

FIELD ADVISORY

FA#96-006
April 11, 1996

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TO: ALL LAND MOBILE SERVICE CENTERS
ATTENTION: SERVICE MANAGER

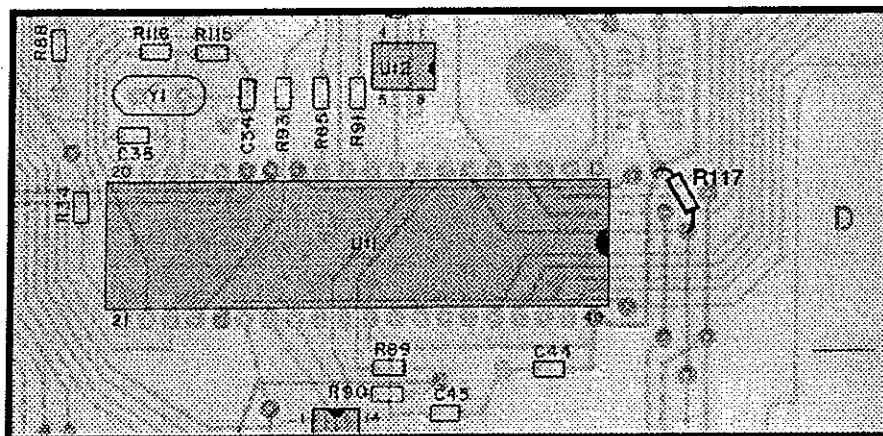
SUBJECT: Revised CMOS Microprocessor In LTR® 8600/40 Mobile Radios
Supersedes 8600/8640 information in FA#96-003

Because the HMOS microprocessors used in some 86XX model radios will soon no longer be available, a CMOS version of the device will be used to replace them. When replacing an HMOS microprocessor with the new CMOS version, some minor changes will need to be made depending on the radio model. These are described below. All 242-8600-001 Models with a Revision of "F" or later and 242-8640-001 with a revision of "E" or later already have the CMOS part and do not require the changes outlined in this document.

8600/40 Radios

Clock Resistors

When replacing an HMOS microprocessor that has a part number of 023-9998-168 with a CMOS device, it is required that R115 and R116 on the audio logic board be removed. The two 100KΩ resistors are located directly adjacent to microprocessor crystal Y1. See the top side audio logic board layout in the 8640 service manual for the location of the resistors. The current 8600 radio service manual audio logic board layout does not show these resistors. Figure 1 below shows the location of the resistors in a partial view with relation to the microprocessor (U11) and Y1. These resistors are used in the microprocessor clock circuit and will only be present in units using the HMOS version of the 023-9998-168 device.



R115/R116 and R117 Locations In 8600 Mobile
Figure 1

<Over>

Part Additions/Changes and Deletions

Add	R117	as a 569-0511-103
Change	Q4	to a 576-0001-300
Change	R34	to a 569-0115-104
Change	R71	to a 569-0115-683
Change	R79	to a 569-0115-472
Change	R80	to a 569-0115-104
Delete	R115	
Delete	R116	

R117 is an axial leaded 10K Ω resistor. This resistor should be placed in existing holes near U11 as shown in Figure 1. The resistor is electrically connected between pins 6 and 40 of U11.

Future revisions of the logic board will have R117 placed on the board as an SMD part.

Static Protection Diode

Because the new replacement microprocessor is CMOS, a static protection diode will need to be installed in radios that do not use a remote control unit. This diode is needed to protect the microprocessor port that connects to the hanger line. To do this, install an 18V Zener diode (pn 523-2503-180) in the JU1 position. JU1 is located on the top side of the main board near microphone jack J303. See the interconnect schematic and the top side main board layout in the service manual for the circuit location of JU1. Install the diode so the cathode lead (banded end) is inserted in the JU1 hole closest to R314 and the anode lead is inserted in the ground side of JU1. The spacing of the JU1 holes allows the diode to fit normally. Note that when a control unit is used with the radio, JU1 must be a wire jumper.

Identifying A CMOS Microprocessor

The new CMOS microprocessor can be identified by viewing the number printed on the top of the device. If the number printed on the top includes 5011448, the device is a CMOS device. If the number is 5010448 or is not present, then the device is not CMOS and the resistors should not be removed.

Please note that this REVISED field advisory ONLY pertains to 8600 and 8640 LTR[®] radios. The original field advisory (FA#96-003) should be referenced for all other models.

If you have any questions regarding this field advisory, call 1-800-328-3911, ext. 2.

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