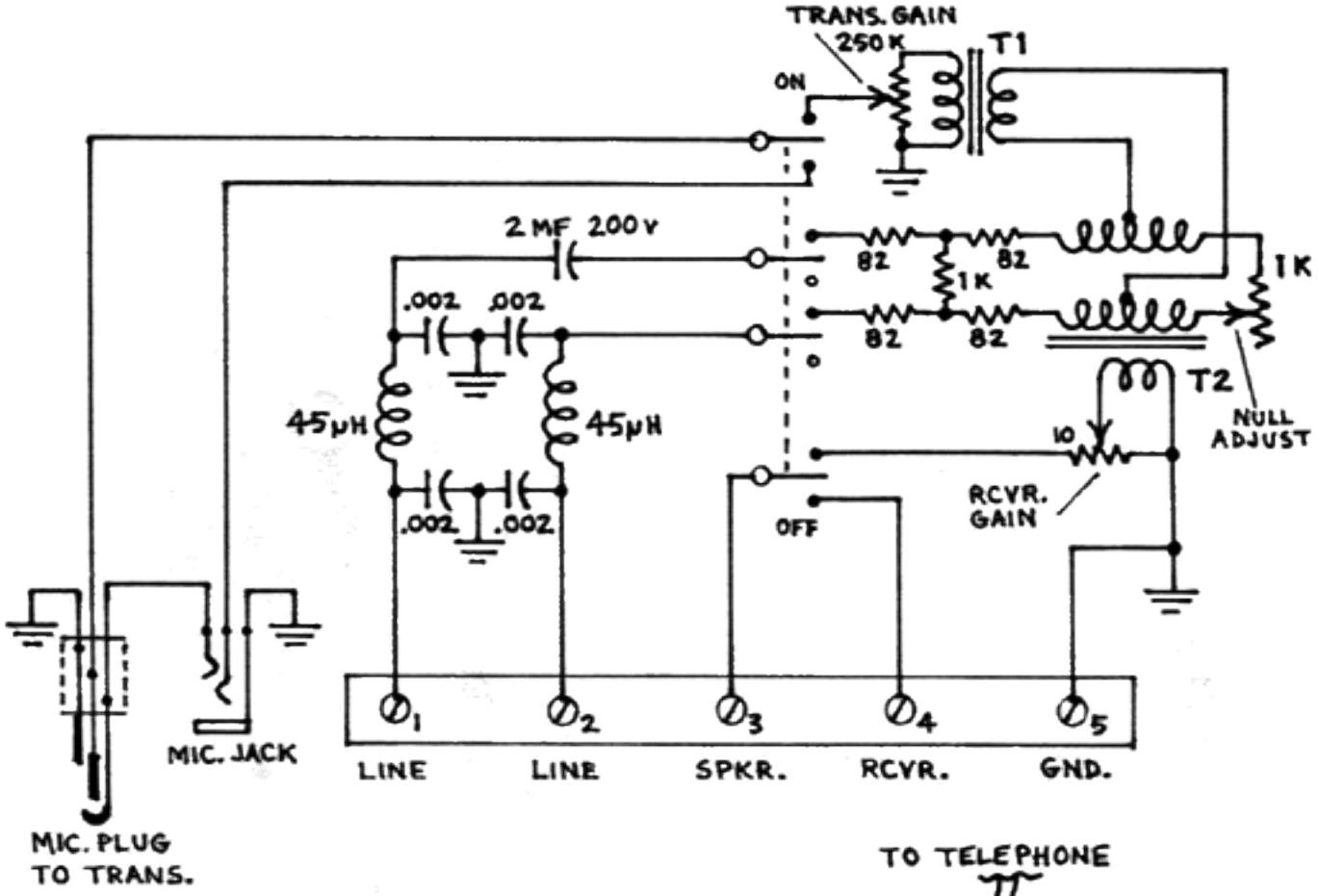
In the normal installation shown in the accompanying pictorial, the loud speaker is disconnected from the receiver when the Phone Patch is turned on. Thus, the operator must listen with the telephone handset to hear the radio signal. Sometimes it may be desireable to have the speaker still connected, for instance, if other people in the ham shack wish to hear what is going on. This can be done by simply connecting a wire jumper from the SPKR. terminal to the RCVR. terminal on back of the Phone Patch. These terminals are numbered 4 and 5. The other leads from the 3 conductor cable remain as shown. If desired, a SPST switch could be connected to these terminals so the speaker can be switched on or off as required.

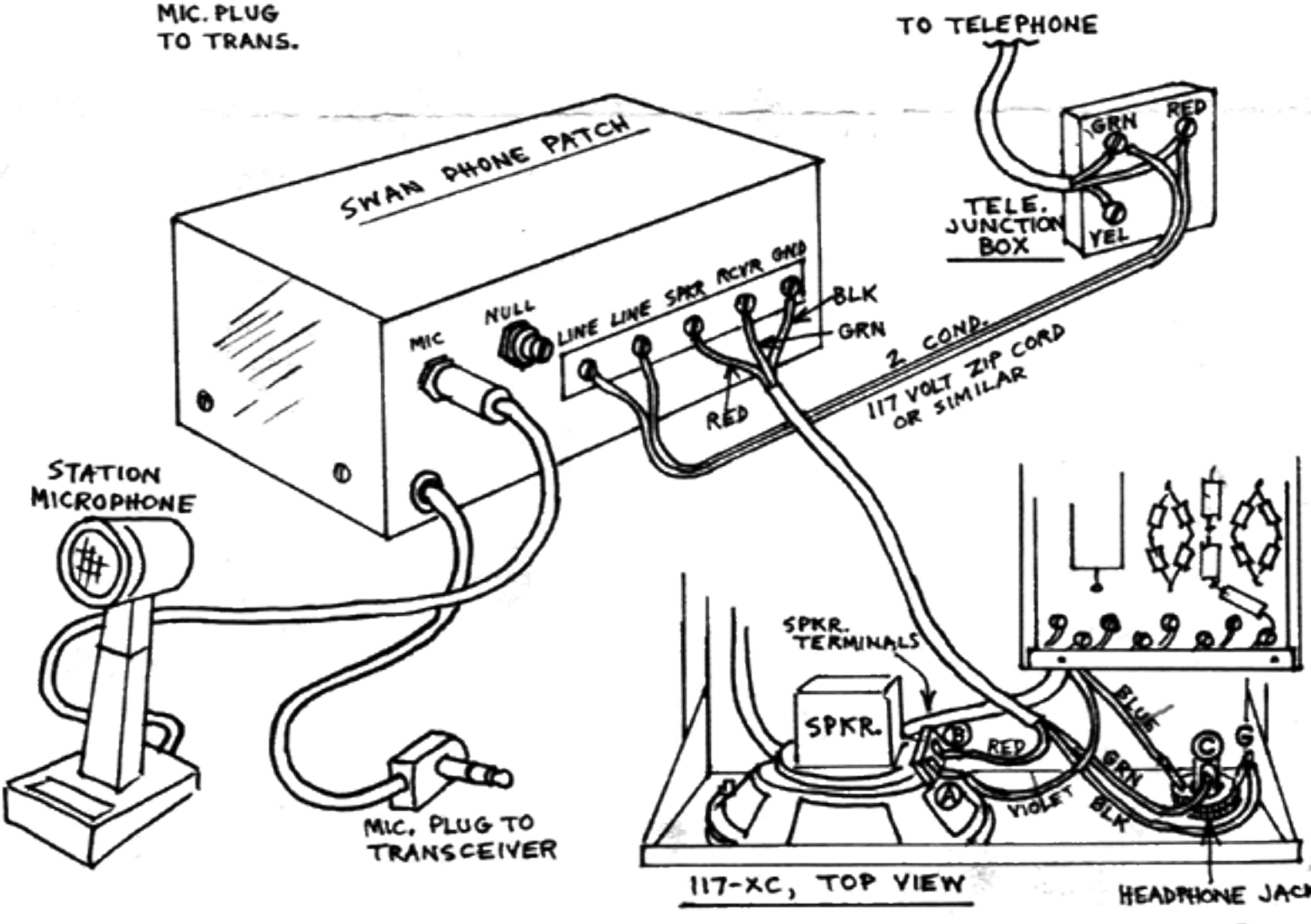
Note that the voice coming over the telephone line will not be heard over the speaker, but will only be heard in the telephone handset, and over the transmitted signal.

"NULL" ADJUSTMENT:

The "NULL" adjustment is located on back of the Phone Patch, and has been factory set for a 600 ohm telephone line. Normally there will be no need to change this setting. It is important only when VOX, (voice-operated-transmit), control is used, and incorrect setting of the NULL adjustment will cause signals coming from the radio receiver to trigger the VOX circuit. If this occurs, try moving the NULL adjustment in small increments until the problem ceases.

In order to make exact NULL adjustment instead of using the cut and try method, the following procedure may be followed:
Connect a VTVM across the secondary winding of transformer T1. This is accomplished most easily by connecting across the TRANS. GAIN control. Note that one end of this potentiometer is grounded and the other end connects to a green wire going to T1. (a) Set the VTVM to the 2.5 or 5 AC volt position. (b) Tune in a CW carrier on the radio receiver with approximately 1000 cycle tone. (c) Call a friend on the telephone, and ask him to stand by while you make the NULL adjustment. (d) Switch the Phone Patch to "ON", and turn "RCVR. GAIN" up to where the 1000 cycle tone from the radio comes through the telephone at normal telephone volume. (e) Adjust the "NULL" control for minimum meter reading.





REMOVE WIRE LEAD GOING FROM TERMINAL Ⓑ TO Ⓒ. THEN CONNECT RED TO Ⓑ, GREEN TO Ⓒ, AND BLACK TO G, THE GROUND LUG.

8-12-68

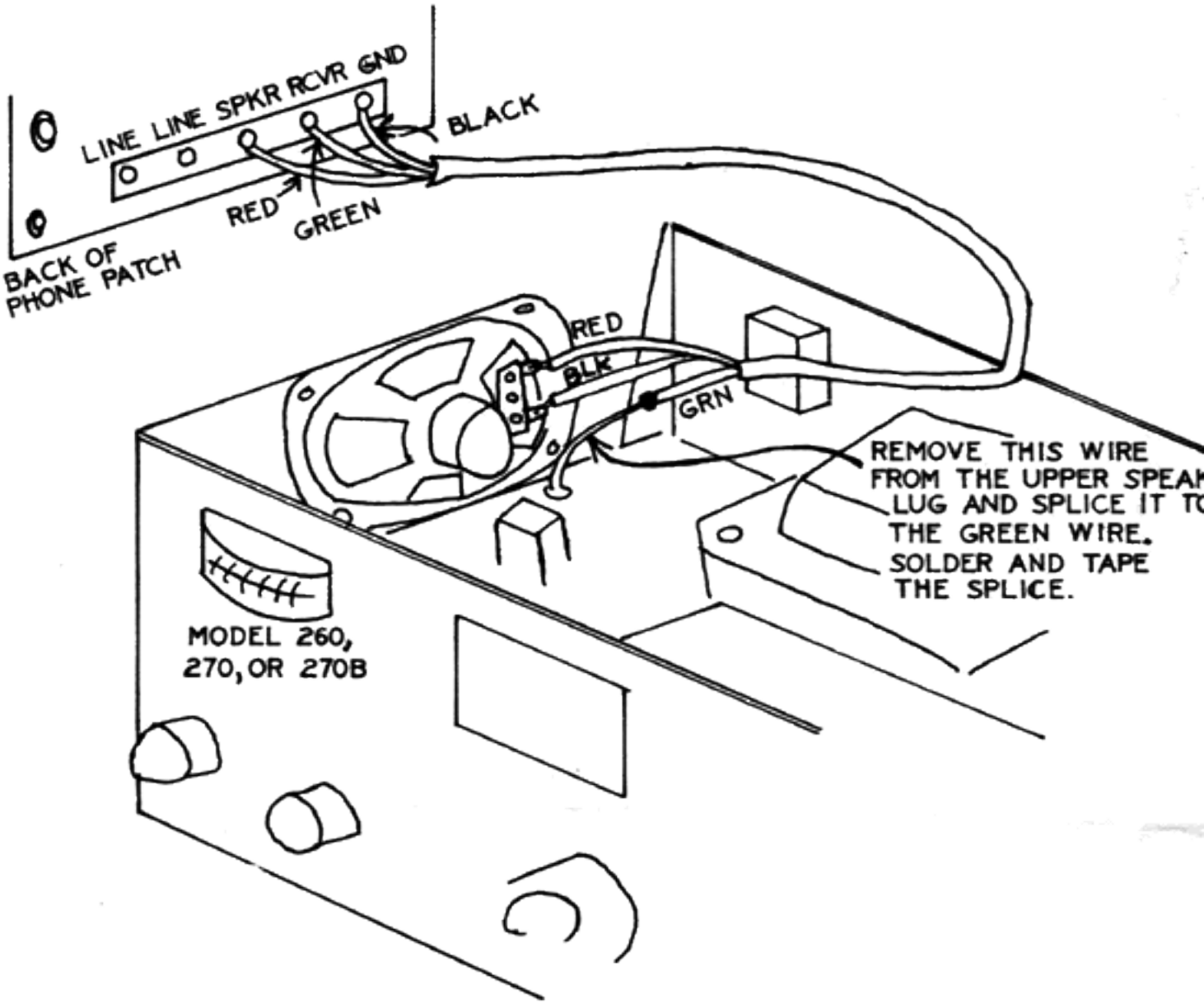


ILLUSTRATION OF PHONE PATCH CONNECTION TO MODELS 260, 270, 270B

WARRANTY POLICY

SWAN ELECTRONICS CORPORATION WARRANTS THIS EQUIPMENT AGAINST DEFECTS IN MATERIAL OR WORKMANSHIP, EXCEPT FOR TUBES, TRANSISTORS, AND DIODES, UNDER NORMAL SERVICE FOR A PERIOD OF ONE YEAR FROM DATE OF ORIGINAL PURCHASE. THE WARRANTY IS VALID ONLY IF THE ENCLOSED CARD IS PROPERLY FILLED IN AND MAILED TO THE FACTORY WITHIN TEN DAYS OF DATE OF PURCHASE. DO NOT SHIP TO THE FACTORY WITHOUT PRIOR AUTHORIZATION. THIS WARRANTY IS LIMITED TO REPAIRING OR REPLACING ONLY THE DEFECTIVE PARTS, AND IS NOT VALID IF THE EQUIPMENT HAS BEEN TAMPERED WITH, MISUSED OR DAMAGED.