

REV A	APPLICATION		REVISIONS			
	FINAL ASSEMBLY	REV	DESCRIPTION	DATE	APPROVED	APPROVED
SH 1		A	INITIAL RELEASE PER DCN W7656	11/06/08	D. Farkas	L. Andujo

**APPLICABILITY:
-5XXX THRU -60XX, -8211
SWID 20 OR LATER**

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APPROVALS	DATE	TITLE			
DRAWN Stan Wild	11/06/08	WULFSBERG SERVICE BULLETIN, SINGLE ZONE IMPLEMENTATION, (WSB-RT-5000-04)			
CHECKED Dan Farkas	11/06/08				
ENGINEER Stan Wild	11/06/08	SIZE	CAGE CODE	DWG. NO.	REV
ISSUED Linda Andujo	11/06/08	A	1B7G3	150-042618-04	A
Typed signatures indicate approval. Handwritten signature approval of this document is on file at Wulfsberg Electronics, Prescott, Arizona			SCALE: NONE		SHEET 1 OF 7



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SERVICE BULLETIN

EQUIPMENT: RT-5000D

DATE: 11/06/2008

BULLETIN NUMBER: WSB RT-5000-04 Revision A

EFFECTIVITY

Affects 400-015526-5XXX thru -82XX, but ONLY with SWID 20 or later.

REASON

Fix channel changing bug in RT-5000 with XTS-5000 P25 trunking radios. This involves mapping zone / channel data from RPWIN to a single zone in CPS. See instructions below.

DESCRIPTION

- Configure unit for Single Zone operation
- Modify Rpwins file for Single Zone operation and load configuration into C-5000
- Modify Cps file for Single Zone operation and load into internal ITM modules

COMPLIANCE

Upon customer request.

APPROVAL

This service bulletin does not affect the original approval.

REFERENCES

- 150-041374 MANUAL, USERS, REMOTE PROGRAMMER, RPWIN, C-5000
- 150-041102 MANUAL, OPERATORS, C-5000 (P25 CAPABLE)

SOFTWARE REQUIRED

- 320-441508-120000 Motorola Astro 25 Portable CPS Software, Version R12.00.00 (or later) for XTS-5000
- 320-141391-04 Remote Programmer for Windows

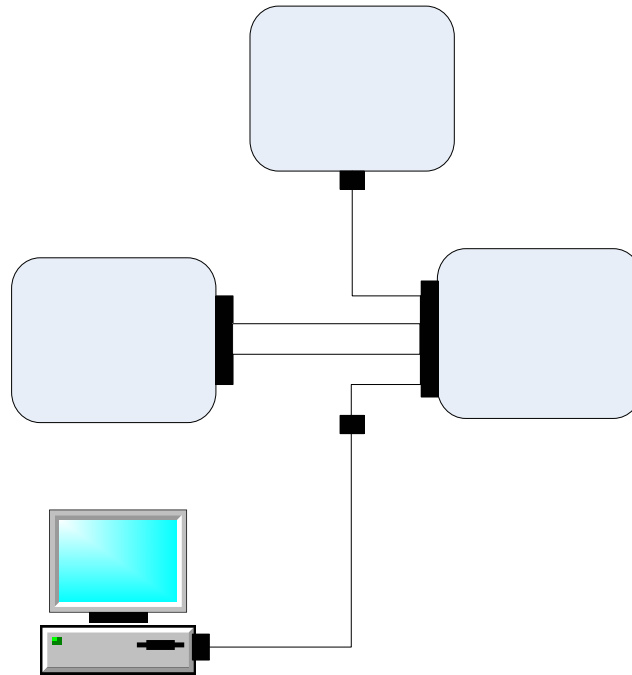
MATERIAL INFORMATION

Any parts or information required to modify the unit in accordance with this Service Bulletin are available from Wulfsberg Electronics at (928) 708-1518.

HYPERTERMINAL PROCEDURE

Insure unit is set connected as indicated in Figure 1 below. This could be a normal aircraft installation.

Figure 1: Typical Unit Connection



1. Turn unit main power OFF.
2. Insure the PC RS-232 serial port cable is connected to the 9 pin harness RT-5000 P1 KVL / data port connector.
3. Start a Terminal Emulator program and create a serial connection with the following parameters:

Parameter	Value
Baud rate	57600
Parity	None
Data bits	8
Start bits	2
Stop bits	1
Flow control	OFF

4. Turn unit main power ON.
5. Within 5 seconds, press CTRL T followed by ENTER on the keyboard. The **UARTC>** prompt should appear. If it does not, check the terminal setup and all connections and retry from step 1.
6. Type in the following command:

```
ver  
Enter
```

Verify the CPLD version is 320-140460-03.
Verify the XAG49 software version is 320-140915-14.

7. Type in the following command:

```
zoneopt one  
Enter
```

NOTE: This data can ONLY be entered (changed) 15 times after a 'fresh' software load. If data has already been entered 15 times, you will get an error message and you MUST return the unit to have the software reloaded and then redo this procedure.

8. Type in the following command:

```
zoneopt r  
Enter
```

Verify the response is:

```
zoneopt one
```

9. Cycle power on the unit.

RPWIN / CPS MODIFICATION PROCEDURE

1. Convert the RpWin file and CPS codeplug file in accordance with examples in Tables 1 and 2.
2. Connect PC loaded with the CPS file to the RT-5000 P1 KVL / data port and download the codeplug in accordance with the instructions in the Flexcomm II (P25) Programming Manual (PN 150-041102).
3. Connect PC loaded with RpWin file to the mating C-5000 connector and download in accordance with the instructions in the MANUAL, USERS, REMOTE PROGRAMMER, RPWIN, C-5000 (PN 150-041374).

NOTE: Reversing steps 2 and 3 may result in having to reboot the PC between steps to allow successful CPS download and avoid com port conflicts.

4. Disconnect all remaining cables.

NOTE:

- All CPS channels must be defined up to the last available channel being used.
 - The remainder of the table can be empty.
- Unused channel gaps within the 1 zone 256 channel CPS codeplug MUST be defined with a dummy placeholder (for example: **Unused**) since you cannot skip channels within CPS.

TEST PROCEDURE

1. Perform Test in Appendix A below.

Table 1: Single Zone Sequential Channeling Method

Index by 16 zones / 16 channels				Index by up to 256 channels in 1 zone		
RpWin file				CPS file		
Zone	Channel	Name		Name	Zone	Channel
1	1	Alpha 1	→	Alpha 1	1	1
1	2	Alpha 2	→	Alpha 2	1	2
1	3	Alpha 3	→	Alpha 3	1	3
1	4	Alpha 4	→	Alpha 4	1	4
1	5	Alpha 5	→	Alpha 5	1	5
1	6	Alpha 6	→	Alpha 6	1	6
1	7	Alpha 7	→	Alpha 7	1	7
1	8	Alpha 8	→	Alpha 8	1	8
1	9	Alpha 9	→	Alpha 9	1	9
1	10	Alpha 10	→	Alpha 10	1	10
1	11	Alpha 11	→	Alpha 11	1	11
1	12	Alpha 12	→	Alpha 12	1	12
1	13	Alpha 13	→	Alpha 13	1	13
1	14	Alpha 14	→	Alpha 14	1	14
1	15	Alpha 15	→	Alpha 15	1	15
1	16	Alpha 16	→	Alpha 16	1	16
2	1	Alpha 17	→	Alpha 17	1	17
2	2	Alpha 18	→	Alpha 18	1	18
2	3	Alpha 19	→	Alpha 19	1	19
2	4	Alpha 20	→	Alpha 20	1	20
2	5	Alpha 21	→	Alpha 21	1	21
Etc.	Etc.	Etc.	→	Etc.	Etc.	Etc.
16	16	Alpha 256	→	Alpha 256	1	256

NOTE:

- All CPS channels must be defined up to the last available used channel (with no gaps).
 - The remainder of the table can be empty if less than 256 channels are defined.

Table 2: Single Zone Non-Sequential Channeling Method

Index by 16 zones / 16 channels				Index by up to 256 channels in 1 zone		
RpWin file				CPS file		
Zone	Channel	Name		Name	Zone	Channel
1	1	Alpha 1	→	Alpha 1	1	1
1	2	Alpha 2	→	Alpha 2	1	2
1	3	Alpha 3	→	Alpha 3	1	3
1	4	Alpha 4	→	Alpha 4	1	4
			→	Unused	1	5
			→	Unused	1	6
1	7	Alpha 5	→	Alpha 5	1	7
1	8	Alpha 6	→	Alpha 6	1	8
			→	Unused	1	9
			→	Unused	1	10
			→	Unused	1	11
1	12	Alpha 7	→	Alpha 7	1	12
1	13	Alpha 8	→	Alpha 8	1	13
1	14	Alpha 9	→	Alpha 9	1	14
			→	Unused	1	15
1	16	Alpha10	→	Alpha10	1	16
2	1	Alpha11	→	Alpha11	1	17
2	2	Alpha12	→	Alpha12	1	18
2			→	Unused	1	19
2	4	Alpha13	→	Alpha13	1	20
2	5	Alpha14	→	Alpha14	1	21
Etc.	Etc.	Etc.	→	Etc.	Etc.	Etc.
16	16	Alpha 256	→	Alpha 256	1	256

NOTE:

- All CPS channels must be defined up to the last available used channel.
- The remainder of the table can be empty.
- Unused channel gaps within the 1 zone 256 channel codeplug **MUST** be defined with a dummy placeholder (for example: **Unused**) since you cannot skip channels within CPS.

APPENDIX A LIMITED TEST

PURPOSE

These instructions describe the test for the RT-5000.

INSTRUCTIONS:

Procedure

1. Power system OFF, then back ON.
2. Use the C-5000 to select the first available channel.
3. Verify unit can transmit and receive on this channel.
4. Use the C-5000 to select a channel in the next zone (preferably NOT the first channel in this zone).
5. Verify unit can transmit and receive on this channel.
6. Use the C-5000 to select a channel in the next zone (preferably NOT the first channel in this zone).
7. Verify unit can transmit and receive on this channel.
8. Repeat on as many channels as desired.