

AWIPS SYSTEM MODIFICATION NOTE 17 (for Electronics Systems Analyst)
Maintenance, Logistics, and Acquisition Division
W/OPS12: JCS

SUBJECT : Firmware upgrade to the Radiosonde Replacement System (RRS) modem in LDAD modem nest.

PURPOSE : To provide firmware upgrading instructions for RRS modems.

EQUIPMENT AFFECTED : Advanced Weather Interactive Processing System (AWIPS), RRS modem.

PARTS REQUIRED : Two field modification kits (FMK). Each FMK contains a two-PROM set, a PROM puller, a manufacturer's instruction manual, and an Electro-Static Discharge (ESD) strap. (See Figure 1)

SPECIAL TOOLS REQUIRED : Standard site tool kit.

MODIFICATION PROCUREMENT : None.

EFFECTIVITY : WFOs Bismarck, ND (BIS), Boulder, CO (BOU), Corpus Christi, TX (CRP), and Spokane, WA (OTX).

ESTIMATED TIME REQUIRED : 15 - 20 minutes.

EFFECT ON OTHER INSTRUCTIONS : None. File in EHB-13, Section 5.1.

AUTHORIZATION : Firmware version 8.1 for the LDAD modem has been the original baseline requirement. However, the four affected sites had only version 8.0. This modification establishes the baseline at the affected sites.

VERIFICATION STATEMENT : This modification was tested at WFO Corpus Christi, TX (CRP).

GENERAL:

This modification note provides RRS modem firmware upgrade instructions. The site Electronics Systems Analyst (ESA) replaces and configures the programmable read-only memory (PROM) chips on the RRS modem. The dial modem card in slot A16 has 2 modems each with 2 PROMs, G01 and G02.

*****WARNING*****

Only qualified service personnel should perform this upgrade procedure. A qualified service person is one who is familiar with the AWIPS hardware, trained in AWIPS maintenance, and adequately aware of the hazards associated with the electrically powered equipment.

CAUTION

Some components in the modem-card are sensitive to ESD; such discharges can damage these components. Use proper handling and grounding precautions (ESD strap) when handling components.

NOTE: 1. Affected sites receive two FMKs containing: a two-PROM set, a PROM puller, and an ESD strap.

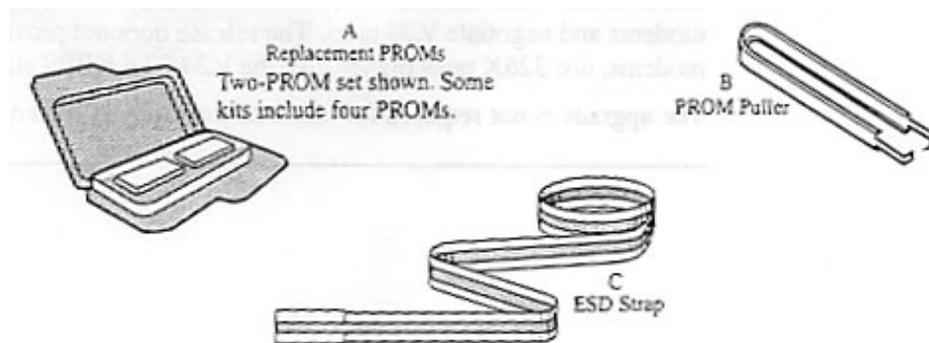


Figure 1

Installation Overview

Before replacing the PROMs, inspect the modem card as follows:

1. Verify that the PROMs are marked as G01 and G02.
2. Inspect them for damage. The pins must be straight - not bent.

NOTE: 2. If any PROMs are damaged, call Motorola customer support (within the United States) at 800-544-0062.

Preparation for upgrading the modems

Since information stored in the modems is lost during this upgrade, record the modem configuration settings, stored telephone numbers, and any non-default settings.

PROCEDURE

1. Remove PROMs.
 - a. Attach the ESD strap to your wrist and to a grounded item.
 - b. Remove the card from the AS2 modem nest, slot A16.
 - c. Hold the PROM puller at a 90-degree angle to PROM G01. Gently loosen the PROM pins by pulling up and rocking the PROM from end to end. Remove PROM G01

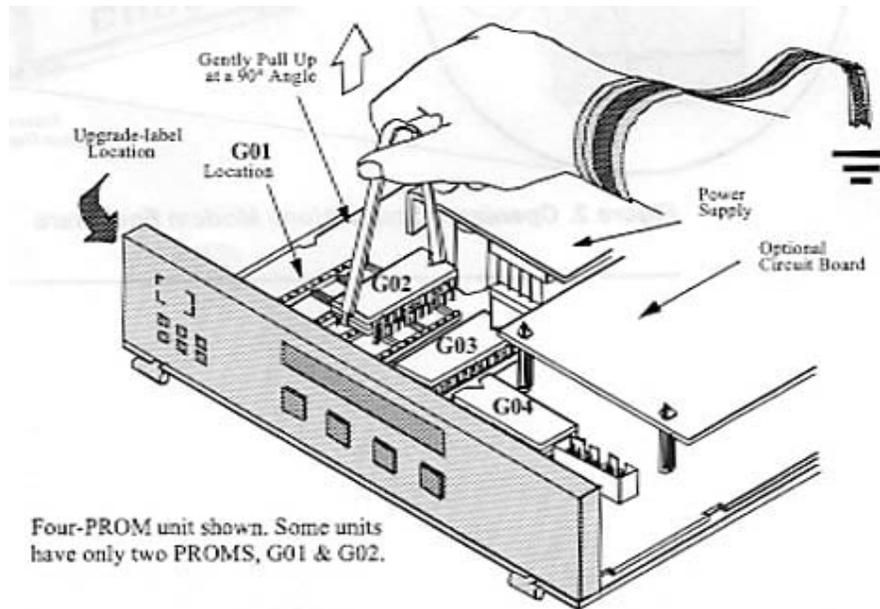


Figure 2

(Figure 2 shows PROM G02 being removed).

- d. Repeat step c for removing PROM G02.

- e. For the second modem on the same card (A16), repeat steps **c** and **d** for removing the second set of PROMs, G01 and G02.
2. Install New PROMs.
 - a. Remove PROM G01 from the package.

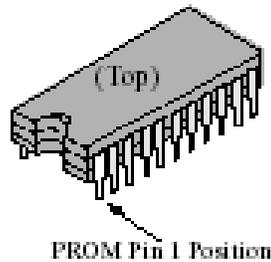


Figure 3

- b. Lay the PROM on its socket and make sure that Pin 1 is oriented correctly (Figure 3) and the pins are properly aligned.

NOTE: 3. Before seating the PROM, ensure the PROM pins are properly lined up with the socket. If the pins do not fit into the socket, **do not** try to force the PROM into place. Instead, gently press both sides of the PROM pins inward. This process should be repeated until all the PROM pins are properly aligned.

- c. Press gently, with equal pressure on both sides, until all pins are seated in the socket. (Figure 4).
 - d. Repeat steps **a** through **c** for PROM G02 and the second set of PROMS (G01 and G02) for the second modem.
3. Reassembling and Testing the Modems.
 - a. After replacing the PROMS, replace the modem card, A16, in the AS2 modem nest.
 - b. Change the modem-selector switch. Result: After 15 seconds, the LCD displays *326X Fast Init*. If the LCD does not display, ensure that the PROMS are:
 - i. Positioned and oriented correctly.
 - ii. Seated flat on the receptacles, with all pins straight.

NOTE: 4. At this point, the modem should reconfigure itself. If there are any problems with reconfiguration, **call the NCF.**

This completes the firmware upgrade and reconfiguration procedure.

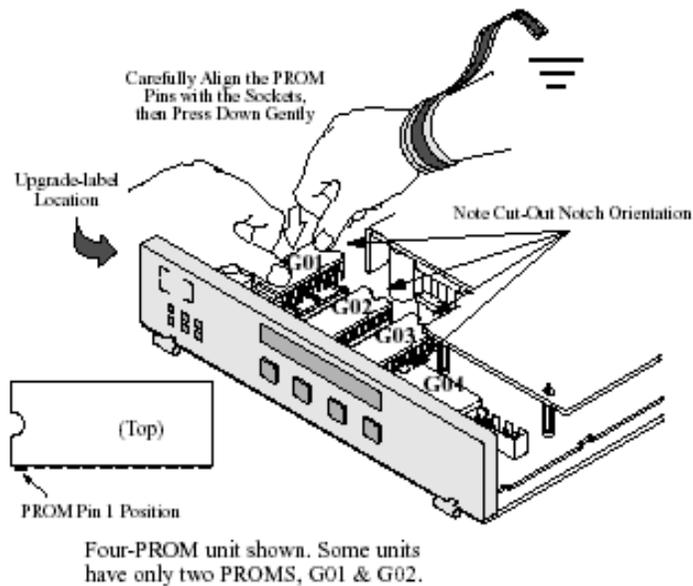


Figure 4

REPORTING INSTRUCTIONS

Report the completed modification using the Engineering Management Reporting System (EMRS) according to the instructions in NWS Instruction 30-2104, Maintenance Documentation, Part 4, Appendix F. Include the following information on the EMRS Report:

Block #	Block Type	Information
5	Description	Upgrade RRS modems firmware.
7	Equipment Code	AWIPS
8	Serial Number	001
15	Comments	Upgraded RRS modems firmware I.A.W. Modification Note 17
17a	Mod. No.	17

A sample EMRS report is provided as attachment A.

Mark S. Paese
Director, Maintenance, Logistics, and Acquisition Division

Attachment A - EMRS Report Sample

Attachment A - EMRS Report Sample

New A26 Commit A26 Place on Hold Copy A26 Delete A26 Detail Report Document Summary Help

GENERAL INFORMATION

NEW RECORD WFO* BIS Document No.* BIS40304001

1. Open Date	Open Time	2. Op Initials	3. Response Priority	4. Close Date	Close Time
03/04/2004	09:00	WSH	<input type="radio"/> Immediate <input type="radio"/> Low <input type="radio"/> Routine <input checked="" type="radio"/> Not Applicable	03/04/2004	09:30

5. Maintenance Description 448 characters left AWIPS

Radiofonde Replacement System Modem Firmware Upgrade

EQUIPMENT INFORMATION

6. Station ID*	7. Equipment Code	8. Serial Number	9. TM	10. AT	11. How Mal
BIS	AWIPS	001	M	M	999

Alert: Time Remaining: (For Block 12 use only)

13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING

ASN	Vendor Part No. (New Part)	Serial Number (Old Part)	Serial Number (New Part)	
				New Row
				Delete Row

14. WORKLOAD INFORMATION

a. Routine	b. Non-Routine	c. Travel	d. Misc	e. Overtime
Hours Minutes				
			0 30	

MISCELLANEOUS INFORMATION

15. Maintenance Comments 656 characters left

Changed PROM-G01 and PROM-G02 on the RRS modem in the AS2 modem nest, I.A.W. AWIPS Mod Note 17

16. Tech Initials KCV

17. SPECIAL PURPOSE REPORTING INFORMATION

a. Mod No.	b. Mod Act/Deact Date	c. Block C	d. Trouble Ticket No.	e. Block E
17	03/04/2004			

Commit A26 Place on Hold Copy A26 New A26 Cancel