SECTION IV
SCHEMATICS

4.1 GENERAL

Schematic diagrams are included for Receiver-Transmitter Group OR-5007/URC, Handset H-5017/PRC-515, Handset-Microphone H-5016/PRC-515, Electrical Power Cable Assembly CX-5229/PRC-515, and Direct Current Generator G-5002/PRC-515. The schematic diagram titles and figure numbers are:

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4-28 Direct Current Generator G-5002/PRC-515, Schematic Diagram
Figure 4-2. Mixer A1A2, Schematic Diagram

4-5/4-6 (Blank)
NOTES:
1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, INDUCTANCE VALUES ARE IN MICROHENRYS, AND DIODES ARE TYPE 1N4453.
2. FINAL VALUE OF R9 SELECTED IN TEST, NOMINAL VALUE 3520.
Figure 4-3. Broadband Amplifier A1A3, Schematic Diagram
Figure 4-4. Power Supply A1A4, Schematic Diagram

4-9/4-10 (Blank)
Figure 4-5. If/Ad A1A5A1, Schematic Diagram (Sheet 1 of 2)

4-11/4-12 (Blank)
NOTES:
1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, AND
   INDUCTANCE VALUES ARE IN MICROHENRYS.
2. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE
   DESIGNATION PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
3. MICROCIRCUIT U3 PIN NO. 4 IS +5.2 V DC AND PIN NO. 7 IS GROUND.
4. TEST SELECT RESISTOR - NOMINAL VALUE 620 OHMS.

Figure 4-5. If/AF A1A5A1, Schematic Diagram (Sheet 2)
NOTES:
1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS AND CAPACITANCE VALUES ARE IN MICROFARADS.
2. PARTIAL REFERENCE DESIGNATORS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
3. VALUE SELECTED IN FINAL TEST.
4. REFER TO A1A6A1A2 FOR A1A6A1 COMPONENT.
Figure 4-7. Frequency Standard A1A6A1A1, Schematic Diagram

4-17/4-18 (Blank)
Figure 4-8. Fixed Frequency Divider
A1A6A1A2 Schematic Diagram

4-19/4-20 (Blank)
Figure 4-9. Lf Phase-Lock Loop
A1A6A1A3 Schematic Diagram

4-21/4-22 (Blank)
Figure 4-10. Frequency Converter A1A6A1A4, Schematic Diagram
CROSS-OTHERWISE-SPECIFIED, RESISTANCE VALUES
IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS
INDUCTANCE VALUES ARE IN MILLIHENRYS.

INTERNAL REFERENCE DESIGNATIONS ARE SHOWN, FOR
COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR
SHIELDED DESIGNATION.

CROSS CONNECTIONS TO POWER AND GROUND ARE
ALLOWED, MICROSCIRCUIT PIN 14 IS +13 V DC
PIN NO. 7 IS GROUND.

APPLIED ON ATAGAI
REFER TO ATAGAI FOR ATAGAI COMPONENT.
NOTES:

1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICRO-
FARADS, AND INDUCTANCE VALUES ARE IN MICRO-
HENRYS.

2. UNLESS OTHERWISE NOTED, DIODES ARE TYPE 1N4454 AND TRANSISTORS ARE TYPE 2N2222A.

3. UNLESS CONNECTION TO POWER AND GROUND ARE SHOWN, MICROCIRCUIT PIN NO. 1 IS +5.2 V DC AND PIN NO. 8 IS GROUND, EXCEPT '555 WHERE MICROCIRCUIT PIN NO. 8 IS +13 V DC AND PIN NO. 4 IS GROUND.

4. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR
ASSEMBLY DESIGNATION.

5. VALUE SELECTED DURING FINAL TEST.

Figure 4-11. Voltage Regulator
A1A6A2A1 Schematic Diagram

4-25/4-26 (Blank)
Figure 4-12. Variable Frequency Divider A1A6A2A2, Schematic Diagram
Figure 4-13. Hf Phase-Lock Loop A1A6A2A3, Schematic Diagram

4-29/4-30 (Blank)
Figure 4-14. Receiver-Transmitter Control
A2, C-5310/URC, Schematic Diagram
Figure 4-15. Amplifier-Coupler A3, AM-5280/URC, Schematic Diagram

4-33/4-34 (Blank)
Figure 4-16. Servo Amplifier A3A1, Schematic Diagram (Sheet 1 of 2)
NOTE:
HIGHEST REFERENCE DESIGNATORS USED: CR16, VR8, L1, R67, C55, Q27, U7.
NOTES:
1. UNLESS OTHERWISE SPECIFIED; RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS, INDUCTANCE VALUES ARE
IN MILLIHENRIES, AND DIODES ARE TYPE IN4454.
2. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION,
PREFX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
3. UNLESS CONNECTION TO POWER AND GROUND ARE SHOWN; MICROCIRCUIT PIN
NO. 14 IS +5 V DC AND PIN NO. 7 IS GROUND.
4. C55 USED ON MCN 1 THRU 16 ONLY.

Figure 4-16. Servo Amplifier A3A1,
Schematic Diagram (Sheet 2)
Figure 4-17. Control Logic A3A2, Schematic Diagram (Sheet 1 of 3)

4-39/4-40 (Blank)
Figure 4-17. Control Logic A3A2, Schematic Diagram (Sheet 2)

4-41/4-42 (Blank)
Figure 4-17. Control Logic A3A2
Schematic Diagram (Sheet 3)

4-43/4-44 (Blank)
NOTES:

1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, AND INDUCTANCE VALUES ARE IN MICROHENrys.

2. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.

Figure 4-18. RF Subassembly A3A4A1, Schematic Diagram
NOTES:
1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS AND CAPACITANCE VALUES ARE IN MICROFARADS.
2. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
3. R25 IS A TEST SELECT, MAY BE 0, 3.3 OR 4.7 OHMS.

Figure 4-19. Bias/Control A3A4A2, Schematic Diagram

628-4272
TPA-5312-014

4-47/4-48 (Blank)
Figure 4-20. Bandswitch A3A5, Schematic Diagram

4-49/4-50 (Blank)
NOTES:
1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, AND INDUCTANCE VALUES ARE IN MILLIHENRYS.
2. TEST SELECT: NOMINAL VALUE SHOWN.

Figure 4-21. Discriminator A3A6, Schematic Diagram

4-51/4-52 (Blank)
Figure 4-22. Tuning Capacitor A3A7, Schematic Diagram
Figure 4-23. Tuning Coil A3A8, Schematic Diagram
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Figure 4-26. Headset-Microphone H-5016/PRC-515, Schematic Diagram
Figure 4-27. Electrical Power Cable
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Schematic Diagram
Figure 4-28. Direct Current Generator G-5002/PRC-515, Schematic Diagram

4-65/4-66 (Blank)
NOTES:
1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, AND CAPACITANCE VALUES ARE IN MICROFARADS.
2. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
3. LAMPS ARE TYPE NO. 387.
4. VALUE SELECTED IN FINAL TEST.
CUSTOMER SERVICE INFORMATION

EQUIPMENT/MANUAL REGISTRATION

MANUAL TITLE

MANUAL PART NO

USER'S NAME

ADDRESS

ZIP:

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Rockwell Collins has endeavored to furnish you with an accurate, up-to-date manual. We welcome your comments concerning this manual. Please use the following space to report any errors, discrepancies, or omissions as well as any general comments you wish to make.

REMARKS:

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