



SERVICE BULLETIN

Collins Telecommunications Products Division/Rockwell International

● 350481

HF-380 TRANSCEIVER (622-3580-001)
KWM-380 TRANSCEIVER (622-5093-001)
RECEIVER-EXCITER A3 (638-6908-001, -002)

SERVICE BULLETIN NO 12

CW WAVESHAPE IMPROVEMENT

HF/KWM-380 Service Bulletin No 18 should be installed in conjunction with this bulletin. This service bulletin applies to the following:

EQUIPMENT	APPLICABLE TO SERIAL NUMBER	PRODUCTION CUT-IN SERIAL NUMBER
HF-380 622-3580-001	206 and below	207
KWM-380 622-5093-001	2099 and below	2100
Production cut-in for Receiver-Exciter A3 (638-6908-001, -002) is REV R.		

The rise and decay time of the cw envelope is less than 1 ms which may cause key clicks to be evident. This modification increases the rise and decay times to a nominal 4 ms. This still produces a hard, but click-free, waveform. This timing may be altered if desired by changing the value of R549. Increase the value to soften the keying, decrease the value to harden the keying.

The modification consists of adding one capacitor and one diode, deleting one zener diode, two resistors, and two capacitors, and changing the value of one capacitor.

Estimated time required to perform the modification is 1.5 man-hours.

The modification parts are itemized in the material information paragraph. For additional information concerning parts, contact Collins Telecommunications Products Division/Rockwell International, Service Parts Department, Cedar Rapids, Iowa 52498. Reference HF/KWM-380 Service Bulletin No 12 in all correspondence.

No special tools or equipment are required.

This service bulletin references the HF-380 (523-0769880) and KWM-380 (523-0769878) Transceiver Service Manuals.



MODIFICATION PROCEDURE

- A. Disconnect primary power from the transceiver.
- B. Set the transceiver on its side with the power transformer on top. Remove the dust cover by removing four screws adjacent to the four feet on the bottom of the transceiver.

NOTE: All changes are made to receiver-exciter assembly A3, located on the bottom of the unit. Taking care to not damage adjacent components, these modifications can be made without removing A3 from the chassis. Refer to Receiver-Exciter A3 instructions in the circuit cards section located in the back of the HF-380 and KWM-380 service manuals for location of components to be removed. Refer to figure 1 of this bulletin for location of added components. Refer to figure 2 for a schematic diagram which includes the changes made by this modification.

Use a 25- to 30-watt soldering iron with a tip designed for use with printed circuits. The tip should be clean to ensure proper melting of the solder prior to component removal or when securing new components to the card. Take care to avoid application of excessive heat.

- C. Unplug ribbon cables as necessary to gain access to the areas to be modified.
- D. Unplug cable connected to J26, J27, and J28.
- E. Cut circuit trace that leads from U910-10.
- F. Insert and solder a square pin (372-2601-045) in the hole that was connected to U910-10.
- G. Insert and solder a square pin (372-2601-045) in the hole just below U911-7.
- H. Wrap the anode lead of diode CR914 (353-3644-010) around U910-10 and the cathode lead around the square pin installed in step F.
- I. Install a 0.47- μ F capacitor C987 (184-9102-330) between the square pins added in steps F and G.
- J. Remove and discard VR500, C544, C545, and R548.
- K. Remove R542 and install a square pin (372-2601-045) in the R542 hole nearest Q503.
- L. Install a 0.15- μ F capacitor C554 (913-5019-460) from the square pin installed in step K to the other hole where R542 was connected.



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- M. Install 33-k Ω resistor R549 (745-0803-000) as shown in figure 1.
- N. Mark RWK REV R on the A3 circuit card near the existing REV letter.
- O. Plug the cables in that were removed in steps C and D.
- P. Reinstall the dust cover.
- Q. Mark SB 12 on the service bulletin information chart. If the transceiver does not have an information chart (280-3778-010), order one and attach it near the name-plate.

MATERIAL INFORMATION

The parts listed below are required to modify one HF-380 or KWM-380.

<u>COLLINS PART NUMBER</u>	<u>QTY</u>	<u>UNIT PRICE</u>	<u>DESCRIPTION</u>
372-2601-045	3		Pin, square
353-3644-010	1		Diode, 1N4454, CR914
184-9102-330	1		Capacitor, 0.47 μ F, C987
913-5019-460	1		Capacitor, 0.15 μ F, C554
745-0803-000	1		Resistor, 33 k Ω , R549
*280-3778-010	1		Chart, information

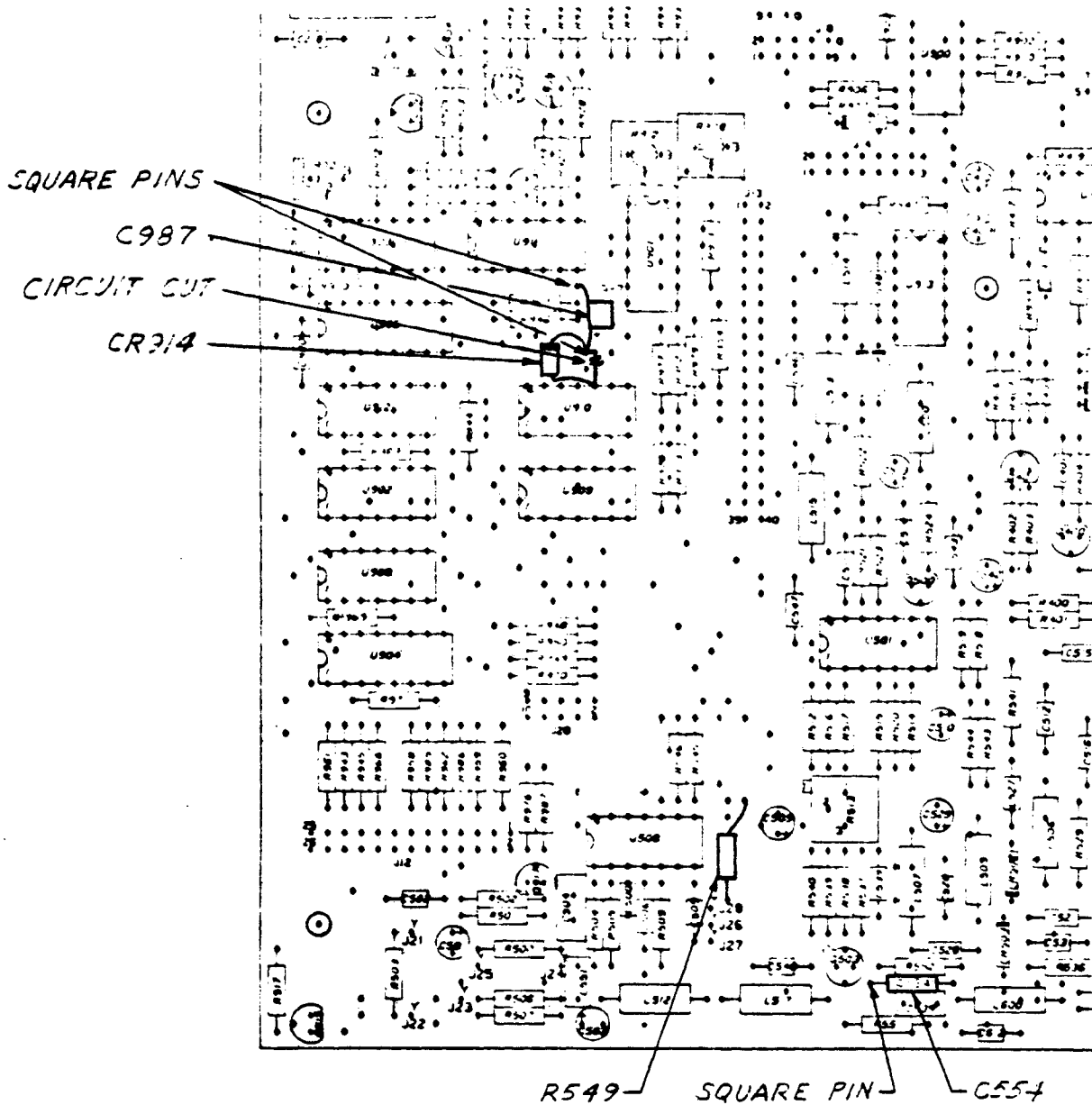
*Order if needed.



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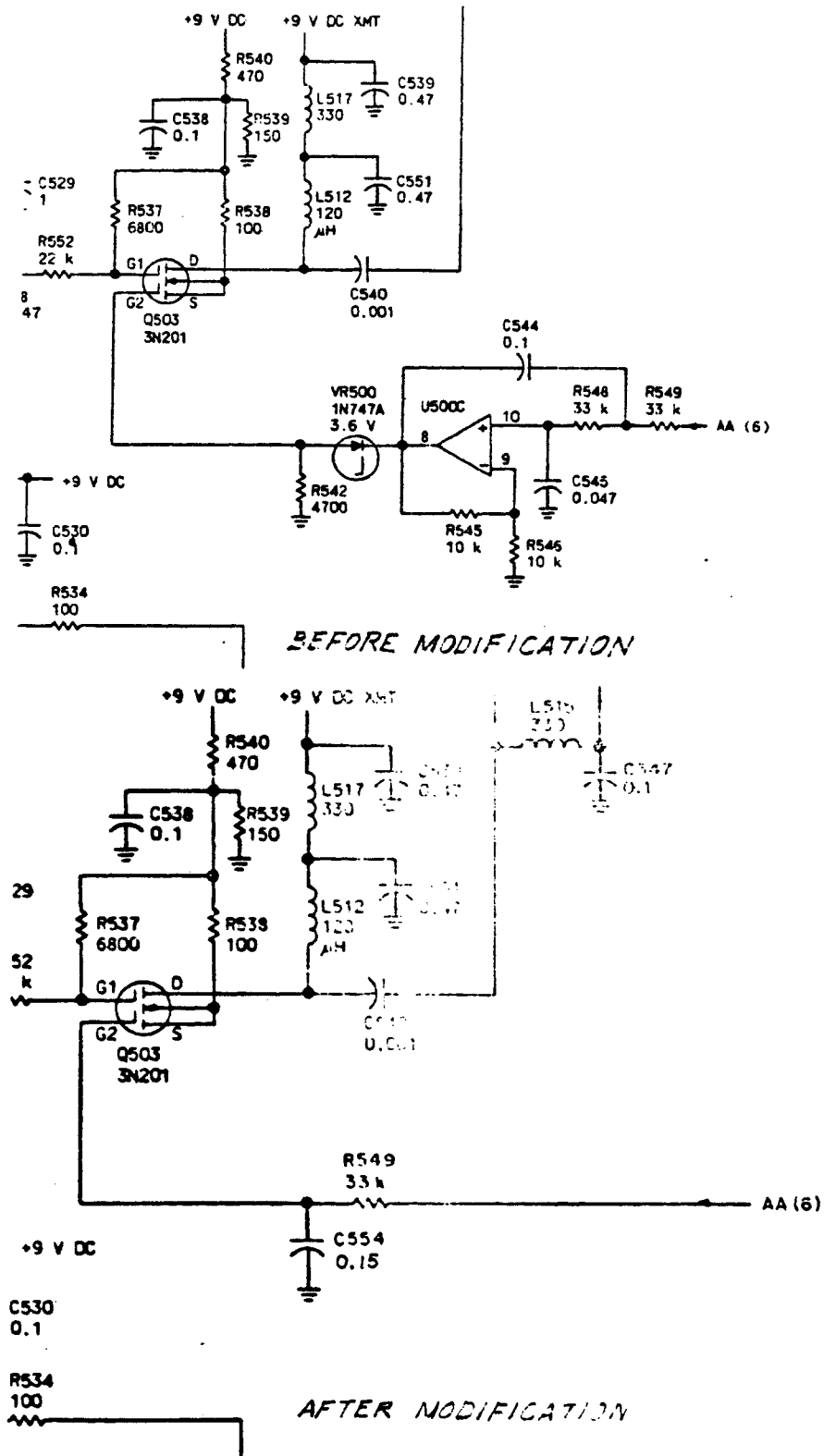


P/O Receiver-Exciter Card A3
Figure 1



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P/O Receiver-Exciter A3, Schematic Diagram
Figure 2 (Sheet 1 of 2)

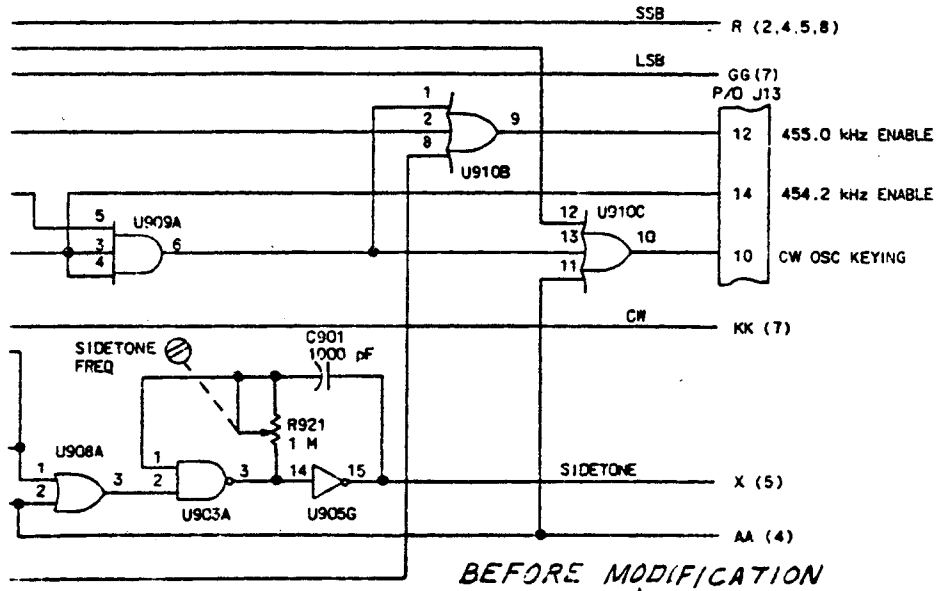


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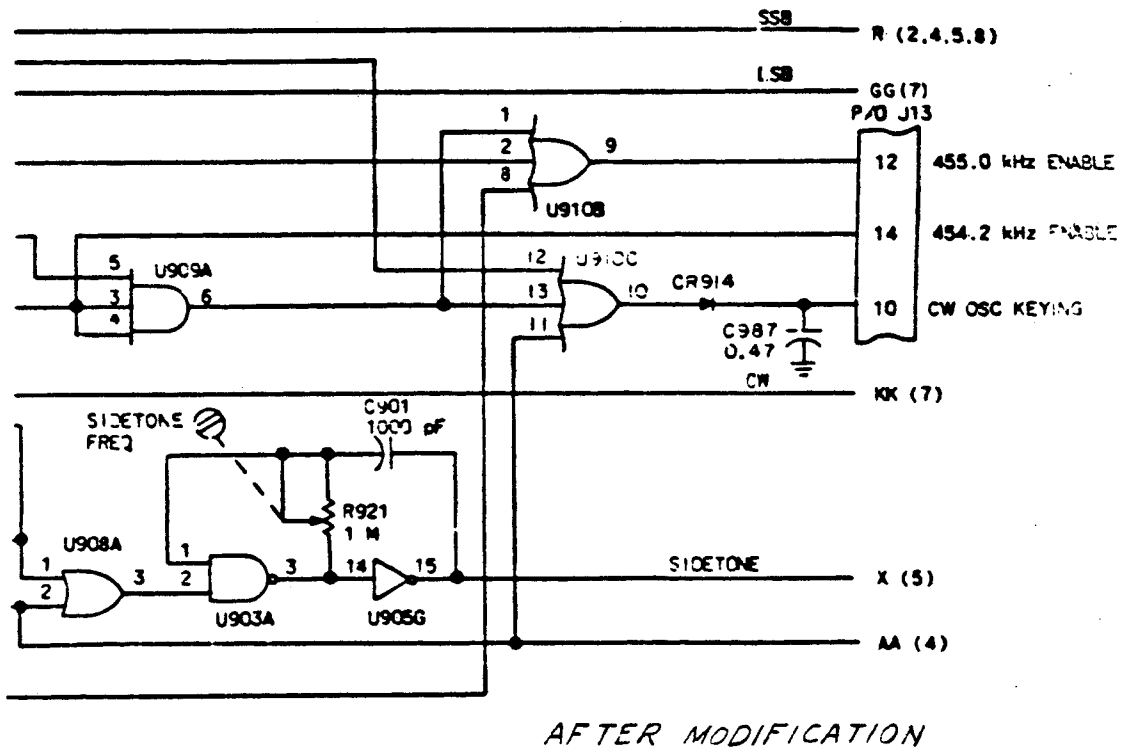
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USB FF (7)



USB FF (7)



P/O Receiver-Exciter A3, Schematic Diagram
Figure 2 (Sheet 2)