•523-0773502-001211
15 June 1984

Tom K4KIY

Rockwell International

instruction book

HF-8064 Preselector

Intermediate and Depot Maintenance

622-3522-203
S/N 128

Collins Defense Communications
Rockwell International Corporation
Cedar Rapids, Iowa 52498

Printed in the United States of America

LIST OF EFFECTIVE PAGES

INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

Please be advised that completion and return of the enclosed Customer Service Information sheet to Rockwell International ensures you of service bulletin modifications to your equipment. Without the return of this sheet, Rockwell International bears no responsibility to forward this information to you.

Caution

The material in this manual is subject to change. Before attempting any maintenance operation on the equipment covered in this manual, verify that you have a complete and up-to-date publication applicable to your equipment.

We welcome your comments concerning this instruction book. Although every effort has been made to keep it free of errors, some may occur. When reporting a specific problem, please describe it briefly and include the instruction book part number, paragraph or figure number, and page number.

Send your comments to: Logistics
Collins Defense Communications
Rockwell International Corporation
Cedar Rapids, Iowa 52498

ATTN: Quality Control-Technical Publications 120-153

Page No	*Change No
Front Matter (523-0773502-001211) 1st Ed — 15 Jun 84	
Title	0
A thru B	0
C Blank	0
i thru vi	0
Section 1 Description	
1-1 thru 1-6	0
Section 2 Installation	
2-1 thru 2-7	0
2-8 Blank	0
Section 3 Operation	
3-1 thru 3-2	0
Section 4 Theory	
4-1 thru 4-4	0
Section 5 Maintenance	
5-1 thru 5-17	0
5-18 Blank	0
Section 6 Parts List	
6-1 thru 6-32	0
Section 7 Diagrams	
7-1	0
7-2 Blank	0
7-3	0
7-4 Blank	0
7-5	0
7-6 Blank	0
7-7	0
7-8 Blank	0
Section 8 Bandpass Filter (523-0773499-001211) 1st Ed — 15 Jun 84	
1 thru 5	0
6 Blank	0
7 thru 9	0
10 Blank	0
11	0
12 Blank	0
13	0
14 Blank	0
15	0
16 Blank	0
17	0
18 Blank	0
19	0
20 Blank	0
21	0
22 Blank	0
23	0
24 Blank	0
25	0
26 Blank	0
27	0
28 Blank	0
29	0
30 Blank	0
31	0
32 Blank	0
33	0
34 Blank	0
35	0
36 Blank	0
37	0

*Zero in this column indicates an original page.

Page No	*Change No
38 Blank	0
39 thru 43	0
44 Blank	0
45 thru 49	0
50 Blank	0
51 thru 55	0
56 Blank	0
57	0
58 Blank	0
59 thru 63	0
64 Blank	0
65 thru 70	0

Section 9 Interface (523-0773500-001211)
1st Ed — 15 Jun 84

1 thru 3	0
4 Blank	0
5	0
6 Blank	0
7	0
8 Blank	0
9 thru 12	0

Section 10 Tuning Control (523-0773501-001211)
1st Ed — 15 Jun 84

1 thru 3	0
4 Blank	0
5	0
6 Blank	0
7	0
8 Blank	0
9 thru 12	0

*Zero in this column indicates an original page.

table of contents

Page

Section 1 Description

1.1 General 1-1
1.2 Equipment Supplied 1-1
1.3 Associated Equipment 1-3
1.4 Accessories 1-3
1.5 Equipment Specifications 1-3

Section 2 Installation

2.1 General 2-1
2.2 Unpacking and Inspection 2-1
2.3 Preparation for Storage/Reshipment 2-1
2.4 Preinstallation Check 2-1
2.5 Cabling 2-1
2.6 Installation Procedures 2-2
2.6.1 General 2-2
2.6.2 Slide Mounting Installation 2-2
2.7 Postinstallation Check 2-2

Section 3 Operation

3.1 General 3-1
3.2 Controls and Indicators 3-1
3.3 Operating Procedures 3-1
3.3.1 Startup 3-1
3.3.2 Normal Operation 3-2
3.3.3 Shutdown 3-2

Section 4 Theory

4.1 General 4-1
4.2 Functional Theory 4-1
4.2.1 General 4-1
4.2.2 Interfacing and Filter Component Selection 4-2
4.2.3 Fault Monitoring 4-2
4.2.4 Power Distribution 4-3

Section 5 Maintenance

5.1 General 5-1
5.2 Test Equipment 5-1
5.3 Preventative Maintenance 5-1
5.4 Testing/Troubleshooting 5-3

Page

5.4.1 General 5-3
5.4.2 Fault Isolation 5-3
5.4.3 Minimum Performance and Fault Isolation Tests 5-3
5.5 Alignment/Adjustment 5-14
5.5.1 General 5-14
5.5.2 High-Voltage Power Supply A2A4 Adjustment 5-14
5.5.3 +28-V dc Power Supply A2A1 Adjustment 5-14
5.5.4 -5-V dc Power Supply A2A3 Adjustment 5-14
5.5.5 +5-V dc Power Supply A2A2 Adjustment 5-15
5.6 Disassembly 5-16
5.6.1 Precautions and General Techniques ... 5-16
5.6.2 Removal of Preselector Top Cover 5-16
5.6.3 Removal of RF Amplifier A1AR1 5-16
5.6.4 Removal of Interface A4 and Tune Control A5 5-16
5.6.5 Removal of Electronics Components Assembly A1A1 5-16
5.6.6 Removal of Power Supply A2 5-16
5.6.7 Removal of Voltage Regulator A1A2 ... 5-17
5.6.8 Removal of Transformer T1 5-17
5.6.9 Removal of Blower B1 5-17
5.6.10 Removal of Bandpass Filter A3 5-17
5.7 Assembly 5-17
5.8 Repair 5-17

Section 6 Parts List

6.1 Introduction 6-1
6.1.1 General 6-1
6.1.2 Group Assembly Parts List 6-1
6.1.3 Numerical Index 6-1
6.1.4 Reference Designation Index 6-1
6.1.5 How to Use This Parts List 6-1
6.1.6 Manufacturer's Code, Name, and Address 6-2
6.1.7 Usable On Codes 6-4
6.1.8 Reference Designation Prefixes 6-4
6.1.9 Configuration Identifiers 6-4
6.2 Group Assembly Parts List 6-5

table of contents (cont)

Page

6.3 Numerical Index 6-25
6.4 Reference Designation Index 6-31

Section 7 Diagrams

7.1 Configuration Status Control 7-1
7.2 Configuration Effectivity 7-1

Section 8 Bandpass Filter, 523-0773499

1. Description 1
2. Principles of Operation 1
2.1 General 1
2.2 Block Diagram Theory 3
2.3 Functional Theory 3
2.3.1 Filter Assembly A1 3
2.3.2 Tuning Control A2 4
2.3.3 Driver Interconnect A3 4
2.3.4 Connector/Filter Assembly A4 7
2.3.5 Rf Switch Assembly A5 7
2.3.6 Jumper Board A6 8
3. Testing/Troubleshooting Procedures 8
4. Repair 8
5. Diagrams 8
5.1 Configuration Status Control 8
5.2 Configuration Effectivity 8
6. Parts List 40
6.1 Introduction 40
6.2 Parts List 40
6.3 How to Use This Parts List 40
6.4 Manufacturer's Code, Name, and Address 40
6.5 Equipment Covered 42
6.6 Usable On Codes 43

Page

Section 9 Interface, 523-0773500

1. Description 1
2. Principles of Operation 1
2.1 General 1
2.2 Functional Theory 2
3. Testing/Troubleshooting Procedures 2
4. Repair 2
5. Diagrams 3
5.1 Configuration Status Control 3
5.2 Configuration Effectivity 3
6. Parts List 9
6.1 Introduction 9
6.2 Parts List 9
6.3 How to Use This Parts List 9
6.3.1 Manufacturer's Code, Name, and Address 9
6.4 Equipment Covered 10

Section 10 Tuning Control, 523-0773501

1. Description 1
2. Principles of Operation 2
2.1 General 2
2.2 Functional Theory 2
3. Testing/Troubleshooting Procedures 2
4. Repair 2
5. Diagrams 2
5.1 Configuration Status Control 2
5.2 Configuration Effectivity 2
6. Parts List 9
6.1 Introduction 9
6.2 Parts List 9
6.3 How to Use This Parts List 9
6.3.1 Manufacturer's Code, Name, and Address 9
6.4 Equipment Covered 10

list of illustrations

Figure **Page**

Section 1 Description

1-1 Subassembly Location 1-4

Section 2 Installation

2-1 Cabling Diagram 2-3
2-2 Slide Mounting Diagram 2-6
2-3 Outline and Mounting Dimensions Diagram 2-7

Section 3 Operation

3-1 Controls and Indicators 3-1

Section 4 Theory

4-1 Overall Block Diagram 4-4
4-2 Power Distribution, Block Diagram 4-3

Section 5 Maintenance

5-1 Subassembly Locations 5-2
5-2 Initial Test Setup 5-6
5-3 High-Voltage Power Supply, Adjustment Location 5-15
5-4 Voltage Adjust Potentiometer Location .. 5-15

Section 6 Parts List

6-1 HF-8064 Preselector 6-5
6-2 Chassis A1 6-7
6-3 Electronic Components Assembly A1A1 6-11
6-4 Voltage Regulator A1A2 6-14
6-5 RF Cable Assemblies 6-16
6-6 Power Supply A2 6-18
6-7 High-Voltage Power Supply A2A4 6-20
6-8 High-Voltage Control A2A4A1 6-23

Section 7 Diagrams

7-1 Chassis A1 and Power Supply A2, Schematic Diagram 7-3

Figure **Page**

7-2 High-Voltage Power Supply A2A4, Schematic Diagram 7-7

Section 8 Bandpass Filter, 523-0773499

1 Bandpass Filter 1
2 Bandpass Filter, Block Diagram 5
3 Bandpass Filter, Interconnect 9
4 Resistor Board A1A1A1 and High-Voltage Filter A1A1A4, Schematic Diagram 13
5 Capacitor Switch No 1 A1A1A2 and Capacitor Switch No 2 A1A1A3, Schematic Diagram 15
6 Interconnect No 1 A1A1A5, Schematic Diagram 19
7 Interconnect No 2 A1A1A6, Schematic Diagram 21
8 Coil/Bandswitch A1A2, Schematic Diagram 23
9 Driver Interconnect A3, Schematic Diagram 25
10 Filter Board A4A1, Schematic Diagram .. 33
11 RF Switch Assembly A5, Schematic Diagram 35
12 RF Amplifier A5A1, Schematic Diagram 39
13 Bandpass Filter, Parts Location Diagram 45
14 Filter Assembly A1, Parts Location Diagram 47
15 Resistor Board A1A1A1, Parts Location Diagram 49
16 Capacitor Switch No 1 A1A1A2 and Capacitor Switch No 2 A1A1A3, Parts Location Diagram 51
17 Interconnect No 1 A1A1A5, Parts Location Diagram 55
18 Interconnect No 2 A1A1A6, Parts Location Diagram 57
19 Coil/Bandswitch A1A2, Parts Location Diagram 59
20 Driver Interconnect A3, Parts Location Diagram 61
21 Filter Board A4A1, Parts Location Diagram 65

list of illustrations (cont)

Figure		Page
22	RF Switch Assembly A5, Parts Location Diagram	67
23	RF Amplifier A5A1, Parts Location Diagram	69

Section 9 Interface, 523-0773500

1	Interface	1
2	Interface, Block Diagram	2
3	Interface, Schematic Diagram	5
4	Interface, Parts Location Diagram	11

Section 10 Tuning Control, 523-0773501

1	Tuning Control	1
2	Tuning Control, Schematic Diagram	3
3	Tuning Control, Parts Location Diagram	11

list of tables

Table		Page

Section 1 Description

1-1	Equipment Supplied	1-1
1-2	Equipment Subassemblies	1-2
1-3	Equipment Specifications	1-5

Section 2 Installation

2-1	Cabling Information	2-4
2-2	Control Cable Connector Pin Identification	2-4

Section 3 Operation

3-1	Controls and Indicators	3-2

Table		Page

Section 5 Maintenance

5-1	Test Equipment	5-1
5-2	Inspection Schedule	5-3
5-3	Fault Isolation	5-4
5-4	Minimum Performance and Fault Isolation Tests	5-6

Section 8 Bandpass Filter, 523-0773499

1	Bandpass Filter, Equipment Supplied	2

introduction

DESIGN FEATURES

The HF-8064 Preselector (hereafter referred to as preselector) is a rapid-tuning bandpass filter, tunable over the 2- to 29.999-MHz frequency range. There are two versions of the preselector, one for receive only applications and the other for receive-transmit applications.

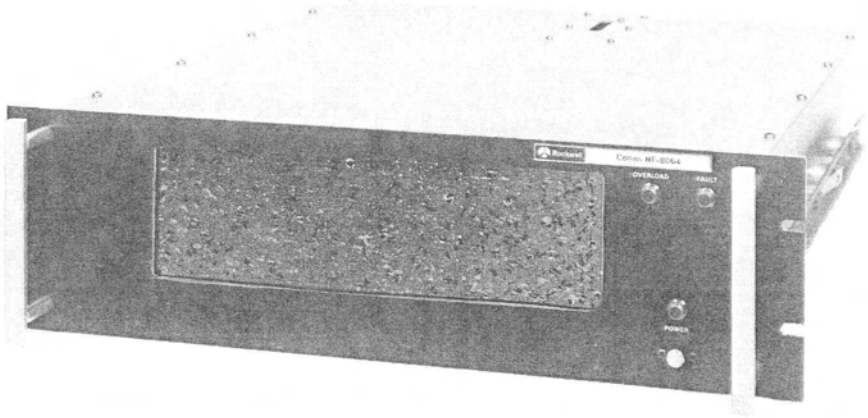
For receive only applications, the preselector provides selectivity and signal overload protection for improved receiver performance in a strong signal environment. For receive-transmit applications, the preselector has the additional capability for reducing exciter out-of-band noise and spurious signals before the rf signal is applied to a power amplifier.

The preselector is designed for use with the Collins HF-80 line of receivers and exciters, as well as other equipment that provide suitable control information. The preselector is controlled by binary coded decimal (bcd) frequency information in parallel form supplied by the associated equipment. An internal monitor is provided and the status of operation is displayed by means of three front-panel lights and eight LED's located on the top cover. Design features of the preselector include:

- High-speed tuning--20 milliseconds maximum, 8 milliseconds typical, not including tuning time for associated equipment
- Receive overload protection—Automatic protection for signals exceeding the operating level (maximum input allowed is 500-volts peak) —Automatic recovery from overloads
- Filter insertion loss compensation
- Automatic transmit-receive (tr) switching in receive-transmit configuration
- High-level logic used for all control information

INSTRUCTION BOOK

This instruction book includes information for support of intermediate and depot maintenance. Sections 1 through 7 are based on replacement of major subassemblies and chassis repair. Sections 8 through 10 provide depot maintenance instructions for major subassemblies.



TPA-6437-017

HF-8064 Preselector

SERVICE BULLETINS/SERVICE INFORMATION LETTERS

All service bulletins (SB) and service information letters (SIL) incorporated in this instruction book are listed below.

Note

Service bulletins/service information letters are written in numerical sequence against the entire HF-80 family of equipments; therefore, all SB/SIL numbers are not included in the listing.

Service bulletins are numbered in sequence for the life of the equipment. Service information letters are numbered in sequence starting at 1 for each calendar year.

SB/SIL	DESCRIPTION	ISSUE DATE
SB 117	Compensates for insertion loss of the bandpass filter subassembly by placing a 10-dB, low noise, rf amplifier after the filter in the receive rf signal path.	11-1-83
SB 118	Relocates the tuning control to isolate and shield tuning control spurious outputs from the bandpass filter subassembly.	12-1-83

section 1
description

1.1 GENERAL

The HF-8064 Preselector (Rockwell-Collins part number 622-3522-XXX) is a rapid-tuning bandpass filter, tunable over the 2- to 29.999-MHz frequency range. Receive only versions of the preselector provide selectivity and signal overload protection for improved receiver performance in a strong signal environment. A receive-transmit version of the preselector has the additional capability for reducing exciter out-of-band noise and spurious signals before the rf signal is applied to a power amplifier.

The preselector is a 132.6-mm- (5.22-in-) high unit conforming to 482.6-mm (19.0-in) EIA racking standards. It mounts in a cabinet that has a minimum of 660.4 mm (26 in) of usable depth behind the front-panel mounting strips. Mounting holes are provided along the sides of the preselector for drawer slide cabinet mounting. An internal blower draws cooling air through a removable foam air filter on the front of the unit and exhausts it through the rear panel.

1.2 EQUIPMENT SUPPLIED

Table 1-1 lists equipment supplied. It also describes the major difference in each preselector. Table 1-2 lists the subassemblies included in each configuration of the preselector. Figure 1-1 shows subassembly location.

Note

All part numbers are Rockwell-Collins, unless otherwise indicated.

Table 1-1. Equipment Supplied.

ITEM	PART NUMBER	DESCRIPTION
HF-8064 Preselector	622-3522-001 or 622-3522-004 or 622-3522-002	Basic receive only. Receive only with 10-dB, low noise rf amplifier to compensate for insertion loss of the bandpass filter assembly. Receive-transmit with rf amplifier to compensate for insertion loss of the bandpass filter subassembly in transmit.
Primary power cable	426-1034-010	
Fuse, 3A	264-4080-000	
Fuse, 5A	264-4090-000	
Slide mounting hardware		
Spacers (qty 10)	637-4710-001	
Screws, 10-32 × ⅞ (qty 10)	324-1694-250	

Table 1-2. Equipment Subassemblies.

SUBASSEMBLY		PRESELECTOR PART NUMBER 622-3522-		
NAME	PART NUMBER	-001	-002	-004
Chassis A1	651-8325-001	X		
	651-8325-002		X	
	651-8325-004			X
Electronic components assembly A1A1	659-1150-001	X 2		
Voltage regulator A1A2	659-1083-001			X
Power supply A2	651-8319-001	X	X	X
Power supply module A2A1	270-0942-010	X	X	X
Power supply module A2A2	270-0942-030	X	X	X
Power supply module A2A3	270-0942-050	X	X	X
High-voltage power supply A2A4	651-8321-001	X	X	X
High-voltage control A2A4A1	646-6041-001	X	X	X
Bandpass filter A3	651-8596-001	X		X
	651-8596-002		X	
Filter assembly A3A1	623-5935-001	X	X	X
Capacitor switch assembly A3A1A1	651-8587-001	X	X	X
Resistor board A3A1A1A1	646-5634-001	X	X	X
Capacitor switch no 1 A3A1A1A2	623-5933-001	X	X	X
Binary capacitor A3A1A1A2A1	646-6109-001	X	X	X
Capacitor switch no 2 A3A1A1A3	623-5934-001	X	X	X
Binary capacitor A3A1A1A3A1	646-6109-001	X	X	X
High-voltage filter A3A1A1A4	651-7922-001	X	X	X
Interconnect no 1 A3A1A1A5	651-7664-001	X	X	X
Interconnect no 2 A3A1A1A6	651-7665-001	X	X	X
Coil/bandswitch A3A1A2	651-7437-001	X	X	X
Tuning control A3A2	646-5618-003	(1)		
Driver interconnect A3A3	646-5630-002	X	X	X
Connector/filter assembly A3A4	647-2932-002	X	X	X

Table 1-2. Equipment Subassemblies (Cont).

SUBASSEMBLY		PRESELECTOR PART NUMBER 622-3522-		
NAME	PART NUMBER	-001	-002	-004
Filter board A3A4A1	646-5796-001	X	X	X
Rf switch assembly A3A5	651-7438-002	X		X
	651-7438-003		X	
Rf amplifier A3A5A1	651-7439-001		X	
Jumper board A3A6	646-5651-001	X	X	X
Interface A4	646-6018-001	X	X	X
Tuning control A5	646-5618-003	X(1)	X	X

NOTES: (1) The tuning control was located in bandpass filter A3 in some early preselectors. It was relocated and the reference designator was reassigned A5 (was A3A2 originally). Service bulletin 118 provides information for relocating the tuning control if located in bandpass filter A3.

(2) Electronic components assembly A1A1 is not included in units that have the tuning control located in bandpass filter A3. Service bulletin 118 provides information for relocating the tuning control. When this is done, electronic components assembly A1A1 is installed.

1.3 ASSOCIATED EQUIPMENT

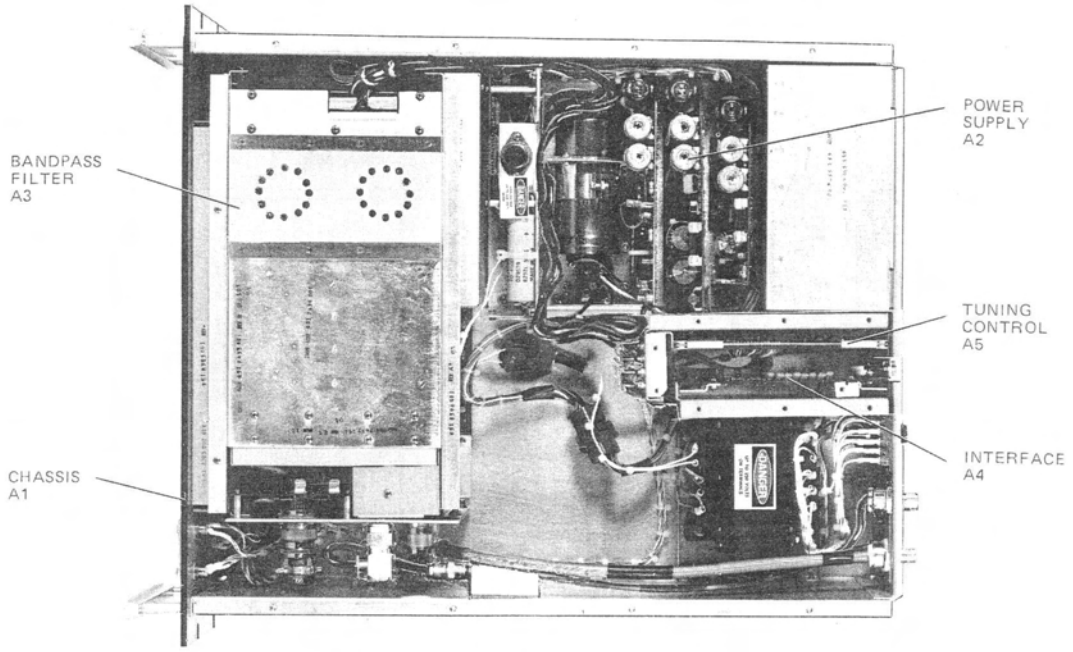
The receive-only versions of the preselector operate with Collins HF-80 receivers, such as the HF-8054( ) Receiver. The receive-transmit versions operate with Collins HF-80 receivers, exciters, and power amplifier such as the HF-8054( ) Receiver, HF-8014( ) Exciter, and HF-80 Solid-State 1-kW Power Amplifier-Power Supply (includes HF-8023 1-kW Power Amplifier and HF-8031 or HF-8032 Power Supply). The preselectors will operate with other equipment so long as they provide suitable control information.

1.4 ACCESSORIES

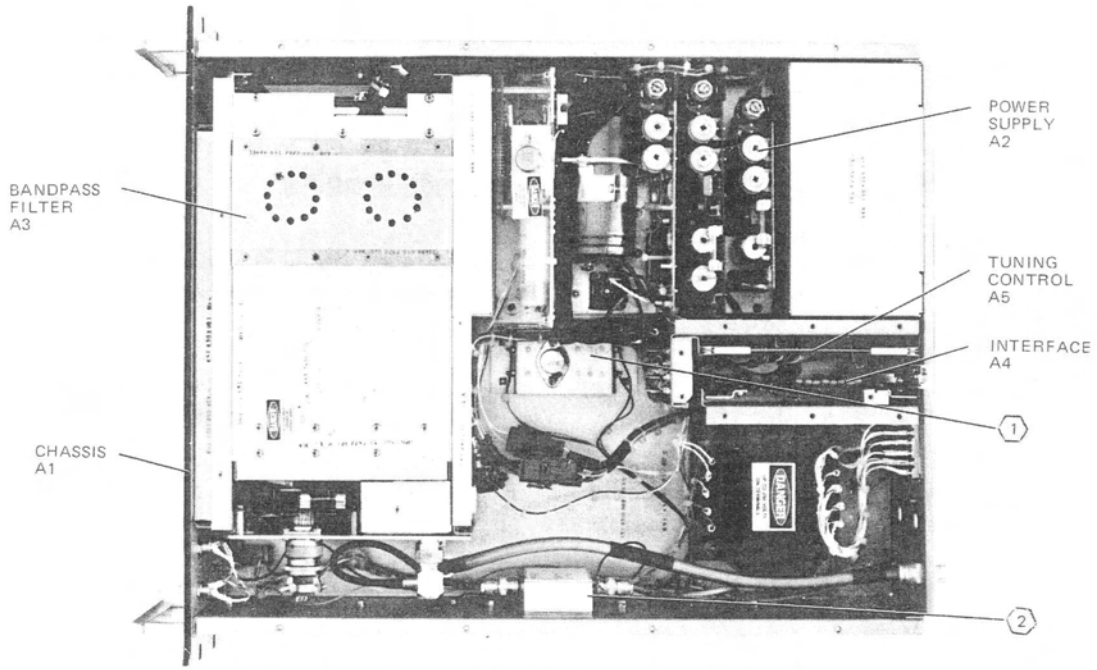
The CA-8033 Slide Mounting Kit, Rockwell-Collins part number 622-3527-001, is available for drawer slide mounting.

1.5 EQUIPMENT SPECIFICATIONS

Table 1-3 lists the electrical, environmental, and physical specifications of the preselector.



RECEIVE-TRANSMIT CONFIGURATION



NOTE: THE FOLLOWING ITEMS ARE NOT USED ON PRESELECTOR PART NO. 622-3522-001:

(1) VOLTAGE REGULATOR A1A2

(2) RF AMPLIFIER A1AR1 AND ASSOCIATED CABLES

RECEIVE ONLY CONFIGURATION

TPA-7582-017

Subassembly Location
Figure 1-1

Table 1-3. Equipment Specifications.

CHARACTERISTIC	SPECIFICATION
Electrical	
Frequency range	2.000 to 29.999 MHz
Bandpass	Not more than 2-dB variation within ±6.0 kHz of tuned frequency
Selectivity	40-dB minimum at ±10 percent from nominal tuned frequency response
Insertion gain/loss	
Receive	
Preselector part number 622-3522-001	7 dB typical, 12 dB maximum (insertion loss)
Preselector part number 622-3522-004	0 dB minimum, 6 dB maximum (insertion gain)
Transmit	
Preselector part number 622-3522-002	0 dB minimum, 6 dB maximum (insertion gain)
Input impedance	50 ohms nominal, unbalanced at tuned frequency
Output impedance	50 ohms nominal, unbalanced at tuned frequency
Overload protection	Automatic for signals exceeding the following levels:
Out-of-band	Preselector part number 622-3522-001 and 622-3522-002, at least 200-volts peak at least 10% removed from tuned frequency Preselector part number 622-3522-004, at least 250-volts peak at least 35% removed from tuned frequency
In-band	Preselector part number 622-3522-001 and 622-3522-002, at least 20-volts peak within 10% of tuned frequency Preselector part number 622-3522-004, at least 4-volts peak within 10% of tuned frequency
Maximum rf input (receive)	500-volts peak open circuit without damage
Intermodulation	
Receive	
In-band	56 dB below 1 volt PEV open circuit, 50 ohms (3rd order)
Out-of-band	Typical: 56 dB below either 40-volt signal, spaced at f_o +10% and F_o +20% (3rd order)
Transmit	40 dB below either tone of a 2-tone signal (1.58 volts rms per tone) for 3rd and higher order intermodulation products.
Cross modulation (receive)	10 dB below a 100-microvolt desired signal caused by a 30% modulated undesired signal of 50 volts 10% or more from tuned frequency.
Tuning time	20 ms maximum; 8 ms typical from 2-9 or 8-29.999 MHz.

Table 1-3. Equipment Specifications (Cont).

CHARACTERISTIC	SPECIFICATION
Power input	Switchable to 105/115/215/230 volts rms, 47-400 Hz, single phase. Input power is 300 watts maximum under normal operating conditions.
Physical	
Size	
Height	132.6 mm (5.22 in)
Depth	538.2 mm (21.19 in)
Width	482.6 mm (19.0 in) fits EIA standard 19-in equipment cabinet
Weight	18.2 kg (40 lb) maximum, without slides
Environmental	
Temperature	
Operating	0 to +25 °C (+32 to +77 °F) at 4572 m (15 000 ft) 0 to +50 °C (+32 to +122 °F) at 3048 in (10 000 ft)
Storage	-62 to +70 °C (-80 to +158 °F)
Humidity	95% up to 50 °C (122 °F) maximum (MIL-STD-810C, method 507.1, procedure II except maximum temperature limited to 50 °C)
Altitude	Up to 3048 m (10 000 ft) max operating except to 4572 m (15 000 ft) if ambient temperature does not exceed 25 °C (77 °F).
Shock	
Operating	15 g's (MIL-STD-810C, method 516.2 procedure 1)
Bench handling	One edge of chassis dropped to work bench from height of not more than 102 mm (4 in). Opposite side of chassis must be on workbench (MIL-STD-810C, method 516.2, procedure V).
Vibration	1.5 g's 5.5 to 55 Hz (MIL-STD-810C, method 514.2, procedure X, curve AW).
Cooling	Forced ambient air drawn through front panel filter and exhausted out rear panel.

section 2
installation

2.1 GENERAL

The HF-8064 Preselector mounts in a 482.6-mm (19.0-in) EIA standard rack/cabinet. It may be mounted in a fixed configuration or on movable slide rails. Rockwell-Collins CA-8033 Slide Mounting Kit is available for drawer slide mounting. Clearance in front and at the rear is required to permit cooling air intake and exhaust.

2.2 UNPACKING AND INSPECTION

The equipment should be handled with care when unpacking. Carefully remove the equipment from its container. Inspect the equipment for possible damage that may have occurred in shipment. If damage is found, notify the nearest Rockwell-Collins agency. Check the equipment against the packing list. Save the original container, fillers, and packing material for use when the equipment is repacked for storage or reshipment.

2.3 PREPARATION FOR STORAGE/RESHIPMENT

Pack the equipment in its original container (if available). Brace the equipment in the same manner used for original shipment. Pack the container with filler for protection of the equipment during storage or shipping. Include desiccant in the packing to absorb moisture.

2.4 PREINSTALLATION CHECK

The equipment has been properly aligned and tested before delivery. However, to ensure proper functioning of the equipment prior to installation, a preinstallation test should be performed as follows:

a. At the rear panel of the preselector, check that the appropriate line fuse F1 is installed and set line voltage switch S1 in accordance with the input voltage diagram (located on the rear panel below switch S1).

Caution

Do not change settings of switch S1 when power is applied to the preselector.

b. Connect the control cable between the receiver and J1 on the preselector rear panel. Refer to paragraph 2.5 for requirements of this cable.
c. Connect the primary power cable between J6 on the preselector rear panel and the power source. Make sure primary power is connected to the receiver and the receiver is turned on.

Note

If the receiver is turned on after the preselector, proceed directly to step g.

d. On the preselector front panel, press the POWER switch. Note that the adjacent indicator is lit.
e. Check the OVERLOAD and FAULT indicators on the preselector front panel and the status display on the preselector top panel. The OVERLOAD indicator should be unlit as the rf cables are not connected to the preselector. The FAULT indicator and status display 2 should be lit. Status display 2 indicates the preselector is not tuned (out-of-band). This occurs because frequency select information has not been provided by the receiver.
f. Change the receiver frequency. The FAULT indicator and status display 2 should go out.
g. Check the status display on the preselector top panel. Status display 1 and 8 should be lit. This indicates the preselector is tuned and no faults exist. All other status display indicators should be unlit.
h. Turn primary power to the preselector and receiver to off. Disconnect cables.

2.5 CABLING

The primary power cable is supplied with the preselector. The remaining cabling required to connect the

preselector to associated equipments will vary considerably because of the number and type of associated equipments used and how they are installed. Figure 2-1 shows the typical cabling for a receive only configuration and a receive-transmit configuration. Table 2-1 contains some general information on the cables shown in figure 2-1. Refer to outline and mounting diagrams for the applicable equipments to determine what type of cable connectors must be used.

Note

Rockwell-Collins may be contacted regarding existing preassembled cables, racking, etc.

2.6 INSTALLATION PROCEDURES

2.6.1 General

The preselector is normally rack or cabinet mounted. For fixed mounting, it is attached to the rack/cabinet by mounting screws through the edges of the front panel. However, slide mounting is recommended for ease of servicing and unit side support.

2.6.2 Slide Mounting Installation

The following procedure describes the method for installing the preselector, using Rockwell-Collins CA-8033 Slide Mounting Kit. Refer to the slide mounting diagram, figure 2-2, and outline and mounting dimensions diagram, figure 2-3, then proceed as follows:

Note

Right and left refer to the sides of the equipment and equipment rack as viewed from the front.

a. Remove the inner channel from the intermediate and outer channels of each slide. This is done by depressing the slide lock and pulling the channels apart.
b. Fasten each end of an outer channel to the equipment rack using three each 0.190-32 × 0.62 machine screws, 0.190 flat washer, and 0.190 lockwasher per bracket. Refer to figure 2-2, detail B and C.
c. Fasten each inner channel to the preselector using five spacers and five 10-32 × 0.88 machine screws supplied with the preselector. Refer to figure 2-2, detail A.
d. Fully extend the slide channels. Lift the preselector into position and slide the inner channels into the tracks of the intermediate slide channels. Press the slide lock on each outer slide channel and slide the preselector completely into the equipment cabinet.
e. Make the required cable connections to the preselector.

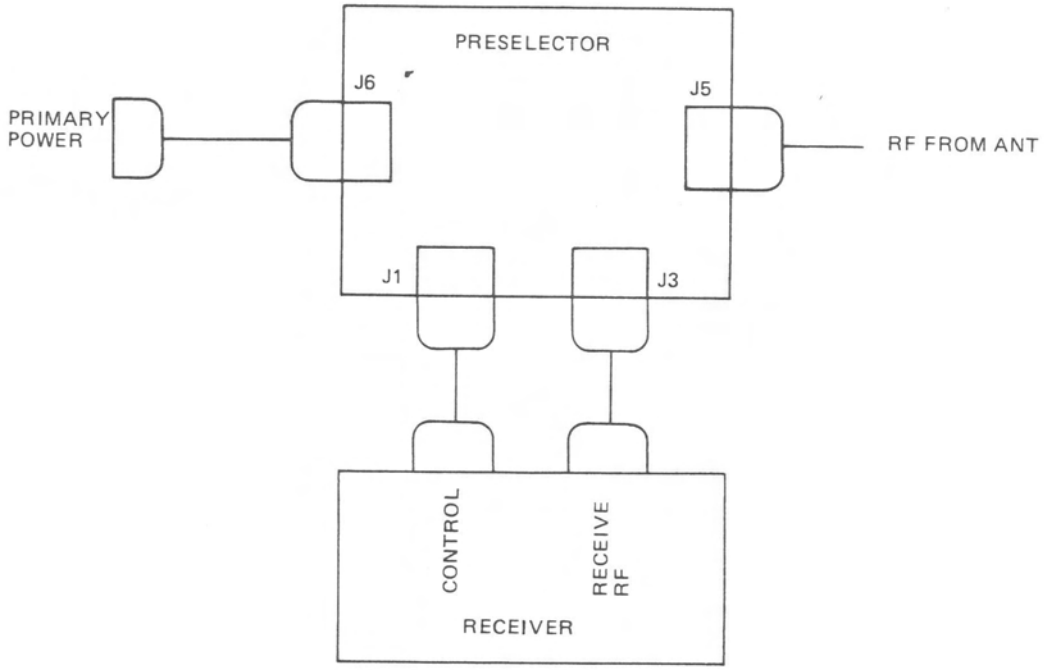
Note

When sliding the preselector out of or into the equipment cabinet, make sure that cables are not damaged by becoming caught or pinched. It is recommended that a Rockwell-Collins CA-8011 Cable Retractor be used to protect the cables.

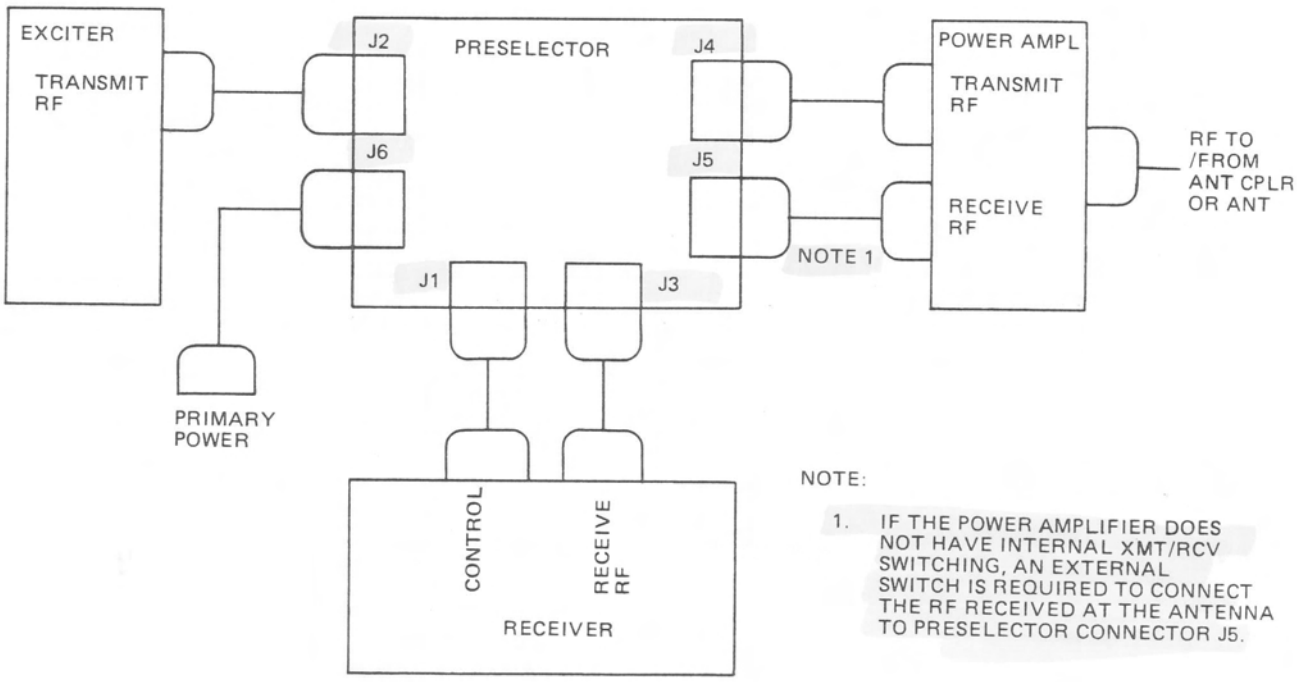
f. Using appropriate hardware, secure the front panel of the preselector to the equipment cabinet.

2.7 POSTINSTALLATION CHECK

Perform the minimum performance test in the maintenance section.



RECEIVE ONLY CONFIGURATION



NOTE:

1. IF THE POWER AMPLIFIER DOES NOT HAVE INTERNAL XMT/RCV SWITCHING, AN EXTERNAL SWITCH IS REQUIRED TO CONNECT THE RF RECEIVED AT THE ANTENNA TO PRESELECTOR CONNECTOR J5.

RECEIVE-TRANSMIT CONFIGURATION

TPA-7617-011

Cabling Diagram
Figure 2-1

Table 2-1. Cabling Information.

FUNCTION	DESCRIPTION	MATES WITH PRESELECTOR CONNECTOR
Primary power	Three-conductor power cable supplied with the preselector (part number 426-1034-010).	J6
Control	Thirty- or 50-conductor cable with overall shield. Conductor size may be stranded 22 to 26 gage. Refer to table 2-2 for connector J1 pin identification.	J1
Receive rf input	50-Ω coaxial cable	J5
Receive rf output	50-Ω coaxial cable	J3
Exciter rf input	50-Ω coaxial cable	J4
Power amplifier rf output	50-Ω coaxial cable	J2

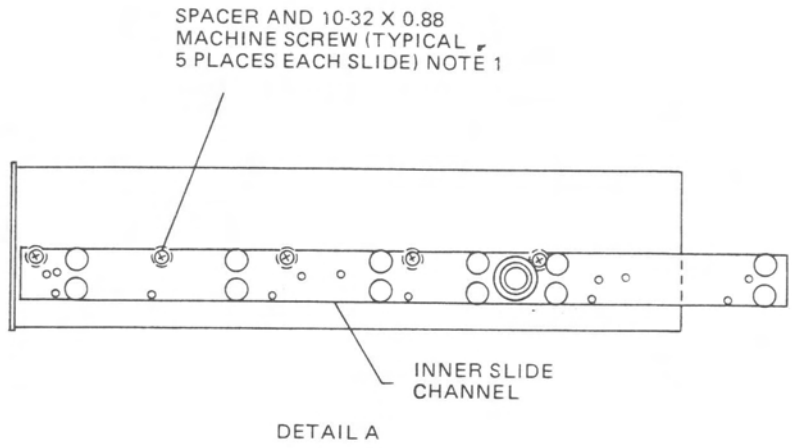
Table 2-2. Control Cable Connector Pin Identification.

CONNECTOR PIN	FUNCTION	CHARACTERISTIC
1	Ground	Dc common
2	+1.5 V dc	+1.5 V dc
3	+5 V dc	+5 V dc
4	+15 V dc	+15 V dc
5	(Not used)	No connection
6	(Reserved)	Not used
7	Freq-1 kHz	Logic "1" if bit selected
8	Freq-8 kHz	Logic "1" if bit selected
9	Freq-100 kHz	Logic "1" if bit selected
10	Freq-800 kHz	Logic "1" if bit selected
11	Freq-4 kHz	Logic "1" if bit selected
12	Freq-20 kHz	Logic "1" if bit selected
13	Rf overload	Logic "1" for overload
14	Keyline	Logic "0" initiates transmit mode
15	(Reserved)	Not used
16	(Reserved)	Not used
17	(Reserved)	Not used
18	Interlock A	Connected to J1-19
19	Interlock B	Connected to J1-18

Table 2-2. Control Cable Connector Pin Identification (Cont).

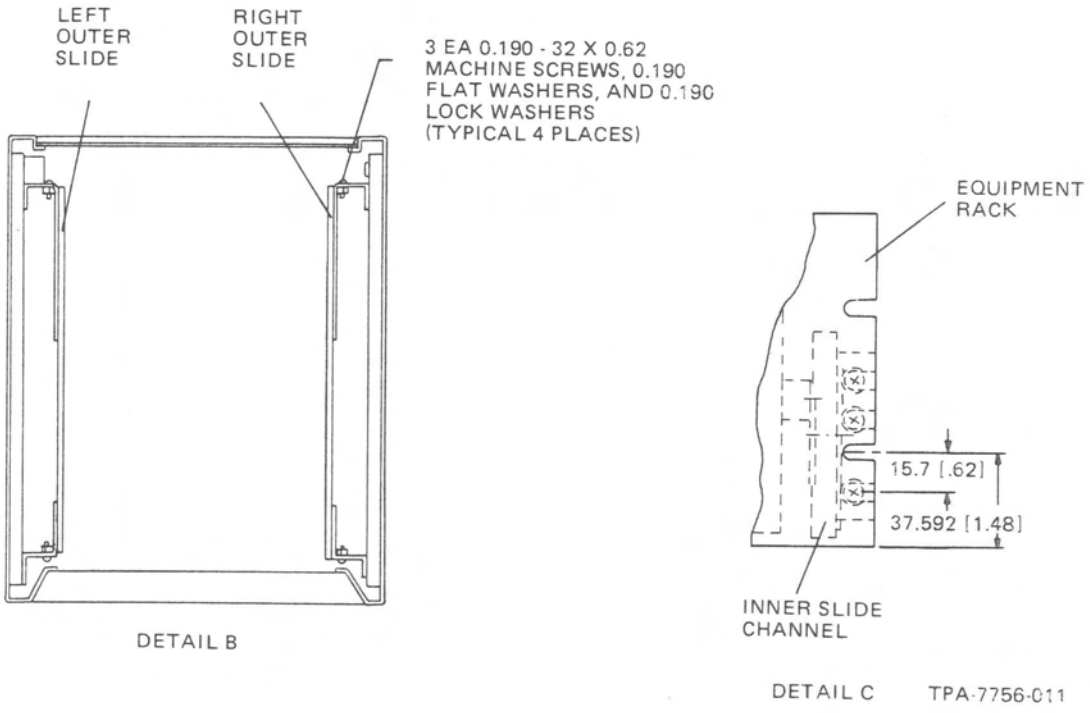
CONNECTOR PIN	FUNCTION	CHARACTERISTIC
20	(Reserved)	Not used
21	(Reserved)	Not used
22	(Reserved)	Not used
23	Freq-2 kHz	Logic "1" if bit selected
24	Freq-10 kHz	Logic "1" if bit selected
25	Freq-80 kHz	Logic "1" if bit selected
26	Freq-400 kHz	Logic "1" if bit selected
27	Freq-2 MHz	Logic "1" if bit selected
28	Freq-10 MHz	Logic "1" if bit selected
29	Self-test	Momentary ground initiates self-test
30	Fault summary	Logic "1" indicates fault
31	Cap test	Logic "0" enables modified self test
32	(Reserved)	Not used
33	(Reserved)	Not used
34	(Reserved)	Not used
35	(Not used)	No connection
36	(Not used)	No connection
37	(Not used)	No connection
38	(Not used)	No connection
39	Freq-4 kHz	Logic "1" if bit selected
40	Freq-20 kHz	Logic "1" if bit selected
41	Freq-40 kHz	Logic "1" if bit selected
42	Freq-200 kHz	Logic "1" if bit selected
43	Freq-1 MHz	Logic "1" if bit selected
44	Freq-8 MHz	Logic "1" if bit selected
45	(Reserved)	Not used
46	Tune start	Momentary ground initiates tune cycle
47	(Reserved)	Not used
48	(Reserved)	Not used
49	(Reserved)	Not used
50	Ground	Dc common

HF-8064B
55 PINS



NOTES:

1. THESE ITEMS SUPPLIED WITH THE PRESELECTOR. IF SLIDE MOUNTING KIT INCLUDES 10 EXTRA MACHINE SCREWS, DISCARD THEM WHEN INSTALLATION IS COMPLETE.
2. DIMENSIONS ARE IN MILLIMETRES [INCHES].

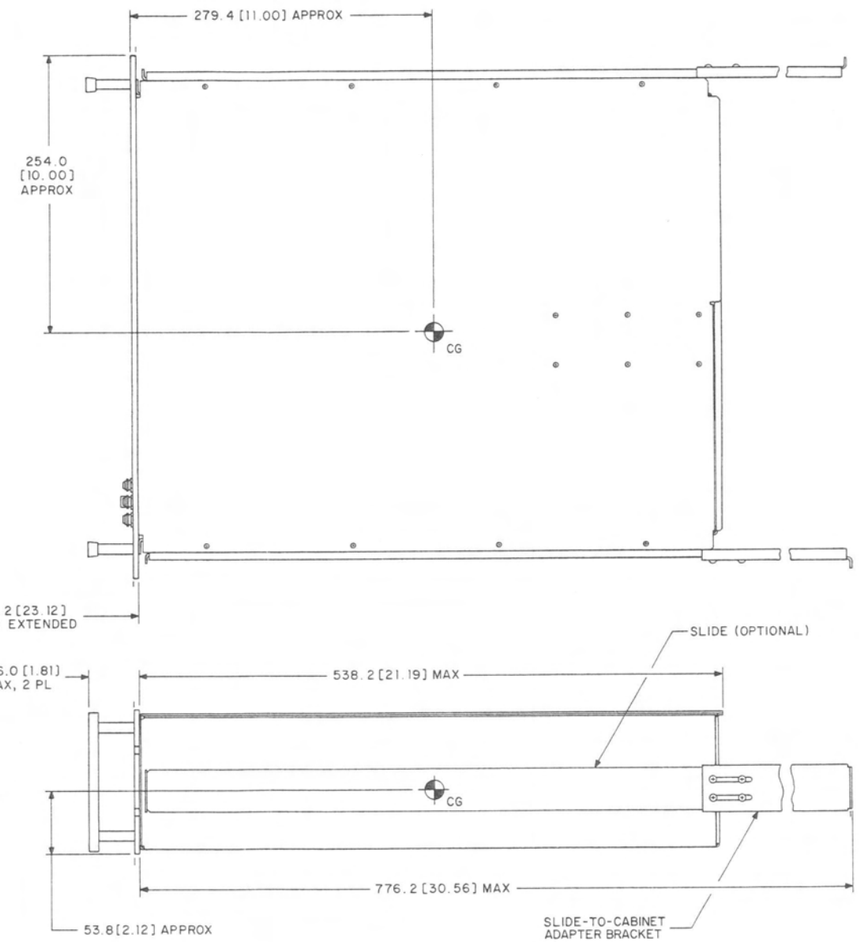


Slide Mounting Diagram
Figure 2-2

NOTES:

1. WEIGHT 18.2 kg [40 LB] MAX WITHOUT SLIDES.
2. ⊕ CG INDICATES CENTER OF GRAVITY.
3. UNIT SHOWN WITH OPTIONAL SLIDE MOUNTING KIT, PART NUMBER 622-3527-001.
4. ALL DIMENSIONS ARE IN MILLIMETRES [INCHES].

CONN	MIL PART NO.	COMPANY PART NO.	MATES WITH	MIL PART NO.
J2, J3, J4	M39012/21-0001	357-9670-000	357-9292-000	M39012/16-0101
J5	M39012/13-0001	357-9455-000	357-0008-000	M39012/06-0002
J1		371-0385-050	371-0358-240	M24308/1-5
J6		368-0385-010	426-1034-010	



Outline and Mounting Dimensions Diagram
Figure 2-3

section 3
operation

3.1 GENERAL

The HF-8064 Preselector will operate with a receiver that is either locally or remotely controlled. The preselector may be unattended during normal operation.

3.2 CONTROLS AND INDICATORS

Operating controls and indicators are shown in figure 3-1 and described in table 3-1. In addition, the status word display, which is a maintenance aid rather than a normal operating indicator, is also included.

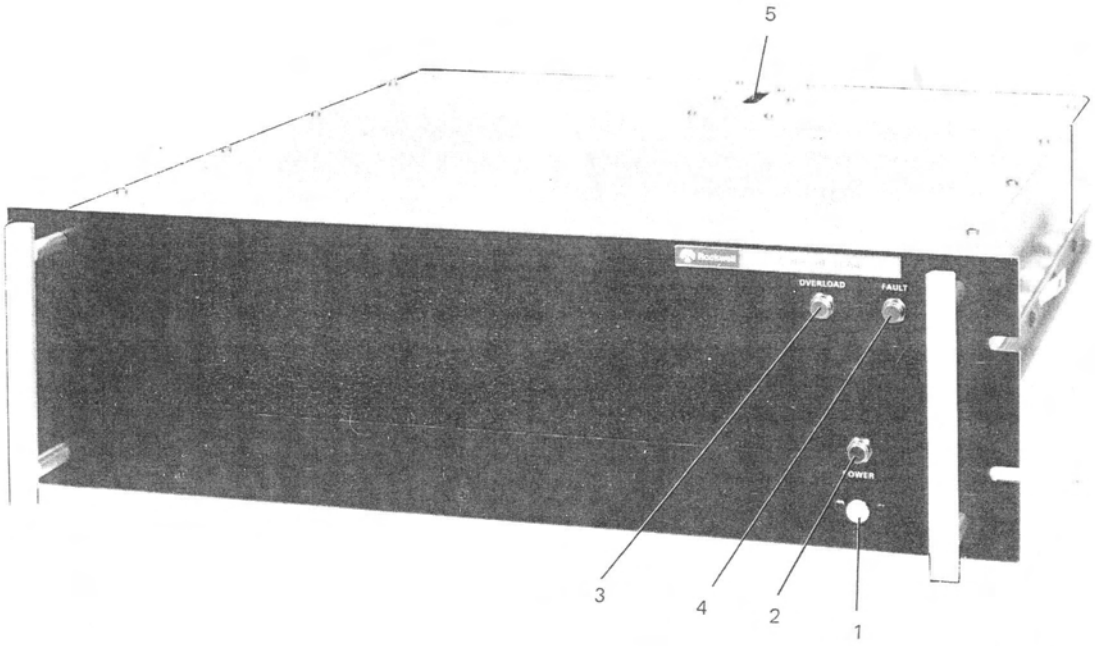
3.3 OPERATING PROCEDURES

3.3.1 Startup

Note

The associated receiver should be turned on prior to performing the following procedure.

a. Press the POWER switch. Observe that the POWER and FAULT indicators are lit.
b. Change the receiver frequency. This provides a frequency rechannel command that will tune the preselector. Observe that the FAULT indicator goes out.



Controls and Indicators
Figure 3-1

Table 3-1. Controls and Indicators.

INDEX NO	CONTROL OR INDICATOR	FUNCTION
1	POWER switch S2	Controls application of primary power.
2	POWER indicator DS1	Indicates that primary power is applied.
3	OVERLOAD indicator DS2	Indicates in-band overload from received rf signal.
4	FAULT indicator DS3	Indicates high-voltage failure, tuning out-of-band, or antenna overload.
5	Status word display A4DS1 through A4DS8	Indicators are LED's located on interface A4 that are visible through a window in the preselector top cover (A4DS1 is nearest the front panel and A4DS8 is nearest the rear panel).
	Status word	
	1 (A4DS1)	When lit, indicates preselector is tuned. During normal operation, this indicator should be lit.
	2 (A4DS2)	When lit, indicates out-of-band tuning fault.
	3 (A4DS3)	When lit, indicates high-voltage power fault.
	4 (A4DS4)	When lit, indicates filter overload fault.
	5 (A4DS5)	When lit, indicates transmit insertion loss fault.
	6 (A4DS6)	When lit, indicates antenna rf input signal overload fault.
	7 (A4DS7)	Reserved for future application.
	8 (A4DS8)	When lit, indicates there are no preselector faults. During normal operation, this indicator should be lit.

3.3.2 Normal Operation

The preselector is controlled entirely by the associated receiver. As the receiver frequency is changed, the preselector automatically retunes to the new frequency.

Note

The preselector provides interlock, fault summary, rf overload, and out-of-band signals to the associated receiver for remote indication of operational status.

3.3.3 Shutdown

To shut down the preselector, press the POWER switch. Observe that the POWER indicator goes out.

section 4
theory

4.1 GENERAL

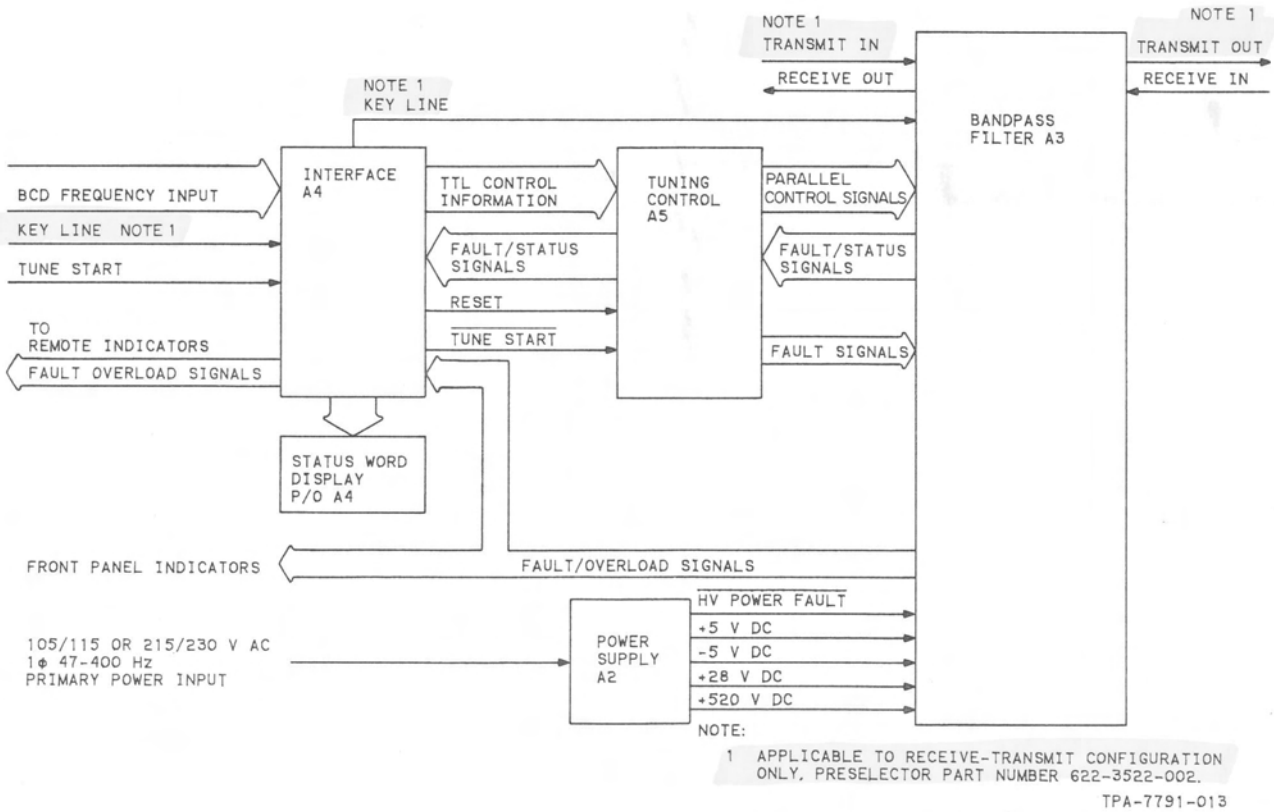
This section describes the theory of operation of the HF-8064 Preselector at the major functional levels. A major function consists of related subassemblies that perform a specific function. The functional level discussion is limited to active components in the preselector. Three major functions are performed by the preselector; interfacing and filter component selection, fault monitoring, and power distribution.

Detailed circuit analysis for bandpass filter A3, interface A4 and tuning control A5 is contained in the instruction sections of this instruction book.

4.2 FUNCTIONAL THEORY

4.2.1 General

Refer to figure 4-1. Tuning of the preselector is implemented by interface A4 and tuning control A5. Binary coded decimal (BCD) frequency information from the receiver is converted to transistor-to-transistor logic (TTL) levels on interface A4 and applied to tuning control A5. The TTL information is used by tuning control A5 to control the driving circuitry of the filter tuning elements in bandpass filter A3.



Overall Block Diagram
Figure 4-1

The rf section, located in bandpass filter A3, consists of a 2-pole bandpass filter with frequency coverage in two overlapping bands. The overlapping bands eliminate band switching in most applications. Tuning of aperture-coupled resonators is accomplished by switching capacitor elements in or out of a tank circuit as determined by the tuning control. All capacitor element switching is solid-state to achieve fast tuning rates.

The filter selectivity greatly attenuates out-of-band signals, suppressing their cross-modulation and intermodulation effects in the receiver. The preselector will withstand rf inputs as high as 500 volts peak. Automatic overload protection is provided for rf inputs to the preselector of 200 volts peak minimum (part numbers 622-3522-001 and 622-3522-002) 10 percent removed from the tuned frequency, or 50 volts peak minimum (part number 622-3522-004) at least 35 percent removed from tuned frequency, decreasing to 20 volts peak minimum (part number 622-3522-001 and 622-3522-002) or 4 volts peak miminum (part number 622-3522-004) at tuned frequency. Recovery from overloads is automatic.

In the receive-transmit configuration, the filter helps reduce exciter out-of-band noise and spurious signals before application of the rf to the power amplifier. The unit incorporates a tr switch to provide proper signal routing for a system rf signal during receive and transmit modes. In receive mode, the rf is routed from the antenna port, through bandpass filter A3, to the receiver port. In transmit mode, the exciter output signal is routed through bandpass filter A3, including an rf amplifier (to compensate for filter insertion loss), and then to the power amplifier input.

Built-in tr switching automatically reroutes the rf path for use with the exciter (when keyed) and the receiver (when unkeyed).

Fault and status signals generated within bandpass filter A3 are routed to tuning control A5. These signals are processed by the microprocessor on tuning control A5 and supplied as fault signals to bandpass filter A3 and as status signals to interface A4.

Bandpass filter A3 routes the fault signals from tuning control A5 to preselector front panel FAULT and OVERLOAD indicators. These signals are also applied to circuits on interface A4. Fault signals from bandpass filter A3 are used by interface A4 to provide outputs for remote indicators. Fault and status signals from tuning control A5 are routed to status word (LED) display by circuits on interface A4.

Power supply A2 generates the dc voltages used by the preselector from the 105/115 or 215/230 V ac, 47 to 400 Hz single phase, primary power input.

4.2.2 Interfacing and Filter Component Selection

Refer to figure 4-1. Frequency information in BCD parallel form and a tune start signal is applied to the input of interface A4. Circuitry on interface A4 converts these signals to TTL levels which are compatible with the TTL circuits on tuning control A5. A clock on interface A4 provides the reset pulse to initiate operation of the microprocessor on tuning control A5.

The microprocessor on tuning control A5 uses the TTL control information to determine the appropriate tuning information. Interface circuits on tuning control A5 convert TTL control signals to levels compatible with driver circuitry on bandpass filter A3. The parallel control signals from tuning control A5 select the appropriate driver circuitry to configure the switching elements to resonate the 2-pole filter in bandpass filter A3.

In the receive-transmit configuration, a keyline is also applied to interface A4. This input is used to configure rf switching and control circuits on bandpass filter A3. These circuits contain the coaxial switching relays that configure the receiver-transmit rf path through the preselector.

4.2.3 Fault Monitoring

Refer to figure 4-1 and chassis A1 schematic diagram. Preselector fault and status conditions are reported by circuits in bandpass filter A3. A monitor in power supply A2 detects a loss of high voltage. This signal ($\overline{\text{HV POWER FAULT}}$) is inverted in bandpass filter A3 before application to tuning control A5 as HV POWER FAULT.

Rf signal strength is monitored by detection circuits in the bandpass filter A3 and improper levels result in either an input overload fault or a filter overload fault signal being sent to the tuning control card A5. In the receive-transmit configuration, transmit input and output detectors are also included in bandpass filter A3. Transmit input and output detector

outputs are applied to comparators in bandpass filter A3. If the output of the comparators exceed normal limits, the output is applied to tuning control A5 as insertion loss fault.

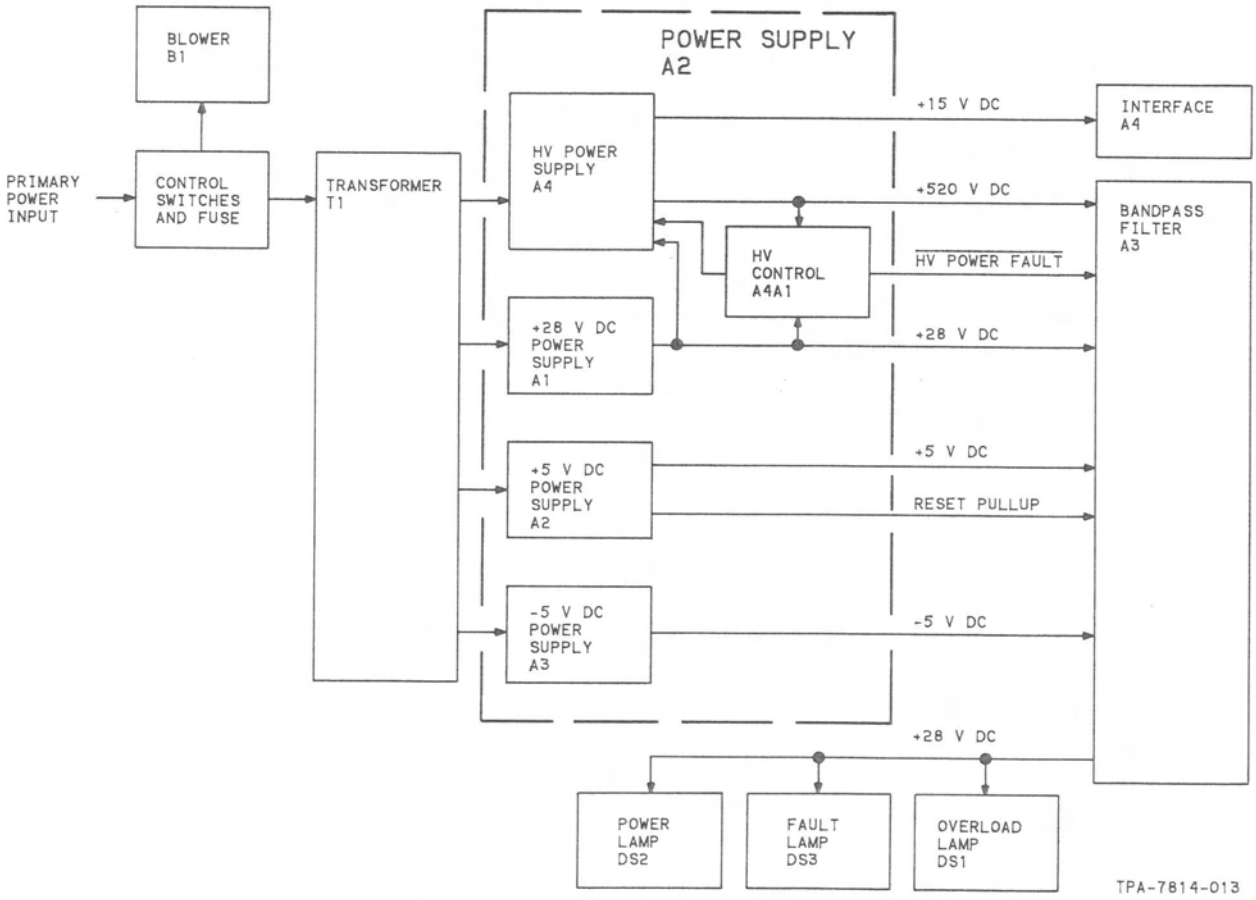
The four fault signals applied to tuning control A5 are polled by the microprocessor and a fault is returned to bandpass filter A3 together with an internally generated processor fault (PRC FLT). These signals are ORed in bandpass filter A3 and used to light the FAULT indicator on the preselector front panel.

When a filter overload condition or input overload condition exists, circuits in bandpass filter A3 immediately energize the de-Q drivers, the OVERLOAD lamp on the preselector front panel lights, and the microprocessor on tuning control card A5 begins a timeout sequence. At the end of the timeout period, an attempt is made to reset the overload circuit. If the circuit is successfully reset, the preselector will return to normal operation; if not, the OVERLOAD indicator on the preselector front panel will remain lit.

4.2.4 Power Distribution

Refer to figure 4-2 and chassis A1 and power supply A2 schematic diagram. The 105/115- or 215/230-V ac, 47- to 400-Hz single-phase, primary power is applied to the primary winding of transformer T1 and blower B1 through power control switches and a line fuse. The multiple secondary windings of transformer T1 provides the ac input voltages to four separate regulated power supply modules in power supply A2.

High-voltage power supply A2A4 (including high-voltage control A2A4A1) provides +15 V dc to interface A4 and a +520-V dc stabilized voltage output to high-voltage switch circuits in bandpass filter A3. It also includes a monitor circuit that determines



Power Distribution, Block Diagram
Figure 4-2

whether the high-voltage output is present and provides a fault ($\overline{\text{HV POWER FAULT}}$) signal upon failure of this power supply. A high-voltage overload trip circuit is also provided that operates an overload relay to disconnect the +520-V dc output from its load when an overload condition exists. This circuit also serves as an interlock circuit to disconnect the 520-V dc output when the top cover is removed. An output from +28-V dc power supply A1 operates the overload trip relay.

The +28-V dc power supply A1 is regulated with a conventional series regulator and provides stabilized voltage to circuits within the power supply module and subassemblies in bandpass filter A3.

The +5-V dc power supply employs a conventional series regulator and provides about 5 amperes to all the +5-V dc circuits in the preselector. The -5-V dc power supply provides regulated -5 V dc for the capacitor switch circuits of bandpass filter A3.

section 5
maintenance

Warning

Lethal voltages (+520 V dc and 115/230 V ac) are present within the preselector. Use extreme caution when testing or troubleshooting to prevent severe electrical burns or severe electrical shock.

Warning

When operating in the receive-transmit configuration, electromagnetic fields in close proximity to the preselector may exceed Occupational Safety and Health Administration (OSHA) recommended maximum limits.

Caution

The equipment contains electrostatic discharge sensitive (ESDS) devices. Special handling methods and materials must be used to prevent equipment damage.

5.1 GENERAL

Intermediate maintenance for the HF-8064 Preselector is based on isolation of a fault to replaceable subassemblies A3, A4, and A5 or to a defective component on chassis A1 or power supply A2. However, special test equipment is not available to test/troubleshoot power supply A2; therefore, it is recommended that a defective power supply A2 be returned to a Rockwell-Collins repair facility. Preselector subassembly locations are shown in figure 5-1.

5.2 TEST EQUIPMENT

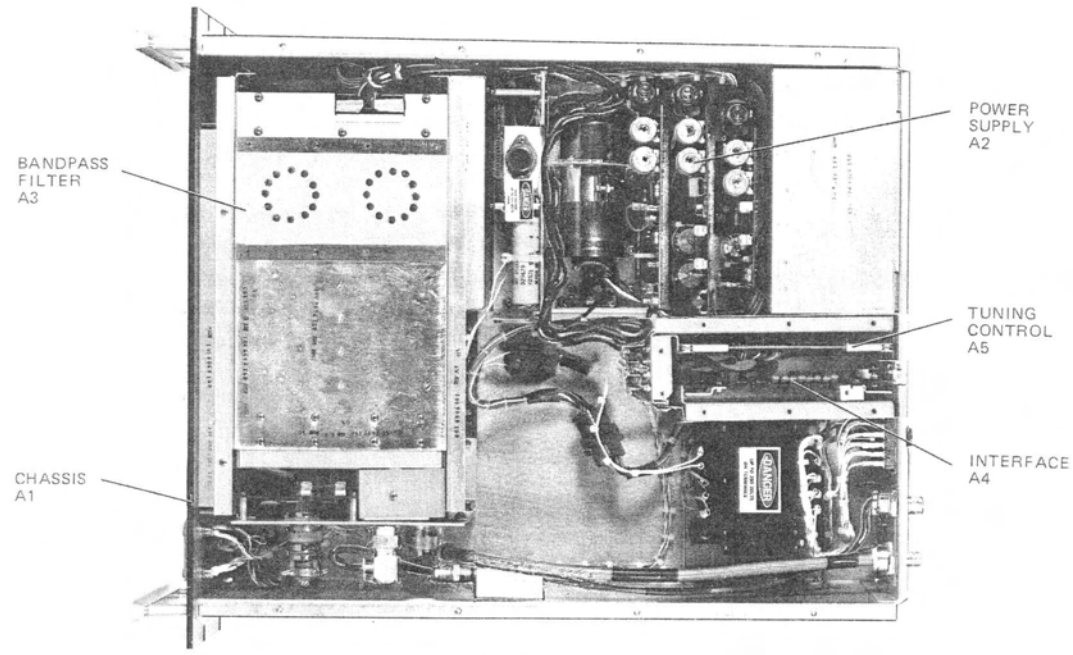
Table 5-1 lists test equipment required to perform testing and troubleshooting of the preselector. In addition to the test equipment listed, a receiver capable of providing the necessary control signals for the preselector is required. When the preselector being tested has receive-transmit capability, an exciter is also required to provide keying of the transmit function.

5.3 PREVENTATIVE MAINTENANCE

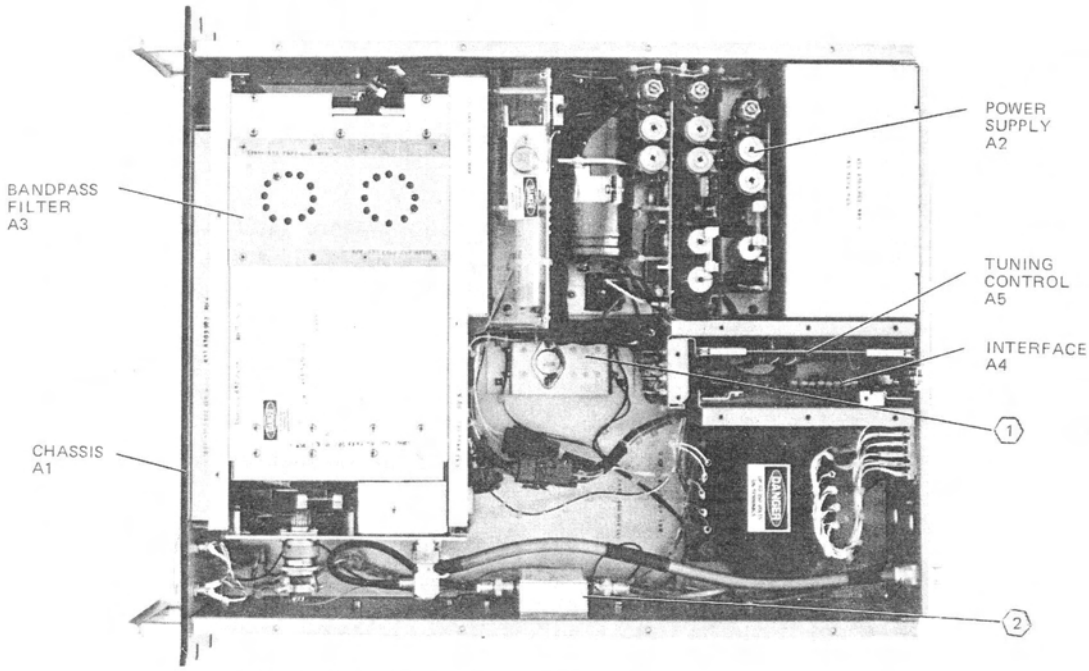
The preventative maintenance procedures listed in table 5-2 are provided to assist the technician in maintaining the overall performance of the preselector. The intervals listed in the table are recommended for units used in normal operating environments. For equipment used in extreme environmental conditions, the frequency of the inspections should be increased.

Table 5-1. Test Equipment.

ITEM	MINIMUM SPECIFICATIONS	REPRESENTATIVE TYPE
Digital voltmeter	General purpose	Fluke 8600A
Rf signal generator	2-30 MHz, -140 to +20 dBm	Hewlett-Packard 8640B
Rf millivoltmeter with 50-ohm adapter	2-30 MHz, -40 to +20 dBm	Boonton 92C, with 91B-83



RECEIVE-TRANSMIT CONFIGURATION



NOTE: THE FOLLOWING ITEMS ARE NOT USED ON PRESELECTOR PART NO. 622-3522-001:

(1) VOLTAGE REGULATOR A1A2

(2) RF AMPLIFIER A1AR1 AND ASSOCIATED CABLES

RECEIVE ONLY CONFIGURATION

TPA-7582-017

Subassembly Locations
Figure 5-1

Table 5-2. Inspection Schedule.

ITEM	INTERVAL	PROCEDURE
Air filter	Weekly Note The air filter should be cleaned at least once a month.	Inspect the air filter in the preselector front panel. If the filter is dirty, remove it by pulling it out of the front panel. Clean the filter by spraying with warm water, allow to dry, then reinstall the filter in the preselector front panel.
Interior compartment and blower B1	Monthly Note In extreme environmental conditions, more frequent inspections may be required to ensure equipment is maintained free of accumulated dust.	Inspect blower B1 by viewing through the finger guard on the rear panel of the preselector. Remove preselector top cover by following the procedures of paragraph 5.6.2 and inspect the interior comparment. If the interior compartment or blower B1 have accumulated dust, disassemble the preselector by following the procedures of paragraph 5.6.3 through 5.6.10. Remove dust from the interior compartment, blower B1, and cooling air duct with a vacuum. Reassemble the preselector (refer to paragraph 5.7).

5.4 TESTING/TROUBLESHOOTING

5.4.1 General

The following paragraphs provide information to aid the technician in evaluating preselector performance, fault isolation, and testing/troubleshooting of a subassembly or chassis-mounted component. The test procedures are performed while the preselector is connected in a bench test setup simulating the system configuration.

5.4.2 Fault Isolation

Table 5-3 is provided to assist the technician in identifying a preselector fault and then isolating the fault to a subassembly or chassis-mounted component. In normal operation, only the front panel POWER indicator is lit. If it is not lit or one or more other indicators on the front panel or the status word display are lit, compare the condition shown with the conditions listed in the INDICATOR STATUS columns of table 5-3.

Note

An X in the INDICATOR STATUS column means that the indicator identified at the top of that column is lit. A 0 means that the indicator is not lit. A - means that the indicator may be lit or not lit.

When the comparable indicator status is located in table 5-3, perform the procedures in the CORRECTIVE ACTION column.

5.4.3 Minimum Performance and Fault Isolation Tests

Table 5-4 provides procedures to aid the technician in evaluating overall performance and isolating preselector faults to an individual subassembly or chassis-mounted component. Tests 1 through 7 are minimum performance tests and provide a rapid means of evaluating the overall performance of the preselector. These tests should be performed upon initial installation or any time the preselector has been repaired. Tests 8 through 11 provide procedures to aid the technician in isolating a fault to a malfunctioning subassembly or chassis mounted component.

The procedures in table 5-4 assume that the preselector has been connected as shown in figure 5-2. If the preselector does not meet the requirements in the NORMAL INDICATION column, perform the procedures in the IF INDICATION IS ABNORMAL column.

Table 5-3. Fault Isolation.

INDICATOR STATUS											NOTES	CORRECTIVE ACTION
FRONT PANEL			STATUS WORD DISPLAY									
POWER	FAULT	OVERLOAD	1	2	3	4	5	6	7	8		
0	0	0	0	0	0	0	0	0	0	0		1. Primary power not applied. Check equipment interconnections. 2. Front panel indicators faulty. Check front panel POWER, FAULT, and OVERLOAD lamps. 3. +28-V dc power supply faulty. Perform +28-V dc power supply test (test 11a, 11b, 11c, and 11h of table 5-4).
X	X	0	0	X	0	0	0	0	0	0		1. Frequency out of band, preselector not tuned. Ensure frequency selected at receiver is within preselector bandpass (2.000 to 30.000 MHz). 2. Interface A4, tune control A5, or electronic components assembly A1A1 faulty. a. Replace interface A4. b. Replace tune control A5. c. Replace electronic components assembly A1A1.
X	X	0	0	0	X	0	0	0	0	0		1. High-voltage power supply A2A4 faulty. Perform high-voltage power supply test (test 11a through 11e of table 5-4). 2. Bandpass filter A3 faulty. Replace bandpass filter A3. 3. Interface A4, tune control A5, or electronic components assembly A1A1 faulty. a. Replace interface A4. b. Replace tune control A5. c. Replace electronic components assembly A1A1.
X	0	X	0	0	0	X	0	0	0	0	⟨1⟩	1. Filter overload. Check system. 2. Preselector faulty. a. Replace tune control A5. b. Replace interface A4. c. Replace bandpass filter A3. d. Replace electronic components assembly A1A1.

Table 5-3. Fault Isolation.

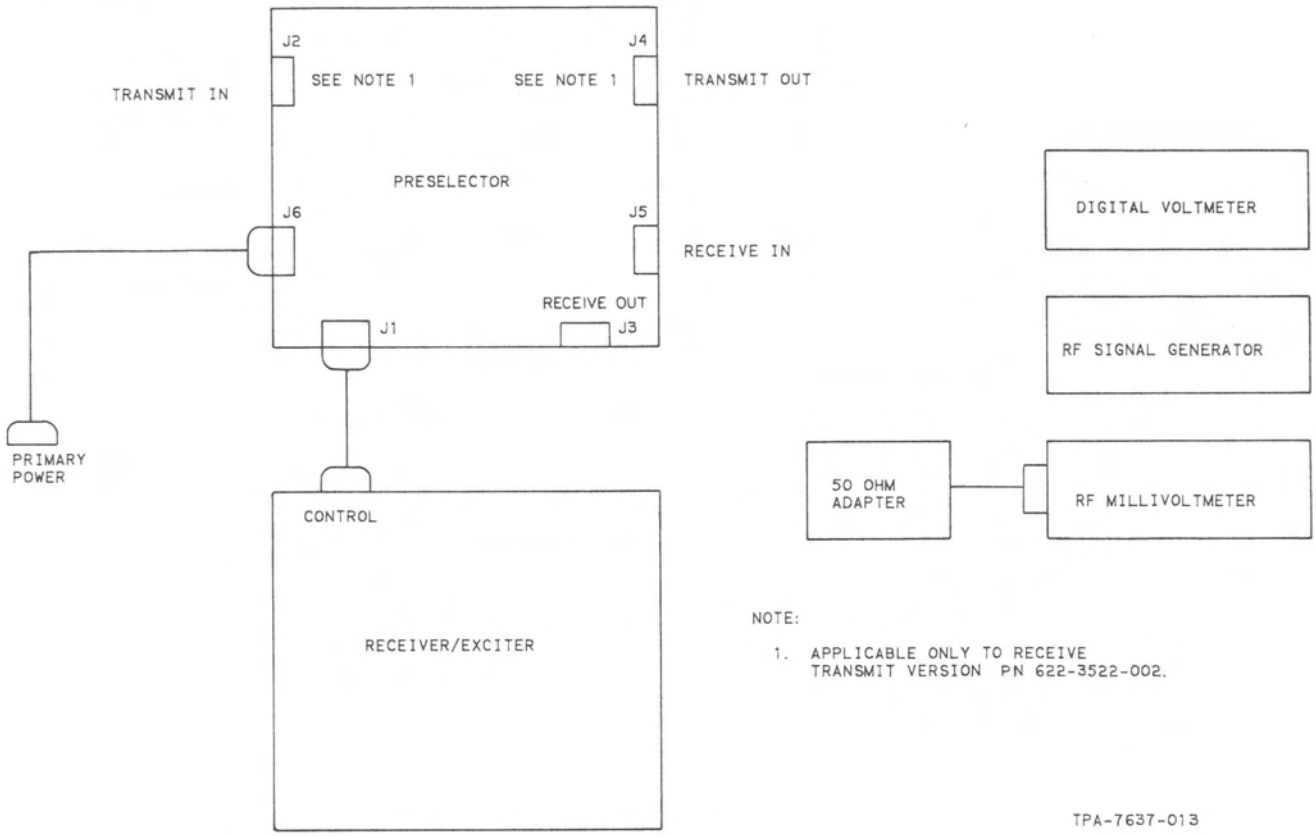
INDICATOR STATUS											NOTES	CORRECTIVE ACTION
FRONT PANEL			STATUS WORD DISPLAY									
POWER	FAULT	OVERLOAD	1	2	3	4	5	6	7	8		
X	X	0	0	0	0	0	X	0	0	0		1. Transmit insertion loss, preselector faulty. a. Check bandpass filter A3 (test 6a through 6e of table 5-4). b. Replace tune control A5. c. Replace interface A4. d. Replace electronic components assembly A1A1.
X	X	X	0	0	0	X	0	X	0	0	2	1. Input antenna overload. Check system. 2. Tune control A5, interface A4, or electronic components assembly A1A1 faulty. a. Replace tune control A5. b. Replace interface A4. c. Replace electronic components assembly A1A1.
X	0	0	-	-	-	-	-	-	X	-	3	1. Tune control A5, interface A4, or electronic components assembly A1A1 faulty. a. Replace interface A4. b. Replace tune control A5. c. Replace electronic components assembly A1A1.

NOTES:

1. The front panel OVERLOAD indicator will go out and the preselector will return to normal operation if the overloading signal is not present at the end of tune control A5 time out sequence. Status word 4 will remain lit until preselector is retuned.

2. The front panel OVERLOAD indicator will go out and the preselector will return to normal operation if the overloading signal is not present at the end of the tune control A5 time out sequence. Front panel FAULT indicator and status words 4 and 6 will remain lit until preselector is retuned.

3. The function represented by status word 7 is not used on preselector part numbers 622-3522-001, -002, and -004.



Initial Test Setup
Figure 5-2

Table 5-4. Minimum Performance And Fault Isolation Tests.

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
	Caution Ensure that switch S1 on the preselector rear panel is set to the appropriate line voltage and that fuse F1 is the proper rating. Note When the preselector top cover is removed, do not bypass high-voltage interlock S1 on high-voltage power supply A2A4 until told to do so in the test procedures.		
1. Test setup	a. Connect the equipment as shown in figure 5-2. Note Do not connect test equipment to the preselector until told to do so in the procedure.		
2.Turn on (Cont)	a. Press the POWER pushbutton on the preselector front panel.	Preselector front panel POWER and FAULT indicators light.	1. Check POWER and FAULT lamp bulbs.

Table 5-4. Minimum Performance And Fault Isolation Tests (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
2. (Cont)			2. Check +28-V dc power supply A2A1 (test 11a, 11b, 11c, and 11h of table 5-4).
	b. Turn on the receiver and change the frequency.	Preselector FAULT indicator goes out.	Refer to table 5-3 for fault isolation.
3. Receive insertion gain/loss	a. Set receiver frequency to 2.000 MHz.		
	b. Using the rf millivoltmeter and the 50-ohm adapter, set the rf signal generator output to 0 dBm at 2.000 MHz.		
	c. Without changing the settings, connect the rf millivoltmeter and 50-ohm adapter to J3 and the rf signal generator to J5.	Rf millivoltmeter indicates between 0 and -12 dBm.	Perform tests 8 and 9.
		Note	Note
		For preselector part number 622-3522-004, rf millivoltmeter indicates not less than 0 dBm and not more than 6 dBm.	For preselector part number 622-3522-004 perform tests 8 and 10.
	d. Repeat steps 3a through 3c at each of the following frequencies in the order listed. 4.000 MHz 8.999 MHz 29.999 MHz 15.000 MHz 8.000 MHz	Same as step 3c.	Same as step 3c.
	e. Disconnect test equipment.		
4. Bandpass	a. Set receiver frequency to 8.000 MHz.		
	b. Connect the rf milliovoltmeter and 50-ohm adapter to J3 and the rf signal generator to J5. Set the rf signal generator to 8.000 MHz and adjust the output for 0 dBm on the rf millivoltmeter.		
	c. Vary the output frequency of the rf signal generator until the rf millivoltmeter changes 2.0 dBm.	Rf signal generator output frequency is less than 7.994 MHz and greater than 8.006 MHz.	Replace bandpass filter A3.
	d. Repeat steps 4a through 4c at 29.000 MHz.	Rf signal generator output frequency is less than 28.994 MHz and greater than 29.006 MHz.	Same as step 4c.
(Cont)			

Table 5-4. Minimum Performance And Fault Isolation Tests (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
4. (Cont)	e. Disconnect test equipment.		
5. Selectivity	a. Set receiver frequency to 2.000 MHz.		
	b. Connect the rf millivoltmeter and 50-ohm adapter to J3 and the rf signal generator to J5.		
	c. Using the output meter on the rf signal generator, set the rf signal generator output for 10 dBm at 2.000 MHz and note rf millivoltmeter indication.	Rf millivoltmeter reference indication.	
	d. Adjust rf signal generator output to 1.800 MHz at 10 dBm.	Rf millivoltmeter indicates more than 40 dBm below reference in step c.	Replace bandpass filter A3.
	e. Adjust rf signal generator output to 2.200 MHz at 10 dBm.	Same as step 5d.	Same as step 5d.
	f. Repeat steps 5a and 5c at 9.000 MHz.	Same as step 5c.	
	g. Adjust rf signal generator output to 8.100 MHz at 10 dBM.	Same as step 5d.	Same as step 5d.
	h. Adjust rf signal generator output to 9.900 MHz at 10 dBm.	Same as step 5d.	Same as step 5d.
	i. Repeat steps 5a and 5c at at 29.999 MHz.	Same as step 5c.	
	j. Adjust rf signal generator output to 27.000 MHz at 10 dBm.	Same as step 5d.	Same as step 5d.
	k. Adjust rf signal generator output to 33.000 MHz at 10 dBm.	Same as step 5d.	Same as step 5d.
	l. Repeat step 5f.	Same as step 5c.	
	m. Repeat steps 5g and 5h.	Same as step 5d.	Same as step 5d.
	n. Disconnect test equipment.		
6. Transmit insertion gain (receive-transmit configuration only)	a. Make sure all test equipment is disconnected from the preselector. Set receiver frequency to 2.000 MHz.		
	b. Using the rf millivoltmeter and 50-ohm adapter, adjust the rf signal generator output to 2.000 MHz at 0 dBm. Turn rf signal generator rf output off.		
(Cont)	c. Without resetting the rf signal generator output level, connect signal generator output level, connect signal generator to J4 and the rf millivoltmeter to J2.		

Table 5-4. Minimum Performance And Fault Isolation Tests (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
6. (Cont)	d. Key the exciter and turn on rf signal generator rf output.	Rf millivoltmeter indicates between 0 dBm and 6 dBm.	Replace bandpass filter A3.
	e. Repeat steps 6a through 6d at each of the following frequencies in the order listed. 4.000 MHz 8.999 MHz 29.999 MHz 15.000 MHz 8.000 MHz	Same as step 6d.	Same as step 6d.
7. Transmit insertion fault (receive-transmit configuration only)	a. Set receiver frequency to 29.000 MHz.		
	b. Connect the rf millivoltmeter and 50-ohm adapter to J2 and signal generator to J4. Adjust the rf signal generator output to 29.000 MHz at 0 dBm as indicated on signal generator rf output meter.		
	c. Momentarily key the exciter.	On the preselector, FAULT and OVERLOAD indicators remain out.	Refer to table 5-3 for fault isolation.
	d. Adjust rf signal generator to 27.000 MHz at 0 dBm as indicated on rf signal generator rf output meter.		
	e. Momentarily key the exciter.	On the preselector, FAULT indicator and status word 5 light.	1. Replace bandpass filter A3. 2. Replace tune control A5. 3. Replace interface A4. 4. Replace electronic components assembly A1A1.
	f. Disconnect test equipment.		
8. Rf cable W4	a. Turn off the receiver and preselector. Disconnect the primary power cable at J6 and the receive rf input at J5.		
	b. Remove preselector top cover by following the disassembly procedures in paragraph 5.6.2.		
	c. Set rf signal generator output for 0 dBm at 15.000 MHz.		
(Cont)	d. Disconnect W4P1 from A3J1. Without changing the settings, connect the rf millivoltmeter and 50-ohm adapter to W4P1 and the rf signal generator to J5.	Rf millivoltmeter indicates 0 ±0.1 dBm.	Replace rf cable W4.

Table 5-4. Minimum Performance And Fault Isolation Tests (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
8. (Cont)	e. Disconnect test equipment and reconnect W4P1 to A3J1.		
9. Rf cable W3 (not applicable to preselector part number 622-3522-004)	a. Turn off the receiver and preselector. Disconnect the primary power cable at J6 and the receiver rf output at J3. b. Perform procedures in tests 8b and 8c. c. Disconnect W3P1 from A3J3. Without changing the settings, connect the rf millivoltmeter and 50-ohm adapter to W3P1 and the rf signal generator to J3. d. Disconnect test equipment and reconnect W3P1 to A3J3.	Rf millivoltmeter indicates 0 ±0.1 dBm.	Replace rf cable W3.
10. Rf amplifier A1A1R1, voltage regulator A1A2, and rf cables W7 and W8 (preselector part number 622-3522-004 only)	a. Turn off the receiver and preselector. Disconnect the primary power at J6 and the receiver rf input at J5. b. Perform procedure in test 8b. c. Disconnect W7P1 from A3J3. d. Using rf millivoltmeter and 50-ohm adapter, set rf signal generator output for 0 dBm at 2.000 MHz. e. Without changing the settings, connect the rf millivoltmeter and 50-ohm adapter the J3 and the rf signal generator to W7P1.		
	f. Connect the primary power cable at J6 and turn on the preselector.	Rf millivoltmeter indicates 10.7 ±0.5 dBm. Note If this indication is obtained, perform step g. This completes the test.	Preceed to step h. Note Do not perform step g.
	g. Turn off the preselector and disconnect the primary power at cable J6. Disconnect test equipment. Reconnect W7P1 to A3A5J3. Replace the preselector top cover. Reconnect the primary power cable at J6.		
(Cont)	h. Connect digital voltmeter positive (+) lead to A1A2E7 and the common (-) lead to A1A2E8.	Digital voltmeter indicates +20 ±0.5 V dc. (If the normal indication is obtained, proceed to step j.)	Proceed to step i.

Table 5-4. Minimum Performance And Fault Isolation Tests (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
10. (Cont)	i. Connect digital voltmeter positive (+) lead to A1A2E5 and the common (-) lead to A1A2E6.	Digital voltmeter indicates +28 ±0.5 V dc. (If normal indication was not obtained in step h, replace voltage regulator A1A2.)	Check +28-V dc power supply A2A1 (test 11a, 11b, 11c, and 11h). Note Do not perform step j.
	j. Turn off the preselector and disconnect the primary power at J6. Disconnect test equipment.		
	k. Disconnect W8P1 from A1AR1J1 and W7P2 from A1AR1J2.		
	l. Using rf millivoltmeter and 50-ohm adapter, set the rf signal generator for 0 dBm at 2.000 MHz.		
	m. Without changing the settings, connect the signal generator to A1AR1J2 and the rf millivoltmeter and 50-ohm adapter to A1AR1J1.		
	n. Connect primary power cable at J6 and turn on the preselector.	Rf millivoltmeter indicates 10.7 ±0.5 dBm.	Replace rf amplifier A1AR1.
	o. Turn off the preselector and disconnect the primary power cable at J6. Disconnect test equipment.		
	p. Set rf signal generator output for 0 dBm.		
	q. Without changing the settings, connect the rf millivoltmeter to W7P2 and the rf signal generator to W7P1.	Rf millivoltmeter indicates 0 ±0.1 dBm.	Replace rf cable W7.
	r. Disconnect test equipment from W7P1 and W7P2. Reconnect W7P2 to A1AR1J2 and W7P1 to A3A5J3.		
	s. Without changing the settings, connect the rf millivoltmeter to W8P1 and the rf signal generator to J3.	Rf millivoltmeter indicates 0 ±0.1 dBm.	Replace rf cable W8.
	t. Reconnect W8P1 to A1AR1J1.		
	u. Perform steps a and c through g.		
Warning Lethal voltages (+520 V dc and 115/230 V ac) are present within the preselector. Use extreme caution when testing or troubleshooting to prevent severe electrical burns or severe electrical shock.			
11. Power supply A2 (Cont)	a. Turn off the receiver and preselector. Disconnect all test equipment. Disconnect primary power cable at J6.		

Table 5-4. Minimum Performance And Fault Isolation Tests (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
11. (Cont)	b. Perform procedure in test 8b.		
	c. Connect primary power cable at J6 and turn on the preselector.		
	d. Enable the high voltage interlock A2A4S1 on high voltage power supply A2A4.		
	e. Connect the digital voltmeter positive (+) lead to test point 3 of A2A4A1P1 (see figure below) and the common (-) lead to preselector chassis.	Digital voltmeter indicates not less than +54 V dc and not more than +58 V dc. 54.7	1. Ensure that high voltage interlock A2A4S1 on high-voltage power supply A2A4 is engaged. 2. If the voltage at test point 3 of A2A4A1P1 is 0, proceed to step f. 3. If the voltage measured at A2A4A1P1 is less than +54 V dc, replace power supply A2. If the voltage measured at A2A4A1P1 is greater than +58 V dc, perform high-voltage power supply A2A4 adjustment of paragraph 5.5.
	f. Connect digital voltmeter positive (+) lead to test point 1 of A2A4P1 and the common (-) lead to preselector chassis.	Digital voltmeter indicates +15 ±0.5 V dc. 14.96	Proceed to step h.
	g. Set digital voltmeter to measure ac voltage. Connect digital voltmeter leads between A2A4 terminal 33 and 34.	Digital voltmeter indicates 362 to 490 V ac.	Proceed to step n.
	h. Set digital voltmeter to measure dc voltage. Connect digital voltmeter positive (+) lead to +28-V dc power supply A2A1 + out and the common (-) lead to preselector chassis.	Digital voltmeter indicates +28 ±0.5 V dc.	1. Perform +28-V dc power supply A2A1 adjustment, paragraph 5.5.3. 2. Turn preselector off, check fuse F1 on +28-V dc power supply A2A1. 3. Proceed to step i.
	i. Set digital voltmeter to measure ac voltage. Turn on preselector and connect digital voltmeter leads across terminals 1 and 2 of +28-V dc power supply A2A1.	Digital voltmeter indicates 46.0 to 60.0 V ac.	Proceed to step n.
(Cont)	j. Set digital voltmeter to measure dc voltage. Connect digital voltmeter positive (+) lead to -5-V dc power supply A2A3 negative - out and the common (-) lead to preselector chassis.	Digital voltmeter indicates -5.1 ±0.1 V dc.	1. Perform -5-V dc power supply A2A3 adjustment, paragraph 5.5.4.

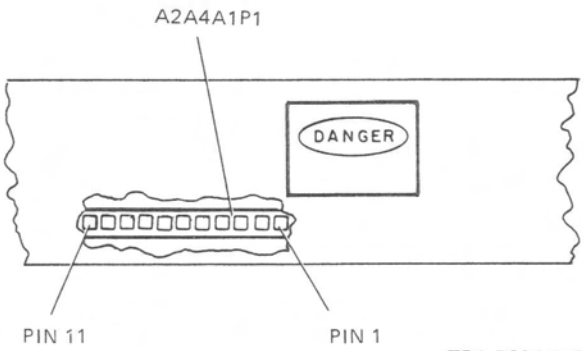


Table 5-4. Minimum Performance And Fault Isolation Tests (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
11. (Cont)			2. Turn preselector off, check fuse F1 on -5-V dc power supply A2A3. 3. Proceed to step k.
	k. Set digital voltmeter to measure ac voltage. Turn on preselector and connect digital voltmeter leads across terminals AC1 and AC2 on -5-V dc power supply A2A3.	Digital voltmeter indicates 17.0 to 23.0 V ac.	Proceed to step n.
	l. Set digital voltmeter to measure dc voltage. Connect digital voltmeter positive (+) lead to +5-V dc power supply A2A2 positive + out and the common (-) lead to preselector chassis.	Digital voltmeter indicates +5.1 ±0.1 V dc.	1. Perform +5-V dc power supply A2A2, paragraph 5.5.5. 2. Turn off preselector, check fuse F1 on +5-V dc power supply A2A2. 3. Proceed to step m.
	m. Set the digital voltmeter to measure ac voltage. Turn on the preselector and connect the digital voltmeter leads across terminals 1 and 3 of +5-V dc power supply A2A2.	Digital voltmeter indicates 16.0 to 22.0 V ac.	Proceed to step n.
	n. Set the digital voltmeter to measure ac voltage. Connect the digital voltmeter leads to each of the terminals listed in the table below.	Digital voltmeter indicates the voltages listed in the table below.	Proceed to step o.

TRANSFORMER A1T1 TEST POINTS	MINIMUM VOLTAGE	MAXIMUM VOLTAGE
6-8	17.0 V ac	23.0 V ac
9-11	16.0 V ac	22.0 V ac
12-14	46.0 V ac	60.0 V ac
15-16	362.0 V ac	490.0 V ac

	o. Connect digital voltmeter leads across transformer A1T1 terminals listed in table below.	Digital voltmeter indicates the voltages for switch S1 settings listed in table below.	Proceed to step p.

TRANSFORMER TERMINALS	S1 SETTING	VOLTAGES	
		MIN	MAX
1-3	100/115	105 V ac	115 V ac
4-5	100/115	105 V ac	115 V ac
1-3	215/230	215 V ac	230 V ac
4-5	215/230	215 V ac	230 V ac

(Cont)

Table 5-4. Minimum Performance And Fault Isolation Tests (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
11. (Cont)	p. Turn preselector off and disconnect primary power cable at J6. q. Press preselector POWER pushbutton and perform continuity checks between the following points: J6 line to A1T1-3 J6 neutral to A1T1-4 r. Replace the preselector top cover by following the reassembly procedures in paragraph 5.7.	Digital voltmeter indicates less than 1 ohm.	1. Check fuse F1. 2. Check primary power select switch S1. 3. Check preselector POWER switch S2.

5.5 ALIGNMENT/ADJUSTMENT

5.5.1 General

Field alignment/adjustment for the preselector is limited to adjustment of power supply A2 whenever the outputs exceed the limits listed in table 5-4.

5.5.2 High-Voltage Power Supply A2A4 Adjustment

The +520-V dc output, monitored at test point 3 of A2A4A1P1 through a 9.1-to-1 divider, should not exceed +58 V dc at the test point. When the +520-V dc output exceeds +530 V dc (+58 V dc at the test point), normally it can be adjusted to be in range by shorting zener diode VR6 and/or VR5. To perform this adjustment, perform the following procedures:

a. Turn off the preselector and disconnect primary power cable at J6.
b. Perform steps b through h of paragraph 5.5.6.
c. Remove the four screws securing high-voltage control A2A4A1 to high-voltage power supply A2A4 and move high-voltage control A2A4A1 to permit access to zener diodes VR5 and VR6 on high-voltage power supply A2A4.
d. Refer to figure 5-3 and high-voltage power supply schematic. If the zener diodes VR5 and VR6 on high-voltage power supply A2A4 are connected as shown in figure 5-3, install a jumper across VR6.
e. Reassemble high-voltage control A2A4A1 to high-voltage power supply A2A4 and reassemble preselector by following the procedures in paragraph 5.7.
f. Perform the procedures in test 11c through 11e of table 5-4. If the voltage measured at test point 3 of A2A4A1P1 is still greater than +58 V dc, repeat steps a through c above. Refer to figure 5-3 and the high-voltage power supply schematic. Install a jumper across VR5 and VR6.
g. Perform steps e and f above. If the voltage measured at test point 3 of A2A4A1P1 is still greater than +58 V dc, replace power supply A2.

5.5.3 +28-V dc Power Supply A2A1 Adjustment

When the +28-V dc output, as measured at the +28-V dc power supply A2A1 +out, exceeds the limits listed in table 5-4, normally it can be adjusted to be in range by adjusting the voltage adjustment potentiometer. To perform this adjustment, perform the following procedure.

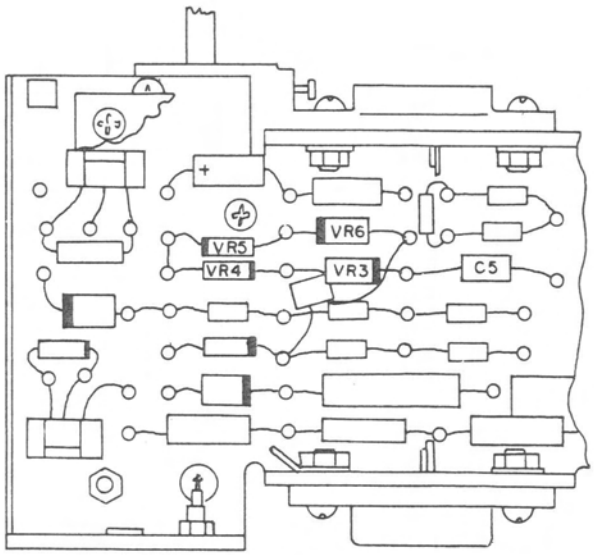
Caution

When adjusting the +28-V dc power supply A2A1 output, care must be exercised not to exceed current limits.

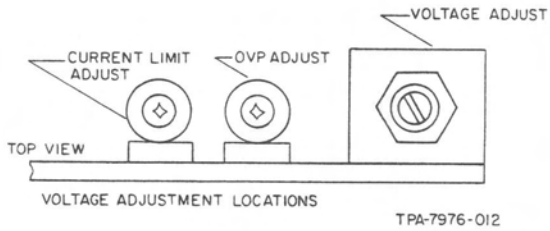
a. Connect digital voltmeter positions (+) lead to +28-V dc power supply A2A1 +out and the common (-) lead to preselector chassis.
b. Adjust +28-V dc power supply A2A1 voltage adjust potentiometer (refer to figure 5-4) for an indication of +28 ±0.5 V dc on the digital voltmeter.

5.5.4 –5-V dc Power Supply A2A3 Adjustment

When the -5-V dc output, as measured at the -5-V dc power supply A2A3 -out, exceeds the limits listed in



High-Voltage Power Supply, Adjustment Location
Figure 5-3



Voltage Adjustment Potentiometer Location
Figure 5-4

table 5-4, normally it can be adjusted to be in range by adjusting the voltage adjustment potentiometer. To perform this adjustment, perform the following procedure.

Caution

When adjusting the -5-V dc power supply A2A3 output, care must be exercised not to exceed current limits.

a. Connect digital voltmeter positive (+) lead to -5-V dc power supply A2A3 -out and the common (-) lead to preselector chassis.
b. Adjust -5-V dc power supply A2A3 voltage adjust potentiometer (refer to figure 5-4) for an indication of -5 ±0.25 V dc on the digital voltmeter.

5.5.5 +5-V dc Power Supply A2A2 Adjustment

When the +5-V dc output, as measured at the +5-V dc power supply A2A2 +out, exceeds the limits listed in table 5-4, normally it can be adjusted to be in range by adjusting the voltage adjustment potentiometer. To perform this adjustment, perform the following procedure.

Caution

When adjusting the +5-V dc power supply A2A2 output, care must be exercised not to exceed current limits.

a. Connect digital voltmeter positions (+) lead to J1-25 on electronic components assembly A1 and the common (-) lead to preselector chassis.

b. Adjust +5-V dc power supply A2A2 voltage adjust potentiometer (refer to figure 5-4) for an indication of +5 ±0.25 V dc on the digital voltmeter.

5.6 DISASSEMBLY

5.6.1 Precautions and General Techniques

Identify all disconnected electrical wiring. Make note of color coding, placement of leads, and methods of applying insulation (if any) before unsoldering or removing any electrical parts.

Caution

This equipment contains electrostatic discharge sensitive (ESDS) devices. Special handling methods must be used to prevent equipment damage.

Disconnect the primary power cable before disassembling any portion of the equipment. Disassembling the equipment with the primary power cable connected to primary power may cause voltage transients that could damage solid-state devices.

Disassemble only to the level required to perform the desired inspection/maintenance.

5.6.2 Removal of Preselector Top Cover

a. Remove 11 #4 screws and eight #6 screws securing top cover to preselector chassis.
b. Remove top cover by lifting from preselector-chassis.

5.6.3 Removal of Rf Amplifier A1AR1

a. Perform procedures in paragraph 5.6.2.
b. Disconnect rf cable W7P2 from A1AR1J2 and rf cable W8P1 from A1AR1J1.
c. Disconnect two wires from A1AR1 E9 and E10.
d. Remove four screws and four lockwashers securing A1AR1 to preselector chassis.
e. Lift rf amplifier A1AR1 out of preselector.

5.6.4 Removal of Interface A4 and Tune Control A5

Caution

This equipment contains electrostatic discharge sensitive (ESDS) devices. Special handling methods must be used to prevent equipment damage.

a. Perform the procedures of paragraph 5.6.2

Caution

Tuning control A5 and interface A4 must be removed from electronic components assembly A1A1 simultaneously.

b. Lift the extractors on tuning control A5, and carefully pull tuning control A5 and interface A4 partially out of electronic components assembly A1A1.
c. Disconnect W2P5 from A4J3.
d. Remove tuning control A5 and interface A4 from electronic components assembly A1A1.

5.6.5 Removal of Electronics Components Assembly A1A1

a. Perform the procedures of paragraph 5.6.2
b. Remove interface A4 and tuning control by performing the procedures in paragraph 5.6.4
c. Remove five panhead and six flathead screws securing capacitor switch assembly cover to bandpass filter A3 and remove capacitor switch assembly cover.
d. Disconnect A1A1P1 by pulling away from connector.
e. Remove five #4 screws from the bottom of the preselector chassis and two #4 screws from the rear of the preselector chassis that secure electronic components assembly A1A1 to preselector chassis.
f. Remove electronic components assembly A1A1 by lifting out.

5.6.6 Removal of Power Supply A2

a. Perform the procedures in paragraph 5.6.2
b. Remove interface A4 and tuning control A5 by following the procedures in paragraph 5.6.4.
c. Remove electronic components assembly by following the procedures in paragraph 5.6.5.
d. Disconnect A2P1 and A2P2 from W1J1 and W1J2.
e. Disconnect A2P4 from W2J3.
f. Disconnect A2P3 from A3J4 by loosening two captive screws securing connector and pulling the connector from A3J4.
g. On the bottom of preselector chassis, remove six screws and six lockwashers securing bandpass filter A3 to preselector chassis and move bandpass filter A3 away from power supply A2.

h. Loosen four captive screws securing power supply A2 to preselector chassis and carefully lift power supply A2 from preselector chassis.

5.6.7 Removal of Voltage Regulator A1A2

a. Perform the procedures of paragraph 5.6.2
b. Disconnect four wires from E5, E6, E7, and E8 on voltage regulator A1A2.
c. On the bottom of the preselector chassis, remove four #6 screws securing voltage regulator A1A2 to preselector chassis. Lift voltage regulator A1A2 from preselector chassis.

5.6.8 Removal of Transformer T1

a. Perform the procedures of paragraph 5.6.2.
b. With preselector on its right side, remove four screws, four nuts, four washers, and four lockwashers securing T1 to preselector chassis.
c. Disconnect wires from the terminals of T1.
d. Remove transformer T1 from preselector chassis.

5.6.9 Removal of Blower B1

a. Perform procedures of paragraph 5.6.2.
b. Remove electronic components assembly A1A1 by following procedures in paragraph 5.6.5.
c. Remove power supply A2 by following the procedures in paragraph 5.6.6.
d. Remove eight #4 screws from the bottom of the preselector and six #4 screws from the rear of the preselector that secure the cooling air duct to preselector chassis. Lift the cooling air duct from preselector chassis.
e. Remove four #6 screws on the rear of the preselector that secure the finger guard and remove the finger guard.
f. Carefully lift blower B1 out of the preselector and disconnect the wires by removing screws from the terminals.

5.6.10 Removal of Bandpass Filter A3

a. Perform the procedures of paragraph 5.6.2.
b. Disconnect W2P4 from A3J7.
c. Disconnect rf cables from rf connectors on A3 front panel.
d. Loosen two captive screws securing A2P3 to A3J4 and disconnect A2P3 from A3J4.
e. Remove five panhead screws and six flathead screws securing capacitor switch assembly cover to bandpass A3 and remove capacitor switch assembly cover.
f. Disconnect A1A1P1 from A3J1.
g. On the bottom of the preselector chassis, remove six screws and six lockwashers securing bandpass filter A3 to preselector chassis.
h. Lift bandpass filter A3 from preselector chassis.

5.7 ASSEMBLY

Assembly of the preselector is essentially the reverse of removal procedures.

5.8 REPAIR

Repair of the preselector consists of replacing subassemblies and chassis mounted components. Refer to paragraph 5.6 for removal of subassemblies and chassis-mounted components and paragraph 5.7 for replacement of subassemblies and chassis-mounted components.

section 6
parts list

6.1 INTRODUCTION

6.1.1 General

The purpose of this parts list, prepared by Collins Defense Communications Division of Rockwell International, is for identification and requisition of parts.

Parts listed meet critical equipment design specification requirements. Use only part numbers specified in this parts list for replacement of parts.

6.1.2 Group Assembly Parts List

FIG-ITEM Column — Digits preceding the dash are figure numbers. Digits following the dash are item numbers assigned in sequence to correspond with item numbers on the illustrations.

PART NO Column — Listed are MIL standard and vendor part numbers.

INDENT Column — Items are coded 1, 2, 3, etc, to indicate the relationship to the next higher assembly.

DESCRIPTION Column — Listed are the noun name, modifier, descriptive information, federal manufacturer's code, reference designation, attaching part (AP), reference to other figures, and effectivities.

Attaching parts are identified by (AP) following the part or parts they attach.

Effectivities are identified by the following methods: MCN (Manufacturer Control Number) 101 and up; CI (Configuration Identifier) 5-digit number; REV (Revision Identifier) dash (—) denotes original, letter A first change, letter B second change, etc. One of the above identifiers is listed on each chassis and/or replaceable assembly. Service bulletins are identified by SB 1, SB 2, etc.

UNITS PER ASSY Column — Quantities specified are per item number. Letters AR denote the selection of parts as required. Letters REF refer to an assembly completely assembled on a preceding figure and illustration.

USABLE ON CODE Column — Part variations within a group of equipment are indicated by a letter code (A, B, C, etc). Absence of a code indicates part applies to all models.

6.1.3 Numerical Index

PART NUMBER Column — Part numbers are listed in alphanumeric sequence.

FIG-ITEM Column — Digits preceding the dash are figure numbers. Digits following the dash are item numbers.

TTL REQ Column — Listed is the total quantity of parts or assemblies covered in the Group Assembly Parts List.

6.1.4 Reference Designation Index

REFERENCE DESIGNATION Column — Reference designations are listed in alphanumeric sequence.

FIG-ITEM Column — Digits preceding the dash are figure numbers. Digits following the dash are item numbers.

PART NUMBER Column — Part numbers listed are for items that have reference designations assigned.

6.1.5 How To Use This Parts List

To locate a part number if the assembly in which the part is used is known, turn to the List of Illustrations and find the page number for the assembly in which the part is used. Locate the part and its index number on the illustration and find the index number on the Group Assembly Parts List page to determine its description and part number.

To locate the illustration for a part if the part number is known, refer to the Numerical Index and find the part number. Turn to the Group Assembly Parts

List and find the first figure and index number indicated in the Numerical Index for that part. If this figure shows the part in a section or system of the equipment other than the one desired, refer to the other figure numbers listed in the Numerical Index.

To locate the illustration for a part if the reference designation is known, refer to the Reference Designation Index and find the symbol; turn to the Group Assembly Parts List and find the figure and index number indicated in the index.

Caution

This equipment contains electrostatic discharge sensitive (ESDS) devices. Special handling methods and materials must be used to prevent equipment damage. Refer to the maintenance section for the equipment before assembly/disassembly or repair is performed. ESDS items are identified in the description column of the parts list by (ESDS).

All supporting parts list illustrations that contain ESDS items are shown with the following symbol.

6.1.6 Manufacturer's Code, Name, and Address

MFR CODE	MANUFACTURER'S NAME AND ADDRESS
A0794	MCCOURTNEY PLASTICS INC MINNEAPLOSIS MN
00779	AMP INC P O BOX 3608 HARRISBURG PA 17105
01295	TEXAS INSTRUMENTS INC SEMICONDUCTOR GROUP 13500 N CENTRAL EXPRESSWAY P O BOX 225012 M/S 49 DALLAS TX 75265
04713	MOTOROLA INC SEMICONDUCTOR PRODUCTS SECTOR 5005 E MCDOWELL RD PHOENIX AZ 85008
06915	RICHCO PLASTIC CO 5825 N TRIPP AVE CHICAGO IL 60646
07263	FAIRCHILD CAMERA AND INSTRUMENT CORP SEMICONDUCTOR DIV SUB OF SCHLUMBERGER LTD NORTH AMERICAN SALES MAIL STOP 14-1053 401 ELLIS ST P O DRAWER 7284 MOUNTAIN VIEW CA 94042
08289	BLINN DELBERT CO INC THE 1678 E MISSION BLVD P O BOX 2007 POMONA CA 91769
08717	SLOAN COMPANY THE 7704 SAN FERNANDO RD P O BOX 367 SUN VALLEY CA 91352
12615	U S TERMINALS INC 7504 CAMARGO ROAD CINCINNATI OH 45243
12969	UNITRODE CORP 580 PLEASANT ST WATERTOWN MA 02172
12998	QUALITY NAME PLATE INC MILL ROAD EAST GLASTONBURY CT 06025
13499	ROCKWELL INTERNATIONAL CORPORATION DEFENSE ELECTRONICS OPERATIONS COLLINS DEFENSE COMMUNICATIONS DIV 350 COLLINS ROAD NE CEDAR RAPIDS IA 52498
13556	TRW CYLINDRICAL CONNECTOR DIV OF TRW INC 8821 SCIENCE CENTER DR MINNEAPOLIS MN 55428
14099	SEMTECH CORP 652 MITCHELL ROAD NEWBURY PARK CA 91320
14936	GENERAL INSTRUMENT CORP DISCRETE SEMI CONDUCTOR DIV 600 W JOHN ST HICKSVILLE NY 11802
16037	SPRUCE PINE MICA CO INC P O BOX 219 SPRUCE PINE NC 28777
17117	ELECTRONIC MOLDING CORP 96 MILL ST WOONSOCKET RI 02895
18677	SCANBE MFG CO DIV OF ZERO CORP 3445 FLETCHER AVE EL MONTE CA 18677
18741	KILOVAC CORP P O BOX 4422 SANTA BARBARA CA 93103

MFR CODE	MANUFACTURER'S NAME AND ADDRESS
21912	ADAMS-RUSSEL CO INC ANZAC DIV 80 CAMBRIDGE ST BURLINGTON MA 01803
24429	POWERTEC INC 20550 NORDHOFF ST CHATSWORTH CA 91311
24444	GENERAL SEMICONDUCTOR INDUSTRIES INC 2001 W 10TH PLACE P O BOX 3078 TEMPE AZ 85281
27014	NATIONAL SEMICONDUCTOR CORP 2900 SEMICONDUCTOR DR SANTA CLARA CA 95051
31433	UNION CARBIDE CORP ELECTRONICS DIV HWY 276 SE P O BOX 5928 GREENVILLE SC 29606
31918	ITT SCHADOW INC 8081 WALLACE RD EDEN PRAIRIE MN 55344
46384	PENN ENGINEERING AND MFG CORP OLD EASTON RD P O BOX 1000 DANBORO PA 18916
49956	RAYTHEON CO EXECUTIVE OFFICES 141 SPRING ST LEXINGTON MA 02173
56289	SPRAGUE ELECTRIC CO 87 MARSHALL ST NORTH ADAMS MA 01247
57863	NORTH AMERICAN SPECIALTIES CORP 120-12 28TH AVE FLUSHING NY 11354
59730	THOMAS AND BETTS CORP HWY 218 S IOWA CITY IA 52240
59942	US MICROTEK COMPONENTS 11144 PENROSE ST UNIT 7 SUN VALLEY CA 91352
70276	ALLEN MFG CO SUB OF CHICAGO PNEUMATIC TOOL CO P O DRAWER 570 HARTFORD CT 06101
70318	ALLMETAL SCREW PRODUCTS CO INC 821 STEWART AVE GARDEN CITY NY 11530
70903	BELDEN CORP SUB OF COOPER INDUSTRIES INC 2000 S BATAVIA AVE GENEVA IL 60134
71468	ITT CANNON ELECTRIC DIV OF INTERNATIONAL TELEPHONE AND TELEGRAPH CORP 10550 TALBERT AVE P O BOX 8040 FOUNTAIN VALLEY CA 92708
72962	AMERACE CORP ESNA DIV 2330 VAUXHALL RD UNION NJ 07083
72982	MURATA ERIE NORTH AMERICA INC ERIE OPRATIONS 645 W 11TH ST ERIE PA 16512
74868	BUNKER RAMO-ELTRA CORP AMPHENOL DIV RF OPERATIONS 33 E FRANKLIN ST DANBURY CT 06810
75915	TRACOR LITTELFUSE INC 800 E NORTHWEST HWY DES PLAINES IL 60016
77147	PATTON-MACGUYER CO DIV OF AVID CORP 17 VIRGINIA AVE PROVIDENCE RI 02905
77250	ALLIED PRODUCTS CORP PHEOLL MFG CO DIV 5700 W ROOSEVELT RD CHICAGO IL 60650
79807	WROUGHT WASHER MFG INC 2100 S BAY ST MILWAUKEE WI 53207
80205	NATIONAL AEROSPACE STANDARD
81349	MILITARY SPECIFICATIONS
82389	SWITCHCRAFT INC SUB OF RAYTHEON CO 5555 N ELSTRON AVE CHICAGO IL 60630
82877	ROTRON INC CUSTOM DIV 7 HASBROUCK LN WOODSTOCK NY 12498
94375	AUTOMATIC CONNECTOR INC 400 MORELAND RD COMMACK NY 11725
96906	MILITARY STANDARDS

MFR CODE	MANUFACTURER'S NAME AND ADDRESS
98330	POLYPHASE INSTRUMENT CO 175 COMMERCE DR FORT WASHINGTON PA 19034

6.1.7 Usable on Codes

The following usable on codes have been assigned in this manual:

USABLE ON CODE	UNIT PART NUMBER	FIG-ITEM
A	622-3522-001	6-1-
B	622-3522-002	6-1-
C	622-3522-004	6-1-

6.1.8 Reference Designation Prefixes

The following prefixes have been assigned in this manual:

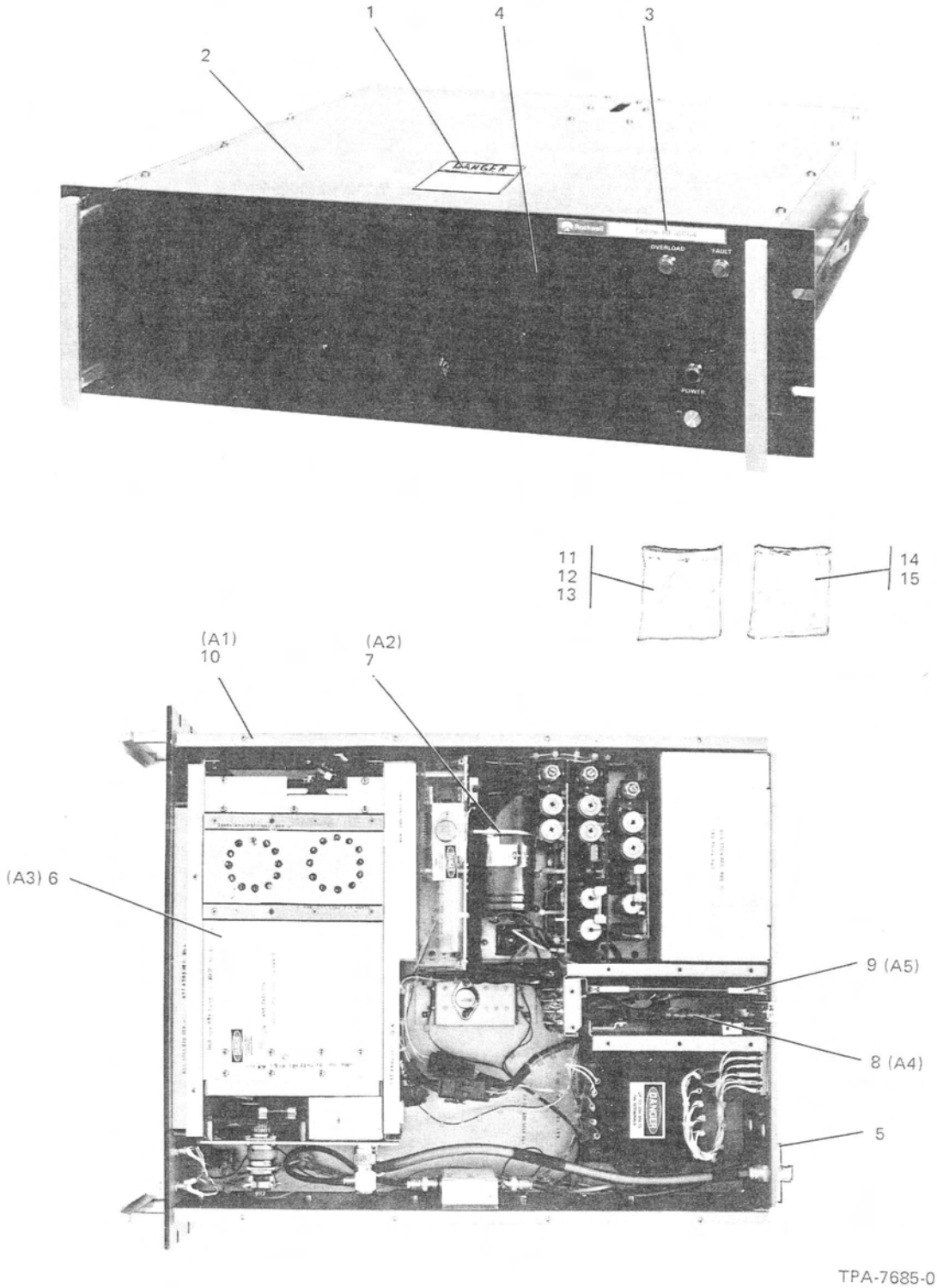
PREFIX	UNIT PART NUMBER	FIG-ITEM
A1	651-8325-001	6-2-
A1	651-8325-002	6-2-
A1	651-8325-004	6-2-
A1A1	659-1150-001	6-3-
A1A2	659-1083-001	6-4-
A2	651-8319-001	6-6-
A2A1	270-0942-010	6-6-1
A2A2	270-0942-030	6-6-2
A2A3	270-0942-050	6-6-3
A2A4	651-8321-001	6-7-
A2A4A1	646-6041-001	6-8-
A3	651-8596-001	6-1-6
A4	646-6018-001	6-1-8
A5	646-5618-003	6-1-9

6.1.9 Configuration Identifiers

The following CI's/REV LTR's were used in compiling data for this manual:

CI/ REV LTR	UNIT PART NUMBER	FIG-ITEM
E	622-3522-001	6-1-
E	622-3522-002	6-1-
C	622-3522-004	6-1-
E	651-8325-001	6-2-
E	651-8325-002	6-2-
D	651-8325-004	6-2-
B	659-1150-001	6-3-
A	659-1083-001	6-4-
—	651-8323-001	6-5-
—	651-8323-002	6-5-
A	651-8323-003	6-5-
A	651-8323-004	6-5-
B	651-8323-005	6-5-
B	651-8323-006	6-5-
C	651-8319-001	6-6-
F	651-8321-001	6-7-
C	646-6041-001	6-8-

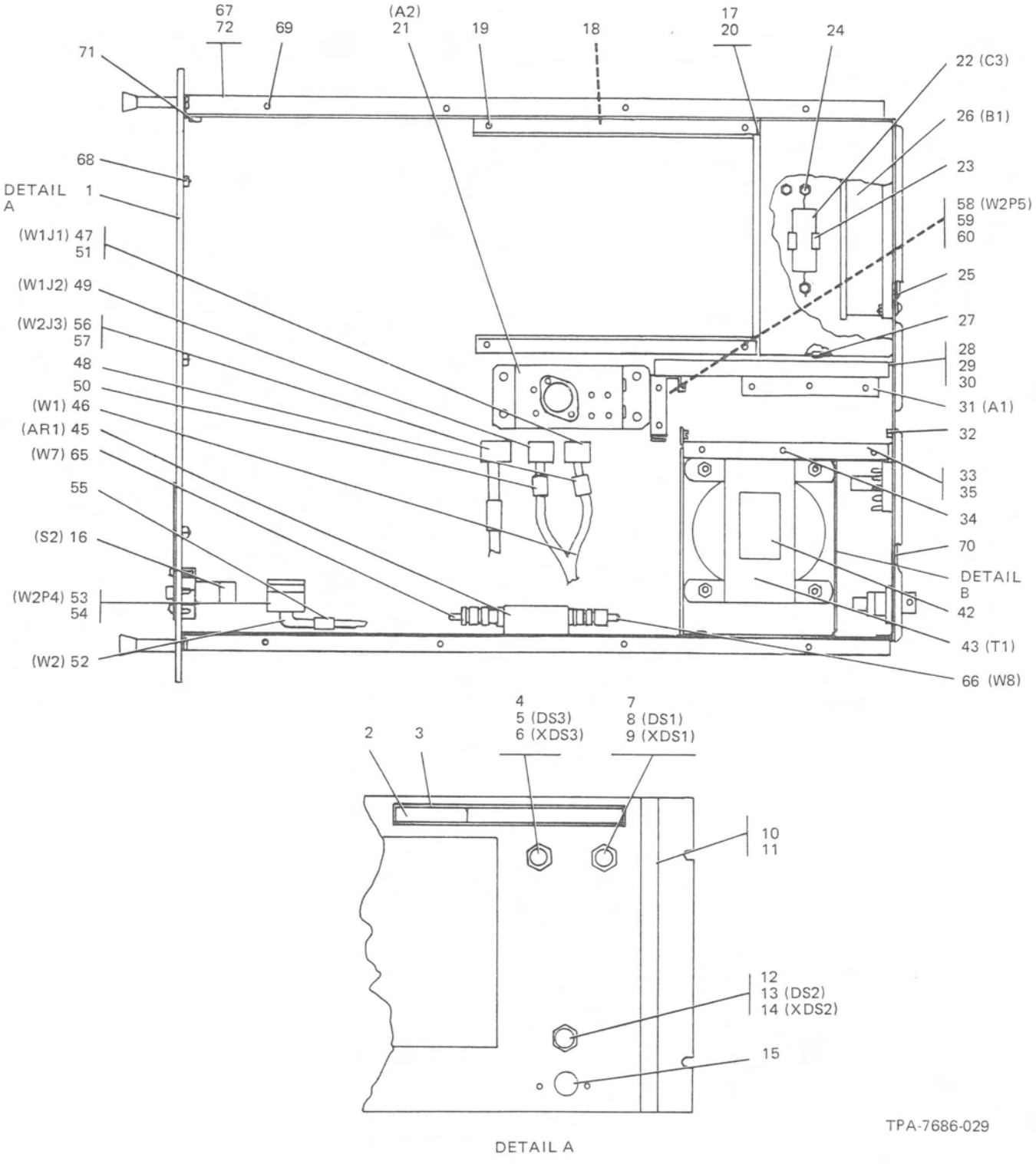
6.2 GROUP ASSEMBLY PARTS LIST



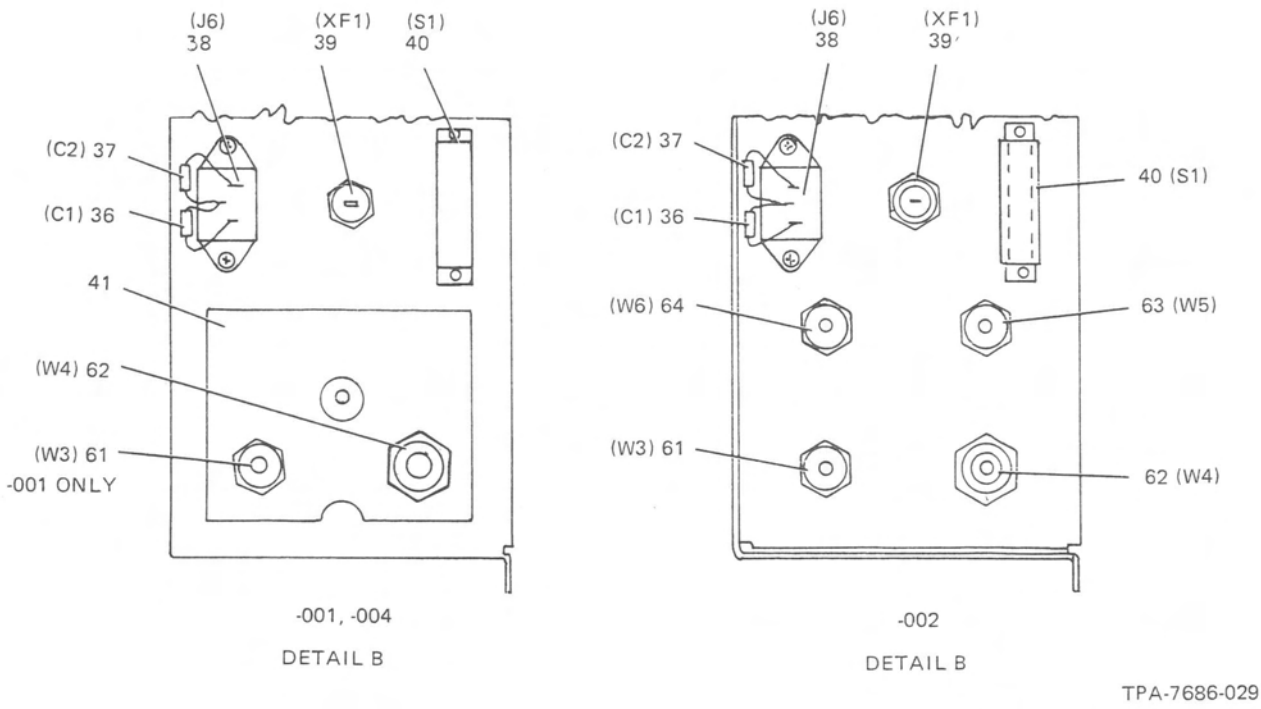
HF-8064 Preselector
Figure 6-1

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-1-	622-3522-001	1	PRESELECTOR, HF-8064	1	A
	622-3522-002	1	PRESELECTOR, HF-8064	1	B
	622-3522-004	1	PRESELECTOR, HF-8064	1	C
1	280-1368-810	2	LABEL,PRESSURE SENS (12998)	1	
2	651-8302-001	2	COVER, PROTECTIVE	1	
	MS51957-15	2	SCREW,MACH STL, 4-40 X 3/8 (96906) 343-0135-000 (AP)	11	
	MS51957-27	2	SCREW,MACHINE CRES, 0.138-32 X 0.312IN (96906) 343-0168-000 (AP)	8	
3	651-8327-001	2	INSERT, IDENT	1	
4	651-8308-001	2	FILTER, AIR	1	
5	642-0189-000	2	PLATE, IDENT	1	
	NAS671C4	2	NUT,PLAIN,HEXAGON CD PL STL, 0.112-40 (80205) 313-0132-000 (AP)	2	
	310-0278-000	2	WASHER,LOCK SST, 0.115 ID X 0.202 0D (70318) (AP)	2	
	MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP)	2	
6	651-8596-001	2	FILTER, BANDPASS A3 (SEE PUB 523-0773499)	1	A,C
6	651-8596-002	2	FILTER, BANDPASS A3 (SEE PUB 523-0773499)	1	B
	MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP)	6	
	310-0278-000	2	WASHER,LOCK SST, 0.115 ID X 0.202 0D (70318) (AP)	6	
7	651-8319-001	2	POWER SUPPLY A2 (SEE FIG 6-6)	1	
8	646-6018-001	2	INTERFACE (ESDS) A4 (SEE PUB 523-0773500)	1	
9	646-5618-003	2	TUNING CONTROL (ESDS) A5 (EFF REV LTR F)(SEE PUB 523-0773501)	1	
10	651-8325-001	2	CHASSIS A1 (SEE FIG 6-2)	1	A
10	651-8325-002	2	CHASSIS A1 (SEE FIG 6-2)	1	B
10	651-8325-004	2	CHASSIS A1 (SEE FIG 6-2)	1	C
11	F02A250V5AS	2	FUSE,CARTRIDGE (81349) 264-4090-000	1	
12	F02A250V3AS	2	FUSE,CRTG (81349) 264-4080-000	1	
13	17250	2	CABLE ASSY,POWER (70903) 426-1034-010	1	
14	637-4710-001	2	SPACER	10	
15	324-1694-250	2	SCREW,CAP,BUTTON HD STL, 10-32 X 7-8 (70276)	10	



Chassis A1
Figure 6-2 (Sheet 1 of 2)



Chassis A1
Figure 6-2 (Sheet 2)

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-2-	651-8325-001	1	CHASSIS A1 (SEE FIG 6-1-10 FOR NHA)	REF	A
	651-8325-002	1	CHASSIS A1 (SEE FIG 6-1-10 FOR NHA)	REF	B
	651-8325-004	1	CHASSIS A1 (SEE FIG 6-1-10 FOR NHA)	REF	C
1	651-8301-001	2	PANEL, FRONT	1	
	MS51959-30B	2	SCREW,MACH SST, 6-32 X 1/2 (96906) 342-1866-000 (AP)	3	
2	623-9008-001	2	INSERT, HOUSEMARK	1	
3	632-5201-001	2	HOLDER, IDENT STRIP	1	
	MS51959-13	2	SCREW,MACHINE CRES, 0.112-40 X 0.25 (96906) 342-0044-000 (AP)	2	
4	855STDR	2	LENS,LIGHT RED (08717) 262-0581-000	1	
5	MS25237-387	2	LAMP,INCANDESCENT (96906) 262-0179-010 A1DS3	1	
6	855906-9	2	LIGHT,IND (08717) 262-0579-000 A1XDS3	1	
7	855STDR	2	LENS,LIGHT RED (08717) 262-0581-000	1	
8	MS25237-387	2	LAMP,INCANDESCENT (96906) 262-0179-010 A1DS1	1	
9	855906-9	2	LIGHT,IND (08717) 262-0579-000 A1XDS1	1	
10	763-3339-009	2	HANDLE	2	
11	635-9714-001	2	POST, HANDLE	4	
	P312-0113-000	2	STUD,CONT THD STL, 10-32 X 5/8 (77250) 312-0113-000 (AP)	4	
	MS16998-28	2	SCREW,CAP,SCH CD PL STL, 10-32 X 5/8 (96906) 324-1496-000 (AP)	4	
	MS35338-138	2	WASHER,LOCK SST, 0.194 ID X 0.334 0D (96906) 310-0284-000 (AP)	4	
12	855STDG	2	LENS,LIGHT GRN (08717) 262-0580-000	1	
13	MS25237-387	2	LAMP,INCANDESCENT (96906) 262-0179-010 A1DS2	1	

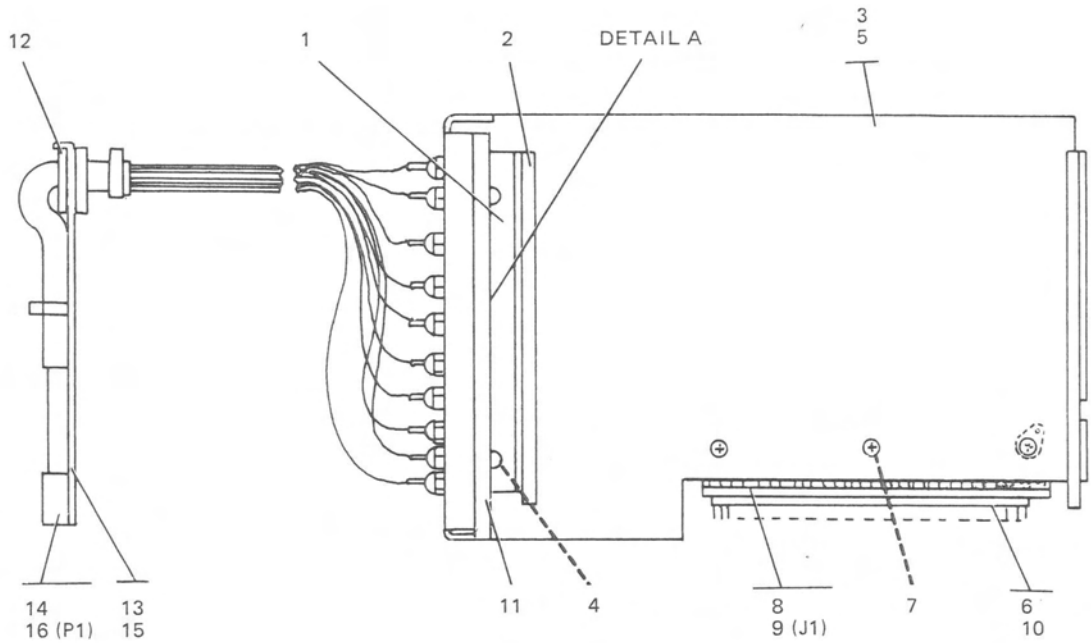
GROUP ASSEMBLY PARTS LIST

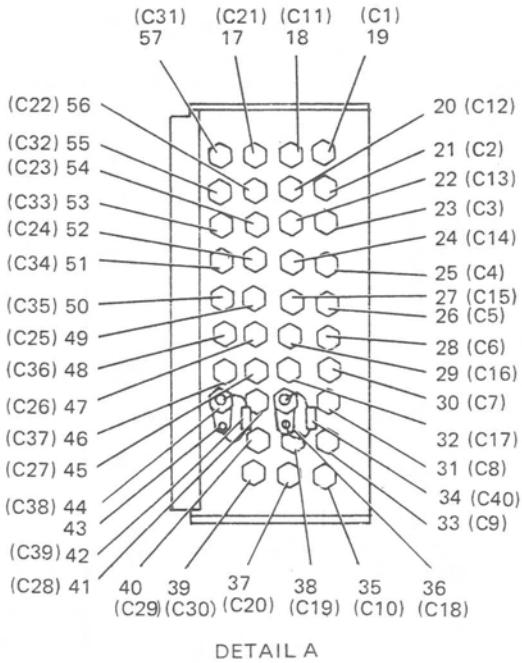
	FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
	6-2-14	855906-9	2	LIGHT,IND (08717) 262-0579-000 A1XDS2	1	
	15	F1-15-H-4	2	BUTTON,SWITCH (31918) 266-7508-210	1	
	16	NE15/F01-0003-00	2	SWITCH,PUSH (31918) 266-7524-010 A1S2	1	
		MS51957-4B	2	SCREW,MACH SST, 2-56 X 5/16 (96906) 343-0672-000 (AP)	2	
		MS51957-3	2	SCREW,MACH CD PL STL, 2-56 X 1/4 (96906) 343-0124-000 (AP)	2	
		CRES-.091IDX.162 OD	2	WASHER,LOCK CRES, 0.091 ID X 0.162 OD (79807) 310-0070-000 (AP)	2	
		540-9006-003	2	POST,ELEC-MECH (AP)	2	
	17	651-8304-001	2	DUCT, AIR-COOLING	1	
		MS51957-14	2	SCREW,MACH SST, 4-40 X 5/16 (96906) 343-0134-000 (AP)	14	
	18	M45938/5-4	3	NUT,SLFLKG,CLINCH CD PL STL, 4-40 (81349) 333-0840-000	14	
	19	M45938/5-6	3	NUT,SLFLKG,CLINCH CD PL STL, 6-32 (81349) 333-0842-000	4	
	20	651-8304-002	3	DUCT, AIR	1	
	21	659-1083-001	2	REGULATOR, VOLTAGE A1A2 (SEE FIG 6-4)	1	C
		MS51957-28	2	SCREW,MACHINE CRES, 0.138-32 X 0.375IN (96906) 343-0169-000 (AP)	4	C
	22	M39022-01-1201	2	CAPACITOR,FXD PPR DIEL, 1UF, 10%, 400V (81349) 951-0877-510 A1C3	1	
	23	V1008	2	HOLDER,CMPNT (06915) 150-0788-090	1	
		NAS671C4	2	NUT,PLAIN,HEXAGON CD PL STL, 0.112-40 (80205) 313-0132-000 (AP)	1	
		310-0278-000	2	WASHER,LOCK SST, 0.115 ID X 0.202 0D (70318) (AP)	1	
		CRES 0.125IDX0.281OD	2	WASHER,FLAT CRES, 0.125 ID X 0.281 OD (79807) 310-6340-000 (AP)	1	
		MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP)	1	
	24	2308-4-1	2	TERMINAL STANDOFF (17117) 306-0234-000	3	
		MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP)	3	
		310-0278-000	2	WASHER,LOCK SST, 0.115 ID X 0.202 0D (70318) (AP)	3	
	25	476042	2	GUARD,FINGER (82877) 009-1766-050	1	
		NAS671C6	2	NUT,PLAIN,HEXAGON CRES, 0.138-32 (80205) 313-0045-000 (AP)	4	
		MS35338-136	2	WASHER,LOCK SST, 0.141 ID X 0.250 0D (96906) 310-0282-000 (AP)	4	
		MS15795-805	2	WASHER,FLAT CRES, 0.164ID X 0.320 OD (96906) 310-0779-050 (AP)	4	
		MS51957-30	2	SCREW,MACHINE CRES, 0.138-32 X 0.500IN (96906) 343-0171-000 (AP)	4	
	26	020028	2	FAN,TUBEAXIAL (82877) 009-1784-040 A1B1	1	
	27	MS35489-1	2	GROMMET,RBR (96906) 201-1040-000	1	
1	28	659-1149-001	2	SHIELD, NO 2	1	A,B
		MS51957-14	2	SCREW,MACH SST, 4-40 X 5/16 (96906) 343-0134-000 (AP)	6	A,B
	29	M45938/5-4	3	NUT,SLFLKG,CLINCH CD PL STL, 4-40 (81349) 333-0840-000	13	A,B
	30	659-1149-002	3	SHIELD	1	A,B
2	31	659-1150-001	2	ELECTRONIC COMPONENT ASSEMBLY-EXTENDER A1A1 (SEE FIG 6-3)	1	A,B
	31	659-1150-001	2	ELECTRONIC COMPONENT ASSEMBLY-EXTENDER A1A1 (SEE FIG 6-3)	1	C
		MS51957-14	2	SCREW,MACH SST, 4-40 X 5/16 (96906) 343-0134-000 (AP)	6	C
	32	23071-3	2	CARD GUIDE,PC (18677) 150-0810-030	2	
	33	651-8305-001	2	SHIELD, NO 1	1	
		MS51957-14	2	SCREW,MACH SST, 4-40 X 5/16 (96906) 343-0134-000 (AP)	7	
	34	M45938/5-4	3	NUT,SLFLKG,CLINCH CD PL STL, 4-40 (81349) 333-0840-000	10	
	35	651-8305-002	3	SHIELD	1	
	36	CK63AW103M	2	CAPACITOR,FIXED CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 A1C1	1	

1 IF SB 118 IS INCORPORATED, ITEMS 28-30 ARE REMOVED
2 SEE SB 118 (OPTIONAL) FOR INSTALLATION OF ASSEMBLY A1A1

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-2-37	CK63AW103M	2	CAPACITOR,FIXED CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 A1C2	1	
38	EAC-301	2	CONNECTOR,RCPT ELEC (82389) 368-0385-010 A1J6	1	
	NAS671C4	2	NUT,PLAIN,HEXAGON CD PL STL, 0.112-40 (80205) 313-0132-000 (AP)	2	
	310-0278-000	2	WASHER,LOCK SST, 0.115 ID X 0.202 0D (70318) (AP)	2	
	CRES 0.125IDX0.281OD	2	WASHER,FLAT CRES, 0.125 ID X 0.281 OD (79807) 310-6340-000 (AP)	2	
	MS51957-15	2	SCREW,MACH STL, 4-40 X 3/8 (96906) 343-0135-000 (AP)	2	
	MS77068-1	2	TERMINAL,LUG (96906) 304-3110-010 (AP)	1	
39	345002	2	FUSEHOLDER,PNL (75915) 265-0017-020 A1XF1	1	
40	11E1067	2	SWITCH,SLIDE (82389) 266-0217-030 A1S1	1	
	NAS671C4	2	NUT,PLAIN,HEXAGON CD PL STL, 0.112-40 (80205) 313-0132-000 (AP)	2	
	310-0278-000	2	WASHER,LOCK SST, 0.115 ID X 0.202 0D (70318) (AP)	2	
	MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP)	2	
41	651-8322-001	2	PLATE, CHASSIS	1	A,C
42	280-1368-330	2	LABEL,PRESSURE SENS (12998)	1	
43	R5338	2	TRANSFORMER,POWER (98330) 662-0977-010 A1T1	1	
	MS35650-304	2	NUT,PLAIN,HEX SST, 10-32 (96906) 313-0019-000 (AP)	4	
	MS35338-138	2	WASHER,LOCK SST, 0.194 ID X 0.334 0D (96906) 310-0284-000 (AP)	4	
	CRES-.203IDX.500 0DX.060TH	2	WASHER,FLAT CRES, 0.203 ID X 0.500 OD (79807) 310-0049-000 (AP)	4	
	MS51958-64	2	SCREW,MACHINE CRES, 0.190-32 X 0.625IN (96906) 343-0229-000 (AP)	4	
44			NOT USED		
45	AM109-8421	2	INTEGRATED CIRCUIT R F AMPLIFIER (21912) 351-1484-010 A1AR1	1	C
	MS51959-6	2	SCREW,MACHINE CRES, 2-56 X 7/16 (96906) 342-0136-000 (AP)	4	C
	310-0278-000	2	WASHER,LOCK SST, 0.115 ID X 0.202 0D (70318) (AP)	4	C
46	651-8591-001	2	WIRING HARNESS - NO 1 A1W1	1	
47	350782-1	3	HOUSING,CONNECTOR ELEC (00779) 372-0064-160 A1W1J1	1	
48	651-8324-009	3	MARKER, CABLE	1	
49	350767-1	3	HOUSING,CONNECTOR ELEC (00779) 372-0064-120 A1W1J2	1	
50	651-8324-010	3	MARKER, CABLE	1	
51	350550-6	3	CONTACT,SOCKET ELEC (00779) 372-0064-320	11	
52	651-8592-001	2	WIRING HARNESS - NO 2 A1W2	1	
53	MS27484T14F35S	3	CONNECTOR,PLUG ELEC (96906) 359-0645-150 A1W2P4	1	
54	MS27506F14-2	3	ADAPTER,CONNECTOR (96906) 359-0637-040	1	
55	651-8324-007	3	MARKER, CABLE	1	
56	350766-1	3	HOUSING,CONNECTOR ELEC (00779) 372-0064-110 A1W2J3	1	
57	350547-1	3	CONTACT,ELECTRICAL ELEC (00779) 372-0064-050	2	
58	1-87631-1	3	HOUSING,CONNECTOR ELEC (00779) 372-0044-060 A1W2P5	1	
59	651-8324-008	3	MARKER, CABLE	1	
60	86016-2	3	CONTACT,ELECTRICAL (00779) 372-2501-040	9	
61	651-8323-001	2	CABLE, RF A1W3 (SEE FIG 6-5-1)	1	A,B
62	651-8323-002	2	CABLE, RF A1W4 (SEE FIG 6-5-8)	1	
63	651-8323-003	2	CABLE, RF A1W5 (SEE FIG 6-5-15)	1	B
64	651-8323-004	2	CABLE, RF A1W6 (SEE FIG 6-5-22)	1	B
65	651-8323-005	2	CABLE, RF A1W7 (SEE FIG 6-5-29)	1	C
66	651-8323-006	2	CABLE, RF A1W8 (SEE FIG 6-5-36)	1	C
67	651-8300-001	2	CHASSIS, ELEC EQPT	1	
68	F12NC4284-1-62	3	NUT,CLINCH,SLFLKG CD PL STL, 0.138-32 (72962) 333-1149-000	3	
69	M45938/5-6	3	NUT,SLFLKG,CLINCH CD PL STL, 6-32 (81349) 333-0842-000	8	
70	M45938/5-7	3	NUT,SLFLKG,CLINCH CD PL STL, 8-32 (81349) 333-0844-000	1	
71	M45938/5-8	3	NUT,SLFLKG,CLINCH CD PL STL, 10-32 (81349) 333-0846-000	10	
72	651-8300-002	3	CHASSIS	1	





TPA-7687-019

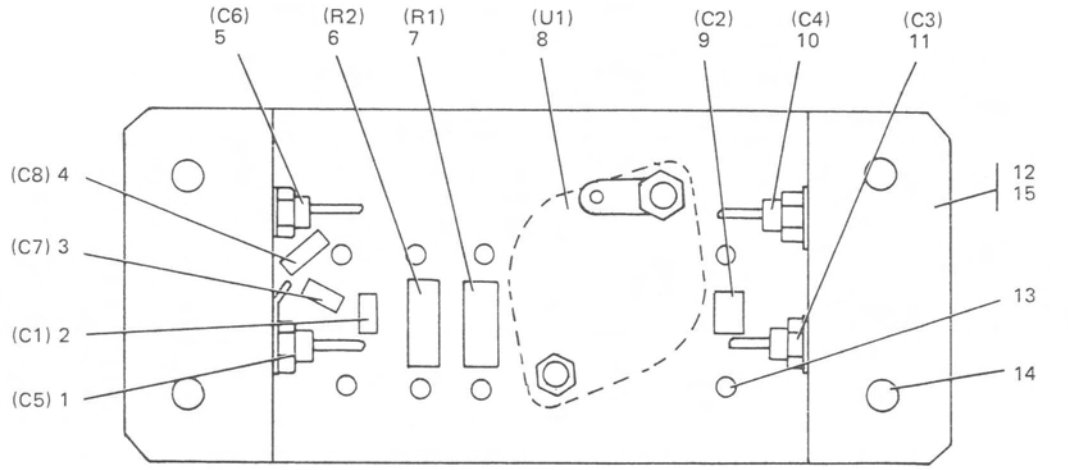
Electronic Components Assembly A1A1
Figure 6-3

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-3-	659-1150-001	1	ELECTRONIC COMPONENTS ASSEMBLY A1A1 (SEE FIG 6-2-31 FOR NHA)	REF	
1	659-1147-001	2	BRACKET, MTG-GUIDE	1	
	MS51959-14	2	SCREW,MACHINE CRES, 0.112-40 X 0.31 (96906) 342-0045-000 (AP)	2	
2	23071-3	2	CARD GUIDE,PC (18677) 150-0810-030	2	
3	659-1149-001	2	SHIELD, NO 2	1	
4	M45938/5-4	3	NUT,SLFLKG,CLINCH CD PL STL, 4-40 (81349) 333-0840-000	13	
5	659-1149-002	3	SHIELD	1	
6	659-1148-001	2	TERMINAL BOARD - PRESSED	1	
	NAS671C4	2	NUT,PLAIN,HEXAGON CD PL STL, 0.112-40 (80205) 313-0132-000 (AP)	1	
	MS35338-135	2	WASHER,LOCK SST, 0.115 ID X 0.209 OD (96906) 310-0279-000 (AP)	1	
	MS51959-14	2	SCREW,MACHINE CRES, 0.112-40 X 0.31 (96906) 342-0045-000 (AP)	3	
	MS77068-1	2	TERMINAL,LUG (96906) 304-3110-010 (AP)	1	
7	M45938/5-4	3	NUT,SLFLKG,CLINCH CD PL STL, 4-40 (81349) 333-0840-000	2	
8	372-2235-010	3	HOUSING,CONTACT (A0794)	10	
9	1107-018	3	CONTACT,ELECTRICAL (57863) 372-2602-018 A1A1J1	50	
10	659-1148-002	3	TERMINAL BOARD	1	
11	MS21266-2N	2	GROMMET,PLSTC CHAN (96906) 150-0175-000	AR	
12	MS35489-11	2	GROMMET,RUBBER (96906) 201-0004-000	1	
13	659-1152-001	2	EXTENDER	1	
14	621-7567-025	3	HOUSING	1	
	MS16535-25	3	RIVET,TUBULAR AL, 0.061 DIA X 0.219 (96906) 305-1724-000 (AP)	2	
15	659-1152-002	3	EXTENDER	1	
16	NA1114-020	2	CONTACT,ELECTRICAL (57863) 372-2255-020 A1A1P1	38	
17	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C21	1	
18	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C11	1	
19	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C1	1	
20	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C12	1	
21	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C2	1	
22	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C13	1	
23	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C3	1	
24	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C14	1	
25	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C4	1	
26	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C5	1	
27	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C15	1	
28	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C6	1	
29	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C16	1	
30	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C7	1	
31	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C8	1	
32	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C17	1	
33	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C9	1	

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-3-34	CK06BX104K	2	CAPACITOR,FIXED CER DIEL, 0.1UF, 10%, 100VDC (81349) 913-5019-440 A1A1C40	1	
35	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C10	1	
36	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C18	1	
37	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C20	1	
38	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C19	1	
39	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C30	1	
40	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C29	1	
41	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C28	1	
42	CK06BX104K	2	CAPACITOR,FIXED CER DIEL, 0.1UF, 10%, 100VDC (81349) 913-5019-440 A1A1C39	1	
43	MS77068-3	2	TERMINAL,LUG (96906) 304-3130-010	2	
44	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C38	1	
45	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C27	1	
46	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C37	1	
47	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C26	1	
48	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C36	1	
49	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C25	1	
50	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C35	1	
51	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C34	1	
52	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C24	1	
53	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C33	1	
54	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C23	1	
55	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C32	1	
56	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C22	1	
57	CSK15045	2	CAPACITOR,FIXED CER DIEL, 2000PF, GMV 100V (72982) 913-0155-040 A1A1C31	1	



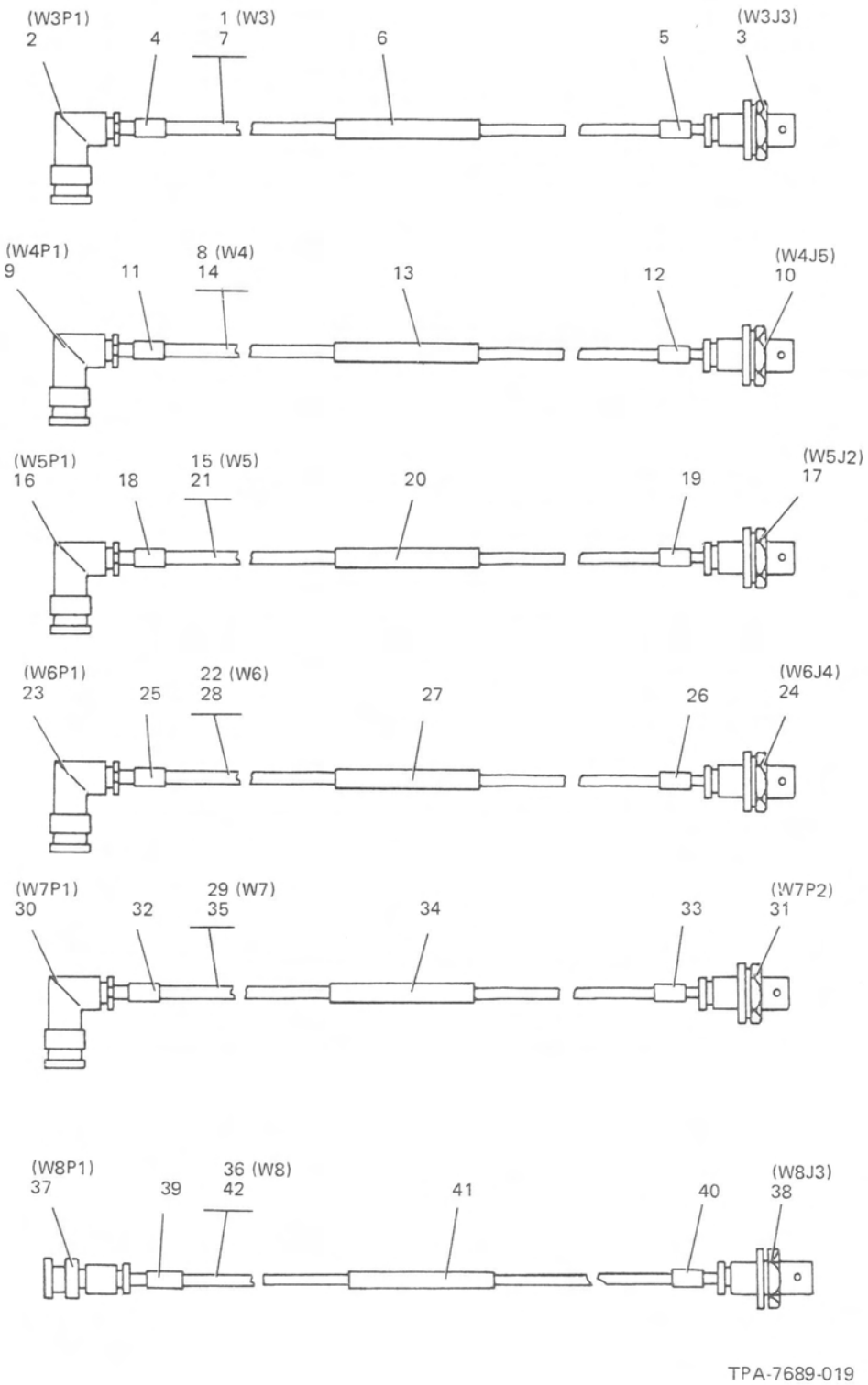
Voltage Regulator A1A2
Figure 6-4

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-4-	659-1083-001	1	REGULATOR, VOLTAGE A1A2 (SEE FIG 6-2-21 FOR NHA)	REF	
1	CSK15043	2	CAPACITOR,FIXED CER DIEL, 1000PF, GMV 100V (72982) 913-0155-010 A1A2C5	1	
	P313-0046-000	2	NUT,PLAIN,HEX SST, 6-32 (77250) 313-0046-000 (AP)	1	
	MS77068-3	2	TERMINAL,LUG (96906) 304-3130-010 (AP)	1	
2	M39003/01-2356	2	CAPACITOR,FIXED ELCTLT, 1UF, 10%, 50V (81349) 184-9087-430 A1A2C1	1	
3	CK06BX104K	2	CAPACITOR,FIXED CER DIEL, 0.1UF, 10%, 100VDC (81349) 913-5019-440 A1A2C7	1	
4	CK06BX104K	2	CAPACITOR,FIXED CER DIEL, 0.1UF, 10%, 100VDC (81349) 913-5019-440 A1A2C8	1	
5	CSK15043	2	CAPACITOR,FIXED CER DIEL, 1000PF, GMV 100V (72982) 913-0155-010 A1A2C6	1	
	P313-0046-000	2	NUT,PLAIN,HEX SST, 6-32 (77250) 313-0046-000 (AP)	1	
	MS35333-72	2	WASHER,LOCK SST, 0.176 ID X 0.340 OD (96906) 373-0003-000 (AP)	1	
6	RN60D3651F	2	RESISTOR,FIXED FILM, 3.65K, 1%, 1/4W (81349) 705-6623-000 A1A2R2	1	
7	RN55D2430F	2	RESISTOR,FIXED FILM, 243 OHMS, 1%, 1/8W (81349) 705-3600-670 A1A2R1	1	
8	LM117K	2	INTEGRATED CIRCUIT REGULATOR (27014) 351-1271-030 A1A2U1	1	
	NAS671C6	2	NUT,PLAIN,HEXAGON CRES, 0.138-32 (80205) 313-0045-000 (AP)	2	

GROUP ASSEMBLY PARTS LIST

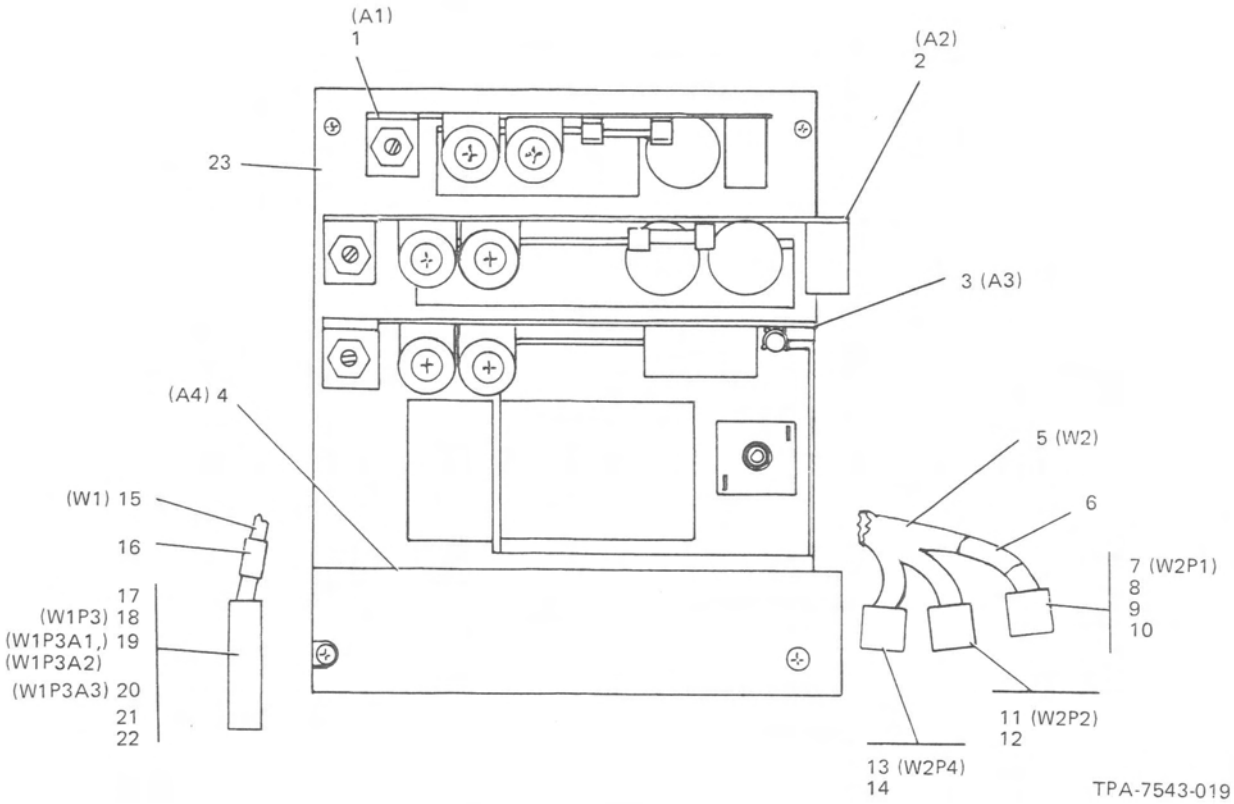
FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-4-	MS35338-136	2	WASHER,LOCK SST, 0.141 ID X 0.250 0D (96906) 310-0282-000 (AP)	2	
	NAS620C6L	2	WASHER,FLAT PSVT CRES, 0.143 ID X 0.267 OD (80205) 310-0740-360 (AP)	1	
	4007-6HTD	2	TERMINAL,LUG (77147) 304-0016-000 (AP)	1	
	547-8177-008	2	BUSHING,INSULATED (AP)	2	
	111	2	INSULATOR,PLATE (16037) 352-9882-010 (AP)	1	
	MS51957-28	2	SCREW,MACHINE CRES, 0.138-32 X 0.375IN (96906) 343-0169-000 (AP)	2	
9	M39003/01-2356	2	CAPACITOR,FIXED ELCTLT, 1UF, 10%, 50V (81349) 184-9087-430 A1A2C2	1	
10	CSK15043	2	CAPACITOR,FIXED CER DIEL, 1000PF, GMV 100V (72982) 913-0155-010 A1A2C4	1	
11	CSK15043	2	CAPACITOR,FIXED CER DIEL, 1000PF, GMV 100V (72982) 913-0155-010 A1A2C3	1	
	P313-0046-000	2	NUT,PLAIN,HEX SST, 6-32 (77250) 313-0046-000 (AP FOR 10,11)	2	
	MS35333-72	2	WASHER,LOCK SST, 0.176 ID X 0.340 OD (96906) 373-0003-000 (AP FOR 10,11)	2	
12	659-1082-001	2	BRACKET, ELEC EQPT	1	
13	SL-439-433WHT	3	TERMINAL,STANDOFF (12615) 306-1521-000	8	
14	M45938/5-6	3	NUT,SLFLKG,CLINCH CD PL STL, 6-32 (81349) 333-0842-000	4	
15	659-1082-002	3	BRACKET	1	



RF Cable Assemblies
Figure 6-5

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-5-1	651-8323-001	1	CABLE, RF A1W3 (SEE FIG 6-2-61 FOR NHA)	REF	A,B
2	18750	2	CONNECTOR,PLUG ELEC (74868) 357-9328-000 A1W3P1	1	
3	M39012/19-0101	2	CONNECTOR,RCPT ELEC (81349) 357-9248-010 A1W3J3	1	
4	651-8324-001	2	MARKER, CABLE	1	
5	651-8324-003	2	MARKER, CABLE	1	
6	651-8324-005	2	MARKER, IDENT	1	
7	M17/128-RG400	2	CABLE,RF (81349) 425-0218-010	AR	
8	651-8323-002	1	CABLE, RF A1W4 (SEE FIG 6-2-62 FOR NHA)	REF	
9	M39012-10-0001	2	CONNECTOR,PLUG ELEC (81349) 357-9357-000 A1W4P1	1	
10	M39012-11-0002	2	CONNECTOR,JACK ELEC (81349) 357-9350-000 A1W4J5	1	
11	651-8324-002	2	MARKER, CABLE	1	
12	651-8324-004	2	MARKER, CABLE	1	
13	651-8324-006	2	MARKER, IDENT	1	
14	RG393U	2	CABLE,RF (81349) 425-1684-010	AR	
15	651-8323-003	1	CABLE, RF A1W5 (SEE FIG 6-2-63 FOR NHA)	REF	B
16	M39012-20-0101	2	CONNECTOR,PLUG ELEC (81349) 357-9169-000 A1W5P1	1	
17	M39012/19-0101	2	CONNECTOR,RCPT ELEC (81349) 357-9248-010 A1W5J2	1	
18	651-8324-001	2	MARKER, CABLE	1	
19	651-8324-015	2	MARKER, CABLE	1	
20	651-8324-013	2	MARKER, IDENT	1	
21	M17/128-RG400	2	CABLE,RF (81349) 425-0218-010	AR	
22	651-8323-004	1	CABLE, RF A1W6 (SEE FIG 6-2-64 FOR NHA)	REF	B
23	M39012-20-0101	2	CONNECTOR,PLUG ELEC (81349) 357-9169-000 A1W6P1	1	
24	M39012/19-0101	2	CONNECTOR,RCPT ELEC (81349) 357-9248-010 A1W6J4	1	
25	651-8324-001	2	MARKER, CABLE	1	
26	651-8324-016	2	MARKER, CABLE	1	
27	651-8324-014	2	MARKER, IDENT	1	
28	M17/128-RG400	2	CABLE,RF (81349) 425-0218-010	AR	
29	651-8323-005	1	CABLE, RF A1W7 (SEE FIG 6-2-65 FOR NHA)	REF	C
30	18750	2	CONNECTOR,PLUG ELEC (74868) 357-9328-000 A1W7P1	1	
31	M39012-16-0101	2	CONNECTOR,PLUG ELEC (81349) 357-9292-000 A1W7P2	1	
32	651-8324-001	2	MARKER, CABLE	1	
33	651-8324-012	2	MARKER, CABLE	1	
34	651-8324-017	2	MARKER, IDENT	1	
35	M17/128-RG400	2	CABLE,RF (81349) 425-0218-010	AR	
36	651-8323-006	1	CABLE, RF A1W8 (SEE FIG 6-2-66 FOR NHA)	REF	C
37	M39012-16-0101	2	CONNECTOR,PLUG ELEC (81349) 357-9292-000 A1W8P1	1	
38	M39012/19-0101	2	CONNECTOR,RCPT ELEC (81349) 357-9248-010 A1W8J3	1	
39	651-8324-001	2	MARKER, CABLE	1	
40	651-8324-003	2	MARKER, CABLE	1	
41	651-8324-018	2	MARKER, IDENT	1	
42	M17/128-RG400	2	CABLE,RF (81349) 425-0218-010	AR	



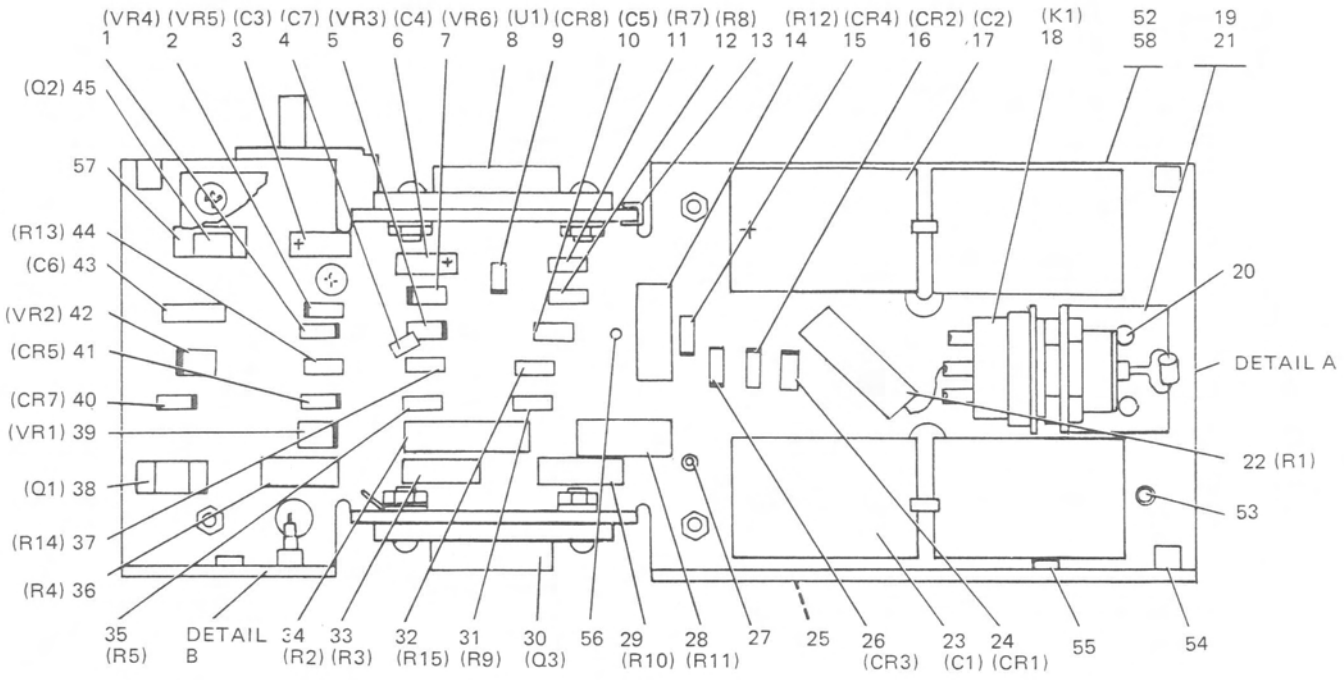
Power Supply A2
Figure 6-6

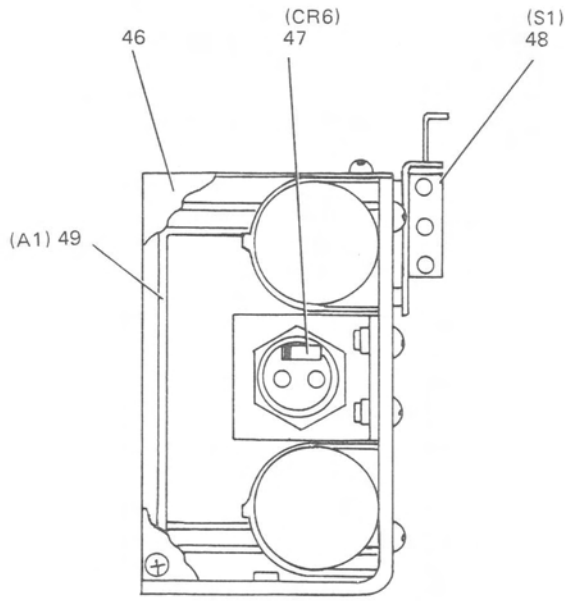
GROUP ASSEMBLY PARTS LIST

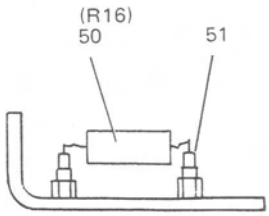
FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-6-	651-8319-001	1	POWER SUPPLY A2 (SEE FIG 6-1-7 FOR NHA)	REF	
1	22B-500	2	POWER SUPPLY MODULE (24429) 270-0942-010 A2A1 (NON-REPAIRABLE ITEM)	1	
	MS51957-31	2	SCREW,MACHINE CRES, 0.138-32 X 0.625IN (96906) 343-0173-000 (AP)	2	
	MS35338-136	2	WASHER,LOCK SST, 0.141 ID X 0.250 0D (96906) 310-0282-000 (AP)	2	
2	22C-100	2	POWER SUPPLY MODULE (24429) 270-0942-030 A2A2 (NON-REPAIRABLE ITEM)	1	
	MS51957-31	2	SCREW,MACHINE CRES, 0.138-32 X 0.625IN (96906) 343-0173-000 (AP)	4	
	MS35338-136	2	WASHER,LOCK SST, 0.141 ID X 0.250 0D (96906) 310-0282-000 (AP)	4	
3	22E-100	2	POWER SUPPLY MODULE (24429) 270-0942-050 A2A3 (NON-REPAIRABLE ITEM)	1	
	MS51957-31	2	SCREW,MACHINE CRES, 0.138-32 X 0.625IN (96906) 343-0173-000 (AP)	6	
	MS35338-136	2	WASHER,LOCK SST, 0.141 ID X 0.250 0D (96906) 310-0282-000 (AP)	6	
4	651-8321-001	2	POWER SUPPLY, HIGH VOLTAGE (ESDS) A2A4 (SEE FIG 6-7)	1	
	651-8316-001	2	SCREW,MACHINE (AP)	4	
	MS51957-31	2	SCREW,MACHINE CRES, 0.138-32 X 0.625IN (96906) 343-0173-000 (AP)	3	
	MS35338-136	2	WASHER,LOCK SST, 0.141 ID X 0.250 0D (96906) 310-0282-000 (AP)	3	

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-6-5	651-8594-001	2	WIRING HARNESS A2W2	1	
	MS51957-28	2	SCREW,MACHINE CRES, 0.138-32 X 0.375IN (96906) 343-0169-000 (AP)	13	
	310-0283-000	2	WASHER,LOCK SST, 0.168 ID X 0.280 OD (70318) (AP)	13	
6	651-8324-002	3	MARKER, CABLE	1	
7	350720-1	3	HOUSING,CONNECTOR ELEC (00779) 372-0064-150 A2W2P1	1	
8	B-10	3	TERMINAL,SNAP-ON (59730) 304-8019-020	6	
9	MS25036-106	3	TERMINAL,LUG (96906) 304-1265-000	1	
10	B-250	3	TERMINAL,SNAP-ON (59730) 304-8019-040	2	
11	350766-1	3	HOUSING,CONNECTOR ELEC (00779) 372-0064-110 A2W2P2	1	
12	350547-6	3	CONTACT,PIN ELEC (00779) 372-0064-330	11	
13	350767-1	3	HOUSING,CONNECTOR ELEC (00779) 372-0064-120 A2W2P4	1	
14	350550-6	3	CONTACT,SOCKET ELEC (00779) 372-0064-320	2	
15	651-8593-001	2	WIRING HARNESS A2W1	1	
16	651-8324-011	3	MARKER, CABLE	1	
17	DC24660	3	SHIELD,ELEC CON (71468) 371-0147-000	1	
	D20419-122	3	SCREW LOCK ASSEMBLY (71468) 371-0040-030 (AP)	2	
18	DCMM25W3P	3	CONNECTOR,RCPT ELEC (71468) 371-1284-370 A2W1P3	1	
19	DM53745-28	3	CONTACT,PIN (13556) 371-2593-050 A2W1P3A1 A2W1P3A2	2	
20	03005-02-020	3	INSERT,CONNECTOR (94375) 371-0246-000 A2W1P3A3	1	
21	MS25036-106	3	TERMINAL,LUG (96906) 304-1265-000	5	
22	MS25036-101	3	TERMINAL,LUG (96906) 304-0127-000	8	
23	651-8309-001	2	HEATSINK, POWER SUPPLY	1	







TPA-7544-019

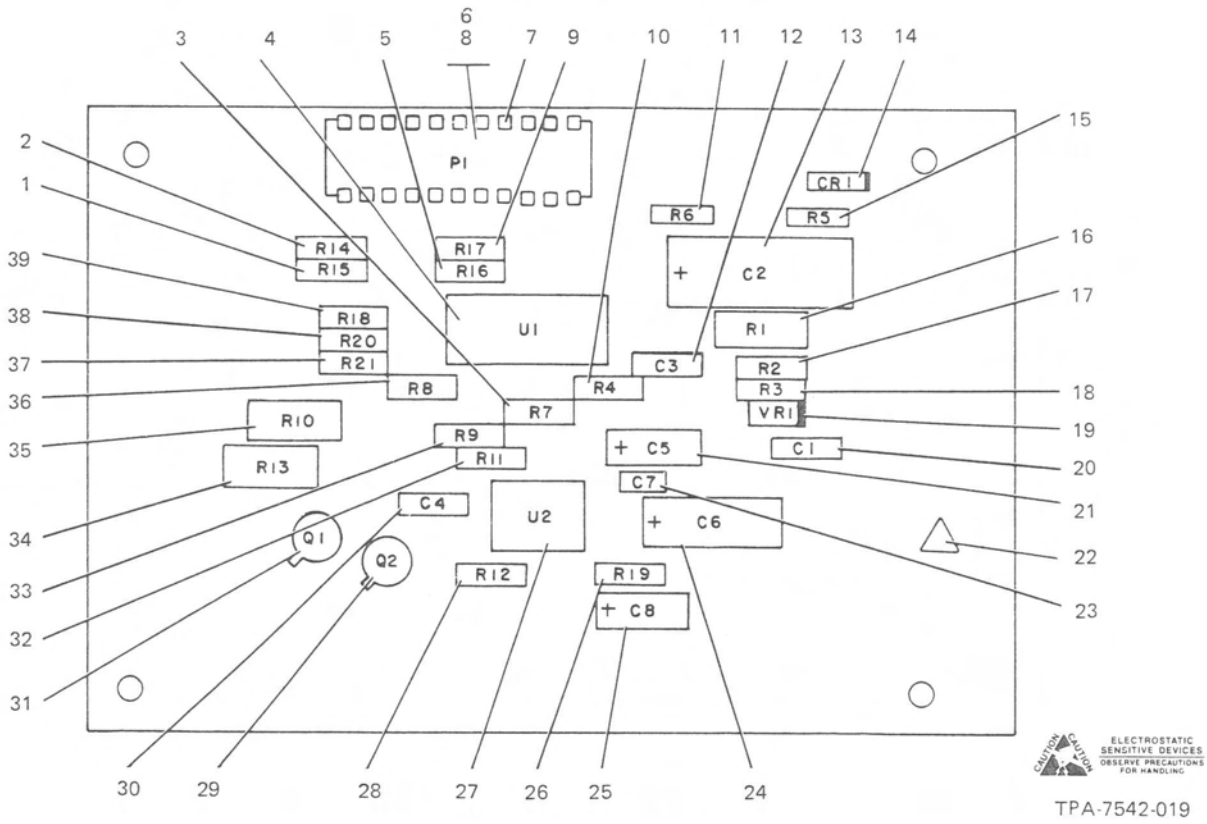
High-Voltage Power Supply A2A4
Figure 6-7

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-7-	651-8321-001	1	POWER SUPPLY, HIGH VOLTAGE (ESDS) A2A4 (SEE FIG 6-6-4 FOR NHA)	REF	
1	1N5129	2	SEMICOND DEVICE (12969) 353-6522-410 A2A4VR4	1	
2	1N4112	2	SEMICOND DEVICE (04713) 353-3591-140 A2A4VR5	1	
3	M39003/01-2356	2	CAPACITOR,FIXED ELCTLT, 1UF, 10%, 50V (81349) 184-9087-430 A2A4C3	1	
4	SCMC350EX7R473KD1	2	CAPACITOR,FIXED CER DIEL, 0.047UF, 10%, 700V (14099) 913-3899-010 A2A4C7	1	
5	1N5129	2	SEMICOND DEVICE (12969) 353-6522-410 A2A4VR3	1	
6	M39003/01-2356	2	CAPACITOR,FIXED ELCTLT, 1UF, 10%, 50V (81349) 184-9087-430 A2A4C4	1	
7	1N4112	2	SEMICOND DEVICE (04713) 353-3591-140 A2A4VR6	1	
8	UA7815KM	2	INTEGRATED CIRCUIT REGULATOR (07263) 351-1217-030 A2A4U1	1	
	MS35649-244	2	NUT,PLAIN,HEX SST, 4-40 (96906) 313-0043-000 (AP)	2	
	MS35338-135B	2	WASHER,SPRING SST, 0.115 1D X 0.212 OD (96906) 310-0463-000 (AP)	2	
	MS51957-15	2	SCREW,MACH STL, 4-40 X 3/8 (96906) 343-0135-000 (AP)	2	
9	1N4007GP	2	SEMICOND DEVICE (14936) 353-6442-070 A2A4CR8	1	
10	X89G104M010	2	CAPACITOR,FIXED CER DIEL, 0.10UF, 20%, 1000V (59942) 913-3282-010 A2A4C5	1	
11	RCR20G820KS	2	RESISTOR,FIXED CMPSN, 82 OHMS, 10%, 1/2W (81349) 745-1307-000 A2A4R7	1	
12	RCR20G820KS	2	RESISTOR,FIXED CMPSN, 82 OHMS, 10%, 1/2W (81349) 745-1307-000 A2A4R8	1	
13	MS21266-2N	2	GROMMET,PLSTC CHAN (96906) 150-0175-000	AR	
14	RCR42G104KS	2	RESISTOR,FXD CMPSN, 100K, 10%, 2W (81349) 745-5736-000 A2A4R12	1	
15	HVG-3	2	SEMICOND DEVICE (14936) 353-3632-010 A2A4CR4	1	
16	HVG-3	2	SEMICOND DEVICE (14936) 353-3632-010 A2A4CR2	1	
17	D29679	2	CAPACITOR,FIXED ELCTLT, 40UF, P50%M10%, 450VDC (56289) 183-1556-000 A2A4C2	1	
18	HC 1/823	2	RELAY,ARMATURE (18741) 410-0346-000 A2A4K1	1	
19	651-8313-001	2	BRACKET, ANGLE	1	
	MS51957-14	2	SCREW,MACH SST, 4-40 X 5/16 (96906) 343-0134-000 (AP)	2	
20	M45938/5-4	3	NUT,SLFLKG,CLINCH CD PL STL, 4-40 (81349) 333-0840-000	2	
21	651-8313-002	3	BRACKET	1	
22	RW67V221	2	RESISTOR,FIXED WW, 220 OHMS, 5%, 6.5W (81349) 747-5447-000 A2A4R1	1	
23	D29679	2	CAPACITOR,FIXED ELCTLT, 40UF, P50%M10%, 450VDC (56289) 183-1556-000 A2A4C1	1	
24	HVG-3	2	SEMICOND DEVICE (14936) 353-3632-010 A2A4CR1	1	
25	280-1368-810	2	LABEL,PRESSURE SENS (12998)	1	
26	HVG-3	2	SEMICOND DEVICE (14936) 353-3632-010 A2A4CR3	1	
27	2308-4-1	2	TERMINAL STANDOFF (17117) 306-0234-000	7	
	MS51957-13B	2	SCREW,MACH SST, 4-40 X 1/4 (96906) 343-0019-000 (AP)	7	
	MS35338-135	2	WASHER,LOCK SST, 0.115 ID X 0.209 OD (96906) 310-0279-000 (AP)	7	
28	RCR42G104KS	2	RESISTOR,FXD CMPSN, 100K, 10%, 2W (81349) 745-5736-000 A2A4R11	1	
29	RCR07G224KS	2	RESISTOR,FIXED CMPSN, 0.22MEGO, 10%, 1/4W (81349) 745-0833-000 A2A4R10	1	
30	JANTX2N3902	2	TRANSISTOR (81349) 352-8011-110 A2A4Q3	1	
	MS35649-244	2	NUT,PLAIN,HEX SST, 4-40 (96906) 313-0043-000 (AP)	2	
	MS35338-135B	2	WASHER,SPRING SST, 0.115 1D X 0.212 OD (96906) 310-0463-000 (AP)	2	
	MS15795-803	2	WASHER,FLAT CRES, 0.125ID X 0.250 OD (96906) 310-0779-030 (AP)	1	
	4007-4HTD	2	TERMINAL,LUG (77147) 304-0015-000 (AP)	1	
	DM-123	2	INSULATOR,PLATE (08289) 352-9882-020 (AP)	3	
	547-8177-017	2	BUSHING,INSULATED (AP)	2	
	MS51957-16	2	SCREW,MACH STL, 4-40 X 7/16 (96906) 343-0136-000 (AP)	2	
31	RCR07G102KS	2	RESISTOR,FIXED CMPSN, 1K, 10%, 1/4W (81349) 745-0749-000 A2A4R9	1	

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-7-32	RN60D3483F	2	RESISTOR,FIXED FILM, 348K, 1%, 1/4W (81349) 705-6718-000 A2A4R15	1	
33	RCR32G222KS	2	RESISTOR,FIXED CMPSN, 2.2K, 10%, 1W (81349) 745-3366-000 A2A4R3	1	
34	RW67V221	2	RESISTOR,FIXED WW, 220 OHMS, 5%, 6.5W (81349) 747-5447-000 A2A4R2	1	
35	RCR07G6R2JS	2	RESISTOR,FIXED CMPSN, 6.2 OHMS, 5%, 1/4W (81349) 745-4384-000 A2A4R5	1	
36	RCR32G222KS	2	RESISTOR,FIXED CMPSN, 2.2K, 10%, 1W (81349) 745-3366-000 A2A4R4	1	
37	RN60D3483F	2	RESISTOR,FIXED FILM, 348K, 1%, 1/4W (81349) 705-6718-000 A2A4R14	1	
38	2N3440	2	TRANSISTOR (04713) 352-0603-010 A2A4Q1	1	
39	1N5558	2	SEMICOND DEVICE (24444) 353-0216-040 A2A4VR1	1	
40	1N4454-1	2	SEMICOND DEVICE (31433) 353-3644-010 A2A4CR7	1	
41	HVG-3	2	SEMICOND DEVICE (14936) 353-3632-010 A2A4CR5	1	
42	1N5558	2	SEMICOND DEVICE (24444) 353-0216-040 A2A4VR2	1	
43	SCMC350EX7R473KD1	2	CAPACITOR,FIXED CER DIEL, 0.047UF, 10%, 700V (14099) 913-3899-010 A2A4C6	1	
44	RN60D3483F	2	RESISTOR,FIXED FILM, 348K, 1%, 1/4W (81349) 705-6718-000 A2A4R13	1	
45	2N3440	2	TRANSISTOR (04713) 352-0603-010 A2A4Q2	1	
46	651-8314-001	2	SHIELD, HIGH VOLTAGE	1	
	MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP)	3	
	MS35338-135	2	WASHER,LOCK SST, 0.115 ID X 0.209 OD (96906) 310-0279-000 (AP)	3	
	MS15795-803	2	WASHER,FLAT CRES, 0.125ID X 0.250 OD (96906) 310-0779-030 (AP)	3	
47	1N4454-1	2	SEMICOND DEVICE (31433) 353-3644-010 A2A4CR6	1	
48	MS16106-4	2	SWITCH ASSY (96906) 266-8000-000 A2A4S1	1	
	P343-1133-000	2	SCREW,MACHINE SST, 4-48 X 1/4 (77250) 343-1133-000 (AP)	2	
	MS35338-135B	2	WASHER,SPRING SST, 0.115 1D X 0.212 OD (96906) 310-0463-000 (AP)	2	
	NAS620C4	2	WASHER,FLAT PSVT CRES, 0.115 ID X 0.209 OD (80205) 310-0740-240 (AP)	4	
49	646-6041-001	2	CONTROL, HIGH VOLTAGE (ESDS) A2A4A1 (SEE FIG 6-8)	1	
	MS51957-14	2	SCREW,MACH SST, 4-40 X 5/16 (96906) 343-0134-000 (AP)	8	
	MS35338-135B	2	WASHER,SPRING SST, 0.115 1D X 0.212 OD (96906) 310-0463-000 (AP)	4	
	MS15795-803	2	WASHER,FLAT CRES, 0.125ID X 0.250 OD (96906) 310-0779-030 (AP)	4	
	540-9059-003	2	POST (AP)	4	
50	RW69V561	2	RESISTOR,FIXED WW, 560.0 OHMS, 5%, 3W (81349) 747-5355-000 A2A4R16	1	
51	469-77-10A	2	TERMINAL,STUD (12615) 306-1018-010	2	
	MS51959-2	2	SCREW,MACHINE CRES, 2-56 X 3/16 (96906) 342-0132-000 (AP)	2	
52	651-8312-001	2	CHASSIS, ELEC EQPT	1	
53	SL479-489WHT	3	TERMINAL,STDF (12615) 306-2518-100	41	
54	565-7241-004	3	FASTENER,ANGLE	3	
55	S-632-3C	3	NUT,PLAIN,CLINCH CD PL STL, 0.138-32 (46384) 334-0557-000	3	
56	M2-542-1	3	TERMINAL,FEEDTHRU (12615) 306-2608-030	3	
57	761-2956-002	3	CLIP,SPG TNSN	2	
58	651-8312-002	3	CHASSIS	1	



High-Voltage Control A2A4A1
Figure 6-8

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-8-	646-6041-001	1	CONTROL, HIGH VOLTAGE (ESDS) A2A4A1 (SEE FIG 6-7-49 FOR NHA)	REF	
1	RN55D5902F	2	RESISTOR,FIXED FILM, 59K, 1%, 1/8W (81349) 705-1081-000 A2A4A1R15	1	
2	RCR07G104KS	2	RESISTOR,FIXED CMPSN, 0.10MEGO, 10%, 1/4W (81349) 745-0821-000 A2A4A1R14	1	
3	RCR07G106KS	2	RESISTOR,FIXED CMPSN, 10MEGO, 10%, 1/4W (81349) 745-0893-000 A2A4A1R7	1	
4	LM139J	2	INTEGRATED CIRCUIT COMPARATOR (ESDS) (01295) 351-1122-030 A2A4A1U1	1	
5	RN55D6652F	2	RESISTOR,FIXED FILM, 66.5K, 1%, 1/8W (81349) 705-3605-870 A2A4A1R16	1	
6	638-1079-020	2	CONNECTOR, ELEC A2A4A1P1	1	
7	NA1112-010	3	CONTACT,ELECTRICAL (57863) 372-2234-010	11	
8	372-2620-020	3	HOUSING,CONNECTOR	1	
9	RN55D2611F	2	RESISTOR,FIXED FILM, 2.61K, 1%, 1/8W (81349) 705-1016-000 A2A4A1R17	1	
10	RCR07G103KS	2	RESISTOR,FIXED CMPSN, 10K, 10%, 1/4W (81349) 745-0785-000 A2A4A1R4	1	
11	RCR07G563KS	2	RESISTOR,FIXED CMPSN, 56K, 10%, 1/4W (81349) 745-0812-000 A2A4A1R6	1	
12	CK06BX104K	2	CAPACITOR,FIXED CER DIEL, 0.1UF, 10%, 100VDC (81349) 913-5019-440 A2A4A1C3	1	
13	M39003/01-2306	2	CAPACITOR,FIXED ELCTLT, 22UF, 10%, 35V (81349) 184-9086-660 A2A4A1C2	1	

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
6-8-14	1N4454-1	2	SEMICOND DEVICE (31433) 353-3644-010 A2A4A1CR1	1	
15	RCR07G103KS	2	RESISTOR,FIXED CMPSN, 10K, 10%, 1/4W (81349) 745-0785-000 A2A4A1R5	1	
16	RCR20G270KS	2	RESISTOR,FIXED CMPSN, 27 OHMS, 10%, 1/2W (81349) 745-1286-000 A2A4A1R1	1	
17	RN55D4991F	2	RESISTOR,FIXED FILM, 4.99K, 1%, 1/8W (81349) 705-3605-330 A2A4A1R2	1	
18	RN55D4991F	2	RESISTOR,FIXED FILM, 4.99K, 1%, 1/8W (81349) 705-3605-330 A2A4A1R3	1	
19	1N4620	2	SEMICOND DEVICE (04713) 353-3591-440 A2A4A1VR1	1	
20	CK06BX104K	2	CAPACITOR,FIXED CER DIEL, 0.1UF, 10%, 100VDC (81349) 913-5019-440 A2A4A1C1	1	
21	M39003/01-2242	2	CAPACITOR,FIXED ELCTLT, 6.8UF, 10%, 6V (81349) 184-9086-020 A2A4A1C5	1	
22	280-2745-040	2	LABEL,WARNING (12998)	1	
23	CK05BX103K	2	CAPACITOR,FIXED CER DIEL, 0.01UF, 10%, 100VDC (81349) 913-5019-200 A2A4A1C7	1	
24	M39003/01-2286	2	CAPACITOR,FIXED ELCTLT, 10UF, 10%, 20V (81349) 184-9086-460 A2A4A1C6	1	
25	M39003/01-2356	2	CAPACITOR,FIXED ELCTLT, 1UF, 10%, 50V (81349) 184-9087-430 A2A4A1C8	1	
26	RCR07G223KS	2	RESISTOR,FIXED CMPSN, 22K, 10%, 1/4W (81349) 745-0797-000 A2A4A1R19	1	
27	LM555J	2	INTEGRATED CIRCUIT TIMER (ESDS) (27014) 351-1137-050 A2A4A1U2	1	
28	RCR07G103KS	2	RESISTOR,FIXED CMPSN, 10K, 10%, 1/4W (81349) 745-0785-000 A2A4A1R12	1	
29	2N2222A	2	TRANSISTOR (49956) 352-0661-020 A2A4A1Q2	1	
30	CK06BX104K	2	CAPACITOR,FIXED CER DIEL, 0.1UF, 10%, 100VDC (81349) 913-5019-440 A2A4A1C4	1	
31	2N2222A	2	TRANSISTOR (49956) 352-0661-020 A2A4A1Q1	1	
32	RCR07G105KS	2	RESISTOR,FIXED CMPSN, 1MEGO, 10%, 1/4W (81349) 745-0857-000 A2A4A1R11	1	
33	RN55D3652F	2	RESISTOR,FIXED FILM, 36.5K, 1%, 1/8W (81349) 705-1071-000 A2A4A1R9	1	
34	RCR20G102KS	2	RESISTOR,FIXED CMPSN, 1K, 10%, 1/2W (81349) 745-1352-000 A2A4A1R13	1	
35	RN60D5113F	2	RESISTOR,FIXED FILM, 511K, 1%, 1/4W (81349) 705-6726-000 A2A4A1R10	1	
36	RCR07G103KS	2	RESISTOR,FIXED CMPSN, 10K, 10%, 1/4W (81349) 745-0785-000 A2A4A1R8	1	
37	RN55D5112F	2	RESISTOR,FIXED FILM, 51.1K, 1%, 1/8W (81349) 705-1078-000 A2A4A1R21	1	
38	RN55D3651F	2	RESISTOR,FIXED FILM, 3.65K, 1%, 1/8W (81349) 705-1023-000 A2A4A1R20	1	
39	RCR07G105KS	2	RESISTOR,FIXED CMPSN, 1MEGO, 10%, 1/4W (81349) 745-0857-000 A2A4A1R18	1	

6.3 NUMERICAL INDEX

PART NUMBER	FIG-ITEM	TTL REQ
AM109-8421	6-2-45	1
B-10	6-6-8	6
B-250	6-6-10	2
CK05BX103K	6-8-23	1
CK06BX104K	6-3-34	
	6-3-42	
	6-4-3	
	6-4-4	
	6-8-12	
	6-8-20	
	6-8-30	7
CK63AW103M	6-2-36	
	6-2-37	2
CRES 0.125IDX0.281OD	6-2-23	
	6-2-38	3
CRES-.091IDX.162OD	6-2-16	2
CRES-.203IDX.500ODX.060TH	6-2-43	4
CSK15043	6-4-1	
	6-4-5	
	6-4-10	
	6-4-11	4
CSK15045	6-3-17	
	6-3-18	
	6-3-19	
	6-3-20	
	6-3-21	
	6-3-22	
	6-3-23	
	6-3-24	
	6-3-25	
	6-3-26	
	6-3-27	
	6-3-28	
	6-3-29	
	6-3-30	
	6-3-31	
	6-3-32	
	6-3-33	
	6-3-35	
	6-3-36	
	6-3-37	
	6-3-38	
	6-3-39	
	6-3-40	
	6-3-41	
	6-3-44	
	6-3-45	
	6-3-46	
	6-3-47	
	6-3-48	
	6-3-49	
	6-3-50	
	6-3-51	
	6-3-52	
	6-3-53	
	6-3-54	
	6-3-55	
	6-3-56	
	6-3-57	38
DCMM25W3P	6-6-18	1
DC24660	6-6-17	1
DM-123	6-7-30	3
DM53745-28	6-6-19	2
D20419-122	6-6-17	2
D29679	6-7-17	
	6-7-23	2
EAC-301	6-2-38	1
F02A250V3AS	6-1-12	1
F02A250V5AS	6-1-11	1
F1-15-H-4	6-2-15	1
F12NC4284-1-62	6-2-68	3
HC 1/823	6-7-18	1
HVG-3	6-7-15	
	6-7-16	
	6-7-24	
	6-7-26	
	6-7-41	5
JANTX2N3902	6-7-30	1
LM117K	6-4-8	1
LM139J	6-8-4	1
LM555J	6-8-27	1
MS15795-803	6-7-30	
	6-7-46	
	6-7-49	8
MS15795-805	6-2-25	4
MS16106-4	6-7-48	1
MS16535-25	6-3-14	2
MS16998-28	6-2-11	4
MS21266-2N	6-3-11	AR
	6-7-13	AR
MS25036-101	6-6-22	8
MS25036-106	6-6-9	
	6-6-21	6
MS25237-387	6-2-5	
	6-2-8	
	6-2-13	3
MS27484T14F35S	6-2-53	1
MS27506F14-2	6-2-54	1
MS35333-72	6-4-5	
	6-4-11	3
MS35338-135	6-3-6	
	6-7-27	
	6-7-46	11
MS35338-135B	6-7-8	
	6-7-30	
	6-7-48	
	6-7-49	10
MS35338-136	6-2-25	
	6-4-8	
	6-6-1	
	6-6-2	
	6-6-3	
	6-6-4	21
MS35338-138	6-2-11	
	6-2-43	8
MS35489-1	6-2-27	1
MS35489-11	6-3-12	1
MS35649-244	6-7-8	
	6-7-30	4
MS35650-304	6-2-43	4
MS51957-13	6-1-5	
	6-1-6	
	6-2-23	
	6-2-24	
	6-2-40	

NUMERICAL INDEX

PART NUMBER	FIG-ITEM	TTL REQ
	6-7-46	17
MS51957-13B	6-7-27	7
MS51957-14	6-2-17	
	6-2-28	
	6-2-31	
	6-2-33	
	6-7-19	
	6-7-49	43
MS51957-15	6-1-2	
	6-2-38	
	6-7-8	15
MS51957-16	6-7-30	2
MS51957-27	6-1-2	8
MS51957-28	6-2-21	
	6-4-8	
	6-6-5	19
MS51957-3	6-2-16	2
MS51957-30	6-2-25	4
MS51957-31	6-6-1	
	6-6-2	
	6-6-3	
	6-6-4	15
MS51957-4B	6-2-16	2
MS51958-64	6-2-43	4
MS51959-13	6-2-3	2
MS51959-14	6-3-1	
	6-3-6	5
MS51959-2	6-7-51	2
MS51959-30B	6-2-1	3
MS51959-6	6-2-45	4
MS77068-1	6-2-38	
	6-3-6	2
MS77068-3	6-3-43	
	6-4-1	3
M17/128-RG400	6-5-7	AR
	6-5-21	AR
	6-5-28	AR
	6-5-35	AR
	6-5-42	AR
M2-542-1	6-7-56	3
M39003/01-2242	6-8-21	1
M39003/01-2286	6-8-24	1
M39003/01-2306	6-8-13	1
M39003/01-2356	6-4-2	
	6-4-9	
	6-7-3	
	6-7-6	
	6-8-25	5
M39012-10-0001	6-5-9	1
M39012-11-0002	6-5-10	1
M39012-16-0101	6-5-31	
	6-5-37	2
M39012-20-0101	6-5-16	
	6-5-23	2
M39012/19-0101	6-5-3	
	6-5-17	
	6-5-24	
	6-5-38	4
M39022-01-1201	6-2-22	1
M45938/5-4	6-2-18	
	6-2-29	
	6-2-34	
	6-3-4	
	6-3-7	
	6-7-20	54
M45938/5-6	6-2-19	
	6-2-69	
	6-4-14	16
M45938/5-7	6-2-70	1
M45938/5-8	6-2-71	10
NAS620C4	6-7-48	4
NAS620C6L	6-4-8	1
NAS671C4	6-1-5	
	6-2-23	
	6-2-38	
	6-2-40	
	6-3-6	8
NAS671C6	6-2-25	
	6-4-8	6
NA1112-010	6-8-7	11
NA1114-020	6-3-16	38
NE15/F01-0003-00	6-2-16	1
P312-0113-000	6-2-11	4
P313-0046-000	6-4-1	
	6-4-5	
	6-4-11	4
P343-1133-000	6-7-48	2
RCR07G102KS	6-7-31	1
RCR07G103KS	6-8-10	
	6-8-15	
	6-8-28	
	6-8-36	4
RCR07G104KS	6-8-2	1
RCR07G105KS	6-8-32	
	6-8-39	2
RCR07G106KS	6-8-3	1
RCR07G223KS	6-8-26	1
RCR07G224KS	6-7-29	1
RCR07G563KS	6-8-11	1
RCR07G6R2JS	6-7-35	1
RCR20G102KS	6-8-34	1
RCR20G270KS	6-8-16	1
RCR20G820KS	6-7-11	
	6-7-12	2
RCR32G222KS	6-7-33	
	6-7-36	2
RCR42G104KS	6-7-14	
	6-7-28	2
RG393U	6-5-14	AR
RN55D2430F	6-4-7	1
RN55D2611F	6-8-9	1
RN55D3651F	6-8-38	1
RN55D3652F	6-8-33	1
RN55D4991F	6-8-17	
	6-8-18	2
RN55D5112F	6-8-37	1
RN55D5902F	6-8-1	1
RN55D6652F	6-8-5	1
RN60D3483F	6-7-32	
	6-7-37	
	6-7-44	3
RN60D3651F	6-4-6	1
RN60D5113F	6-8-35	1
RW67V221	6-7-22	
	6-7-34	2
RW69V561	6-7-50	1
R5338	6-2-43	1
S-632-3C	6-7-55	3

NUMERICAL INDEX

PART NUMBER	FIG-ITEM	TTL REQ
SCMC350EX7R473KD	6-7-4	
1		
	6-7-43	2
SL-439-433WHT	6-4-13	8
SL479-489WHT	6-7-53	41
UA7815KM	6-7-8	1
V1008	6-2-23	1
X89G104M010	6-7-10	1
009-1766-050	6-2-25	1
009-1784-040	6-2-26	1
020028	6-2-26	1
03005-02-020	6-6-20	1
1-87631-1	6-2-58	1
1N4007GP	6-7-9	1
1N4112	6-7-2	
	6-7-7	2
1N4454-1	6-7-40	
	6-7-47	
	6-8-14	3
1N4620	6-8-19	1
1N5129	6-7-1	
	6-7-5	2
1N5558	6-7-39	
	6-7-42	2
11E1067	6-2-40	1
1107-018	6-3-9	50
111	6-4-8	1
150-0175-000	6-3-11	AR
	6-7-13	AR
150-0788-090	6-2-23	1
150-0810-030	6-2-32	
	6-3-2	4
17250	6-1-13	1
183-1556-000	6-7-17	
	6-7-23	2
184-9086-020	6-8-21	1
184-9086-460	6-8-24	1
184-9086-660	6-8-13	1
184-9087-430	6-4-2	
	6-4-9	
	6-7-3	
	6-7-6	
	6-8-25	5
18750	6-5-2	
	6-5-30	2
2N2222A	6-8-29	
	6-8-31	2
2N3440	6-7-38	
	6-7-45	2
201-0004-000	6-3-12	1
201-1040-000	6-2-27	1
22B-500	6-6-1	1
22C-100	6-6-2	1
22E-100	6-6-3	1
23071-3	6-2-32	
	6-3-2	4
2308-4-1	6-2-24	
	6-7-27	10
262-0179-010	6-2-5	
	6-2-8	
	6-2-13	3
262-0579-000	6-2-6	
	6-2-9	
	6-2-14	3
262-0580-000	6-2-12	1
262-0581-000	6-2-4	
	6-2-7	2
264-4080-000	6-1-12	1
264-4090-000	6-1-11	1
265-0017-020	6-2-39	1
266-0217-030	6-2-40	1
266-7508-210	6-2-15	1
266-7524-010	6-2-16	1
266-8000-000	6-7-48	1
270-0942-010	6-6-1	1
270-0942-030	6-6-2	1
270-0942-050	6-6-3	1
280-1368-330	6-2-42	1
280-1368-810	6-1-1	
	6-7-25	2
280-2745-040	6-8-22	1
304-0015-000	6-7-30	1
304-0016-000	6-4-8	1
304-0127-000	6-6-22	8
304-1265-000	6-6-9	
	6-6-21	6
304-3110-010	6-2-38	
	6-3-6	2
304-3130-010	6-3-43	
	6-4-1	3
304-8019-020	6-6-8	6
304-8019-040	6-6-10	2
305-1724-000	6-3-14	2
306-0234-000	6-2-24	
	6-7-27	10
306-1018-010	6-7-51	2
306-1521-000	6-4-13	8
306-2518-100	6-7-53	41
306-2608-030	6-7-56	3
310-0049-000	6-2-43	4
310-0070-000	6-2-16	2
310-0278-000	6-1-5	
	6-1-6	
	6-2-23	
	6-2-24	
	6-2-38	
	6-2-40	
	6-2-45	20
310-0279-000	6-3-6	
	6-7-27	
	6-7-46	11
310-0282-000	6-2-25	
	6-4-8	
	6-6-1	
	6-6-2	
	6-6-3	
	6-6-4	21
310-0283-000	6-6-5	13
310-0284-000	6-2-11	
	6-2-43	8
310-0463-000	6-7-8	
	6-7-30	
	6-7-48	
	6-7-49	10
310-0740-240	6-7-48	4
310-0740-360	6-4-8	1
310-0779-030	6-7-30	
	6-7-46	

NUMERICAL INDEX

PART NUMBER	FIG-ITEM	TTL REQ
	6-7-49	8
310-0779-050	6-2-25	4
310-6340-000	6-2-23	
	6-2-38	3
312-0113-000	6-2-11	4
313-0019-000	6-2-43	4
313-0043-000	6-7-8	
	6-7-30	4
313-0045-000	6-2-25	
	6-4-8	6
313-0046-000	6-4-1	
	6-4-5	
	6-4-11	4
313-0132-000	6-1-5	
	6-2-23	
	6-2-38	
	6-2-40	
	6-3-6	8
324-1496-000	6-2-11	4
324-1694-250	6-1-15	10
333-0840-000	6-2-18	
	6-2-29	
	6-2-34	
	6-3-4	
	6-3-7	
	6-7-20	54
333-0842-000	6-2-19	
	6-2-69	
	6-4-14	16
333-0844-000	6-2-70	1
333-0846-000	6-2-71	10
333-1149-000	6-2-68	3
334-0557-000	6-7-55	3
342-0044-000	6-2-3	2
342-0045-000	6-3-1	
	6-3-6	5
342-0132-000	6-7-51	2
342-0136-000	6-2-45	4
342-1866-000	6-2-1	3
343-0019-000	6-7-27	7
343-0124-000	6-2-16	2
343-0133-000	6-1-5	
	6-1-6	
	6-2-23	
	6-2-24	
	6-2-40	
	6-7-46	17
343-0134-000	6-2-17	
	6-2-28	
	6-2-31	
	6-2-33	
	6-7-19	
	6-7-49	43
343-0135-000	6-1-2	
	6-2-38	
	6-7-8	15
343-0136-000	6-7-30	2
343-0168-000	6-1-2	8
343-0169-000	6-2-21	
	6-4-8	
	6-6-5	19
343-0171-000	6-2-25	4
343-0173-000	6-6-1	
	6-6-2	
	6-6-3	
	6-6-4	15
343-0229-000	6-2-43	4
343-0672-000	6-2-16	2
343-1133-000	6-7-48	2
345002	6-2-39	1
350547-1	6-2-57	2
350547-6	6-6-12	11
350550-6	6-2-51	
	6-6-14	13
350720-1	6-6-7	1
350766-1	6-2-56	
	6-6-11	2
350767-1	6-2-49	
	6-6-13	2
350782-1	6-2-47	1
351-1122-030	6-8-4	1
351-1137-050	6-8-27	1
351-1217-030	6-7-8	1
351-1271-030	6-4-8	1
351-1484-010	6-2-45	1
352-0603-010	6-7-38	
	6-7-45	2
352-0661-020	6-8-29	
	6-8-31	2
352-8011-110	6-7-30	1
352-9882-010	6-4-8	1
352-9882-020	6-7-30	3
353-0216-040	6-7-39	
	6-7-42	2
353-3591-140	6-7-2	
	6-7-7	2
353-3591-440	6-8-19	1
353-3632-010	6-7-15	
	6-7-16	
	6-7-24	
	6-7-26	
	6-7-41	5
353-3644-010	6-7-40	
	6-7-47	
	6-8-14	3
353-6442-070	6-7-9	1
353-6522-410	6-7-1	
	6-7-5	2
357-9169-000	6-5-16	
	6-5-23	2
357-9248-010	6-5-3	
	6-5-17	
	6-5-24	
	6-5-38	4
357-9292-000	6-5-31	
	6-5-37	2
357-9328-000	6-5-2	
	6-5-30	2
357-9350-000	6-5-10	1
357-9357-000	6-5-9	1
359-0637-040	6-2-54	1
359-0645-150	6-2-53	1
368-0385-010	6-2-38	1
371-0040-030	6-6-17	2
371-0147-000	6-6-17	1
371-0246-000	6-6-20	1
371-1284-370	6-6-18	1
371-2593-050	6-6-19	2

NUMERICAL INDEX

PART NUMBER	FIG-ITEM	TTL REQ
372-0044-060	6-2-58	1
372-0064-050	6-2-57	2
372-0064-110	6-2-56	
	6-6-11	2
372-0064-120	6-2-49	
	6-6-13	2
372-0064-150	6-6-7	1
372-0064-160	6-2-47	1
372-0064-320	6-2-51	
	6-6-14	13
372-0064-330	6-6-12	11
372-2234-010	6-8-7	11
372-2235-010	6-3-8	10
372-2255-020	6-3-16	38
372-2501-040	6-2-60	9
372-2602-018	6-3-9	50
372-2620-020	6-8-8	1
373-0003-000	6-4-5	
	6-4-11	3
4007-4HTD	6-7-30	1
4007-6HTD	6-4-8	1
410-0346-000	6-7-18	1
425-0218-010	6-5-7	AR
	6-5-21	AR
	6-5-28	AR
	6-5-35	AR
	6-5-42	AR
425-1684-010	6-5-14	AR
426-1034-010	6-1-13	1
469-77-10A	6-7-51	2
476042	6-2-25	1
540-9006-003	6-2-16	2
540-9059-003	6-7-49	4
547-8177-008	6-4-8	2
547-8177-017	6-7-30	2
565-7241-004	6-7-54	3
621-7567-025	6-3-14	1
622-3522-001	6-1-	1
622-3522-002	6-1-	1
622-3522-004	6-1-	1
623-9008-001	6-2-2	1
632-5201-001	6-2-3	1
635-9714-001	6-2-11	4
637-4710-001	6-1-14	10
638-1079-020	6-8-6	1
642-0189-000	6-1-5	1
646-5618-003	6-1-9	1
646-6018-001	6-1-8	1
646-6041-001	6-7-49	1
	6-8-	REF
651-8300-001	6-2-67	1
651-8300-002	6-2-72	1
651-8301-001	6-2-1	1
651-8302-001	6-1-2	1
651-8304-001	6-2-17	1
651-8304-002	6-2-20	1
651-8305-001	6-2-33	1
651-8305-002	6-2-35	1
651-8308-001	6-1-4	1
651-8309-001	6-6-23	1
651-8312-001	6-7-52	1
651-8312-002	6-7-58	1
651-8313-001	6-7-19	1
651-8313-002	6-7-21	1
651-8314-001	6-7-46	1
651-8316-001	6-6-4	4
651-8319-001	6-1-7	1
	6-6-	REF
651-8321-001	6-6-4	1
	6-7-	REF
651-8322-001	6-2-41	1
651-8323-001	6-2-61	1
	6-5-1	REF
651-8323-002	6-2-62	1
	6-5-8	REF
651-8323-003	6-2-63	1
	6-5-15	REF
651-8323-004	6-2-64	1
	6-5-22	REF
651-8323-005	6-2-65	1
	6-5-29	REF
651-8323-006	6-2-66	1
	6-5-36	REF
651-8324-001	6-5-4	
	6-5-18	
	6-5-25	
	6-5-32	
	6-5-39	5
651-8324-002	6-5-11	
	6-6-6	2
651-8324-003	6-5-5	
	6-5-40	2
651-8324-004	6-5-12	1
651-8324-005	6-5-6	1
651-8324-006	6-5-13	1
651-8324-007	6-2-55	1
651-8324-008	6-2-59	1
651-8324-009	6-2-48	1
651-8324-010	6-2-50	1
651-8324-011	6-6-16	1
651-8324-012	6-5-33	1
651-8324-013	6-5-20	1
651-8324-014	6-5-27	1
651-8324-015	6-5-19	1
651-8324-016	6-5-26	1
651-8324-017	6-5-34	1
651-8324-018	6-5-41	1
651-8325-001	6-1-10	1
	6-2-	REF
651-8325-002	6-1-10	1
	6-2-	REF
651-8325-004	6-1-10	1
	6-2-	REF
651-8327-001	6-1-3	1
651-8591-001	6-2-46	1
651-8592-001	6-2-52	1
651-8593-001	6-6-15	1
651-8594-001	6-6-5	1
651-8596-001	6-1-6	1
651-8596-002	6-1-6	1
659-1082-001	6-4-12	1
659-1082-002	6-4-15	1
659-1083-001	6-2-21	1
	6-4-	REF
659-1147-001	6-3-1	1
659-1148-001	6-3-6	1
659-1148-002	6-3-10	1
659-1149-001	6-2-28	

NUMERICAL INDEX

PART NUMBER	FIG-ITEM	TTL REQ
	6-3-3	2
659-1149-002	6-2-30	
	6-3-5	2
659-1150-001	6-2-31	
	6-2-31	2
	6-3-	REF
659-1152-001	6-3-13	1
659-1152-002	6-3-15	1
662-0977-010	6-2-43	1
705-1016-000	6-8-9	1
705-1023-000	6-8-38	1
705-1071-000	6-8-33	1
705-1078-000	6-8-37	1
705-1081-000	6-8-1	1
705-3600-670	6-4-7	1
705-3605-330	6-8-17	
	6-8-18	2
705-3605-870	6-8-5	1
705-6623-000	6-4-6	1
705-6718-000	6-7-32	
	6-7-37	
	6-7-44	3
705-6726-000	6-8-35	1
745-0749-000	6-7-31	1
745-0785-000	6-8-10	
	6-8-15	
	6-8-28	
	6-8-36	4
745-0797-000	6-8-26	1
745-0812-000	6-8-11	1
745-0821-000	6-8-2	1
745-0833-000	6-7-29	1
745-0857-000	6-8-32	
	6-8-39	2
745-0893-000	6-8-3	1
745-1286-000	6-8-16	1
745-1307-000	6-7-11	
	6-7-12	2
745-1352-000	6-8-34	1
745-3366-000	6-7-33	
	6-7-36	2
745-4384-000	6-7-35	1
745-5736-000	6-7-14	
	6-7-28	2
747-5355-000	6-7-50	1
747-5447-000	6-7-22	
	6-7-34	2
761-2956-002	6-7-57	2
763-3339-009	6-2-10	2
855STDG	6-2-12	1
855STDR	6-2-4	
	6-2-7	2
855906-9	6-2-6	
	6-2-9	
	6-2-14	3
86016-2	6-2-60	9
913-0155-010	6-4-1	
	6-4-5	
	6-4-10	
	6-4-11	4
913-0155-040	6-3-17	
	6-3-18	
	6-3-19	
	6-3-20	
	6-3-21	
	6-3-22	
	6-3-23	
	6-3-24	
	6-3-25	
	6-3-26	
	6-3-27	
	6-3-28	
	6-3-29	
	6-3-30	
	6-3-31	
	6-3-32	
	6-3-33	
	6-3-35	
	6-3-36	
	6-3-37	
	6-3-38	
	6-3-39	
	6-3-40	
	6-3-41	
	6-3-44	
	6-3-45	
	6-3-46	
	6-3-47	
	6-3-48	
	6-3-49	
	6-3-50	
	6-3-51	
	6-3-52	
	6-3-53	
	6-3-54	
	6-3-55	
	6-3-56	
	6-3-57	38
913-1188-000	6-2-36	
	6-2-37	2
913-3282-010	6-7-10	1
913-3899-010	6-7-4	
	6-7-43	2
913-5019-200	6-8-23	1
913-5019-440	6-3-34	
	6-3-42	
	6-4-3	
	6-4-4	
	6-8-12	
	6-8-20	
	6-8-30	7
951-0877-510	6-2-22	1

6.4 REFERENCE DESIGNATION INDEX

REFERENCE DESIGNATION	FIG-ITEM	PART NUMBER	REFERENCE DESIGNATION	FIG-ITEM	PART NUMBER
A1	6-1-10	651-8325-001	A1A2U1	6-4-8	LM117K
A1	6-1-10	651-8325-002	A1B1	6-2-26	020028
A1	6-1-10	651-8325-004	A1C1	6-2-36	CK63AW103M
A1	6-2-	651-8325-001	A1C2	6-2-37	CK63AW103M
A1	6-2-	651-8325-002	A1C3	6-2-22	M39022-01-1201
A1	6-2-	651-8325-004	A1DS1	6-2-8	MS25237-387
A1AR1	6-2-45	AM109-8421	A1DS2	6-2-13	MS25237-387
A1A1	6-2-31	659-1150-001	A1DS3	6-2-5	MS25237-387
A1A1	6-2-31	659-1150-001	A1J6	6-2-38	EAC-301
A1A1	6-3-	659-1150-001	A1S1	6-2-40	11E1067
A1A1C1	6-3-19	CSK15045	A1S2	6-2-16	NE15/F01-0003-00
A1A1C10	6-3-35	CSK15045	A1T1	6-2-43	R5338
A1A1C11	6-3-18	CSK15045	A1W1	6-2-46	651-8591-001
A1A1C12	6-3-20	CSK15045	A1W1J1	6-2-47	350782-1
A1A1C13	6-3-22	CSK15045	A1W1J2	6-2-49	350767-1
A1A1C14	6-3-24	CSK15045	A1W2	6-2-52	651-8592-001
A1A1C15	6-3-27	CSK15045	A1W2J3	6-2-56	350766-1
A1A1C16	6-3-29	CSK15045	A1W2P4	6-2-53	MS27484T14F35S
A1A1C17	6-3-32	CSK15045	A1W2P5	6-2-58	1-87631-1
A1A1C18	6-3-36	CSK15045	A1W3	6-2-61	651-8323-001
A1A1C19	6-3-38	CSK15045	A1W3	6-5-1	651-8323-001
A1A1C2	6-3-21	CSK15045	A1W3J3	6-5-3	M39012/19-0101
A1A1C20	6-3-37	CSK15045	A1W3P1	6-5-2	18750
A1A1C21	6-3-17	CSK15045	A1W4	6-2-62	651-8323-002
A1A1C22	6-3-56	CSK15045	A1W4	6-5-8	651-8323-002
A1A1C23	6-3-54	CSK15045	A1W4J5	6-5-10	M39012-11-0002
A1A1C24	6-3-52	CSK15045	A1W4P1	6-5-9	M39012-10-0001
A1A1C25	6-3-49	CSK15045	A1W5	6-2-63	651-8323-003
A1A1C26	6-3-47	CSK15045	A1W5	6-5-15	651-8323-003
A1A1C27	6-3-45	CSK15045	A1W5J2	6-5-17	M39012/19-0101
A1A1C28	6-3-41	CSK15045	A1W5P1	6-5-16	M39012-20-0101
A1A1C29	6-3-40	CSK15045	A1W6	6-2-64	651-8323-004
A1A1C3	6-3-23	CSK15045	A1W6	6-5-22	651-8323-004
A1A1C30	6-3-39	CSK15045	A1W6J4	6-5-24	M39012/19-0101
A1A1C31	6-3-57	CSK15045	A1W6P1	6-5-23	M39012-20-0101
A1A1C32	6-3-55	CSK15045	A1W7	6-2-65	651-8323-005
A1A1C33	6-3-53	CSK15045	A1W7	6-5-29	651-8323-005
A1A1C34	6-3-51	CSK15045	A1W7P1	6-5-30	18750
A1A1C35	6-3-50	CSK15045	A1W7P2	6-5-31	M39012-16-0101
A1A1C36	6-3-48	CSK15045	A1W8	6-2-66	651-8323-006
A1A1C37	6-3-46	CSK15045	A1W8	6-5-36	651-8323-006
A1A1C38	6-3-44	CSK15045	A1W8J3	6-5-38	M39012/19-0101
A1A1C39	6-3-42	CK06BX104K	A1W8P1	6-5-37	M39012-16-0101
A1A1C4	6-3-25	CSK15045	A1XDS1	6-2-9	855906-9
A1A1C40	6-3-34	CK06BX104K	A1XDS2	6-2-14	855906-9
A1A1C5	6-3-26	CSK15045	A1XDS3	6-2-6	855906-9
A1A1C6	6-3-28	CSK15045	A1XF1	6-2-39	345002
A1A1C7	6-3-30	CSK15045	A2	6-1-7	651-8319-001
A1A1C8	6-3-31	CSK15045	A2	6-6-	651-8319-001
A1A1C9	6-3-33	CSK15045	A2A1	6-6-1	22B-500
A1A1J1	6-3-9	1107-018	A2A2	6-6-2	22C-100
A1A1P1	6-3-16	NA1114-020	A2A3	6-6-3	22E-100
A1A2	6-2-21	659-1083-001	A2A4	6-6-4	651-8321-001
A1A2	6-4-	659-1083-001	A2A4	6-7-	651-8321-001
A1A2C1	6-4-2	M39003/01-2356	A2A4A1	6-7-49	646-6041-001
A1A2C2	6-4-9	M39003/01-2356	A2A4A1	6-8-	646-6041-001
A1A2C3	6-4-11	CSK15043	A2A4A1CR1	6-8-14	1N4454-1
A1A2C4	6-4-10	CSK15043	A2A4A1C1	6-8-20	CK06BX104K
A1A2C5	6-4-1	CSK15043	A2A4A1C2	6-8-13	M39003/01-2306
A1A2C6	6-4-5	CSK15043	A2A4A1C3	6-8-12	CK06BX104K
A1A2C7	6-4-3	CK06BX104K	A2A4A1C4	6-8-30	CK06BX104K
A1A2C8	6-4-4	CK06BX104K	A2A4A1C5	6-8-21	M39003/01-2242
A1A2R1	6-4-7	RN55D2430F	A2A4A1C6	6-8-24	M39003/01-2286
A1A2R2	6-4-6	RN60D3651F	A2A4A1C7	6-8-23	CK05BX103K

REFERENCE DESIGNATION INDEX

REFERENCE DESIGNATION	FIG-ITEM	PART NUMBER
A2A4A1C8	6-8-25	M39003/01-2356
A2A4A1P1	6-8-6	638-1079-020
A2A4A1Q1	6-8-31	2N2222A
A2A4A1Q2	6-8-29	2N2222A
A2A4A1R1	6-8-16	RCR20G270KS
A2A4A1R10	6-8-35	RN60D5113F
A2A4A1R11	6-8-32	RCR07G105KS
A2A4A1R12	6-8-28	RCR07G103KS
A2A4A1R13	6-8-34	RCR20G102KS
A2A4A1R14	6-8-2	RCR07G104KS
A2A4A1R15	6-8-1	RN55D5902F
A2A4A1R16	6-8-5	RN55D6652F
A2A4A1R17	6-8-9	RN55D2611F
A2A4A1R18	6-8-39	RCR07G105KS
A2A4A1R19	6-8-26	RCR07G223KS
A2A4A1R2	6-8-17	RN55D4991F
A2A4A1R20	6-8-38	RN55D3651F
A2A4A1R21	6-8-37	RN55D5112F
A2A4A1R3	6-8-18	RN55D4991F
A2A4A1R4	6-8-10	RCR07G103KS
A2A4A1R5	6-8-15	RCR07G103KS
A2A4A1R6	6-8-11	RCR07G563KS
A2A4A1R7	6-8-3	RCR07G106KS
A2A4A1R8	6-8-36	RCR07G103KS
A2A4A1R9	6-8-33	RN55D3652F
A2A4A1U1	6-8-4	LM139J
A2A4A1U2	6-8-27	LM555J
A2A4A1VR1	6-8-19	1N4620
A2A4CR1	6-7-24	HVG-3
A2A4CR2	6-7-16	HVG-3
A2A4CR3	6-7-26	HVG-3
A2A4CR4	6-7-15	HVG-3
A2A4CR5	6-7-41	HVG-3
A2A4CR6	6-7-47	1N4454-1
A2A4CR7	6-7-40	1N4454-1
A2A4CR8	6-7-9	1N4007GP
A2A4C1	6-7-23	D29679
A2A4C2	6-7-17	D29679
A2A4C3	6-7-3	M39003/01-2356
A2A4C4	6-7-6	M39003/01-2356
A2A4C5	6-7-10	X89G104M010
A2A4C6	6-7-43	SCMC350EX7R473KD 1
A2A4C7	6-7-4	SCMC350EX7R473KD 1
A2A4K1	6-7-18	HC 1/823
A2A4Q1	6-7-38	2N3440
A2A4Q2	6-7-45	2N3440
A2A4Q3	6-7-30	JANTX2N3902
A2A4R1	6-7-22	RW67V221
A2A4R10	6-7-29	RCR07G224KS
A2A4R11	6-7-28	RCR42G104KS
A2A4R12	6-7-14	RCR42G104KS
A2A4R13	6-7-44	RN60D3483F
A2A4R14	6-7-37	RN60D3483F
A2A4R15	6-7-32	RN60D3483F
A2A4R16	6-7-50	RW69V561
A2A4R2	6-7-34	RW67V221
A2A4R3	6-7-33	RCR32G222KS
A2A4R4	6-7-36	RCR32G222KS
A2A4R5	6-7-35	RCR07G6R2JS
A2A4R7	6-7-11	RCR20G820KS
A2A4R8	6-7-12	RCR20G820KS
A2A4R9	6-7-31	RCR07G102KS
A2A4S1	6-7-48	MS16106-4
A2A4U1	6-7-8	UA7815KM
A2A4VR1	6-7-39	1N5558
A2A4VR2	6-7-42	1N5558
A2A4VR3	6-7-5	1N5129
A2A4VR4	6-7-1	1N5129
A2A4VR5	6-7-2	1N4112
A2A4VR6	6-7-7	1N4112
A2W1	6-6-15	651-8593-001
A2W1P3	6-6-18	DCMM25W3P
A2W1P3A1	6-6-19	DM53745-28
A2W1P3A2	6-6-19	DM53745-28
A2W1P3A3	6-6-20	03005-02-020
A2W2	6-6-5	651-8594-001
A2W2P1	6-6-7	350720-1
A2W2P2	6-6-11	350766-1
A2W2P4	6-6-13	350767-1
A3	6-1-6	651-8596-001
A3	6-1-6	651-8596-002
A4	6-1-8	646-6018-001
A5	6-1-9	646-5618-003

section 7
diagrams

7.1 CONFIGURATION STATUS CONTROL

Collins Defense Communications Division of Rockwell International uses a 2-character (maximum) alphabetic identifier for configuration identification. The alphabetic identifier is preceded by the letters REV (revision) and starts with — (dash) if no changes have been made. The first change is identified as A, the second as B, continuing through Z to AA, AB, and ultimately to ZZ.

Note

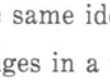
The alphabetic identifier is not a serial number; therefore, many units or subassemblies may exist with the same identifier.

Incorporation of design changes in a unit or subassembly that has been returned to Rockwell-Collins for repair or has been removed from the company's finished goods inventory is defined as rework. At the time of rework, the unit or subassembly is marked again to reflect the design level to which it is being upgraded. This is done by leaving the original marking and adding the letters RWK (rework) followed by the alphabetic identifier of the latest change incorporated in the rework. For example, unit one may be marked REV B—RWK F and unit two may be marked REV F. A reworked unit may not contain all design changes made prior to the reworked alphabetic identifier, but does contain all changes required to make unit operation identical to a newly manufactured unit having the same alphabetic identifier. Therefore, a unit reworked to a specific alphabetic identifier may not have the exact components and/or the same physical appearance as a newly manufactured unit having the same alphabetic identifier.

When schematic changes are required, an arrow with a revision identification (eg

,

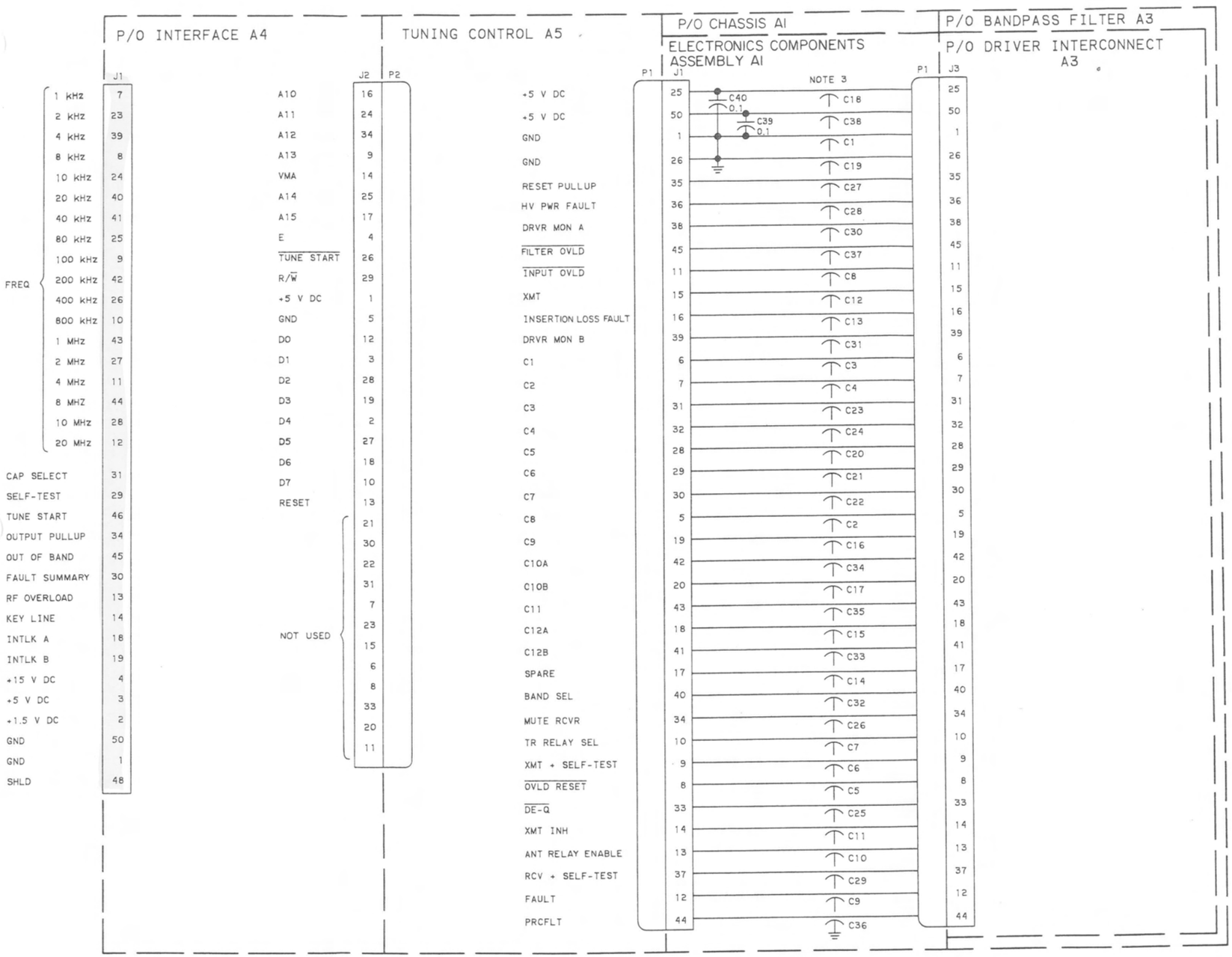
,

, 

) will point to the area of the schematic that is changed. The revision identification will be listed on a schematic changes page that preceeds the schematic. For each revision identification listed, the schematic changes page will include: (1) description of revision and reason for change, (2) service bulletin number, if applicable, and (3) effectivity.

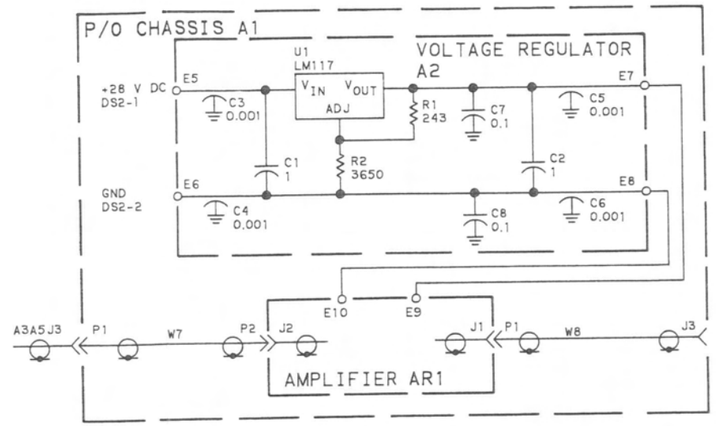
7.2 CONFIGURATION EFFECTIVITY

Refer to the parts list for configuration effectivity.



NOTES:

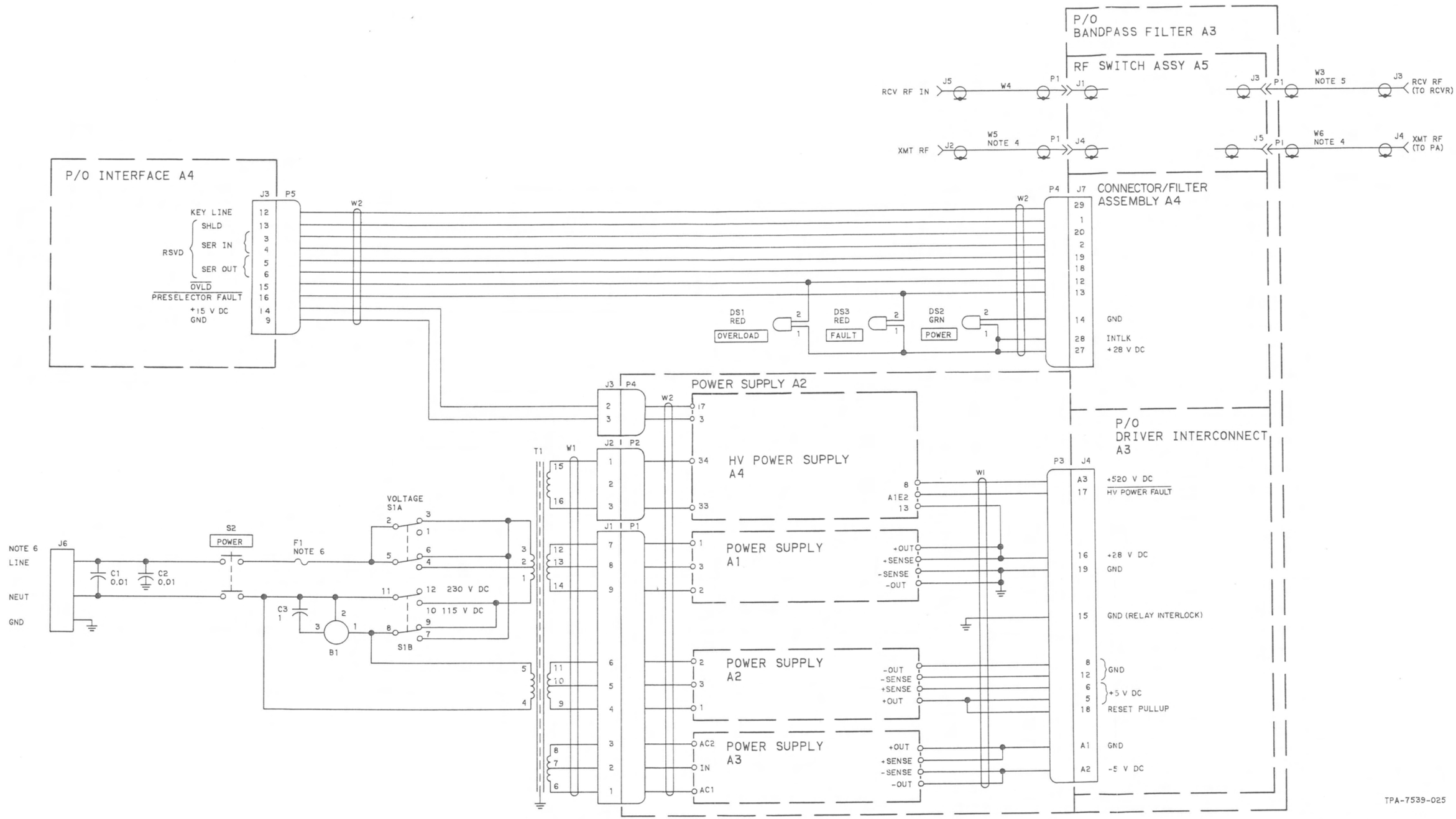
1. UNLESS OTHERWISE SPECIFIED; RESISTANCE VALUES ARE IN OHMS AND CAPACITANCE VALUES ARE IN MICROFARADS.
2. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH SUBASSEMBLY DESIGNATION. ITEMS NOT ENCLOSED IN SUBASSEMBLY LINES ARE MOUNTED ON CHASSIS A1.
3. CAPACITORS A1C1 THRU A1C38 ARE 0.002 MICROFARADS.
4. USED ONLY ON PRESELECTOR PART NO 622-3522-002.
5. FOR PRESELECTOR PART NO 622-3522-004, RF CABLE W3 IS REPLACED WITH THE FOLLOWING:



6. PRIMARY POWER IS 105/115 V AC OR 215/230 V AC, 47-400 Hz SINGLE PHASE. FOR 105/115 V AC; F1 IS 5 A. FOR 215/230 V AC F1 IS 3 A.

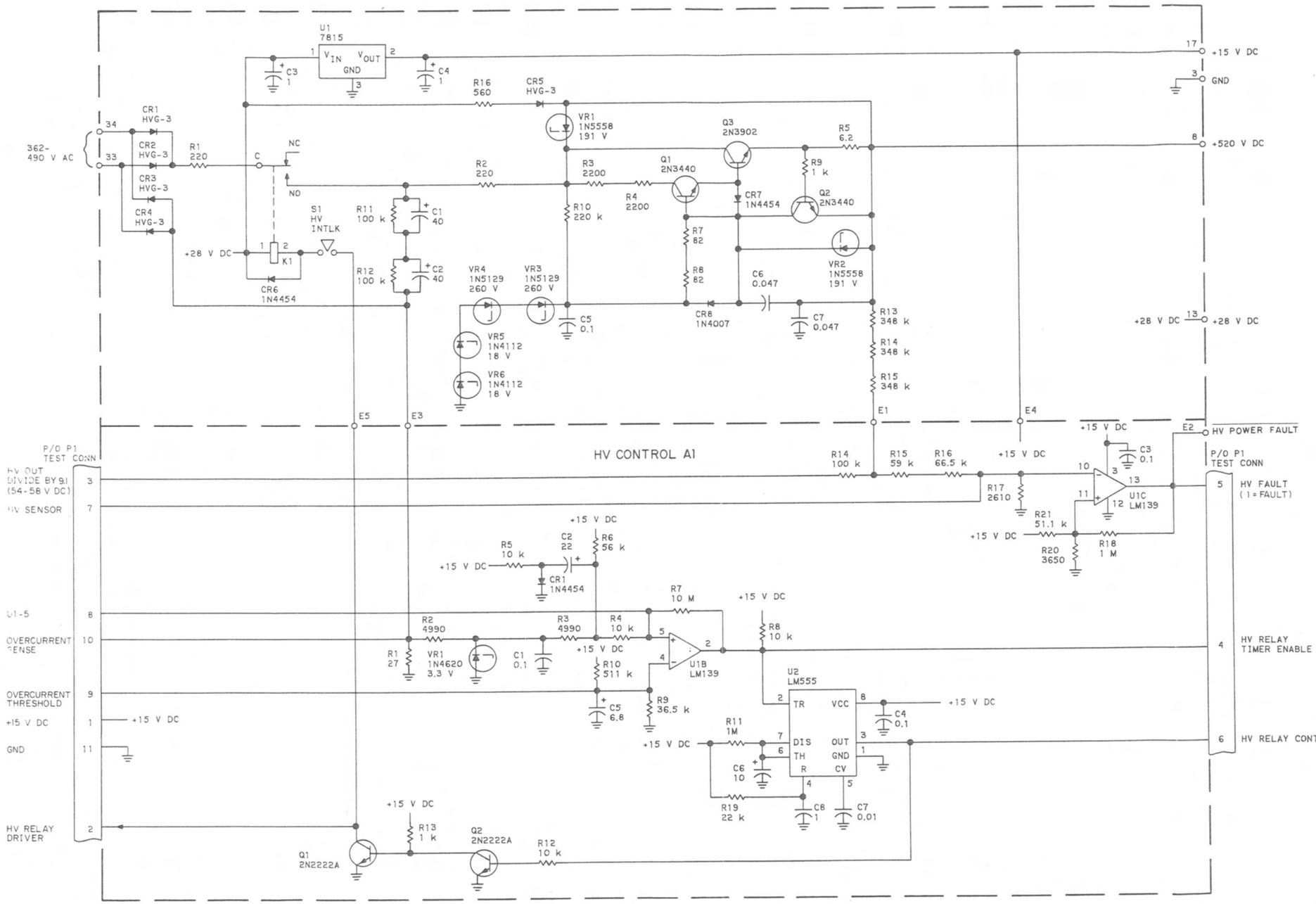
TPA-7539-025

Chassis A1 and Power Supply A2, Schematic Diagram
Figure 7-1 (Sheet 1 of 2)



TPA-7539-025

Chassis A1 and Power Supply A2, Schematic Diagram
Figure 7-1 (Sheet 2)



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/SUBASSEMBLY DESIGNATION.
3. TYPE DESIGNATIONS SHOWN MAY BE GENERIC IN FORM AND ARE FOR REFERENCE ONLY. SEE APPLICABLE PARTS LIST FOR REPLACEMENT PARTS.

TPA-7672-014

High-Voltage Power Supply A2A4, Schematic Diagram
Figure 7-2