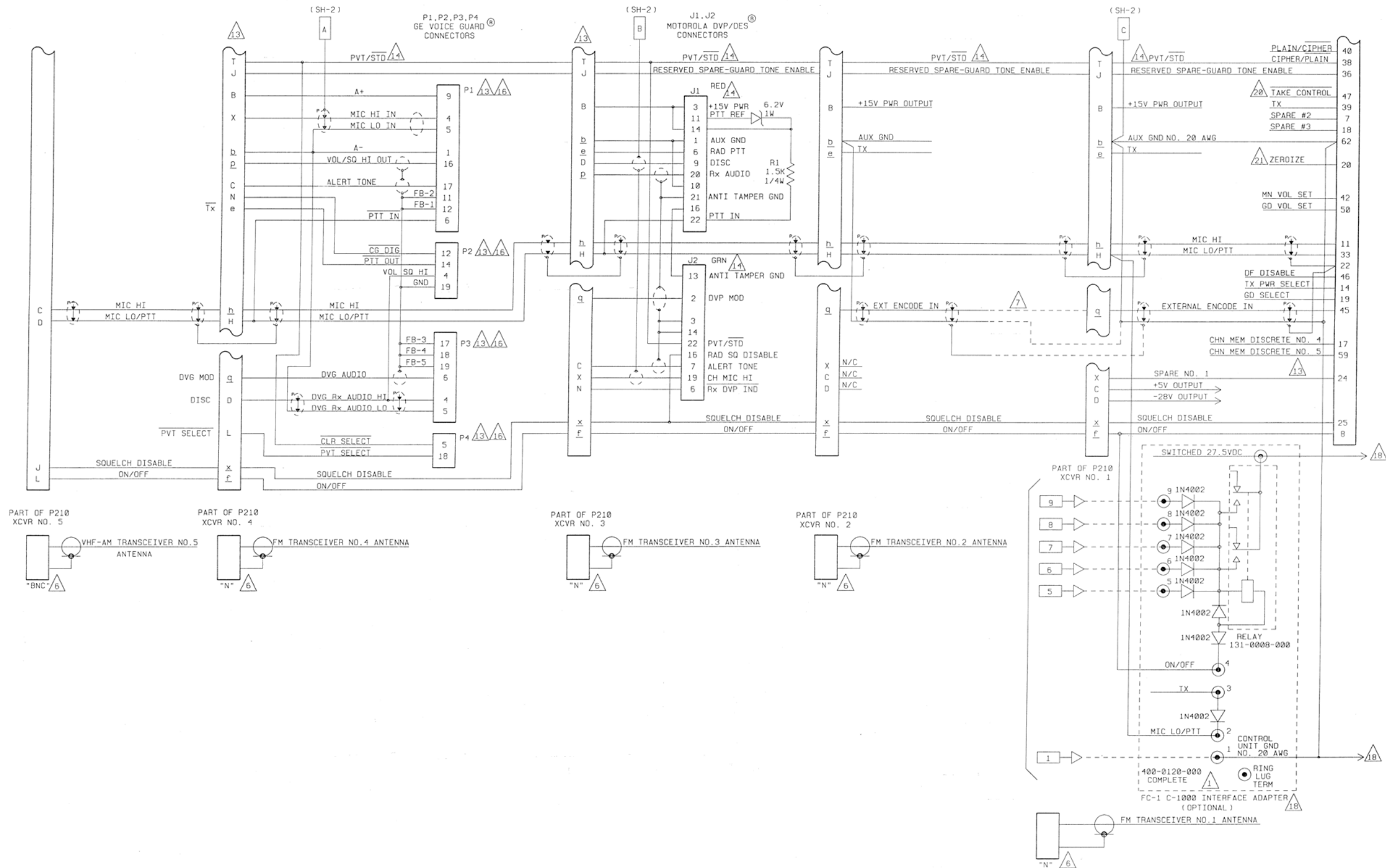
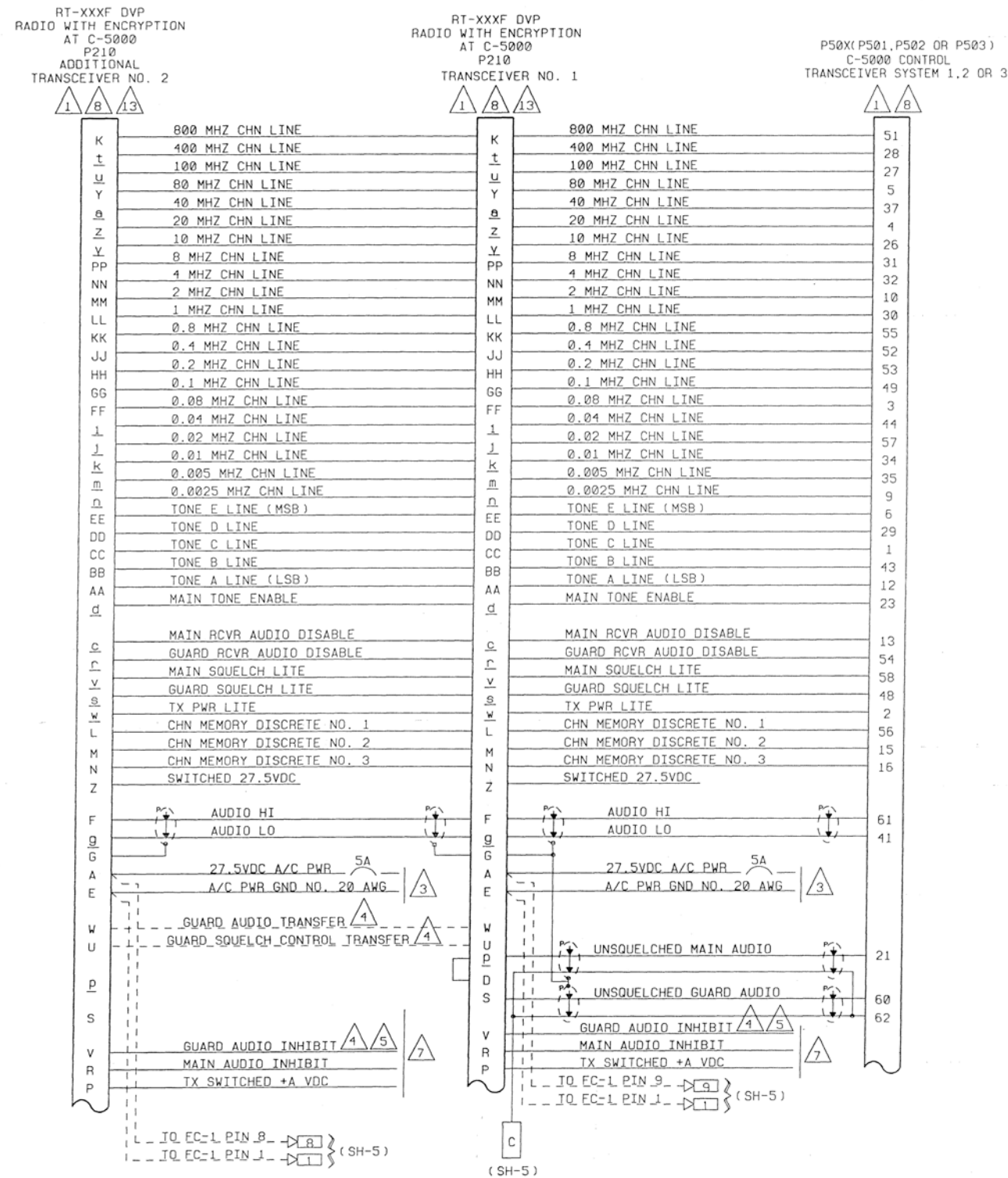


**C-5000 COMMUNICATION MANAGEMENT CONTROLLER  
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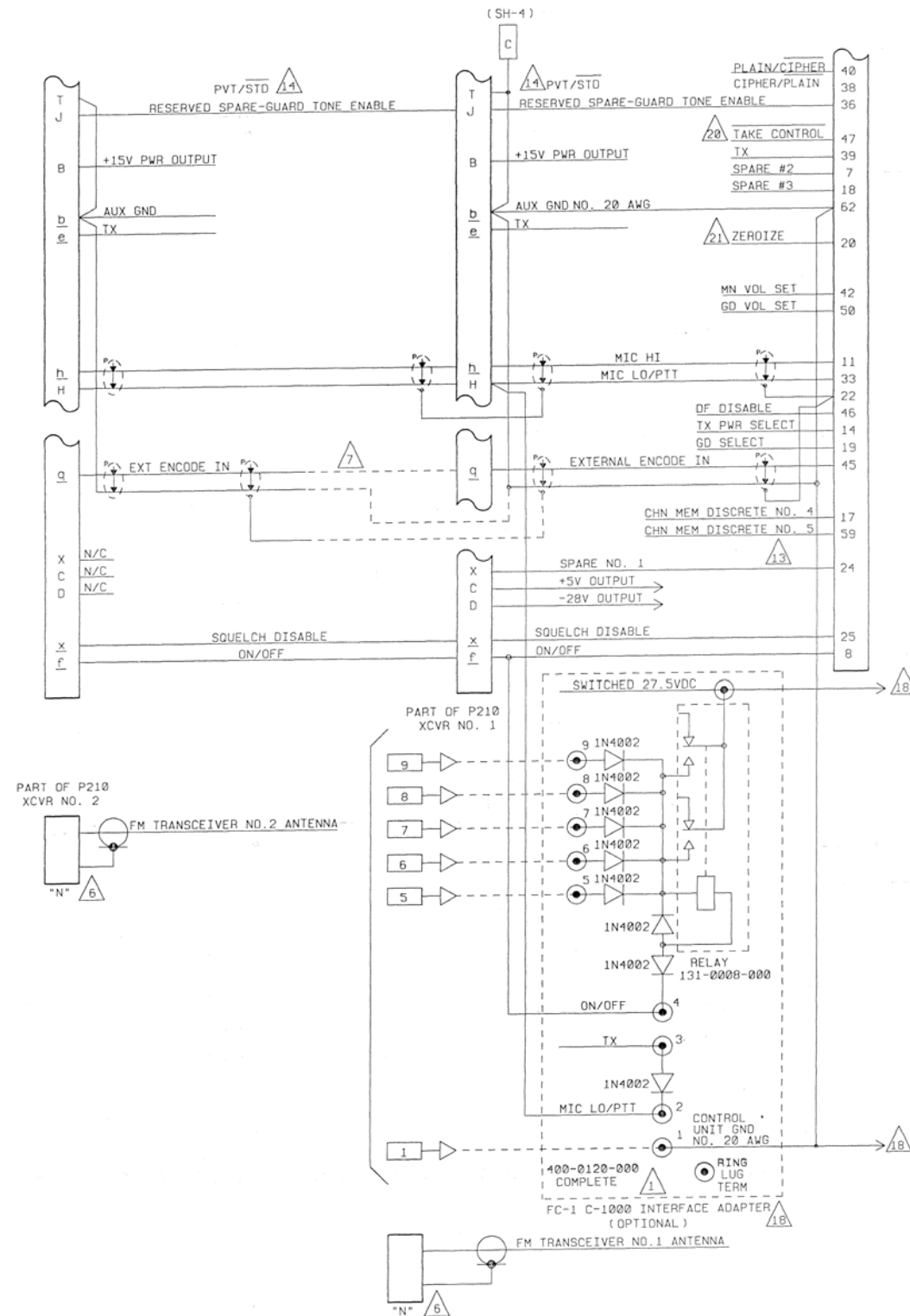
**Figure 4-13c. FLEXCOMM I Transceivers Installation Wiring Diagram (Sheet 3 of 5)**  
RT-30, RT-118, RT-138, RT-138F, RT-450 and RT-406F  
(Dwg No 147-014991, Rev B)

# C-5000 COMMUNICATION MANAGEMENT CONTROLLER INSTALLATION MANUAL



**Figure 4-13d. FLEXCOMM I Transceivers Installation Wiring Diagram (Sheet 4 of 5)**  
**RT-30, RT-118, RT-138, RT-138F, RT-450 and RT-406F**  
**(Dwg No 147-014991, Rev B)**

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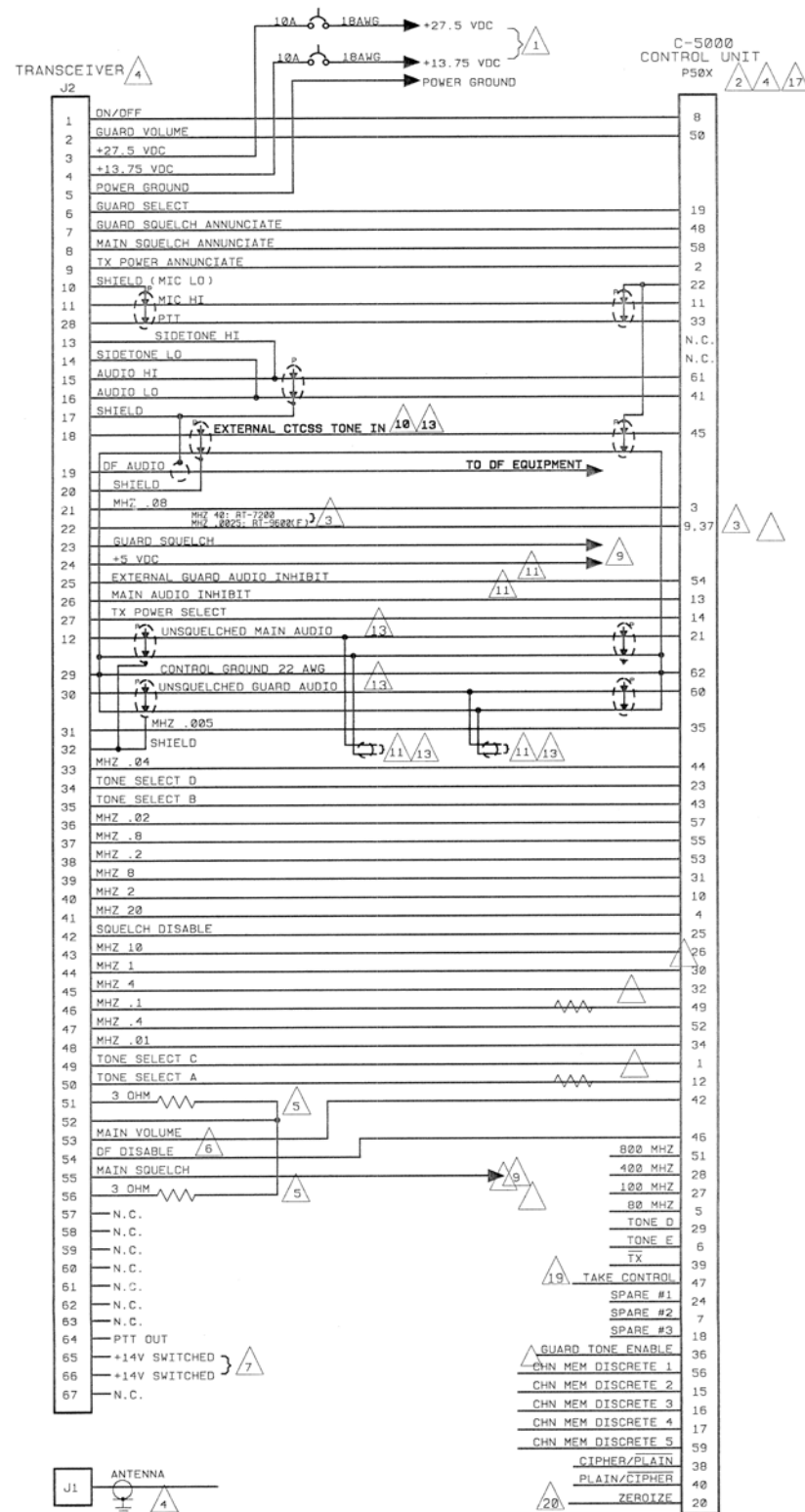


**Figure 4-13e. FLEXCOMM I Transceivers Installation Wiring Diagram (Sheet 5 of 5)**  
**RT-30, RT-118, RT-138, RT-138F, RT-450 and RT-406F**  
**(Dwg No 147-014991, Rev B)**

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### NOTES:

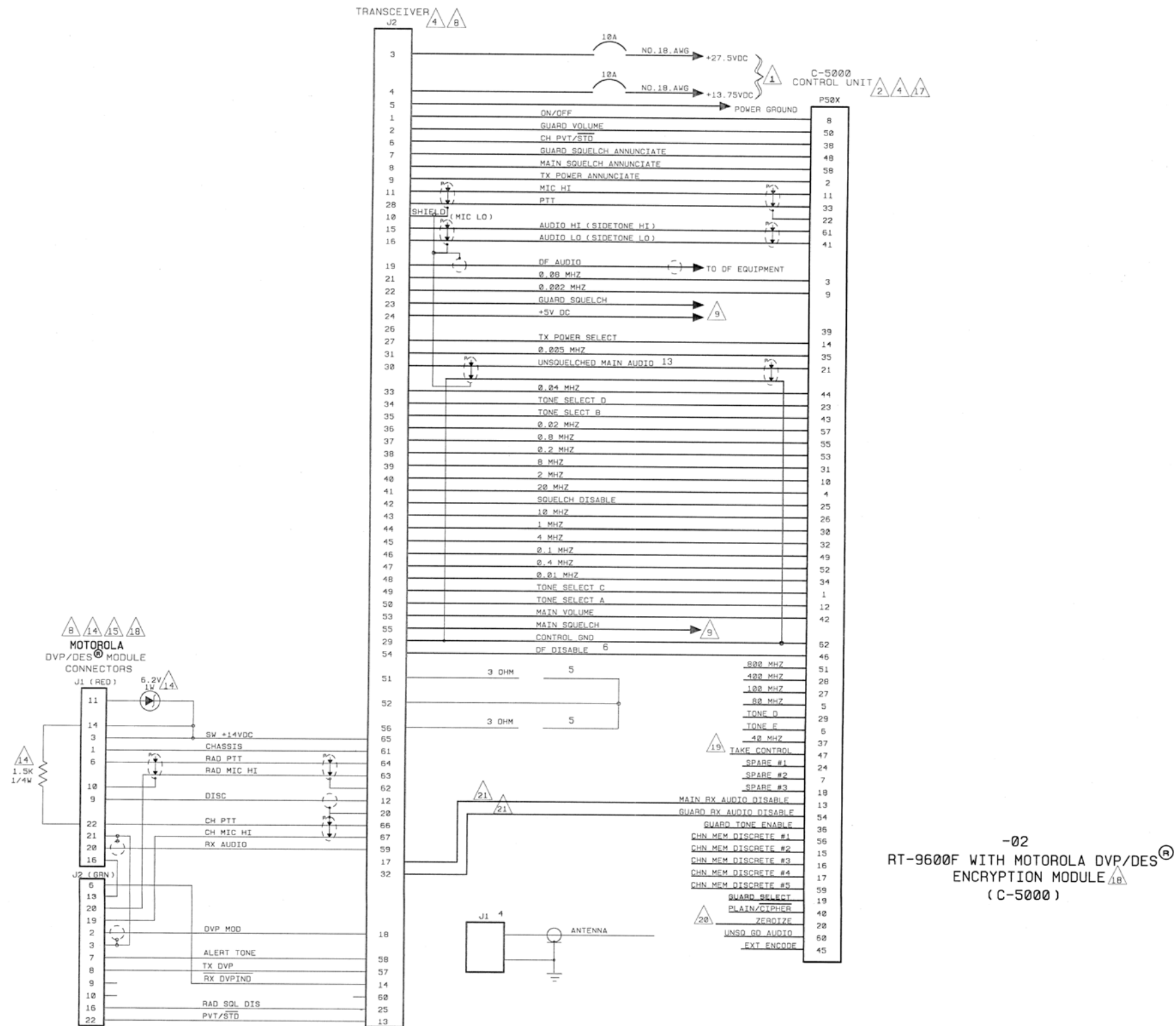
1. USE +13.75 VDC OR +27.5 VDC AT INSTALLERS OPTION.  
DO NOT CONNECT BOTH.
2. SEE "INSTALLATION WIRING CONSIDERATIONS" SECTION OF  
INSTALLATION MANUAL FOR PERTINENT ADDITIONAL INFORMATION TO THIS DIAGRAM.
3. CONNECT RT-9600(F) PIN 22 TO C-5000 PIN 9. CONNECT RT-7200  
PIN 22 TO C-5000 PIN 37.
4. CABLE CONNECTORS  
TRANSCIVER - DPXB-67-33S-0001 (GLOBAL-WULFSBERG IN-97A-2)  
(PROTRUDING XCVRS)  
DPXB-67-34S-0001 (GLOBAL-WULFSBERG IN-96A-2)  
(RECESSED XCVRS)  
CONTROL UNIT - (GLOBAL-WULFSBERG P/N 129-215344-02)  
(POSITRONICS P/N 00062FO0Y60C-914.2)  
THIS CONNECTOR HAS A MALE JACK SCREW NEAR PIN 1 AND THE OTHER  
JACK SCREW IS FEMALE.  
P50X REPRESENTS ONE OF THREE INTERCONNECT PLUGS TO ONE  
OF THREE INDEPENDENT R/T INTERFACE MODULES CONTAINED IN THE C-5000  
ANTENNA - UG-88 E/U (GLOBAL-WULFSBERG P-96)  
5. THE 3 OHM POWER RESISTORS ARE A PART OF THE MOUNTING RACK ASSEMBLY.  
6. GROUND WHEN DF FEATURE IS NOT USED AND LEAVE P50X PIN 46 NOT CONNECTED.  
7. THESE PINS ARE CONNECTED TO THE INTERNAL RADIO BUSS VOLTAGE. LOADING  
SHOULD NOT EXCEED 500mA OF COMBINED CURRENT.  
8. THIS CONFIGURATION PROVIDES MOTOROLA DVP/DES<sup>®</sup> DEDICATED TO THE RT-9600F.  
IT PRECLUDES THE C-5000 DISTRIBUTED MOTOROLA DVP/DES<sup>®</sup> FEATURE AS WELL AS  
CTCSS, DIGITAL CODED SQUELCH FUNCTIONS EITHER EXTERNAL TO OR PART  
OF THE C-5000.  
9. CONNECT GUARD SQUELCH RT CONNECTOR PIN 23 AND MAIN SQUELCH PIN 55  
TO GROUND AT THE RT CONNECTOR PIN 29 OR THE C-5000 CONNECTOR P50X  
PIN 62.  
10. "EXTERNAL CTCSS TONE IN" (PIN 18) PROVIDES A FLAT MODULATION SIGNAL PATH  
FROM THE CONTROL UNIT FOR CTCSS AND/OR DIGITAL CODED SQUELCH ENCODE  
SIGNALS AS WELL AS VOICE ENCRYPTION MODULATION INPUT TO THE R/T UNIT  
IF THESE FEATURES OF THE CONTROL UNIT ARE NOT USED. THIS INPUT MAY  
BE CONNECTED TO THE OTHER EXTERNAL EQUIPMENT REQUIRING A FLAT  
MODULATION INPUT TO THE R/T UNIT.  
11. UNSQUELCHED MAIN AND GUARD AUDIO OUTPUTS MAY BE PARALLEL  
CONNECTED TO OTHER EXTERNAL EQUIPMENT. WHEN USED WITH THE MAIN  
AND GUARD AUDIO INHIBIT INPUTS, EXTERNAL SQUELCH CONTROL  
SYSTEMS CAN BE PROVIDED.  
12. SEE INTERCONNECT DIAGRAM 147-014995  
FOR COMPLETE C-5000 INTERCONNECT INFORMATION. THIS DRAWING ONLY  
INDICATES SPECIFIC CONNECTIONS TO THE RT-9600(F)/7200 R/T UNITS.  
THESE LINES MAY BE SINGLE CONDUCTOR SHIELDED IN ORIGINAL  
INSTALLATIONS. UPDATE TO TWISTED SHIELDED PAIRS IS NOT REQUIRED.  
13. DVP/DES<sup>®</sup> MODULE CONNECTORS, 1.5K OHM RESISTOR AND 6.2V ZENER DIODE  
ARE CUSTOMER SUPPLIED.  
14. FOR PROPER RT-9600F DVP/DES<sup>®</sup> SYSTEM OPERATION OBSERVE THE FOLLOWING  
CONDITIONS:  
A) THE MOTOROLA DVP/DES<sup>®</sup> BOARD MUST HAVE R44 REMOVED.  
B) DO NOT ATTEMPT TO INTERFACE AN EXTERNAL DECODER TO THE RT-9600  
MAIN RECEIVER OR GUARD RECEIVER.  
C) IT IS RECOMMENDED, BUT NOT NECESSARY, TO CHANGE C28 ON THE  
MOTOROLA DVP/DES<sup>®</sup> BOARD FROM A 1uF TO A 15uF 18V DIPPED TANTALUM FOR  
IMPROVED TRANSMIT SIGNAL TO NOISE RATIO IN THE PVT MODE.  
15. MOTOROLA AND DVP/DES ARE REGISTERED TRADEMARKS  
OF MOTOROLA, INC.  
16. SPECIAL MARKING OF THE CABLE PLUS P50X FOR ROUTING TO RT INTERFACE  
SYSTEM 1 (P501), SYSTEM 2 (P502) AND SYSTEM 3 (P503) OF THE C-5000 IS  
RECOMMENDED TO ASSURE PROPER MATING OF THE SYSTEM 1, 2 OR 3 CONNECTIONS.  
17. FOR INSTALLATIONS WITH THE MOTOROLA DVP/DES<sup>®</sup> MODULE CONNECTED DIRECTLY  
TO THE TRANSCIVER AS SHOWN, RT-9600F TRANSCIVERS WITH P/N'S END-  
ING IN -X5X, X6X, X7X MUST BE USED. SEE 147-014995 SYSTEM INTERFACE  
DIAGRAM FOR INTERFACE WITH MOTOROLA DVP/DES<sup>®</sup> AT THE C-5000 WHICH  
ALLOWS SELECTIVE ENCRYPTION WITH ONE OF 3 RADIO SYSTEMS.  
18. THE "TAKE CONTROL" PIN IS NORMALLY OPEN CIRCUITED. IN A DUAL C-5000  
SYSTEM, WIRE THE TRANSCIVER INTERFACE IN PARALLEL TO BOTH C-5000  
UNITS. CONNECT THE "TAKE CONTROL" PIN FROM EACH C-5000 TO A SWITCH  
SUCH THAT ONE OR THE OTHER C-5000 IS ALWAYS SUPPLIED WITH A GROUND  
WHICH TAKES CONTROL AWAY FROM THE UNIT WITH THE GROUNDED PIN. WITH  
3 TRANSCIVER INTERFACES IN DUAL C-5000 SYSTEMS, 3 SEPARATE TAKE  
CONTROL SWITCHES ARE REQUIRED (ONE FOR EACH PAIR OF TRANSCIVER  
INTERFACES).



20. THE ZEROIZE FUNCTION PROVIDES AN OUTPUT FROM THE C-5000 TO ENCRYPTION  
EQUIPMENT TO ERASE KEY VARIABLES. THE OUTPUT CAN BE CONFIGURED  
ONE OF TWO WAYS: NORMALLY OPEN CIRCUIT WITH ACTIVE GROUND TO ZEROIZE  
OR NORMALLY OPEN WITH ACTIVE 27.5VDC TO ZEROIZE. STANDARD CONFIG-  
URATION IS ACTIVE GROUND TO ZEROIZE. JUMPER AWJP1 ON THE RT INTER-  
FACE CAN BE MOVED FROM '1 TO 2' TO '2 TO 3' TO YIELD ACTIVE 27.5VDC  
FOR ZEROIZE.
21. PIN 17,32 ARE REASSIGNED FOR USE WITH C-5000 IN THIS CONFIGURATION.  
CONTACT GWS CUSTOMER SERVICE FOR SERVICE BULLETIN AND MODIFICATIONS  
INSTRUCTIONS FOR THE RT-9600F.

-01  
STANDARD INSTALLATION

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**Figure 4-15b. Installation Wiring Diagram (Sheet 2 of 3)**  
**RT-9600 / RT-9600F / RT-7200**  
**(Dwg No 147-014992, Rev 4)**

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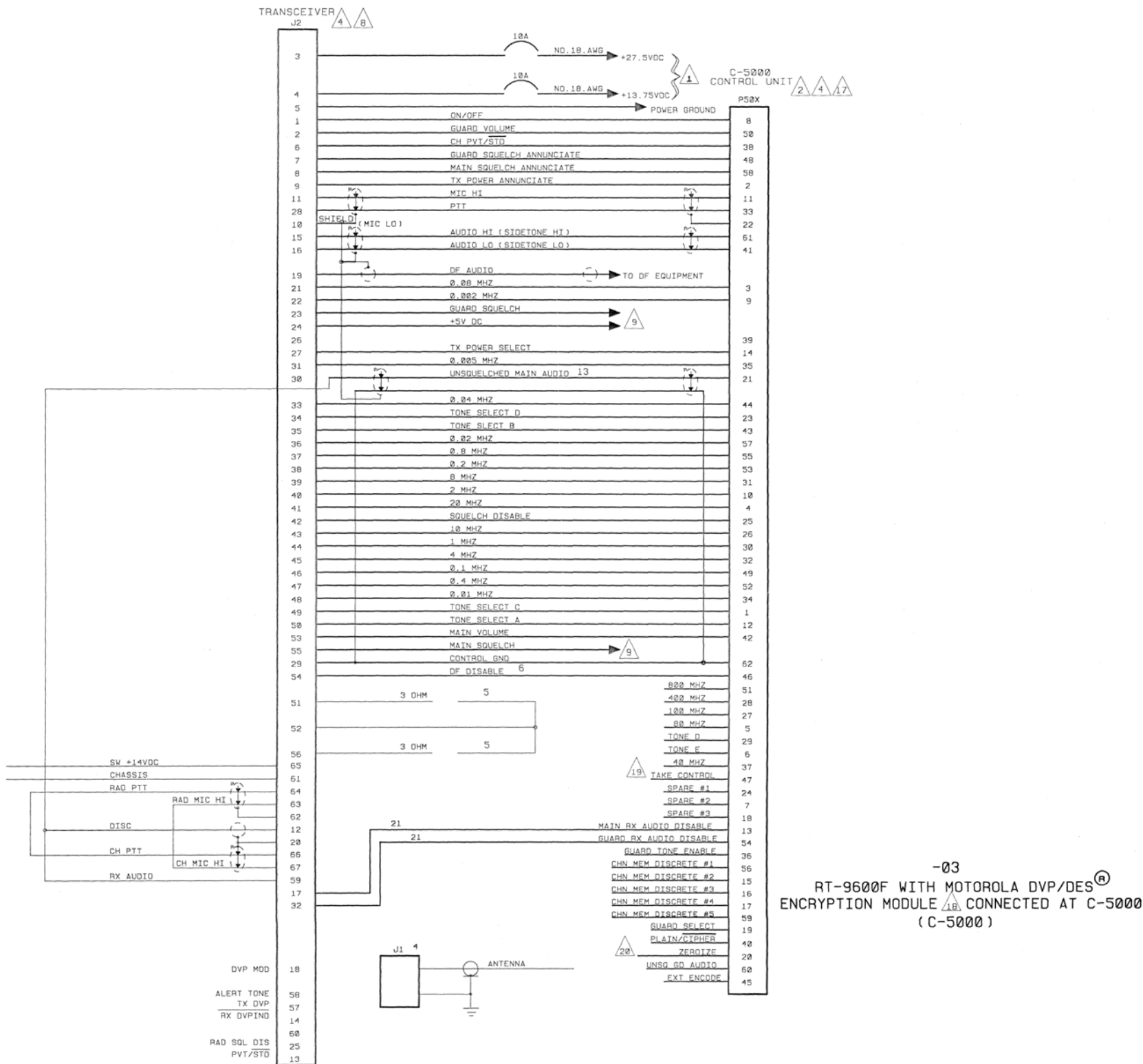


Figure 4-15c. Installation Wiring Diagram (Sheet 3 of 3)  
RT-9600 / RT-9600F / RT-7200  
(Dwg No 147-014992, Rev 4)

C-5000 COMMUNICATION MANAGEMENT CONTROLLER  
INSTALLATION MANUAL

NOTES:

1. WIRE PER WIRING LIST, P1, P2, AND P3 AS SHOWN.

2.  PIECE MARK PART NUMBER, DASH NUMBER, AND CURRENT REV. LETTER ON TAG (ITEM 6) AND ATTACH TO CABLE P2.

| WIRING LIST (P1) |      |             |
|------------------|------|-------------|
| FROM             | TO   | NOTES       |
| P1-3             | P3-7 | ORANGE WIRE |
| P1-1             | P3-3 | BROWN WIRE  |
| P1-2             | P3-2 | RED WIRE    |
| SHIELD           | P3-1 | SHIELD      |

| WIRING LIST (P2) |      |             |
|------------------|------|-------------|
| FROM             | TO   | NOTES       |
| P2-3             | P3-7 | ORANGE WIRE |
| P2-1             | P3-2 | BROWN WIRE  |
| P2-2             | P3-3 | RED WIRE    |
| SHIELD           | P3-1 | SHIELD      |

| WIRING LIST (P3) |       |                     |
|------------------|-------|---------------------|
| FROM             | TO    | NOTES               |
| P3-4             | P3-5  | JUMPER USING ITEM 5 |
|                  | P3-8  |                     |
| P3-6             | P3-20 | JUMPER USING ITEM 5 |

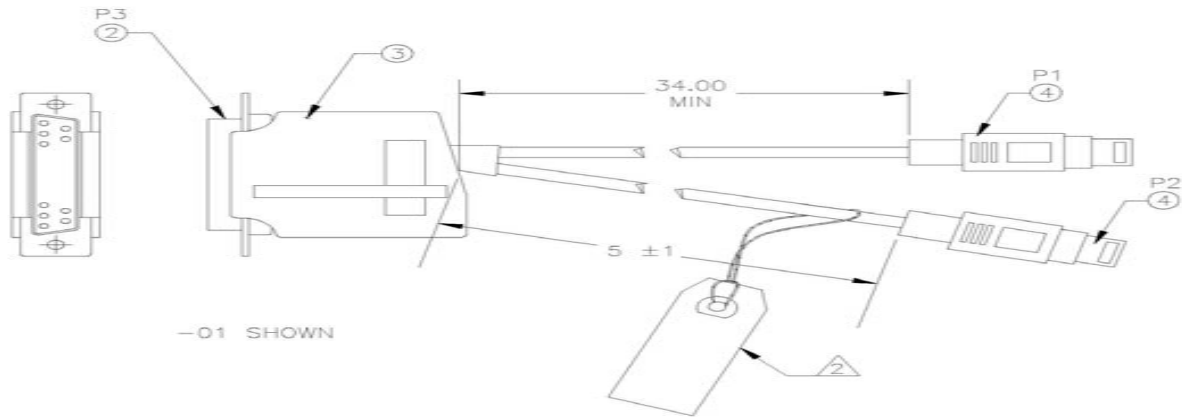
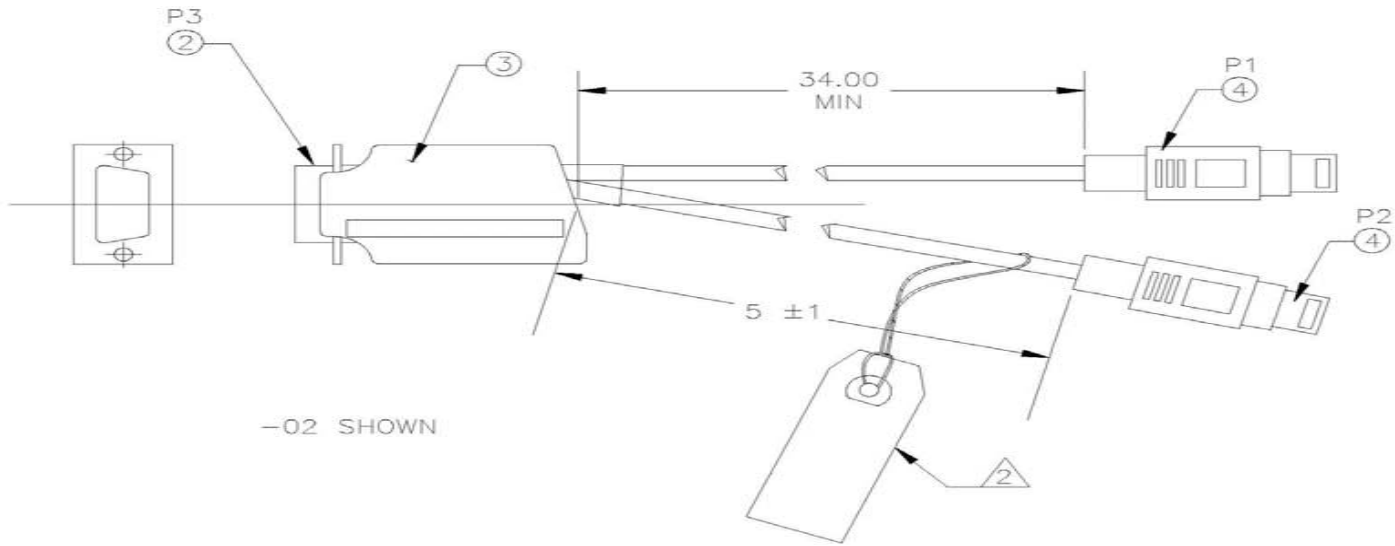


Figure 4-17a. Cable Assembly, C-5000 Digital Interface (Sheet 1 of 2)  
(Dwg No 124-015911, Rev E)

**C-5000 COMMUNICATION MANAGEMENT CONTROLLER  
INSTALLATION MANUAL**



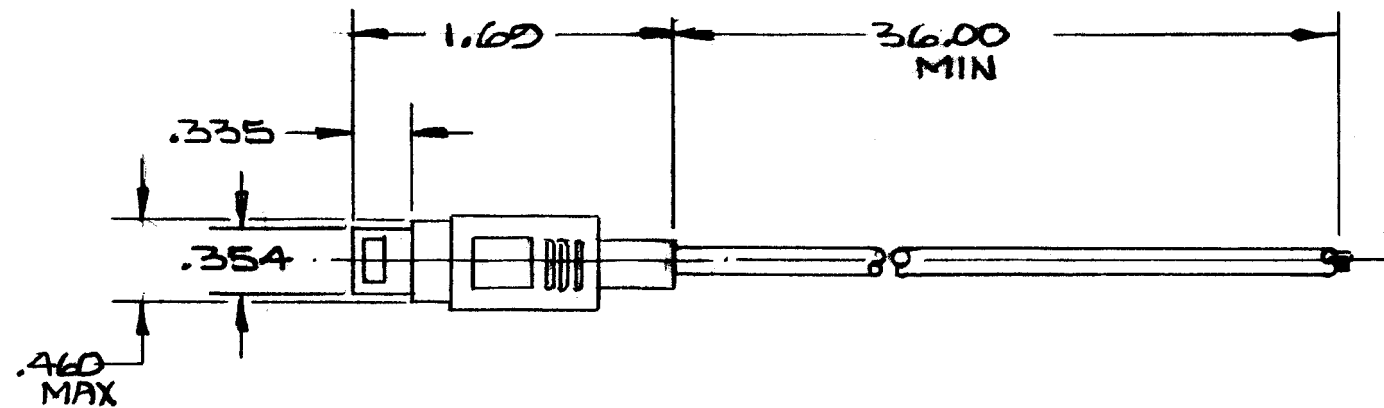
| WIRING LIST (P1) |      |             |
|------------------|------|-------------|
| FROM             | TO   | NOTES       |
| P1-3             | P3-5 | ORANGE WIRE |
| P1-1             | P3-2 | BROWN WIRE  |
| P1-2             | P3-3 | RED WIRE    |
| SHIELD           | P3-5 | SHIELD      |

| WIRING LIST (P2) |      |             |
|------------------|------|-------------|
| FROM             | TO   | NOTES       |
| P2-3             | P3-5 | ORANGE WIRE |
| P2-1             | P3-3 | BROWN WIRE  |
| P2-2             | P3-2 | RED WIRE    |
| SHIELD           | P3-5 | SHIELD      |

| WIRING LIST (P3) |      |                     |
|------------------|------|---------------------|
| FROM             | TO   | NOTES               |
| P3-7             | P3-1 | JUMPER USING ITEM 5 |
|                  | P3-8 | JUMPER USING ITEM 5 |
| P3-6             | P3-4 | JUMPER USING ITEM 5 |

**Figure 4-17b. Cable Assembly, C-5000 Digital Interface (Sheet 2 of 2)**  
**(Dwg No 124-015911, Rev E)**

**C-5000 COMMUNICATION MANAGEMENT CONTROLLER**  
**INSTALLATION MANUAL**



**NOTES:**

1. CONTACT MATERIAL:  
PLUG: PHOSPHOR BRONZE.
2. CONTACT PLATING:  
GOLD FLASH OVER NICKEL UNDERPLATE OVERALL.
3. WIRE SIZE: 28 AWG.
4. DURABILITY: WITHSTANDS 500 MATING / UNMATING CYCLES.
5. MATING FORCE: 10 LB MAX.
6. UNMATING FORCE: 1 LB.
7. VOLTAGE RATING: 500 VAC rms.
8. CURRENT RATING: 1 AMP @ 100 VAC.  
2 AMP @ 12 VDC.
9. OPERATING TEMPERATURE: -40°C TO +70°C.
10. DIMENSIONS SHOWN FOR REFERENCE ONLY.
11. BRAIDED SHIELD.

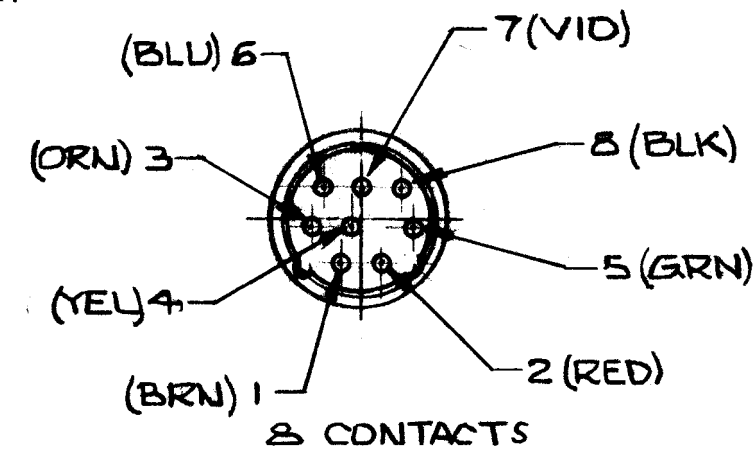
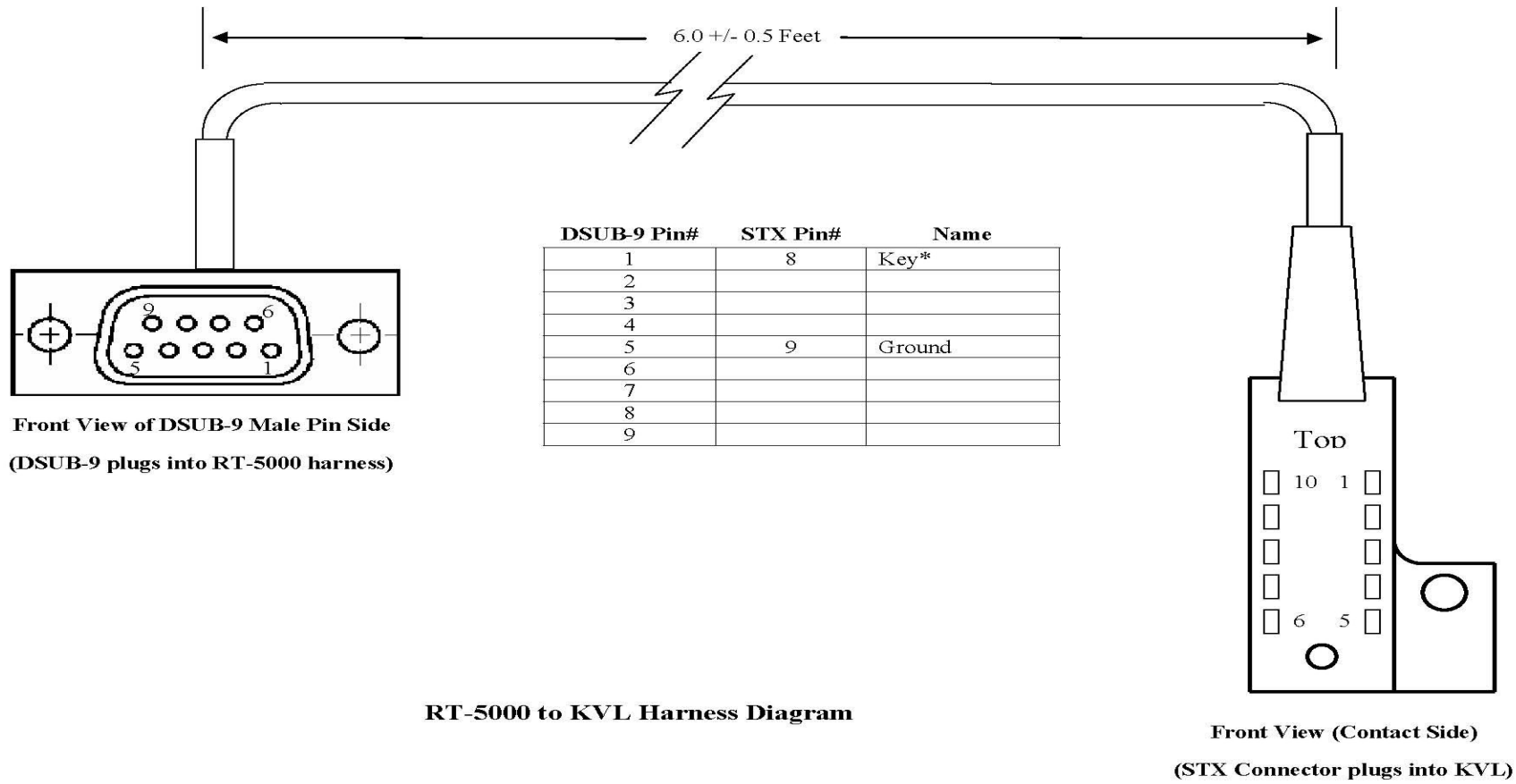


Figure 4-18. Cable Assembly, 8-Pin Mini Din with Cable (Sheet 1 of 1)  
 (Dwg No 124-015910, Rev B)

**C-5000 COMMUNICATION MANAGEMENT CONTROLLER  
INSTALLATION MANUAL**



**Figure 4-19. Wiring Harness Diagram KVL TO RT-5000 (Sheet 1 of 1)**  
**(Dwg No 152-241520, Rev C)**