

b. Write in CP09A1KB105K3; 1.0 uf, $\pm 10\%$, 100 vdcw.

Record this action on Record of Corrections Made page and adjacent to each pen and ink correction by inserting this EIB number (895).

**AN/FSH-7(V) Allowance Parts List #54925827--
Corrections to**

Refer to AN/FSH-7(V) Allowance Parts List (APL) #54925827 of April 1969 and make the following pen and ink corrections after completion of Field Change 18-AN/FSH-7(V).

NOTE

All corrections to be made in Section B

1. Page 4--1A2A15R7
 - a. Delete 279-3504 and add 279-1876.
2. Page 5--1A2A15A1R4
 - a. In the blank space after 1A2A15A1R3 add: "1 A 2A15A 1 R- 4 279-3503 P1272 0028 1 01"
3. Page 11--1A7A15C24
 - a. Delete 835-2175 and add 818-9760.

Adjacent to each pen and ink correction insert this EIB number (895).

➔ **R-390A/URR Receivers, Frequent Failures and Replacements of V603 and V604 AF Amplifier Tubes, 6AK6 Type--Maintenance Hint**

It has been reported by CTMC David MYERS of NAVSECGRU, Edzell, Scotland that they are replacing a large number of 6AK6 tubes used in the V603 and V604 R-390A/URR receiver AF amplifier application. Upon investigation, they found that when Field Change #6 to an R-390A/URR was accomplished, plate voltage to these two tubes is increased by 20 to 35 VDC, depending on AC line input voltage. Tube specifications for 6AK6's stipulate that they should not be operated with plate voltages (plate to cathode) in excess of 180 VDC. R-390A/URR field change #6 is boosting the plate to cathode voltage to between 200 and 215 VDC. This is resulting in the development of internal tube shorts, which in turn, in some instances, also results in damage to each tube's respective cathode resistors.

In order to minimize downtime and the unnecessary use of repair time and parts, a

series B+ dropping resistor may be installed by activities which are experiencing this problem.

Refer to the 15 April 1970 issue of the R-390A/URR Technical Manual, NAVELEX 0967-063-2010, figure 5-13, sheet 2, zone B-7. The resistor will be located between terminal #5 of J619 and terminal #1 of L601 and may be installed as follows:

a. The following resistor types and values are recommended for this installation and should be obtained from supply, before starting the installation, if they are not on hand. One resistor is required for each receiver. Use a 200 ohm resistor if the AC line voltage is consistently maintained at 115 VAC; use a 220 ohm resistor if the line voltage will vary up to 120 and 125 VAC.

- * RW31V221 220 ohms, 14 watts 9N5905-00-642-2542
- * RW31V201 200 ohms, 14 watts 9N5905-00-636-9919
- RW68V221 220 ohms, 11 watts 9N5905-00-973-9157
- RW68V201 200 ohms, 11 watts 9N5905-00-973-9225

* Requires the addition of hook-up wire pigtails to the resistor terminals.

b. Remove the AC power from the receiver at the main bulkhead switch.

c. Remove the receiver chassis from its cabinet or rack. Disconnect and tag as necessary the cables connected to the rear of the receiver.

d. Place the receiver chassis on its side on a flat work surface and remove the AF amplifier sub-chassis.

e. Unsolder and disconnect the single lead from L601 terminal #1. Check that the opposite end of the lead is connected to J619 terminal #5.

f. Cut the wiring harness ties as necessary to enable connection of the disconnected end of the lead to XC-606 spare terminal #2.

g. Install the resistor between L601-1 and XC-606-2. Prior to the resistor installation, position any leads in the area between L601 and XC-606 so that they will not contact the resistor, or be between the resistor and the chassis. Retie the leads as necessary and solder the connections.

h. Reconnect the AF sub-chassis to J619 and J620 so that the component side of the chassis is accessible; reapply AC line power to the receiver, and set the FUNCTION switch to AGC.

i. Check the DC plate voltage between pins 5 and 7 at V603 and V604 tube sockets. --- Depending on AC line input levels, B+ should be in the approximate range of 170 to 180 VDC.

j. After the resistor installation, the CARRIER meter and IF GAIN adjustments should be checked, and performed if found necessary, in accordance with the procedures in Chapter 6 of the technical manual.

k. Remove the AC power from the receiver and reinstall the AF amplifier sub-chassis in its respective mounting location; reconnect the cables at the rear of the receiver chassis, and reinstall the receiver in its cabinet or rack.

l. Reapply AC power to the receiver; return the receiver to the mode desired.

TA-790/U Microphone Element--Maintenance Hint

Several failures of Raonwell part number 113950 microphone element (part of TA-790/U telephone set) have been reported recently. The failures are due to broken wires internal to the element.

This article provides a procedure for repairing the element. Use of this procedure is recommended only in an emergency situation when a replacement microphone is not available.

The microphone element is a factory sealed unit. The seal must be broken in order to effect repair. Caution must be exercised in both breaking and restoring the seal.

Material Required:

Scotchweld Adhesive #1838 B/A or equivalent

#28 AUG Stranded Wire Cotton

Tools Required:

Screwdriver, flat, 1/8 inch blade

Soldering Iron, 25-30 watt

Solder, 60/40, Resin core

Test Equipment Required:

None

Procedure:

Proceed as follows:

NOTE

USE CAUTION WHEN SOLDERING TO
AVOID INTERNAL DAMAGE

1. Construct a jig to hold the microphone element during the disassembly and assembly operation.

2. Using a small screwdriver gently tap to puncture seal. Continue around the periphery of the element.

3. Cautiously separate black portion of microphone from red portion to expose broken wire.

4. Remove broken wire and replace with 2 inches of #28 AWG stranded wire.

5. Place a ball of cotton between the internal element and the case sufficient to preclude vibration of the element under normal conditions.

6. Place black portion of microphone over red portion in the original alignment.

7. Seal with sealant.

The first part of this maintenance hint is a result of an adopted suggestion by DAVID A. FRITZLER, ETN 3, USS SHREVEPORT (LPD 12) and the second part is a result of an adopted suggestion by JONATHAN P. WORLEY, ETNSN, USS VREELAND (DE-1068).

COUNTERMEASURES

Field Change 37-AN/FRA-54(V), 5-AN/FRA-54A(V), 22-AN/FLR-11(V), 5-AN/FLR-11A(V)--Removal of Storage Batteries and Power Selector Unit from OA-4414/F Time Code Distribution Group--Correction to EIB 886

The purpose of this article is to correct a discrepancy on subject field changes as printed in EIB 886 and to add one additional step.

Refer to EIB 886, page 3, Procedures: Delete Step 6. Write in "See EIB 895 for further steps."

Corrected Step 6 and additional Step 7 are as follows:

1. Step 6. Save P-14 from the removed interconnecting cables. Remove all wires from subject plug and perform the following:

a. Solder a jumper between pin 3 and pin 5 of P-14.

b. Solder a jumper between pin 1 and pin 4 of P-14.

c. Reinstall P-14 into J-14 of the O-1076/F.

2. Step 7. Restore equipment to operational condition.

All other items of this field change are correct.

Thanks to CTMCM William H. MAUER, CTM1 Robert B. HANSHAW, CTM1 William L. SILAS and