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**NATIONAL SECURITY AGENCY  
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NAVELEX 0967-455-5020  
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**OM-44(V)/GCC  
MODEM GROUP, TELEPHONE**

**TECHNICAL MANUAL  
PREVENTIVE MAINTENANCE,  
CORRECTIVE MAINTENANCE,  
ILLUSTRATED PARTS BREAKDOWN**

**WITH BAUD RATE CONTROLS:**

**PL-1337/GCC  
PL-1338/GCC  
PL-1339/GCC**

**VOLUME 2 OF 2  
(CHAPTERS 5-7)**

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## TABLE OF CONTENTS

## CHAPTER 5

## PREVENTIVE MAINTENANCE

|                                  | <u>Paragraph</u> | <u>Page</u> |
|----------------------------------|------------------|-------------|
| Preventive Maintenance . . . . . | 5-1              | 5-1         |

## CHAPTER 6

## CORRECTIVE MAINTENANCE

|                                                     |      |      |
|-----------------------------------------------------|------|------|
| Introduction . . . . .                              | 6-1  | 6-1  |
| Troubleshooting Procedures . . . . .                | 6-2  | 6-1  |
| Overall Performance Test. . . . .                   | 6-3  | 6-1  |
| Purpose . . . . .                                   | 6-3a | 6-1  |
| Test Equipment Required . . . . .                   | 6-3b | 6-1  |
| Preliminary Procedure . . . . .                     | 6-3c | 6-1  |
| Power Test . . . . .                                | 6-3d | 6-2  |
| Transmitter Data Flow Check . . . . .               | 6-3e | 6-2  |
| Transmitter Control and Timing Check. . . . .       | 6-3f | 6-2  |
| Receiver Data Flow Check . . . . .                  | 6-3g | 6-3  |
| Receiver Control and Timing Check . . . . .         | 6-3h | 6-3  |
| Remote Test Check . . . . .                         | 6-3i | 6-3  |
| Test and Adjustment Procedures . . . . .            | 6-4  | 6-70 |
| CP AR323 Carrier, Pilots, and HF Clock Generators-  |      |      |
| Test and Adjustment Procedure . . . . .             | 6-5  | 6-70 |
| Test Equipment Required . . . . .                   | 6-5a | 6-70 |
| Crystal Oscillator Adjustments . . . . .            | 6-5b | 6-70 |
| Output Level Measurements . . . . .                 | 6-5c | 6-74 |
| Rise, Fall Times, and Duty Cycle Measurements . . . | 6-5d | 6-75 |
| CP AR324 Carrier, Pilots, and HF Clock Generators-  |      |      |
| Test and Adjustment Procedure . . . . .             | 6-6  | 6-75 |
| Test Equipment Required . . . . .                   | 6-6a | 6-75 |
| Crystal Oscillator Adjustments . . . . .            | 6-6b | 6-75 |
| Output Level Measurements . . . . .                 | 6-6c | 6-77 |
| Rise, Fall Times, and Duty Cycle Measurements . . . | 6-6d | 6-77 |

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## TABLE OF CONTENTS (CONTINUED)

|                                                                                                       | PARAGRAPH | PAGE      |
|-------------------------------------------------------------------------------------------------------|-----------|-----------|
| <b>CP AR325 Digital-to-Analog Converter, Modulator and Summer - Test and Adjustment Procedure . .</b> | 6 - 7     | 6 - 7 8   |
| Test Equipment Required . . . . .                                                                     | 6 - 7 a   | 6 - 7 8   |
| Dynamic Output Test . . . . .                                                                         | 6 - 7 b   | 6 - 7 8   |
| DC Voltage Test . . . . .                                                                             | 6 - 7 c   | 6 - 7 8   |
| Static Output Tests . . . . .                                                                         | 6 - 7 d   | 6 - 8 1   |
| Modulator Feed-Through Test . . . . .                                                                 | 6 - 7 e   | 6 - 8 1   |
| Modulator Distortion Test . . . . .                                                                   | 6 - 7 f   | 6 - 8 2   |
| Modulator Maximum Amplitude Test . . . . .                                                            | 6 - 7 g   | 6 - 8 2   |
| Summer Gain Test . . . . .                                                                            | 6 - 7 b   | 6 - 8 2   |
| Summer Distortion Test . . . . .                                                                      | 6 - 7 i   | 6 - 8 3   |
| <b>CP AR327 Bit Speed and Sample Generator - Test Procedure . . . . .</b>                             | 6 - 8     | 6 - 8 3   |
| Test Equipment Required . . . . .                                                                     | 6 - 8 a   | 6 - 8 3   |
| Test Procedure . . . . .                                                                              | 6 - 8 b   | 6 - 8 3   |
| <b>CP AR328 Buffer - Test Procedures . . . . .</b>                                                    | 6 - 9     | 6 - 8 5   |
| Test Equipment Required . . . . .                                                                     | 6 - 9 a   | 6 - 8 5   |
| Test Procedure . . . . .                                                                              | 6 - 9 b   | 6 - 8 6   |
| <b>CP AR335 Option Board - Test Procedures . . . . .</b>                                              | 6 - 1 0   | 6 - 8 6   |
| Test Equipment Required . . . . .                                                                     | 6 - 1 0 a | 6 - 8 6   |
| Strap Test . . . . .                                                                                  | 6 - 1 0 b | 6 - 8 7   |
| Loss Pad Test . . . . .                                                                               | 6 - 1 0 c | 6 - 8 8   |
| <b>CP AR337 Remote Test - Test Procedure . . . . .</b>                                                | 6 - 1 1   | 6 - 8 9   |
| Test Equipment Required . . . . .                                                                     | 6 - 1 1 a | 6 - 8 9   |
| Test Procedure . . . . .                                                                              | 6 - 1 1 b | 6 - 9 0   |
| <b>CP AR340 Control Logic I - Test Procedures . . . .</b>                                             | 6 - 1 2   | 6 - 9 2   |
| Test Equipment Required . . . . .                                                                     | 6 - 1 2 a | 6 - 9 2   |
| Relay Driver Test . . . . .                                                                           | 6 - 1 2 b | 6 - 9 2   |
| RTI Test . . . . .                                                                                    | 6 - 1 2 c | 6 - 9 6   |
| SD1, DTRM Test . . . . .                                                                              | 6 - 1 2 d | 6 - 9 6   |
| RSI Test . . . . .                                                                                    | 6 - 1 2 e | 6 - 9 6   |
| SRSC, EXT, Test . . . . .                                                                             | 6 - 1 2 f | 6 - 9 7   |
| RD, RDO, and CO Test . . . . .                                                                        | 6 - 1 2 g | 6 - 9 7   |
| SCOM Test . . . . .                                                                                   | 6 - 1 2 h | 6 - 9 8   |
| <b>CP AR341 Control Logic II - Test Procedure . . . .</b>                                             | 6 - 1 3   | 6 - 9 9   |
| Test Equipment Required . . . . .                                                                     | 6 - 1 3 a | 6 - 9 9   |
| RI, SCS, DSR Test . . . . .                                                                           | 6 - 1 3 b | 6 - 9 9   |
| SCR. OPTH. MB1 Test . . . . .                                                                         | 6 - 1 3 c | 6 - 1 0 1 |

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## TABLE OF CONTENTS (CONTINUED)

|                                                                                                   | Paragraph | Page  |
|---------------------------------------------------------------------------------------------------|-----------|-------|
| <b>IST and CS; SQ and RDR Test</b> .....                                                          | 6-13 d    | 6-101 |
| <b>Ring Memory Test</b> .....                                                                     | 6-13 e    | 6-103 |
| <b>CP AR342 Start Sequence Gates - Test Procedure</b> .....                                       | 6-14      | 6-103 |
| <b>Test Equipment Required</b> .....                                                              | 6-14 a    | 6-103 |
| <b>Continuity Test</b> .....                                                                      | 6-14 b    | 6-105 |
| <b>Frequency Measurements</b> .....                                                               | 6-14 c    | 6-105 |
| <b>Time Interval Measurements</b> .....                                                           | 6-14 d    | 6-105 |
| <b>Waveform Observations and Level Measurements</b> .....                                         | 6-14 e    | 6-105 |
| <b>CP AR343 Carrier Recovery Modulator and Slicers -<br/>Test and Adjustment Procedures</b> ..... | 6-15      | 6-107 |
| <b>Test Equipment Required</b> .....                                                              | 6-15 a    | 6-107 |
| <b>Slicer Operation Test</b> .....                                                                | 6-15 b    | 6-107 |
| <b>Bandpass Filter Test</b> .....                                                                 | 6-15 c    | 6-109 |
| <b>Modulator Test</b> .....                                                                       | 6-15 d    | 6-109 |
| <b>CP AR344 Clock Generator II - Test Procedures</b> .....                                        | 6-16      | 6-110 |
| <b>Test Equipment Required</b> .....                                                              | 6-16 a    | 6-110 |
| <b>Test Procedure</b> .....                                                                       | 6-16 b    | 6-110 |
| <b>CP AR345 Receiver Crystal Oscillator - Test and<br/>Adjustment Procedure</b> .....             | 6-17      | 6-114 |
| <b>Test Equipment Required</b> .....                                                              | 6-17 a    | 6-114 |
| <b>Test and Adjustment Procedure</b> .....                                                        | 6-17 a    | 6-118 |
| <b>CP AR346 Receiver Crystal Oscillator - Test and<br/>Adjustment Procedure</b> .....             | 6-18      | 6-119 |
| <b>Test Equipment Required</b> .....                                                              | 6-18 a    | 6-119 |
| <b>Test and Adjustment Procedure</b> .....                                                        | 6-18 b    | 6-119 |
| <b>CP AR349 Received Carrier Frequency and Phase<br/>Adjust - Test Procedure</b> .....            | 6-19      | 6-123 |
| <b>Test Equipment Required</b> .....                                                              | 6-19 a    | 6-123 |
| <b>Test Procedure</b> .....                                                                       | 6-19 b    | 6-123 |
| <b>CP AR350 Demodulator and Amplitude Adjust - Test<br/>Procedure</b> .....                       | 6-20      | 6-126 |
| <b>Test Equipment Required</b> .....                                                              | 6-20 a    | 6-126 |
| <b>DC Voltage Tests</b> .....                                                                     | 6-20 b    | 6-128 |
| <b>Amplifier Gain and Distortion Tests</b> .....                                                  | 6-20 c    | 6-128 |
| <b>Amplitude Adjust Test</b> .....                                                                | 6-20 d    | 6-128 |
| <b>Amplitude Adjust Reset Test</b> .....                                                          | 6-20 e    | 6-128 |
| <b>Demodulator Feed-Through Tests</b> .....                                                       | 6-20 f    | 6-129 |
| <b>Distortion Tests</b> .....                                                                     | 6-20 g    | 6-129 |

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## TABLE OF CONTENTS (CONTINUED)

|                                                                                                    | Paragraph | Page  |
|----------------------------------------------------------------------------------------------------|-----------|-------|
| <b>CP AR352 Analog-to-Digital Converter - Test Procedure</b> . . . . .                             | 6-21      | 6-129 |
| <b>Test Equipment Required</b> . . . . .                                                           | 6-21a     | 6-129 |
| <b>Dynamic Output Tests</b> . . . . .                                                              | 6-21b     | 6-129 |
| <b>DC Voltage Tests</b> . . . . .                                                                  | 6-21c     | 6-134 |
| <b>CP AR353 Pilot Detector - Test Procedure</b> . . . . .                                          | 6-22      | 6-134 |
| <b>Test Equipment Required</b> . . . . .                                                           | 6-22a     | 6-134 |
| <b>DC Voltage Tests</b> . . . . .                                                                  | 6-22b     | 6-134 |
| <b>Self-Restoring Integrator Threshold Test</b> . . . . .                                          | 6-22c     | 6-136 |
| <b>Self-Restoring Integrator Rate Test</b> . . . . .                                               | 6-22d     | 6-136 |
| <b>Integration and Threshold Circuit Test</b> . . . . .                                            | 6-22e     | 6-138 |
| <b>Fixed Amplifier Test</b> . . . . .                                                              | 6-22f     | 6-140 |
| <b>Self-Regulating Amplifier Test</b> . . . . .                                                    | 6-22g     | 6-140 |
| <b>CP AR354 Automatic Gain Control - Test Procedure</b> . . . . .                                  | 6-23      | 6-141 |
| <b>Test Equipment Required</b> . . . . .                                                           | 6-23a     | 6-141 |
| <b>Supply Voltage Test</b> . . . . .                                                               | 6-23b     | 6-141 |
| <b>Gain Control Test</b> . . . . .                                                                 | 6-23c     | 6-141 |
| <b>Signal Detection Test</b> . . . . .                                                             | 6-23d     | 6-143 |
| <b>CP AR359 4-Tap Attenuator - Test Procedure</b> . . . . .                                        | 6-24      | 6-144 |
| <b>Test Equipment Required</b> . . . . .                                                           | 6-24a     | 6-144 |
| <b>Test Procedure</b> . . . . .                                                                    | 6-24b     | 6-144 |
| <b>CP AR360 Amplifier - Test Procedure</b> . . . . .                                               | 6-25      | 6-146 |
| <b>Test Equipment Required</b> . . . . .                                                           | 6-25a     | 6-146 |
| <b>Test Procedure</b> . . . . .                                                                    | 6-25b     | 6-147 |
| <b>CP AR386 Relays I - Test Procedure</b> . . . . .                                                | 6-26      | 6-150 |
| <b>Test Equipment Required</b> . . . . .                                                           | 6-26a     | 6-150 |
| <b>Test Procedure</b> . . . . .                                                                    | 6-26b     | 6-151 |
| <b>CP AR387 Relays II - Test Procedure</b> . . . . .                                               | 6-27      | 6-153 |
| <b>Test Equipment Required</b> . . . . .                                                           | 6-27a     | 6-153 |
| <b>Test Procedure</b> . . . . .                                                                    | 6-27b     | 6-153 |
| <b>CP AR411 Carrier, Pilots, and HF Clock Generators - Test and Adjustment Procedure</b> . . . . . | 6-28      | 6-155 |
| <b>Test Equipment Required</b> . . . . .                                                           | 6-28a     | 6-155 |
| <b>Crystal Oscillator Adjustments</b> . . . . .                                                    | 6-28b     | 6-156 |
| <b>Output Level Measurements</b> . . . . .                                                         | 6-28c     | 6-159 |
| <b>Rise and Fall Times and Duty Cycle Measurements</b> . . . . .                                   | 6-28d     | 6-159 |

"This technical document contains information for purposes of installation, operation and maintenance only. It is not to be used for procurement or manufacture without the written permission of the Western Electric Company, Incorporated."

## TABLE OF CONTENTS (CONTINUED)

|                                                                                                          | Paragraph | Page  |
|----------------------------------------------------------------------------------------------------------|-----------|-------|
| <b>CP AR412 Receiver Crystal Oscillator - Test and Adjustment Procedure . . . . .</b>                    | 6 - 2 9   | 6-160 |
| <b>Test Equipment Required . . . . .</b>                                                                 | 6 - 2 9 a | 6-160 |
| <b>Oscillator Adjustments . . . . .</b>                                                                  | 6-29b     | 6-160 |
| <b>CP AR473 Start Sequence Generator - Test Procedure . . . . .</b>                                      | 6 - 3 0   | 6-164 |
| <b>Test Equipment Required . . . . .</b>                                                                 | 6 - 3 0 a | 6-164 |
| <b>Frequency Measurements . . . . .</b>                                                                  | 6-30b     | 6-167 |
| <b>Time Interval Measurements . . . . .</b>                                                              | 6-30c     | 6-167 |
| <b>External Holdup Control Test . . . . .</b>                                                            | 6 - 3 0 d | 6-167 |
| <b>Output Level Measurements . . . . .</b>                                                               | 6-30e     | 6-168 |
| <b>CP AR474 Parallel-to-Serial Converter, Descrambler, and Baseband Logic - Test Procedure . . . . .</b> | 6 - 3 1   | 6-170 |
| <b>Test Equipment Required . . . . .</b>                                                                 | 6-31a     | 6-170 |
| <b>Test Procedure . . . . .</b>                                                                          | 6-31b     | 6-170 |
| <b>CP AR496 Interface I - Test Procedure . . . . .</b>                                                   | 6 - 3 2   | 6-176 |
| <b>Test Equipment Required . . . . .</b>                                                                 | 6 - 3 2 a | 6-176 |
| <b>Zener Voltage Measurements . . . . .</b>                                                              | 6-32b     | 6-176 |
| <b>Rise and Fall Time Measurements . . . . .</b>                                                         | 6-32c     | 6-179 |
| <b>Voltage Level Measurements . . . . .</b>                                                              | 6-32d     | 6-179 |
| <b>Threshold Voltage Measurements . . . . .</b>                                                          | 6 - 3 2 e | 6-180 |
| <b>Bipolar Limiter Test . . . . .</b>                                                                    | 6 - 3 2 f | 6-181 |
| <b>CP AR497 Interface II - Test Procedure . . . . .</b>                                                  | 6 - 3 3   | 6-181 |
| <b>Test Equipment Required . . . . .</b>                                                                 | 6-33a     | 6-181 |
| <b>Zener Voltage Test . . . . .</b>                                                                      | 6-33b     | 6-181 |
| <b>Rise and Fall Time Measurements . . . . .</b>                                                         | 6-33c     | 6-183 |
| <b>Continuity Test . . . . .</b>                                                                         | 6-33d     | 6-184 |
| <b>CP AR501 Control Logic 2 - Test Procedure . . . . .</b>                                               | 6 - 3 4   | 6-184 |
| <b>Test Equipment Required . . . . .</b>                                                                 | 6-34a     | 6-184 |
| <b>RI, SCS, DSR Test . . . . .</b>                                                                       | 6-34b     | 6-184 |
| <b>SCR, OPTH, MB1 Test . . . . .</b>                                                                     | 6-34c     | 6-187 |
| <b>IST and CS; SQ and RDR Test . . . . .</b>                                                             | 6-34d     | 6-187 |
| <b>Ring Memory Test . . . . .</b>                                                                        | 6-34e     | 6-189 |
| <b>SCS Delay Test . . . . .</b>                                                                          | 6 - 3 4 f | 6-189 |
| <b>CP AR503 Control Logic 1 - Test Procedure . . . . .</b>                                               | 6 - 3 5   | 6-190 |
| <b>Test Equipment Required . . . . .</b>                                                                 | 6-35a     | 6-190 |
| <b>Relay Driver Test . . . . .</b>                                                                       | 6-35b     | 6-190 |
| <b>RTI Test . . . . .</b>                                                                                | 6-35c     | 6-190 |

"This technical document contains information for purposes of installation, operation and maintenance only. It is not to be used for procurement or manufacture without the written permission of the Western Electric Company, Incorporated."

## TABLE OF CONTENTS (CONTINUED)

|                                                                      | Paragraph | Page  |
|----------------------------------------------------------------------|-----------|-------|
| <b>SD1 Test</b> . . . . .                                            | 6-35 d    | 6-194 |
| <b>RSI Test</b> . . . . .                                            | 6-35 e    | 6-194 |
| <b>SRSC, EXT Test</b> . . . . .                                      | 6-35 f    | 6-194 |
| <b>RD, RDO, and CO Test</b> . . . . .                                | 6-35 g    | 6-195 |
| <b>SCOM, DTRM, and AAT Test</b> . . . . .                            | 6-35 h    | 6-196 |
| <b>41A-Type Power Unit - Test and Adjustment Procedure</b> . . . . . | 6-36      | 6-196 |
| <b>Test Equipment Required</b> . . . . .                             | 6-36 a    | 6-196 |
| <b>Voltage Adjustment</b> . . . . .                                  | 6-36 b    | 6-197 |
| <b>Inverter Frequency Adjustment</b> . . . . .                       | 6-36 c    | 6-197 |
| <b>Schematic and Wiring Diagrams</b> . . . . .                       | 6-37      | 6-197 |

## CHAPTER 7

## ILLUSTRATED BREAKDOWN

|                                                 | Paragraph     | Page |
|-------------------------------------------------|---------------|------|
| <b>INTRODUCTION</b> . . . . .                   |               | 7-1  |
| <b>General</b> . . . . .                        | 7-1           | 7-1  |
| <b>Abbreviations</b> . . . . .                  | 7-1 a         | 7-1  |
| <b>Part Numbers</b> . . . . .                   | 7-1 b         | 7-1  |
| <b>Major Groups</b> . . . . .                   | 7-2           | 7-1  |
| <b>Introduction</b> . . . . .                   | 7-2 a         | 7-1  |
| <b>Group Assembly Parts List</b> . . . . .      | 7-2 b         | 7-1  |
| <b>Figure and index number column</b> . . . . . | 7-2 b (1)     | 7-1  |
| <b>Reference designation column</b> . . . . .   | 7-2 b (2)     | 7-1  |
| <b>Description column</b> . . . . .             | 7-2 b (3)     | 7-2  |
| <b>Indention</b> . . . . .                      | 7-2 b (3) (a) | 7-2  |
| <b>Cross-reference</b> . . . . .                | 7-2 b (3) (b) | 7-2  |
| <b>Part number column</b> . . . . .             | 7-2 b (4)     | 7-2  |
| <b>Code indent column</b> . . . . .             | 7-2 b (5)     | 7-2  |
| <b>Units per assembly column</b> . . . . .      | 7-2 b (6)     | 7-2  |
| <b>Usable on code column</b> . . . . .          | 7-2 b (7)     | 7-3  |
| <b>Numerical Index</b> . . . . .                | 7-2 c         | 7-3  |
| <b>Part number column</b> . . . . .             | 7-2 c (1)     | 7-3  |
| <b>Figure and index number column</b> . . . . . | 7-2 c (2)     | 7-3  |
| <b>Quantity per article</b> . . . . .           | 7-2 c (3)     | 7-3  |
| <b>Reference Designation Index</b> . . . . .    | 7-2 d         | 7-3  |

"This technical document contains information for purposes of installation, operation and maintenance only. It is not to be used for procurement or manufacture without the written permission of the Western Electric Company, Incorporated."

## TABLE OF CONTENTS (CONTINUED)

|                                                     | Paragraph | Page  |
|-----------------------------------------------------|-----------|-------|
| <b>How To Use The Illustrated Parts Breakdown .</b> | 7 - 2 e   | 7 - 5 |
| <b>GROUP ASSEMBLY PARTS LIST . . . . .</b>          |           | 7 - 7 |
| <b>203AW Telephone Modem Group . . . . .</b>        |           | 7 - 9 |
| <b>22A-Type Data Unit . . . . .</b>                 |           | 7-13  |
| Circuit Pack Assembly AR325 . . . . .               |           | 7-15  |
| Circuit Pack Assembly AR473 . . . . .               |           | 7-19  |
| Circuit Pack Assembly DW7 . . . . .                 |           | 7-21  |
| Circuit Pack Assembly AR327 . . . . .               |           | 7-23  |
| Circuit Pack Assemblies AR323 and AR324 . . . . .   |           | 7-25  |
| Circuit Pack Assembly AR411 . . . . .               |           | 7-29  |
| Unit Chassis Assembly . . . . .                     |           | 7-33  |
| <b>23A-Type Data Unit. . . . .</b>                  |           | 7-35  |
| Circuit Pack Assembly AR359 . . . . .               |           | 7-39  |
| Circuit Pack Assembly AR360 . . . . .               |           | 7-41  |
| Circuit Pack Assembly AR328 . . . . .               |           | 7-47  |
| Circuit Pack Assemblies AR345 and AR346 . . . . .   |           | 7-49  |
| Circuit Pack Assembly AR412 . . . . .               |           | 7-51  |
| Circuit Pack Assembly AR349 . . . . .               |           | 7-53  |
| Circuit Pack Assembly DW2 . . . . .                 |           | 7-55  |
| Circuit Pack Assembly AR344 (Series 3) . . . . .    |           | 7-57  |
| Circuit Pack Assembly DW4 (Series 1) . . . . .      |           | 7-59  |
| Circuit Pack Assembly AR344 (Series 4) . . . . .    |           | 7-61  |
| Circuit Pack Assembly DW4 (Series 2) . . . . .      |           | 7-63  |
| Circuit Pack Assembly AR342 . . . . .               |           | 7-65  |
| Circuit Pack Assembly DW5 . . . . .                 |           | 7-67  |
| Circuit Pack Assembly AR474 . . . . .               |           | 7-69  |
| Circuit Pack Assembly DW8 . . . . .                 |           | 7-71  |
| Circuit Pack Assembly AR352 . . . . .               |           | 7-73  |
| Circuit Pack Assembly AR343 . . . . .               |           | 7-77  |
| Circuit Pack Assembly AR350 . . . . .               |           | 7-81  |
| Circuit Pack Assembly AR353 . . . . .               |           | 7-87  |
| Circuit Pack Assembly AR354 . . . . .               |           | 7-91  |
| Unit Chassis Assembly . . . . .                     |           | 7-95  |
| <b>24A-Type Data Unit. . . . .</b>                  |           | 7-97  |
| Circuit Pack Assembly AR337 . . . . .               |           | 7-101 |
| Circuit Pack Assembly AR340 . . . . .               |           | 7-103 |
| Circuit Pack Assembly AR503 . . . . .               |           | 7-105 |
| Circuit Pack Assembly AR341 . . . . .               |           | 7-107 |
| Circuit Pack Assembly AR501 . . . . .               |           | 7-109 |
| Circuit Pack Assembly AR496 . . . . .               |           | 7-111 |
| Circuit Pack Assembly AR497 . . . . .               |           | 7-115 |
| Circuit Pack Assembly AR335 . . . . .               |           | 7-119 |

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TABLE OF CONTENTS (CONTINUED)

|                                                     | Paragraph | Page  |
|-----------------------------------------------------|-----------|-------|
| <b>19A1 Data Unit . . . . .</b>                     |           | 7-121 |
| <b>Circuit Pack Assembly AR386 . . . . .</b>        |           | 7-123 |
| <b>Circuit Pack Assembly AR387 . . . . .</b>        |           | 7-125 |
| <b>Controller Panel Assembly (Series 1 and 2)</b>   |           | 7-127 |
| <b>Controller Panel Assembly (Series 3) . . . .</b> |           | 7-131 |
| <b>41A-Type Power Unit . . . . .</b>                |           | 7-135 |
| <b>Printed Wiring Board Assembly . . . . .</b>      |           | 7-139 |
| <b>Printed Wiring Board Assembly . . . . .</b>      |           | 7-143 |
| <b>Unit Chassis Assembly . . . . .</b>              |           | 7-147 |
| <b>Electrical Equipment Cabinet . . . . .</b>       |           | 7-151 |
| <b>NUMERICAL INDEX . . . . .</b>                    |           | 7-152 |
| <b>REFERENCE DESIGNATION INDEX . . . . .</b>        |           | 7-169 |
| <b>APPENDIX . . . . .</b>                           |           | A2-1  |

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## LIST OF ILLUSTRATIONS

| Figure |                                                                                                                           | P a g e |
|--------|---------------------------------------------------------------------------------------------------------------------------|---------|
| 6 - 1  | <b>Circuit Pack Auxiliary Test Circuit . . . . .</b>                                                                      | 6-71    |
| 6 - 2  | <b>Circuit Pack AR323 and AR324 Carrier, Pilots, and HF<br/>Clock Generators, Test Setup Diagram (2 Sheets) . . . . .</b> | 6-72    |
| 6 - 3  | <b>Circuit Pack AR325 Digital-to-Analog Converter, Modulator<br/>and Summer, Test Setup Diagram (2 Sheets). . . . .</b>   | 6-79    |
| 6 - 4  | <b>Circuit Pack AR327 Bit Speed and Sample Generator, Test<br/>Setup Diagram . . . . .</b>                                | 6-84    |
| 6 - 5  | <b>Circuit Pack AR328 Buffer, Test Setup Diagram . . . . .</b>                                                            | 6-87    |
| 6 - 6  | <b>Circuit Pack AR335 Option Card, Test Setup Diagram . . . . .</b>                                                       | 6-88    |
| 6 - 7  | <b>Circuit Pack AR337 Remote Test, Test Setup Diagram . . . . .</b>                                                       | 6-91    |
| 6 - 8  | <b>Circuit Pack AR340 Control Logic I, Test Setup Diagram<br/>(3 Sheets) . . . . .</b>                                    | 6-93    |
| 6 - 9  | <b>Circuit Pack AR341 Control Logic II, Test Setup Diagram . . . . .</b>                                                  | 6-100   |
| 6 - 10 | <b>Circuit Pack AR342 Start Sequence Gates, Test Setup<br/>Diagram . . . . .</b>                                          | 6-104   |
| 6 - 11 | <b>Circuit Pack AR343 Carrier Recovery Modulators and<br/>Slicers, Test Setup Diagram . . . . .</b>                       | 6-108   |
| 6 - 12 | <b>Circuit Pack AR344 Clock Generator II, Test Setup Diagram . . . . .</b>                                                | 6-111   |
| 6 - 13 | <b>Circuit Pack AR345 Receiver Crystal Oscillator, Test<br/>Setup Diagram (3 Sheets) . . . . .</b>                        | 6-115   |
| 6 - 14 | <b>Circuit Pack AR346 Receiver Crystal Oscillator, Test<br/>Setup Diagram (3 Sheets) . . . . .</b>                        | 6-120   |
| 6 - 15 | <b>Circuit Pack AR349 Received Carrier Frequency and<br/>Phase Adjust, Test Setup Diagram . . . . .</b>                   | 6-124   |
| 6 - 16 | <b>Circuit Pack AR350 Demodulator and Amplitude Adjust,<br/>Test Setup Diagram . . . . .</b>                              | 6-127   |
| 6 - 17 | <b>Circuit Pack AR352 Analog-to-Digital Converter, Test<br/>Setup Diagram . . . . .</b>                                   | 6-130   |
| 6 - 18 | <b>Circuit Pack AR353 Pilot Detector, Test Setup Diagram . . . . .</b>                                                    | 6-135   |

## LIST OF ILLUSTRATIONS (Continued)

| Figure |                                                                                                                       | Page  |
|--------|-----------------------------------------------------------------------------------------------------------------------|-------|
| 6-19   | <b>Circuit Pack AR354 Automatic Gain Control, Test Setup Diagram . . . . .</b>                                        | 6-142 |
| 6-20   | <b>Circuit Pack AR359 4-Tap Attenuator, Test Setup Diagram . . . . .</b>                                              | 6-145 |
| 6-21   | <b>Circuit Pack AR360 Amplifier, Test Setup Diagram . . . . .</b>                                                     | 6-148 |
| 6-22   | <b>Circuit Pack AR386 Relays I, Test Setup Diagram . . . . .</b>                                                      | 6-151 |
| 6-23   | <b>Circuit Pack AR387 Relays II, Test Setup Diagram . . . . .</b>                                                     | 6-154 |
| 6-24   | <b>Circuit Pack AR411 Carrier, Pilots, and HF Clock Generators, Test Setup Diagram (2 Sheets) . . . . .</b>           | 6-157 |
| 6-25   | <b>Circuit Pack AR412 Receiver Crystal Oscillator, Test Setup Diagram (3 Sheets) . . . . .</b>                        | 6-161 |
| 6-26   | <b>Circuit Pack AR473 Start Sequence Generator, Test Setup Diagram (2 Sheets) . . . . .</b>                           | 6-165 |
| 6-27   | <b>Circuit Pack AR474 Parallel-to-Serial Converter, Descrambler, and Baseband Logic, Test Setup Diagram . . . . .</b> | 6-171 |
| 6-28   | <b>Circuit Pack AR496 Interface I, Test Setup Diagram (2 Sheets) . . . . .</b>                                        | 6-177 |
| 6-29   | <b>Circuit Pack AR497 Interface II, Test Setup Diagram . . . . .</b>                                                  | 6-182 |
| 6-30   | <b>Circuit Pack AR501, Control Logic 2, Test Setup Diagram (2 Sheets) . . . . .</b>                                   | 6-185 |
| 6-31   | <b>Circuit Pack AR503 Control Logic 1, Test Setup Diagram (3 Sheets) . . . . .</b>                                    | 6-191 |
| 6-32   | <b>41A-Type Power Unit, Test Setup Diagram . . . . .</b>                                                              | 6-198 |
| 7-1    | <b>203AW Telephone Modem Group . . . . .</b>                                                                          | 7-8   |
| 7-2    | <b>22A-Type Data Unit . . . . .</b>                                                                                   | 7-12  |
| 7-3a   | <b>Circuit Pack Assembly AR325 . . . . .</b>                                                                          | 7-14  |
| 7-3b   | <b>Circuit Pack Assembly AR325 . . . . .</b>                                                                          | 7-16  |
| 7-4    | <b>Circuit Pack Assembly AR473 . . . . .</b>                                                                          | 7-18  |
| 7-5    | <b>Circuit Pack Assembly DW7 . . . . .</b>                                                                            | 7-20  |
| 7-6    | <b>Circuit Pack Assembly AR327 . . . . .</b>                                                                          | 7-22  |
| 7-7a   | <b>Circuit Pack Assemblies AR323 and AR324 . . . . .</b>                                                              | 7-24  |
| 7-7b   | <b>Circuit Pack Assemblies AR323 and AR324 . . . . .</b>                                                              | 7-26  |
| 7-8a   | <b>Circuit Pack Assembly AR411 . . . . .</b>                                                                          | 7-28  |

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## LIST OF ILLUSTRATIONS (Continued)

| <u>Figure</u> |                                                   | <u>Page</u> |
|---------------|---------------------------------------------------|-------------|
| 7-8b          | circuit Pack Assembly AR411 . . . . .             | 7-30        |
| 7-9           | Unit Chassis Assembly . . . . .                   | 7-32        |
| 7-10          | 23A-Type Data Unit . . . . .                      | 7-34        |
| 7-11          | Circuit Pack Assembly AR359 . . . . .             | 7-38        |
| 7-12a         | Circuit Pack Assembly AR360 . . . . .             | 7-40        |
| 7-12b         | Circuit Pack Assembly AR360 . . . . .             | 7-42        |
| 7-12c         | Circuit Pack Assembly AR360 . . . . .             | 7-44        |
| 7-13          | Circuit Pack Assembly AR328 . . . . .             | 7-46        |
| 7-14          | Circuit Pack Assemblies AR345 and AR346 . . . . . | 7-48        |
| 7-15          | Circuit Pack Assembly AR412 . . . . .             | 7-50        |
| 7-16          | Circuit Pack Assembly AR349 . . . . .             | 7-52        |
| 7-17          | Circuit Pack Assembly DW2 . . . . .               | 7-54        |
| 7-18          | Circuit Pack Assembly AR344 (Series 3) . . . . .  | 7-56        |
| 7-19          | Circuit Pack Assembly DW4 (Series 1) . . . . .    | 7-58        |
| 7-20          | Circuit Pack Assembly AR344 (Series 4) . . . . .  | 7-60        |
| 7-21          | Circuit Pack Assembly DW4 (Series 2) . . . . .    | 7-62        |
| 7-22          | Circuit Pack Assembly AR342 . . . . .             | 7-64        |
| 7-23          | Circuit Pack Assembly DW5. . . . .                | 7-66        |
| 7-24          | Circuit Pack Assembly AR474 . . . . .             | 7-68        |
| 7-25          | Circuit Pack Assembly DW8. . . . .                | 7-70        |
| 7-26a         | Circuit Pack Assembly AR352 . . . . .             | 7-72        |
| 7-26b         | Circuit Pack Assembly AR352 . . . . .             | 7-74        |
| 7-27a         | Circuit Pack Assembly AR343 . . . . .             | 7-76        |
| 7-27b         | Circuit Pack Assembly AR343 . . . . .             | 7-78        |
| 7-28a         | Circuit Pack Assembly AR350 . . . . .             | 7-80        |
| 7-28b         | Circuit Pack Assembly AR350 . . . . .             | 7-82        |
| 7-28c         | Circuit Pack Assembly AR350 . . . . .             | 7-84        |
| 7-29a         | Circuit Pack Assembly AR353 . . . . .             | 7-86        |
| 7-29b         | Circuit Pack Assembly AR353 . . . . .             | 7-88        |

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## LIST OF ILLUSTRATIONS (Continued)

| Figure |                                                                                         | Page  |
|--------|-----------------------------------------------------------------------------------------|-------|
| 7-30a  | <b>Circuit Pack Assembly AR354</b> . . . . .                                            | 7-90  |
| 7-30b  | <b>Circuit Pack Assembly AR354</b> . . . . .                                            | 7-92  |
| 7-31   | <b>Unit Chassis Assembly</b> . . . . .                                                  | 7-94  |
| 7-32   | <b>24A-Type Data Unit</b> . . . . .                                                     | 7-96  |
| 7-33   | <b>Circuit Pack Assembly AR337</b> . . . . .                                            | 7-100 |
| 7-34   | <b>Circuit Pack Assembly AR340</b> . . . . .                                            | 7-102 |
| 7-35   | <b>Circuit Pack Assembly AR503</b> . . . . .                                            | 7-104 |
| 7-36   | <b>Circuit Pack Assembly AR341</b> . . . . .                                            | 7-106 |
| 7-37   | <b>Circuit Pack Assembly AR501</b> . . . . .                                            | 7-108 |
| 7-38a  | <b>Circuit Pack Assembly AR496</b> . . . . .                                            | 7-110 |
| 7-38b  | <b>Circuit Pack Assembly AR496</b> . . . . .                                            | 7-112 |
| 7-39a  | <b>Circuit Pack Assembly AR497</b> . . . . .                                            | 7-114 |
| 7-39b  | <b>Circuit Pack Assembly AR497</b> . . . . .                                            | 7-116 |
| 7-40   | <b>Circuit Pack Assembly AR335</b> . . . . .                                            | 7-118 |
| 7-41   | <b>19A1 Data Unit</b> . . . . .                                                         | 7-120 |
| 7-42   | <b>Circuit Pack Assembly AR386</b> . . . . .                                            | 7-122 |
| 7-43   | <b>Circuit Pack Assembly AR387</b> . . . . .                                            | 7-124 |
| 7-44   | <b>Controller Panel Assembly (Series 1 and 2)</b> . . . . .                             | 7-126 |
| 7-45   | <b>Controller Panel Assembly (Series 3)</b> . . . . .                                   | 7-130 |
| 7-46   | <b>41A-Type Power Unit</b> . . . . .                                                    | 7-134 |
| 7-47   | <b>Printed Wiring Board Assembly</b> . . . . .                                          | 7-138 |
| 7-48   | <b>Printed Wiring Board Assembly</b> . . . . .                                          | 7-142 |
| 7-49   | <b>Unit Chassis Assembly</b> . . . . .                                                  | 7-146 |
| 7-50   | <b>Electrical Equipment Cabinet</b> . . . . .                                           | 7-150 |
| A2-1   | <b>Transmitter Data Flow, Troubleshooting Diagram (2 Sheets)</b>                        | A2-1  |
| A2-2   | <b>Transmitter Control and Timing, Troubleshooting Diagram<br/>(3 Sheets)</b> . . . . . | A2-5  |
| A2-3   | <b>Receiver Data Flow, Troubleshooting Diagram (4 Sheets)</b> . .                       | A2-11 |
| A2-4   | <b>Receiver Control and Timing, Troubleshooting Diagram<br/>(3 Sheets)</b> . . . . .    | A2-19 |
| A2-5   | <b>Remote Test, Troubleshooting Diagram</b> . . . . .                                   | A2-25 |

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## LIST OF ILLUSTRATIONS (Continued)

| <u>Figure</u> |                                                                                                               | <u>Page</u> |
|---------------|---------------------------------------------------------------------------------------------------------------|-------------|
| A2-6          | Telephone Modem Group, Power Distribution Diagram<br>(2 Sheets)                                               | A2-27       |
| A2-7          | Sample Wiring Diagram .                                                                                       | A2-31       |
| A2-8          | Telephone Modem Group, Schematic Diagram (6 Sheets) . .                                                       | A2-33       |
| A2-9          | Telephone Modem Group, Wiring Diagram . . . . .                                                               | A2-45       |
| A2-10         | 22A-Type Data Unit, Schematic Diagram (3 Sheets) . . . . .                                                    | A2-47       |
| A2-11         | 22A-Type Data Unit, Wiring Diagram . . . . .                                                                  | A2-53       |
| A2-12         | 23A-Type Data Unit, Schematic Diagram (6 Sheets) . . . . .                                                    | A2-55       |
| A2-13         | 23A-Type Data Unit, Wiring Diagram (3 Sheets). . . . .                                                        | A2-67       |
| A2-14         | 24A-Type Data Unit, Schematic Diagram (10 Sheets). . . . .                                                    | A2-73       |
| A2-15         | 24A1 Data Unit, Wiring Diagram (4 Sheets)                                                                     | A2-93       |
| A2-16         | 24A2 Data Unit, Wiring Diagram (7 Sheets) . . . . .                                                           | A2-101      |
| A2-17         | 41A-Type Power Unit, Schematic Diagram (2 Sheets) . . . . .                                                   | A2-115      |
| A2-18         | 41A-Type Power Unit, Wiring Diagram (2 Sheets). . . . .                                                       | A2-119      |
| A2-19         | 41A-Type Power Unit Circuit Pack 1, Printed Circuit<br>Layout Diagram . . . . .                               | A2-123      |
| A2-20         | 41A-Type Power Unit Circuit Pack 2, Printed Circuit<br>Layout Diagram                                         | A2-125      |
| A2-21         | Circuit Pack AR323 - Carrier, Pilots, and HF Clock<br>Generators, Schematic Diagram . . . . .                 | A2-127      |
| A2-22         | Circuit Pack AR323 - Carrier, Pilots, and HF Clock<br>Generators, Printed Circuit Layout Diagram. . . . .     | A2-129      |
| A2-23         | Circuit Pack AR324 - Carrier, Pilots, and HF Clock<br>Generators, Schematic Diagram                           | A2-131      |
| A2-24         | Circuit Pack AR324 - Carrier, Pilots, and HF Clock<br>Generators, Printed Circuit Layout Diagram. . . . .     | A2-133      |
| A2-25         | Circuit Pack AR325 - Digital-to-Analog Converter,<br>Modulator, and Summer, Schematic Diagram                 | A2-135      |
| A2-26         | Circuit Pack AR325 - Digital-to-Analog Converter,<br>Modulator, and Summer, Printed Circuit Layout<br>Diagram | A2-137      |

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## LIST OF ILLUSTRATIONS (Continued)

| <u>Figure</u> |                                                                                                           | <u>Page</u> |
|---------------|-----------------------------------------------------------------------------------------------------------|-------------|
| A2-27         | Circuit Pack AR327 - Bit Speed and Sample Generator,<br>Schematic Diagram . . . . .                       | A2-139      |
| A2-28         | Circuit Pack AR327 - Bit Speed and Sample Generator,<br>Printed Circuit Layout Diagram . . . . .          | A2-141      |
| A 2 - 2 9     | Circuit Pack AR328 - Buffer, Schematic Diagram . . . . .                                                  | A2-143      |
| A 2 - 3 0     | Circuit Pack AR328 - Buffer, Printed Circuit Layout<br>Diagram . . . . .                                  | A2-145      |
| A2-3 1        | Circuit Pack AR335 - Option Card, Schematic Diagram . . . .                                               | A2-147      |
| A2-32         | Circuit Pack AR335 - Option Card, Printed Circuit Layout<br>Diagram . . . . .                             | A2-149      |
| A2-33         | Circuit Pack AR337 - Remote Test, Schematic Diagram . . .                                                 | A2- 151     |
| A2-34         | Circuit Pack AR337 - Remote Test, Printed Circuit Layout<br>Diagram . . . . .                             | A2- 153     |
| A2-35         | Circuit Pack AR340 - Control Logic I, Schematic Diagram . .                                               | A2- 155     |
| A2-36         | Circuit Pack AR340 - Control Logic I, Printed Circuit<br>Layout Diagram . . . . .                         | A2-157      |
| A2-37         | Circuit Pack AR341 - Control Logic II, Schematic Diagram                                                  | A2-159      |
| A2-38         | Circuit Pack AR341 - Control Logic II, Printed Circuit<br>Layout Diagram. . . . .                         | A2-161      |
| A2-39         | Circuit Pack AR342 - Start Sequence Gates, Schematic<br>Diagram (2 Sheets) . . . . .                      | A2-163      |
| A2-40         | Circuit Pack AR342 - Start Sequence Gates, Printed Circuit<br>Layout Diagram (2 Sheets) . . . . .         | A2-167      |
| A2-41         | Circuit Pack AR343 - Carrier Recovery Modulators and<br>Slicers, Schematic Diagram . . . . .              | A2-171      |
| A2-42         | Circuit Pack AR343 - Carrier Recovery Modulators and<br>Slicers, Printed Circuit Layout Diagram . . . . . | A2-173      |
| A2-43         | Circuit Pack AR344 - Clock Generator II, Schematic<br>Diagram (5 Sheets) . . . . .                        | A2-175      |
| A2-44         | Circuit Pack AR344 - Clock Generator II, Printed Circuit<br>Layout Diagram (4 Sheets) . . . . .           | A2-185      |
| A2-45         | Circuit Pack AR345 - Receiver Crystal Oscillator, Schematic<br>Diagram . . . . .                          | A2-193      |
| A2-46         | Circuit Pack AR345 - Receiver Crystal Oscillator, Printed<br>Circuit Layout Diagram . . . . .             | A2-195      |

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## LIST OF ILLUSTRATIONS (Continued)

| <u>Figure</u> |                                                                                                                             | <u>Page</u> |
|---------------|-----------------------------------------------------------------------------------------------------------------------------|-------------|
| A2-47         | Circuit Pack AR346 - Receiver Crystal Oscillator,<br>Schematic Diagram . . . . .                                            | A2-197      |
| A2-48         | Circuit Pack AR346 - Receiver Crystal Oscillator, Printed<br>Circuit Layout Diagram . . . . .                               | A2- 199     |
| A2-49         | Circuit Pack AR349 - Received Carrier Frequency and<br>Phase Adjust, Schematic Diagram (2 Sheets) . . . . .                 | A2-201      |
| A2-50         | Circuit Pack AR349 - Received Carrier Frequency and<br>Phase Adjust, Printed Circuit Layout Diagram<br>(2 Sheets) . . . . . | A2-205      |
| A2-51         | Circuit Pack AR350 - Demodulator and Amplitude Adjust,<br>Schematic Diagram . . . . .                                       | A2-209      |
| A2-52         | Circuit Pack AR350 - Demodulator and Amplitude Adjust,<br>Printed Circuit Layout Diagram . . . . .                          | A2-211      |
| A2-53         | Circuit Pack AR352 - Analog-to-Digital Converter,<br>Schematic Diagram . . . . .                                            | A2-213      |
| A2-54         | Circuit Pack AR352 - Analog-to-Digital Converter,<br>Printed Circuit Layout Diagram . . . . .                               | A2-215      |
| A2-55         | Circuit Pack AR353 - Pilot Detector, Schematic Diagram . .                                                                  | A2-217      |
| A2-56         | Circuit Pack AR354 - Pilot Detector, Printed Circuit<br>Layout Diagram. . . . .                                             | A2-219      |
| A2-57         | Circuit Pack AR354 - Automatic Gain Control, Schematic<br>Diagram . . . . .                                                 | A2-221      |
| A2-58         | Circuit Pack AR354 - Automatic Gain Control, Printed<br>Circuit Layout Diagram . . . . .                                    | A2-223      |
| A2-59         | Circuit Pack AR359 - 4-Tap Attenuator, Schematic Diagram.                                                                   | A2-225      |
| A2-60         | Circuit Pack AR359 - 4-Tap Attenuator, Printed Circuit<br>Layout Diagram.. . . .                                            | A2-227      |
| A2-61         | Circuit Pack AR360 - Amplifier, Schematic Diagram. . . . .                                                                  | A2-229      |
| A2-62         | Circuit Pack AR360 - Amplifier, Printed Circuit Layout<br>Diagram. . . . .                                                  | A2-231      |
| A2-63         | Circuit Pack AR386 - Relays I, Schematic Diagram. . . . .                                                                   | A2-233      |
| A2-64         | Circuit Pack AR386 - Relays I, Printed Circuit Layout<br>Diagram. . . . .                                                   | A2-235      |
| A2-65         | Circuit Pack AR387 - Relays II, Schematic Diagram . . . . .                                                                 | A2-237      |

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## LIST OF ILLUSTRATIONS (Continued)

| <u>Figure</u> |                                                                                                                                         | <u>Page</u> |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------|
| A2-66         | Circuit Pack AR387 - Relays II, Printed Circuit Layout Diagram . . . . .                                                                | A2-239      |
| A2-67         | Circuit Pack AR411 - Carrier, Pilots, and HF Clock Generators, Schematic Diagram . . . . .                                              | A2-241      |
|               | Circuit Pack AK411 - Carrier, Pilots, and HF Clock Generators, Printed Circuit Layout Diagram . . . . .                                 | A2-243      |
| A2-69         | Circuit Pack AR412 - Receiver Crystal Oscillator, Schematic Diagram . . . . .                                                           | A2-245      |
| A2-70         | Circuit Pack AR412 - Receiver Crystal Oscillator, Printed Circuit Layout Diagram                                                        | A2-247      |
| A2-71         | Circuit Pack AR473 - Start Sequence Generator, Schematic Diagram (2 Sheets) . . . . .                                                   | A2-249      |
|               | Circuit Pack AR473 - Start Sequence Generator, Printed Circuit Layout Diagram (2 Sheets) . . . . .                                      | A2-253      |
| A2-73         | Circuit Pack AR474 - Parallel- to-Serial Converter, Descrambler, and Baseband Logic, Schematic Diagram (2 Sheets) . .                   | A2-257      |
| A2-74         | Circuit Pack AR474 - Parallel-to-Serial Converter, Descrambler, and Baseband Logic, Printed Circuit Layout Diagram (2 Sheets) . . . . . | A2-261      |
| A2-75         | Circuit Pack AR496-Interface I, Schematic Diagram . . . . .                                                                             | A2-265      |
| A2-76         | Circuit Pack AR496-Interface I, Printed Circuit Layout Diagram . . . . .                                                                | A2-267      |
| A2-77         | Circuit Pack AR497-Interface II, Schematic Diagram . . . . .                                                                            | A2-269      |
| A2-78         | Circuit Pack AR497-Interface II, Printed Circuit Layout Diagram . . . . .                                                               | A2-271      |
| A2-79         | Circuit Pack AR501 - Control Logic II, Schematic Diagram .                                                                              | A2-273      |
| A2-80         | Circuit Pack AR501 - Control Logic II, Printed Circuit Layout Diagram . . . . .                                                         | A2-275      |
| A2-81         | Circuit Pack AR503 - Control Logic I, Schematic Diagram                                                                                 | A2-277      |
| A2-82         | Circuit Pack AR503 - Control Logic I, Printed Circuit Layout Diagram . . . . .                                                          | A2-279      |

LIST OF TABLES

| <u>Table</u> |                                                                                    | P a g e |
|--------------|------------------------------------------------------------------------------------|---------|
| 6 - 1        | Transmitter Data Flow, Troubleshooting Table for<br>Figure A2-1 . . . . .          | 6-4     |
| 6-2          | Transmitter Control and Timing, Troubleshooting Table<br>for Figure A2-2 . . . . . | 6-15    |
| 6-3          | Receiver Data Flow, Troubleshooting Table for Figure A2-3 .                        | 6-23    |
| 6-4          | Receiver Control and Timing, Troubleshooting Table for<br>Figure A2-4 . . . . .    | 6-53    |
| 6-5          | Remote Test, Troubleshooting Table for Figure                                      | 6-69    |
|              | GROUP ASSEMBLY PARTS LIST . . . . .                                                | 7-7     |
|              | NUMERICAL INDEX . . . . .                                                          | 7-152   |
|              | REFERENCE DESIGNATION INDEX . . . . .                                              | 7-169   |

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## CHAPTER 5

### PREVENTIVE MAINTENANCE

5-1. PREVENTIVE MAINTENANCE. - Due to the continuous on-line status of the equipment, no scheduled preventive maintenance procedures are required.

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## CHAPTER 6

## CORRECTIVE MAINTENANCE

6-1. INTRODUCTION. - Corrective maintenance consists of data set trouble-. - shooting procedures and circuit pack test and adjustment procedures,

6-2. TROUBLESHOOTING PROCEDURES. - The Telephone Modem Group data set corrective maintenance procedures provide a means of trouble isolation and are intended for experienced maintenance technicians. Procedures given in paragraph 6-3 should isolate the trouble to a general functional area such as power, transmitter, or receiver. By following the general procedures of the following paragraphs, and by referring to the appropriate troubleshooting diagrams, the malfunction can be isolated to a circuit pack. Replace the malfunctioned circuit pack with a spare. Refer to paragraph 6-4 for circuit pack test and adjustment procedures. Troubleshooting diagrams and associated maintenance procedures are divided into five major categories: transmitter data flow, transmitter control and timing, receiver data flow, receiver control and timing, and remote test circuit diagrams. Main data paths are shown in heavy lines and data flow circuitry is shown from left to right. The major outputs of each diagram are shown at the right on sheet 1. The following sheets functionally trace each output signal development back to its source. Measurements are referenced by starred or circled numbers to an associated sheet for each diagram which provides normal operation measurement characteristics and tolerances. Circuit pack schematic, wiring, and component location diagrams are provided in this chapter.

6-3. OVERALL PERFORMANCE TEST,

a. Purpose. - The purpose of this test is to isolate a malfunction to the on-site power, transmitter, or receiver.

b. Test Equipment Required.

(1) Voltmeter, Hewlett-Packard Model 403B, part of Portable Test Set Hewlett-Packard Model 3550A (or equivalent)

(2) Oscilloscope, Tektronix Model 547 (or equivalent) with a Type 1A2 plug-in

c. Preliminary Procedure.

Note: - Perform step 2 only for steps\_e, f, g, h, and i

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