

NAVSEA 0967-LP-063-2120

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NAVSEA 0967-LP-063-2120

TECHNICAL MANUAL
FIELD CHANGE BULLETIN

**REDUCE INTERNALLY GENERATED
INTERFERRING SIGNALS**

R390A/URR

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LIST OF EFFECTIVE PAGES

Insert latest changed pages, dispose of superseded pages in accordance with applicable regulations.

NOTE: On a changed page, the portion of the text affected by the latest change is indicated by a vertical line, or other change symbol, in the outer margin of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Page No.	#Change No.
Title	0
A	0
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TMDER	0

#Zero in this column indicates an original page.

RECORD OF CHANGES

CHANGE NO.	DATE	TITLE OR BRIEF DESCRIPTION	ENTERED BY

ELECTRONICS FIELD CHANGE BULLETIN
 NAVAL SHIP ENGINEERING CENTER
 WASHINGTON, D. C. 20360

REDUCTION OF INTERNAL INTERFERENCE

FSN 225820-089-9648

TYPE (1) CLASS (A)
 ESTIMATED MAN HOURS (3)

OPERATIONAL CHANGE ()
 NON-OPERATIONAL CHANGE (X)

Prepared by
 NAVAL SHIP ENGINEERING CENTER
 NORFOLK DIVISION
 NAVAL STATION, NORFOLK, VA. 23511

APPROVAL NOTICE: This field change is within the technical capability of forces afloat and station personnel, and is approved for accomplishment of "equipment affected" at the earliest opportunity.

EQUIPMENT AFFECTED: This field change applies only to those shipboard installed R390A/URR equipment used in supplementary radio spaces.

PURPOSE: The purpose of this field change is to reduce internally generated interfering signals.

PREVIOUS FIELD CHANGES: No previous field changes need be accomplished.

EFFECT ON NOMENCLATURE: None

IDENTIFICATION OF ACCOMPLISHMENT: The presence of a 220K 1/2 watt resistor in place of the 56K resistor R702 in the Variable Frequency Oscillator assembly and a decal "MODIFIED BY FC 7" affixed to the VFO assembly below the nameplate on the oven cover. The presence of a decal "MODIFIED BY FC 7" affixed to the chassis near the tube socket XV207 (5654/6AK5W) on the R.F. Amplifier subchassis.

LIST OF MATERIAL REQUIRED:

Supplied with Field Change Kit

<u>Item</u>	<u>Quantity</u>	<u>Description</u>
1(a)	1	Finger Contact Strip, 8-1/16" X 4-11/16" X .005"
1(b)	8	Panhead Screw, 6/32 X 1/4 inch
1(c)	8	Flat Washer, size #6
1(d)	8	External Tooth Washer, size #6
1(e)	2	Resistors, Fixed, Composition 220K, 1/2 W type RC20-GF-224J
1(f)	2	Decal "MODIFIED BY FC 7"
1(g)	2	Field Change Bulletin 0967-063-2120
1(h)	2	Temporary Corrections to NAVSHIPS 0967-063-2030

TOOLS REQUIRED:

To be supplied by Installing Activity

- #18 Fluted Bristo Wrench (supplied with receiver)
- #1 Phillips Head Screwdriver (supplied with receiver)
- Diagonal Pliers, 6 inch
- Longnose Pliers, 6 inch
- Electric Drill, 1/4" chuck
- #35 Drill
- 6/32 Tap
- Tap Wrench
- Soldering Iron or Gun - 60/100 watts
- Machinist Scribe
- Center Punch
- Ball Peen Hammer, 1 lb.
- Technical Manual, NAVSHIPS 0967-063-2030 (formerly NAVSHIPS 93053), Vol. III

NOTE: OBSERVE SAFETY PRECAUTIONS AT ALL TIMES. ALWAYS INSURE THAT THE EQUIPMENT IS PROPERLY GROUNDED WHENEVER EQUIPMENT IS ENERGIZED.

Before accomplishment of this field change, insure that the receiver is in good operating condition in accordance with latest published specifications (MRC-MAINT STANDARDS).

De-energize the receiver at its power source. Disconnect all wires or cables and remove it from its cabinet or rack, and place upon a suitable work bench.

PROCEDURE: Refer to NAVSHIPS 0967-063-2030, Vol. III

The following will be accomplished during this field change:

1. Resistor R702 (56K) in the VFO will be changed to 220K.
2. Resistor R210 (56K) in the R.F. Amplifier, will be changed to 220K.
3. Finger stock will be mounted on the main frame of the receiver, below the second crystal oscillator sub-chassis to provide additional R.F. shielding.
 - A. 1. Remove top and bottom dust covers if installed.
 2. Remove the front panel of the receiver using the procedure listed in paragraph 57c and paragraph 59a, 59b (1 through 10).
 3. Remove the R.F. Amplifier and the second crystal oscillator sub-chassis as one unit, using the procedure listed in paragraph 59a, 59b (1 through 10).
 4. Remove the I.F. sub-chassis, using the procedure listed in paragraph 61a and 61b.
 5. Remove the variable frequency oscillator, using the procedure listed in paragraph 62a and 62b (1 through 6).
- CAUTION: DO NOT TURN SHAFT.
6. Remove the finger contact strip and mounting hardware presently mounted on the receiver main frame.
 - B. 1. Place the new finger stock, item 1(a), supplied with the kit, on the main frame of the receiver as shown in Fig. 1(a) of field change. Place so that the fingers are facing upward.
 2. Using the four existing tapped holes and hardware which was previously removed, tighten the screws to hold the new finger stock in position.
 3. Using the new finger stock as a template, scribe the four holes on the left side of the receiver main frame as shown in Fig. 1(a). Remove the new finger stock and center punch the four holes which has been scribed.
 4. Using a #35 drill, drill the four holes and then tap with the 6/32 tap.
 5. Install the new finger stock, using the hardware, items 1(b), 1(c), and 1(d), supplied with the kit as shown in Fig. 1(b). Insure that the fingers are in the upward position.

- C. 1. Place the R.F. Amplifier chassis bottom up on the work bench.
2. Locate the 56K resistor R210, one end of which is connected to pin 6 of V207, the first crystal oscillator.
3. With the diagonal pliers, cut resistor R210, 56K, out of the circuit.
4. Cut, shape, install and solder a 220K 1/2 watt resistor, supplied in the kit, in place of the 56K R210 resistor.
5. Turn the R.F. Amplifier sub-chassis topside up.
6. Locate the first crystal oscillator tube socket XV207 and attach a decal "MODIFIED BY FC 7" to the chassis, directly above the words "1st Xtal Osc", stamped on the chassis. Place R.F. chassis aside.

CAUTION: DO NOT TURN VFO SHAFT.

- D. 1. Place the VFO assembly on the work bench with the shaft end up.
2. Loosen and remove the three small Phillips head screws that secure the oblong cover to the assembly.
3. Remove the cover which will expose the tube socket connections.
4. Locate the 56K resistor R702.
5. With diagonals, cut out of the circuit the 56K resistor R702.
6. Cut, shape, install and solder a 220K 1/2 watt resistor in its place.
7. Replace the cover and screws.
8. Attach a decal "MODIFIED BY FC 7", to the VFO assembly directly below and adjacent to the designation label on the oven cover.

E. Reinstall the VFO assembly in the main receiver frame, following the procedure listed in NAVSHIPS 0967-063-2030, Vol. III, paragraph 37(c) (1 through 6).

F. Reinstall the R.F. Amplifier and second crystal oscillator sub-chassis as one unit. Use care so as not to damage the newly installed finger contact stock located on the main frame, below the second crystal oscillator sub-chassis. Follow the procedure listed in paragraph 59(c) (1 through 8).

G. Reinstall the front panel, following the procedure listed in paragraph 58(c) (1 through 8).

H. 1. Apply temporary power to the receiver, turn function switch to STANDBY and allow receiver to warm up for at least 20 minutes.

2. Check calibration, sensitivity and operation of the receiver. Adjust VFO if calibration has been disturbed in accordance with NAVSHIPS 0967-063-2030.

3. Sensitivity and operation of the receiver should be the same as it was before accomplishment of the field change.

4. If improper operation results, insure that the proper resistors were replaced. Refer to NAVSHIPS 0967-063-2030 for corrective action required.

I. If receiver operation is correct, reinstall in its cabinet or rack. Reconnect all wires and cables.

ROUTINE INSTRUCTIONS:

1. Corrections to Publications. The applicable equipment technical manual shall be corrected in accordance with the following instructions:

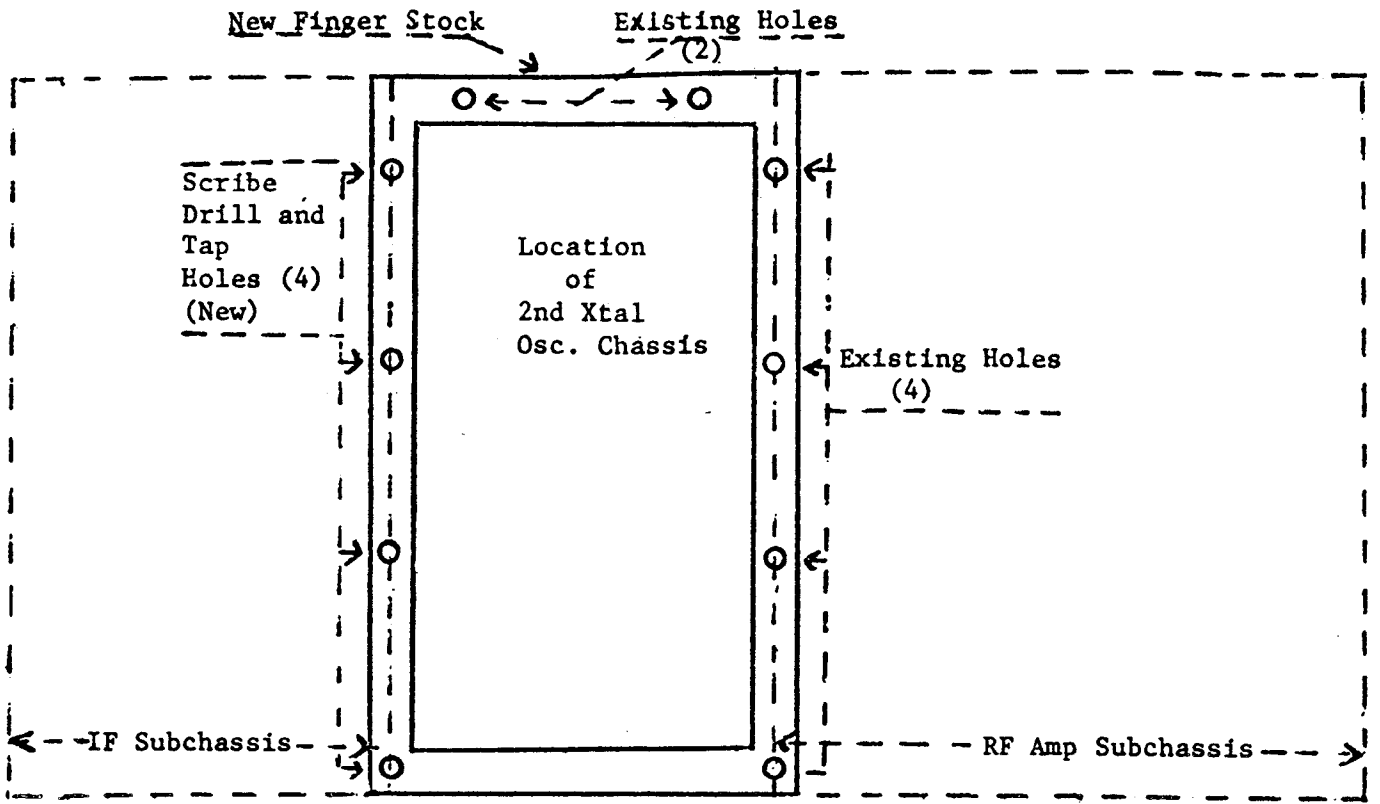
a. Maintenance support activities shall make the corrections immediately but shall keep the superseded data in the book for support of equipment that has not been modified. Holders of equipment shall not make these corrections until after field change has been accomplished.

b. Correct the technical manual for Radio Receiver R390A/URR, in accordance with Temporary Correction T-2 to NAVSHIPS 0967-063-2030.

c. This field change does not affect any other publications, plans or charts.

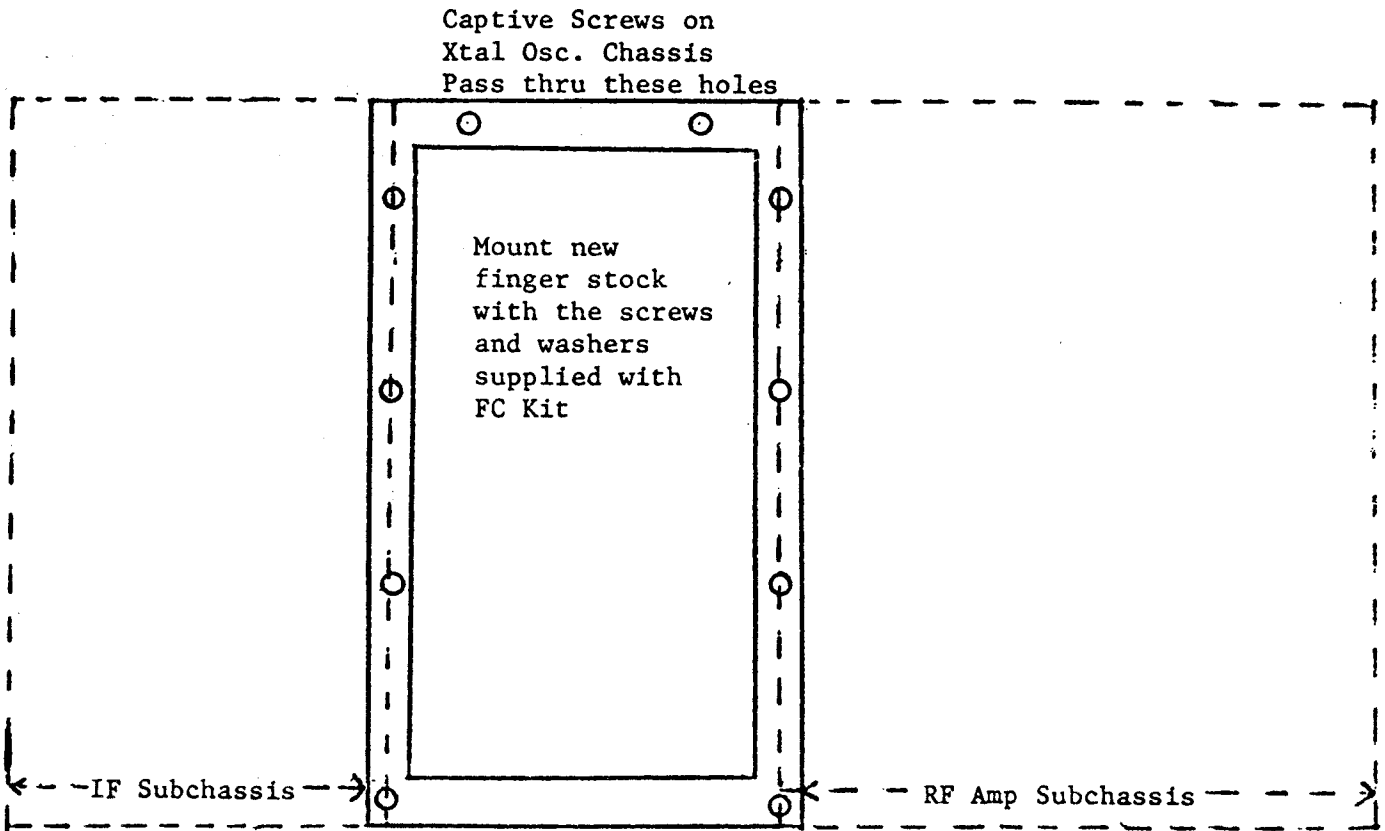
2. Record of Accomplishment. Personnel making this field change shall record the completion data of the change on the Electronics Equipment History Card, NAVSHIPS 536, and on the Record of Field Changes Card, NAVSHIPS 537.

3. Disposition of Field Change Bulletins. Maintenance support activities shall maintain a library copy of this field change bulletin. Holders of the equipment shall not destroy this field change bulletin until the field change has been accomplished, the equipment tested, and the applicable manuals have been corrected.



Front Panel

Figure 1(a)



Front Panel

Figure 1(b)