

REV C	APPLICATION		REVISIONS			
	NEXT ASSEMBLY	FINAL ASSEMBLY	REV	DESCRIPTION	DATE	APPROVED
			A	INITIAL RELEASE	8/13/99	Vern Wallace
			B	REVISED PER DCN W1086	6/1/00	V. Wallace
SH 1			C	REVISED PER DCN W1137	8/9/00	V. Wallace
	DWG. NO. 150-040141					

THIS COVER SHEET IS FOR WULFSBERG ELECTRONICS DIVISION INTERNAL USE. IT IS NOT TO BE PUBLISHED WITH THE DOCUMENT IT DESCRIBES

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF WULFSBERG ELECTRONICS DIVISION, A CHELTON GROUP COMPANY. NEITHER RECEIPT NOR POSSESSION THEREOF CONFERS ANY RIGHT TO REPRODUCE, OR USE, OR DISCLOSE, IN WHOLE OR IN PART, ANY SUCH INFORMATION WITHOUT WRITTEN AUTHORIZATION FROM WULFSBERG ELECTRONICS DIVISION.



Wulfsberg Electronics Division
A Chelton Group Company
 Prescott, AZ 86301 U.S.A.

APPROVALS	DATE	TITLE			
DRAWN Bill Patt	12/6/99	WULFSBERG SERVICE BULLETIN (WSB C-962N-1)			
CHECKED S. Elliott	12/6/99				
ENGINEER Hank Schnieder	12/6/99	SIZE	CAGE CODE	DWG. NO.	REV
ISSUED Vern Wallace	12/6/99	A	1B7G3	150-040141	C
		SCALE NONE			SHEET 1 OF 1



SERVICE BULLETIN

EQUIPMENT: C-962N

DATE: June 28, 2000

BULLETIN NUMBER: WSB C-962N-1

DESCRIPTION

This Service Bulletin describes the modifications required to upgrade C-962A Control Units to support narrow-band (12.5 kHz) channel spacing.

APPLICABILITY

This Service Bulletin applies to all C-962A Control Units (Part Numbers 400-0073 -010, -020, or -030).

WARNING: This Service Bulletin does NOT apply to any C-962S Control Units (Part Numbers 400-0141-010, or -020). This is because C-962S Control Units are only used with RT-9600F Transceivers equipped with the Voice Privacy (VP) interface option and these transceivers cannot be converted to narrow-band operation.

REASON

To satisfy customer requests to upgrade existing C-962A Control Unit/RT-9600F Transceiver systems for narrow-band operation.

EFFECTIVITY

Modifications described in the Service Bulletin will be completed as required by customer.

COMPLIANCE

Modifications contained in this Service Bulletin are optional. They are indicated for customers who want to add narrow-band capability to systems using C-962A Control Units to control RT-9600F transceivers. NOTE: Systems using C-962S Control Units and RT-9600 Transceivers equipped with the Voice Privacy (VP) option cannot be converted to narrow-band operation.

APPROVAL

Modifications do not affect the original approval.

REFERENCES

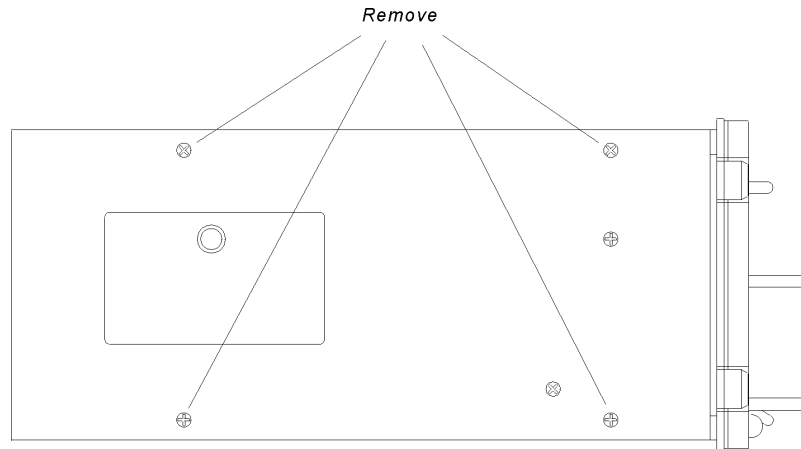
RT-9600 Maintenance Manual, PN 150-0058-000

C-722/722A, C-962/962A/962S, AN/ARC-513(V) VHF-FM Control Units,
PN 150-0073-000

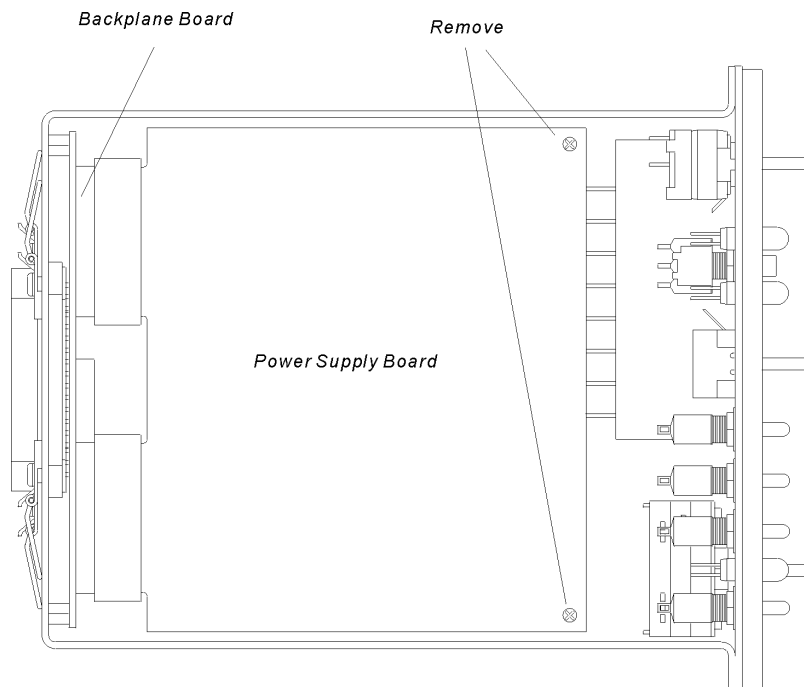
MODIFICATION PROCEDURE

Disassembly

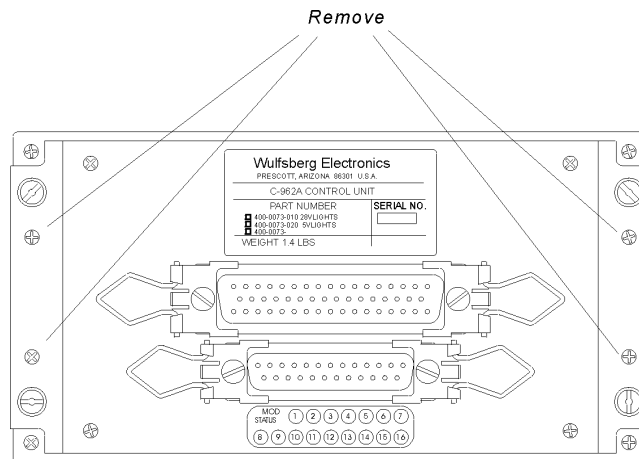
1. Remove the three knobs from the front panel.
2. Remove the four screws on each side that secure the top and bottom covers to the frame.



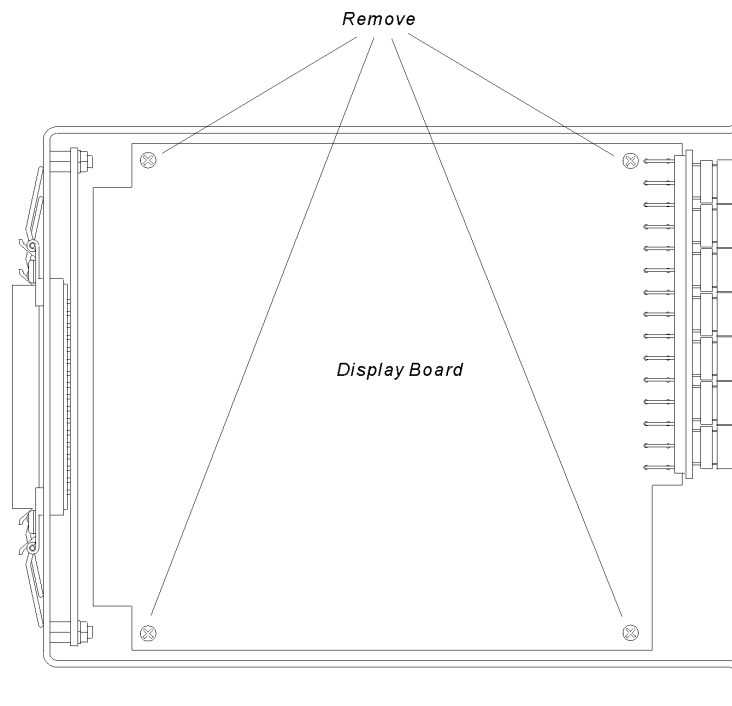
3. Remove the screw that secures the bottom cover.
4. Remove the top and bottom covers.
5. Remove the two screws that secure the Power Supply Board. Unplug the board from its two connectors on the Backplane Board. Remove the Power Supply Board.



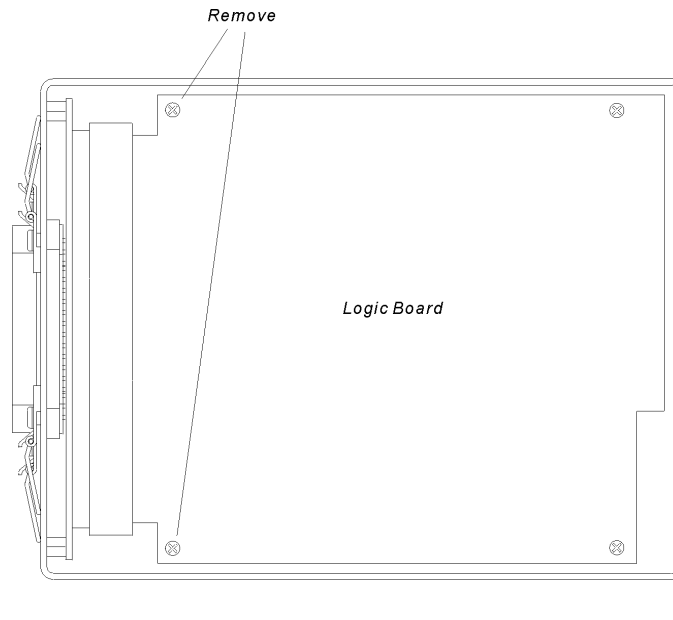
6. Unplug the two cables from the connectors located near the left and right sides of the Backplane Board.
7. Remove the two screws from each side of the back of the Front Panel. Loosen the Front Panel.



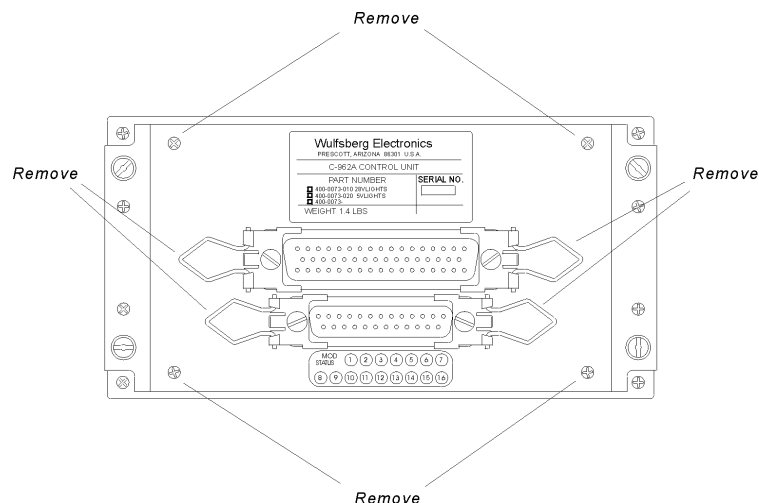
8. Unplug the cable from the connector located near the top of the Backplane Board. Remove the Front Panel from the frame.
9. Remove the four screws that secure the Display Board, unplug the board from its connector on the Backplane Board, and remove the Display Board. These components will not be reused.



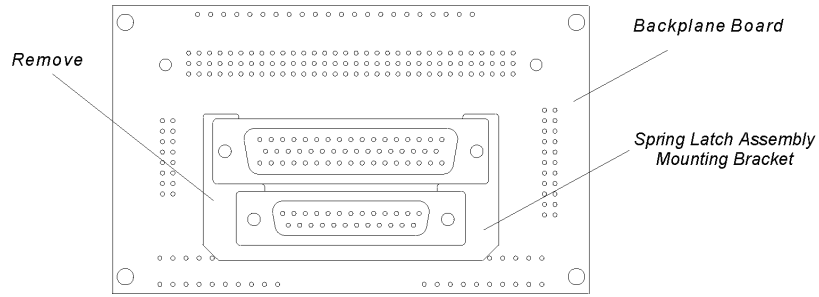
10. Remove the two screws and standoffs that secure the Logic Board to the frame, unplug the board from its connector on the Backplane Board, and remove the Logic Board. These components will not be reused.



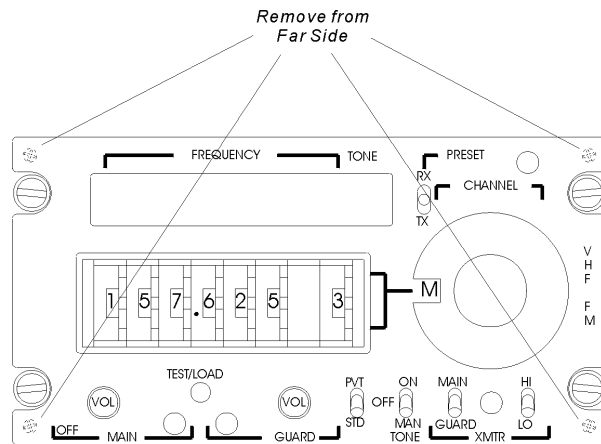
11. Remove the screws that secure the two Display Board and Logic Board right-angle mounting brackets to the sides of the frame. Set the screws aside for reuse. Discard the brackets.
12. Remove the four screws that secure the Spring Latch Assemblies to the connectors on the rear of the frame. Set the screws and Spring Latch Assemblies aside for reuse.
13. Remove the four 4-40 x 7/16 FHP screws, 4-40 x 3-16 3/16L standoffs, #4 lockwashers, and 4-40 x 3/16 nuts that secure the Backplane Board to the frame. Guide the connectors through the cutouts on the Frame to remove the Backplane Board. Set the hardware aside for reuse. The board will not be reused.



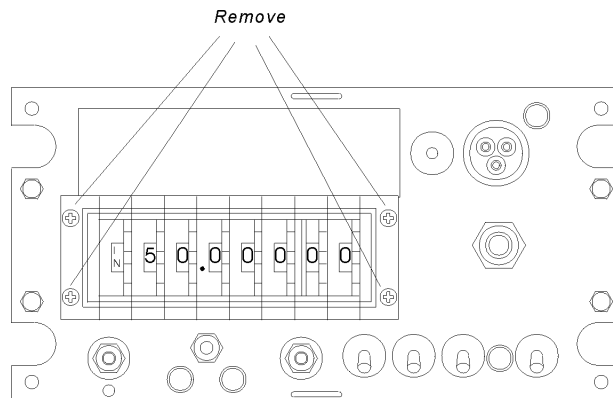
- Remove the Spring Latch Assembly Mounting Bracket from under the connectors on the Backplane Board.



- Remove the four 4-40 x 3/16 FHP screws located on the far side of the Front Panel that secure the Thumbwheel Switch bezel to the Panel. Separate the bezel from the Front Panel.

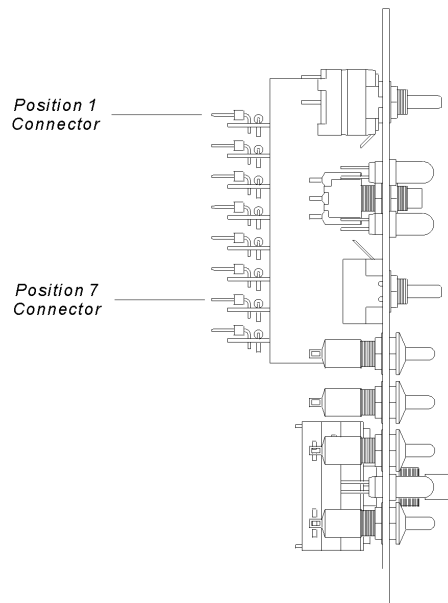


- Unplug the connectors from the original Thumbwheel Switch, noting their positions. Remove the switch by removing the four 2-56 x 1/4 PHP mounting screws that secure it to the Front Panel. It will not be reused.



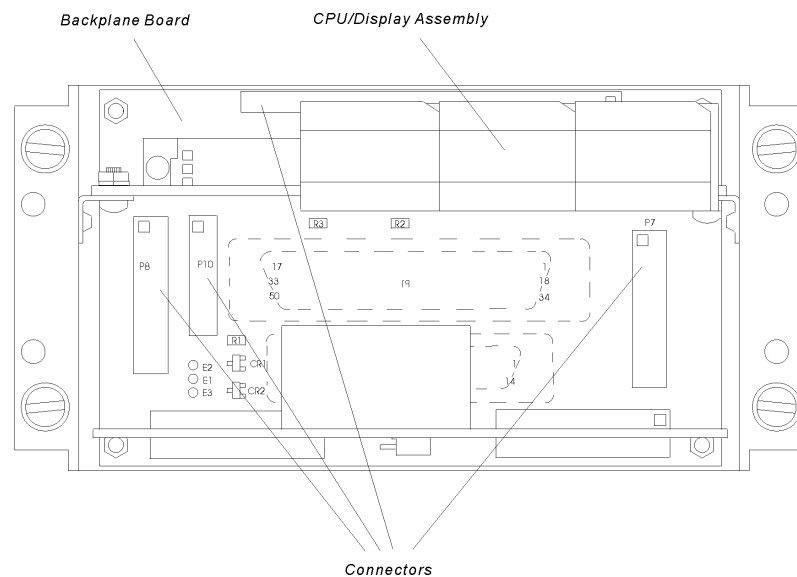
Reassembly

1. Secure the C-962 Narrow-band Thumbwheel Switch, PN 130-040157-01, supplied in the Modification Kit, to the Front Panel, reusing the four original 2-56 x ¼ PHP mounting screws (see step 16 of the disassembly procedure).
2. Plug the cables into the new Thumbwheel Switch in their original positions, except for the cable that was in the position 1 connector on the original switch.
3. Plug J12 of the C-962 Narrow-band Wire Harness, PN 124-040040-01, supplied in the Modification Kit, into the position 1 connector on the new Thumbwheel Switch.



4. Plug J11 of the C-962 Narrow-band Wire Harness into the position 7 connector on the new Thumbwheel Switch.
5. Secure the bezel to the Front Panel using the original four 4-40 x 3/16 FHP screws (see step 15 of the disassembly procedure).
6. Replace the knobs removed in step 1 of the disassembly procedure.
7. Place the Spring Latch Assembly Mounting Bracket under the connectors on the C-962 Narrow-band Backplane Board, PN 300-040038-01, supplied in the Modification Kit (see step 14 of the disassembly procedure).
8. Feed the Backplane Board connectors through the cutouts on the frame.
9. Secure the new Backplane Board to the frame using the original four 4-40 x 7/16 FHP screws, 4-40 x 3-16 3/16L standoffs, #4 lockwashers, and 4-40 x 3/16 nuts (see step 13 of the disassembly procedure). Do not tighten hardware at this time.

10. Secure the Spring Latch Assemblies on the connectors with the original screws (see step 12 of the disassembly procedure). Tighten all hardware.
11. Plug the original Power Supply Board into the two connectors on the Backplane Board (see step 5 of the disassembly procedure). Secure the board to the Frame Angle Brackets using the two original 4-40 ¼ Sems. The board is mounted with the component side facing into the Frame cavity.
12. Replace the angle brackets removed in step 11 of the disassembly procedure with the Right Angle Brackets, PN 189-0006-000, supplied in the Modification Kit. Install them using the two 4-40 x 3/16 FHP screws that held the original brackets in position.
13. Plug the cables removed from the original Backplane board (see step 6 of the disassembly procedure) into the corresponding connectors on the new board. Plug the cable from the C-962 Narrow-band Wire Harness into the third connector on the board.



14. Install the C-962 Narrow-band CPU/Display Assembly, PN 300-040037-01, supplied in the Modification Kit. Use the two 4-40 x 5/16 PHP Screws, #4 Splitlock Washers, and 4-40 x 3/16 Nuts supplied in the kit to secure the CPU/Display Assembly to the Right Angle Bracket installed in step 12 above. Screws, washers, and nuts must be installed as shown above.
15. Secure the Bezel to the Frame using the four 4-40 x 3/16 FHP screws removed in step 15 of the disassembly procedure.
16. Plug the last cable from the C-962 Narrow-band Wire Harness into the connector located near the top of the Backplane Board (see step 8 of the disassembly procedure).
17. Secure the Top and Bottom Covers using the screws removed in steps 2 and 3 of the disassembly procedure.

IDENTIFICATION PROCEDURE

Affix the software configuration ID label, P/N 057-03284-0003, immediately to the right of the "MOD STATUS" label on the rear of the unit.

Mark the "MOD STATUS" label to indicate that Mod 3 is complete.

TESTING PROCEDURE

Perform a complete functional test of the unit in accordance with the following publications:

RT-9600 Maintenance Manual, PN 150-0058-000 Rev. D, paragraph 4.4

RT-9600F Transceiver Narrow-Band Synthesizer Module Maintenance Manual Addendum, PN 150-040219 Rev. A

C-722/722A, C-962/962A/962S, AN/ARC-513(V) VHF-FM Control Units, PN 150-0073-000 Rev. C, paragraph 4.2

MATERIAL INFORMATION

The parts required to modify a C-962A in accordance with this Service Bulletin are contained in Kit, C-962 Narrow-band Modification, PN 149-240158-01.

The kit includes the following components:

<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	300-040037-0103	C-962 Narrow-band CPU/Display Assembly
2	1	300-040038-01	C-962 Narrow-band Backplane Board
3	1	124-040040-01	C-962 Narrow-band Wiring Harness
4	1	130-040157-01	Thumbwheel Switch, C-962 (Narrow-band)
5	2	189-0006-000	Right Angle Bracket
6	2	MS51957-14	4-40 x 5/16 PHP Screw
7	2	MS35338-135	#4 Splitlock Washer
8	2	089-02076-0030	4-40 x 3/16 Nut
9	1	057-03284-0003	Software Configuration ID (SW ID) Label