



- (✓) Straighten the leads on each transistor, if necessary, so that they extend straight away from the body. Now install each transistor in its proper socket, using Pictorial 5 as a guide. Observe the spacing of the leads and socket holes and press in with straight and steady pressure. Long-nose pliers may prove useful in confined spaces.

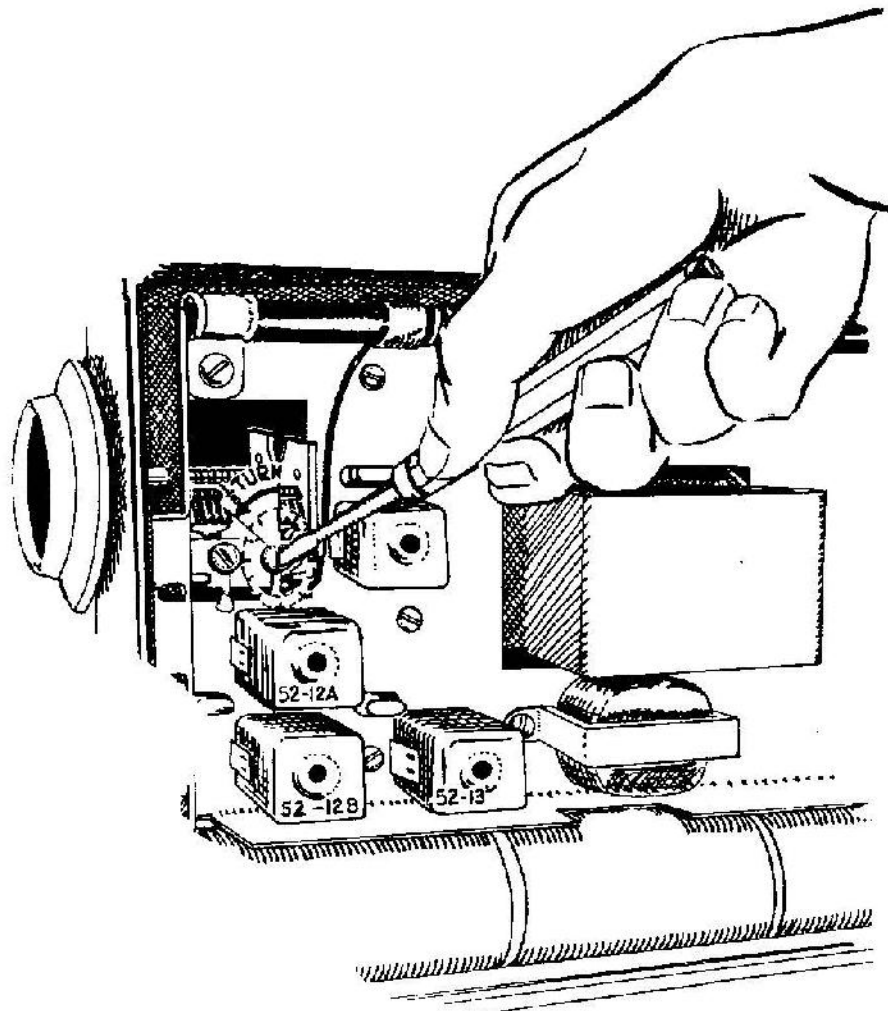
### ADJUSTMENT PROCEDURE

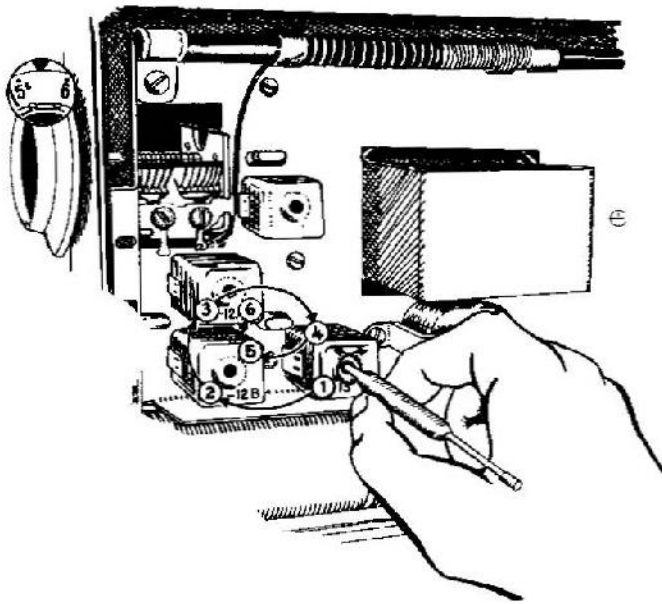
Double check the installation of batteries and transistors before attempting to operate your XR-1 Transistor Receiver. Errors could cause non-operation or damage to components in the receiver. When reasonably sure that no errors exist, turn on the receiver by rotating the VOLUME knob to the right until a "click" is heard. Advance the control until a slight rushing sound or static is heard. If no sound is heard, turn the receiver off and refer to the section "In Case of Difficulty." If operation appears normal, you may proceed with the adjustments required to obtain maximum performance.

Read each step completely before performing the operations described.

#### STEP ONE

- A. Turn BOTH adjusting screws on the variable capacitor down snugly without forcing.
- B. Loosen EACH screw about 1/8 turn.





## STEP TWO

This procedure will adjust the I. F. amplifiers for maximum gain.

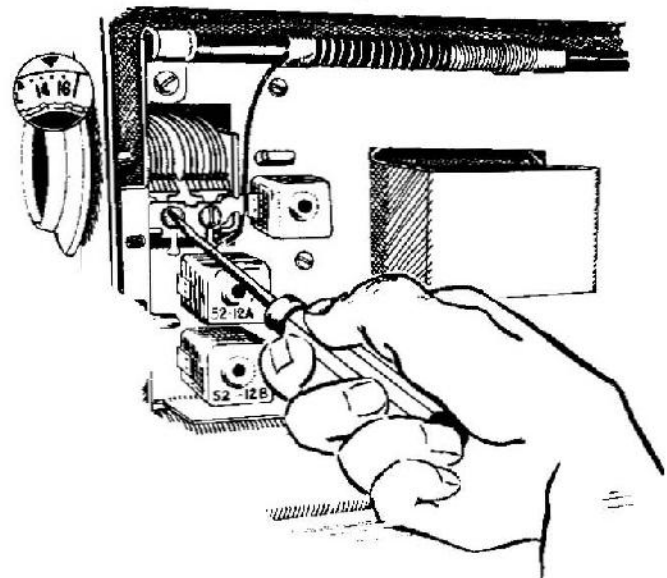
- A. Tune in any station near the low frequency end of the dial.
- B. Using the tool provided, carefully turn the internal adjustment of transformer 52-13 left or right to obtain maximum volume. Now adjust 52-12B and 52-12A in a similar manner. Repeat the procedure.

## STEP THREE

This step will adjust the oscillator circuit so that the dial will indicate properly the station frequencies.

- A. Set the dial to the **FREQUENCY** of a station in your location broadcasting on the high frequency end of the dial, 1400 KC or higher if possible. Refer to the radio column of your newspaper to ascertain the correct frequency and broadcasting schedule. \*
- B. Adjust the screw nearest the panel end of the variable capacitor to receive the reference station. This adjustment is critical and must be done very carefully. Do not disturb the dial setting while performing this step. Another operating radio may prove helpful in identifying the chosen station as several stations will probably appear while turning the screw.

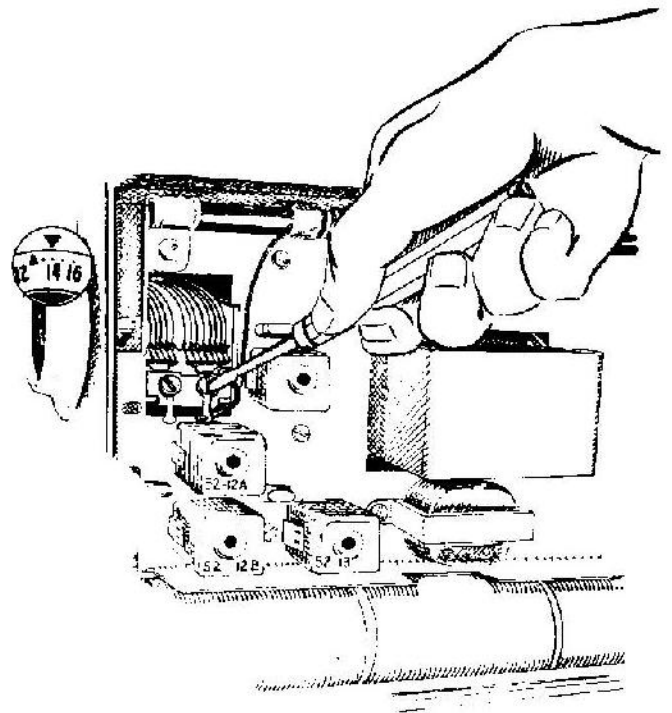
\* The illustration has assumed a station frequency of 1500 KC. Be sure to set the dial to the frequency of your own local station.



#### STEP FOUR

This step will adjust the signal and oscillator circuits to 455 KC separation at the high frequency end of the dial.

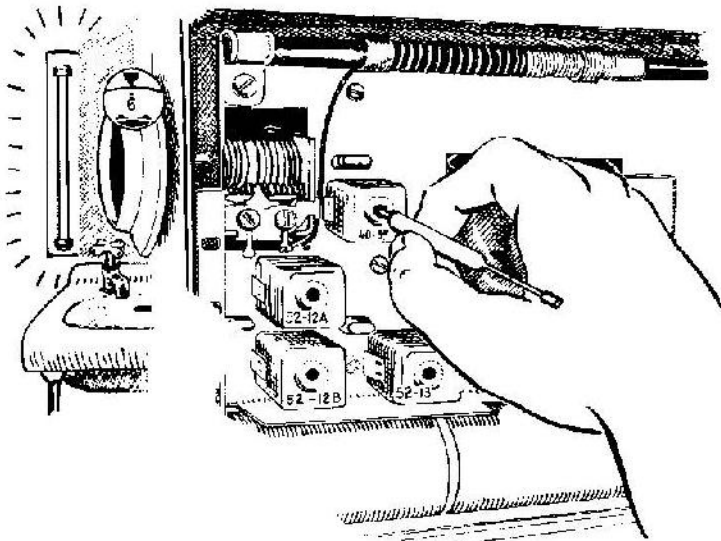
- A. Tune in a weak station in the vicinity of 1400 kilocycles.
- B. Adjust the screw on the large section of the variable capacitor to obtain maximum volume.



#### STEP FIVE

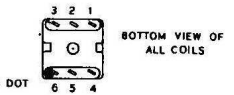
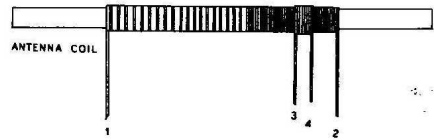
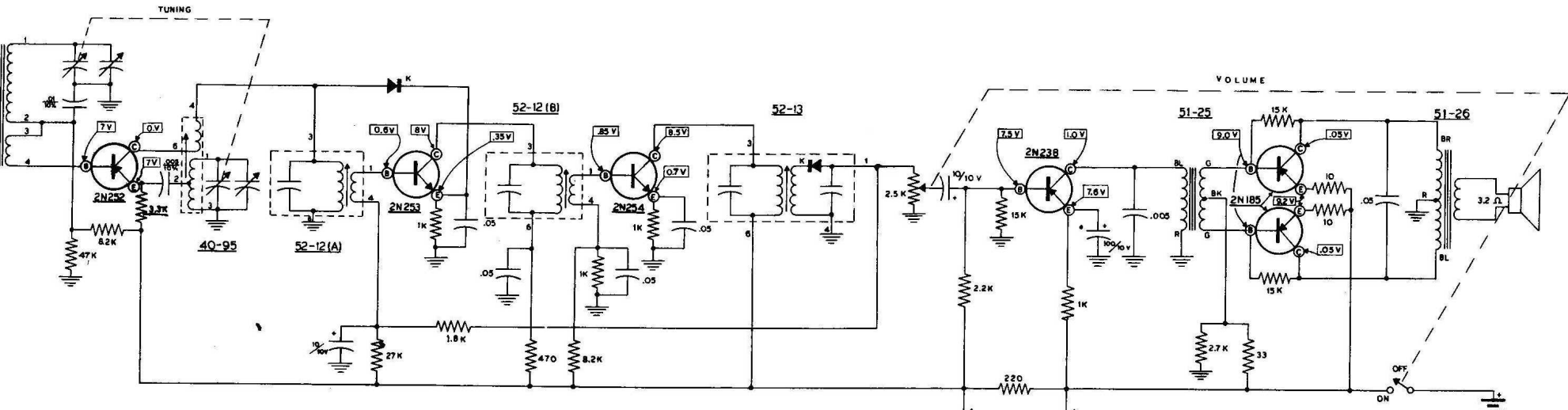
This step will adjust the signal and oscillator circuits to 455 KC separation at the low frequency end of the dial.

- A. Turn on a source of "noise" such as a fluorescent lamp, electric shaver or a mixer.
- B. Place the receiver near the noise source so that the static will be heard. Tune the dial to approximately 600 KC but not to a station.
- C. Adjust oscillator coil 40-95 to obtain maximum noise volume. If a station should appear during this adjustment, slightly retune the dial so that only the noise will be heard. Make the adjustment with the dial as close to 600 KC as possible without interference from a station.



#### STEP SIX

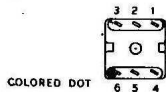
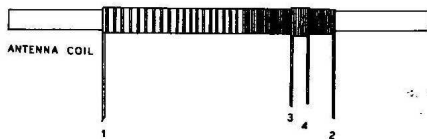
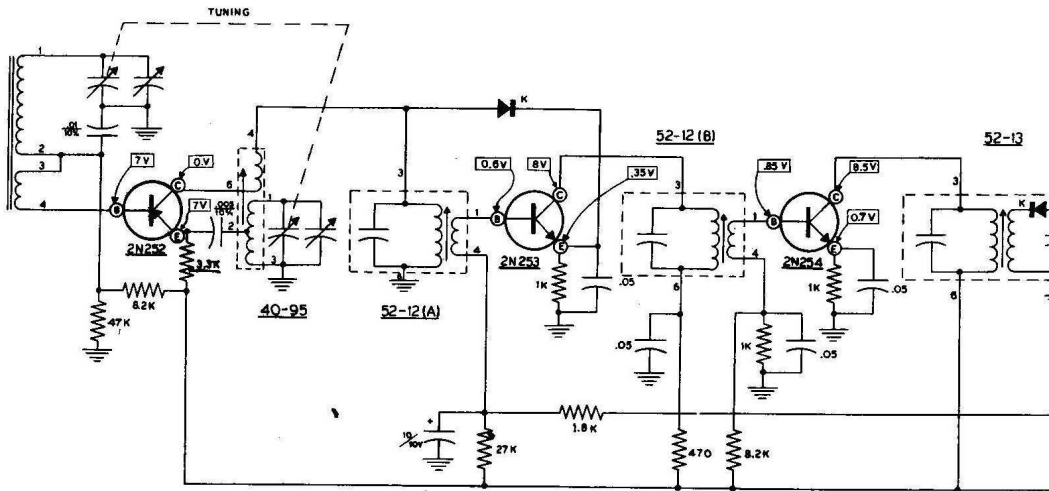
Since the adjustments tend to interact slightly, repeat Steps 3, 4, and 5 to obtain best results.



ALL RESISTORS 1/2 WATT  
 ALL CAPACITOR VALUES IN MFD  
 All voltages measured to chassis with 20,000 Ω/V. or VTVM. Fresh batteries installed. Volume maximum, no signal. ± 20% readings normal.  
 I.F. = 455 KC.

⏏ Indicates chassis connection.

SCHMATIC  
 HEATHKIT TRANSISTOR  
 PORTABLE RADIO  
 MODEL XR-1

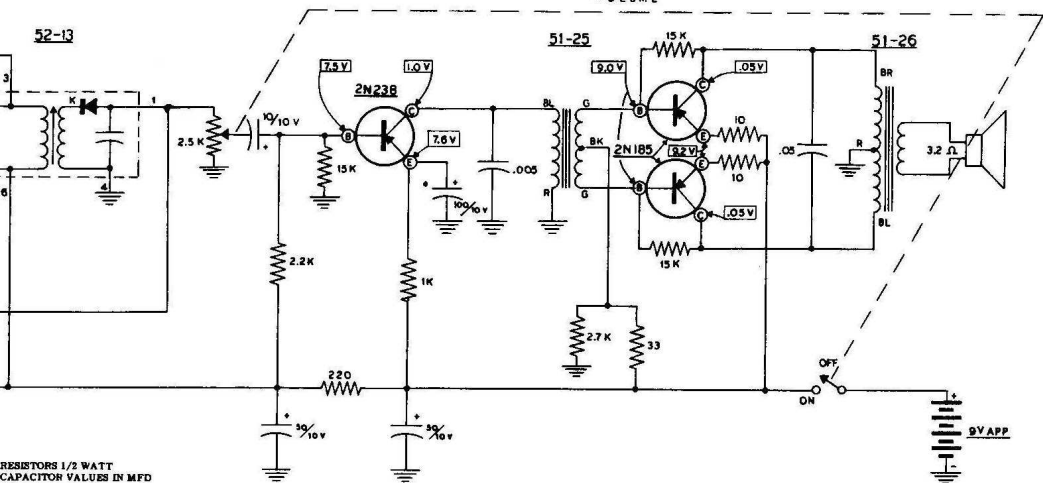


ALL RESISTORS 1/2 WATT  
 ALL CAPACITOR VALUES  
 All voltages measured  
 with 20,000  $\Omega/V$ . or VTM  
 batteries installed. Volt-  
 meter, no signal.  $\pm 20\%$   
 normal.  
 I.F. = 455 KC.

Indicates chassis connection

BOTTOM VIEW OF  
 ALL COILS

52-13



RESISTORS 1/2 WATT  
 CAPACITOR VALUES IN MFD  
 voltages measured to chassis  
 10,000 Ω/V, or VTVM. Fresh  
 tubes installed. Volume maxi-  
 no signal. ± 20% readings  
 al.  
 = 455 KC.

Indicates chassis connection.

SCHEMATIC  
 HEATHKIT TRANSISTOR  
 PORTABLE RADIO  
 MODEL XR-1