



# SERVICE BULLETIN

COLLINS RADIO COMPANY

Cedar Rapids, Iowa 52406

EQUIPMENT SERIES: KWM

BULLETIN NO. 2

DATE 8-8-60

Page 1 of 4

(1st Revision 10-1-60)

EQUIPMENT TYPE: KWM-2, KWM-2A TRANSCEIVER

SUBJECT: ADD VOX RELAY TIME CONSTANT CONTROL.

NOTE: This revision supersedes and replaces KWM Service Bulletin 2 dated 8-8-60. Changes are indicated by black lines in margin.

Modifying Transceiver KWM-2/2A according to this bulletin will allow the time constant of the vox-control relay to be adjusted. Adjusting the time constant will enable the operator to obtain a more uniform operation of the relay by compensating for variations in microphone and voice characteristics. Increasing the time constant will increase the time between the last spoken word or keyed character and the release of the relay; decreasing it will have converse effects.

#### MODIFICATION PROCEDURE:

See figure 1 for circuit changes.

1. Remove the feet from cabinet.
2. Lift lid and remove the two unpainted screws from the top rim of the front panel.
3. Slide unit out of cabinet.
4. Remove and discard the 10-megohm resistor R43 located between V4, pin 9 and ground.
5. Add 0.047-uf capacitor (931-0295-00) in parallel with 0.01-uf disc capacitor located between pins 1 and 3 of E50. E50 is a mounting turret post located between XV4 and XV14 tube sockets. Sleeve leads of new capacitors with insulation (152-1613-00). See figure 2.
6. Solder 18-inch length of wire (439-7036-00) to V14, pin 3 and another 18-inch length to V14, pin 1. Lay these wires along chassis and push through cable grommet (in corner near front panel) to the top of the chassis.
7. With transceiver in upright position, remove the two nuts holding the shield to the back of the meter.
8. Mount VOX TIME CONSTANT control bracket (546-7971-00) on the meter shield using hardware removed in step 7. See figure 3.

(1st Revision 10-1-60)

9. Solder either one of the 18-inch wires to the center terminal of the control.
10. Solder the other wire to the counterclockwise terminal (as viewed from the shaft end) of the control. Refer to figure 3.
11. Mount VOX TIME CONSTANT control (376-7206-00) in the new bracket, using hardware and knob included in kit.
12. Reassemble unit.

ADJUSTMENT PROCEDURE:

1. To set controls, place the VOX TIME CONSTANT control to midrange and the VOX and ANTI-VOX controls fully counterclockwise.
2. Speak into microphone and advance the VOX GAIN until satisfactory vox action is attained.
3. Continuing to speak into the microphone, rotate the VOX TIME CONSTANT control clockwise to increase delay and counterclockwise to shorten delay time. As the control is rotated counterclockwise to reduce the release time, vox sensitivity will be reduced. It may be necessary to advance the VOX GAIN control.
4. Set the ANTI-VOX control as outlined in the instruction book.

PARTS REQUIRED:

Modification Kit 546-7969-00 which consists of: \* Price \$3.50

QTY	DESCRIPTION	COLLINS PART NUMBER
1	Bracket mounting, resistor	546-7971-002
1	Nut, lock hex 3/8-32	313-0061-00
1	Washer, 3/8	373-0085-00
1	Resistor, variable - 10 meg	376-7206-00
1	Knob, black phenolic	281-0069-00
1	Capacitor, 0.047 uuf $\pm$ 10%, Fixed paper dielectric	931-0295-00
3 (ft)	Wire, no. 22 Electrical, white-green	439-7036-00
0.3 (ft)	Insulation Sleeving, electrical	152-1613-00

The above kit may be obtained from Collins Radio Company, Service Parts Department, Cedar Rapids, Iowa, at the price indicated. All orders should specify modification kit 546-7969-00 and make reference to KWM Bulletin No. 2.

1

\* Original bulletin showed incorrect price of \$9.25. Refunds will be made of monies received over this amount. Orders received but not yet shipped will be billed at the corrected price.

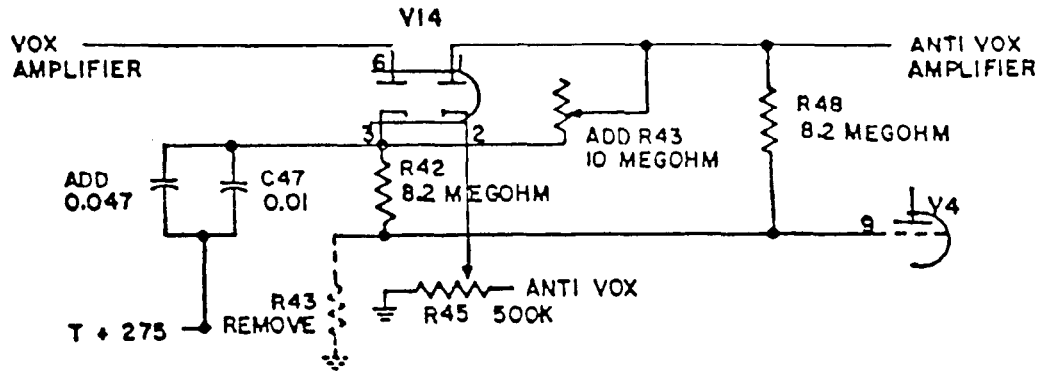


Figure 1. KWM-2/2A VOX Circuit Schematic Changes

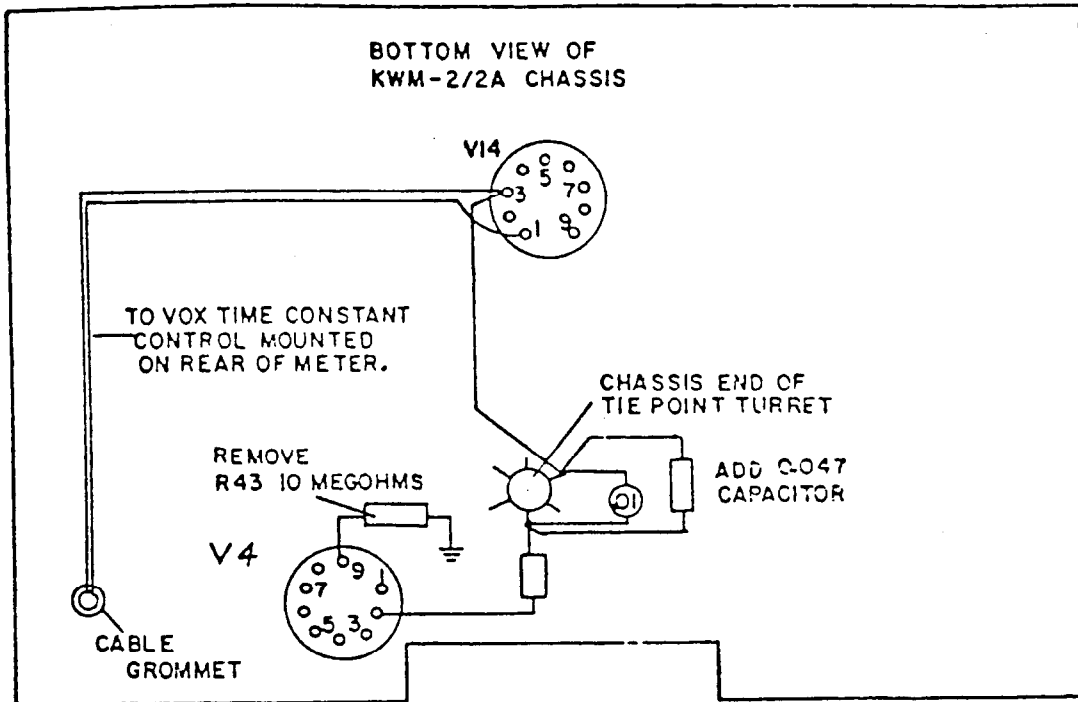


Figure 2. Parts Location - Under Chassis

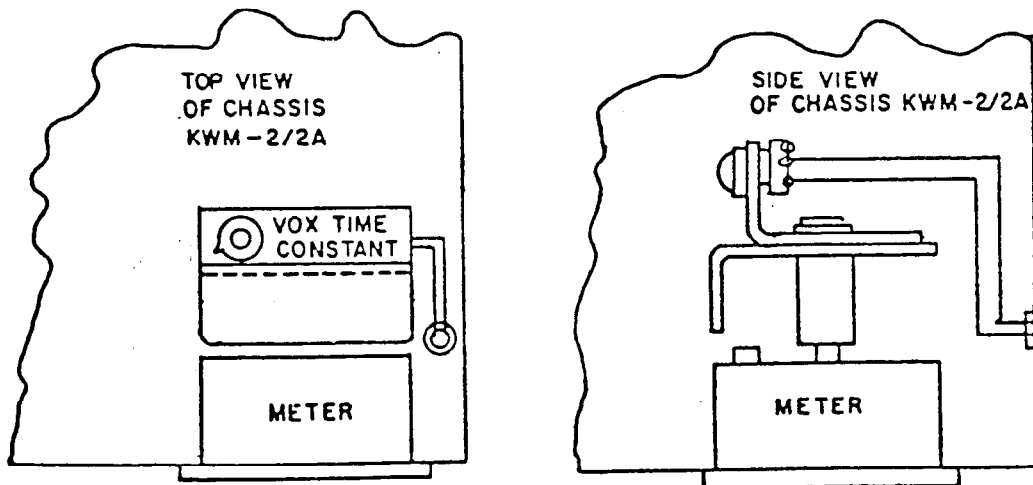


Figure 3. Installation of VOX Time Constant Control and Bracket.