



815 Broad Hollow Rd., Farmingdale, New York 11735

(631) 755-7625 Fax: (631) 755-7046

This word document contains figures representing the Schematics for the Receiver Transmitter RT-1501A. These figures are scanned images from Section VII of the maintenance manual part number 006-15590-0000, Revision 2 dated October 1991. It should be noted that those pages "Intentionally Left Blank" were not scanned and are therefore not included here.



BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

SECTION VII DIAGRAMS

1. General

This section contains schematic diagrams and pictorials of the PC boards, PC modules, and assemblies of the RT-1501A Radar Receiver-Transmitter.

2. Summary of Unit Modifications

The "Summary of Unit Modifications" page summarizes the unit modifications by unit modification number, the PC modules and boards affected, the subassembly modification number, the reason for the change, the serial number of the unit when the modification became effective, and, if available, the service bulletin number. The "Summary of Changes To" page for each assembly provides additional modification information.

3. Schematic Diagram, PC Board Component Layout, and Summary of Changes

The main frame assembly schematic diagram illustrates the intercabling between the main frame assembly and the PC modules, PC boards, and assemblies. Each PC module/board is illustrated by a schematic diagram and PC board component layout diagram.

Each diagram is covered by a "Summary of Changes To" page.

All assembly modifications are described in detail. If the modification is too extensive to be verbally described, or numerous changes have already been described verbally, a current version of the schematic is added to the existing schematic.

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MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER

SUMMARY OF UNIT MODIFICATIONS

P/N 4001973-0751

UNIT MOD NO.	BOARD(S) AFFECTED	SUBASSY MOD NO.	REASON	EFF. UNIT S/N	SERVICE BULLETIN NO.*
5	--	--	Equipment released at Unit Mod 5.	--	--
6	Afc Module	4 & 5	To eliminate noise spikes on 12V line.	1103	1500-030
8	Processor Module	1	To correct afc sample tuning.	1116	1500-050
9	--	--	Addition of conformal coating to PCB assemblies to correct PCB moisture contamination.	1139	1500-058
10	S/L Pulse Modulator	1	To eliminate high-voltage arcing above 20,000 feet.	1139	1500-060
	Mid-Pulse	1			
	Main frame	3			
11	Preamplifier Assembly	1	To improve limiter reliability.	1139	1500-066
	Bias Module	1			

* SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL.

I.B. 21500B
PART 4

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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

SUMMARY OF CHANGES TO

**MAIN FRAME
INTERCONNECT MODULE P/N 3606475-0501 AND -0502**

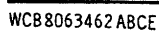
SUBASSY. MOD. NO.	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N

*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

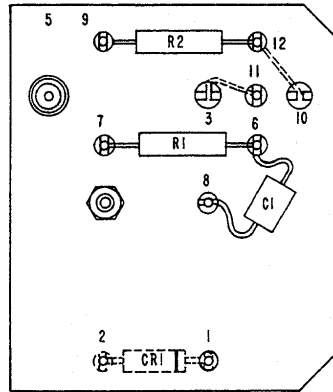
7-5/7-6
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MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER



NOTE: ADD 1200 TO ALL REFERENCE DESIGNATIONS.

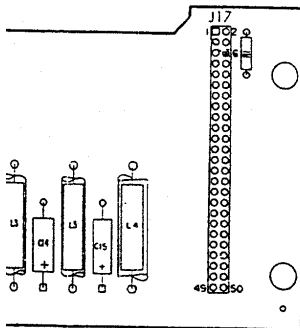
7-7/7-8
Oct/91



WCA8063545

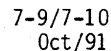
NOTE: ADD 1050 TO ALL REFERENCE DESIGNATIONS.

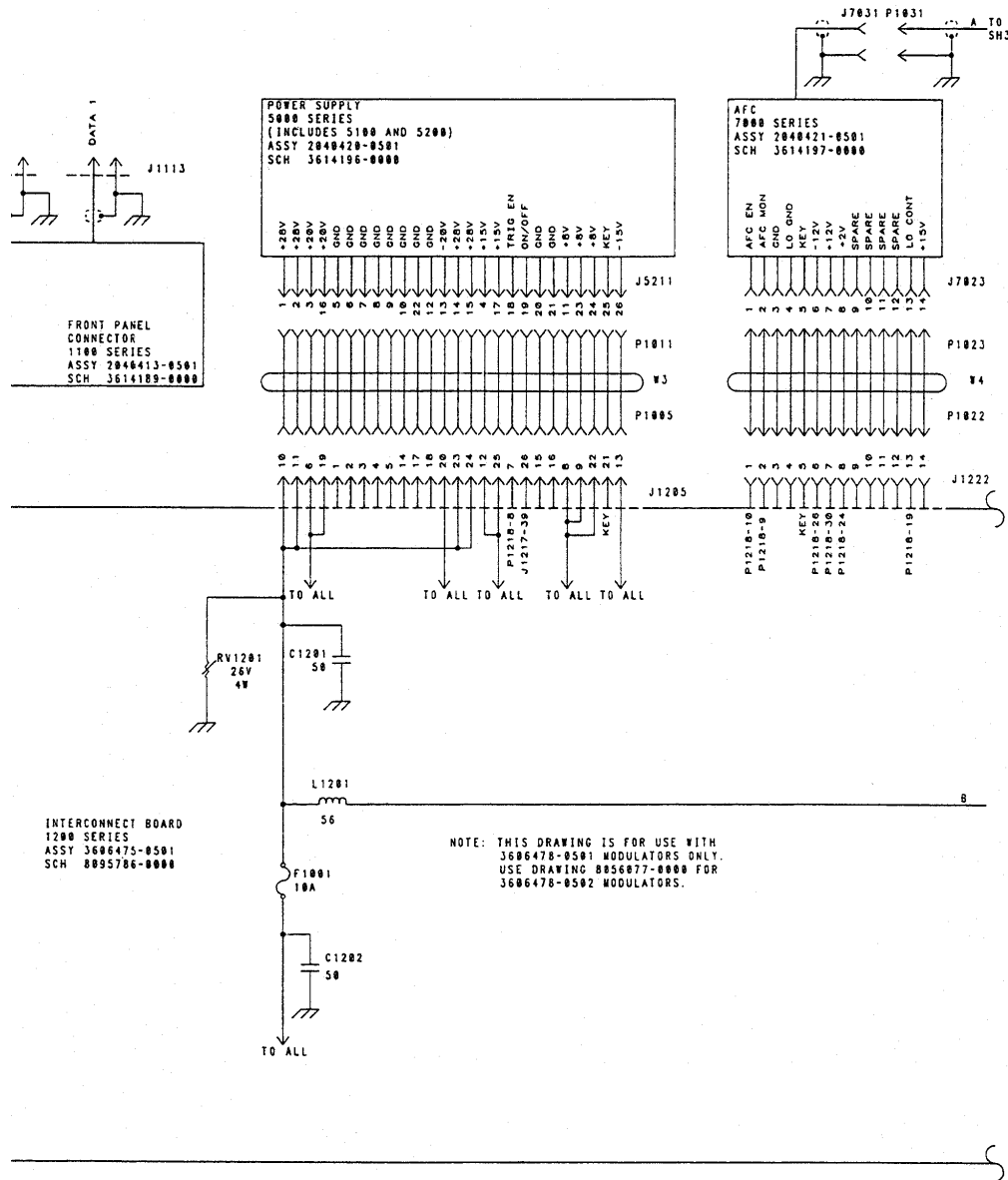
Pulse Transformer Terminal Board



/7-8
t/91

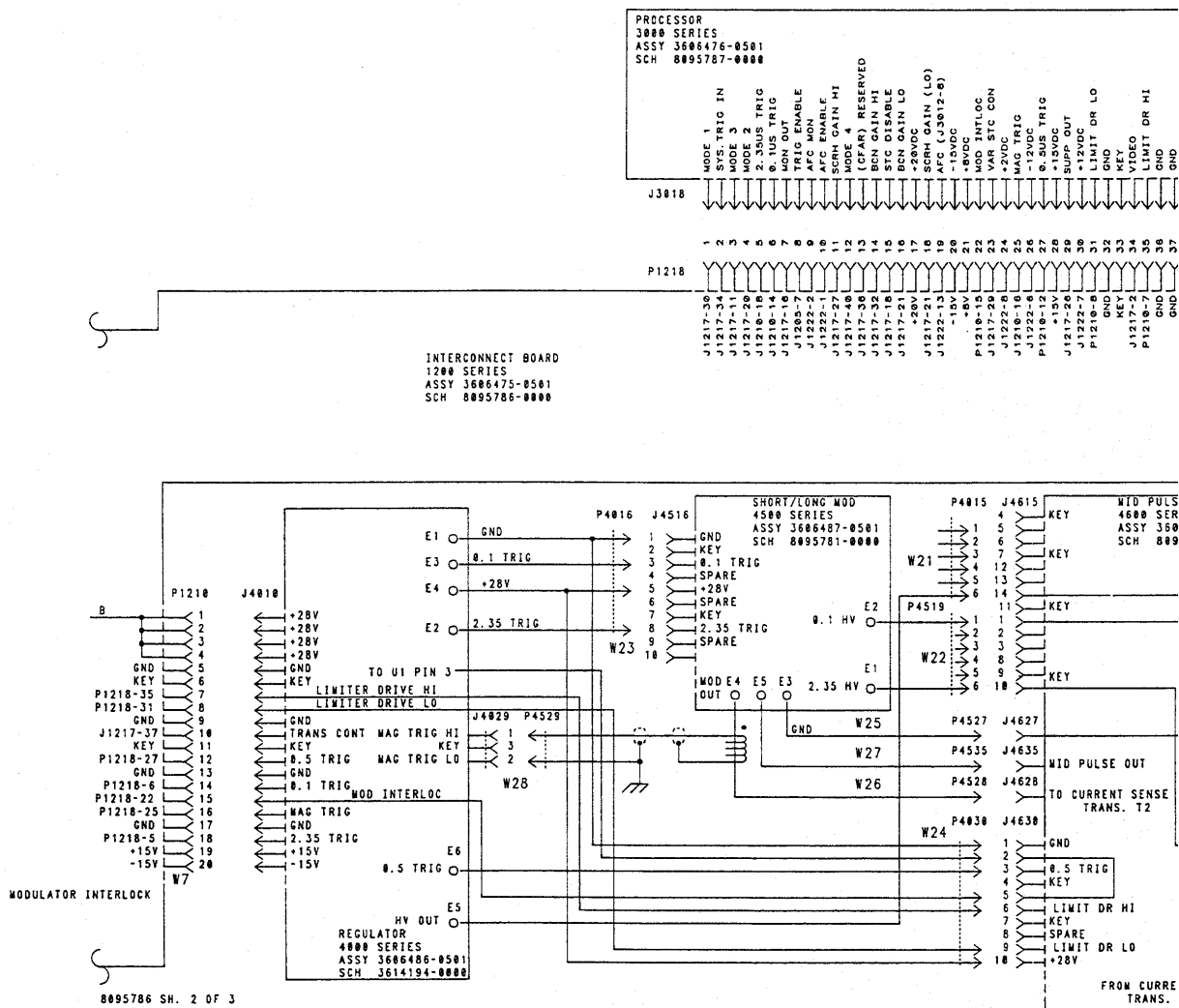
MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER





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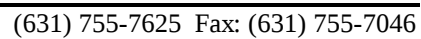
**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



Main Frame/Interconnect, Schematic Diagram (for Units
with P/N 3606478-0501 Modulators Only)
Figure 7-1 (Sheet 2)

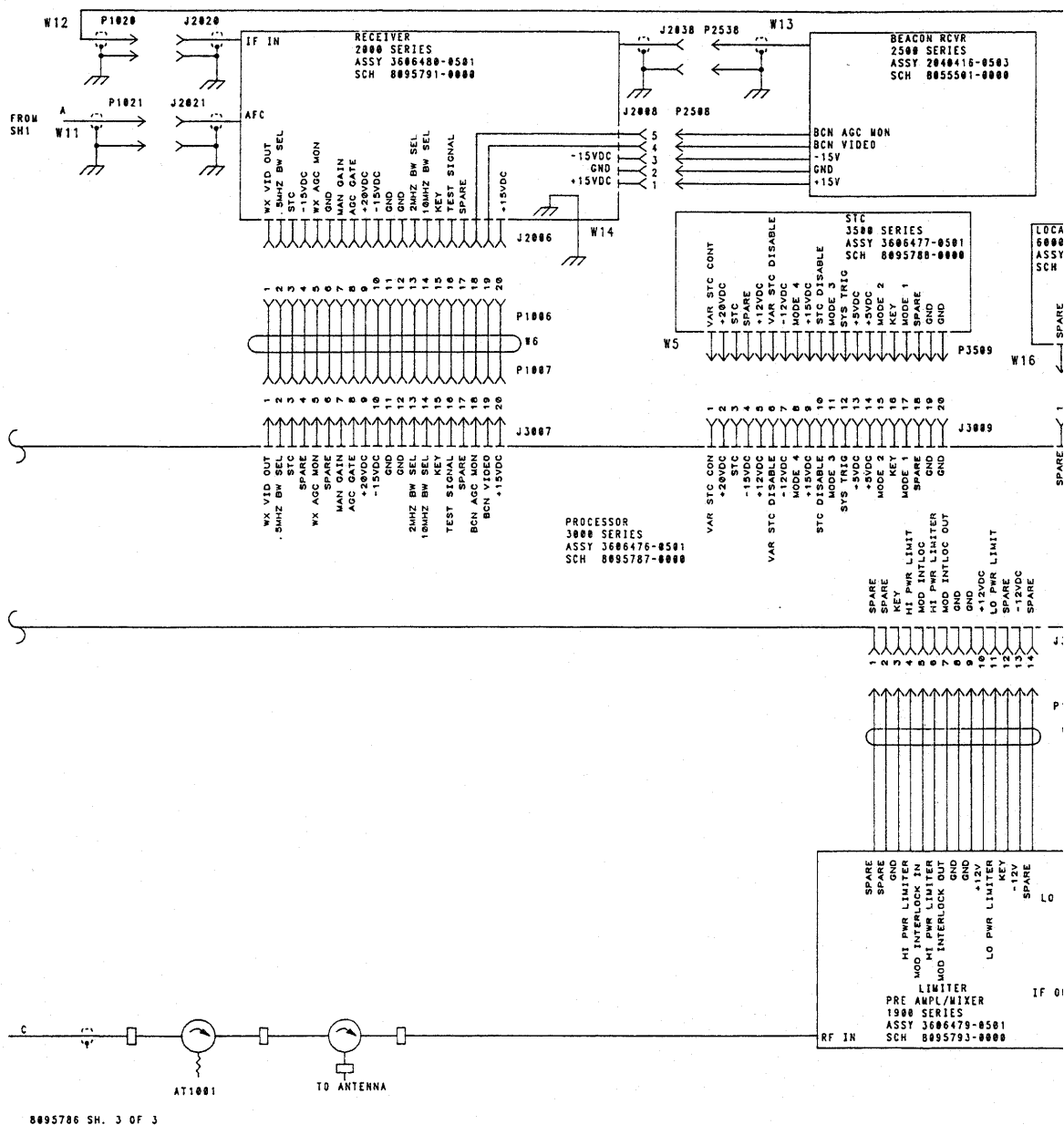
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7-11/7-12
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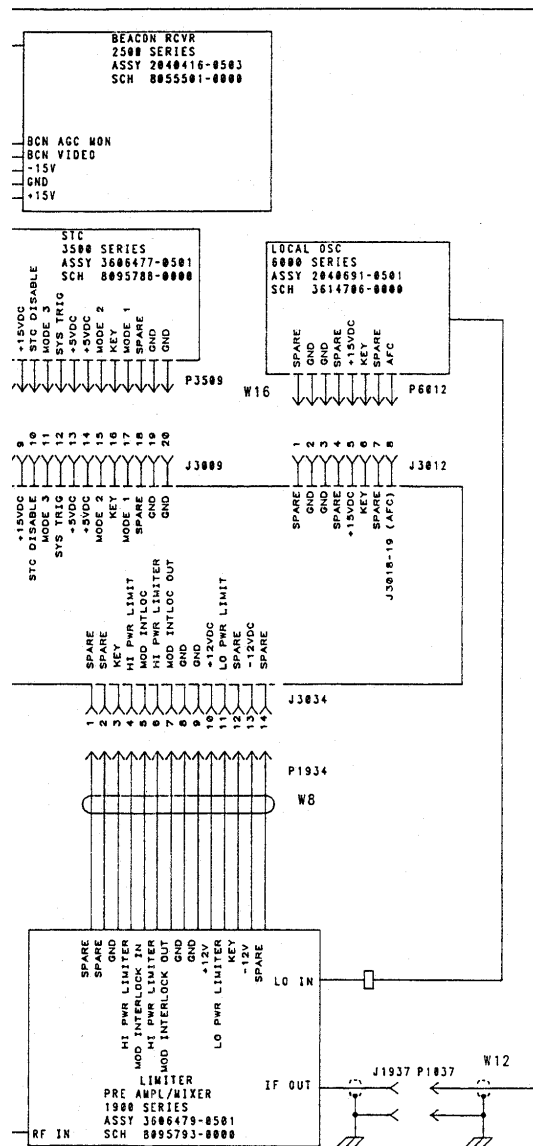
**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



Main Frame/Interconnect, Schematic Diagram (for Units
with P/N 3606478-0501 Modulators Only)
Figure 7-1 (Sheet 3)

I.B. 215008
PART 4

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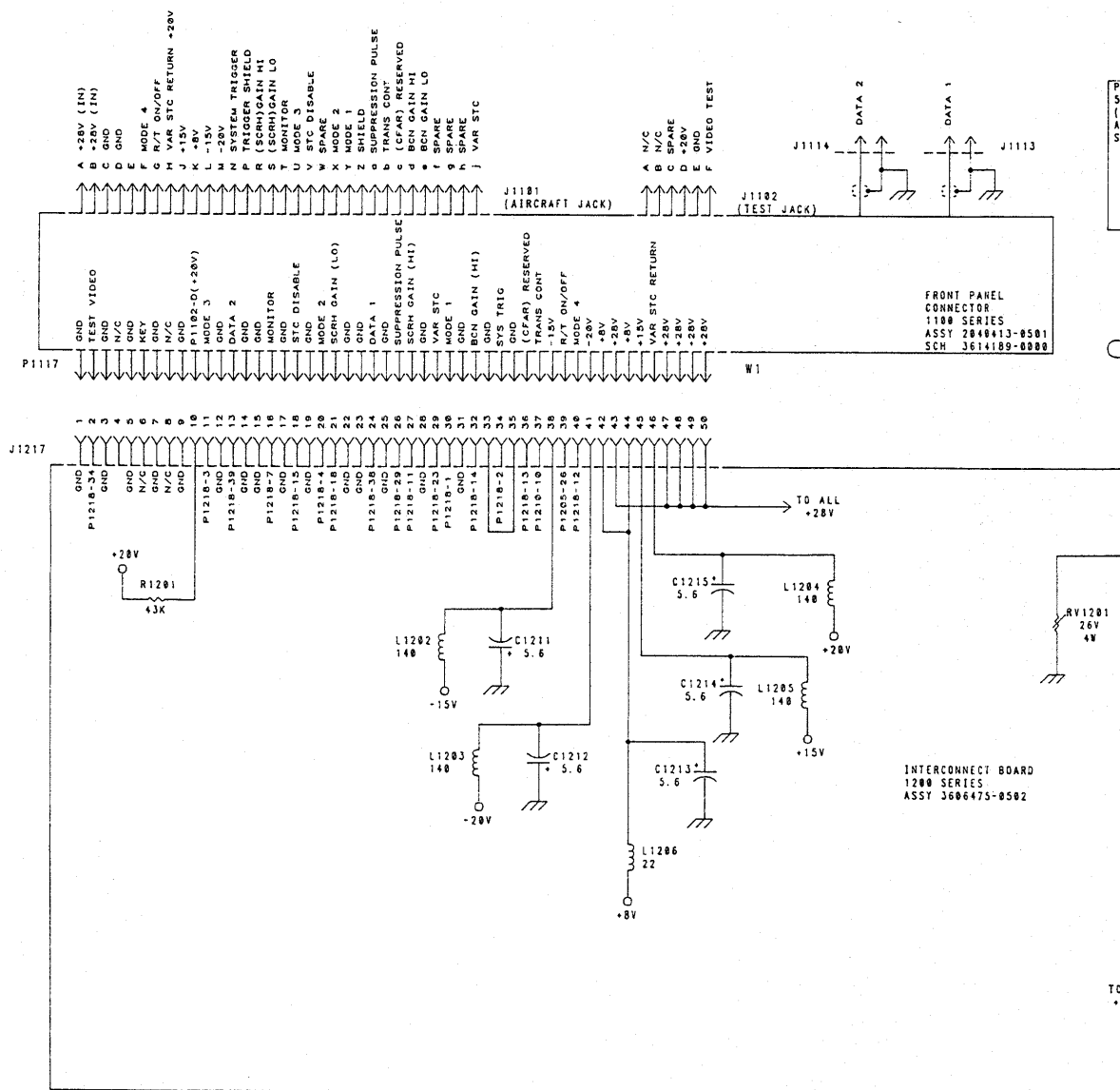
NOTES:

1. ALL RESISTANCE IN OHMS
2. ALL CAPACITANCE IN uF UNLESS OTHERWISE SPECIFIED
3. ALL INDUCTORS IN uH UNLESS OTHERWISE SPECIFIED
4. ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED
5. THIS SYMBOL  INDICATES AREA OF SUBASSEMBLY MOD CHANGE; NUMBER WITHIN SYMBOL INDICATES MOD LEVEL.
6. NEXT CIRCUIT SYMBOL NUMBER TO BE USED FOR COMPONENT ADDITIONS: R2, RV2, C16, L7, E4. (1200 SERIES ONLY)
7. CAUTION: THIS MODULE EITHER CONTAINS OR IS ASSOCIATED WITH ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES. HANDLE WITH CARE IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE REPAIR SECTION OF THIS MANUAL. EACH ESDS DEVICE IS IDENTIFIED IN THE PARTS LIST.



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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



8056877- SH. 1 OF 3

Main Frame/Interconnect, Schematic Diagram (for Units
with P/N 3606478-0502 Modulators Only)

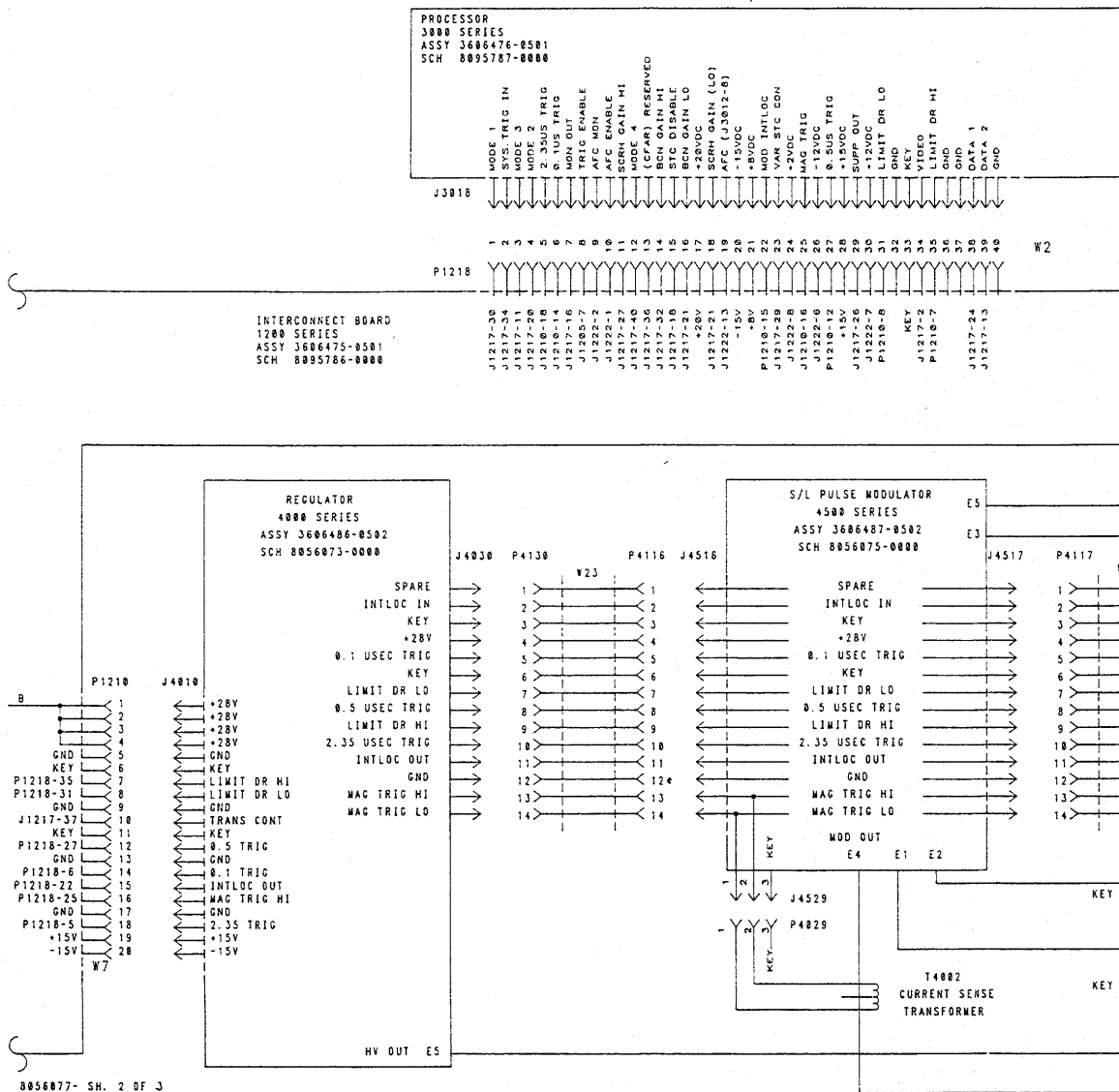
I.B. 21500B
PART 4

Figure 7-1.1 (Sheet 1 of 3)

7-14.1/7-14.2
Oct/91

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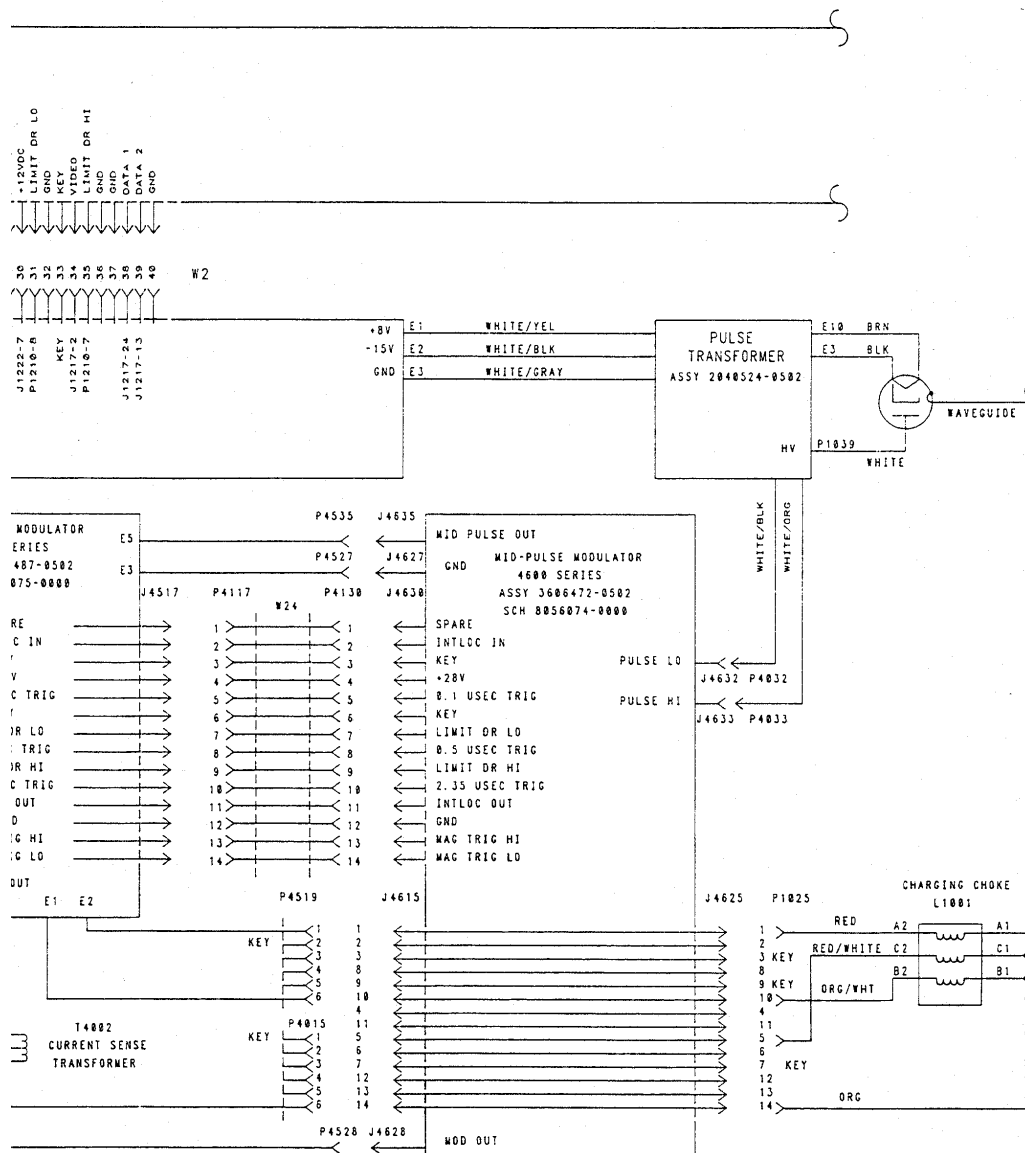
**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



Main Frame/Interconnect, Schematic Diagram (for Units
with P/N 3606478-0502 Modulators Only)
Figure 7-1.1 (Sheet 2)

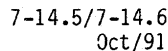
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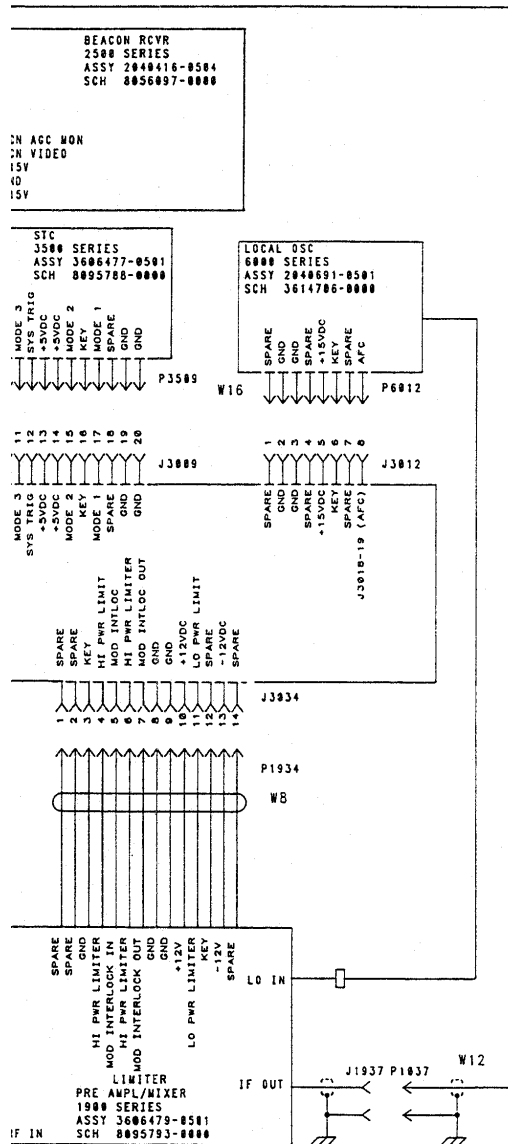
7-14.3/7-14.4
Oct/91



4.4
/91

MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER





NOTES:

1. ALL RESISTANCE IN OHMS
2. ALL CAPACITANCE IN μ F UNLESS OTHERWISE SPECIFIED
3. ALL INDUCTORS IN μ H UNLESS OTHERWISE SPECIFIED
4. ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED
5. THIS SYMBOL $\Rightarrow$ INDICATES AREA OF SUBASSEMBLY MOD CHANGE; NUMBER WITHIN SYMBOL INDICATES MOD LEVEL.
6. NEXT CIRCUIT SYMBOL NUMBER TO BE USED FOR COMPONENT ADDITIONS: R2, RV2, C16, L7, E4. (1200 SERIES ONLY)
7. CAUTION: THIS MODULE EITHER CONTAINS OR IS ASSOCIATED WITH ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES. HANDLE WITH CARE IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE REPAIR SECTION OF THIS MANUAL. EACH ESDS DEVICE IS IDENTIFIED IN THE PARTS LIST.





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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

SUMMARY OF CHANGES TO

**FRONT CONNECTOR MODULE
P/N 2040413-0501**

SUBASSY. MOD. NO. 	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N

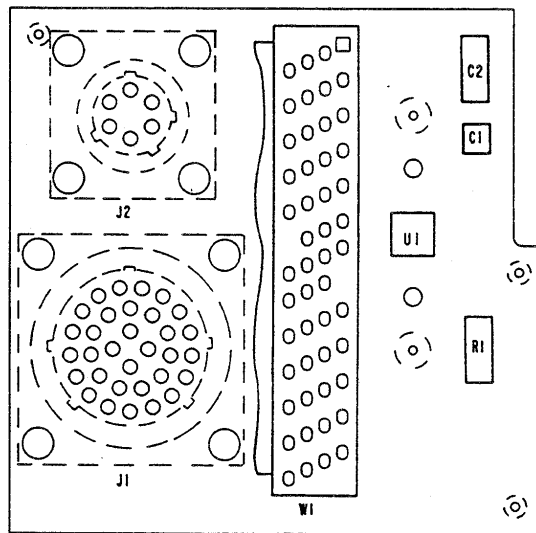
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



ADD 1100 TO ALL REFERENCE DESIGNATIONS

A3612995C

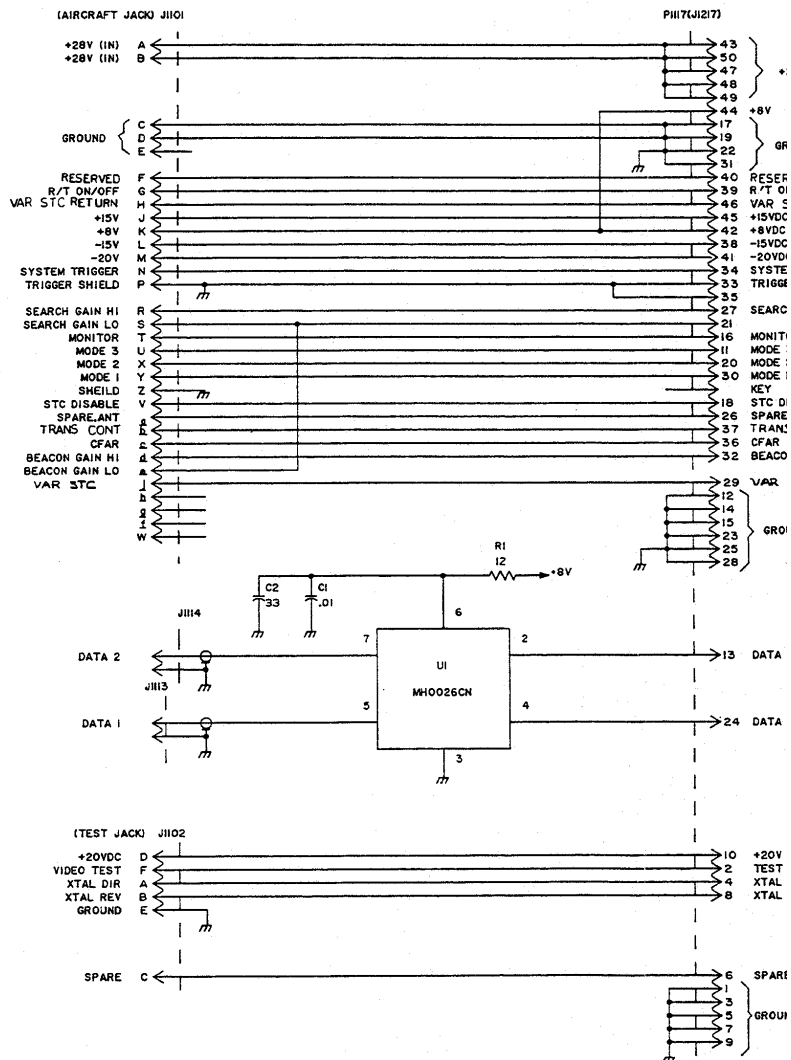
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Front Connector Module

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RT-1501A RECEIVER-TRANSMITTER**

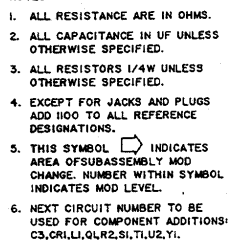
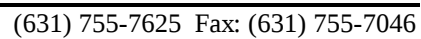


3614189 E SHT.1 OF 1

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Front Connector Module, Schematic Diagram
Figure 7-2

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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

SUMMARY OF CHANGES TO

RECEIVER MODULE
P/N 3606480-0501

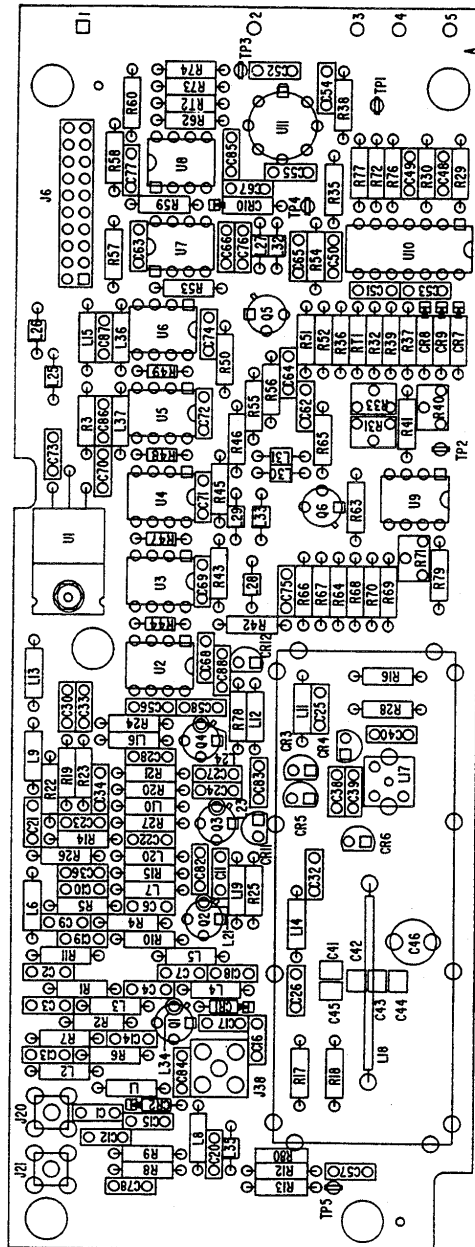
SUBASSY. MOD. NO.	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1	Changed value of R2004 and R2008 from 680 ohms to 200 ohms (sheet 1). To increase the gain in the afc amplifier to provide more dynamic range for the 4.5V afc lock adjustment.	- -	1120
2	Changed value of L2016 from 0.22 uH to 0.27 uH (sheet 2). To correct broadband tuning of search mode to proper 87-MHz centering with maximum amplitude.	- -	1132
3	Changed value of R2003 from 10k-ohms to 1000 ohms and C2006 from 47 picofarads to 470 picofarads (sheet 1). To prevent receiver oscillation.	1500-065	1139

*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

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MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER



NOTE: ADD 2000 TO ALL REFERENCE DESIGNATIONS.

WC88063467AR

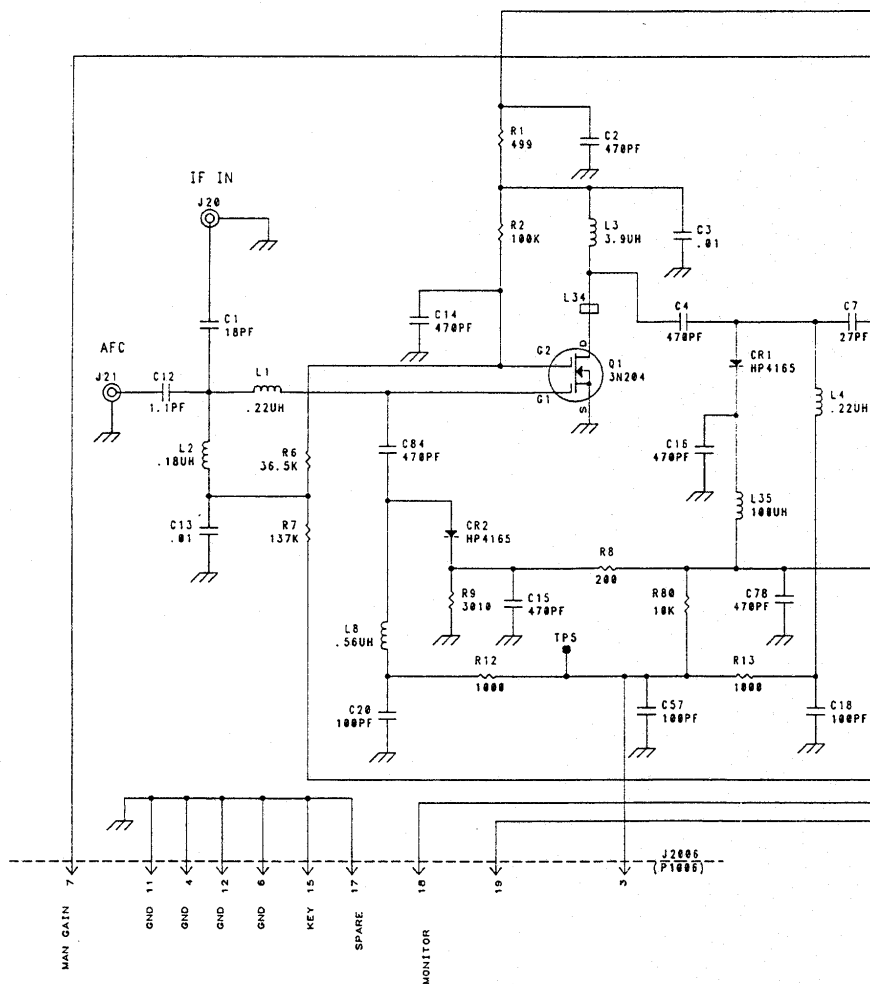
Receiver Module

I.B. 21500B
PART 4

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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



8895791A SH. 1 OF 3

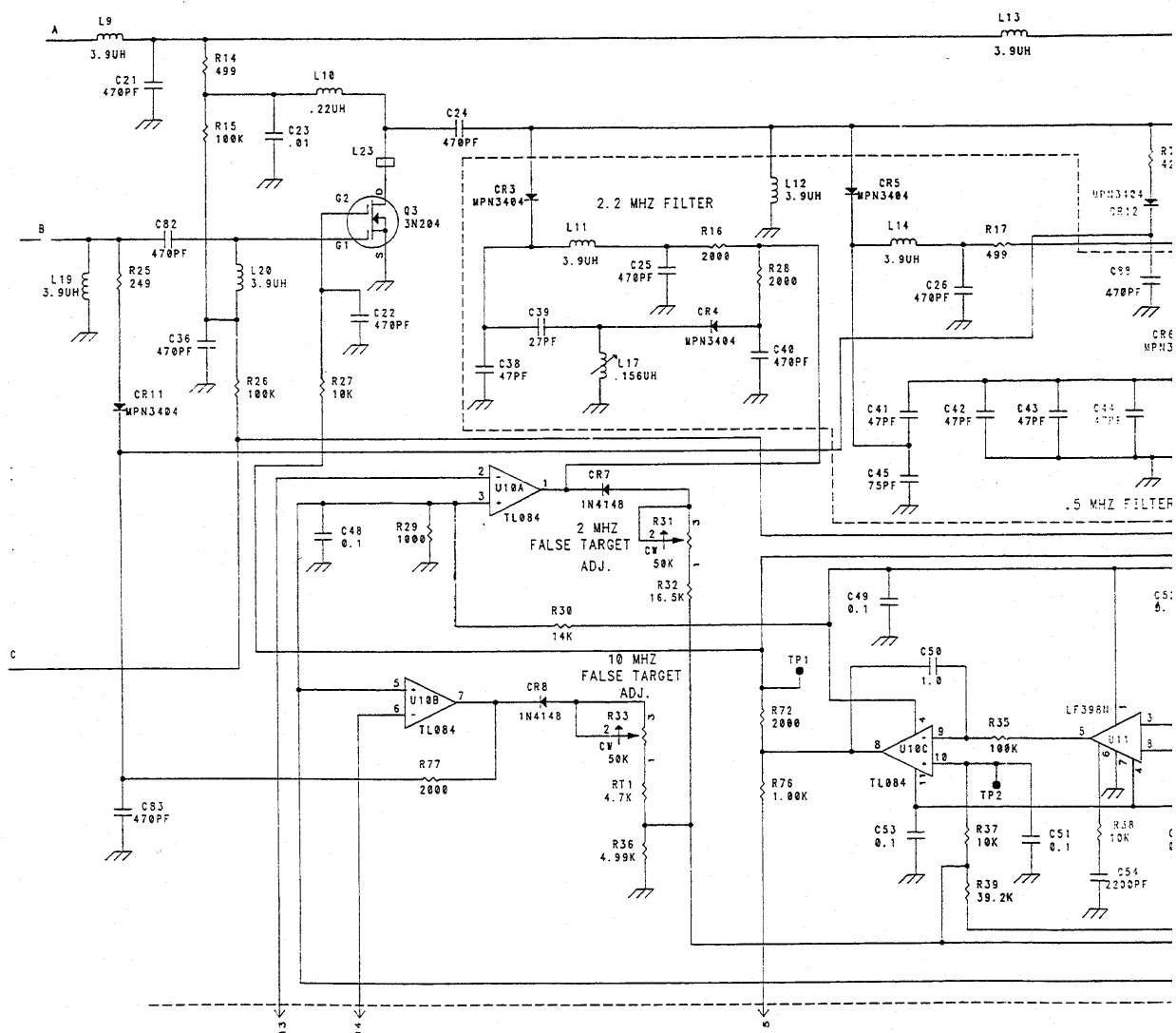
I.B. 21500B
PART 4

Receiver Module, Schematic Diagram
Figure 7-3 (Sheet 1 of 3)

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Oct/91

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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

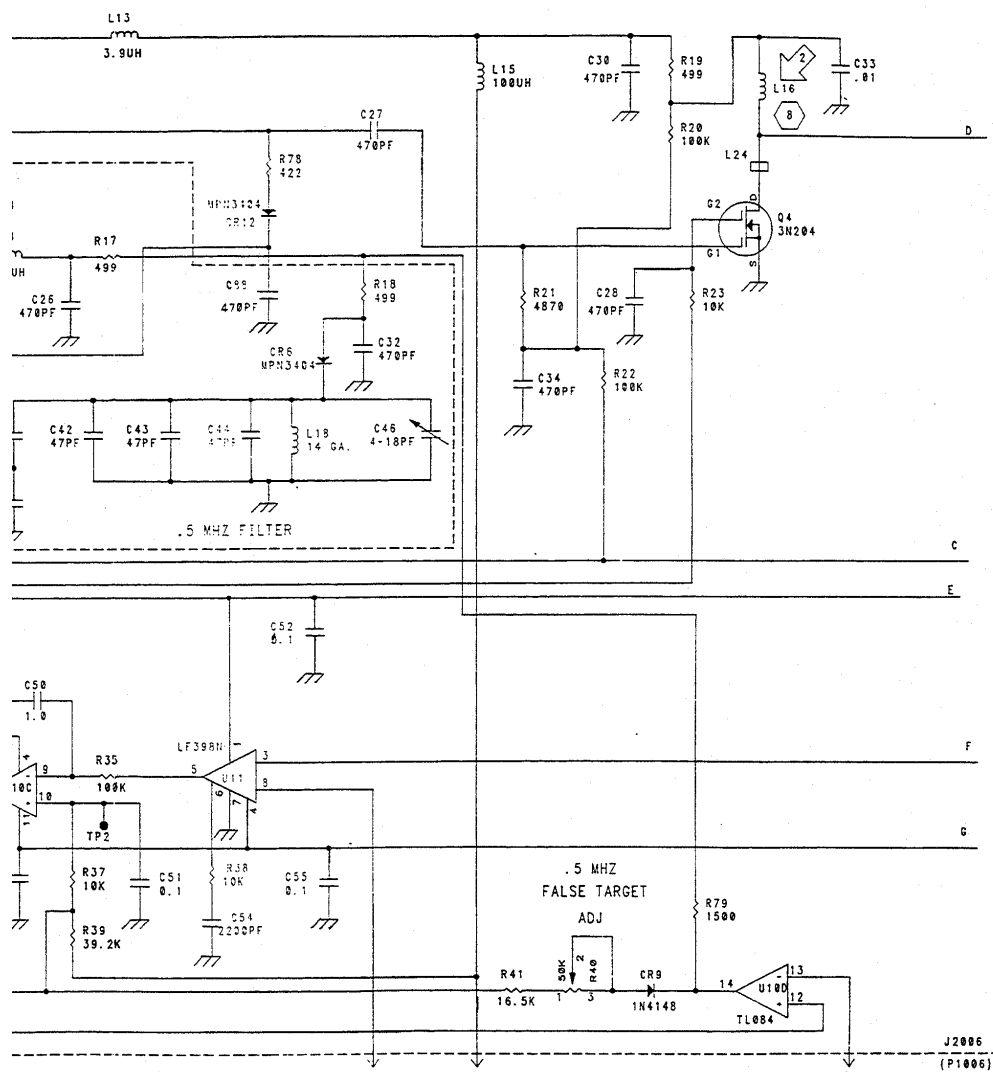


8895791C SH. 2 OF 3

I.B. 21500B
PART 4

Receiver Module, Schematic Diagram
Figure 7-3 (Sheet 2)

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Oct/91



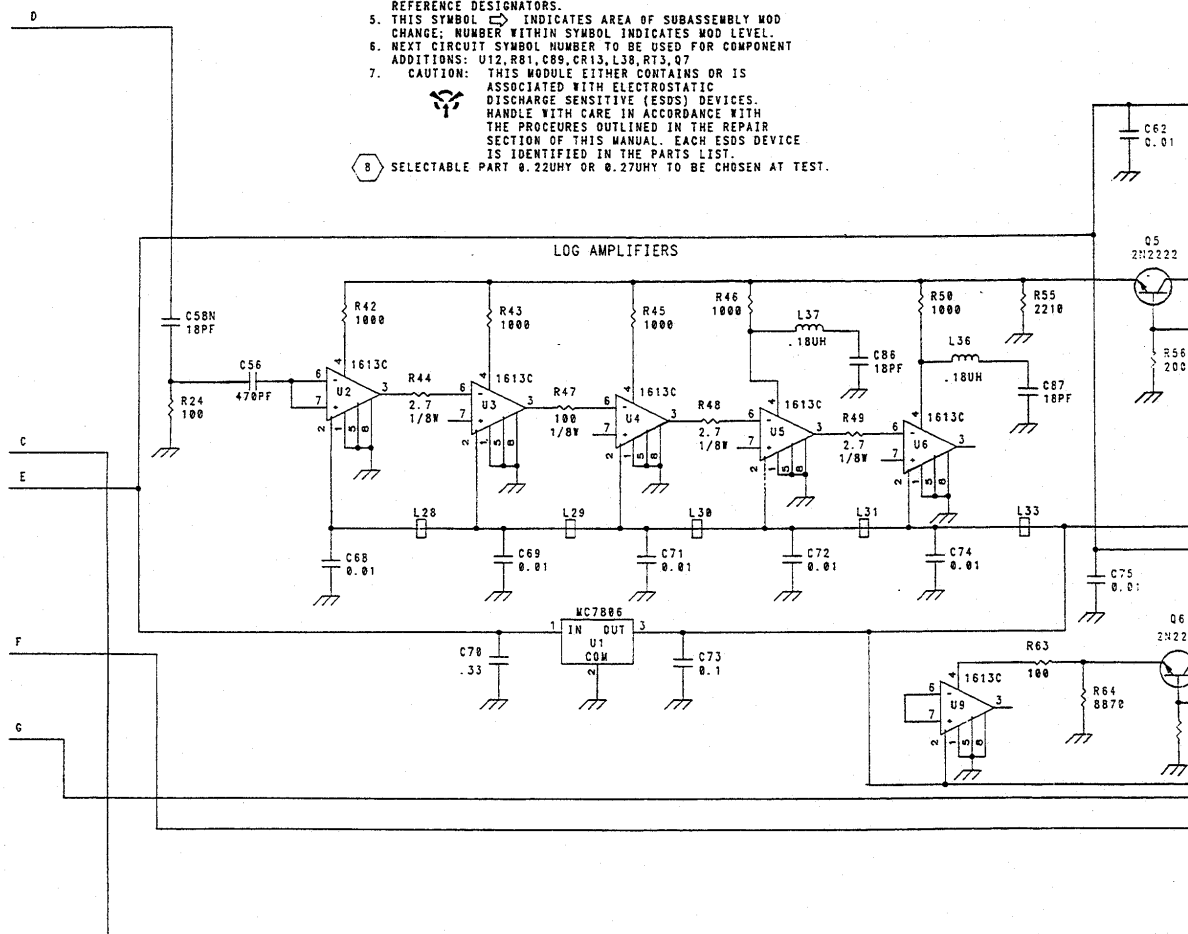
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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

NOTES:

1. ALL RESISTANCE IN OHMS
2. ALL CAPACITANCE IN μ F UNLESS OTHERWISE SPECIFIED
3. ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED
4. EXCEPT FOR PLUGS AND JACKS ADD 2000 TO ALL REFERENCE DESIGNATORS.
5. THIS SYMBOL $\Rightarrow$ INDICATES AREA OF SUBASSEMBLY MOD CHANGE; NUMBER WITHIN SYMBOL INDICATES MOD LEVEL.
6. NEXT CIRCUIT SYMBOL NUMBER TO BE USED FOR COMPONENT ADDITIONS: U12,R81,C89,C13,L38,RT3,Q7
7. CAUTION: THIS MODULE EITHER CONTAINS OR IS ASSOCIATED WITH ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES. HANDLE WITH CARE IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE REPAIR SECTION OF THIS MANUAL. EACH ESDS DEVICE IS IDENTIFIED IN THE PARTS LIST.

8 SELECTABLE PART 0.22 μ H OR 0.27 μ H TO BE CHOSEN AT TEST.

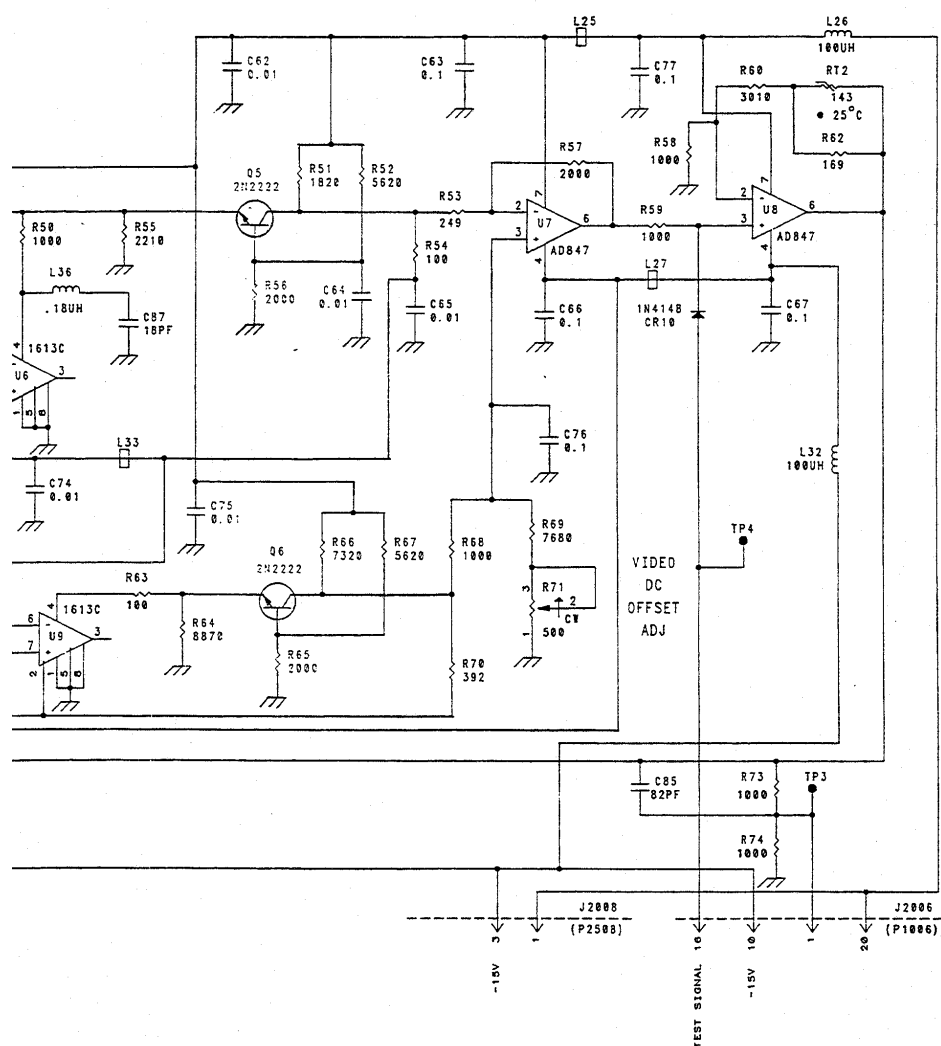


8895791A SH. 3 OF 3

I.B. 21500B
PART 4

Receiver Module, Schematic Diagram
Figure 7-3 (Sheet 3)

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**MAINTENANCE MANUAL
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SUMMARY OF CHANGES TO

**BEACON MODULE
P/N 2040416-0503**

SUBASSY. MOD. NO. 	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N

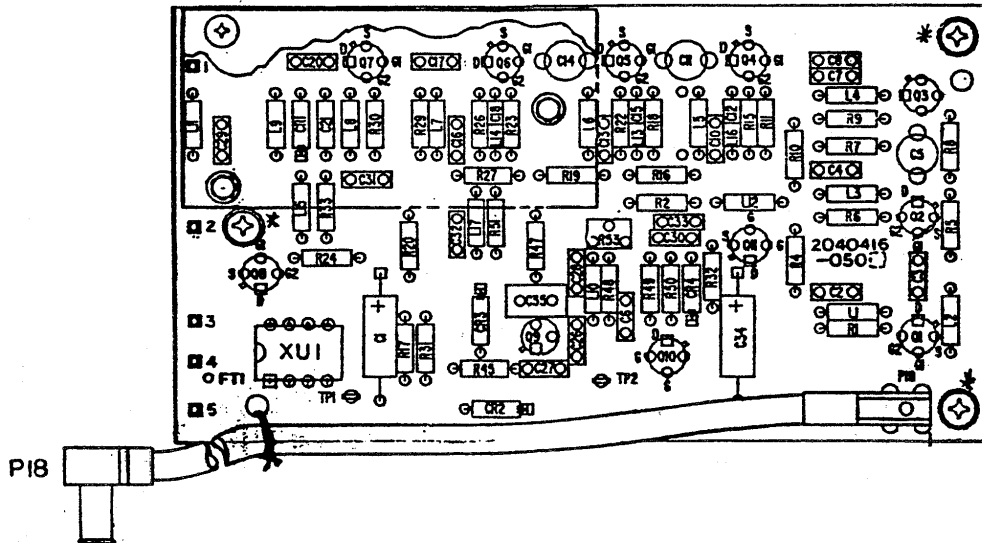
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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Aug 12/91

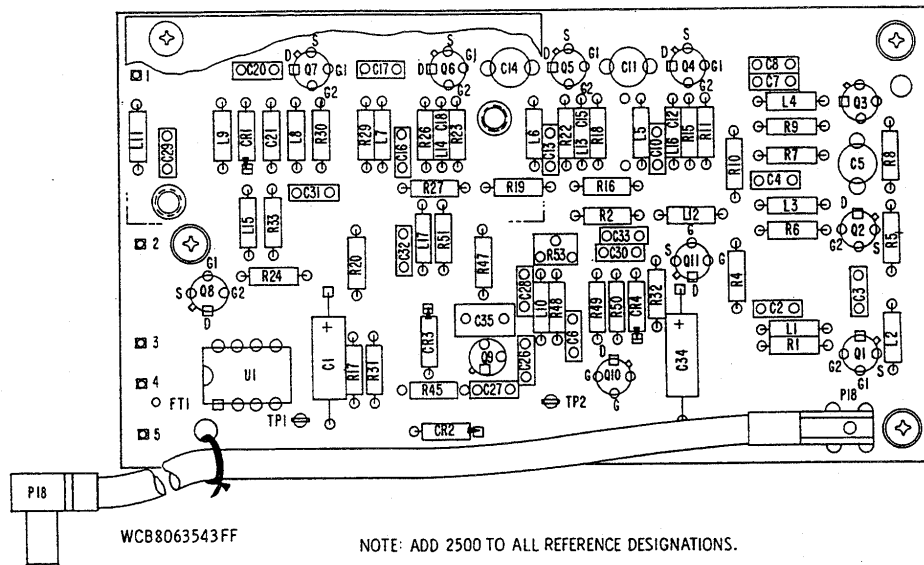
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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



WCA8063495EE

NOTE: ADD 2500 TO ALL REFERENCE DESIGNATIONS.



WCB8063543FF

NOTE: ADD 2500 TO ALL REFERENCE DESIGNATIONS.

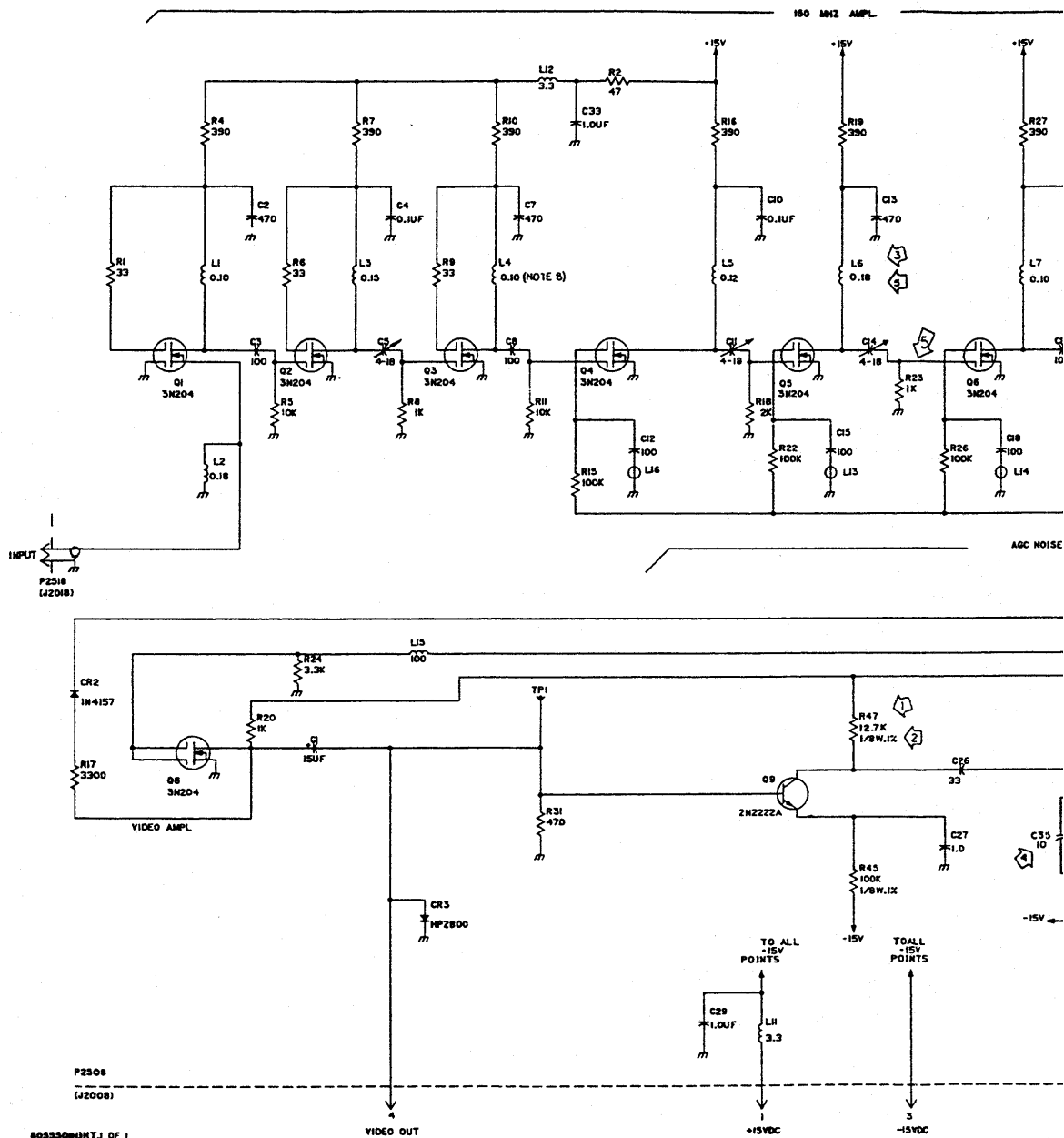
Beacon Module

I.B. 21500B
PART 4

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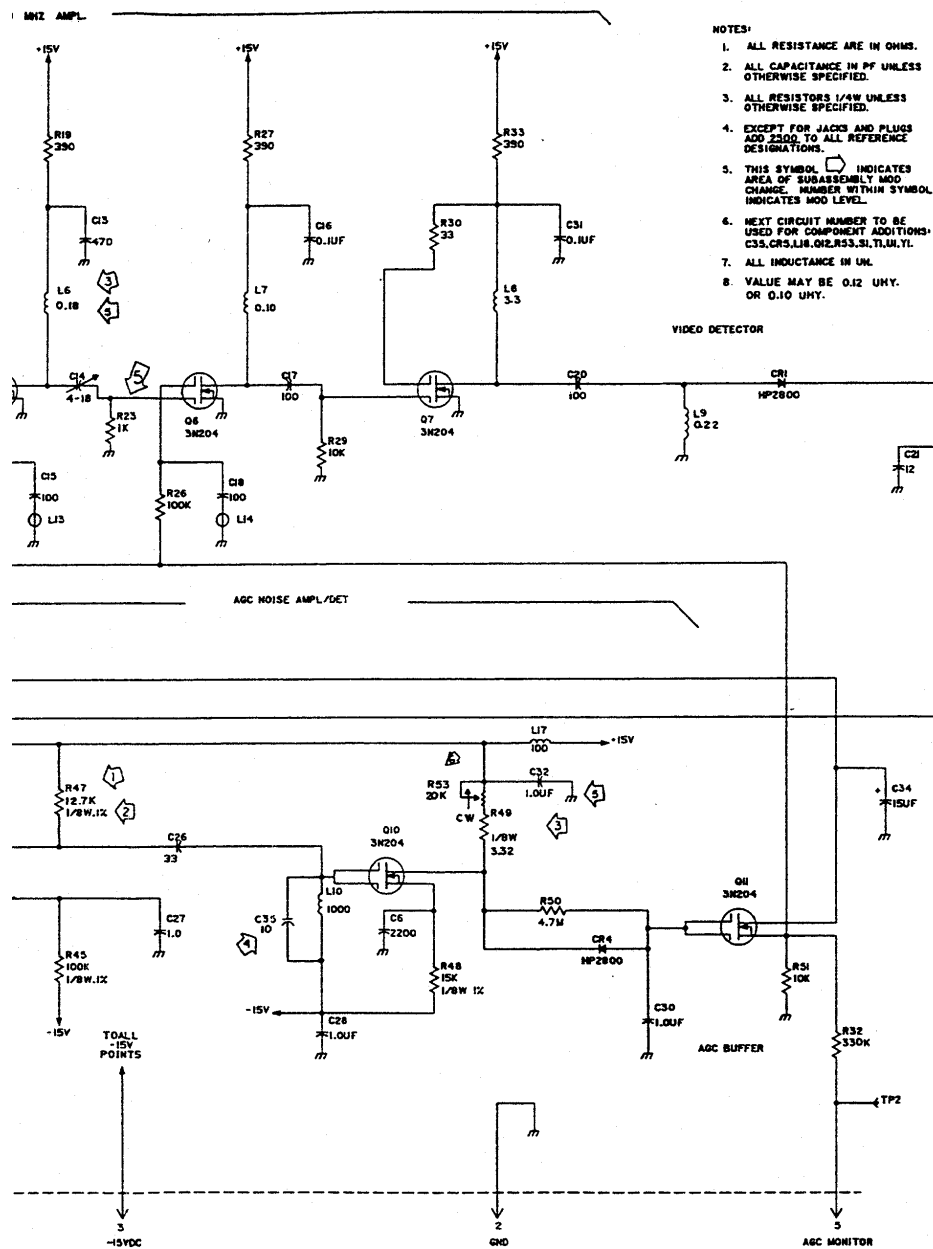
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RT-1501A RECEIVER-TRANSMITTER**



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PART 4

Beacon Module, Schematic Diagram
Figure 7-4

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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

SUMMARY OF CHANGES TO

**PROCESSOR MODULE
P/N 3606476-0501**

SUBASSY. MOD. NO. 	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1	Added C3057 to variable STC disable circuit (sheet 2). To correct afc sample timing.	1500-050	1116, 1114, 1112, & 1110

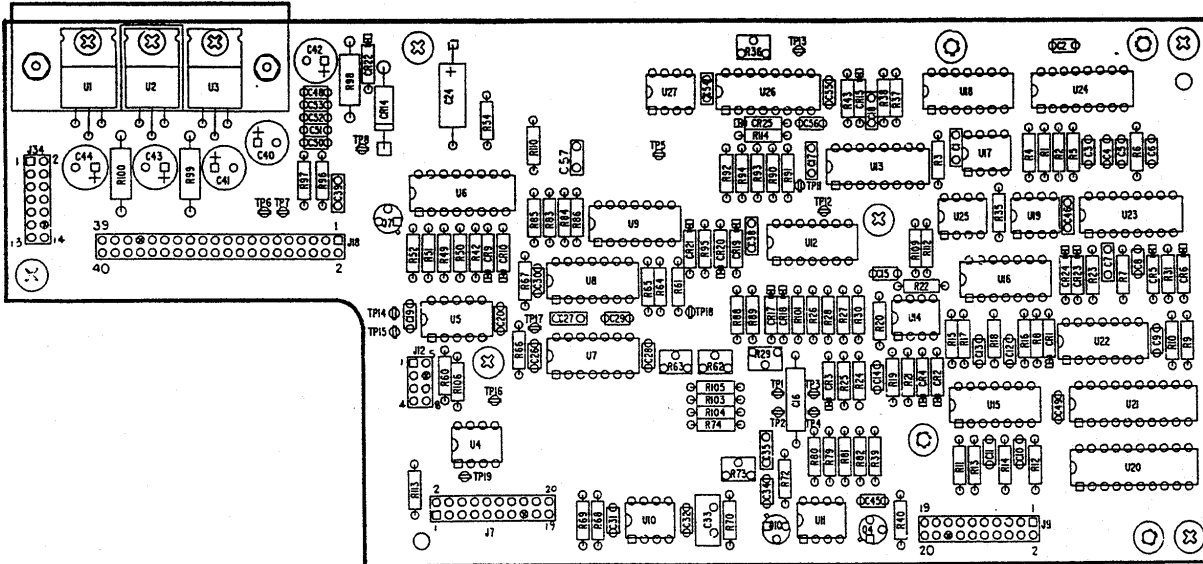
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

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PART 4

7-31/7-32
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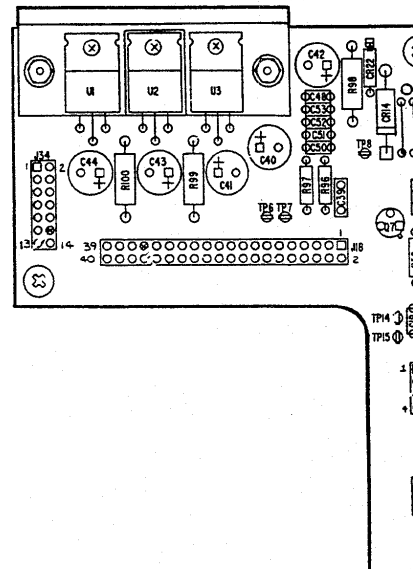
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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



WC88063456

NOTE: ADD 3000 TO ALL REFERENCE DESIGNATIONS.

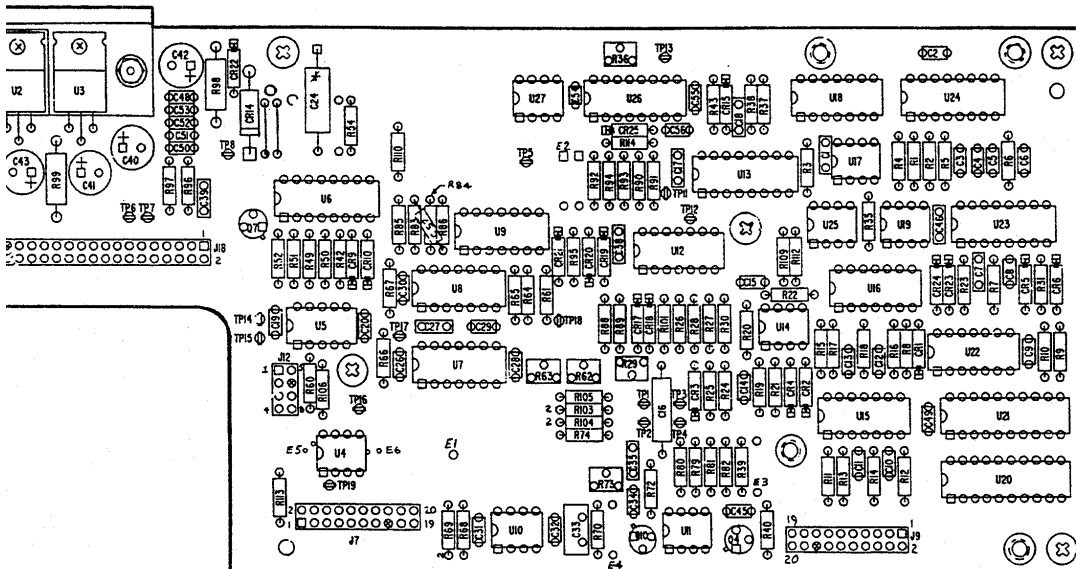
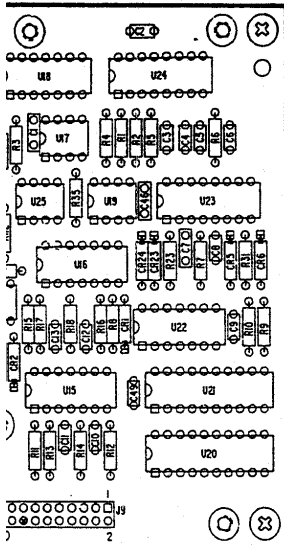


WC88063455BDN

Processor Module

I.B. 21500B
PART 4

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Aug 12/91



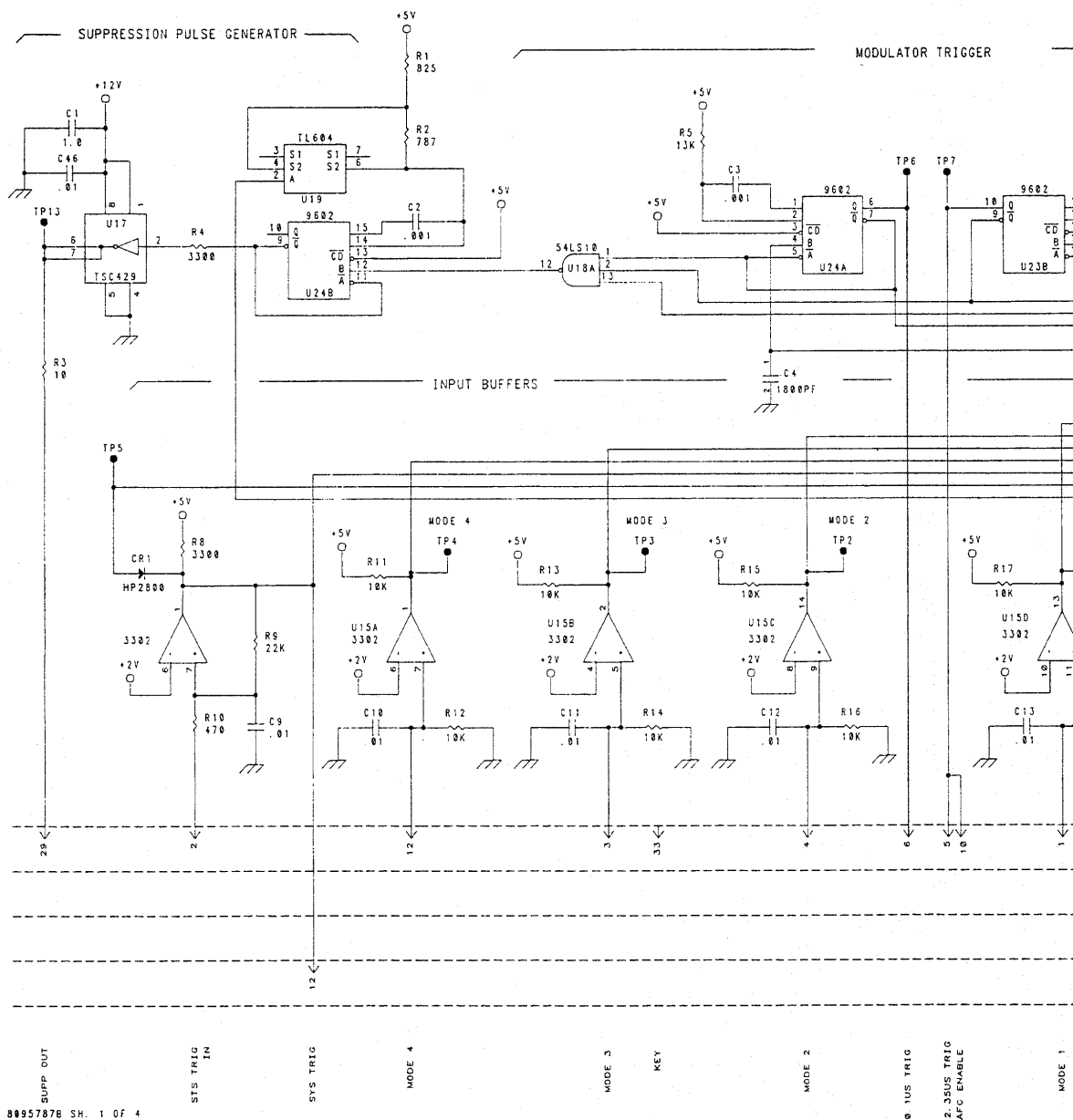
BDN

NOTE: ADD 3000 TO ALL REFERENCE DESIGNATIONS.

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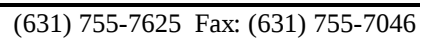
**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



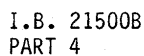
I.B. 21500B
PART 4

Processor Module, Schematic Diagram
Figure 7-5 (Sheet 1 of 4)

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Aug 12/91

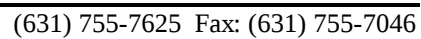


MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER

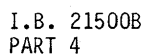


Processor Module, Schematic Diagram
Figure 7-5 (Sheet 2)

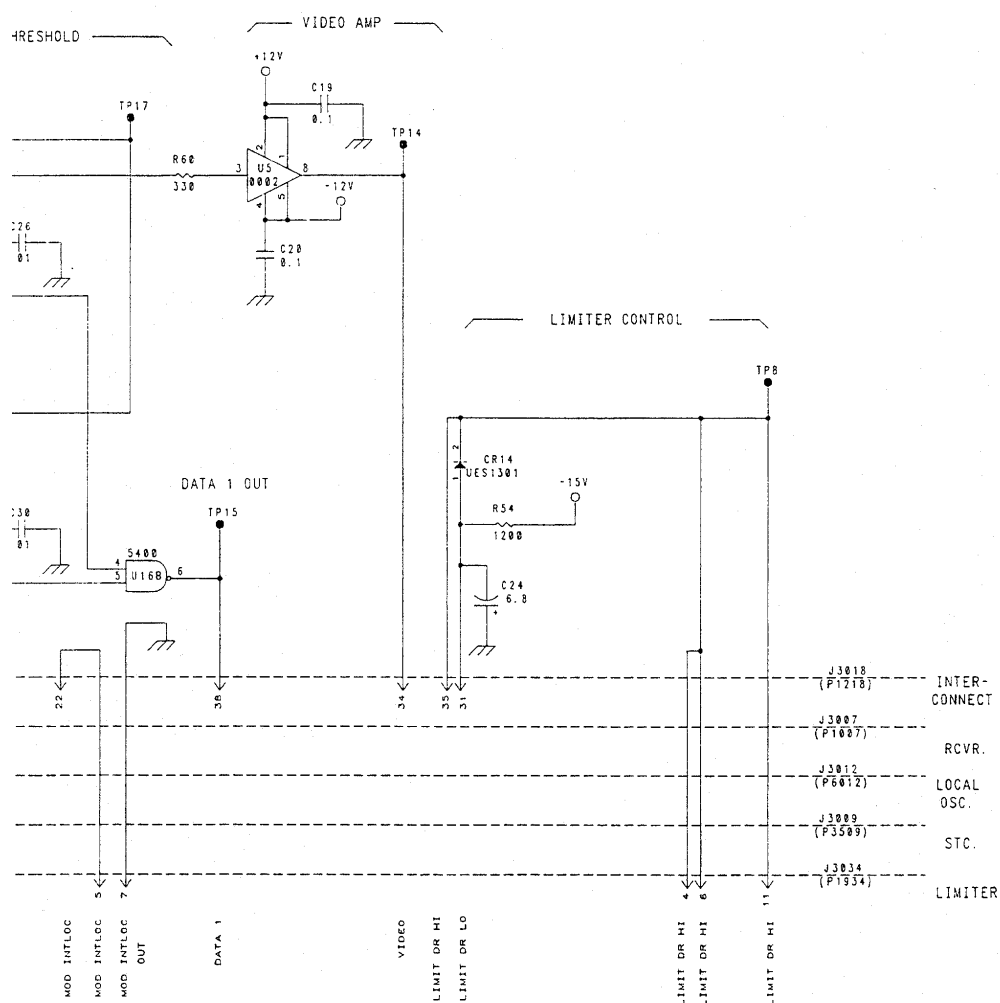
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RT-1501A RECEIVER-TRANSMITTER

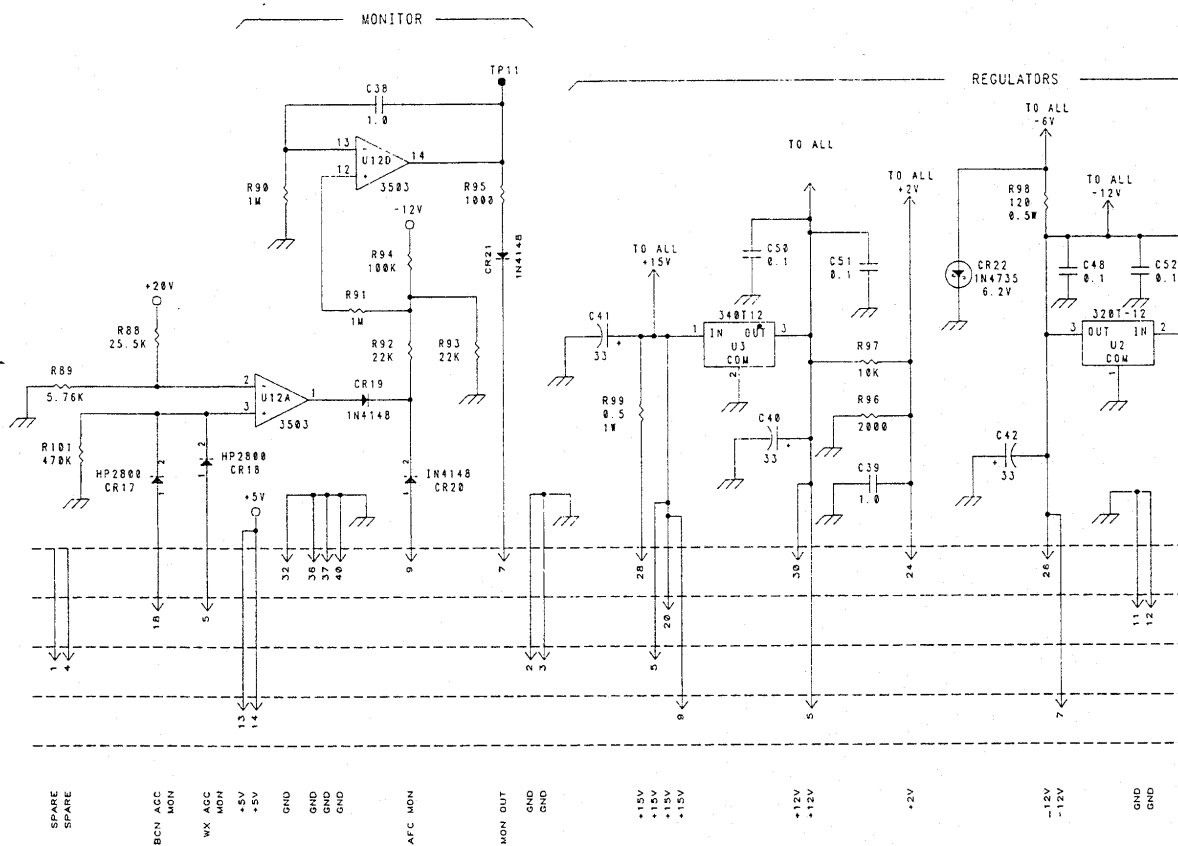
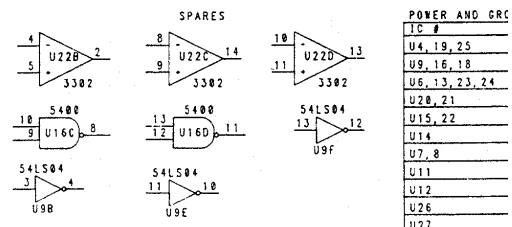


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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



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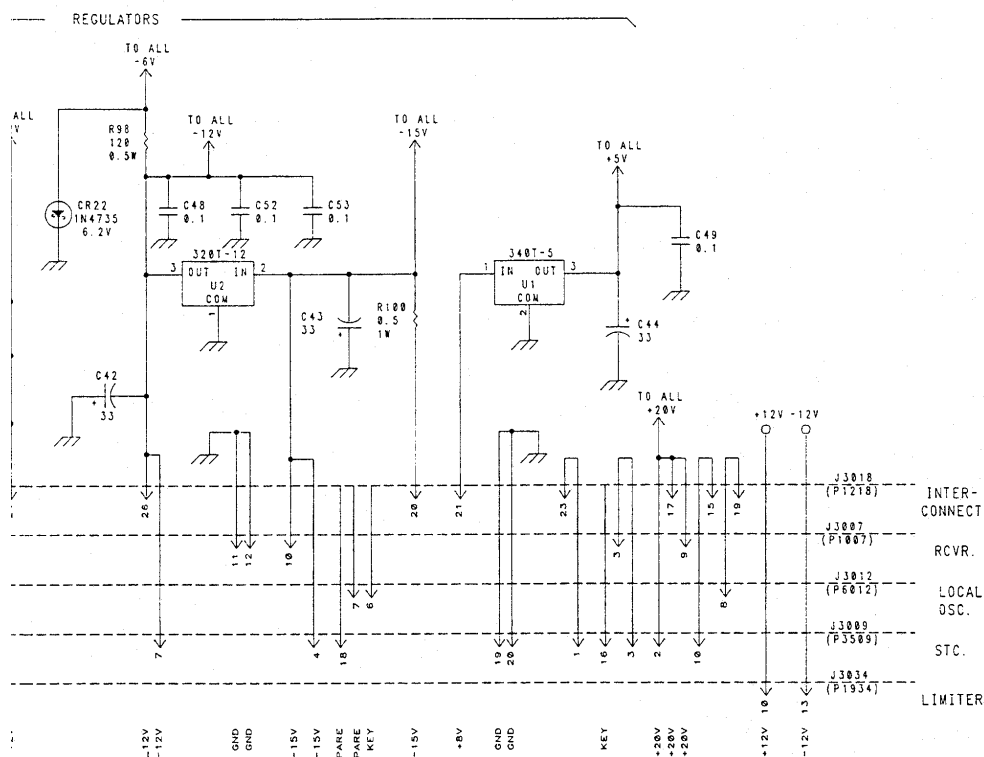
Processor Module, Schematic Diagram
Figure 7-5 (Sheet 4)

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Aug 12/91

POWER AND GROUND TABLE				
IC #	GND	+5	+12	-12
U4, 19, 25	1	8	5	
U9, 16, 18	7	14		
U6, 13, 23, 24	8	16		
U20, 21	10	20		
U15, 22	12	3		
U14	1	8		
U7, 8	11			
U11		8	4	
U12		4	11	
U26	5	13	4	
U27		7	4	

NOTES:

1. ALL RESISTANCE IN OHMS
2. ALL CAPACITANCE IN uF UNLESS OTHERWISE SPECIFIED
3. ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED
4. EXCEPT FOR PLUGS AND JACKS ADD 3000 TO ALL REFERENCE DESIGNATORS.
5. THIS SYMBOL  INDICATES AREA OF SUBASSEMBLY MOD CHANGE; NUMBER WITHIN SYMBOL INDICATES MOD LEVEL.
6. NEXT CIRCUIT SYMBOL NUMBER TO BE USED FOR COMPONENT ADDITIONS: U28, R114, C57, CR26, L5, Q11, TP21.
7. CAUTION: THIS MODULE EITHER CONTAINS OR IS ASSOCIATED WITH ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES. HANDLE WITH CARE IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE REPAIR SECTION OF THIS MANUAL. EACH ESDS DEVICE IS IDENTIFIED IN THE PARTS LIST.





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BENDIX/KING

MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER

SUMMARY OF CHANGES TO

MODULATOR REGULATOR MODULE
P/N 3606486-0501 AND -0502

SUBASSY. MOD. NO.	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1	Replaced 4.7V Zener diode CR4016 (1N750A) with 6.8V Zener diode (1N754A).	- -	1125

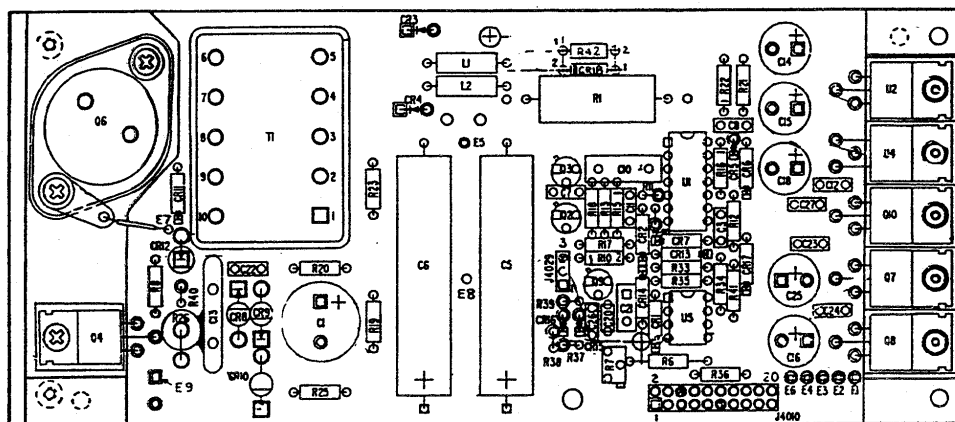
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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Aug 12/91

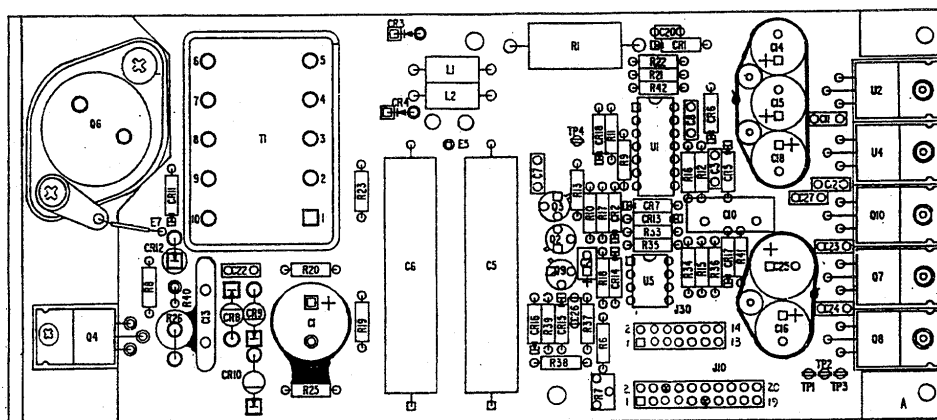
BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



WCB8063459 F

NOTE: ADD 4000 TO ALL REFERENCE DESIGNATIONS.



WCB8063459 AF

NOTE: ADD 4000 TO ALL REFERENCE DESIGNATIONS.

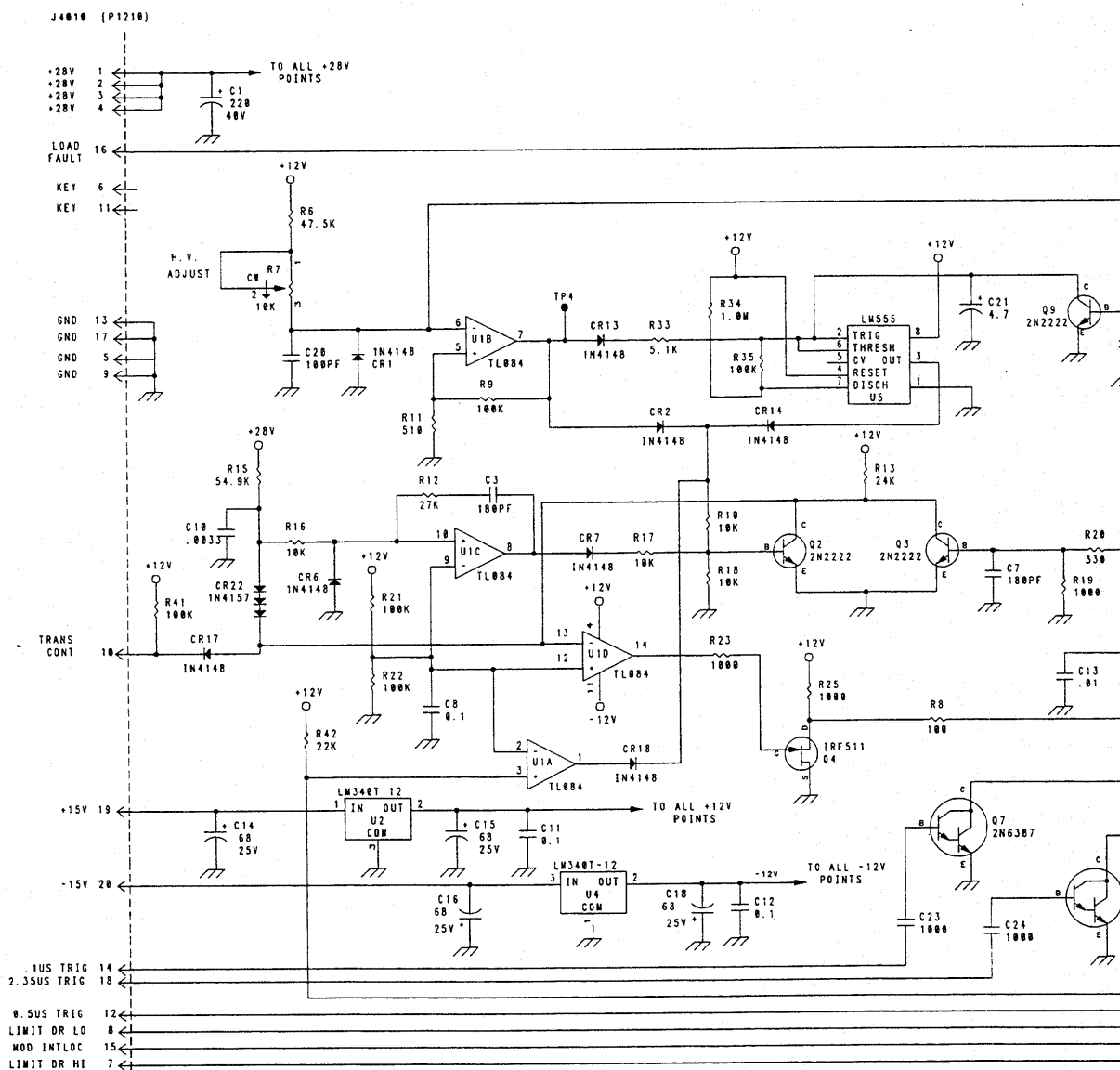
I.B. 21500B
PART 4

Modulator Regulator Module

7-44
Oct/91

BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



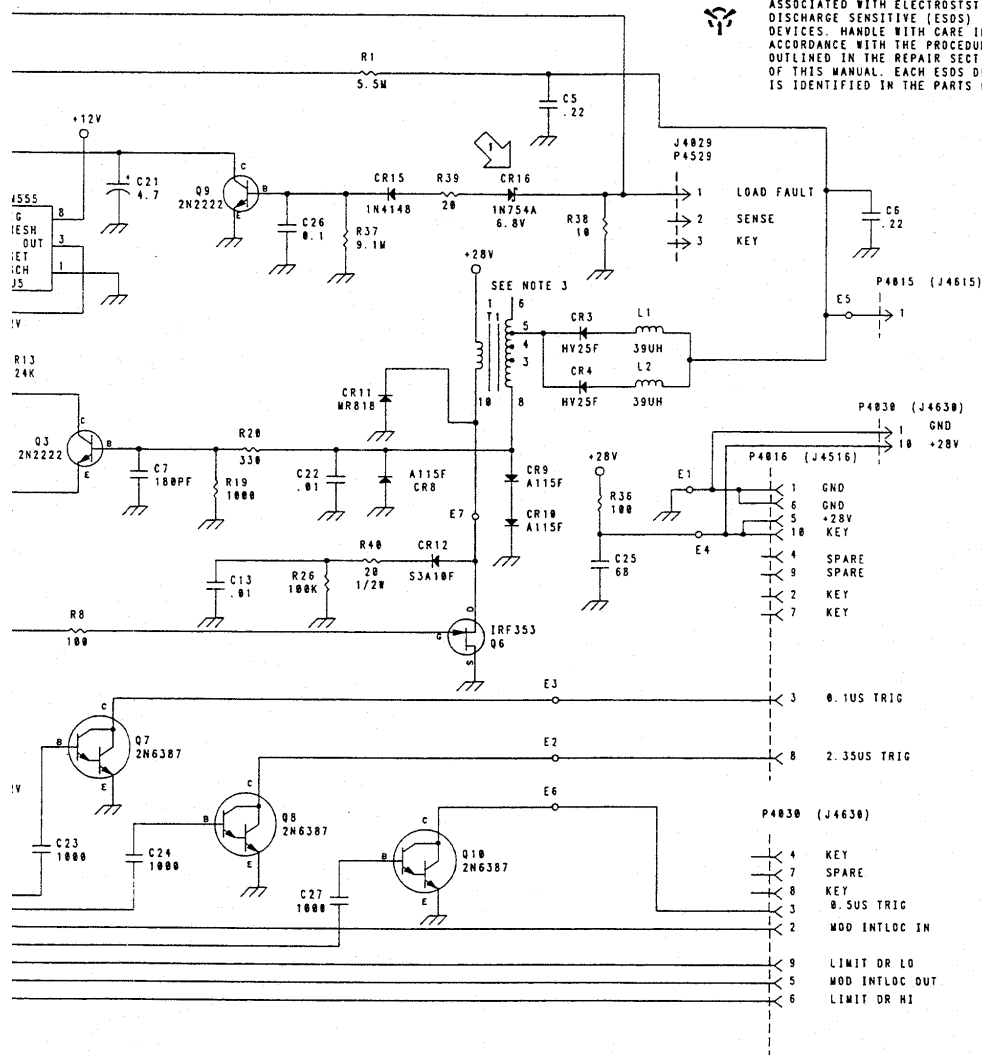
8895886A SH. 1 OF 1

I.B. 21500B
PART 4

Modulator Regulator Module, Schematic Diagram
Figure 7-6

7-45/7-46
Oct/91

- NOTES:
1. RESISTORS ARE IN OHMS 1/4 WATT UNLESS OTHERWISE NOTED.
 2. CAPACITANCE IN UF UNLESS OTHERWISE NOTED.
 3. SELECT TAP IN TEST.
 4. NEXT CIRCUIT SYMBOL TO BE USED FOR COMPONENT
ADDITIONS: CR19, R41, L3, T2, U6, Q11, C27
 5. EXCEPT FOR PLUGS AND JACKS, ADD 4800 TO ALL REFERENCE DESIGNATORS.
 6. CAUTION: THIS MODULE CONTAINS OR IS ASSOCIATED WITH ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES. HANDLE WITH CARE IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE REPAIR SECTION OF THIS MANUAL. EACH ESDS DEVICE IS IDENTIFIED IN THE PARTS LIST.





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**MAINTENANCE MANUAL
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SUMMARY OF CHANGES TO

S/L PULSE MODULATOR MODULE
P/N 3606487-0501 AND -0502

SUBASSY. MOD. NO.	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1	Mechanical changes to eliminate high-voltage arcing above 20,000 feet. Does not affect schematic diagram.	1500-060	1139

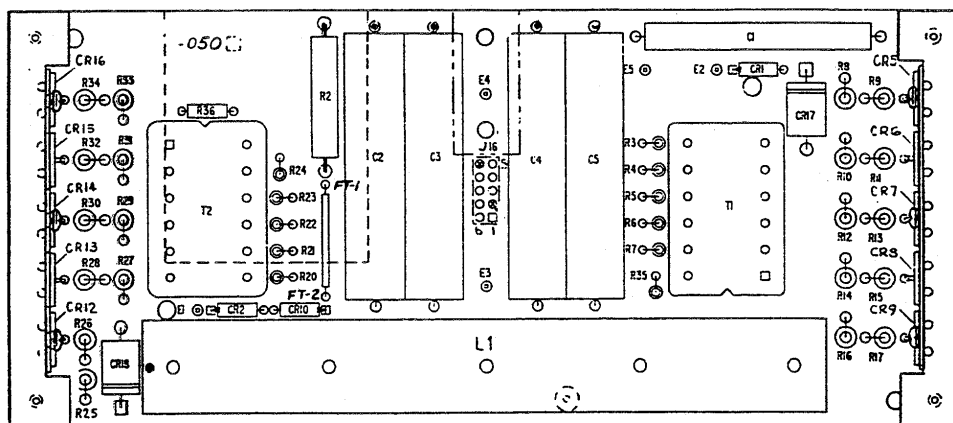
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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Oct/91

BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



WCB8063464 AD

NOTE: ADD 4500 TO ALL REFERENCE DESIGNATIONS.

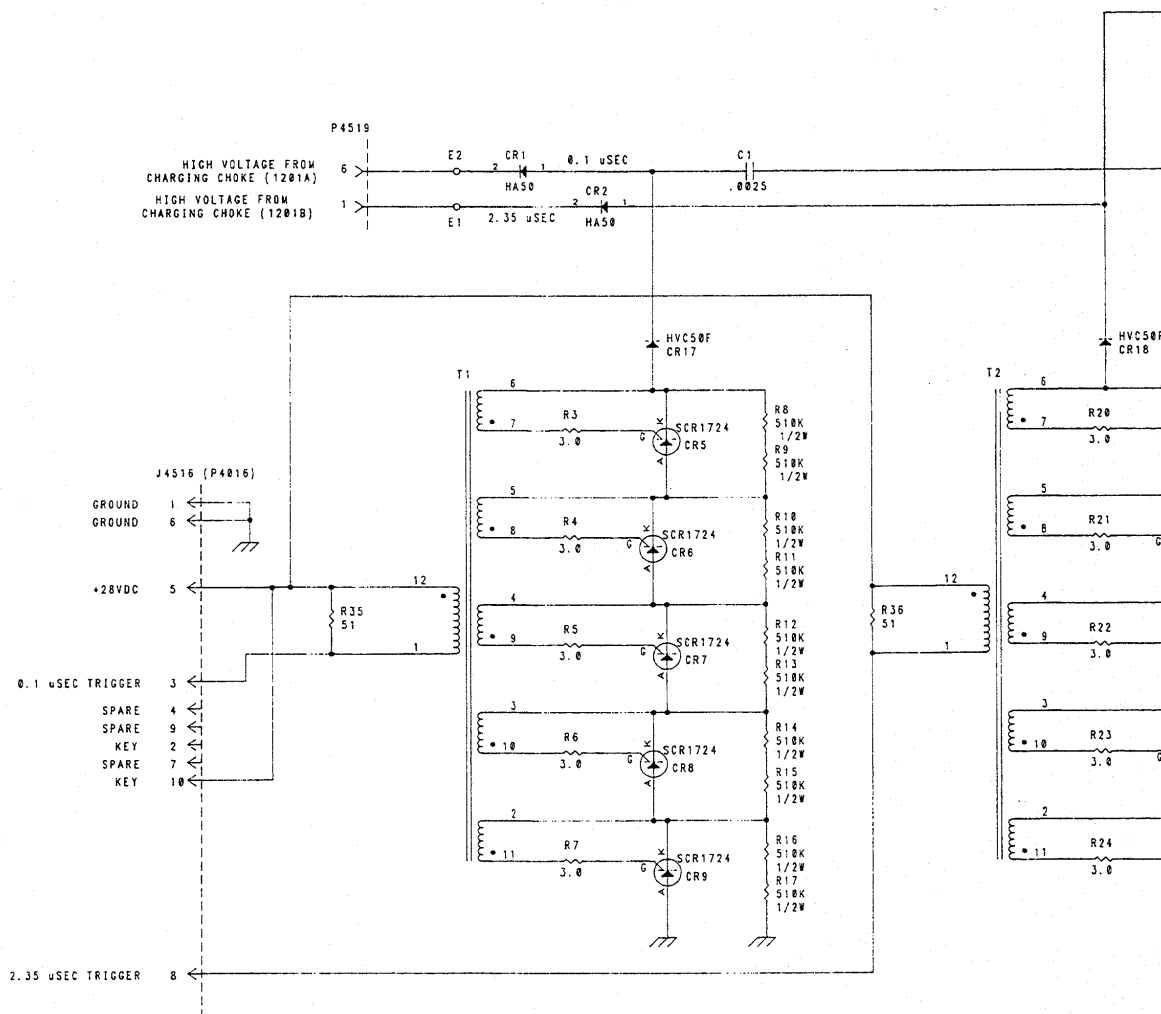
I.B. 21500B
PART 4

S/L Pulse Modulator Module

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Aug 12/91

BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

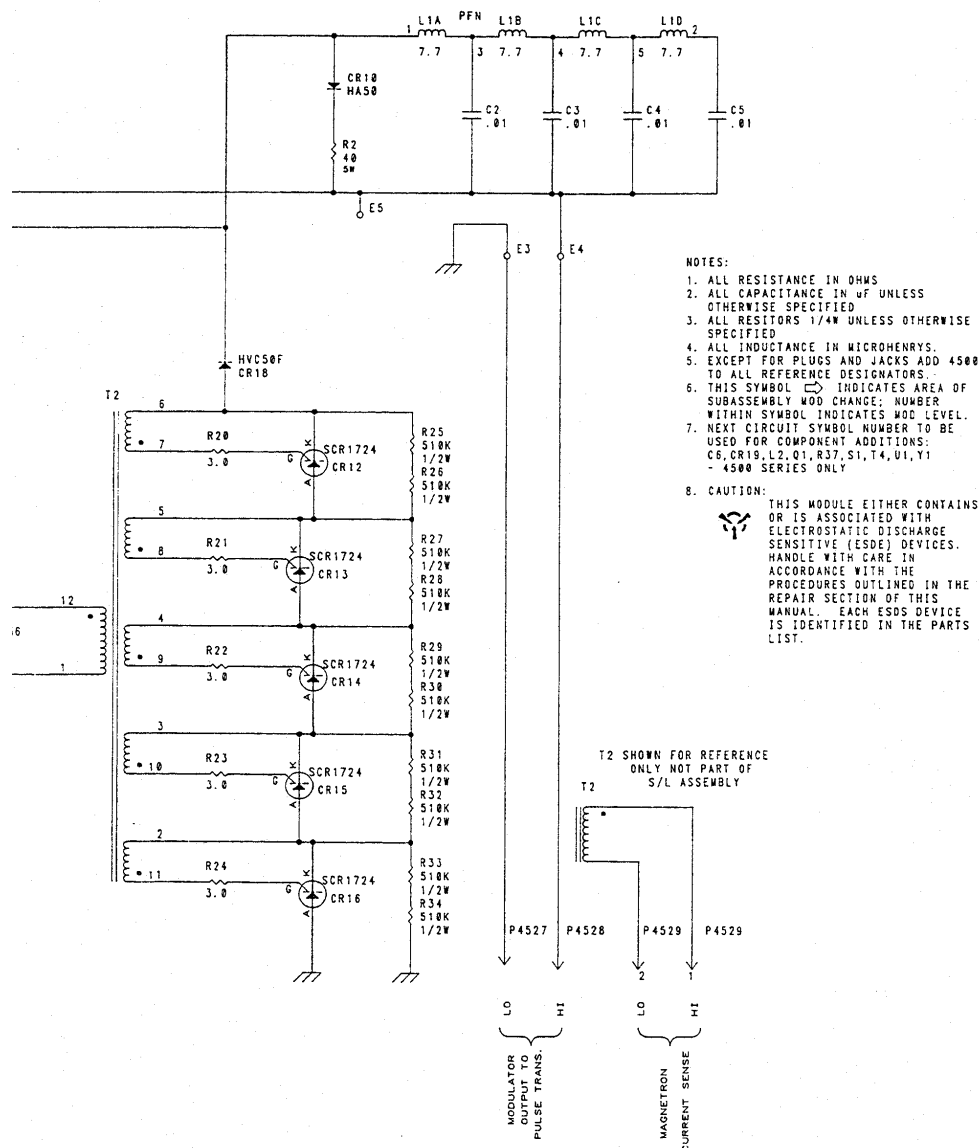


8095781 SH. 1 OF 1

I.B. 21500B
PART 4

S/L Pulse Modulator Module, Schematic Diagram
Figure 7-7

7-49/7-50
Aug 12/91



BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

SUMMARY OF CHANGES TO

**MID-PULSE MODULATOR MODULE
P/N 3606472-0501 AND -0502**

SUBASSY. MOD. NO.	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1	Mechanical changes to eliminate high-voltage arcing above 20,000 feet. Does not affect schematic diagram.	1500-060	1139

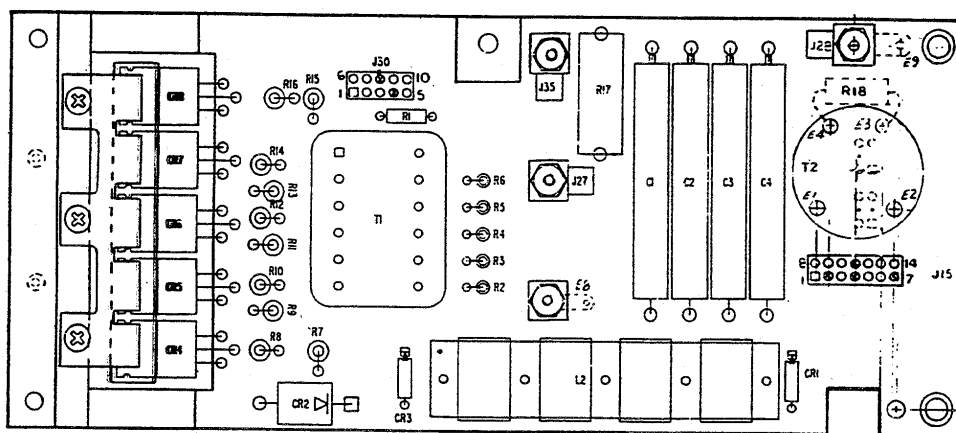
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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Oct/91

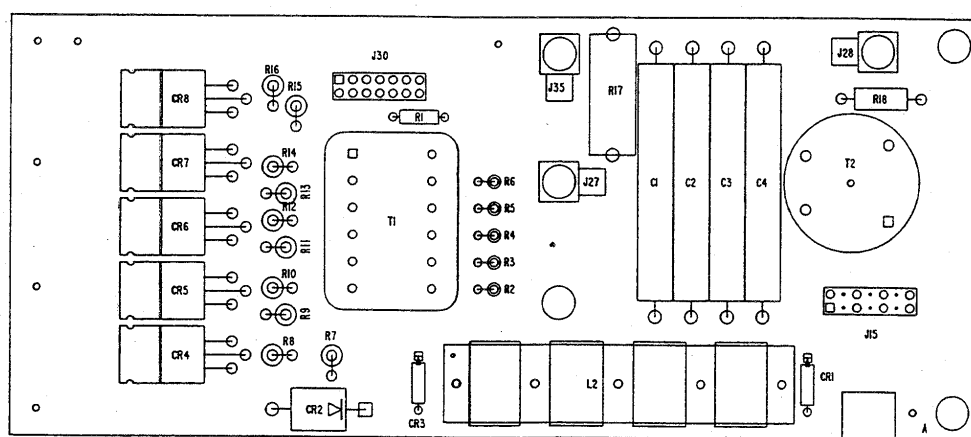
BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



WCB8063463AJ

NOTE: ADD 4600 TO ALL REFERENCE DESIGNATIONS.



WCB8063463AJ

NOTE: ADD 4600 TO ALL REFERENCE DESIGNATIONS.

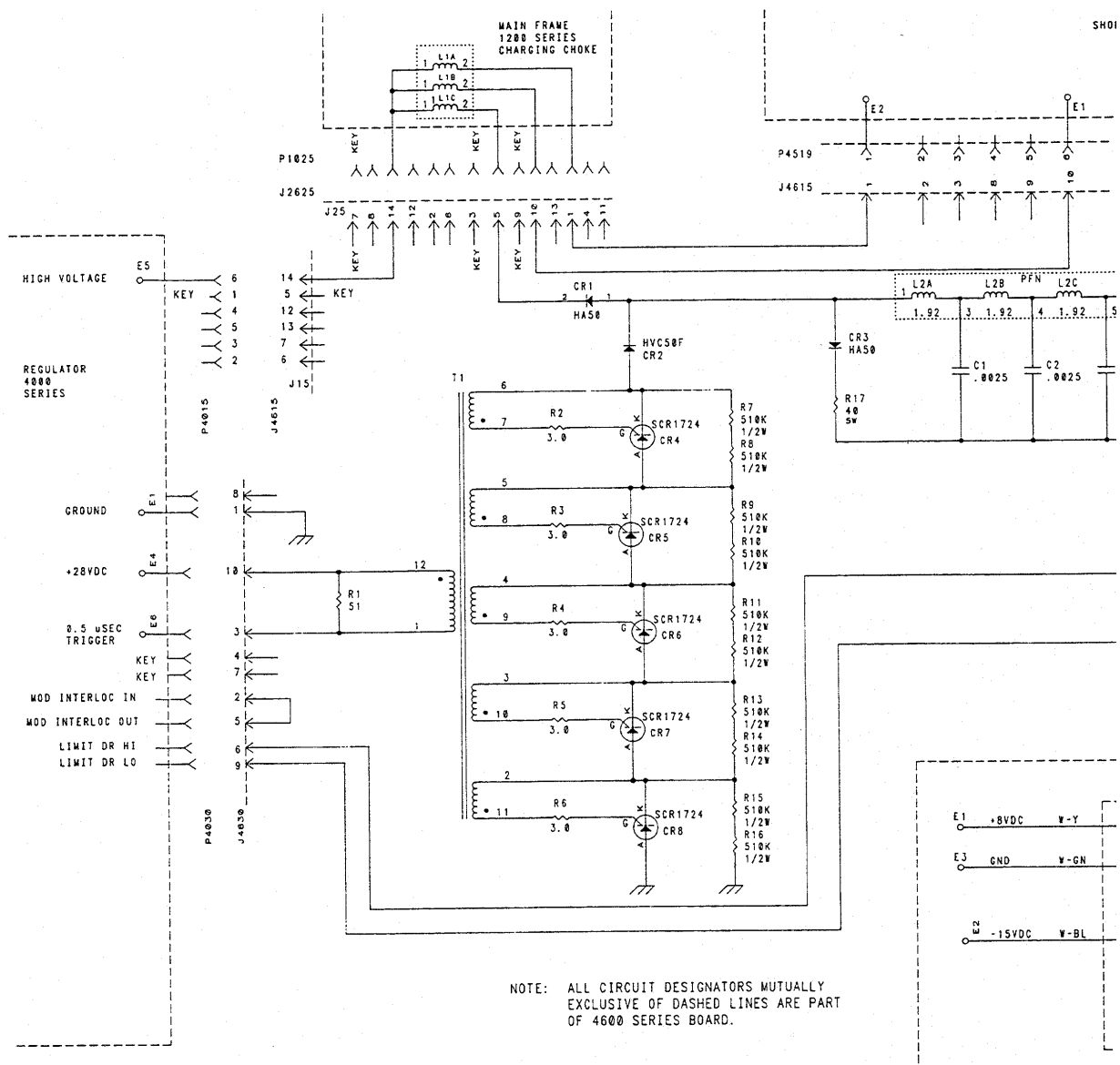
Mid-Pulse Modulator Module

I.B. 21500B
PART 4

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Oct/91

BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

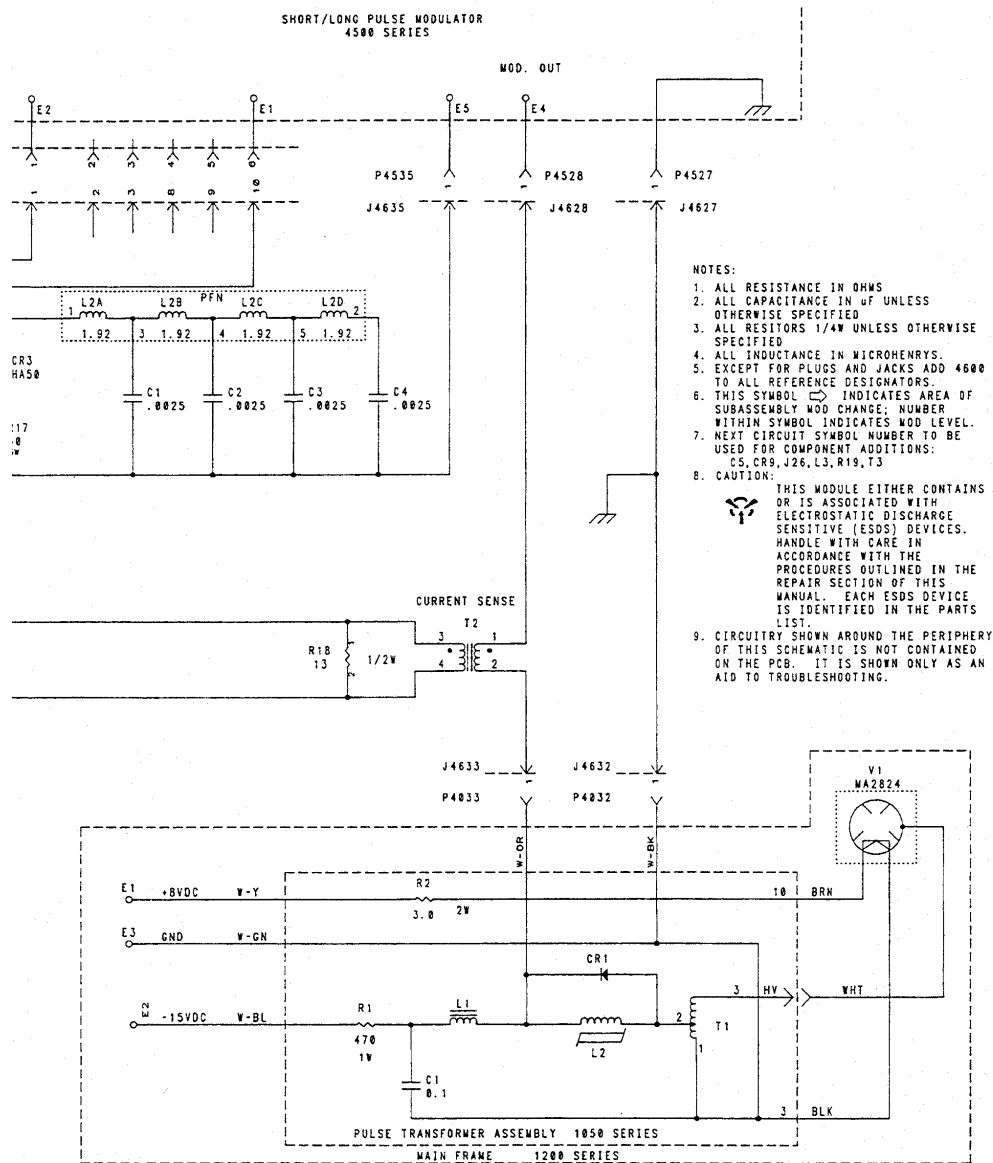


8895780A SH. 1 OF 1

I.B. 21500B
PART 4

Mid-Pulse Modulator Module, Schematic Diagram
Figure 7-8

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Oct/91



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t/91



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MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER

SUMMARY OF CHANGES TO

POWER SUPPLY ASSEMBLY
P/N 2040420-0501

SUBASSY. MOD. NO.	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1	Incorporated prior to equipment release.	- -	- -

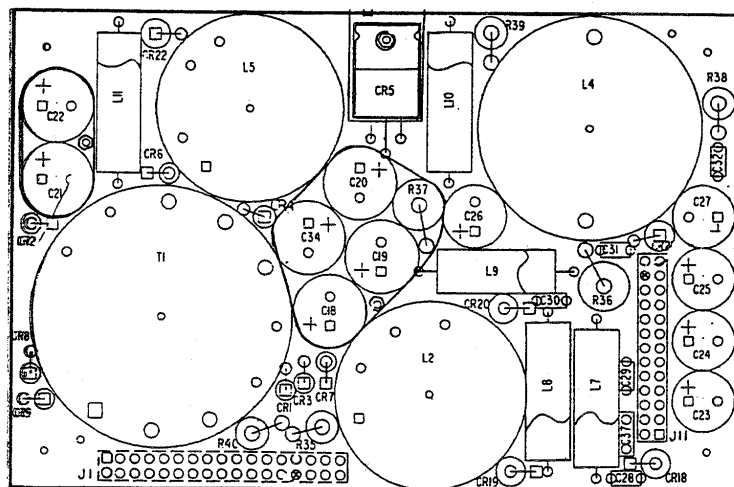
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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Aug 12/91

BENDIX/KING

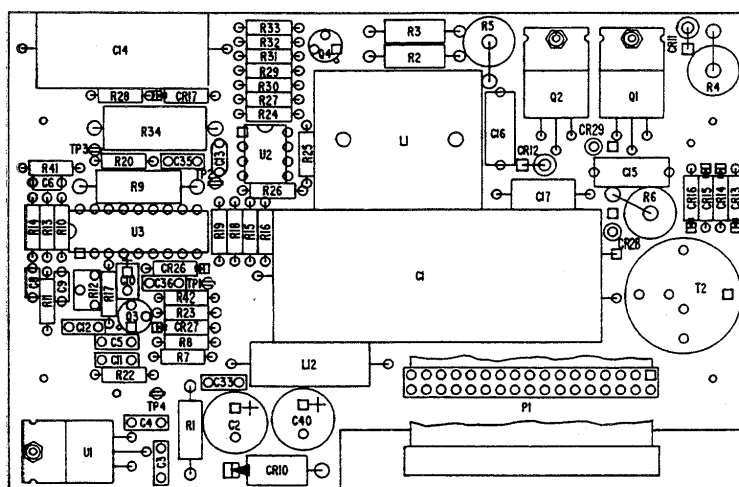
**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



WCB8063465AF

NOTE: ADD 5200 TO ALL REFERENCE DESIGNATIONS.

Output Module, P/N 2040522-0501



WCB8063466 A,BCJ

NOTE: ADD 5100 TO ALL REFERENCE DESIGNATIONS.

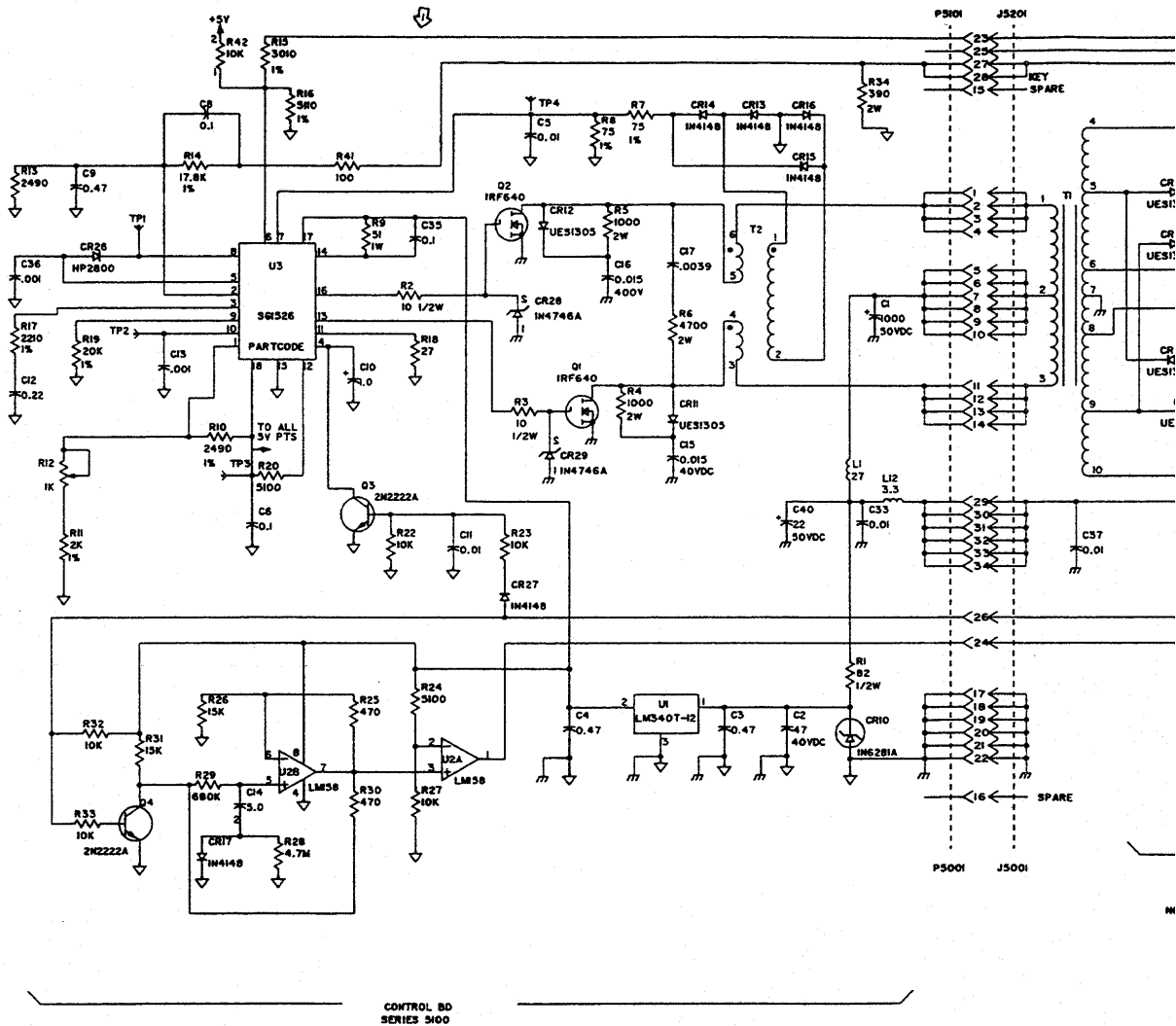
Control Module, P/N 2040523-0501

I.B. 21500B
PART 4

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Oct/91

BENDIX/KING

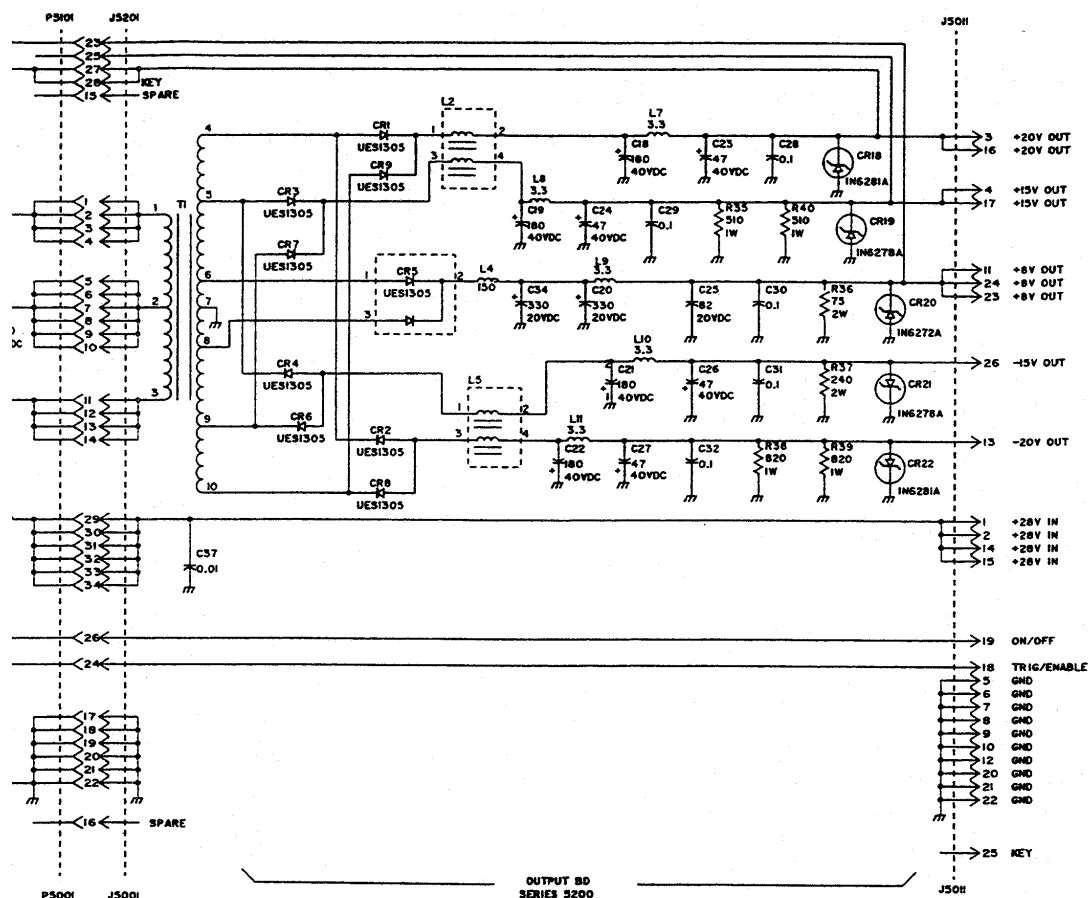
MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER



I.B. 21500B
PART 4

Power Supply Assembly, Schematic Diagram
Figure 7-9

7-57/7-58
Oct/91



NOTES:

1. ALL RESISTANCE IN OHMS.
2. ALL RESISTORS 1/4 WATT UNLESS OTHERWISE SPECIFIED.
3. ALL CAPACITANCE IN MICRO FARADS UNLESS OTHERWISE SPECIFIED.
4. ALL INDUCTANCE IN MICRO HENRIES UNLESS OTHERWISE SPECIFIED.
5. ADD 500 TO ALL COMPONENT DESIGNATIONS CONTROL BD.
6. ADD 5200 TO ALL COMPONENTS DESIGNATION OUTPUT BD.
7. NEXT REFERENCE DESIGNATION TO BE USED FOR COMPONENT ADDITIONS C38,L13,Q5,R43,T3,TP5,U4..
7. ▽= LOW POWER GND. AND ▴=HIGH POWER GND. ON P.C.B..



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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

**SUMMARY OF CHANGES TO
LOCAL OSCILLATOR ASSEMBLY
P/N 2040691-0501**

SUBASSY. MOD. NO. 	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1	Incorporated prior to equipment release.	- -	- -
2	Replaced 0.01-microfarad capacitor C6001 with one having a value of 0.1 microfarads. To prevent pulling of local oscillator frequency when dust cover is installed.	1500-064	1139

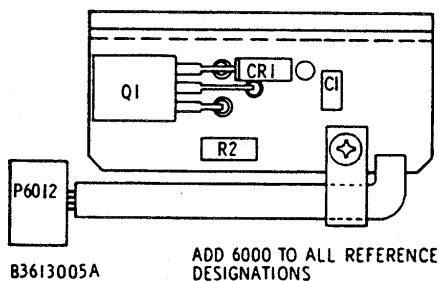
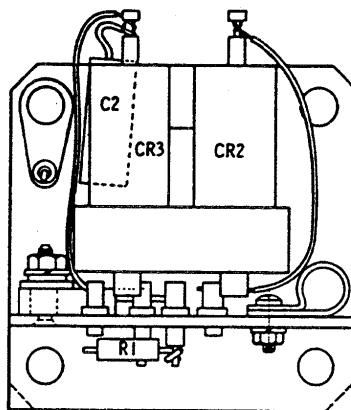
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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Oct/91

BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



B3613005A

ADD 6000 TO ALL REFERENCE
DESIGNATIONS

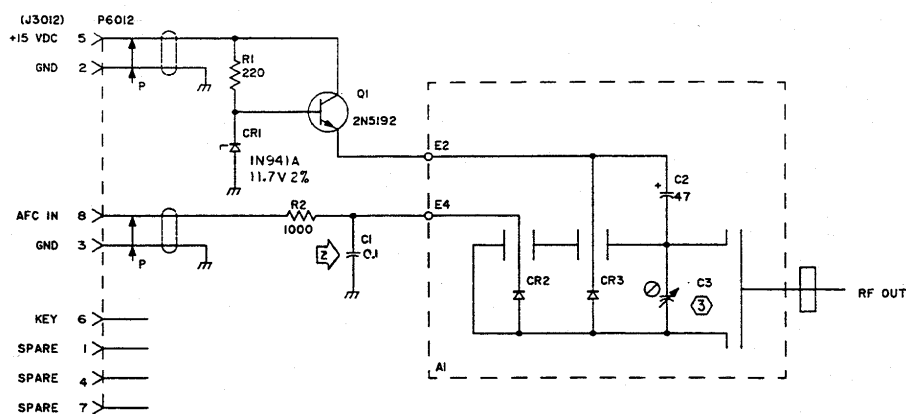
I.B. 21500B
PART 4

Local Oscillator Assembly

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Aug 12/91

BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



NOTES:

1. ALL RESISTANCE IN OHMS. CAPACITANCE IN MICROFARADS.
2. EXCEPT FOR PLUGS AND JACKS, ADD 6000 TO ALL REFERENCE DESIGNATIONS.
3. C3 IS A FREQUENCY ADJUST TUNING SCREW.

3414706 BSH.T.1 OF 1

I.B. 21500B
PART 4

Local Oscillator Assembly, Schematic Diagram
Figure 7-10

7-61/7-62
Oct/91



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**MAINTENANCE MANUAL
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SUMMARY OF CHANGES TO

**AFC MODULE
P/N 2040421-0501**

SUBASSY. MOD. NO.	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1 thru 3	Incorporated prior to equipment release.	- -	- -
4 5	Added capacitor C7049. Added C7050, R7065, and R7066. To eliminate noise spikes on the 12V line.	1500- 030	1103
7	Changed value of R7004 and R7008 from 680 to 200 ohms. To increase the gain in the 87-MHz afc amplifier to provide more dynamic range for the 4.5V afc lock pulse adjustment.	1500- 049	1120
8	Changed value of R7062 from 10k to 6800 ohms, and added R7067 and thermistor RT7001. To limit the range of afc sweep voltage so the radar will not false-lock on the second harmonic of the mixer.	1500- 053	1132

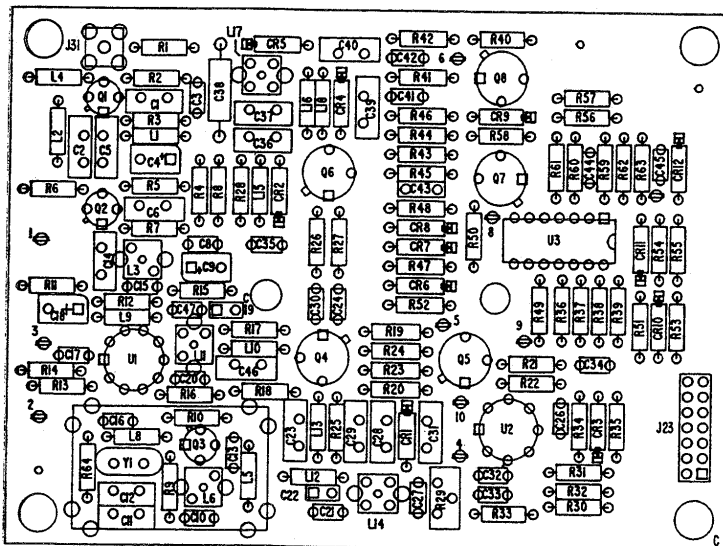
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

7-63
Aug 12/91

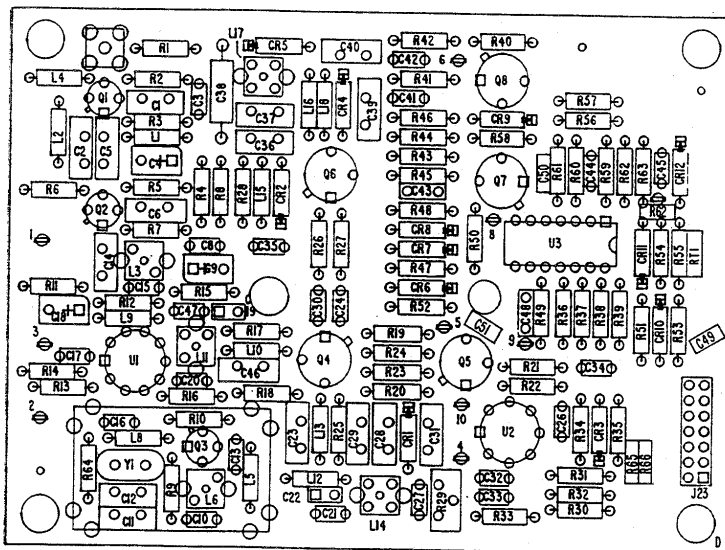
BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



WCB8063460CD

NOTE: ADD 7000 TO ALL REFERENCE DESIGNATIONS.



WCB8063457DD

NOTE: ADD 7000 TO ALL REFERENCE DESIGNATIONS.

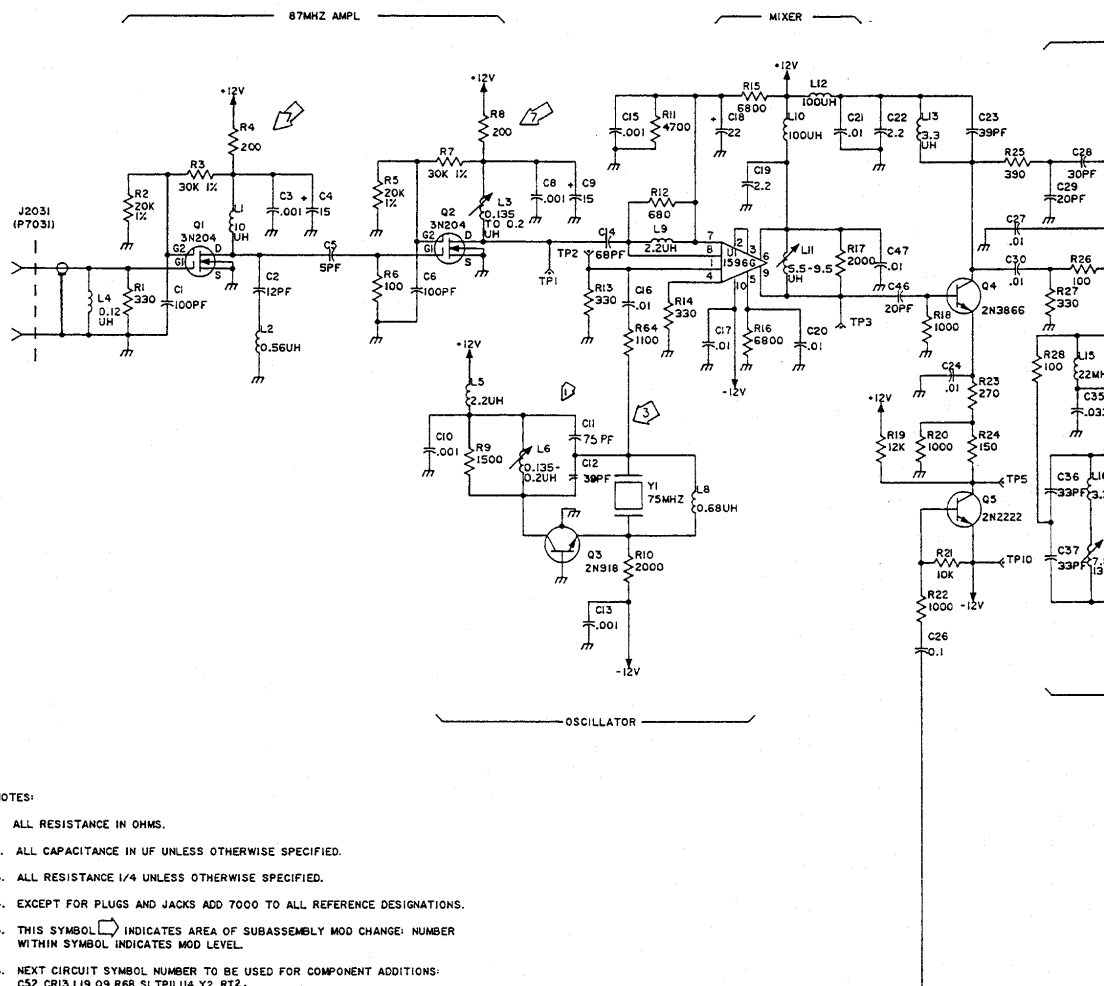
Afc Module

I.B. 21500B
PART 4

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Oct/91

BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



NOTES:

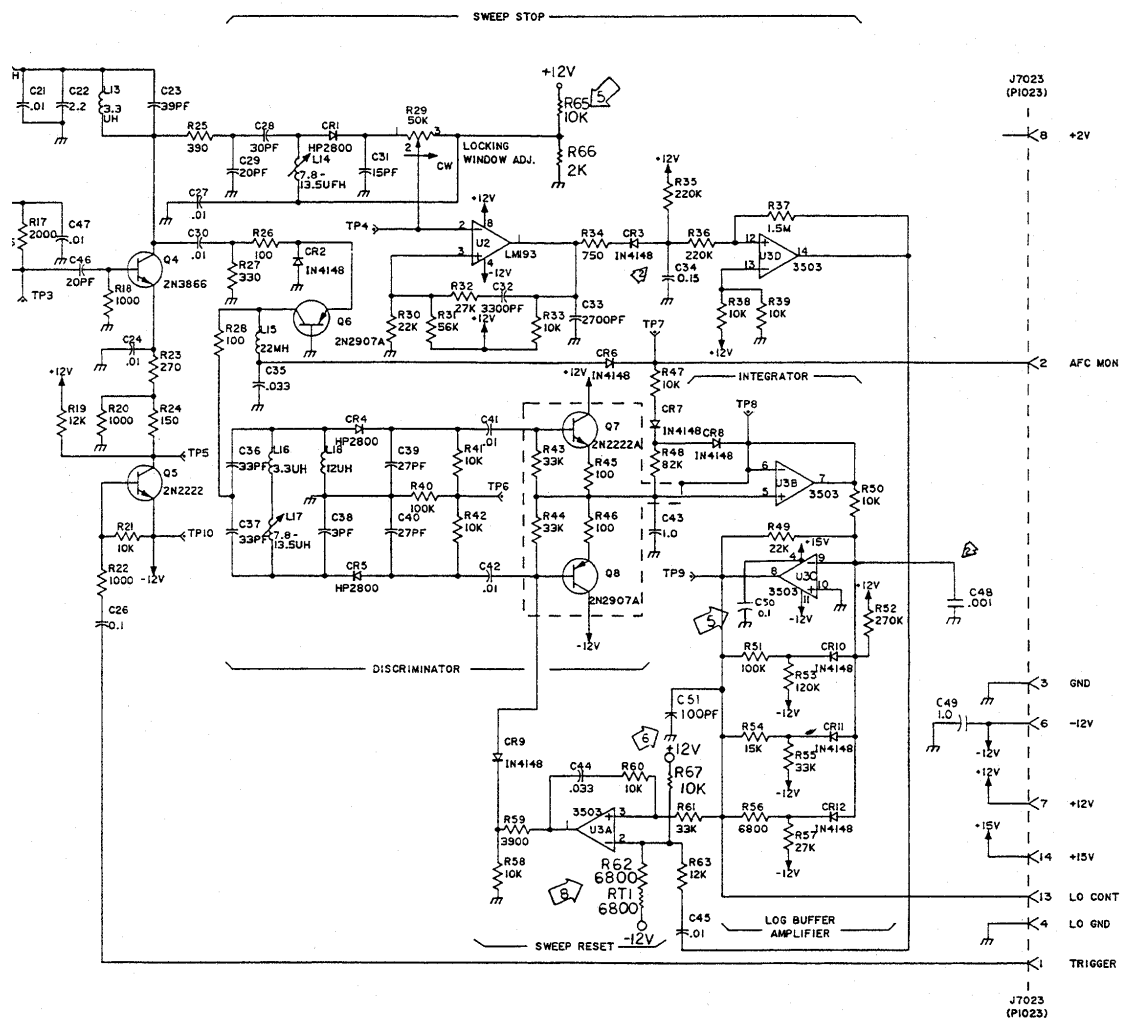
1. ALL RESISTANCE IN OHMS.
2. ALL CAPACITANCE IN UF UNLESS OTHERWISE SPECIFIED.
3. ALL RESISTANCE 1/4 UNLESS OTHERWISE SPECIFIED.
4. EXCEPT FOR PLUGS AND JACKS ADD 7000 TO ALL REFERENCE DESIGNATIONS.
5. THIS SYMBOL  INDICATES AREA OF SUBASSEMBLY MOD CHANGE; NUMBER WITHIN SYMBOL INDICATES MOD LEVEL.
6. NEXT CIRCUIT SYMBOL NUMBER TO BE USED FOR COMPONENT ADDITIONS: C52, C13, L19, Q9, R68, S1, TP11, U4, Y2, RT2.

3614197K SHTJ OF 1

I.B. 21500B
PART 4

Afc Module, Schematic Diagram
Figure 7-11

7-65/7-66
Oct/91





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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

SUMMARY OF CHANGES TO

**STC MODULE
P/N 3606477-0501**

SUBASSY. MOD. NO. 	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N

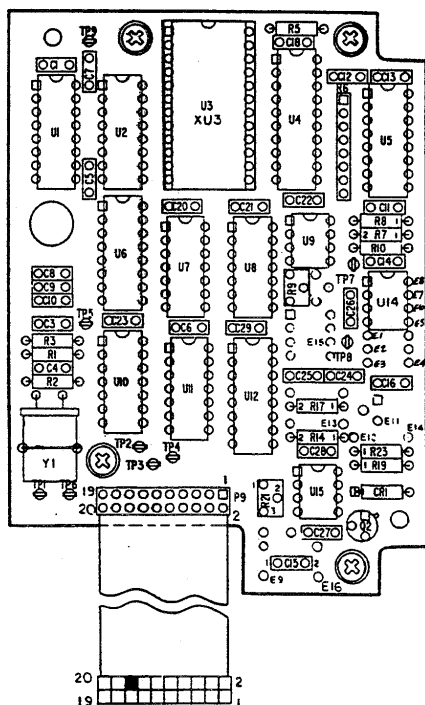
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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Aug 12/91

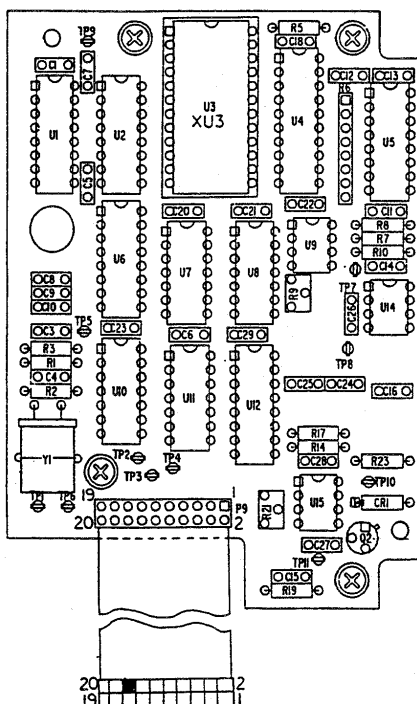
BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



WCB8063461 ABJ

NOTE: ADD 3500 TO ALL REFERENCE DESIGNATIONS.



WCB8063468

NOTE: ADD 3500 TO ALL REFERENCE DESIGNATIONS.

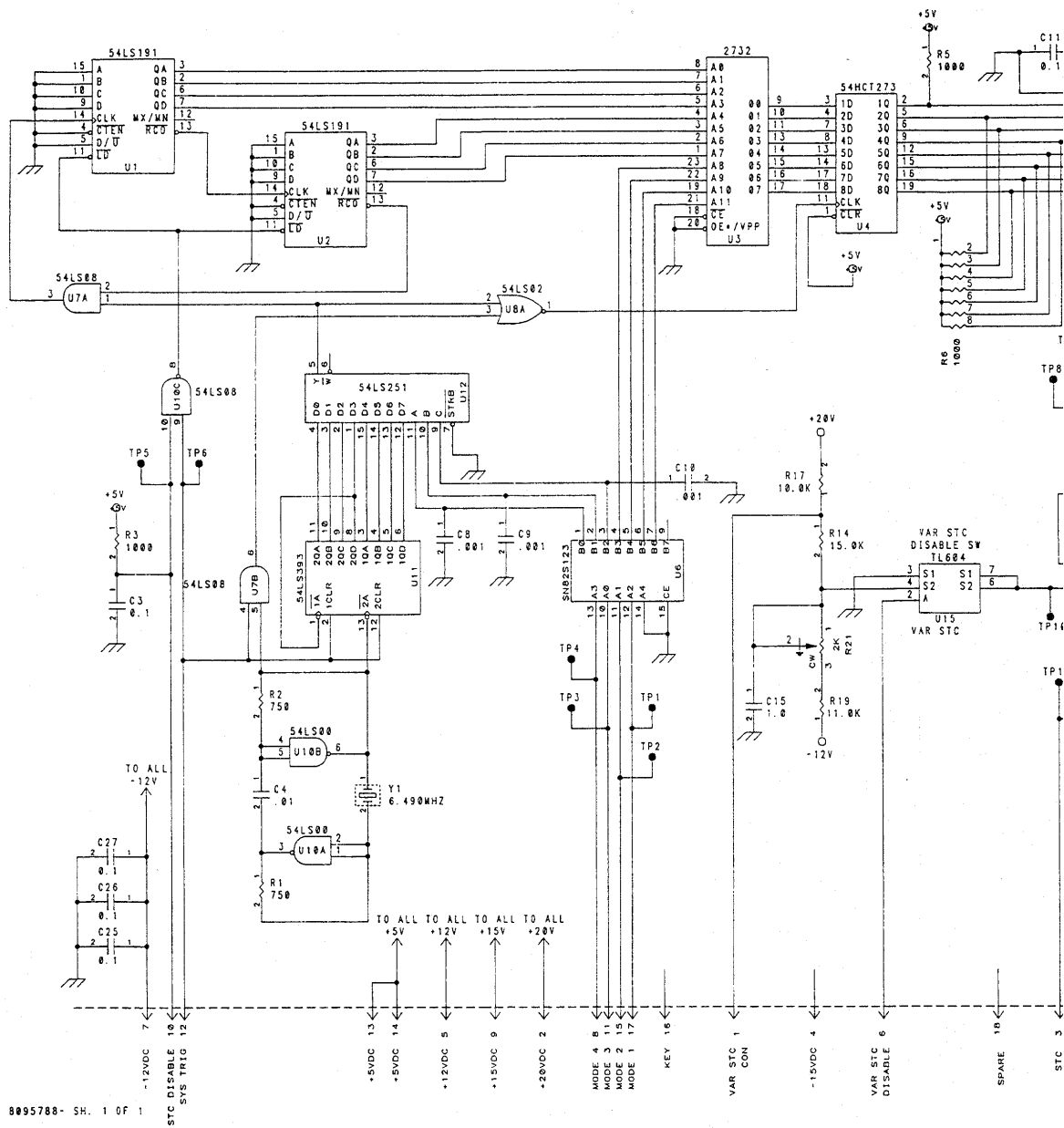
STC Module

I.B. 21500B
PART 4

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Aug 12/91

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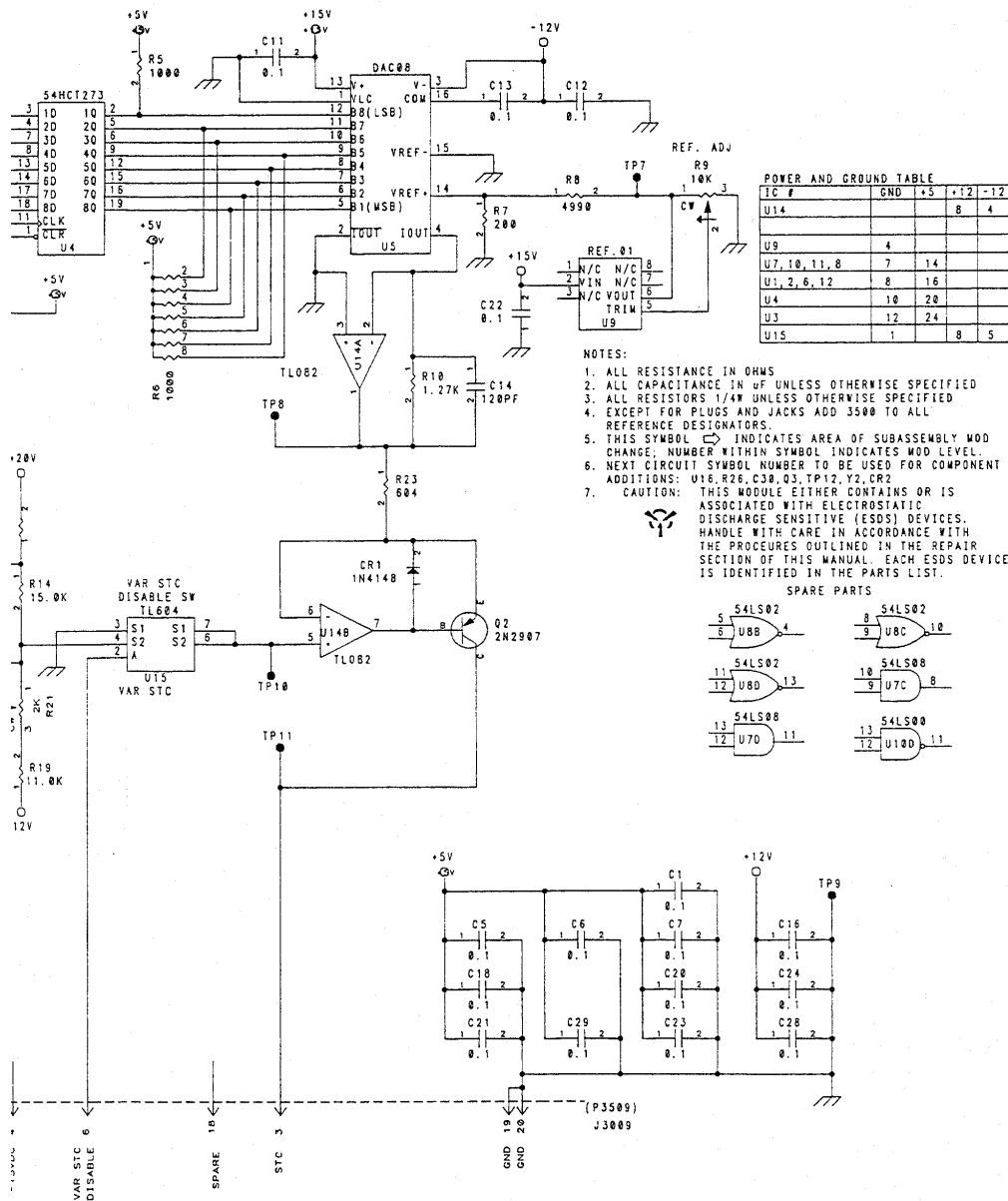
**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



I.B. 21500B
PART 4

STC Module, Schematic Diagram
Figure 7-12

7-69/7-70
Oct/91



BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

**SUMMARY OF CHANGES TO
PREAMPLIFIER-LIMITER ASSEMBLY
P/N 3606479-0502**

SUBASSY. MOD. NO.	DESCRIPTION OF CHANGE	SERVICE BULLETIN NUMBER *	EFFECTIVITY UNIT S/N
1	Added components C1925, CR1920, CR1921, R1952, and R1953, and changed value of C1924 from 0.1 to 0.01 microfarad. Subassembly Mod 1 to preamplifier-limiter assembly includes subassembly Mod 1 to bias module. Part of Unit Mod 11. To improve limiter reliability.	1500-066	1139

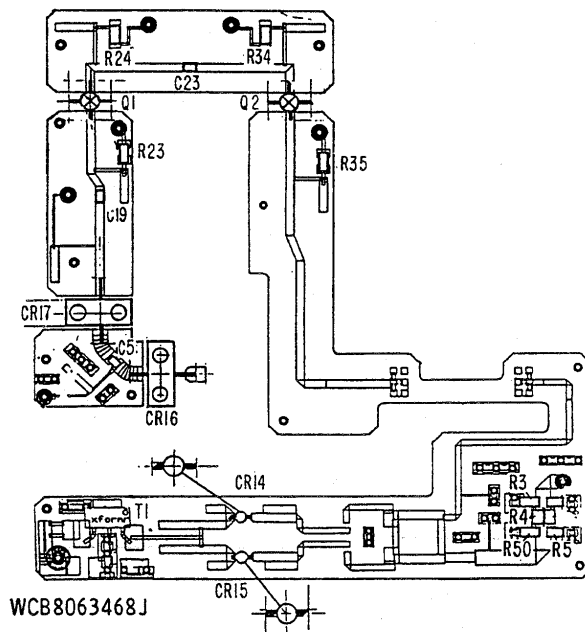
*SEE SERVICE BULLETIN LIST IN FRONT OF MANUAL

I.B. 21500B
PART 4

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Oct/91

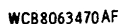
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**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**

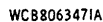


NOTE: ADD 1900 TO ALL REFERENCE DESIGNATIONS.

MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER



NOTE: ADD 1900 TO ALL REFERENCE DESIGNATIONS.

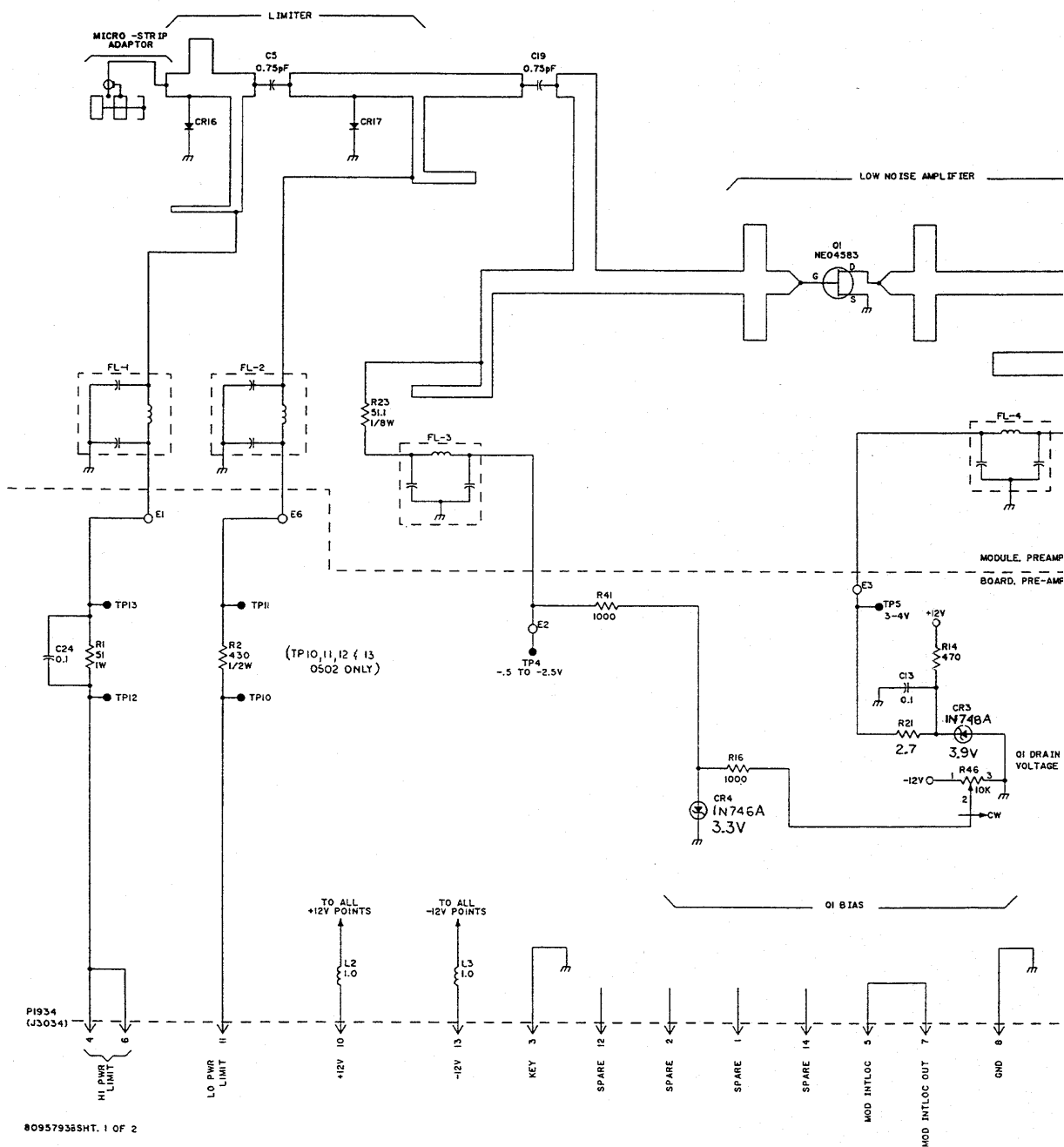


NOTE: ADD 1900 TO ALL REFERENCE DESIGNATIONS.

Page 75 of 83

BENDIX/KING

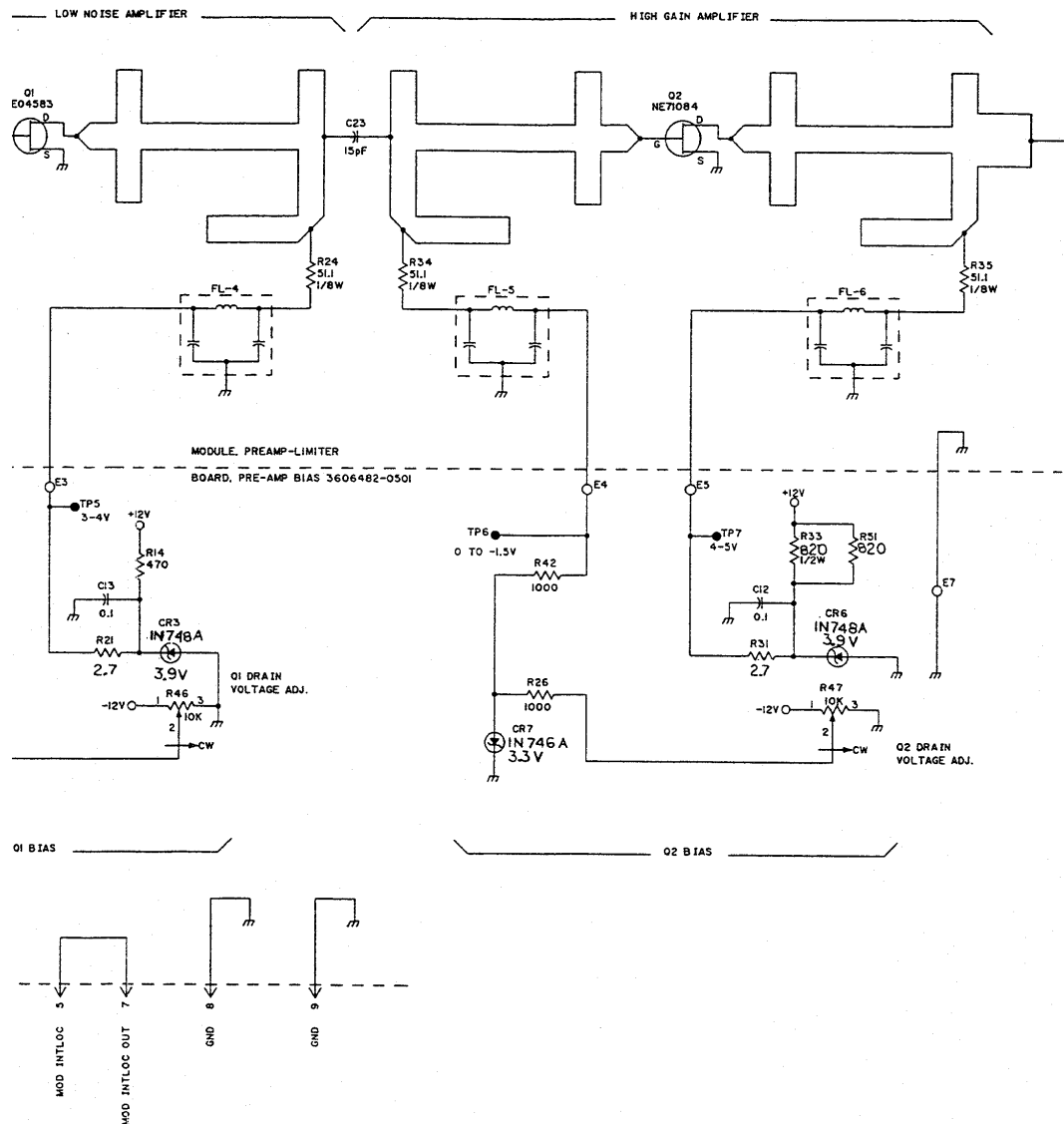
**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



I.B. 21500B
PART 4

Preamplifier-Limiter Assembly, Schematic Diagram
Figure 7-13 (Sheet 1 of 2)

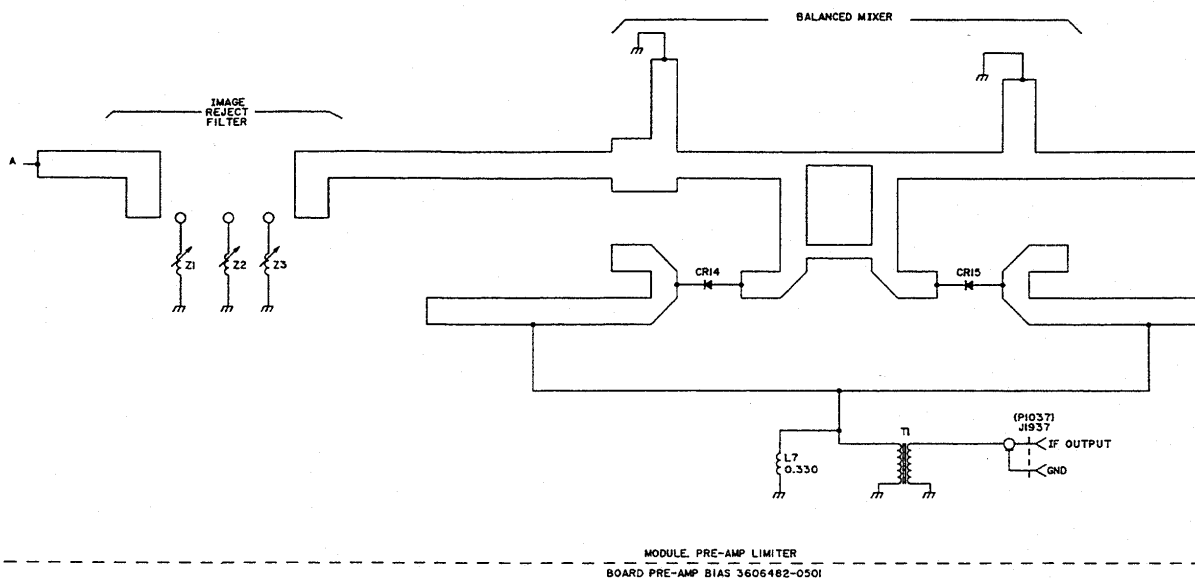
7-75/7-76
Aug 12/91



-76
/91

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RT-1501A RECEIVER-TRANSMITTER**



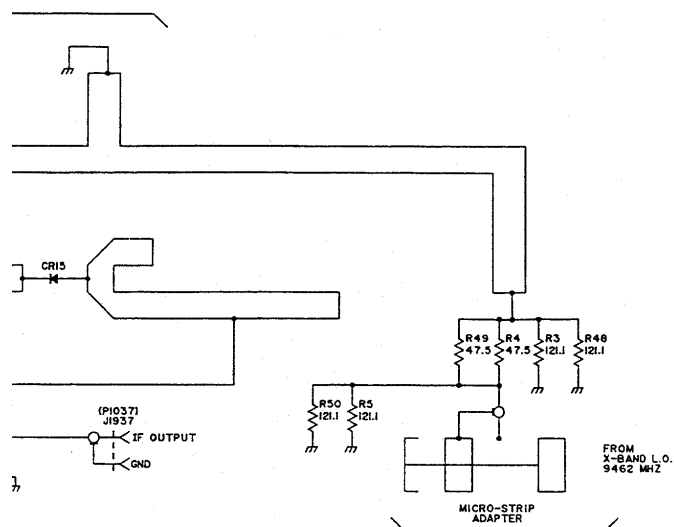
P1934
(J3034)

8095793ASHT. 2 OF 2

I.B. 21500B
PART 4

Preamplifier-Limiter Assembly, Schematic Diagram
Figure 7-13 (Sheet 2)

7-77/7-78
Aug 12/91

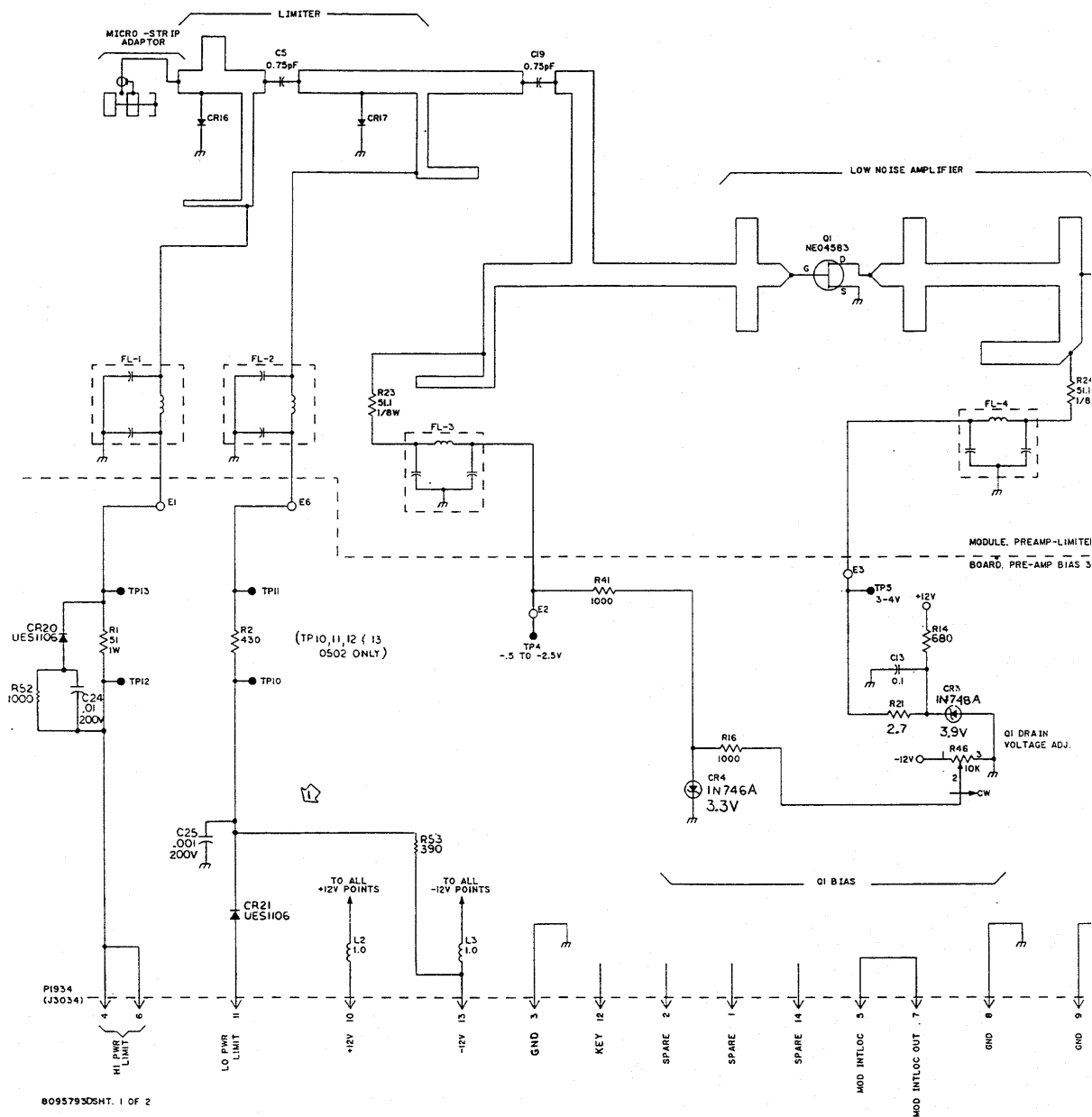


NOTES

1. ALL RESISTANCE IN OHMS.
2. ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED.
3. ALL CAPACITANCE IN pF UNLESS OTHERWISE SPECIFIED.
4. ALL INDUCTANCE IN μ H UNLESS OTHERWISE SPECIFIED.
5. EXCEPT FOR JACKS AND PLUGS ADD 1500 TO ALL REFERENCE DESIGNATIONS.
6. THIS SYMBOL  INDICATES AREA OF SUBASSEMBLY MOD CHANGE. NUMBER WITHIN SYMBOL INDICATES MOD LEVEL.
7. NEXT CIRCUIT SYMBOL NUMBER TO BE USED FOR COMPONENT ADDITIONS: E8, FL7, J1938, Q5, L8, TP12, U2, CR20, R52, C25, Z4, T2.

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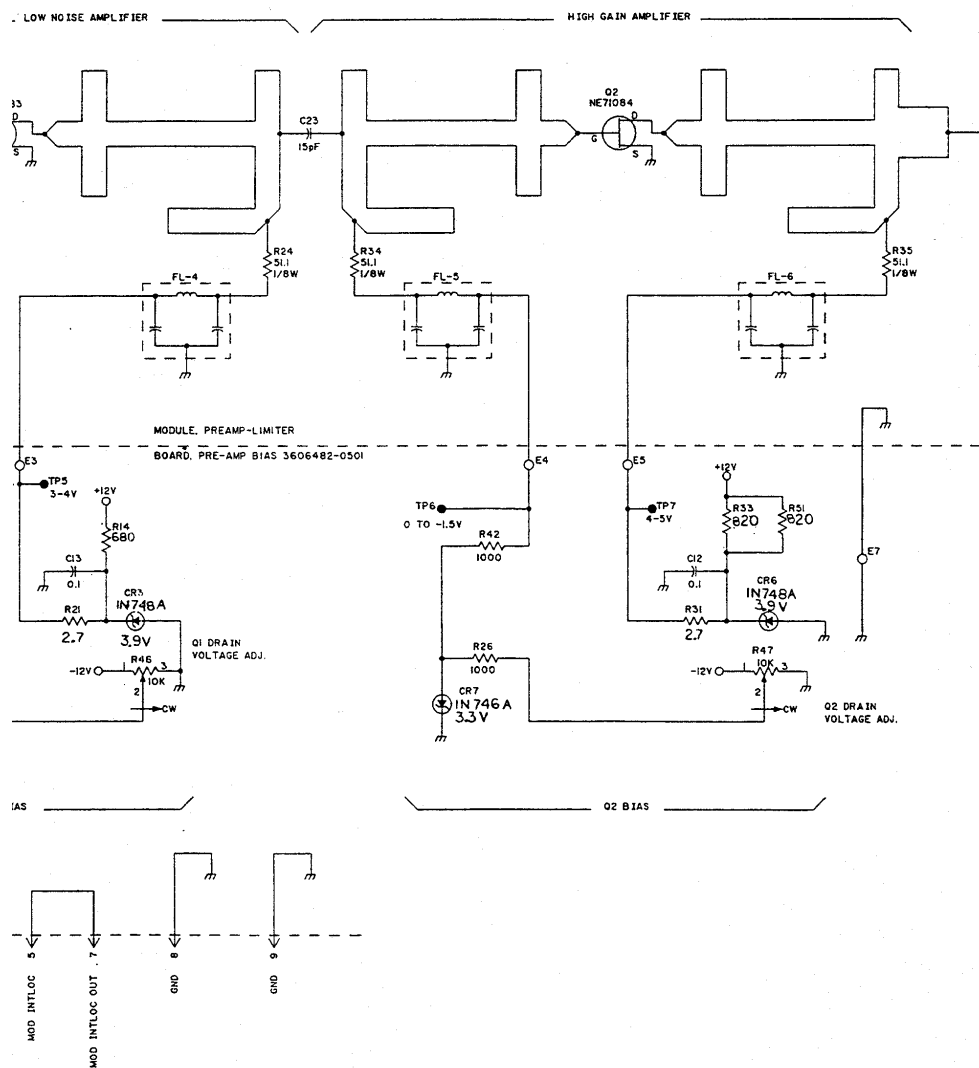
**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



I.B. 21500B
PART 4

Preamplifier-Limiter Assembly, Schematic Diagram
Figure 7-13a (Sheet 1 of 2)

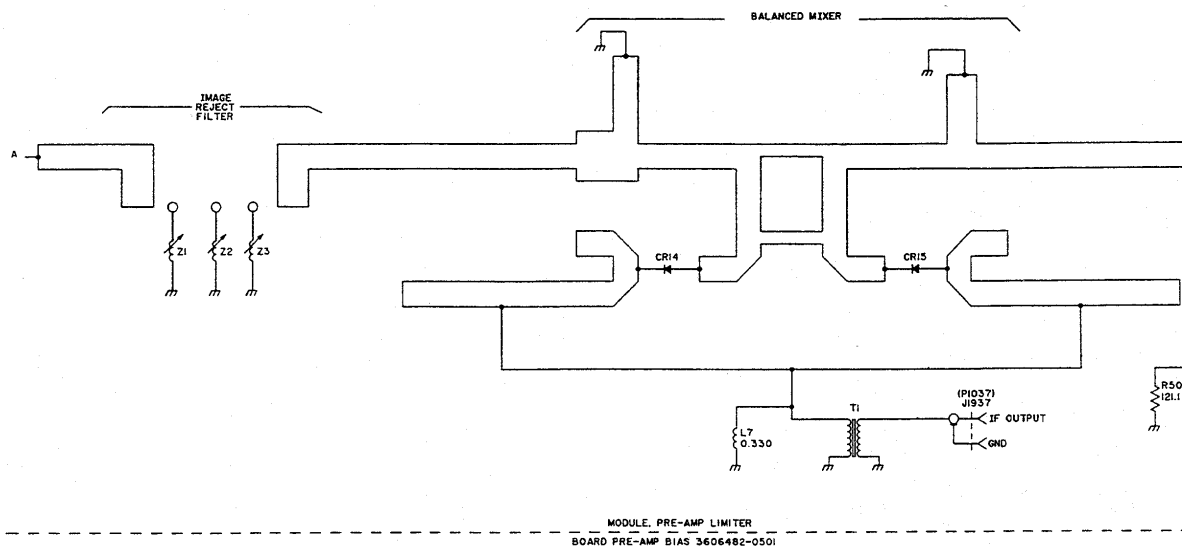
7-79/7-80
Oct/91



'-80
:/91

BENDIX/KING

**MAINTENANCE MANUAL
RT-1501A RECEIVER-TRANSMITTER**



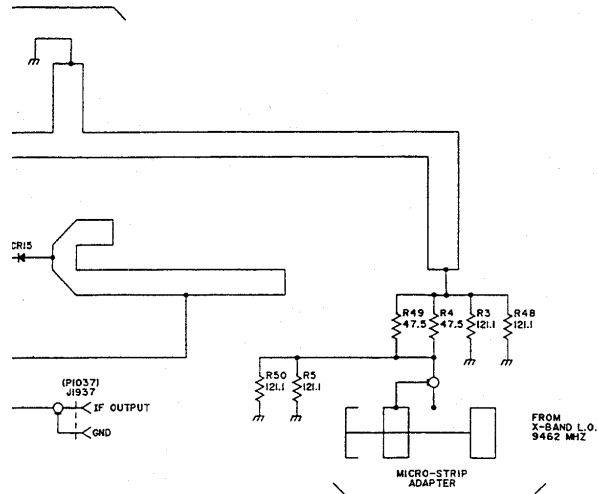
P1934
(J3034)

8095793ASHT. 2 OF 2

I.B. 215008
PART 4

Preamplifier-Limiter Assembly, Schematic Diagram
Figure 7-13a (Sheet 2)

7-81/7-82
Oct/91



NOTES

1. ALL RESISTANCE IN OHMS.
2. ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED.
3. ALL CAPACITANCE IN μF UNLESS OTHERWISE SPECIFIED.
4. ALL INDUCTANCE IN μH UNLESS OTHERWISE SPECIFIED.
5. EXCEPT FOR JACKS AND PLUGS ADD 100 TO ALL REFERENCE DESIGNATIONS.
6. THIS SYMBOL  INDICATES AREA OF SUBASSEMBLY MOD. CHANGE NUMBER WITHIN SYMBOL INDICATES MOD LEVEL.
7. NEXT CIRCUIT SYMBOL NUMBER TO BE USED FOR COMPONENT ADDITIONS: E8, FL7, J1936, Q5, L6, TP12, U2, CR20, R52, C25, Z4, T2.