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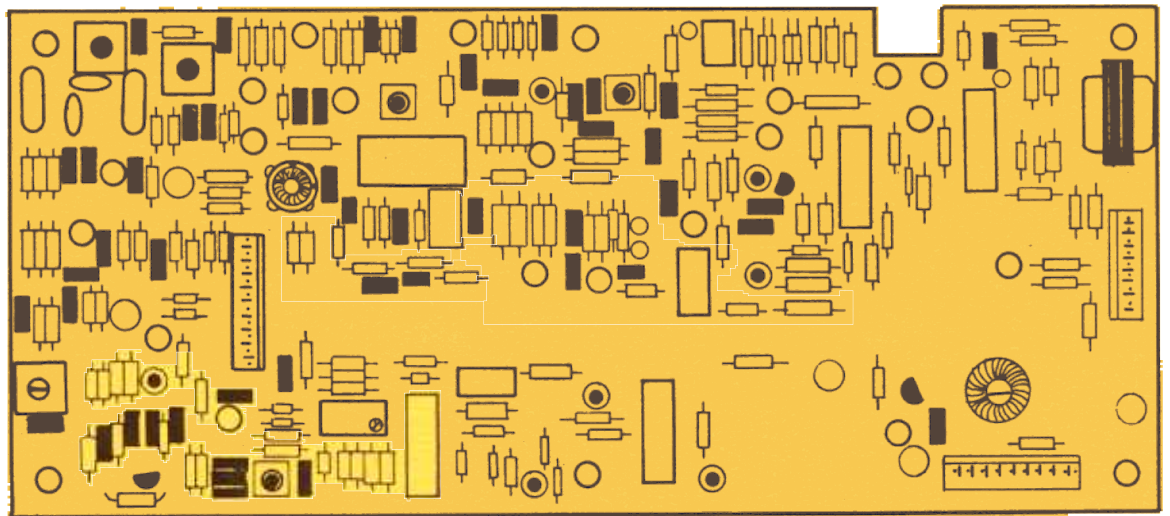
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**INDEPENDENT SIDEBAND
(ISB) ASSEMBLY
(A18 ASSEMBLY)**



INDEPENDENT SIDEBAND (ISB) ASSEMBLY (A18 ASSEMBLY)

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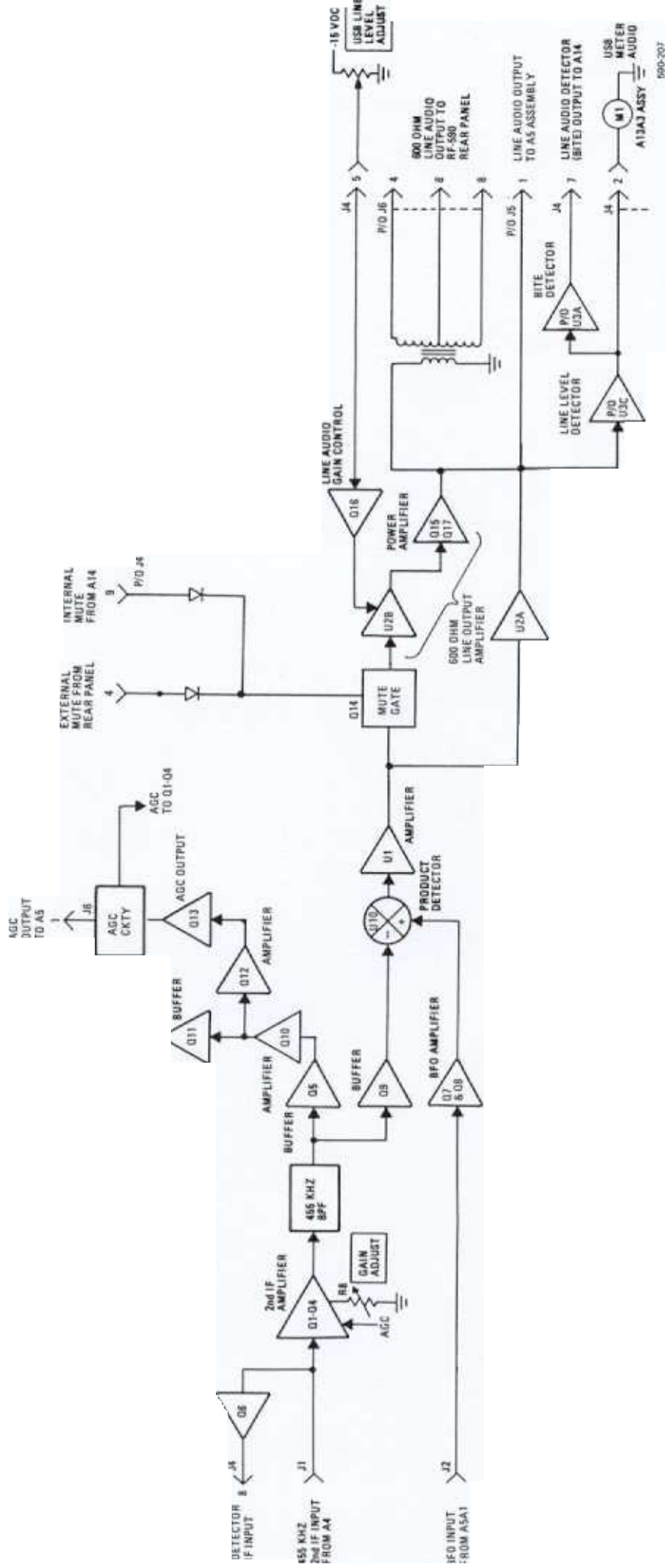
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1 GENERAL DESCRIPTION

The ISB IF/Audio Assembly (10073-6350) duplicates the parts of the IF/Audio Assembly (10073-5410 and 10073-5450) required for independent sideband (ISB) operation. Specifically, it includes:

- 455 kHz IF Amplifier
- Product detector
- Line audio output
- Signal monitoring

2. INTERFACE CONNECTIONS

Table details the various input/output connections and other relevant data for:

- J4 – Interconnect with A14 Control Assembly
- J5 – Interconnect with A5 IF/Audio Assembly
- J6 – Interconnect with RF-590 Rear Panel

Table 1 A18 ISB Assembly Interface Connections

Connector	Function	Characteristics
J1	IF Input	455 kHz, -97/-5 dBm, 50 ohms
J2	BFO Input	455 kHz, 0 dBm, 50 ohms
J3	ISB Output	455 kHz, -7 dBm (under AGC control), 50 ohms
J4-1	ISB AGC Meter	ISB (LSB) signal strength
J4-2	ISB Audio Meter	ISB (LSB) line audio level
J4-3	Index key	
J4-4	External mute	+5 Vdc = mute
J4-5	ISB (LSB) Line Level Adjust	0 to -15 Vdc
J4-6	AGC BITE output	Typically 1.5 Vdc during BITE test
J4-7	Detected Line Audio	

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Table 1. A18 ISB Assembly Interface Connections (Cont.)

Connector	Function	Characteristics
J4-8	Detected IF Input (BITE)	
J4-9	Internal Mute	+5 Vdc = mute
J4-10	Spare	
J5-1	ISB (LSB) Audio Output	To volume potentiometer
J5-2	ISB (LSB) AGC Output	To IF/Audio AGC circuit
J5-3	Medium AGC	+5 Vdc = selected
J5-4	Fast AGC	+5 Vdc = selected
J5-5	AGC ON/OFF	+5 Vdc = AGC off
J5-6	RF gain	0 to +12 Vdc
J5-7	Index key	
J5-8	-15 Vdc	
J5-9	+15 Vdc	
J5-10	Spare	
J6-1	AGC output	0 to +6 Vdc
J6-2	Spare	
J6-3	Index key	
J6-4	Line audio	
J6-5	AGC dump	
J6-6	Line audio center tap	
J6-7	External AGC input	0 to +6 Vdc
J6-8	Line audio	

3. A18 CIRCUIT DESCRIPTIONS

3.1 455 kHz Second IF Amplifier Chain

Low level signals at 455 kHz from IF Filter Assembly A4 enter the A18 assembly at coax connector J1. At this point it goes to both the input of the IF amplifier and the input BITE detector. The BITE detector consists of Q6 and its associated components. Q6 is an amplifier with 26 dB of gain that feeds a diode detector consisting of CR4, CR5, R32, and C27. CR6 is a 4.7 volt Zener diode that protects the BITE circuitry against overvoltage. This detector serves to check the output of the IF Filter board and the input to the IF/AF board.

Q1 is a grounded gate FET amplifier that is the input stage to the IF strip amplifier, and has approximately 20 dB of gain. Q2, Q3, and Q4 are common emitter amplifiers with an overall gain of 46 dB \pm 6 dB. This 12 dB gain adjustment is available at R8, and allows the user to trim the overall gain of the IF strip to its desired value.

Receiver Automatic Gain Control (AGC) of the IF strip is accomplished through the use of PIN diodes CR1, CR2, and CR3. A negative voltage applied to the IF AGC line (TP2) forward biases the PIN diodes and decreases the gain of the IF strip by decreasing the load impedance of each stage. Normal receiver operation requires 80 dB of available gain reduction in the strip, which is accomplished with approximately -3.0 volts on the IF AGC line.

L3, L4, C17, C18, and C19 form a bandpass filter which is adjusted during alignment to be centered at 455 kHz. This filter has approximately 9 dB of insertion loss for an overall gain to TP1 of 56 dB. The output of this filter drives Q5, (an emitter follower that buffers the rest of the IF strip) and Q9 (a dual gate MOSFET that is the input to the product detector).

Q5 serves as a buffer to provide inputs to Q10 (IF output gain stage). Q10 is a common emitter amplifier that has 30 dB of gain to provide the high level IF output, and drive amplifier Q12. Q11 is an emitter follower that buffers the high level IF output, nominally -7 dBm. Resistor R61 serves to set the IF output impedance at 50 ohms at J3. This output is then routed to rear panel connector J2 and is referred to as the ISB output. Overall IF strip gain to the IF output is nominally 80 dB. Q12 is a common emitter amplifier with 11 dB of gain that drives Q13 (the AGC detector).

3.2 Product Detector

Sideband signals are demodulated using a mixer as a product detector. The 455 kHz input to the mixer RF port is buffered through dual gate MOSFET Q9. LO input is 455 kHz at 0 dBm. Q7 is a buffer that drives Q8. Q8 provides 10 dB of gain to 50 ohm matching network R42, R43, R44, which in turn provides 7 dBm of LO drive to U7. LO leakage back into the IF chain is prevented by the 40 dB LO to RF isolation of U7 as well as the high reverse isolation of buffer Q8. Sideband inversion occurs in the mixing process. Typically audio output level of 2.5 mVrms at the U7 IF port is boosted to approximately 150 mVrms by amplifier U1.

3.3 Audio Output Circuitry

The 600 ohm line audio output at J6 (pins 4, 6, and 8) is driving long lines. This output is the secondary of transformer T2 and along with the center tap it's available at both the rear panel terminal strip TB1 and D connector J7.

The gain of the output amplifier is adjusted by a 20 turn trim potentiometer at the front panel meter. The output level in dBm 600 ohms may be read from the meter to ease adjustment.

The output amplifier is a FET input, low noise, wideband op amp (U5A) with a complementary current buffer Q15 and Q17. Gain control is accomplished by varying the gate bias on FET Q16. Q16 is configured as a voltage variable resistor and acts as the shunt leg in the amplifier feedback network. Total gain control range is 30 dB from -20 dBm to +10 dBm. The two endpoints can be set independently. The minimum gain is controlled by resistor R82 which is in parallel with Q14. The maximum gain is set by the minimum on resistance of Q14.

The current buffer output stage of this amplifier is formed by Q15 and Q17, a class AB complementary amplifier. The 600 ohm output impedance is set by resistor R85 whose 180 ohm value is transformed to 600 ohms by the 1.82:1 ratio of T2.

A buffered single ended line output to the processor is available at J5-1. The output of Q15 and Q17 also drives the precision half-wave detector (U3C) that provides the ISB AF meter and line audio detector BITE outputs. This circuit is a precision wideband, temperature compensated detector that provides meter drive through R91. The value of R91 is chosen so that the meter reads calibrated line output level in dBm 600 ohms. R93 provides a discharge path for C60 when the meter is not in circuit. There is also a buffered version of the peak detector output available for the line audio detector BITE line to the processor. A 4.7 volt Zener diode (CR20) provides overvoltage protection for the BITE circuitry.

3.4 AGC Circuit Operation

Refer to paragraph 7 of the A5 (IF/Audio/AGC) section of the RF-590 manual for a discussion of AGC circuit operation. The circuitry is identical except for the portion that produces the RF AGC output.

4. MAINTENANCE

The following adjustments should not be performed as routine maintenance procedures, but only when a failure indicates a definite need. All tests are performed with the assembly connections in normal contact, unless otherwise specified.

4.1 Second IF Chain Alignment

Perform the following procedure to align the second IF chain.

- a. Connect equipment as shown in figure 1. Set the signal generator to 456.5 kHz, 10 uV. Set spectrum analyzer to 455 kHz.



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Figure 1. Second IF Chain Alignment

- b. Set RF-590 controls as follows:
 - Mode to ISB
 - AGC to OFF
 - RF Gain to fully clockwise (cw)
- c. Monitoring the spectrum analyzer at 455 kHz, adjust L3 and L4 for maximum output. (adjustments may be some what interactive, so repeat as necessary.)
- d. Adjust R8 for -7 dBm (100 mVrms) at J3. Test is complete.

5. PARTS LIST

Table 2 is a comprehensive parts lists of all replaceable components in ISB Assembly A18. When ordering parts from the factory, include a full description of the part. Use figure 2, ISB Assembly A18 Component Location Diagram, to identify parts.

6. SCHEMATIC DIAGRAM

Figure 3 is the ISB A18 schematic diagram.

Table 2. ISB Assembly A18 Maintenance Parts List (PL 10073-6350)

Ref. Desig.	Part No.	Description
C1	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C2	CK06BX474M	Capacitor
C3	CK06BX474M	Capacitor
C4	CK06BX474M	Capacitor
C5	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C6	CK06BX474M	Capacitor

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Table 2. ISB Assembly A18 Maintenance Parts List (PL 10073-6350) (Cont.)

Ref. Desig.	Part No.	Description
C7	CK06BX474M	Capacitor
C8	CK06BX474M	Capacitor
C9	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C10	CK06BX474M	Capacitor
C11	CK06BX474M	Capacitor
C12	C26-0025-220	Capacitor
C13	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C14	CK06BX474M	Capacitor
C15	CK06BX474M	Capacitor
C16	CM04FD181J03	Capacitor, Mica, 180 pF, 300
C17	CM06FD112J03	Capacitor
C18	CM04ED680J03	Capacitor
C19	CM06FD122J03	Capacitor
C20	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C21	CK06BX474M	Capacitor
C22	C26-0025-220	Capacitor
C23	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C24	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C25	CK06BX474M	Capacitor
C26	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C27	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C29	CK06BX474M	Capacitor
C30	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C31	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C32	CK06BX474M	Capacitor
C33	CK06BX474M	Capacitor
C34	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C35	CK05BX102M	Capacitor
C36	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C37	CK06BX474M	Capacitor
C38	CK06BX474M	Capacitor
C39	CK06BX474M	Capacitor
C40	CK06BX102M	Capacitor
C41	C26-0025-470	Capacitor
C42	C26-0025-470	Capacitor
C43	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C44	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C45	CK06BX474M	Capacitor
C46	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C47	CK06BX474M	Capacitor
C48	CK06BX474M	Capacitor

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Table 2. ISB Assembly A18 Maintenance Parts List (PL 10073-6350) (Cont.)

Ref. Desig.	Part No.	Description
C49	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C50	CK06BX474M	Capacitor
C51	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C52	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C53	CK05BX102M	Capacitor
C54	C26-0025-339	Capacitor
C55	C26-0025-339	Capacitor
C56	C26-0025-339	Capacitor
C57	CK06BX474M	Capacitor
C58	CK06BX474M	Capacitor
C59	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C60	C26-0025-339	Capacitor
C61	C25-0003-209	Capacitor
C62	CK06BX104M	Capacitor, .1 uF, 100 Vdc
C63	CK06BX104M	Capacitor, .1 uF, 100 Vdc
CR1	D12-0008-001	Diode
CR2	D12-0008-001	Diode
CR3	D12-0008-001	Diode
CR4	1N4454	Diode
CR5	1N4454	Diode
CR6	1N4732A	Diode, 1N4732A, 4.7 U, Zener
CR7	1N4454	Diode
CR8	1N4454	Diode
CR9	1N4454	Diode
CR10-CR19	1N4454	Diode
CR20	1N4732A	Diode, Zener, 1N4732A, 4.7 U
CR21	1N4454	Diode
CR22	1N4732A	Diode, Zener, 1N4732A, 4.7 U
CR23-CR30	1N4454	Diode
J1-J3	J-0031	Connector, Coax
J4,J5	J46-0032-010	Header, 10 pin
J6	J46-0032-008	Connector, Amp, 8 pin
L1,L2	MS75085-19	Inductor
L3,L4	L11-0004-037	Inductor
L5,L6	MS75085-19	Inductor
L7	MS75085-18	Inductor
L8	MS75085-11	Choke
L9-L11	MS75085-19	Inductor
L12	10073-7029	Inductor
Q1	Q35-0001-001	Transistor

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Table 2. ISB Assembly A18 Maintenance Parts List (PL 10073-6350) (Cont.)

Ref. Desig.	Part No.	Description
Q2	2N2222	Transistor, SI, NPN, GP
Q3	2N2222	Transistor, SI, NPN, GP
Q4	2N2222	Transistor, SI, NPN, GP
Q5	2N2222	Transistor, SI, NPN, GP
Q6	2N2222	Transistor, SI, NPN, GP
Q7	2N2222	Transistor, SI, NPN, GP
Q8	2N2222	Transistor, SI, NPN, GP
Q9	Q-0325	Transistor
Q10	2N2222	Transistor, SI, NPN, GP
Q11	2N2222	Transistor, SI, NPN, GP
Q12	2N2222	Transistor, SI, NPN, GP
Q13	2N2907	Transistor, PNP
Q14	2N2222	Transistor, SI, NPN, GP
Q15	2N2222	Transistor, SI, NPN, GP
Q16	2N4091	Transistor
Q17	2N2907	Transistor, PNP
Q18	2N2222	Transistor, SI, NPN, GP
Q19	2N2222	Transistor, SI, NPN, GP
Q20	2N2222	Transistor, SI, NPN, GP
Q21	2N2907	Transistor, PNP
R1	R65-0003-181	Resistor, Carbon Film
R2	R65-0003-561	Resistor, Film
R3	R65-0003-101	Resistor
R4	R65-0003-102	Resistor, Carbon Film
R5	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R6	R65-0003-512	Resistor, Carbon Film, 5.1 K, 1/4 W
R7	R65-0003-200	Resistor
R8	R40-0008-101	Resistor
R9	R65-0003-431	Resistor, Carbon Film
R10	R65-0003-102	Resistor, Carbon Film
R11	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R12	R65-0003-512	Resistor, Carbon Film, 5.1 K, 1/4 W
R13	R65-0003-221	Resistor
R14	R65-0003-390	Resistor, Film
R15	R65-0003-431	Resistor, Carbon Film
R16	R65-0003-101	Resistor
R17	R65-0003-102	Resistor, Carbon Film
R18	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R19	R65-0003-512	Resistor, Carbon Film, 5.1 K, 1/4 W
R20	R65-0003-561	Resistor, Film

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Table 2. ISB Assembly A18 Maintenance Parts List (PL 10073-6350) (Cont.)

Ref. Desig.	Part No.	Description
R21	R65-0003-101	Resistor
R22	R65-0003-361	Resistor
R23	R65-0003-203	Resistor, Carbon Film, 1/4 W, 5%
R24	R65-0003-203	Resistor, Carbon Film, 1/4 W, 5%
R25	R65-0003-271	Resistor
R26	R65-0003-102	Resistor, Carbon Film
R27	R65-0003-512	Resistor, Carbon Film, 5.1 K, 1/4 W
R28	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R29	R65-0003-561	Resistor, Film
R30	R65-0003-270	Resistor
R31	R65-0003-431	Resistor, Carbon Film
R32	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R33	R65-0003-203	Resistor, Carbon Film, 1/4 W, 5%
R34	R65-0003-203	Resistor, Carbon Film, 1/4 W, 5%
R35	R65-0003-471	Resistor, Metal Film, 470, 1/4 W
R36	R65-0003-221	Resistor
R37	R65-0003-431	Resistor, Carbon Film
R38	R65-0003-101	Resistor
R39	R65-0003-242	Resistor, Carbon Film, 1/4 W, 5%
R40	R65-0003-120	Resistor, Carbon Film, 12, 1/4 W
R41	R65-0003-101	Resistor
R42	R65-0003-301	Resistor, Carbon Film
R43	R65-0003-180	Resistor
R44	R65-0003-301	Resistor, Carbon Film
R45	R65-0003-510	Resistor, Carbon Film, 1/4 W, 5%
R46	R65-0003-102	Resistor, Carbon Film
R47	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R48	R65-0003-201	Resistor, Film
R49	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R50	R65-0003-201	Resistor, Film
R51	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R52	R65-0003-221	Resistor
R53	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R54	R65-0003-562	Resistor
R55	R65-0003-561	Resistor, Film
R56	R65-0003-433	Resistor, Carbon Film, 43 K, 1/4 W, 5%
R57	R65-0003-100	Resistor, Carbon Film, 1/4 W, 5%
R58	R65-0003-100	Resistor, Carbon Film, 1/4 W, 5%
R59	R65-0003-431	Resistor, Carbon Film
R60	R65-0003-203	Resistor, Carbon Film, 1/4 W, 5%
R61	R65-0003-510	Resistor, Carbon Film, 1/4 W, 5%

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Table 2. ISB Assembly A18 Maintenance Parts List (PL 10073-6350) (Cont.)

Ref. Desig.	Part No.	Description
R62	R65-0003-331	Resistor, Carbon Film, 330, 1/4 W
R63	R65-0003-432	Resistor, Carbon Film
R64	R65-0003-432	Resistor, Carbon Film
R65	R65-0003-223	Resistor, Carbon Film, 1/4 W, 5%
R66	R65-0003-432	Resistor, Carbon Film
R67	R65-0003-433	Resistor, Carbon Film, 43 K, 1/4 W, 5%
R68	R30-0008-203	Resistor, Variable, 20 K
R69	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R70	R65-0003-561	Resistor, Film
R71	R65-0003-512	Resistor, Carbon Film, 5.1 K, 1/4 W
R72	R65-0003-161	Resistor
R73	R65-0003-561	Resistor, Film
R74	R65-0003-473	Resistor, Carbon Film, 1/4 W, 5%
R75	R65-0003-101	Resistor
R76	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R77	R65-0003-513	Resistor, Carbon Film, 1/4 W, 5%
R78	R65-0003-512	Resistor, Carbon Film, 1/4 W, 5%
R79, R80	R65-0003-104	Resistor, Carbon Film, 100 K, 1/4 W, 5%
R81	R65-0003-511	Resistor, Carbon Film, 510, 1/4 W
R82	R65-0003-203	Resistor, Carbon Film, 1/4 W, 5%
R83	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R84	R65-0003-910	Resistor, Film, 910, 1/4 W, 5%
R85	R65-0003-181	Resistor, Carbon Film
R86	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R87	R65-0003-910	Resistor, Film, 910, 1/4 W, 5%
R88	R65-0003-473	Resistor, Carbon Film, 1/4 W, 5%
R89	R65-0003-152	Resistor, Film, 1.5 K, 1/4 W, 5%
R90	R65-0003-244	Resistor
R91	R65-0003-273	Resistor
R92	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R93	R65-0003-302	Resistor, Carbon Film, 3 K, 1/4 W, 5%
R95	R65-0003-512	Resistor, Carbon Film, 5.1 K, 1/4 W
R96	R65-0003-101	Resistor
R97	R65-0003-471	Resistor, Metal Film, 470, 1/4 W
R98	R65-0003-101	Resistor
R99	R75-0001-002	Resistor
R100	R65-0003-473	Resistor, Carbon Film, 1/4 W, 5%
R101	R65-0003-431	Resistor, Carbon Film
R102	R65-0003-473	Resistor, Carbon Film, 1/4 W, 5%
R103	R65-0003-203	Resistor, Carbon Film, 1/4 W, 5%
R104	R65-0003-242	Resistor, Carbon Film, 1/4 W, 5%

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Table 2. ISB Assembly A18 Maintenance Parts List (PL 10073-6350) (Cont.)

Ref. Desig.	Part No.	Description
R105	R65-0003-474	Resistor, Carbon Film, 1/4 W, 10%
R106	R65-0003-100	Resistor, Carbon Film, 1/4 W, 5%
R107	R65-0003-473	Resistor, Carbon Film, 1/4 W, 5%
R108	R65-0003-473	Resistor, Carbon Film, 1/4 W, 5%
R109	R65-0003-473	Resistor, Carbon Film, 1/4 W, 5%
R110	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R111	R65-0003-203	Resistor, Carbon Film, 1/4 W, 5%
R112	R30-0008-202	Resistor
R113	R65-0003-683	Resistor, Carbon Film, 68 K, 1/4 W
R114	R65-0003-184	Resistor, Carbon Film, 180 K, 1/4 W, 5%
R115	R65-0003-822	Resistor, Carbon Film, 8, 1/4 W, 5%
R116	R65-0003-393	Resistor, Carbon Film, 1/4 W, 5%
R117	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
R118	R65-0003-751	Resistor, Carbon Film
R119	R65-0003-681	Resistor, Carbon Film, 680, 1/4 W, 5%
R120	R30-0008-501	Resistor
R121	R65-0003-102	Resistor, Carbon Film
R122	R65-0003-301	Resistor, Carbon Film
R123	R65-0003-102	Resistor, Carbon Film
R124	R65-0003-623	Resistor, Carbon Film, 62 KR, 1/4 W, 5%
R125	R65-0003-103	Resistor, Carbon Film, 1/4 W, 5%
T1	10073-7026	Transformer
T2	T60-0004-001	Transformer
TP1	J-0071	Test Point
TP2	J-0066	Test Point
TP3	J-0069	Test Point
TP4	J-0070	Test Point, Yellow
TP5	J-0068	Test Point, Green
TP6	J-0072	Test Point, Blue
TP7	J-0073	Test Point
TP8	J-0074	Test Point, Grey
U1	I30-0036-001	Integrated Circuit
U2	I30-0035-000	Integrated Circuit
U3	I30-0003-000	Integrated Circuit, Quad Oper. Ampl.
U4	I30-0003-000	Integrated Circuit, Quad Oper. Ampl.
U5	I30-0003-000	Integrated Circuit, Quad Oper. Ampl.
U6	I30-0003-000	Integrated Circuit, Quad Oper. Ampl.
U7	I51-0003-001	Mixer
VR1	I12-0010-005	Voltage Regulator
VR2	I12-0006-005	Integrated Circuit

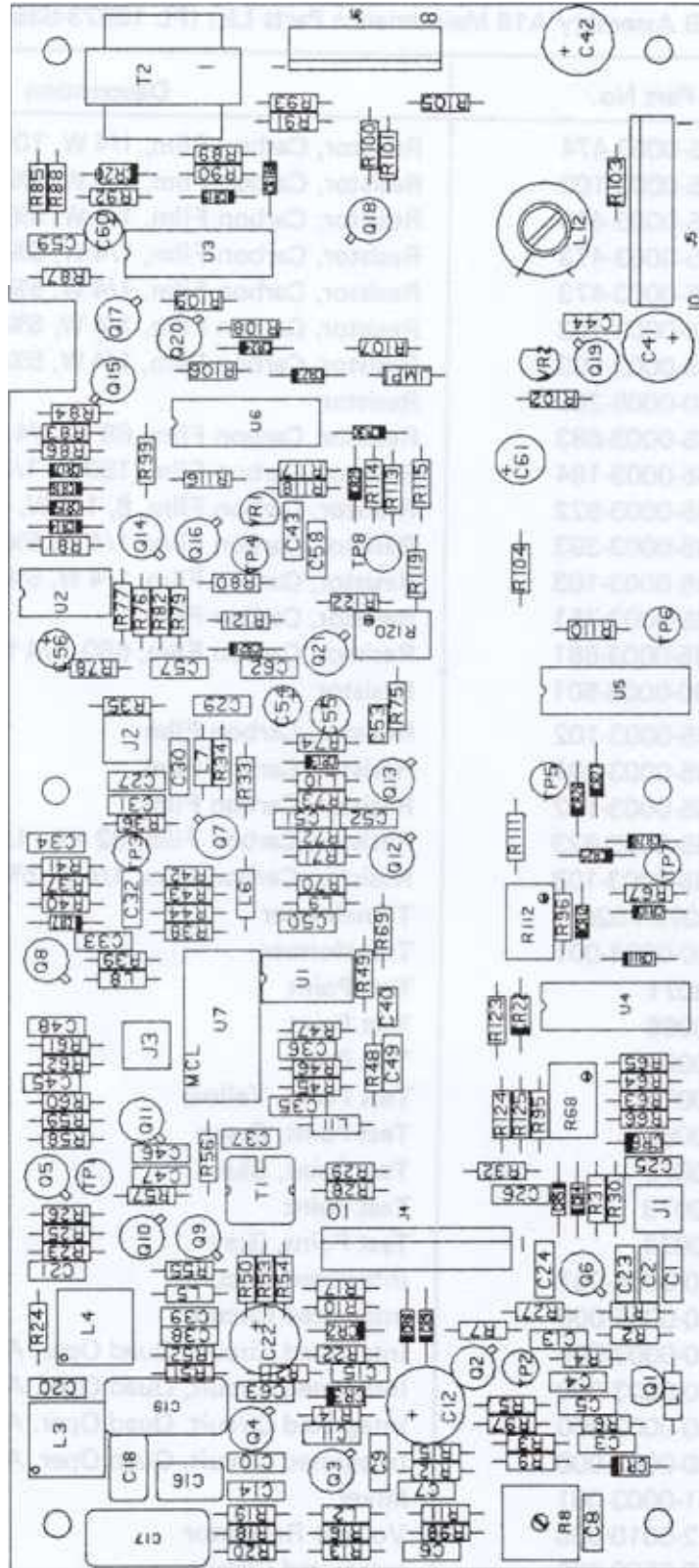


Figure 2. ISB Assembly A18 Component Location Diagram

NOTE: UNLESS OTHERWISE SPECIFIED:

PARTIAL REFERENCE DESIGNATIONS ARE SHOWN.
FOR A COMPLETE DESIGNATION, PREFIX WITH
UNIT NO. AND/OR ASSEMBLY NO. DESIGNATION.

ALL RESISTOR VALUES ARE IN OHMS, 1/4W, ±5%.

ALL CAPACITOR VALUES ARE IN MICROFARADS, 200V.

VENDOR PART NO. CALLOUTS ARE FOR REFERENCE ONLY.
COMPONENTS ARE SUPPLIED PER PART NO. IN PARTS LIST.

⊕ = RF GND

⊕ = LOCAL GND

UNUSED GATES

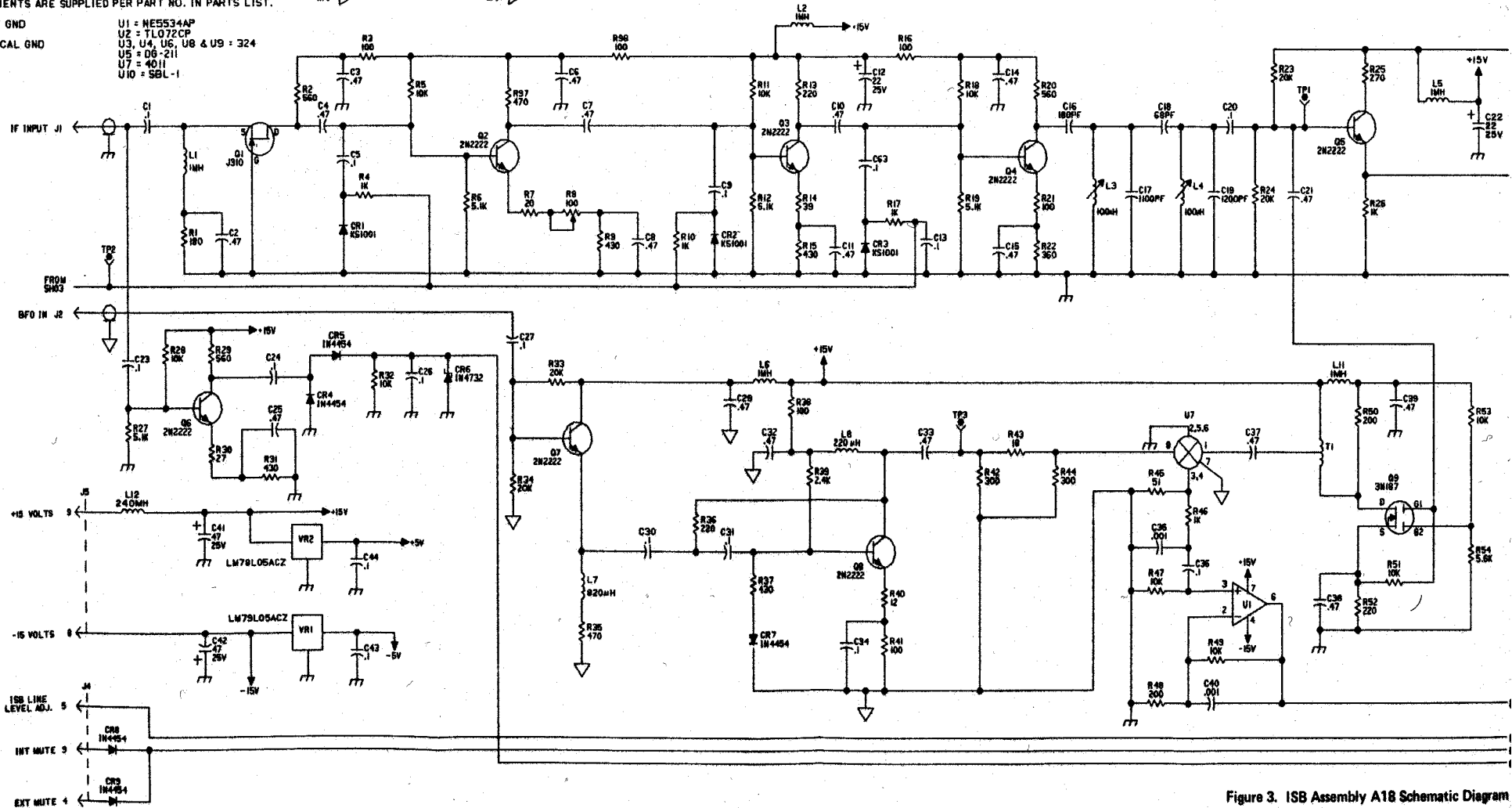
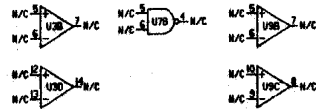


Figure 3. ISB Assembly A18 Schematic Diagram
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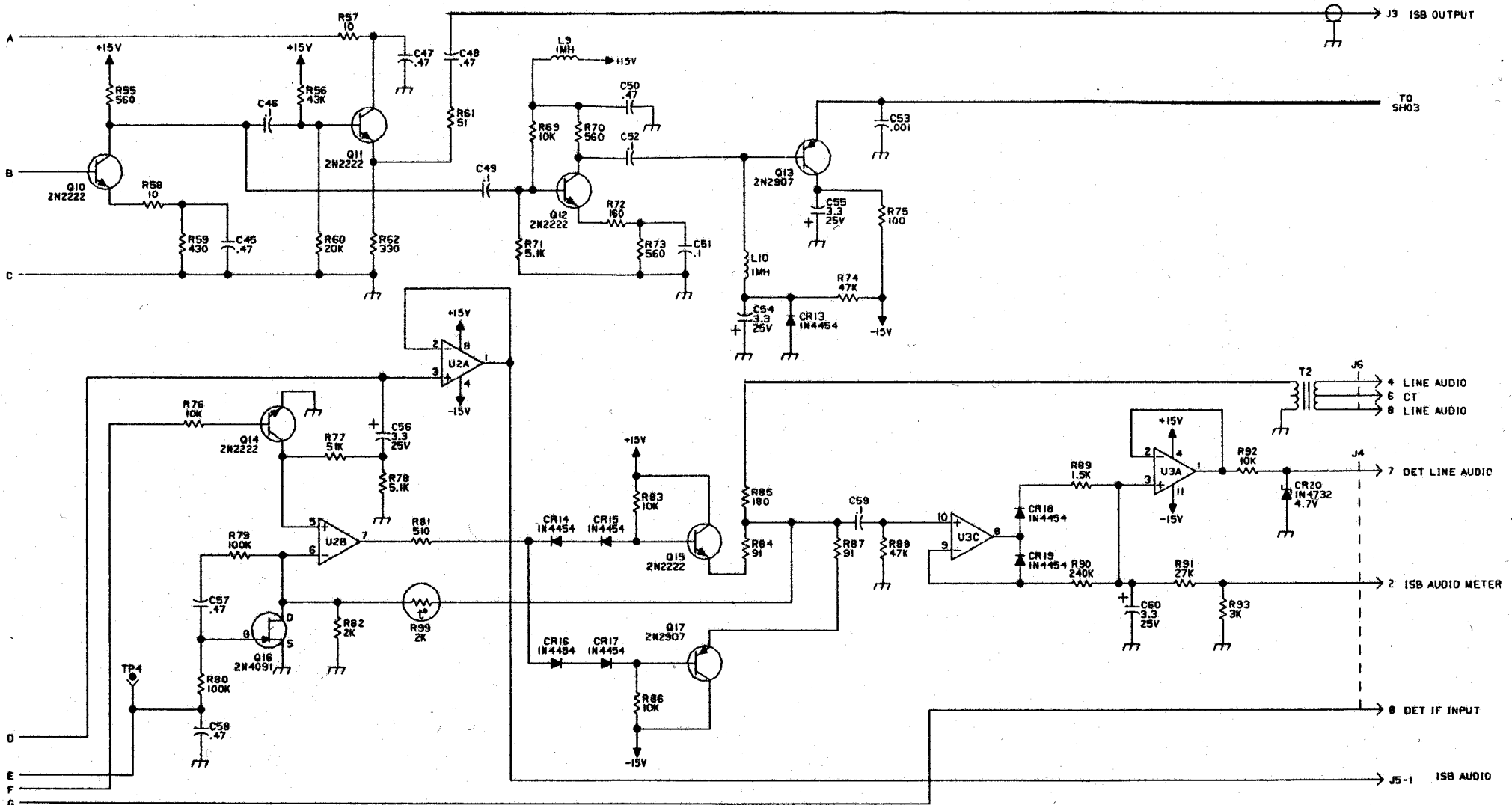
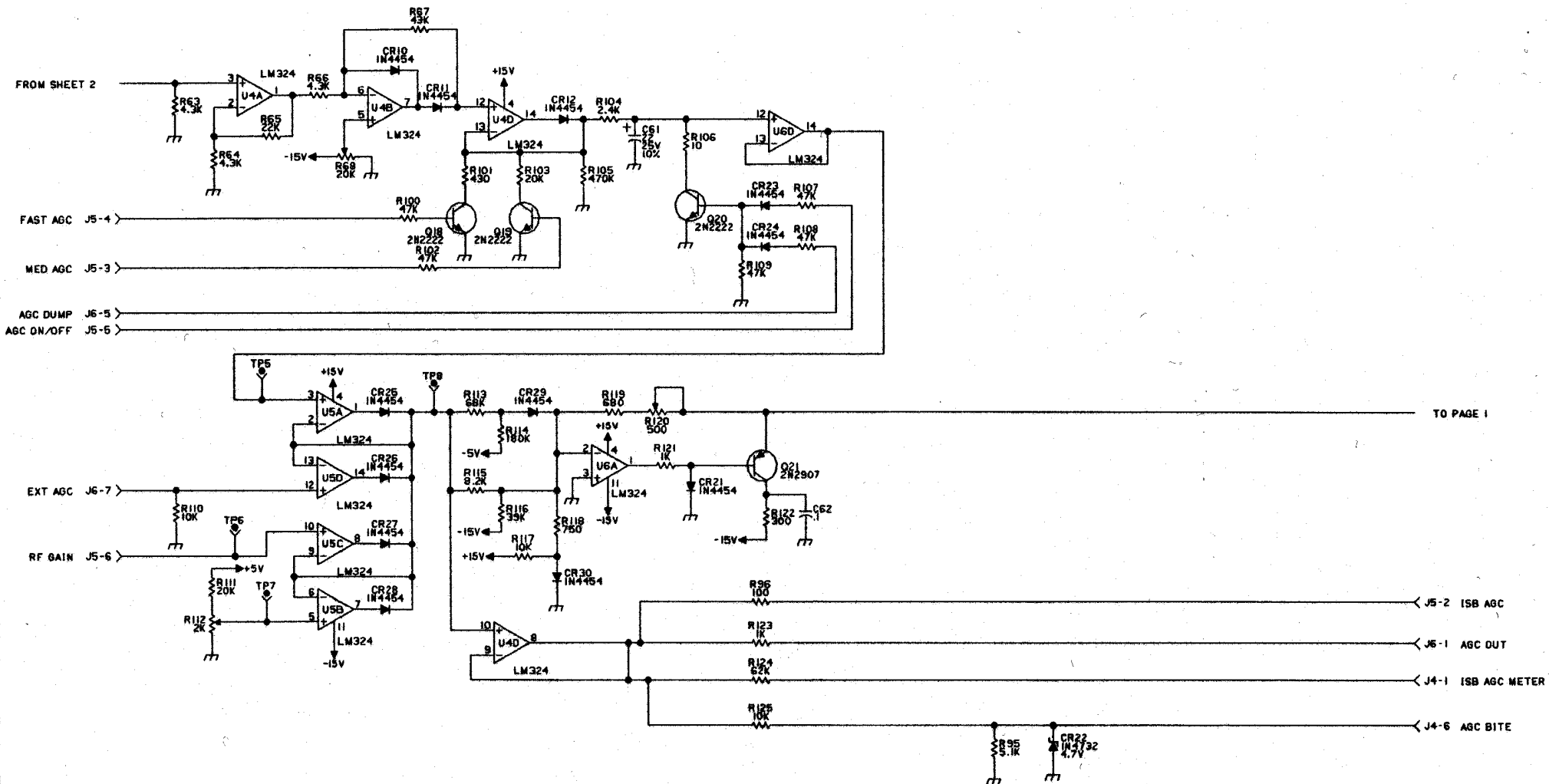


Figure 3. ISB Assembly A18 Schematic Diagram
(Sheet 2 of 3)



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Figure 3. ISB Assembly A18 Schematic Diagram
(Sheet 3 of 3)