

## Pilot Radio Corp.

**Model:** T601

**Chassis:**

**Year:** Pre 1949

**Power:**

**Circuit:**

**IF:**

**Tubes:**

**Bands:**

### Resources

[Riders Volume 17 - PILOT 17-1](#)

[Riders Volume 17 - PILOT 17-2](#)

[Riders Volume 17 - PILOT 17-3](#)

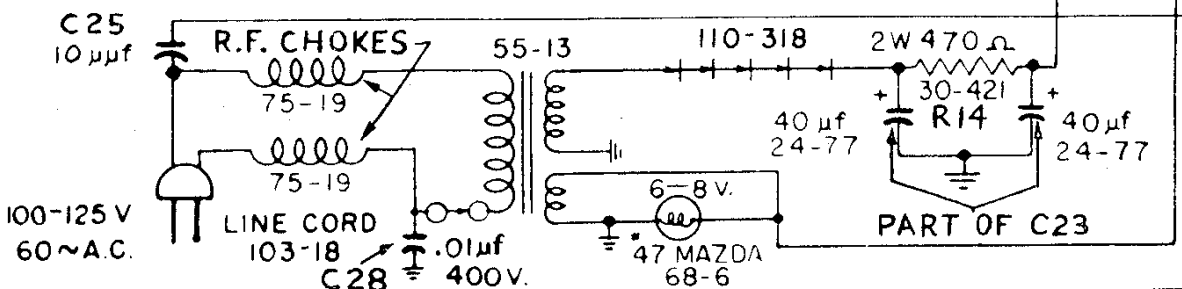
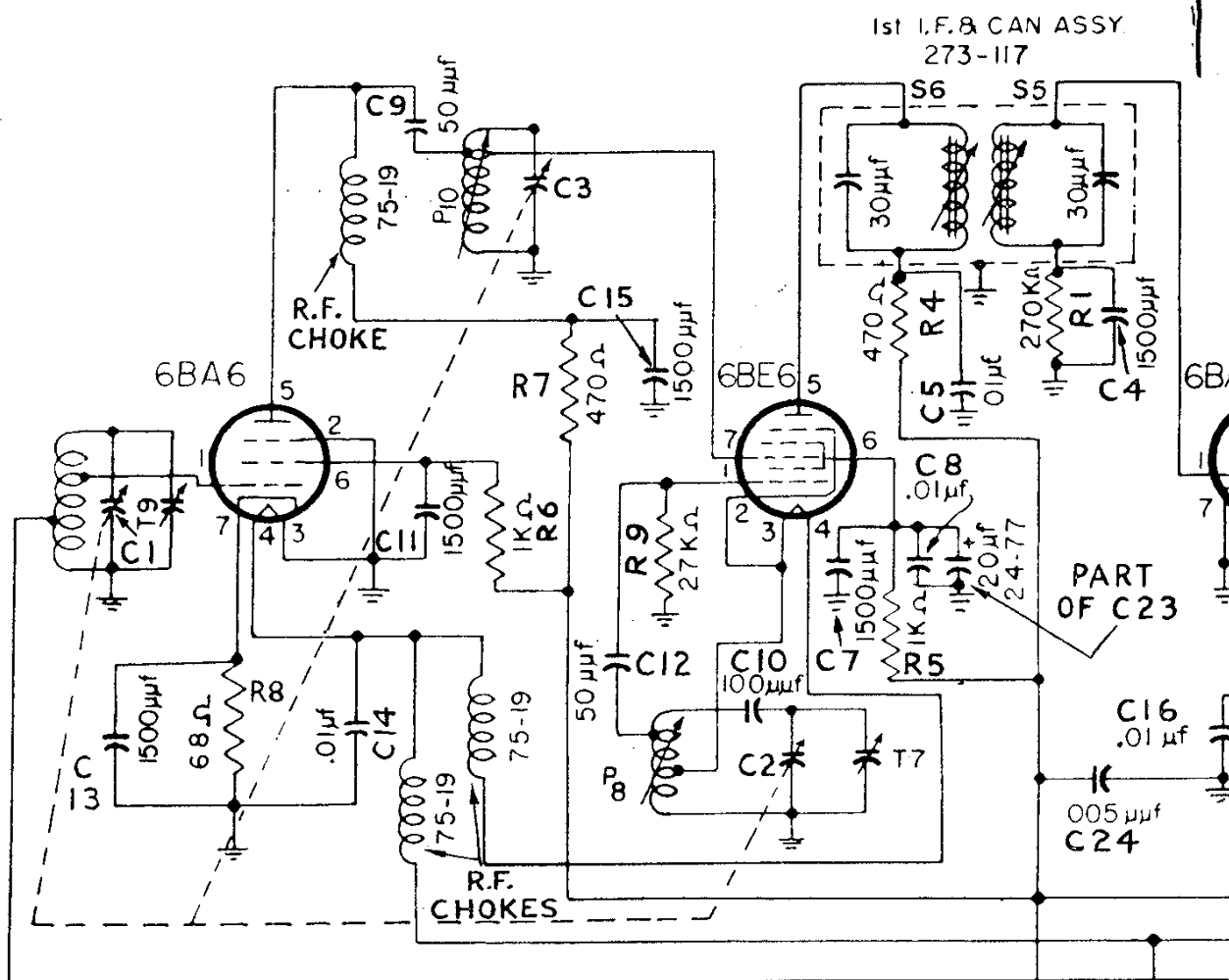
[Riders Volume 17 - PILOT 17-4](#)

[Riders Volume 17 - PILOT 17-5](#)

[Riders Volume 17 - PILOT 17-6](#)

17-1,2

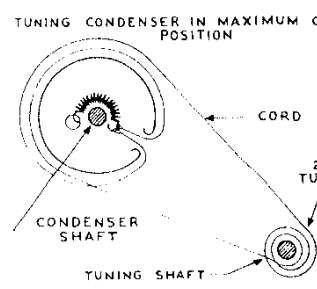
PILOT



DRAWN BY J.C. 2-11 CHECKED BY W.F. DATE 6-1-42

PILOT RADIO CORP. LONG ISLAND

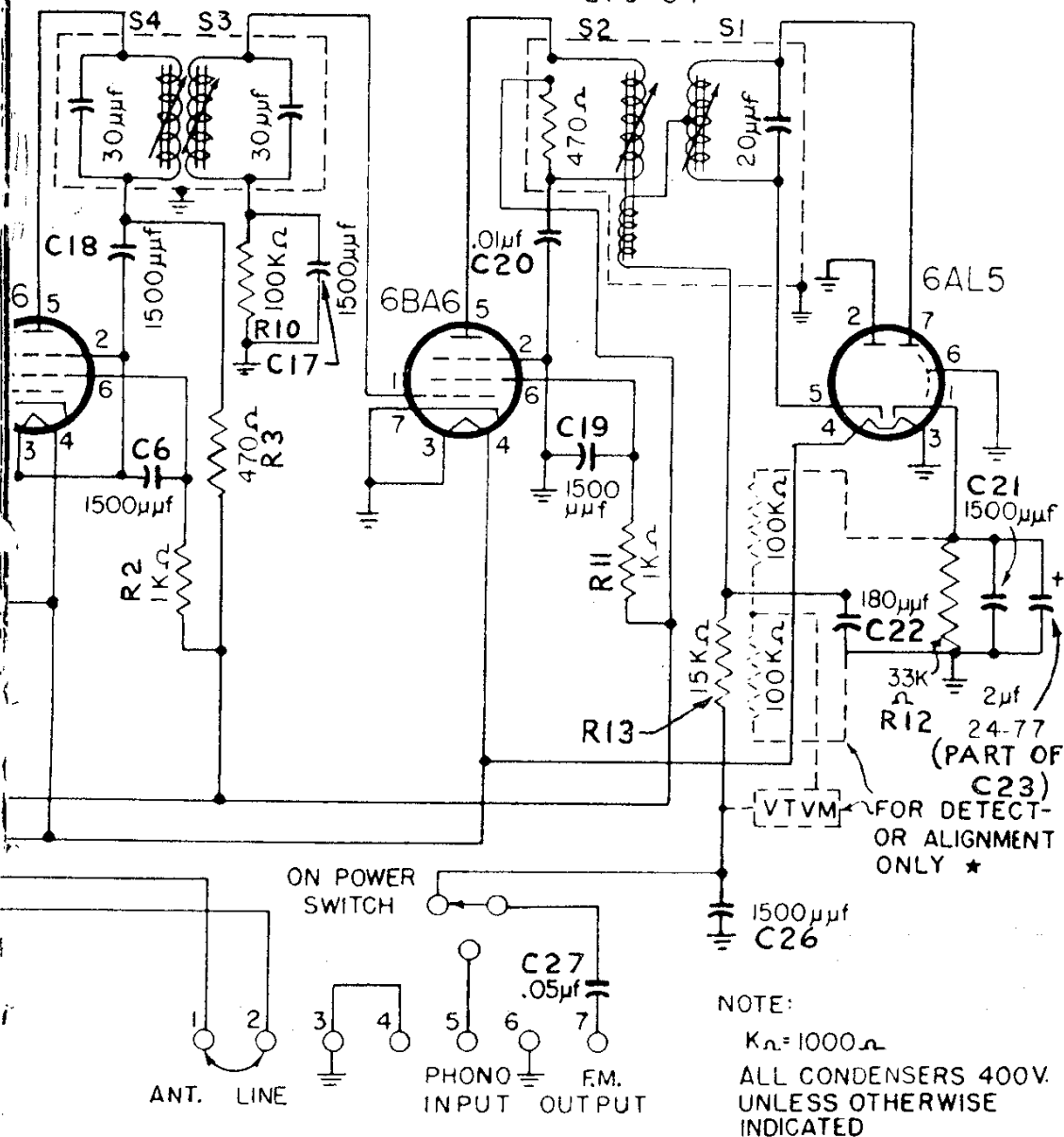
- |     |                |      |         |
|-----|----------------|------|---------|
| S1  | RATIO DETECTOR | SEC. | 10.7 MC |
| S2  | RATIO DETECTOR | PRI. | 10.7 MC |
| S3  | 2ND I.F. SEC.  |      | 10.7 MC |
| S4  | 2ND I.F. PRI.  |      | 10.7 MC |
| S5  | 1ST I.F. SEC.  |      | 10.7 MC |
| S6  | 1ST I.F. PRI.  |      | 10.7 MC |
| T7  | OSC. TRIMMER   |      | 106 MC  |
| P8  | OSC. PADDER    |      | 90 MC   |
| T9  | ANT. TRIMMER   |      | 106 MC  |
| P10 | R.F. PADDER    |      | 90 MC   |



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2nd. I.F. & CAN ASSY.  
273-II9

RATIO DETECTOR & CAN ASSY.  
279-34



NY, N.Y. U.S.A.

DWG. NO. 90-58

MODEL NO. T601

TO ALIGN RECEIVER USE FREQUENCIES AS  
INDICATED ON LEFT. ADJUST ALL TRIMMERS  
FOR MAX. D.C. OUTPUT ACROSS 33K $\Omega$  RESISTOR  
IN 6AL5 CIRCUIT.

★ TO ALIGN SECONDARY OF RATIO DETECTOR  
CONNECT METER AS INDICATED IN SCHEMATIC  
AND ADJUST S<sub>1</sub> FOR ZERO OUTPUT.

## ALIGNMENT CHART

(Follow sequence as indicated)

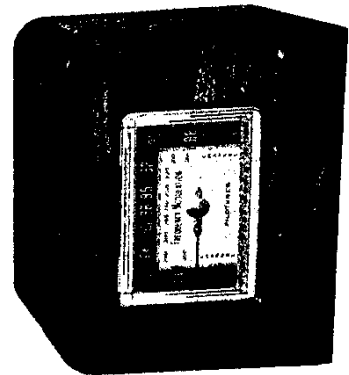
CIRCUIT ALIGNED	STEP	RCVR. DIAL POINTER	SIGNAL GEN. FREQ.	CONNECTIONS	METER	METER CONNECTIONS	TRIMMER OR SLUG ADJUSTMENT	PROCEDURE
IF	1	88 mc	10.7 mc	Through .01 mfd. cap. to grid of 6BE6	VTVM	Across two 100K resistors —indicated by dotted lines in schematic	S2, S1, S4, S3, S6, S5	Adjust for maximum out- put
	2			Repeat Step No. 1				
Radio Detector	3	88 mc	10.7 mc	Same as No. 1	VTVM	From: Junction of two 100K resistors TO: Audio output of ratio detector. Connec- tions indicated by dot- ted lines in schematic	S1	Adjust meter to zero (Check proper zero set) Meter should register re- verse polarity when slug is rotated through zero output.
	4	90 mc	90 mc	Through carbon 300 ohm resistor to Ant. Terminal	VTVM	Same as Step No. 1	P8	Same as Step No. 1
Oscil- lator	5	106 mc	106 mc	Same as No. 4	VTVM	Same as No. 1	T7	Same as No. 1
	6			Repeat Steps No. 4 & 5				
RF	7	90 mc	90 mc	Same as No. 4	VTVM	Same as No. 1	P10	Same as No. 1
	8	106 mc	106 mc	Same as No. 4	VTVM	Same as No. 1	T9	Same as No. 1

SENSITIVITY

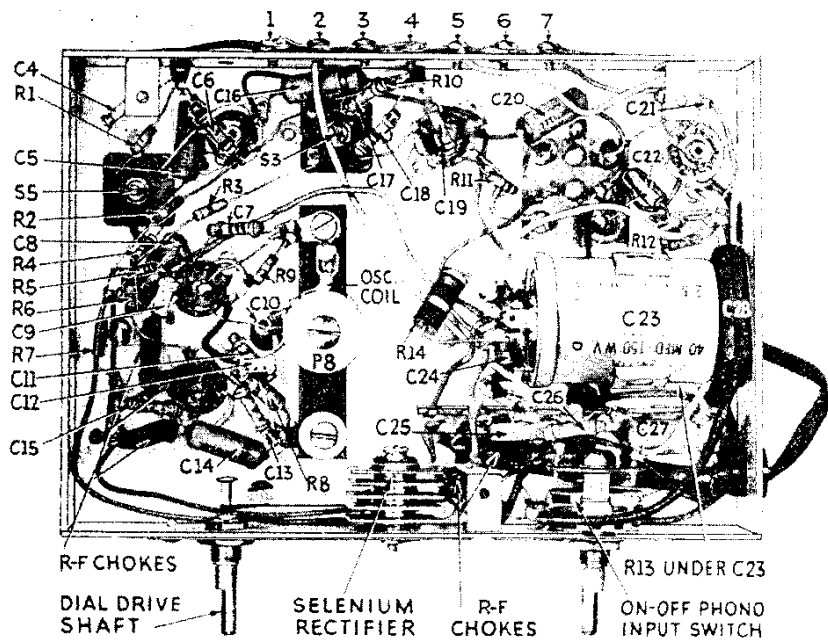
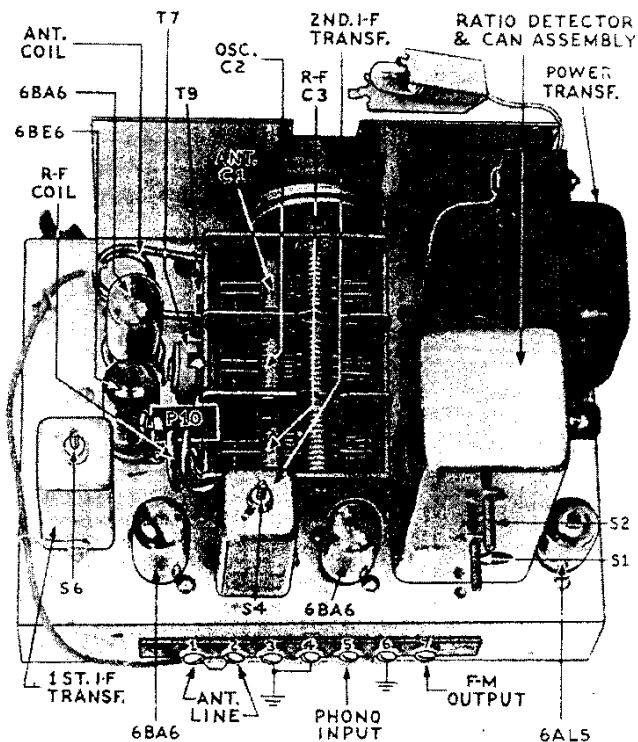
Approximately 25 Microvolts for  $\frac{1}{2}$  watt output when coupled to an audio amplifier consisting of a triode and power pentode. Perfect Quieting.

AUDIO RESPONSE

All frequencies up to 12000 cycles. Less de-emphasis than required by transmitter standards, in order to equalize possible deficiencies in the frequency response of audio amplifiers in old AM receivers.



PILOT RADIO CORP.



## PILOT RADIO CORP.

MODEL T601

Pilotuner

## PILOTUNER MODEL T-601

TUBE	PIN	VTVM	20,000 P.V.	1,000 P.V.	RESISTANCE
6AB6 RF Ampl	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	AC	AC	AC	0.2 $\Omega$
	5	98	98	98	Over 1 meg
	6	98	98	98	Over 1 meg
	7	0.8	0.8	0.8	70 $\Omega$
6BE6 Conv	1	-1.5	-0.4	-0.2	28 K
	2	0	0	0	0
	3	0	0	0	0
	4	AC	AC	AC	0.2 $\Omega$
	5	98	98	98	Over 1 meg
	6	92	92	92	Over 1 meg
	7	0	0	0	0
6BA6 IF Ampl	1	0	0	0	270 K
	2	0	0	0	0
	3	0	0	0	0
	4	AC	AC	AC	0.2 $\Omega$
	5	94	94	94	Over 1 meg
	6	94	94	94	Over 1 meg
	7	0	0	0	0
6BA6 IF Ampl	1	0	0	0	100 K
	2	0	0	0	0
	3	0	0	0	0
	4	AC	AC	AC	0.2 $\Omega$
	5	94	94	94	Over 1 meg
	6	94	94	94	Over 1 meg
	7	0	0	0	0
6AL5 Ratio Detector	1	1	0.6	0.4	33 K
	2	0	0	0	0
	3	0	0	0	0
	4	AC	AC	AC	0.2 $\Omega$
	5	0.5	0.3	0.2	Infinite
	6	0	0	0	0
	7	0.5	0.3	0.2	Infinite

NOTE: Selenium rectifier D.C. voltage output in 125 V.

NOTE: All voltage and resistance measurements made with respect to chassis ground and with a line voltage of 116 V.A.C.

NOTE: All values are positive unless indicated otherwise.

Connection of the PILOTUNER is possible in accordance with the instructions outlined in paragraphs III A. 1, 2 and 3 above, provided there is no terminal available. However, if there is no phone terminal, this type installation must be made by a radio service technician, following the instructions given in paragraph III C. above.

Remove plug from phono terminal. Disconnect wires attached to the plug. Bend and mark for future reference. Connect center wire of PILOTUNER connector cable firmly, preferably by soldering, into one stem of the plug ("high" side), and outside shielded wire of connector cable into other stem of plug ("low" side). Replace two-hole plug into phono terminal.

8. Radio receiver with Phono Outlet only (no Phonograph):

Connection of the PILOTUNER will be made similar to the instructions outlined in paragraph III A above, except that no phonograph leads have to be disconnected.

## C. Receiver without Phonograph or Phono Outlet

THIS INSTALLATION MUST BE MADE BY A COMPETENT RADIO SERVICE TECHNICIAN SINCE IT IS NECESSARY TO WIRE THE PILOT TUNER DIRECTLY INTO THE CIRCUIT OF YOUR RADIO RECEIVER.

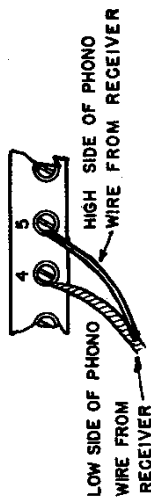
**GRAPH RECORD PLAYER OR AMPLIFIER SYSTEM**

Connection of the PILOTUNER is possible in accordance with instructions outlined in paragraphs III A, 2 and 3 above, provided there is a phone terminal available. However, if there is no phone terminal, this type of installation must be made by a radio service technician, following the instructions given in paragraph III C, above.

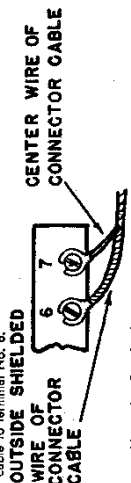
CONNECTIONS FROM RADIO RECEIVER PHONOGRAPH TO  
PILOTUNER

If you disconnected any wires from the phonograph terminal of your radio receiver in order to connect the FM PILOTUNER (paragraph III A, 2 and 3, above), locate these wires which you marked for future reference.

Attach the "high" side of the phonograph wire from your radio receiver to terminal No. 5 of the PILOTUNER; and attach the "low" side of the phonograph wire from your radio receiver to terminal No. 4 of the PILOTUNER. The phonograph of your combination radio will operate normally when the ON - OFF switch of the PILOTUNER is in the OFF position.



Attach the center wire of one end of the connector cable to terminal No. 7; attach the outside shielded wire of the same end of the connector



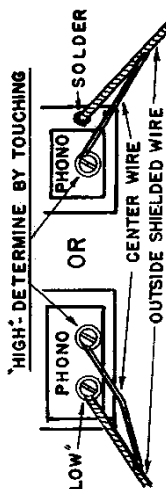
Now, the FM PILOTUNER is ready for attachment to your radio receiver. The method of connecting the PILOTUNER will depend on whether the radio receiver is a combination set with phonograph, a radio with phonograph outlet only, or a radio without phonograph or phonograph outlet.

A. **Combination Radio Receiver with Phonograph:** Locate the phonograph terminal at the back of your radio receiver chassis. Usually it will be marked PHONO or TELEVISION. There are, in general, three different types of phonograph terminals on standard receivers, as follows:

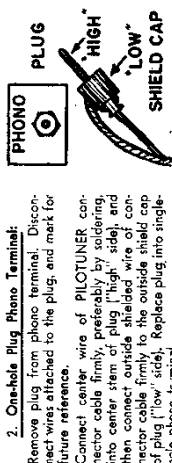


**SCREW TYPE**

Attach center wire of the free end of the PILOTWIRE connector cable to the "high" side of the phono terminal. You can determine the "high" side by touching each of the screws of the phono terminal with the radio receiver in operation, and the selector switch on PHONO position; the "high" side will cause speaker hum. Then, attach the outside shielded wire of the same end of the PILOTWIRE cable to the "low" or grounded side of the phono terminal. If there is only one screw on the phono terminal of your radio receiver, it will be the "high" side.



Therefore, connect the outside shielded wire of the PILOTUNER connector cable firmly, preferably by soldering, to the radio receiver chassis.

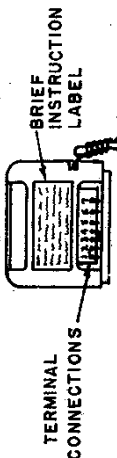


1. Two-hole Plug Phone Terminal:



## GENERAL

The FM PILOTUNER is a complete, superheterodyne frequency modulation unit, consisting of 5 miniature tubes and a selenium rectifier. It contains its own power supply, designed for AC operation only. However, it does not contain a loudspeaker and audio system. Therefore, the FM PILOTUNER must be connected and operated through your own radio receiver, or separate phonograph, record player or amplifier system. All interconnection connections from and to the FM PILOTUNER are made to the terminals on the back of the cabinet, numbered from 1 to 7.



## ANTENNA CONNECTIONS

The choice of antenna to be used for the best FM reception depends on many factors: your location, the type of building, power and distance of the FM station. The three main types of antennas are explained below. Test your FM PILOTUNER and choose the one most practical for your use.

A. For local high-powered FM stations: The PILOTUNER, when shipped from the factory, is equipped with a permanent built-in antenna that will be satisfactory for good reception of most local FM stations. This built-in antenna is connected internally through a wire link between terminals No. 1 and No. 2. For best results when using the built-in antenna, keep the electric line cord extended to its full length and separated from the connector cable of the PILOTUNER.

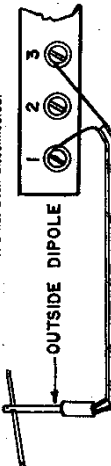


**WIRE LINK**

8. For local weak-powered FM stations: Improved reception of weak FM stations may be obtained, in some localities, by disconnecting the wire link between terminals No. 1 and No. 2, and attaching a 4 ft. length of wire to terminal No. 1. Keep this wire stretched out at full length in order to secure the maximum signal pick-up.



C. **For distant FM stations:** In a few cases, an outside FM dipole antenna may be found to be necessary when the FM PILOTUNER is operated at a great distance from the broadcasting station, or under unusual operating conditions. The outside dipole antenna (equipped with a 300 ohm load) should be connected to terminals No. 1 and No. 3, after the wire link between terminals No. 1 and No. 2 has been disconnected.



## CONNECTIONS FROM PILOTUNER TO RADIO RECEIVER

A 5 ft. shielded cable is furnished with the FM PILOTUNER to facilitate connecting the tuner to your radio receiver, or separate tuner, for use with a phonograph, record player or amplifying system. One end of this cable is provided with spade lugs for easy connection to the terminals at the back of the PILOTUNER.