REV B

SH 1

DWG. NO. 150-040495

APPLICATION	
NEXT ASSEMBLY	FINAL ASSEMBLY

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE PER DCN W853	1/28/00	V. Wallace
B	UPDATE FOR MINOR SOFTWARE REVISION PER DCN W1804	05/21/02	S. Analyst / V. Wallace

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APPROVALS	DATE
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ISSUED: V. Wallace	05/21/02

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SERVICE BULLETIN, WSB C-5000-9, OPTIMIZED DUAL-MIC SOFTWARE

SIZE	CAGE CODE	DWG NO.	REV
A	1B7G3	150-040495	B

SCALE: NONE — DO NOT SCALE DRAWING

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SERVICE BULLETIN

EQUIPMENT: C-5000 DATE: May 21, 2002

BULLETIN NUMBER: WSB C-5000-9

APPLICABILITY

This service bulletin applies to C-5000 Communication Management Controller P/N 31300-0X01-[1/2/3]XXX units (X = any digit) with serial numbers 2839-2840, 2813-2837, 2809 and lower.

Also, units must have one of the following Software Mods installed. If not, their modification will require additional components beyond those provided in the standard Mod Kit.

31300-0X01-1XXX, Mod 22, 24, 28, or 32.
31300-0X01-2XXX, Mod 16, 18, 24, or 28.
31300-0X01-3XXX, S/W Mod 1 or 2.

REASON

This software update adds the optimized dual MIC operation. See Appendix A for a detailed list of changes.

EFFECTIVITY

All C-5000 P/N 31300-[ ]-[ ] units with serial numbers 2810-2812, 2838, 2841 and above shall have this modification incorporated during original manufacturing.

DESCRIPTION

This modification consists of rework to the 300-017305-01 C-5000 CPU Assembly to install new software. The rework involves replacing two programmed PROMs with the current version.

COMPLIANCE

This Service Bulletin is recommended to be performed at customer convenience for those desiring the optimized dual Mic feature.

WARRANTY INFORMATION

Units still in the warranty period may be returned for installation of this modification under the terms of the warranty agreement. Units should be sent to:

Wulfsberg Electronics Division
Attention: Repair and Overhaul Department
6400 Wilkinson Drive
Prescott, AZ 86301

APPROVAL

This modification does not affect the original approval.

REFERENCES

C-5000 Installation Manual, P/N 150-1355-000.
C-5000 Operator's Manual, P/N 150-1352-000.

MATERIAL INFORMATION

The parts required to modify a C-5000 per this Service Bulletin are available from Wulfsberg Electronics Division, at (928) 708-1518. The part numbers are as follows:

149-340496-02 PARTS LIST, MODIFICATION KIT, OPTIMIZED DUAL-MIC SOFTWARE UPGRADE, C-5000

ITEM	QTY	WED PN	DESCRIPTION
1	1	156-017926-01	Label, Software Mod
2	1	106-816662-16	IC, Programmed 27C010 UVPROM U201 (CPU)
3	1	106-816664-16	IC, Programmed 27C256 UVPROM U208 (CPU)
4	1	150-040497	Addendum A to C-5000 CMC Operator's Manual 150-1352-000

Additional components required for C-5000's below minimum applicable software Mod Level. (See APPLICABILITY section)

ITEM	QTY	WED PN	DESCRIPTION
1A	1	106-816663-06	I.C., Programmed 27C256 UVPROM U304 (CPU)
2A	1	106-816929-06	I.C., Programmed 27C256 UVPROM U25 (Serial RT)

MODIFICATION PROCEDURE

CAUTION

Any disassembly/assembly of the C-5000 must be done at a static-safe workstation. Removed modules should be placed in antistatic bags when not installed in the unit.

1. Remove the bottom cover of the C-5000 to access the Main Board. The bottom cover is secured to the chassis by eight Phillips-head screws, four located on the left side and four located on the right side of the unit. See Figure 1.

2. Remove EPROMS U201, P/N 106-816662-XX, and U208, P/N 106-816664-XX. See Figure 2.

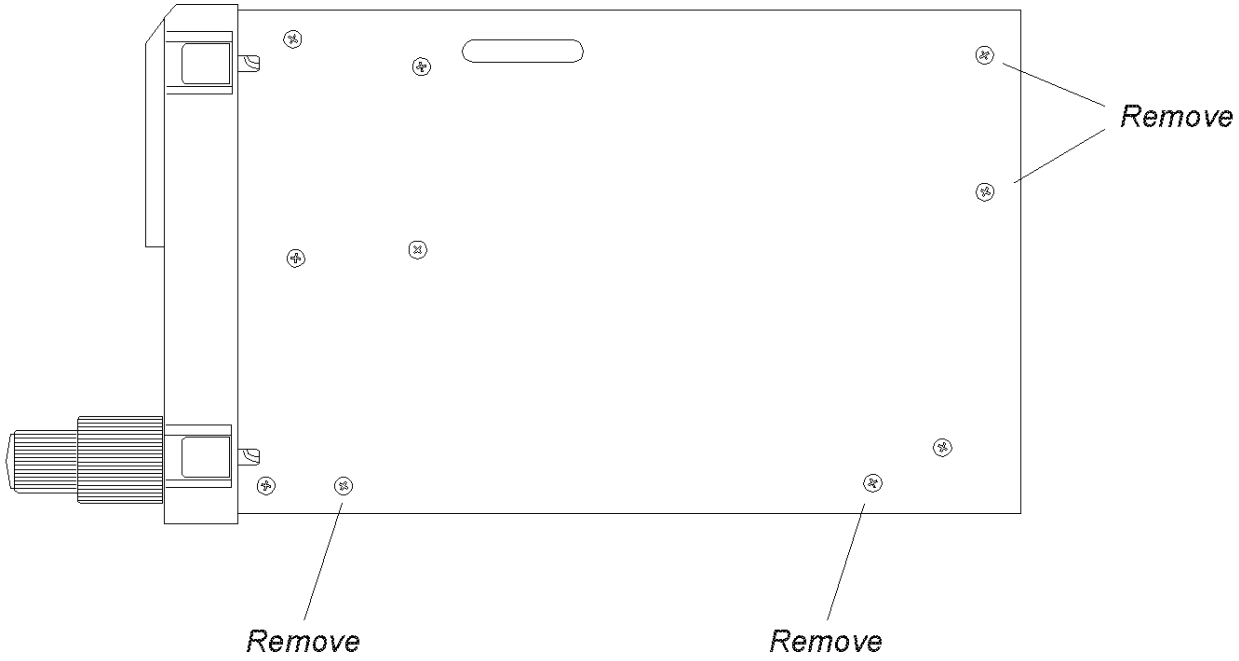
3. Install updated EPROMS U201, P/N 106-816662-16, and U208, P/N 106-816664-16.

4. Verify U304 is marked as 106-816663-06. U304 should already be –06 if U201 and U208 were –12 or higher. If not, replace it with item 1A. (This item is not included in standard kit)

5. Remove the rear cover and 300-016290-01 SERIAL RT INTERFACE Board.

6. Verify U25 is marked as 106-816929-06. U25 should already be –06 if U201 and U208 were –12 or higher. If not, replace it with item 2A. (This item is not included in standard kit)

7. Reassemble and secure the C-5000.



Cover

Figure 1. Screw Locations to Remove C-5000 Bottom Cover

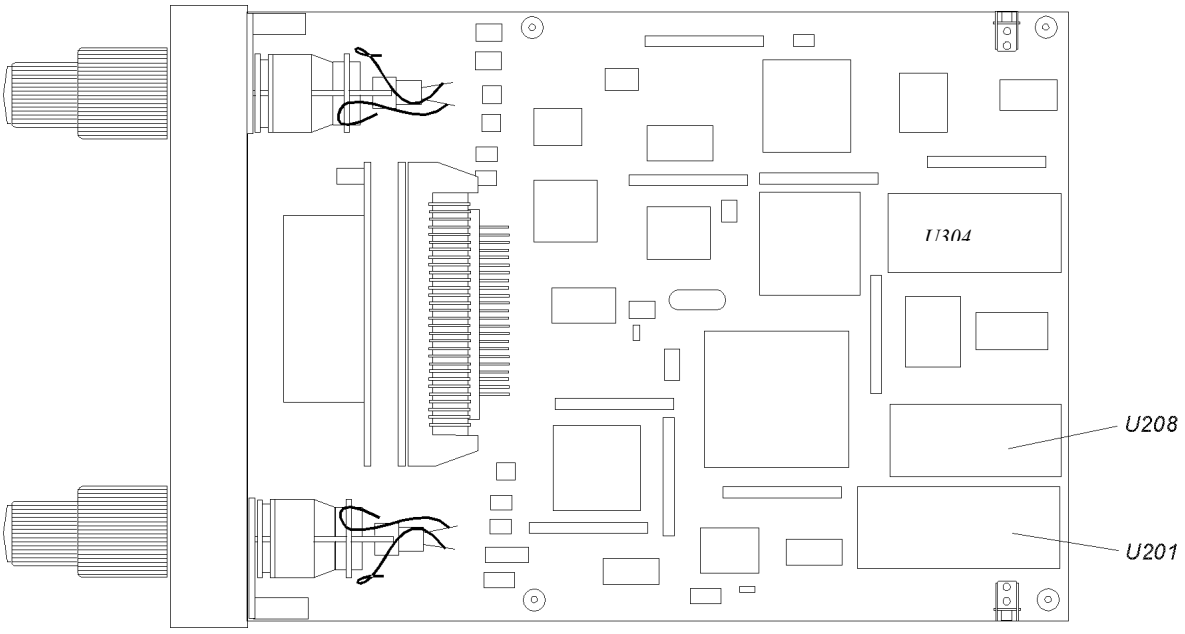


Figure 2. EPROM Locations

UNIT IDENTIFICATION PROCEDURE

Stamp Item 1 (156-017926-01 Software Mod Label) with Mod status shown and apply to unit ID label.

C-5000 UNIT PART NUMBER	MOD STATUS MARKING
31300-0X01-1XXX	33
31300-0X01-2XXX	33
31300-0X01-3XXX	33

X = Any Number

UNIT TESTING PROCEDURE

Perform a complete functional test of the unit in accordance with Section VI (System Checkout) of the C-5000 Installation Manual, P/N 150-1355-000.

When the unit is powered on, confirm that part number 106-816664-16 is displayed after the copyright message.

APPENDIX A

Software Upgrade Features for Optimized Dual Systems

1. Allow audio to be used on the SMIC port during encrypted mode of operation. The unit should operate this way even if not in optimized mode.
2. Allow the user to select the type of secondary operation from the menu page. The menu selection process should go from Dual mode “OFF”, “NORMAL”, “OPTIMIZED”. As an alternative, the OPT (optimized) mode could be automatically selected when only two radio systems are enabled.
3. If Optimized Dual mode is enabled, make the unit go to dual mic page upon power-up.
4. In Dual optimized mode, hardcode RT #1 to the PMIC and top line, and RT #2 to the SMIC and Lower line.
5. Hardcode the inner volume knob to control RT #1 volume, and the outer volume knob to control RT #2 volume while in Dual optimized mode.
6. Change the Optimized and Normal Dual Mic page to add M123 and G123 instead of displaying PMIC/SMIC.
7. Do not allow the cursor/value knob to change the RT assignments in the optimized dual mic. This is because RT #1 is hardcoded to Pmic and RT#2 is hardcoded to Smic.
8. If RT #1 or RT #2 is not enabled, display (RT #1 NOT ENABLED). If main receiver for RT#1 is disabled or not available, enable the Guard for RT #1 to become the active channel for RT #1. If neither Main or Guard for RT#1 or RT #2 is available or disabled, Display (RT #1(2) Disabled)
9. In optimized Dual Mic mode, change softkey operation to toggle between Main and Guard Receiver for each RT system.
10. Change the “Disp” button to cycle between Control Display page showing RT #(1 or 2) control display page and the Dual Mic page based upon which line the cursor is on. This would not allow the user to see the Freq, ACT/SBY, and system pages.
11. Add “r” and “t” to the receive and transmit frequency strings. Remove the “R” that currently is between the channel number and alpha ID. This should affect all pages that display a frequency, not just the Dual Mic page.
12. Put a “D” between the channel # and alpha id when in Direct mode and on any Dual Mic page (normal or optimized).
13. Put a “P” between the M12 and RT number when in Private mode.
14. Make the “P” change to a “*” when receiving encrypted signals.
15. Add Additional CTCSS tones to tone card and RT5000.
16. Make so any RT5000 can be tuned to any preset station configured for a RT5000 in any mode.