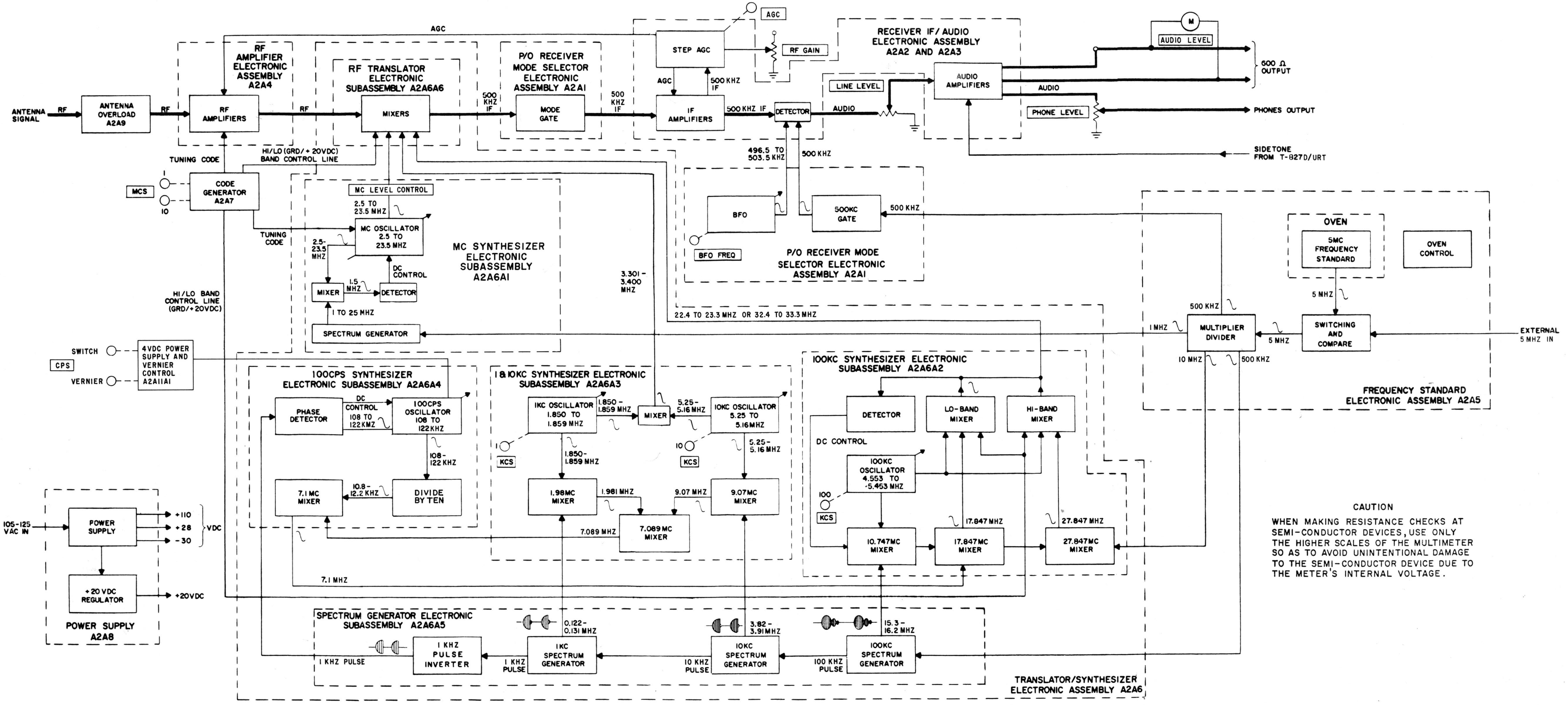


CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 3-1. Radio Receiver R-1051D/URR, Functional Block Diagram

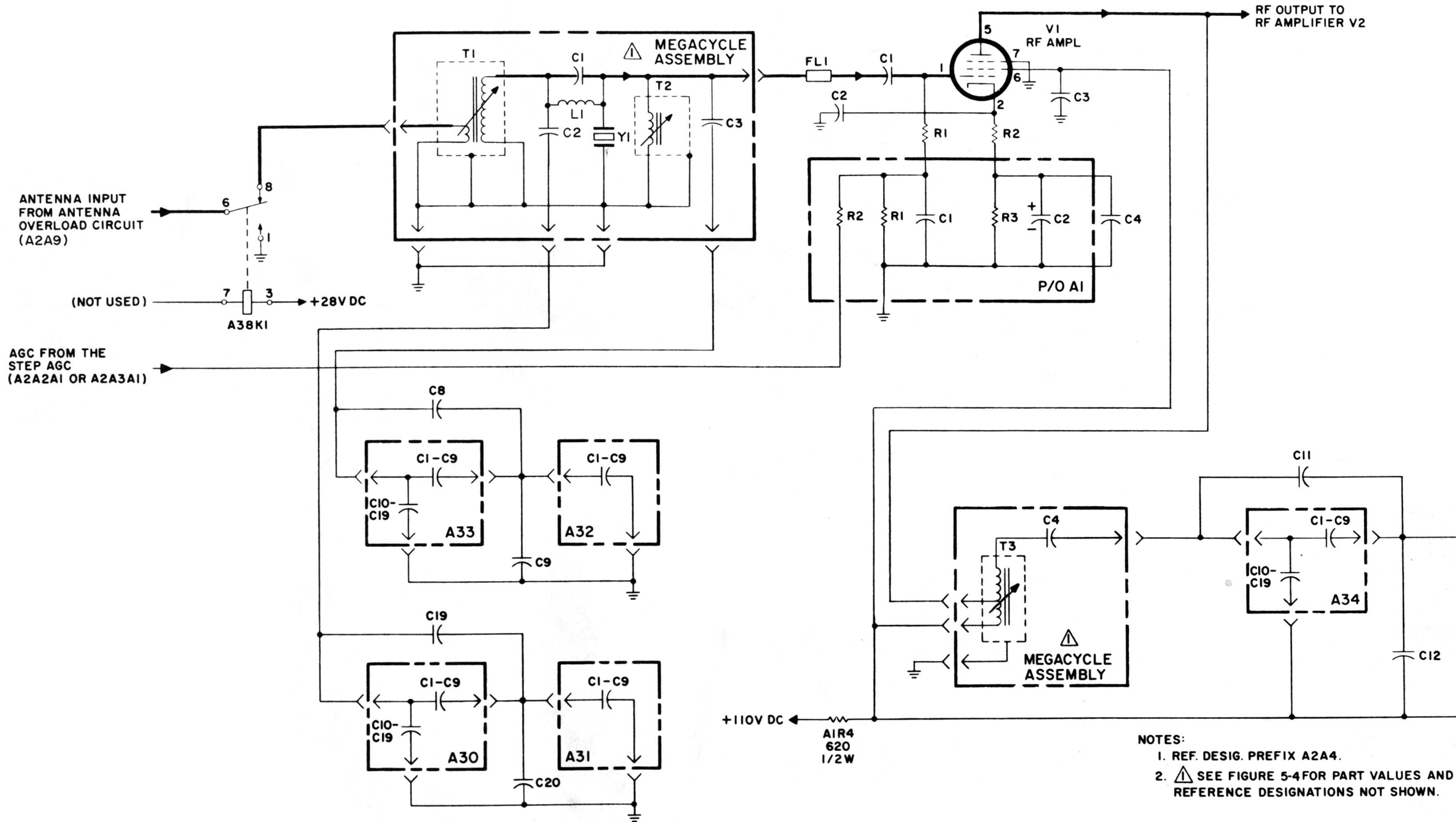
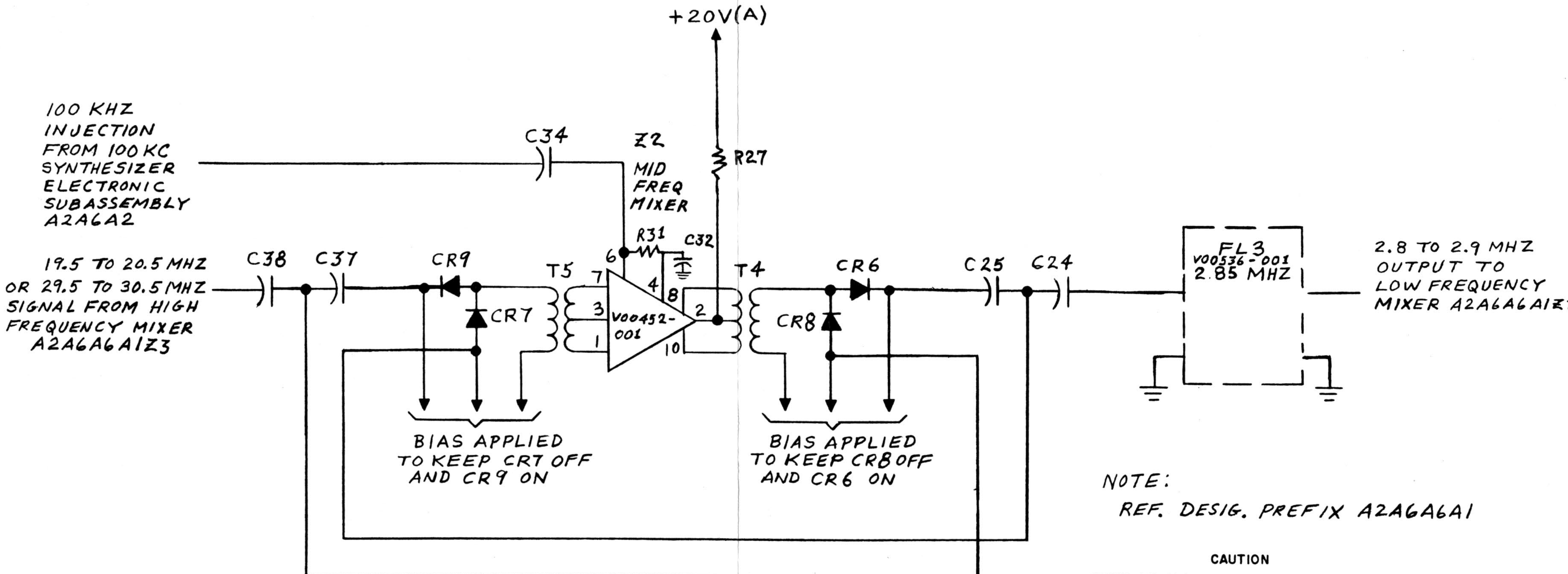


Figure 3-4. RF Amplifier V1, Simplified Schematic Diagram

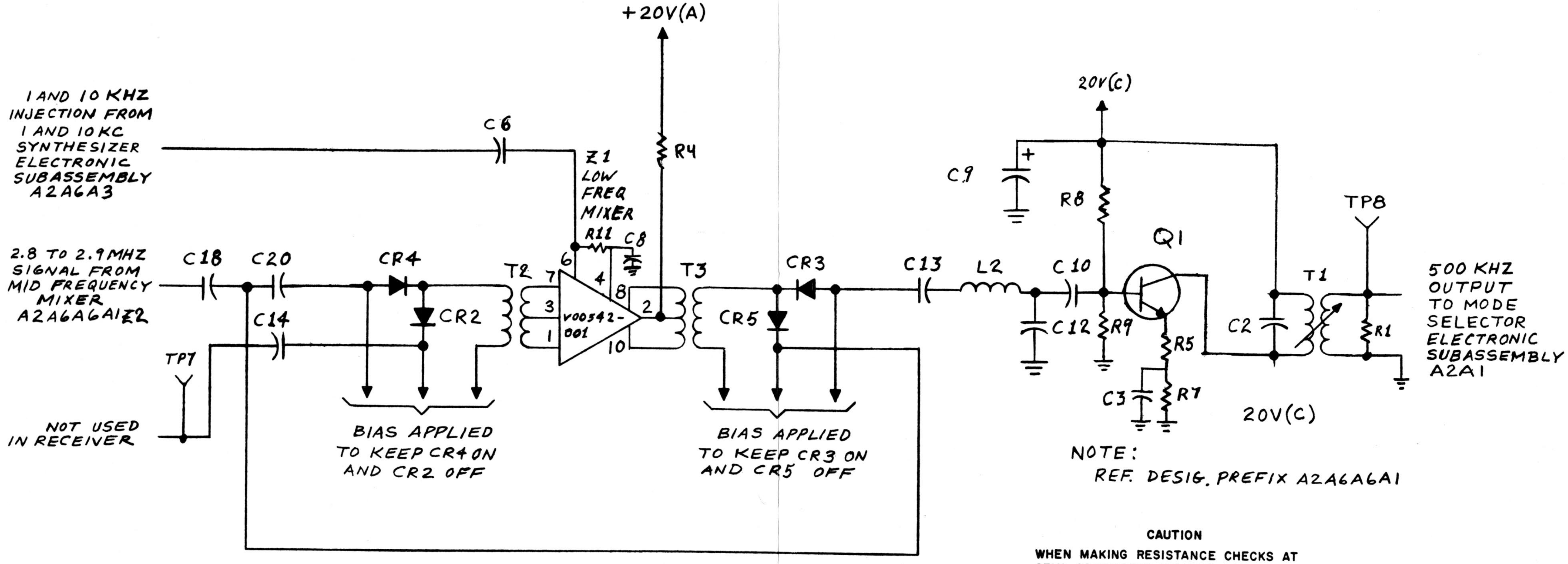


NOTE:
REF. DESIG. PREFIX A2A6A6A1

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 3-7. Mid Frequency Mixer, Simplified Schematic Diagram



CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 3-8. Low Frequency Mixer, Simplified Schematic Diagram

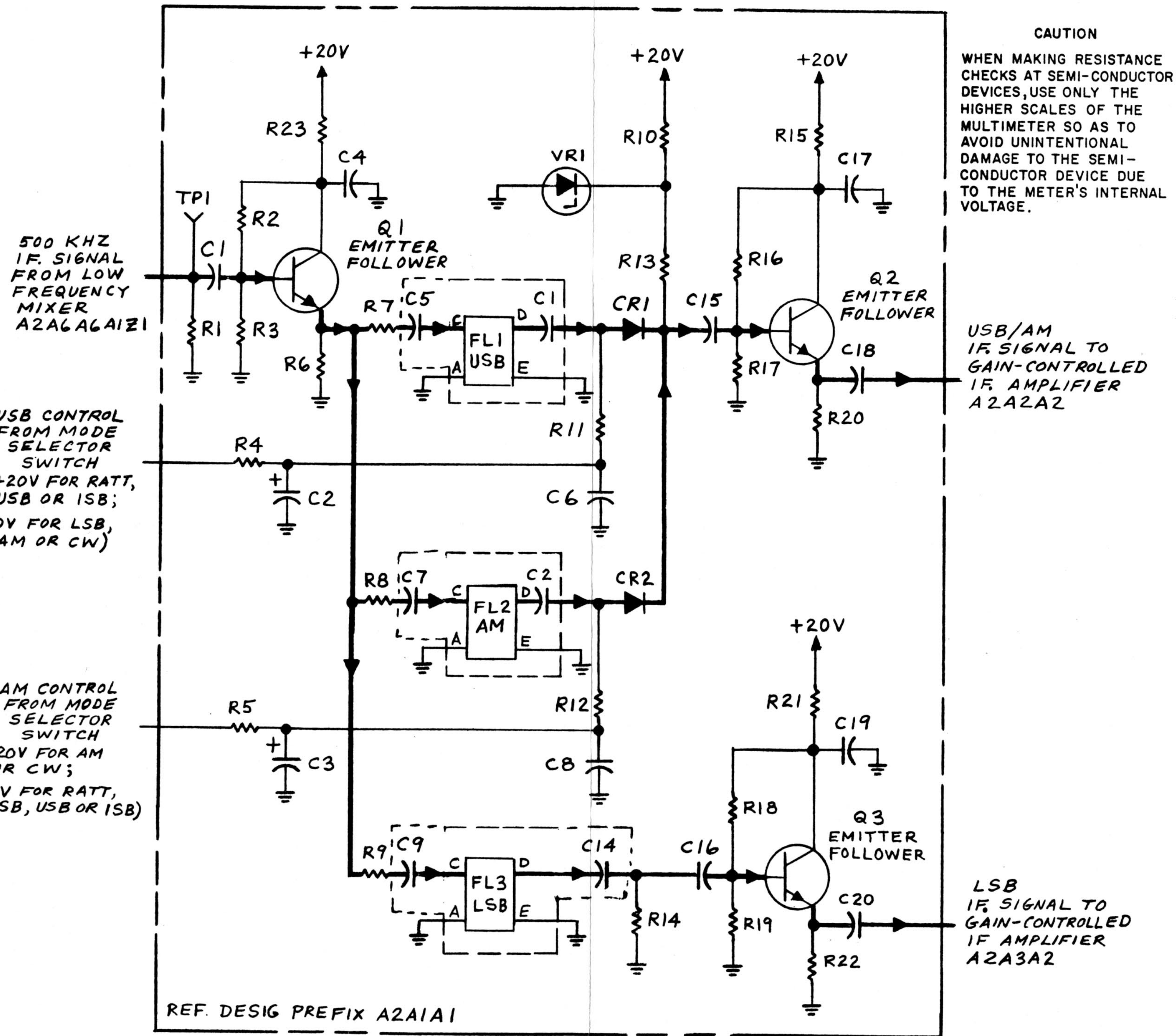
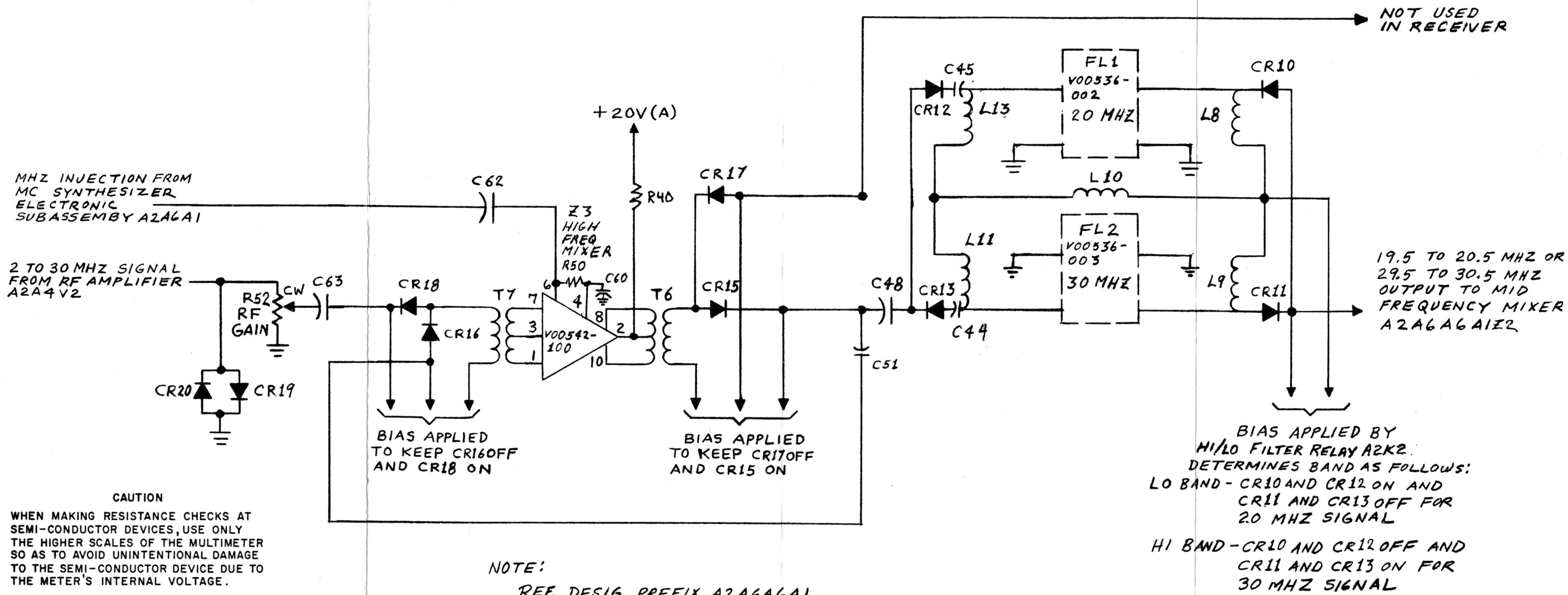


Figure 3-9. Mode Gate, Simplified Schematic Diagram



CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTE:
REF. DESIG. PREFIX A2A6A6A1

Figure 3-6. High Frequency Mixer, Simplified Schematic Diagram

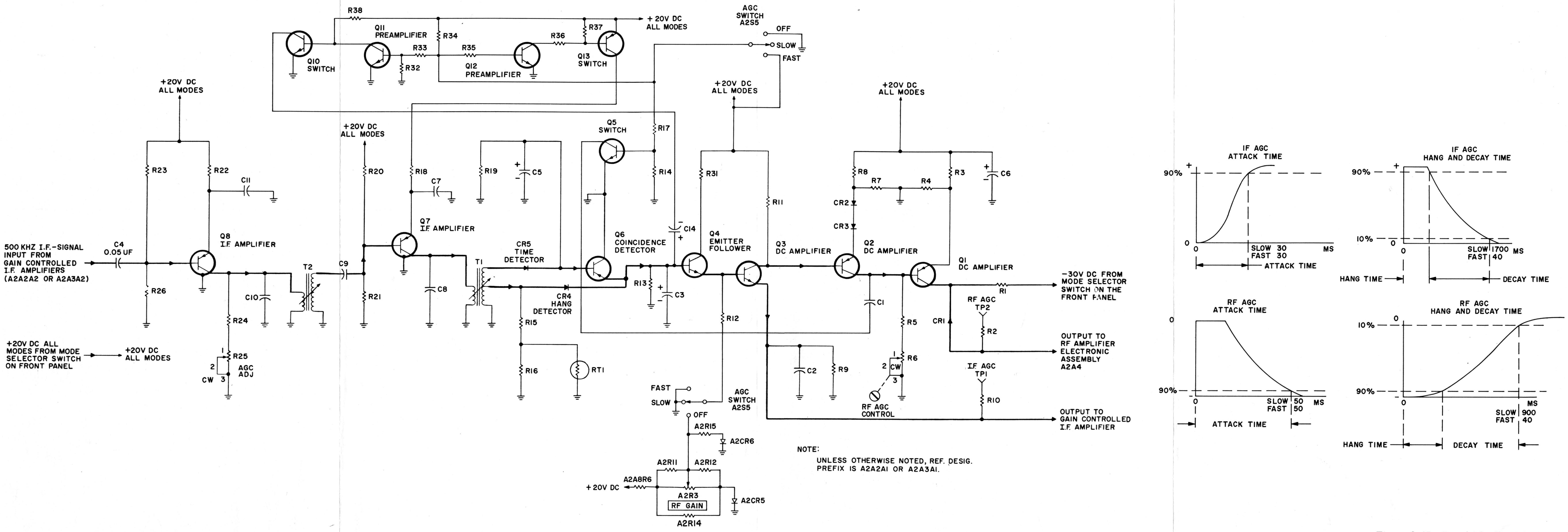
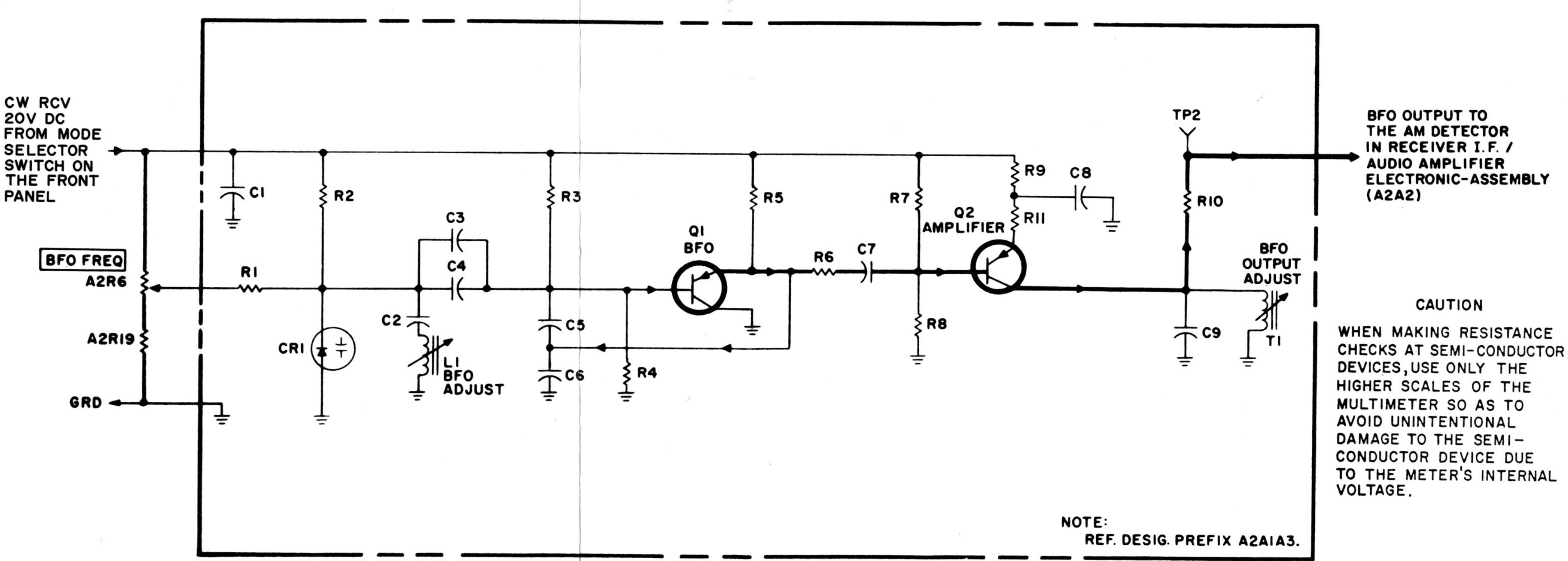


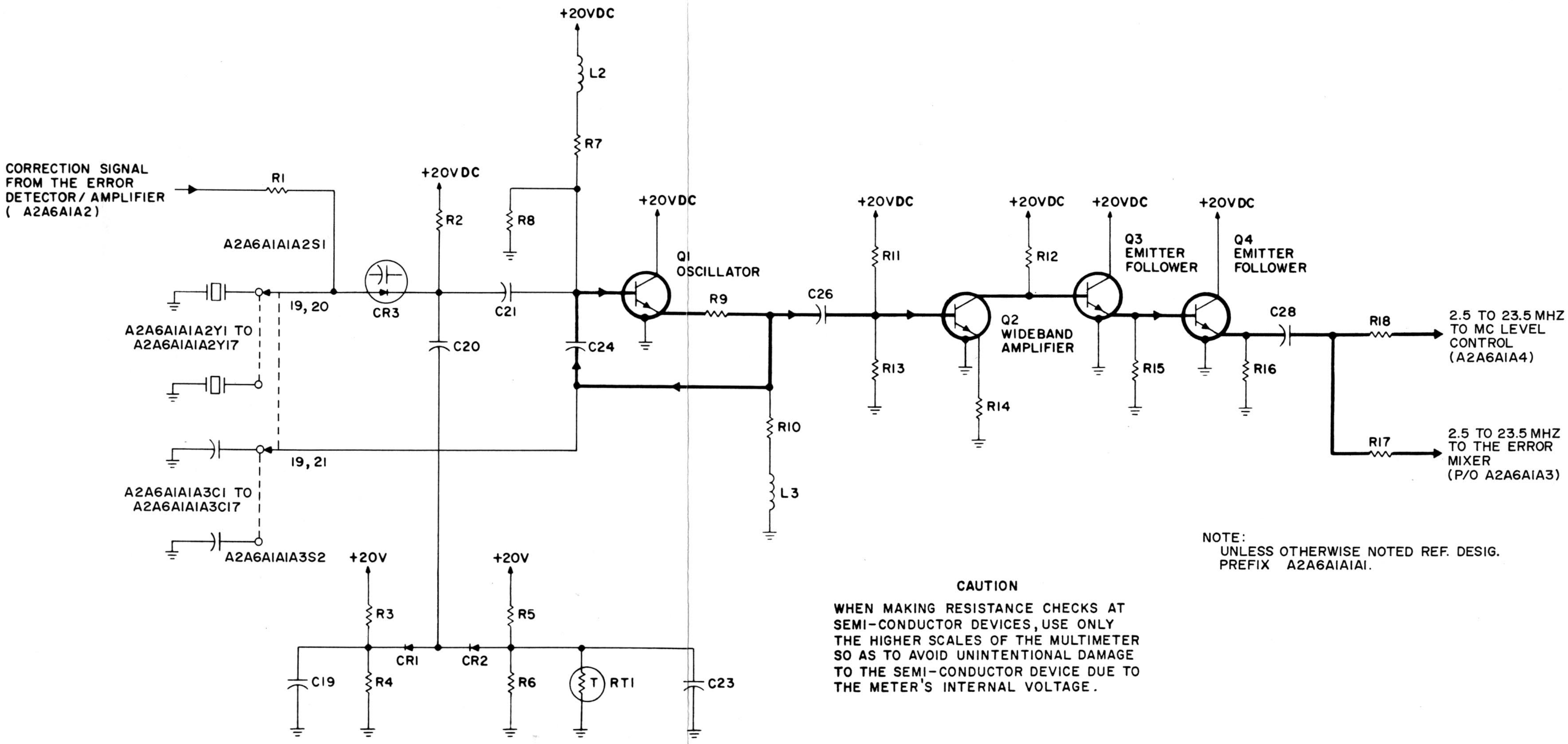
Figure 3-15. Step AGC, Simplified Schematic and Output Timing Diagram



CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 3-16. BFO and Amplifier, Simplified Schematic Diagram

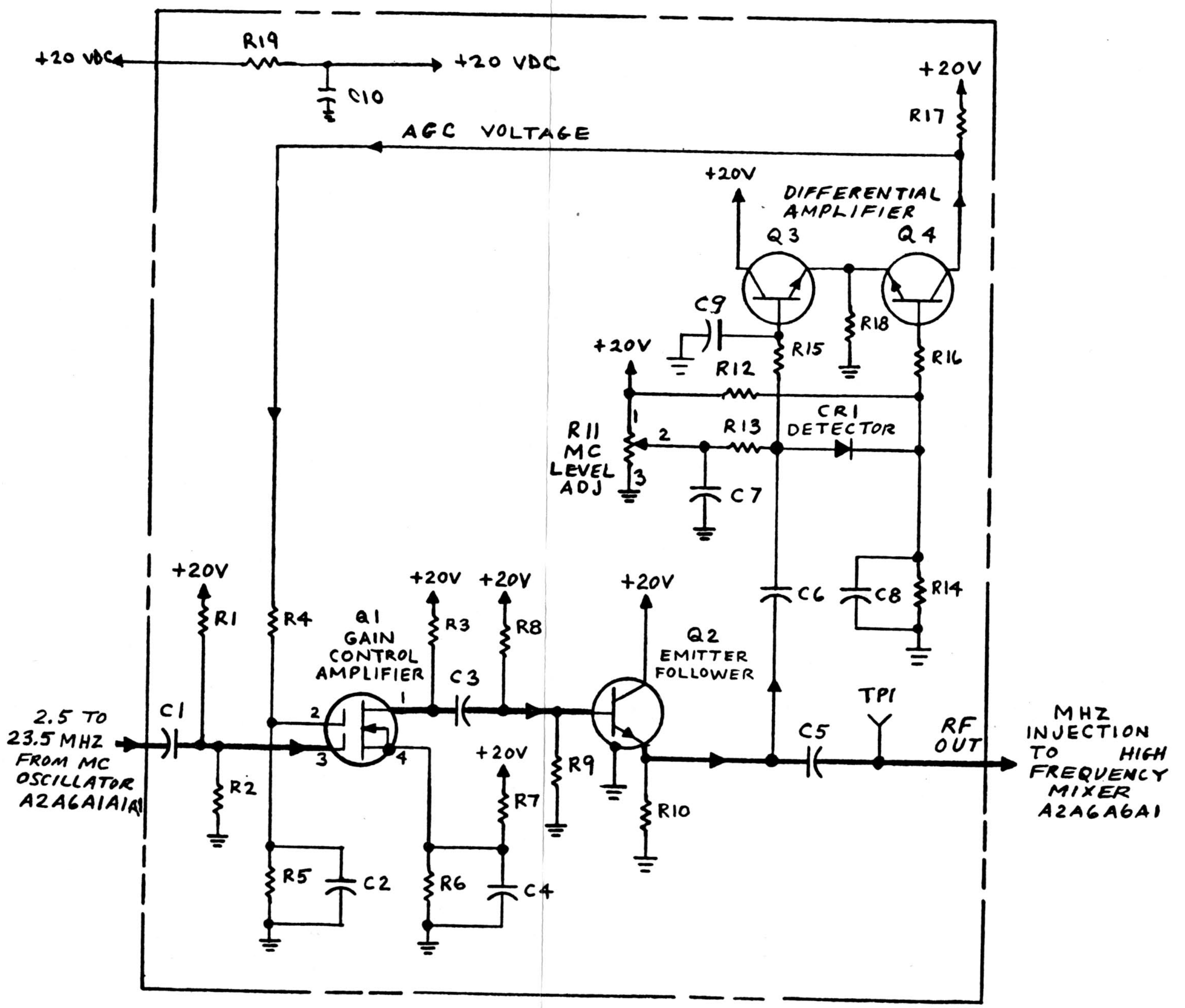


CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTE:
UNLESS OTHERWISE NOTED REF. DESIG. PREFIX A2A6A1A1A1.

Figure 3-17. MC Oscillator, Simplified Schematic Diagram



NOTE:
REF. DESIG. PREFIX
WITH A2A6A1A4

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 3-18. MC Level Control, Simplified Schematic Diagram

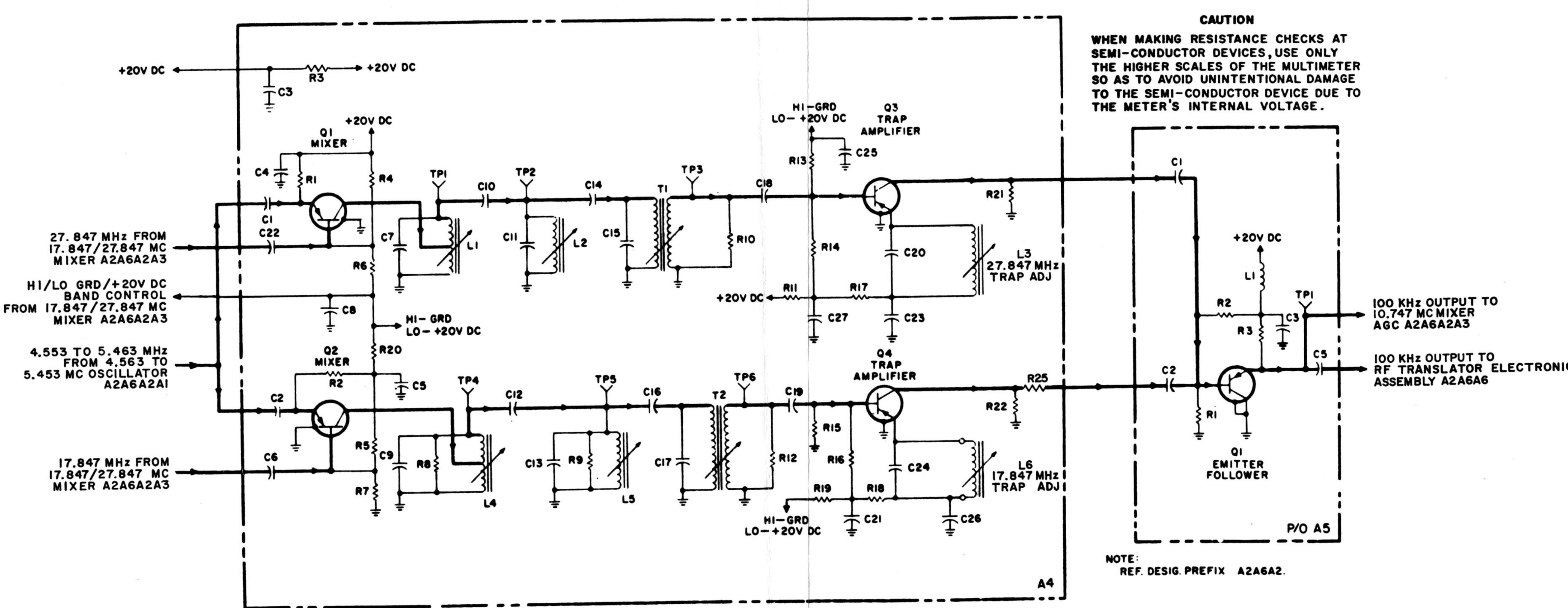


Figure 3-20. Hi-Band/Lo-Band Mixer/Amplifier, Simplified Schematic Diagram

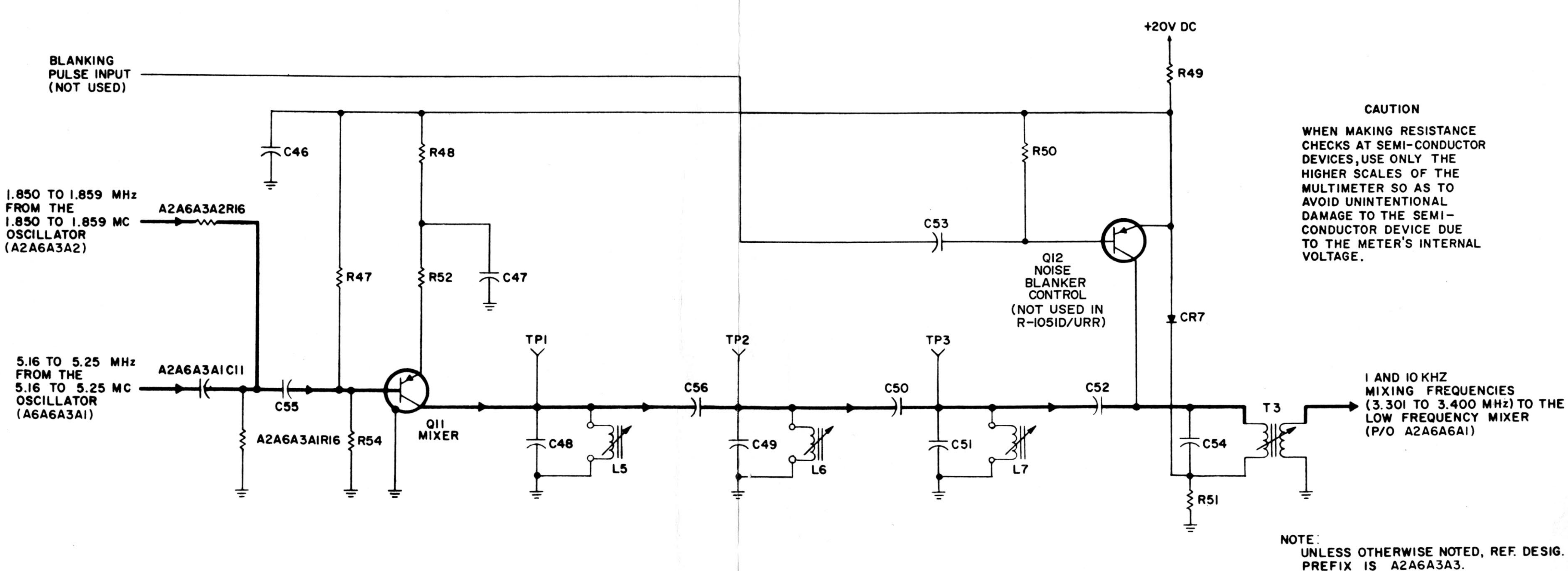


Figure 3-23. 1 and 10 KC Mixer, Simplified Schematic Diagram

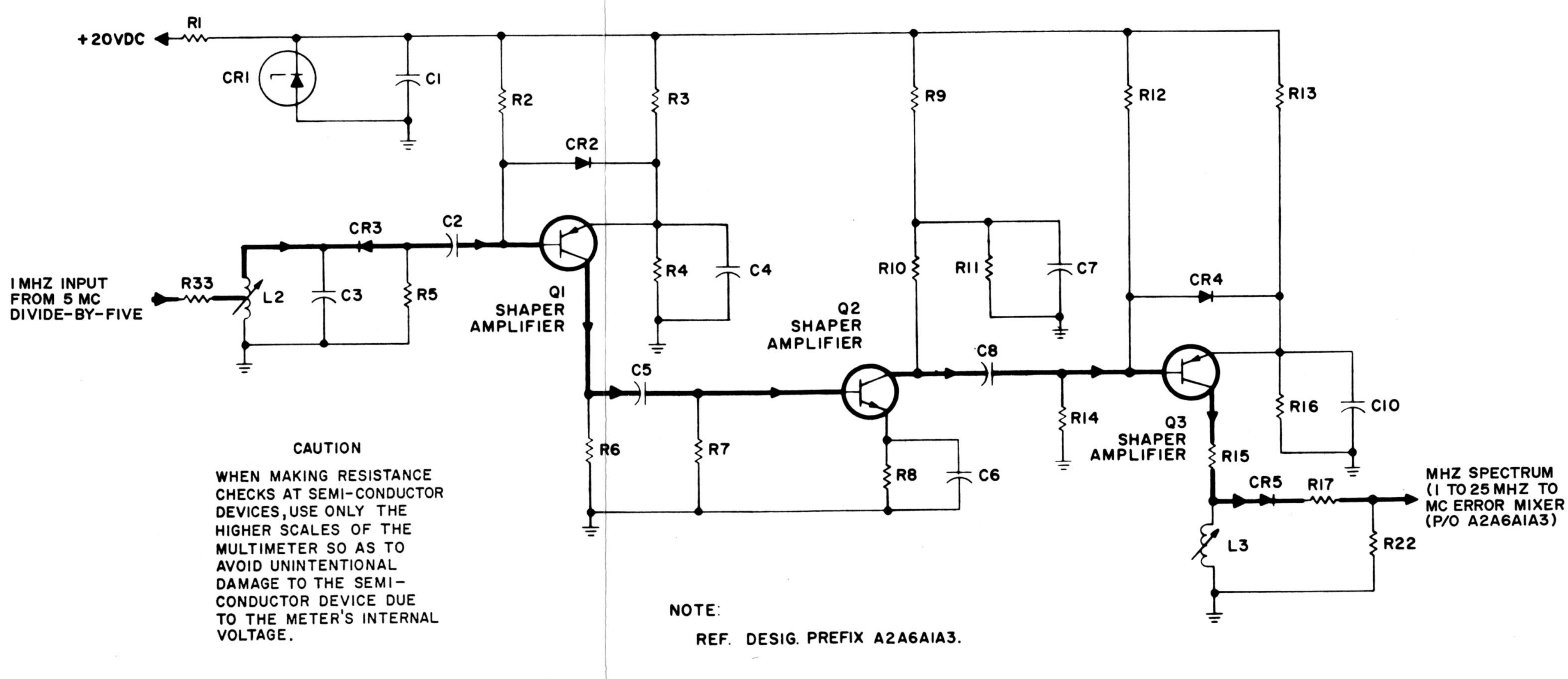
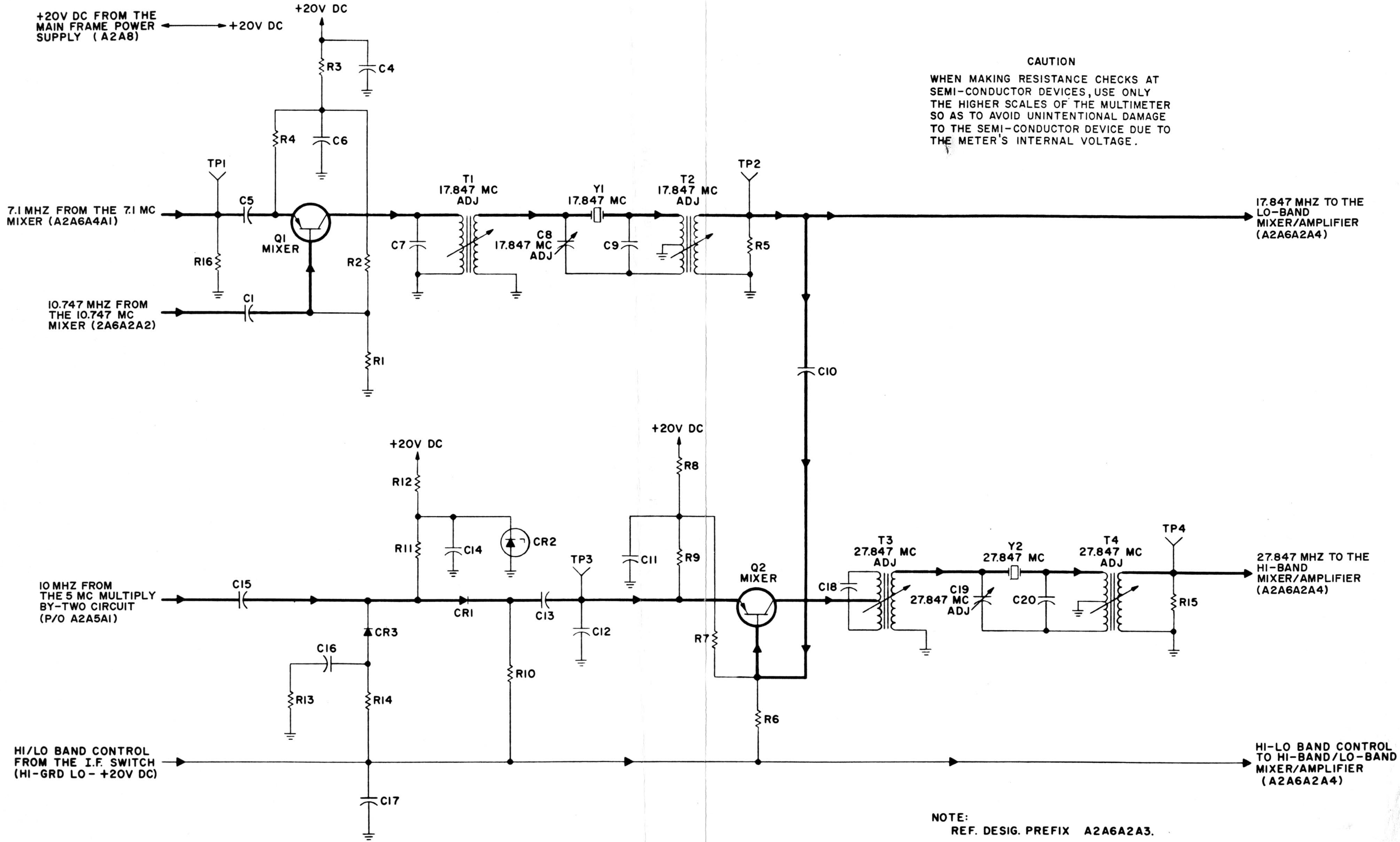


Figure 3-24. MC Spectrum Generator, Simplified Schematic Diagram

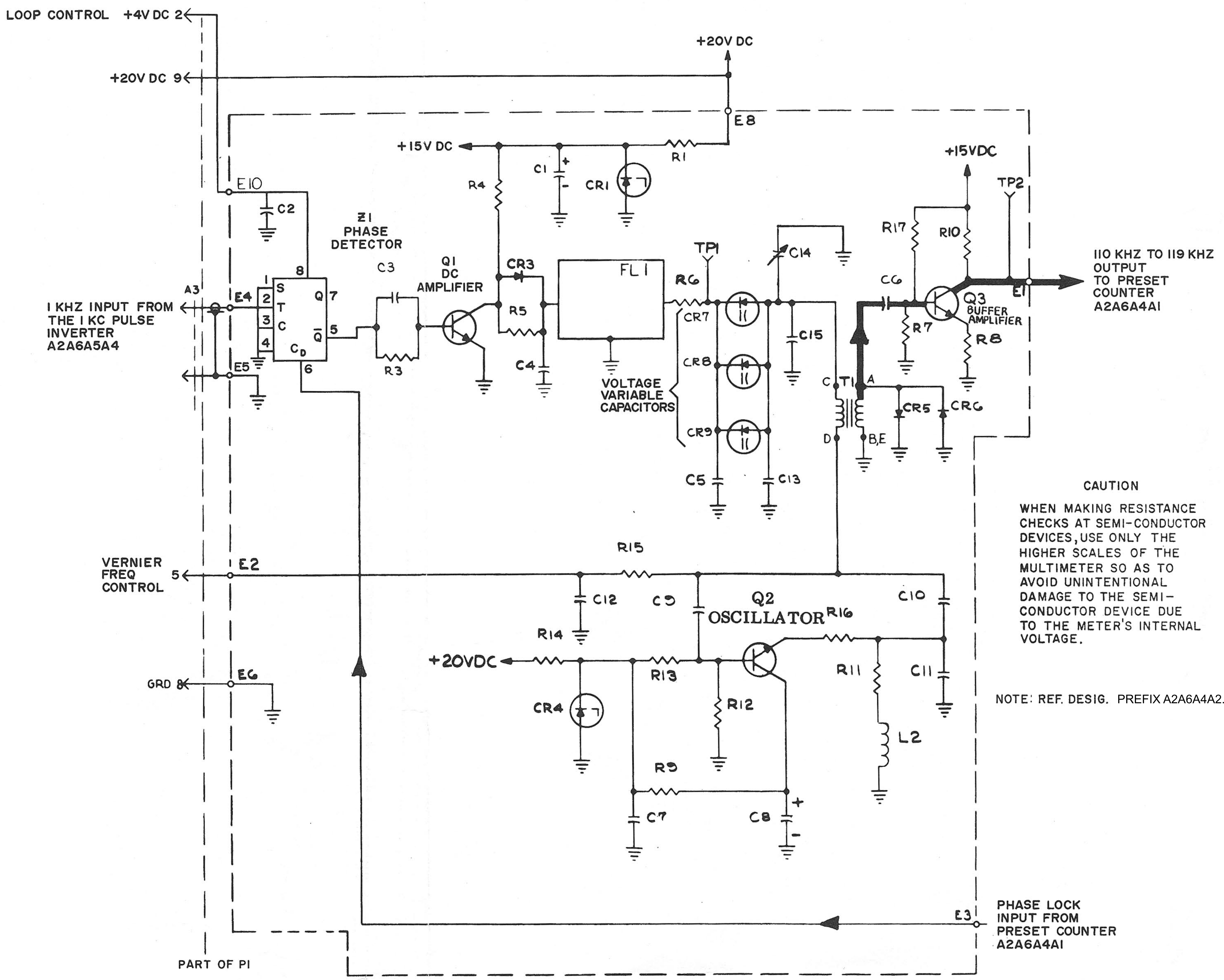
CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.



NOTE:
REF. DESIG. PREFIX A2A6A2A3.

Figure 3-37. 17.847/27.847 MC Mixer, Simplified Schematic Diagram

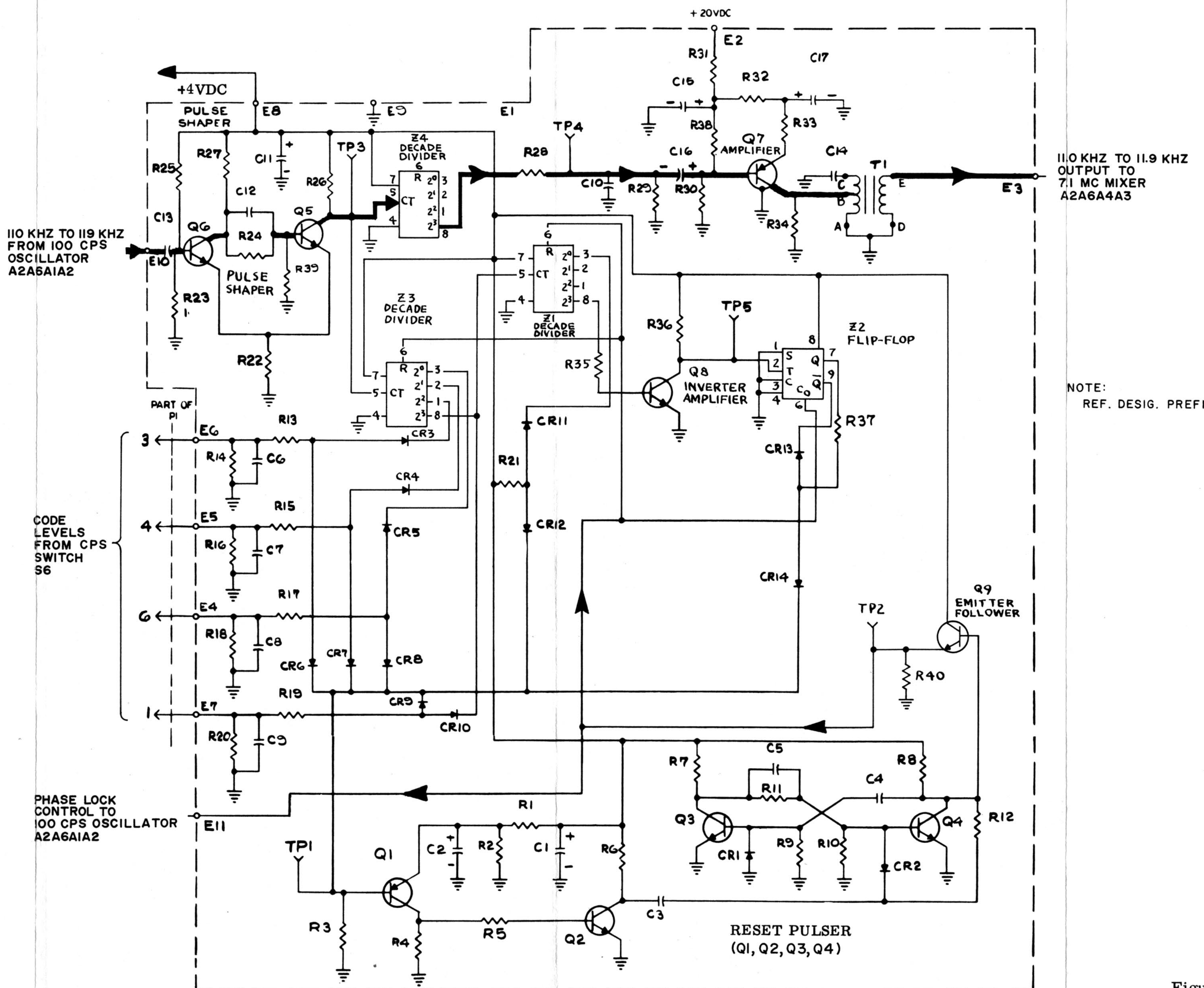


CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

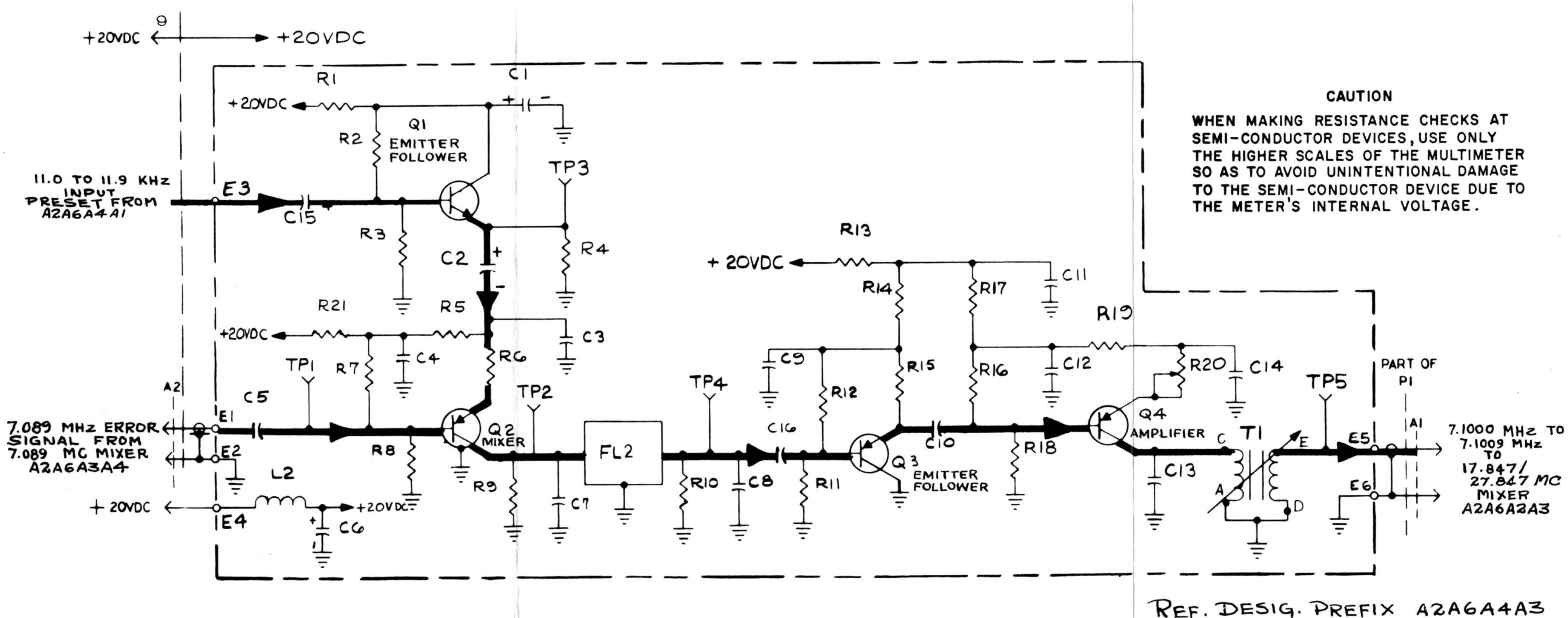
NOTE: REF. DESIG. PREFIX A2A6A4A2.

Figure 3-44. 100 CPS Oscillator, Simplified Schematic Diagram



NOTE:
REF. DESIG. PREFIX A2A6A4A1.

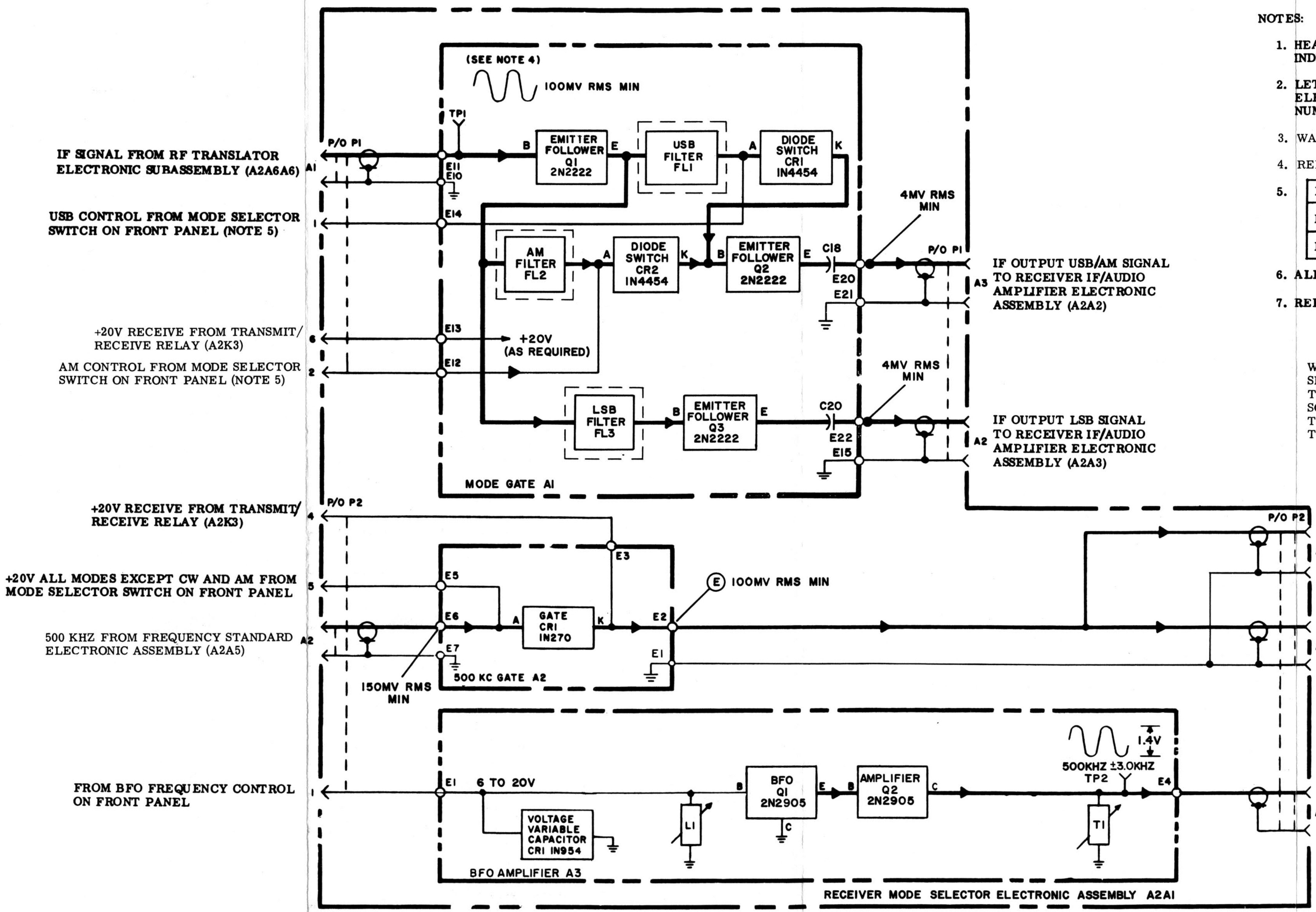
Figure 3-48. Preset Counter, Simplified Schematic Diagram



CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 3-51. 7.1 MC Mixer, Simplified Schematic Diagram



NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
3. WAVEFORMS RECORDED ON OSCILLOSCOPE AN/USM-105A.
4. REFER TO PARA. 4-5n FOR SIGNAL LEVELS.
5.

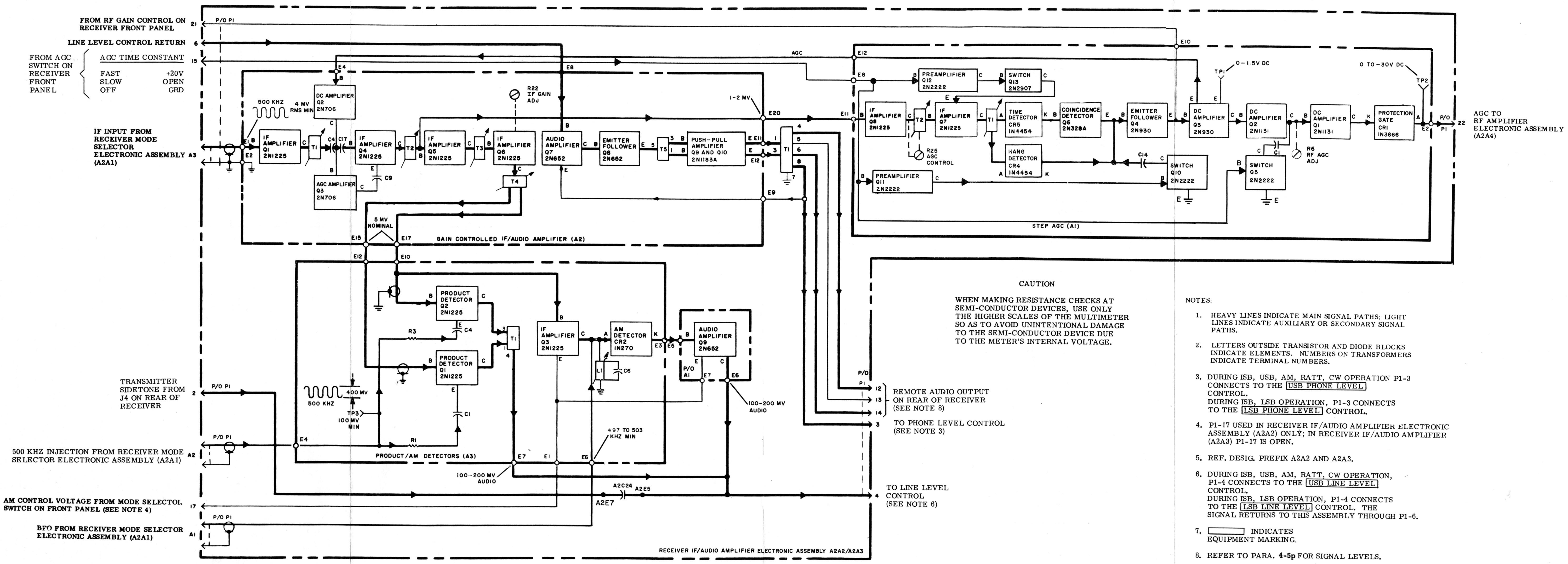
POSITION	LSB	RATT	AM	CW	USB	ISB
P1-1	GRD	+20V	GRD	GRD	+20V	+20V
P1-2	GRD	GRD	+20V	+20V	GRD	GRD

6. ALL VOLTAGES ARE DC UNLESS OTHERWISE SPECIFIED.
7. REF. DESIG. PREFIX A2A1.

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 4-1. Mode Selector Electronic Assembly A2A1, Servicing Block Diagram



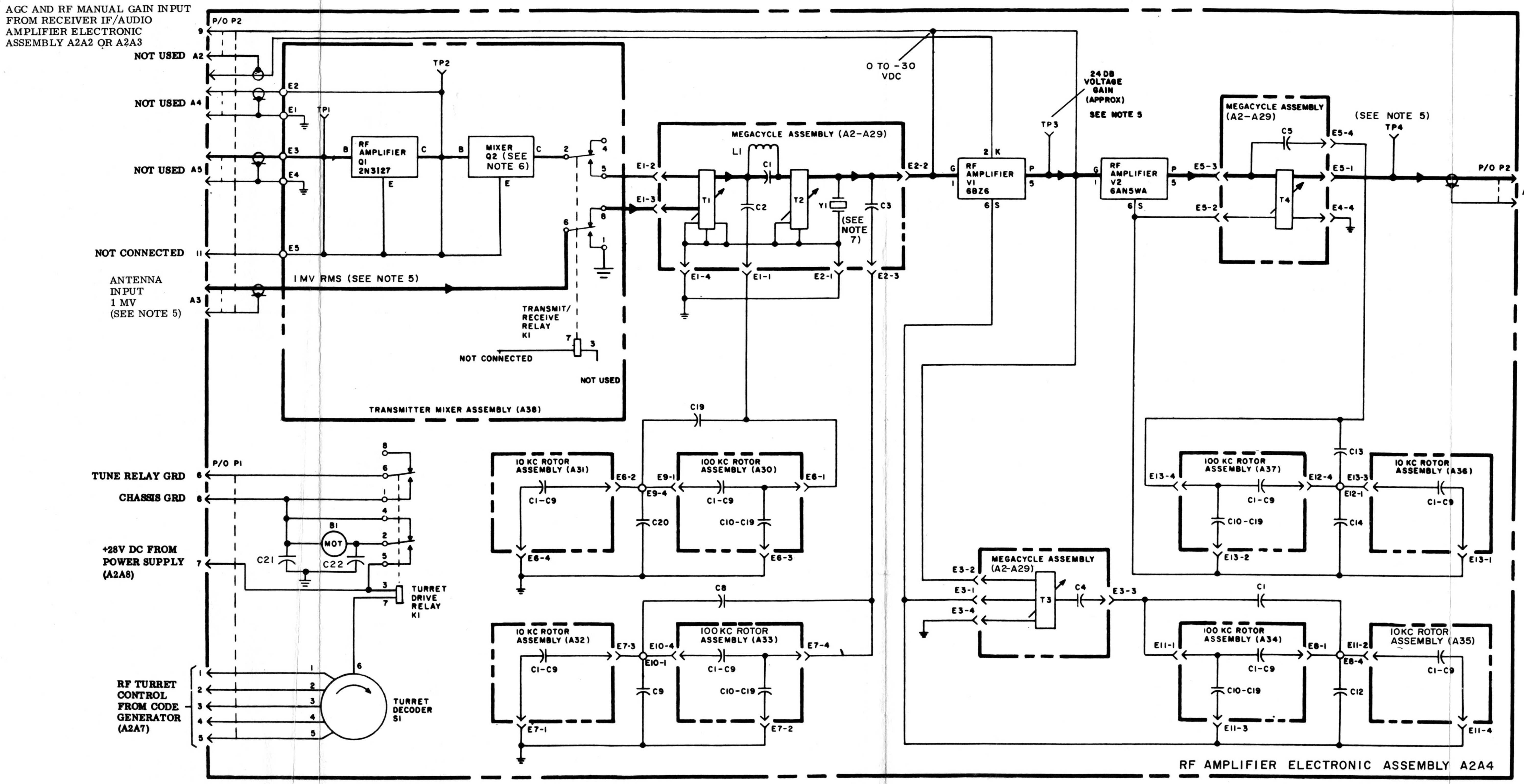
CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
3. DURING ISB, USB, AM, RATT, CW OPERATION P1-3 CONNECTS TO THE USB PHONE LEVEL CONTROL. DURING ISB, LSB OPERATION, P1-3 CONNECTS TO THE LSB PHONE LEVEL CONTROL.
4. P1-17 USED IN RECEIVER IF/AUDIO AMPLIFIER ELECTRONIC ASSEMBLY (A2A2) ONLY; IN RECEIVER IF/AUDIO AMPLIFIER (A2A3) P1-17 IS OPEN.
5. REF. DESIG. PREFIX A2A2 AND A2A3.
6. DURING ISB, USB, AM, RATT, CW OPERATION, P1-4 CONNECTS TO THE USB LINE LEVEL CONTROL. DURING ISB, LSB OPERATION, P1-4 CONNECTS TO THE LSB LINE LEVEL CONTROL. THE SIGNAL RETURNS TO THIS ASSEMBLY THROUGH P1-6.
7. ▭ INDICATES EQUIPMENT MARKING.
8. REFER TO PARA. **4-5p** FOR SIGNAL LEVELS.

Figure 4-2. IF./Audio Amplifier Electronic Assemblies A2A2 AND A2A3, Servicing Block Diagram



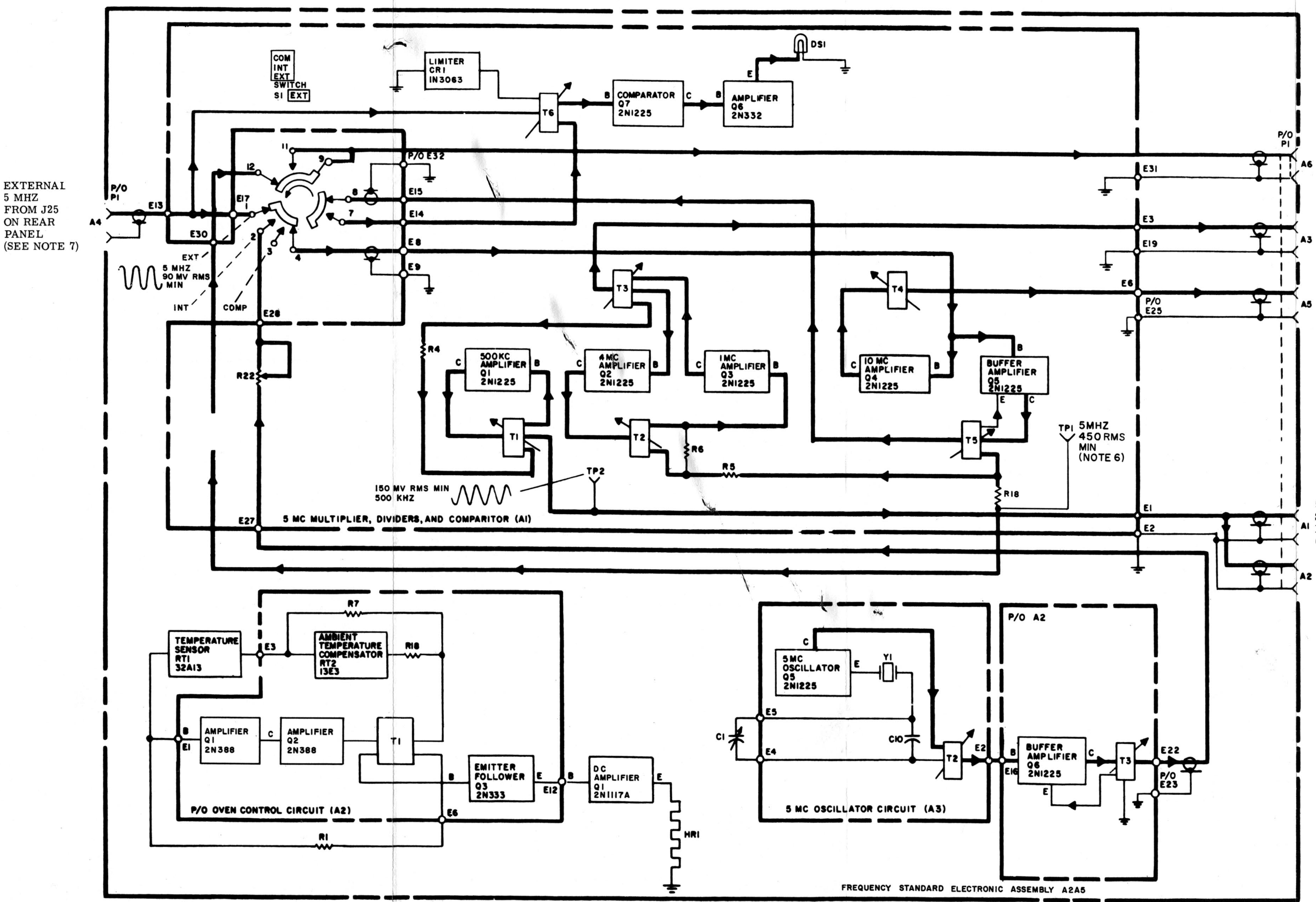
NOTES:

1. **HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.**
2. **LETTERS OUTSIDE TRANSISTOR AND TUBE BLOCKS INDICATE ELEMENTS.**
3. ALL VOLTAGES ARE DC UNLESS OTHERWISE SPECIFIED.
4. REF. DESIG. PREFIX A2A4.
5. REFER TO PARA. **4-5j** FOR SIGNAL LEVELS.
6. A38Q2 IS MOTOROLA NO. SM2437 OR TEXAS INST. NO. GM1151 IN CURRENT MODELS.
7. CRYSTAL Y1 USED ONLY ON ASSEMBLIES A9, A10, AND A19.

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 4-3. RF Amplifier Electronic Assembly A2A4, Servicing Block Diagram



CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATH.
2. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
3. WAVEFORMS RECORDED USING OSCILLOSCOPE AN/USM-105A.
4. REF. DESIG. PREFIX A2A5.
5. SWITCH S1 IS SHOWN IN EXTERNAL POSITION.
6. REFER TO PARA. **4-5h** FOR SIGNAL LEVELS.
7. 5 MHZ ±1 PART IN 10^8 IS REQUIRED FOR OPERATION.
5 MHZ ±1 PART IN 10^9 IS REQUIRED FOR CALIBRATION.

Figure 4-4. Frequency Standard Electronic Assembly A2A5, Servicing Block Diagram

NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS.
3. WAVEFORMS RECORDED USING OSCILLOSCOPE AN/USM-105A.
4. REF. DESIG. PREFIX A2A6A1.

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

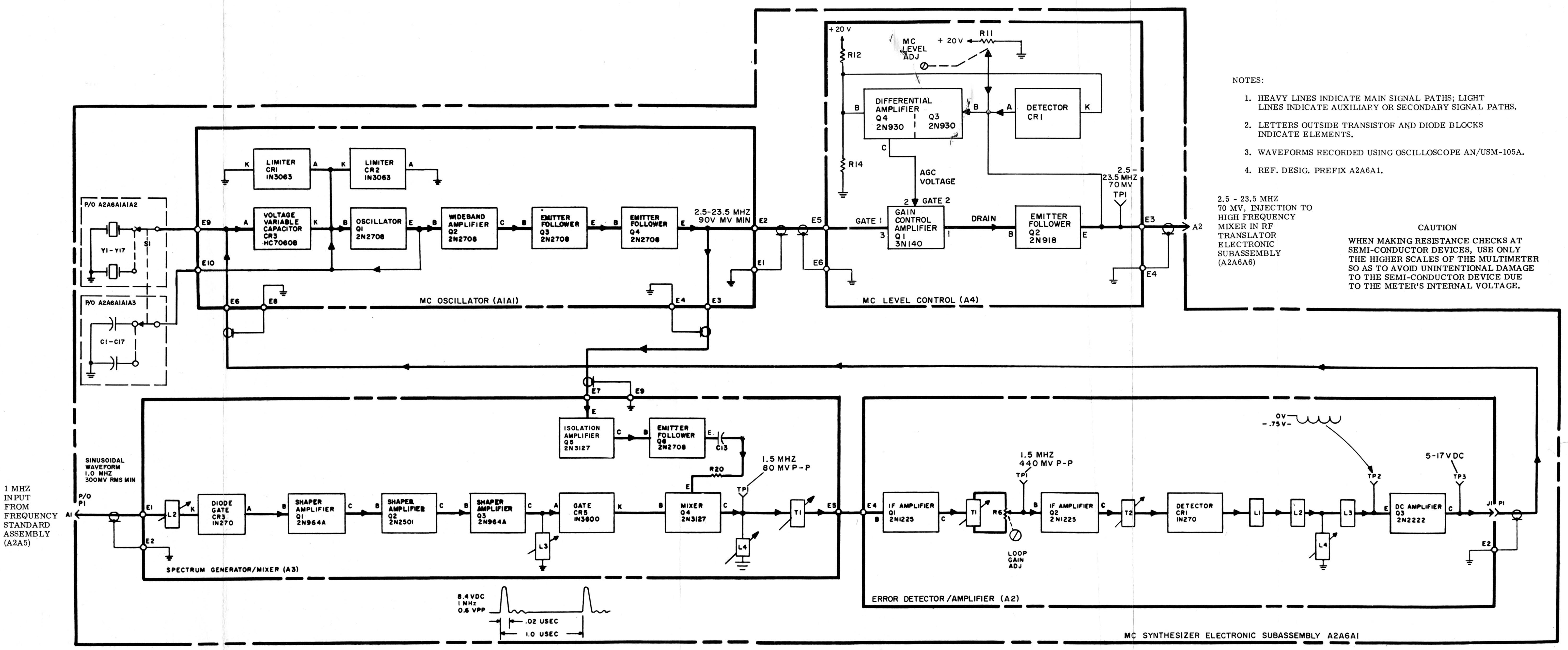
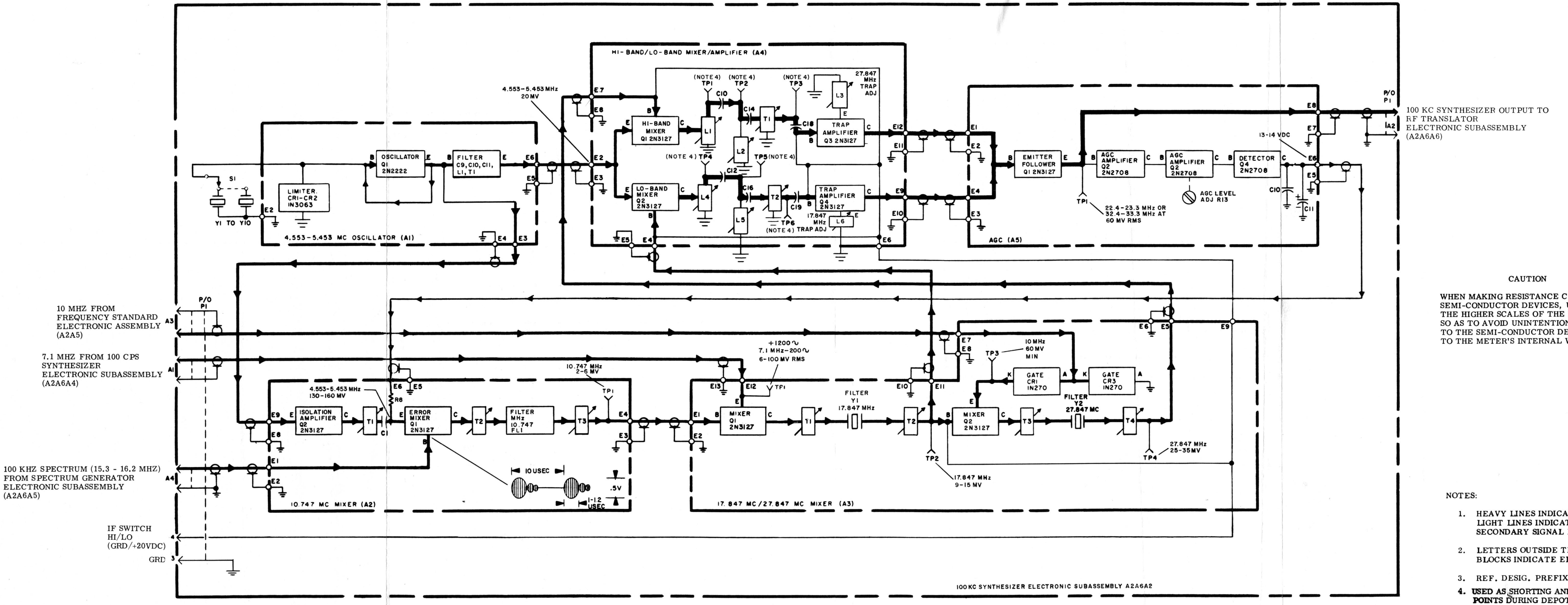


Figure 4-5. MC Synthesizer Electronic Subassembly A2A6A1, Servicing Block Diagram



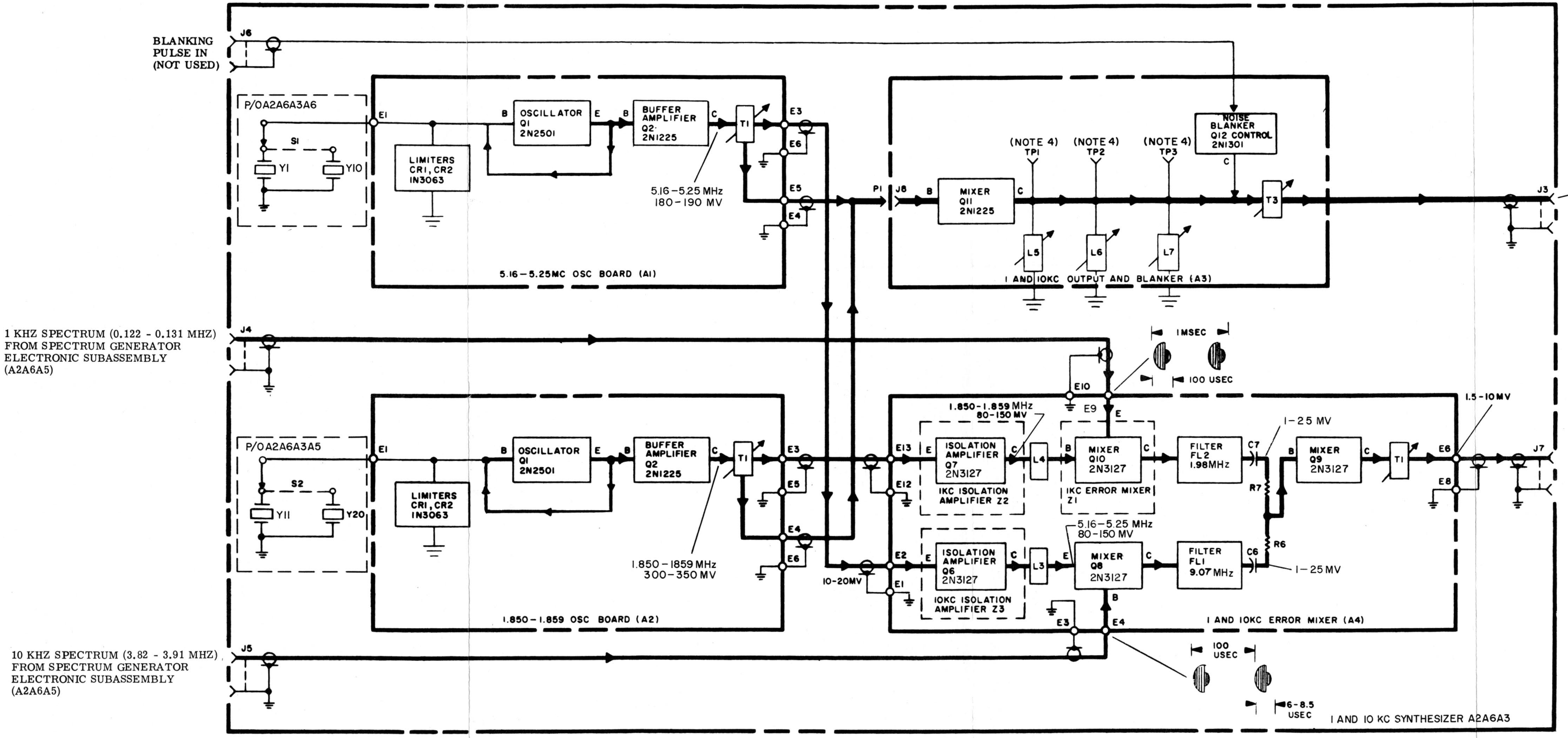
CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS.
3. REF. DESIG. PREFIX A2A6A2.
4. USED AS SHORTING AND SIGNAL INSERTION POINTS DURING DEPOT ALIGNMENT.

Figure 4-6. 100 KC Synthesizer Electrical Subassembly A2A6A2, Servicing Block Diagram



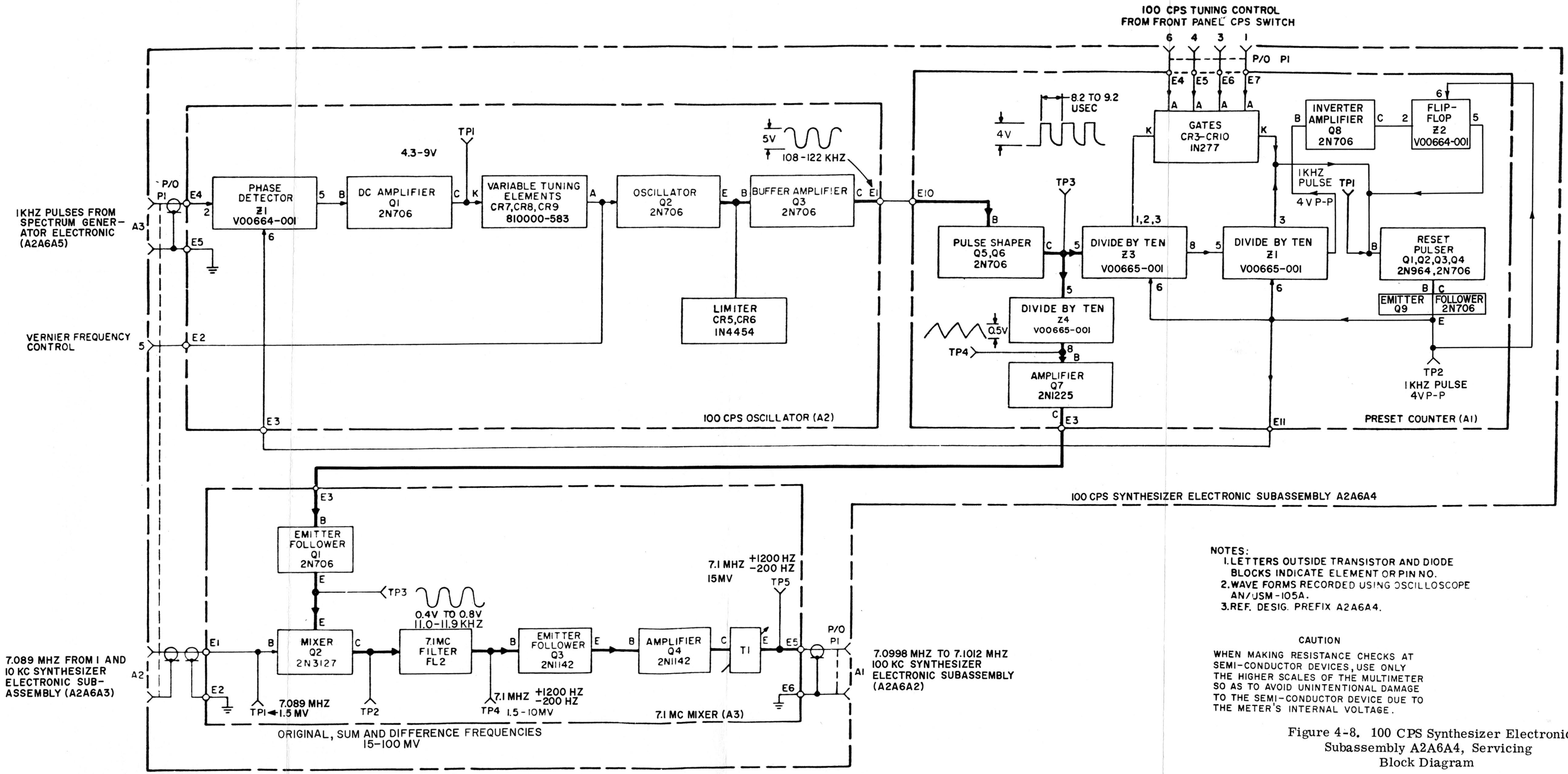
CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
3. REF. DESIG. PREFIX A2A6A3
4. USED AS SHORTING AND SIGNAL INSERTION POINTS DURING DEPOT ALIGNMENT.

Figure 4-7. 1 and 10 KC Synthesizer Electronic Subassembly A2A6A3 Servicing Block Diagram

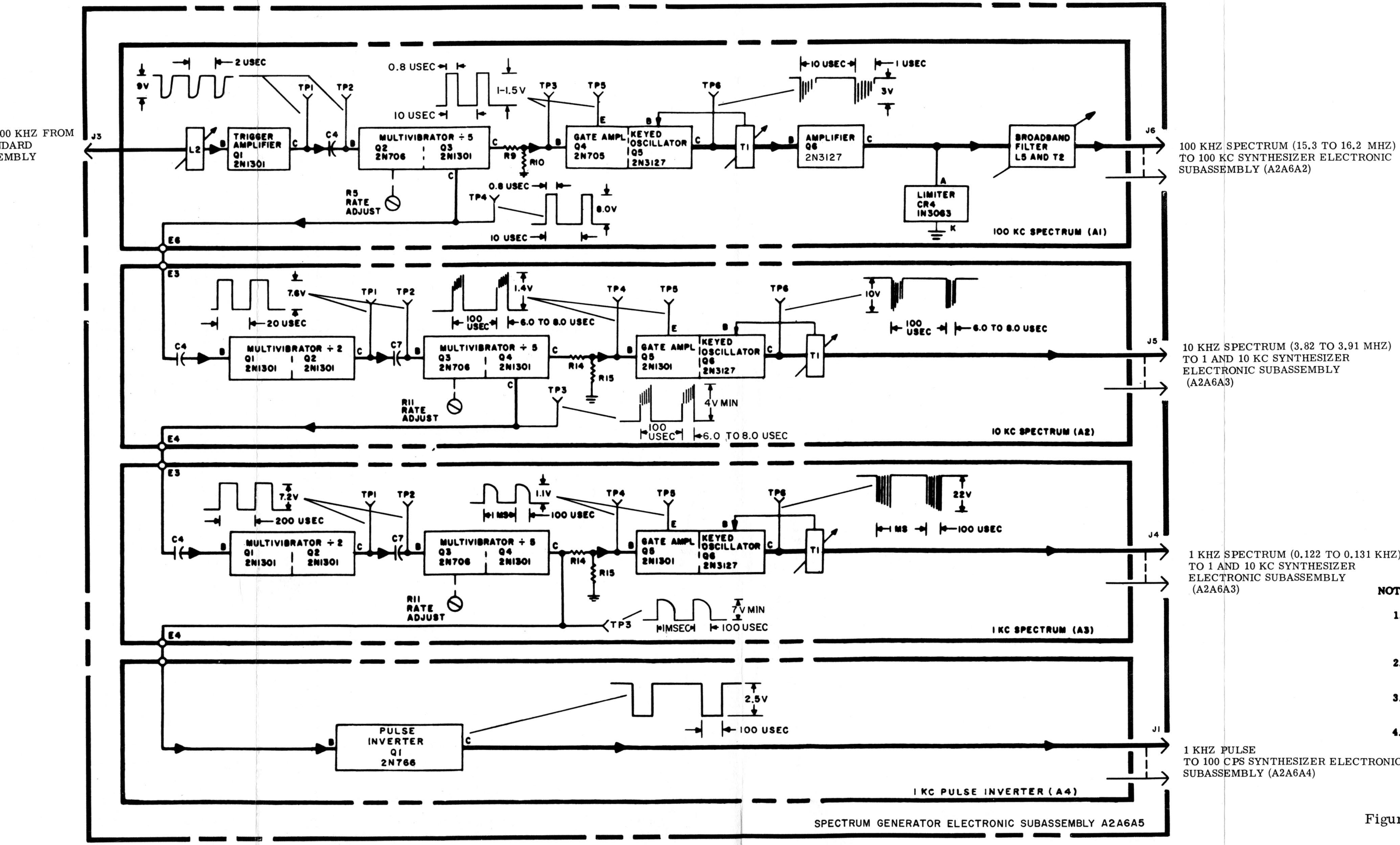


NOTES:
1. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENT OR PIN NO.
2. WAVE FORMS RECORDED USING OSCILLOSCOPE AN/USM-105A.
3. REF. DESIG. PREFIX A2A6A4.

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 4-8. 100 CPS Synthesizer Electronic Subassembly A2A6A4, Servicing Block Diagram



CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTES:

1. **HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.**
2. **LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS.**
3. **WAVEFORMS RECORDED USING OSCILLOSCOPE AN/USM-105A.**
4. **REF. DESIG. PREFIX A2A6A5**

Figure 4-9. Spectrum Generator Electronic Subassembly A2A6A5, Servicing Block Diagram

Figure 4-10. RF Translator Electronic Subassembly A2A6A6, Servicing Block Diagram

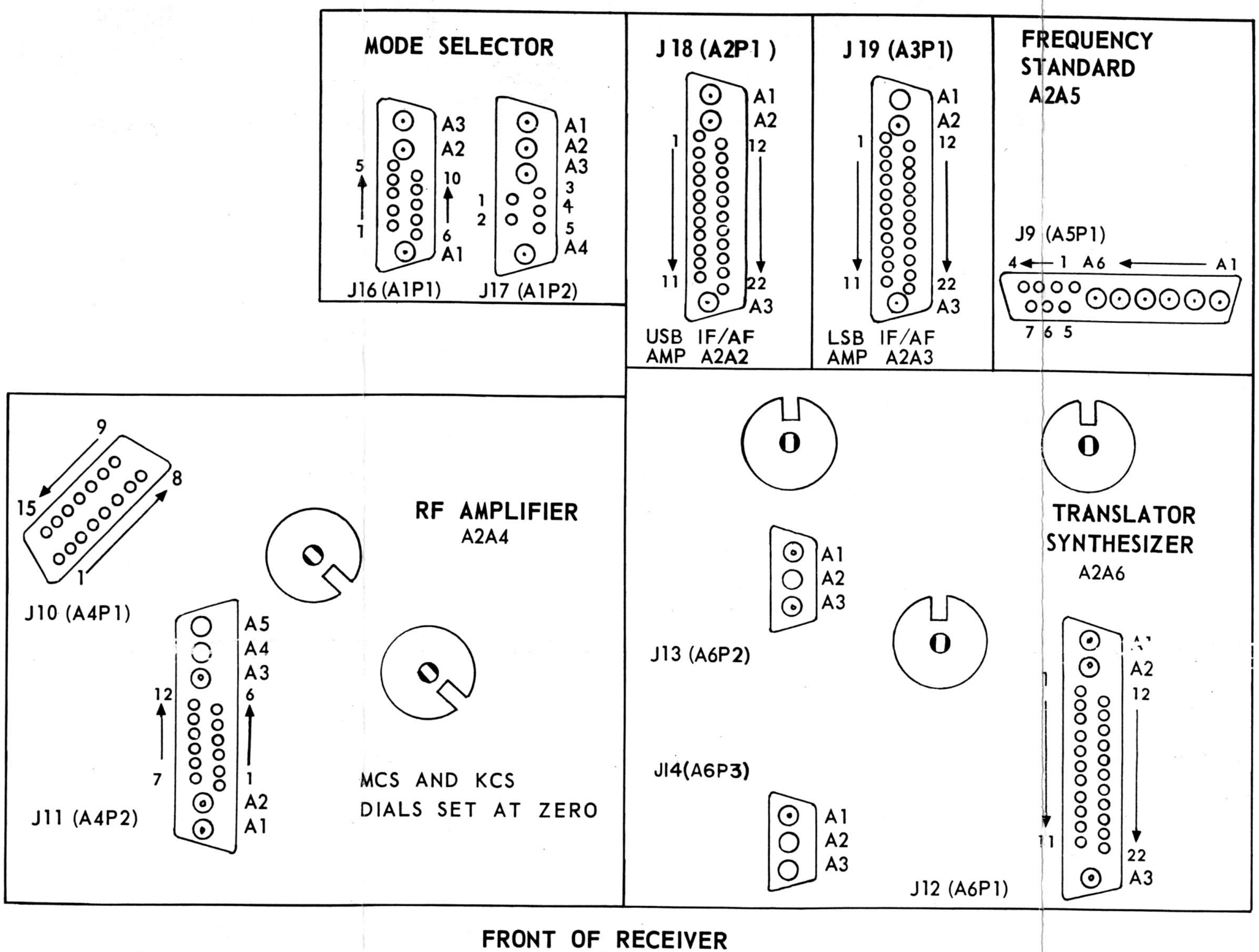


Figure 4-11. Main Frame Connector Pin Location Diagram

PARTS LOCATION INDEX

REF DESIG	LOC
A1J23	15B
A1J24	37I
A1J25	15H
A1P21	3B, 3C, 3D, 3E, 3F, 5C, 18A, 18I, 39A, 39B, 39C, 39D, 39E, 39F
A1P22	16B, 16H, 37I
A1A1C5	3B
A1A1C6	16I
A1A1C7	39E
A1A1C8	17I
A1A1C10	17A
A1A1C11	39F
A1A1C12	39F
A1A1C13	39D
A1A1C15	39A
A1A1C16	39B
A1A1C17	3B
A1A1C18	3C
A1A1C19	3C
A1A1C21	3D
A1A1C22	3D
A1A1C23	3F
A1A1C24	3E
A1A1C25	36C
A1A1J3	2C, 2B
A1A1J4	2B, 2D, 2E, 2F, 15A, 15I, 40A, 40B, 40C, 40D, 40E, 40F
A1A1J5	40B
A1A1J6	40F
A1A2S1	3D
A1A2S2	4D
C1	11B
C2	11C
C3	7E
CR1	6F
CR2	19F
CR3	5F
CR4	19G
CR5	11H
CR6	12H
DS1	6D
DS2	6B
DS3	11C
DS4	11C
DS5	27G
E11	11D
E15	23C
E16	23D
E17	11B
E21	13F
E22	13F
E23	38B
E26	38A
E29	34G
E33	38G
E34	12F
E35	12F
E36	38F
F1	6D
F2	6C
FL1	21H
FL2	20H
J1	37E
J2	37D
J8	20E, 20F, 21E, 22E, 21G, 22F, 23G
J10	23B, 24B
J11	23A, 25A, 25B, 24B
J12	24F, 25C, 25D, 26B, 30G, 31G, 32C, 32F
J13	26B, 32A
J14	26A, 32B
J16	32A, 33C, 34C, 34A, 34B
J17	32C, 33C, 34C
J18	13F, 35A, 35B, 36C, 37A, 37B, 37C
J19	11F, 12F, 35F, 36G, 37E, 37F
J21	4B, 4C, 4D, 4E, 4F, 5C, 17I, 17A, 39A, 39B, 39C, 39D, 39E, 39F
J22	17B, 17H, 31I
K1	6F
K2	18G
K2A	25H
K3	5F
K3A	24H
K3B	23I
L1	10B
L2	10C
M1	37F
Q1	7E
R1	35F
R2	35C
R3	11G
R4	38E
R5	37B
R6	33E
R8	11C
R9	37D
R10	37E
R11	11G
R12	11G
R14	10G
R15	12G
R19	33F
R20	11B
S1	37G
S2A (Front)	6D, 36D
S2A (Rear)	11D, 32E, 35E
S2B (Front)	5C, 37C, 38C
S2B (Rear)	34G
S2C (Front)	12B, 35D
S2C (Rear)	34E
S2D (Front)	12D
S2D (Rear)	8G, 34D
S5	12G
S7	4D
S8	5D
S9	4E, 4F
T1	7A, 7B, 7C, 7D
A1P1	33A, 33C, 34A, 34B, 34C
A1P2	33C, 34C
A2P1	12E, 13E, 35A, 35B, 36B, 37A, 37B
A3P1	11E, 12E, 35F, 36G, 37E, 37F
A4P1	23A, 24B
A4P2	25A, 25B, 23A, 24A
A5P1	21G, 22G, 23G
A6A1P1	26C, 27C
A6A2P1	30D, 30E, 31D, 31E
A6A3J1	29E
A6A3J3	29E
A6A3J4	29E
A6A3J5	29E
A6A3J6	30E
A6A3J7	29E
A6A4P1	30F, 31F
A6A5J1	26F
A6A5J2	25F
A6A5J3	25F
A6A5J4	26E
A6A5J5	26E
A6A5J6	25E
A6A6J4	31B
A6A6J5	27B
A6A6J6	30B
A6A6J7	31B
A6C1	31C
A6C2	30C
A6J4	26C, 26D, 27C, 27D
A6J5	30F, 31F
A6J6	30D, 30F, 31D, 31E
A6P1	25C, 25D, 25F, 26B, 30G, 31C, 31D, 31G
A6P2	26B, 31A, 31E
A6P3	26A, 31B
A6P7	30B
A6P8	31B
A6P9	31B
A6P10	27B
A6P14	29F
A6P15	29F
A6P16	30E
A6P17	29E
A6P18	29E
A6P19	29E
A6P21	25F
A6P22	26F
A6P23	26E
A6P24	26E
A6P25	26E
A6P26	25F
A7P8	20E, 21E, 22E
A7S3	22E
A7S4	22E
A8C3	9D
A8C4	10D
A8C6	10E
A8C7	10D
A8CR1	8B
A8CR2	8B
A8CR3	8B
A8CR4	8B
A8CR5	8C
A8CR6	8C
A8CR7	8C
A8CR8	8C
A8CR9	8C
A9CR10	8C
A8CR11	8D
A8CR12	8D
A8CR13	9D
A8CR14	9D
A8CR15	8D
A8CR16	8F
A8CR17	9F
A8E1	7C
A8E2	7C
A8E3	10C
A8E4	10C
A8E5	10C
A8E7	10B
A8E8	7B
A8E9	7B
A8E10	10C
A8E11	7D
A8E12	7C
A8E13	7E
A8E14	7E
A8E15	7D, 11D
A8E16	11F
A8E17	10B
A8E18	10C
A8Q1	8E
A8Q2	8E
A8Q3	9E
A8Q4	9E
A8R1	9C
A8R2	10C
A8R3	8D
A8R4	9D
A8R5	8E
A8R6	11E
A8R7	8E
A8R8	9D
A8R9	9E
A8R10	9D
A8R11	9D
A8R12	9F
A8R13	10E
A8R14	10E
A8R15	10E
A9C1	18C
A9C2	18B
A9C3	19C
A9C4	19C
A9CR1	19C
A9CR2	19B
A9E1	18C
A9E2	18A, 22A
A9E3	18C
A9E4	22B
A9E5	22B
A9E6	18B
A9K1	21B
A9Q1	20B
A9Q2	21B
A9R1	18C
A9R2	19C
A9R3	20C
A9R4	20B
A9R5	20C
A9R6	21B
A9R7	21C
A9R8	22B
A9R9	21C
A10DS3	11C
A10DS4	12C
A11E30	36G
A11R7	25H
A11S6A (Front)	31H
A11S6A (Rear)	34H
A11S6B (Front)	33H
A11S6B (Rear)	36H
A11A1C1	26G
A11A1C2	27H
A11A1C4	27H
A11A1CR2	27H
A11A1E1	25H
A11A1E2	25I
A11A1E3	25H
A11A1E4	26G
A11A1E5	28H
A11A1E6	27G
A11A1E7	28H
A11A1E8	27G
A11A1R1	26G
A11A1R2	26H
A11A1R3	26H
A11A1R5	26G
A11A1R6	27H
A11A1R7	27H
A11A1R8	26H
A11A1R9	26H

40 53 41

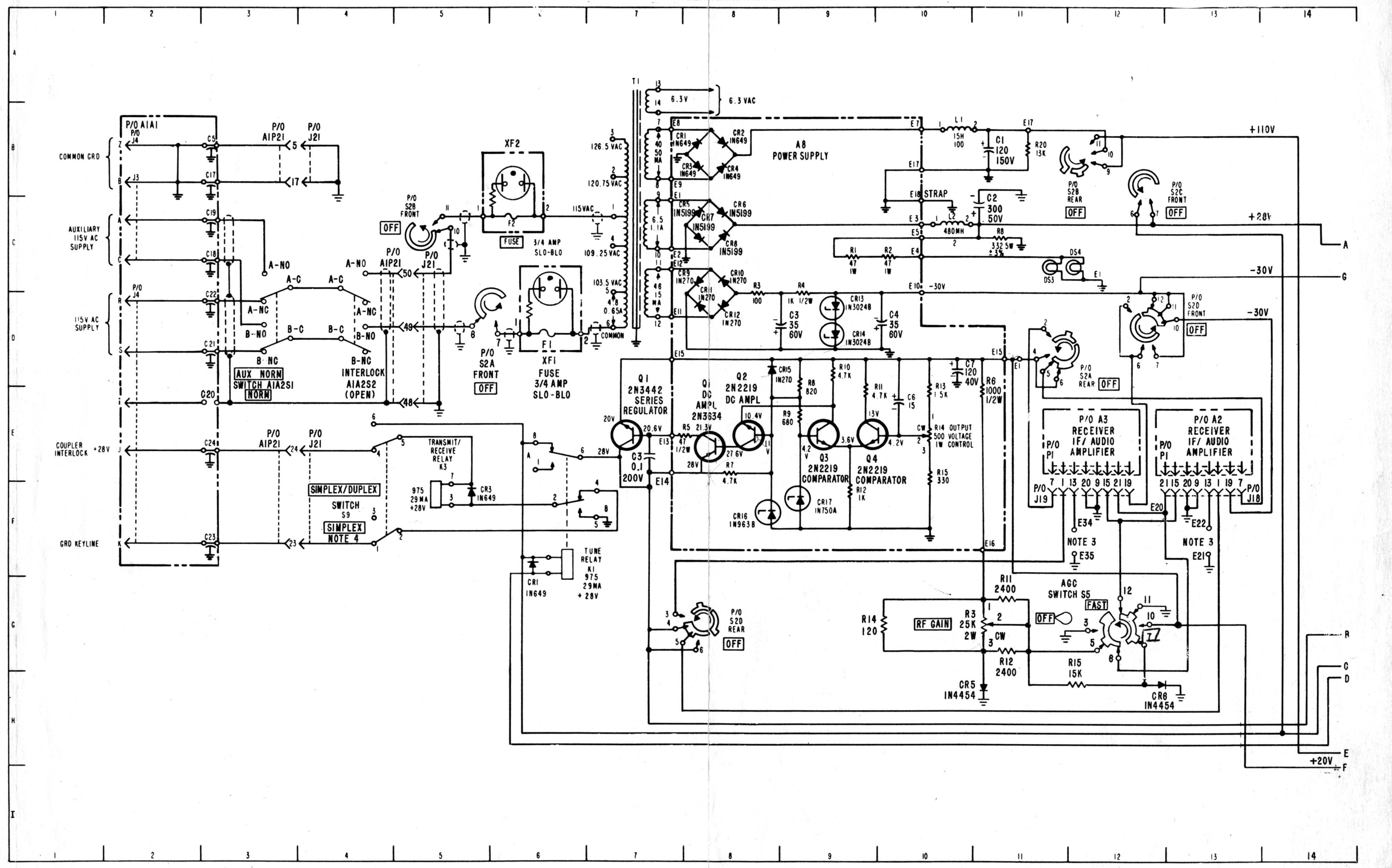
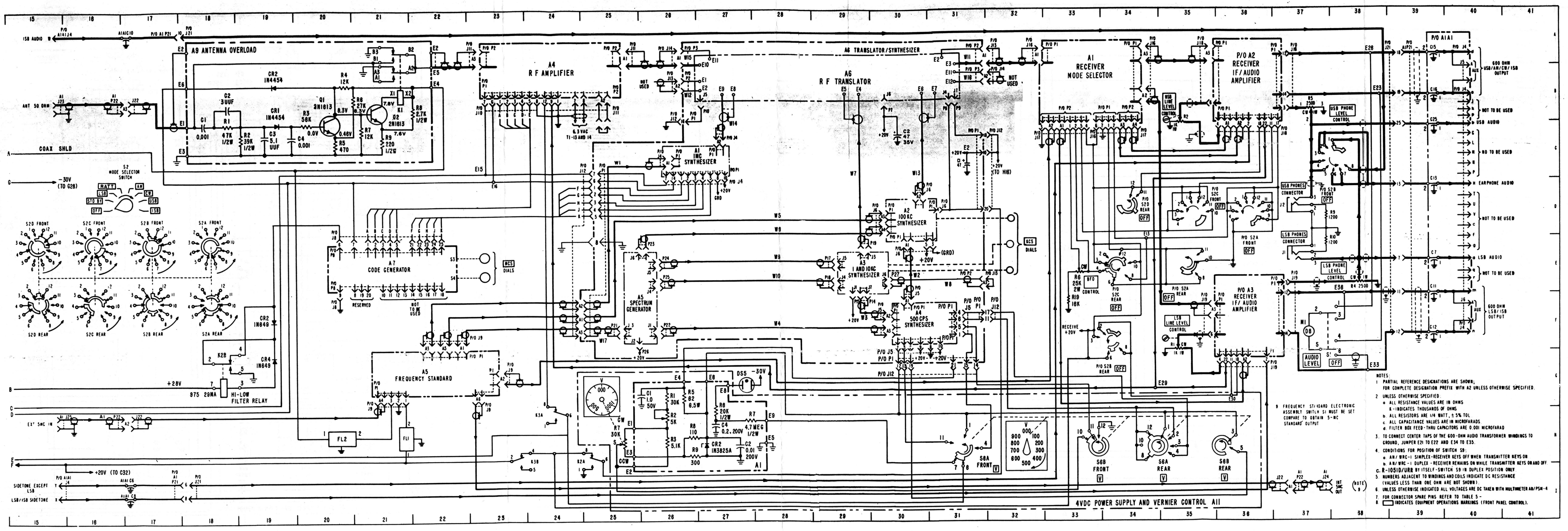


Figure 5-9. Radio Receiver R-1051D/URR, Chassis and Main Frame, Schematic Diagram (Sheet 1 of 2)



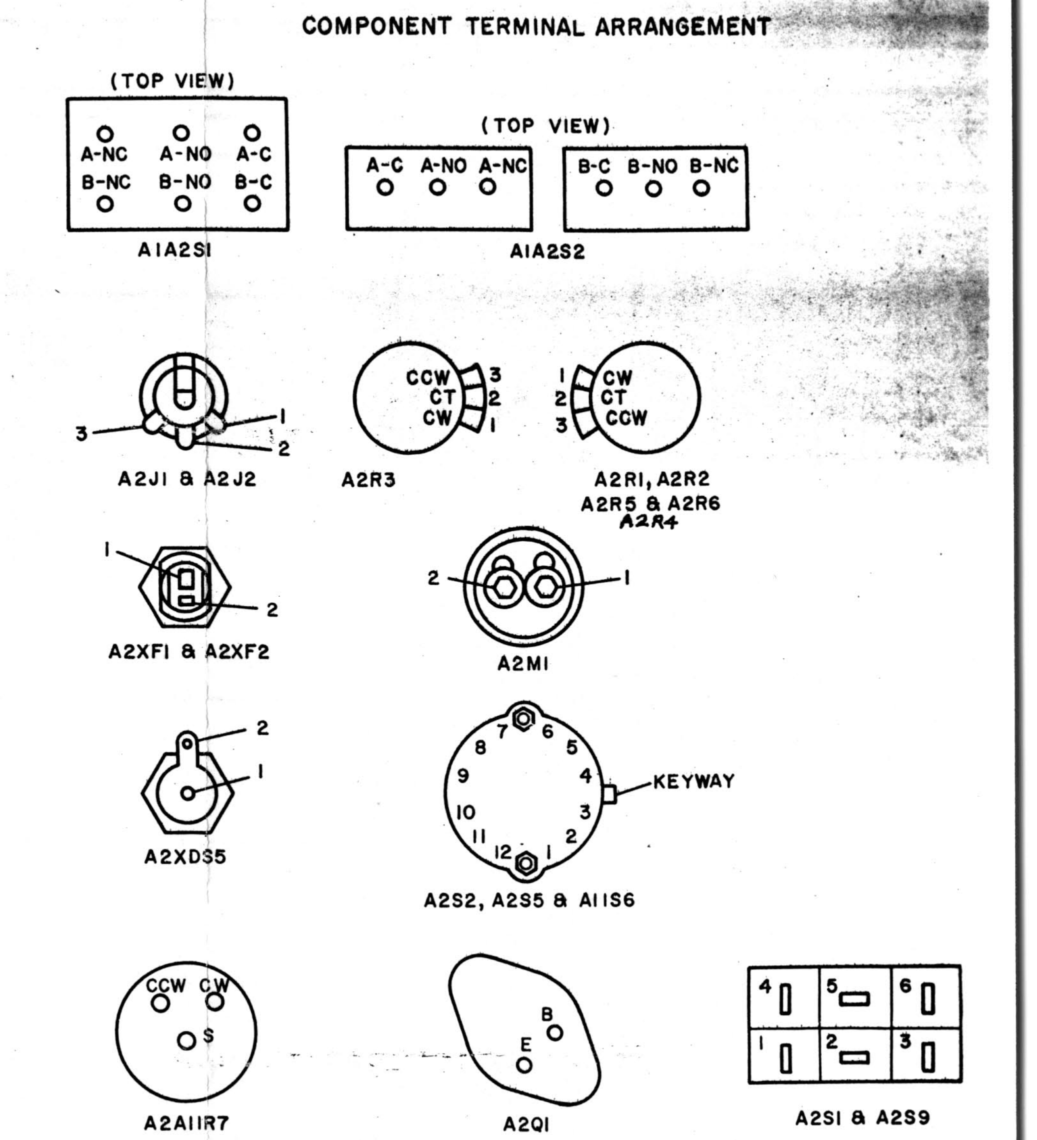


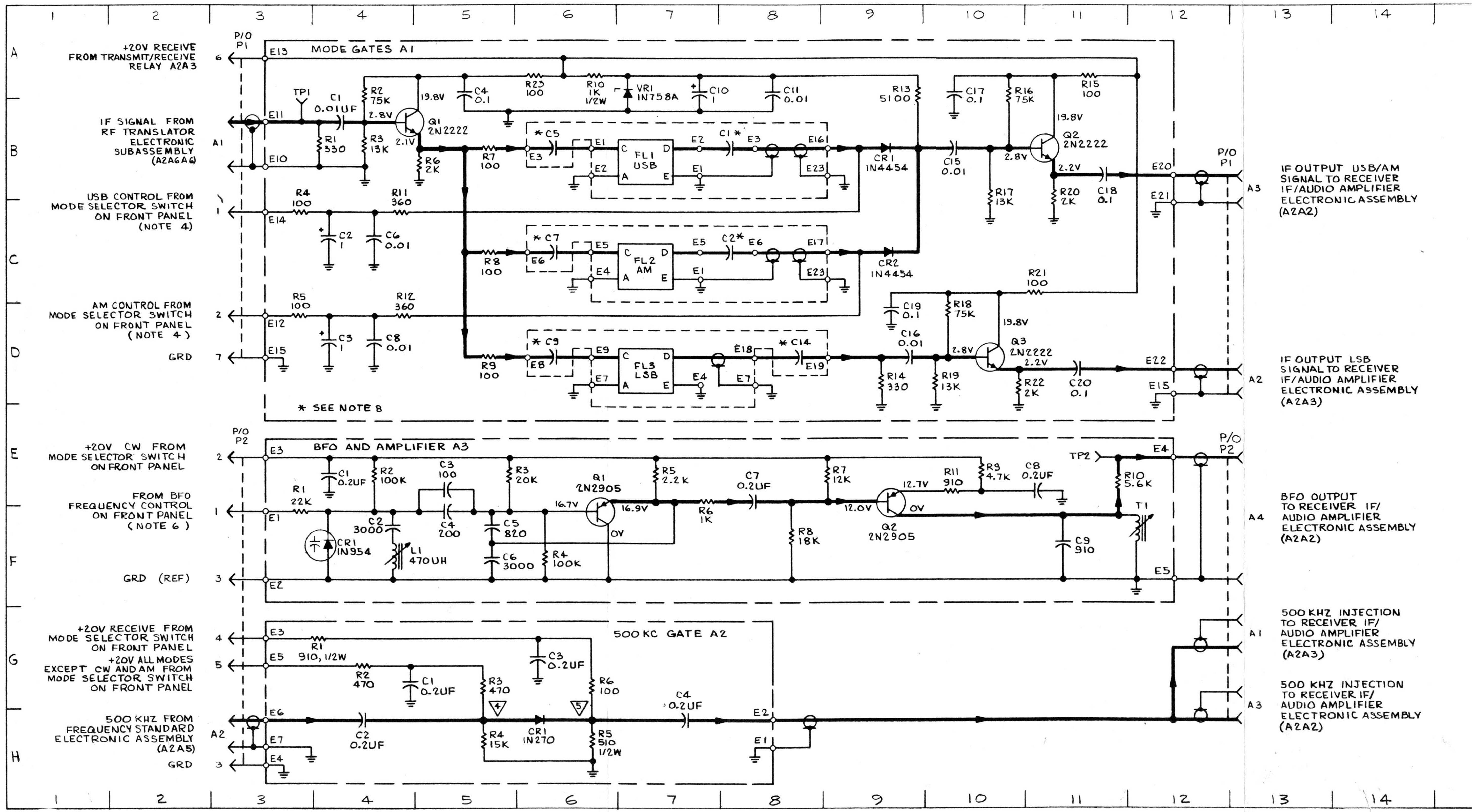
Figure 5-9. Radio Receiver R-1051D/URR, Chassis and Main Frame, Schematic Diagram (Sheet 2)

PARTS LOCATION INDEX

REF DESIG	LOC
C1	B8
C2	C8
C5	B6
C7	C6
C9	D6
C14	D8
E1	B7
E2	B7
E3	B8
E4	D7
E5	C7
E6	C8
FL1	B7
FL2	C7
FL3	D7
P1	A3, B3, C3, D3, B12, C12, D12
P2	E3, F3, G3, H3, E12, F12, G12, H12
A1C1	B4
A1C2	C4
A1C3	D4
A1C4	A5
A1C6	C4
A1C8	D4
A1C10	A7
A1C11	A8
A1C15	B10
A1C16	D9
A1C17	A10
A1C18	B11
A1C19	D9
A1C20	D11
A1CR1	B9
A1CR2	C9
A1E1	B6
A1E2	B6
A1E3	B6
A1E4	C6
A1E5	C6
A1E6	C6
A1E7	D6
A1E8	D6
A1E9	D6
A1E10	B3
A1E11	B3
A1E12	D3
A1E13	A3
A1E14	C3
A1E15	D3

REF DESIG	LOC
A1E16	B9
A1E17	C9
A1E18	D8
A1E19	D9
A1E20	B12
A1E21	C12
A1E22	D12
A1E23	B9
A1Q1	B4
A1Q2	B11
A1Q3	D10
A1R1	B4
A1R2	A4
A1R3	B4
A1R4	C3
A1R5	D3
A1R6	B5
A1R7	B5
A1R8	C5
A1R9	D5
A1R10	A6
A1R11	C4
A1R12	D4
A1R13	A9
A1R14	D9
A1R15	A11
A1R16	A10
A1R17	B10
A1R18	B10
A1R19	D10
A1R20	B11
A1R21	C11
A1R22	D10
A1R23	A6
A1TP1	B3
A1VR1	A7
A2C1	G4
A2C2	G4
A2C3	G6
A2C4	H7
A2CR1	H6
A2E1	H8
A2E2	H8
A2E3	G3
A2E4	H3
A2E5	G3
A2E6	H3
A2E7	H3
A2R1	G4
A2R2	G4
A2R3	G5

REF DESIG	LOC
A2R4	H5
A2R5	H6
A2R6	G6
A3C1	E4
A3C2	F4
A3C3	E5
A3C4	F5
A3C5	F5
A3C6	F5
A3C7	E8
A3C8	E11
A3C9	F11
A3CR1	F4
A3E1	F3
A3E2	F3
A3E3	E3
A3E4	E12
A3E5	F12
A3L1	F4
A3Q1	F6
A3Q2	E9
A3R1	F3
A3R2	E4
A3R3	E5
A3R4	F6
A3R5	E7
A3R6	E7
A3R7	E9
A3R8	F8
A3R9	E10
A3R10	E11
A3R11	E10
A3T1	F12
A3TP2	E11



CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN: FOR COMPLETE DESIGNATION PREFIX WITH A2A1.
2. UNLESS OTHERWISE SPECIFIED:
   a. ALL RESISTANCE VALUES ARE IN OHMS, K-INDICATES THOUSANDS OF OHMS.
   b. ALL RESISTORS ARE 1/4 WATT ±5% TOLERANCE.
   c. ALL CAPACITANCE VALUES ARE IN PICOFARADS, UF INDICATES MICROFARADS.
3. NUMBERS ADJACENT TO WINDINGS, COILS, AND TEST POINTS INDICATE DC RESISTANCE. (VALUES LESS THAN ONE OHM ARE NOT SHOWN)
4.

MODE	LSB	RATT	AM	CW	USB	ISB
P1-1	GRD	+20V	GRD	GRD	+20V	+20V
P1-2	GRD	GRD	+20V	+20V	GRD	GRD

5.

MODE	▽4	▽5
LSB	10.4V	10V
RATT	10.4V	10V
AM	0V	6.5V
CW	0V	6.5V
USB	10.4V	10V
ISB	10.4V	10V

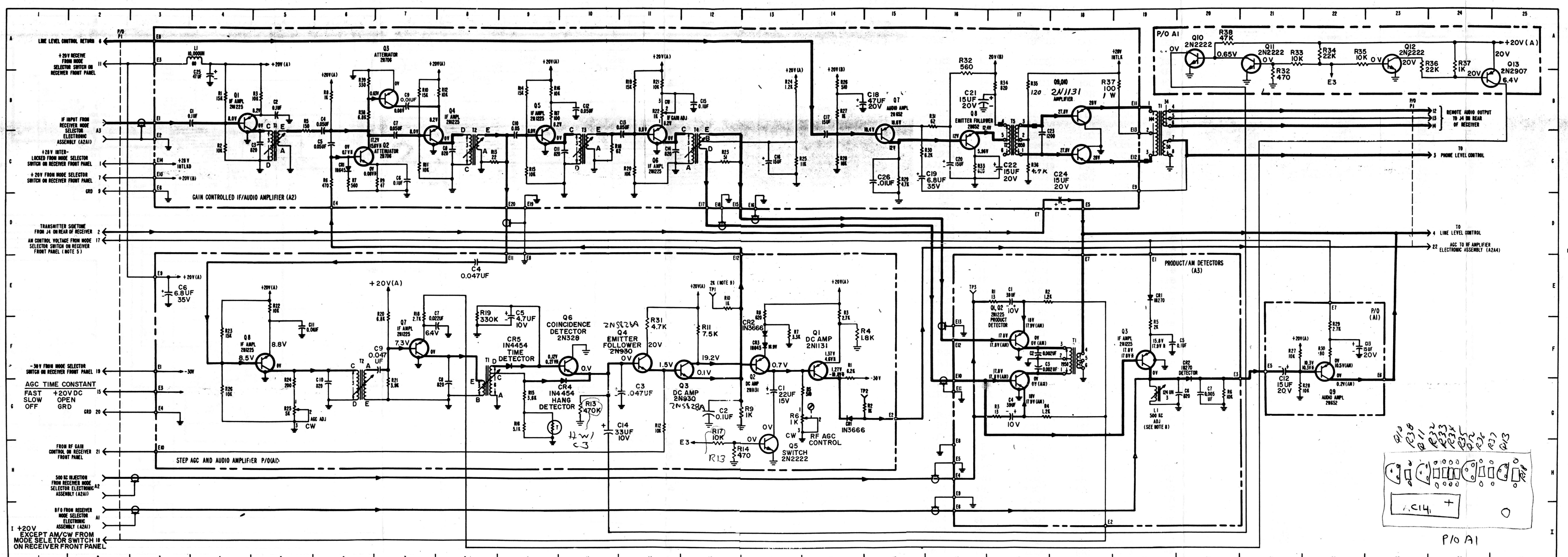
6. 12.8 TO 20V PRESENT DEPENDING ON BFO FREQUENCY CONTROL POSITION.
7. A3T1 IS ADJUSTED AND SEALED AT THE FACTORY.
8. CAPACITANCE TO BE SELECTED ACCORDING TO COLOR CODE DOT ON FILTERS:
   ORANGE, 130 PF ±2%
   YELLOW, 142 PF ±2%
   GREEN, 150 PF ±2%
9. UNLESS OTHERWISE INDICATED ALL VOLTAGES ARE DC TAKEN WITH ELECTRONIC MULTIMETER AN/USM-116.
10. FOR CONNECTOR SPARE PINS REFER TO TABLE 5-1.

Figure 5-10. Mode Selector Electronic Assembly A2A1, Schematic Diagram

Figure 5-11

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
P1	2A, 2B, 2C,	A1R2	15G	A2C9	7B	A2Q10	18C	A3C7	20G
	2D, 2F, 2G,	A1R3	14E	A3C10	9C	A2R1	4B	A3CR1	19E
	2H, 2I, 23B,	A1R4	14F	A2C11	10C	A2R2	4C	A3CR2	20F
	23C, 23D	A1R5	14G	A2C12	10B	A2R3	5B	A3E1	19E
T1	19B	A1R6	13G	A2C13	11C	A2R5	5B	A3E2	18I
A1C1	13G	A1R7	13F	A2C14	11C	A2R6	6C	A3E3	20F
A1C2	12G	A1R8	13E	A2C15	12B	A2R7	6C	A3E4	16H
A1C3	11G	A1R9	13G	A2C16	13C	A2R8	6B	A3E5	16H
A1C4	8E	A1R10	12E	A2C17	14C	A2R9	7C	A3E6	16I
A1C5	9F	A1R11	12F	A2C18	14B	A2R10	7B	A3E7	18E
A1C6	3E	A1R12	11G	A2C19	15C	A2R11	7C	A3E8	16H
A1C7	7F	A1R13	10G	A2C20	16C	A2R12	8B	A3E9	16H
A1C8	8G	A1R14	12H	A2C21	16B	A2R13	8C	A3E10	16G
A1C9	7F	A1R15	9G	A2C22	17C	A2R14	9B	A3E11	16G
A1C10	6G	A1R16	9G	A2C23	17C	A2R15	9C	A3E12	16F
A1C11	5F	A1R17	12H	A2C24	18D	A2R16	9B	A3E13	16F
A1C12	21F	A1R18	7F	A2C25	4B	A2R17	9B	A3L1	19G
A1C13	22F	A1R19	8F	A2C26	15C	A2R18	10C	A3Q1	17F
A1CR1	14G	A1R20	7F	A2CR1	6C	A2R19	11B	A3Q2	17F
A1CR2	13F	A1R21	7G	A2E1	3B	A2R20	11C	A3Q3	19F
A1CR3	13F	A1R22	5E	A2E2	3C	A2R21	11B	A3R1	17E
A1CR4	10G	A1R23	4F	A2E3	3A	A2R22	11B	A3R2	17E
A1CR5	9F	A1R24	5G	A2E4	6D	A2R23	12C	A3R3	17G
A1E1	3F	A1R25	5G	A2E5	18D	A2R24	13B	A3R4	17G
A1E2	15G	A1R26	4G	A2E6	3C	A2R25	13C	A3R5	19F
A1E3	3G	A1R27	21F	A2E7	17D	A2R26	14B	A3R6	20F
A1E4	3G	A1R28	22G	A2E8	3A	A2R27	14B	A3T1	18F
A1E5	21F	A1R29	22F	A2E9	19C	A2R28	14C	A3TP3	16E
A1E6	23G	A1R30	22F	A2E10	3C	A2R29	15C		
A1E7	22E	A1R31	11F	A2E11	19B	A2R30	15C		
A1E8	9E	A1R32	21B	A2E12	19C	A2R31	16B		
A1E9	3E	A1R33	21A	A2E13	19C	A2R32	16B		
A1E10	3H	A1R34	22A	A2E14	3C	A2R33	16C		
A1E11	9E	A1R35	22A	A2E15	12D	A2R34	17B		
A1E12	12E	A1R36	24A	A2E16	13D	A2R35	17B		
A1Q1	14F	A1R37	24A	A2E17	12D	A2R36	17C		
A1Q2	13F	A1R38	20A	A2E18	12D	A2R37	19B		
A1Q3	12G	A1T1	8F	A2E19	9D	A2R38	6B		
A1Q4	11F	A1T2	6F	A2E20	9D	A2T1	5C		
A1Q5	13H	A1TP1	12E	A2L1	4A	A2T2	8C		
A1Q6	10F	A1TP2	14G	A2Q1	4B	A2T3	10C		
A1Q7	7F	A2C1	3B	A2Q2	6C	A2T4	12C		
A1Q8	5F	A2C2	5B	A2Q3	7B	A2T5	17B		
A1Q9	22F	A2C3	5C	A2Q4	7C	A3C1	17E		
A1Q10	20A	A2C4	6B	A2Q5	9C	A3C2	17F		
A1Q11	21A	A2C5	6C	A2Q6	11C	A3C3	17F		
A1Q12	23A	A2C6	7C	A2Q7	15C	A3C4	17G		
A1Q13	25A	A2C7	7C	A2Q8	16C	A3C5	19F		
A1R1	14F	A2C8	8C	A2Q9	18B	A3C6	20G		



CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN: FOR COMPLETE DESIGNATION PREFIX WITH A2A2 OR A2A3
2. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTANCE VALUES ARE IN OHMS K- INDICATES THOUSANDS OF OHMS.
   B. ALL RESISTORS ARE 1/4 WATT, ± 5% TOL
   C. ALL CAPACITANCE VALUES ARE IN PICOFARADS, UF INDICATES MICROFARADS.
3. NUMBERS ADJACENT TO WINDINGS, COILS, AND TEST POINTS INDICATE DC RESISTANCE (VALUES LESS THAN ONE OHM NOT SHOWN).
4. CW ON ALL POTENTIOMETERS INDICATE DIRECTION OF ROTATION WHEN VIEWED FROM SHAFT END.
5. P4-17 USED IN RECEIVER IF/AUDIO AMPLIFIER ELECTRONIC ASSEMBLY (A2A2) ONLY; IN RECEIVER IF/AUDIO AMPLIFIER ELECTRONIC ASSEMBLY (A2A3) P4-17 IS OPEN.

MODE	LSB	RATT	AM	CW	USB	ISB
CONDITION	GRD	GRD	RECEIVE +20V	RECEIVE +20V	GRD	GRD

6. UNLESS OTHERWISE INDICATED ALL VOLTAGES ARE DC TAKEN WITH ELECTRONIC MULTIMETER AN/USM-116, WITH THE RECEIVER IN USB MODE OF OPERATION.
*7. VOLTAGE READINGS FOR A1Q1, A1Q2, A1Q3, A1Q4, A1Q6, AND A2Q2 ARE VARIABLE DEPENDENT ON INPUT SIGNAL LEVEL TO THE RECEIVER VOLTAGES MARKED WITH ASTERISKS ARE FOR INPUT SIGNALS OF 1000 UV WITH $\boxed{\text{RF GAIN}}$ CONTROL AT MAX CW AND $\boxed{\text{AGC}}$ SWITCH AT $\boxed{\text{OFF}}$
8. A3L1 IS ADJUSTED AND SEALED AT THE FACTORY
9. RESISTANCE VALUES AT SIGNIFICANT TEST POINTS ARE TO CHASSIS WITH ALL UNITS INTERCONNECTED, BUT EQUIPMENT DE-ENERGIZED.
10. ALL DC RESISTANCE READINGS OF TRANSFORMERS AND INDUCTORS ARE AS SEPERATE COMPONENTS NOT NECESSARILY CONNECTED IN THE CIRCUIT.
11. REFER TO APPLICABLE PRINTED CIRCUIT BOARD ILLUSTRATION FOR TRANSFORMER CIRCUIT ORIENTATION.
12. FOR CONNECTOR SPARE PINS REFER TO TABLE 5-2.

CHANGE 1

Figure 5-11. IF./Audio Amplifier Electronic Assemblies A2A2 and A2A3, Schematic Diagram

PARTS LOCATION INDEX

REF DESIG	LOC
B1	6G
C1	12B
C2	12C
C3	14B
C4	14C
C5	15B
C6	16C
C7	16B
C8	12E
C9	13E
C10	14E
C11	18D
C12	18E
C13	19B
C14	20C
C15	3E
C16	3E
C17	5E
C18	5E
C19	12G
C20	12H
E8-4	18E
E9-4	13H
E10-1	12F
E13-3	20C
FL1	12B
FL2	15B
FL3	16A
K1	7G
P1	3F, 3G, 3H
P2	3A, 3B, 3C
	3D, 3E, 3F
	19B
R1	13C
R2	13C
R3	15C
S1	5H
TP4	19A
V1	4E, 13B
V2	4E, 5B
A1C1	13C
A1C2	14C
A1C3	16B
A1E1	12D
A1E2	13C
A1E4	15B
A1E5	12D
A1E6	17C
A1E7	15C

REF DESIG	LOC
A1E8	16C
A1E9	12D
A1E10	13C
A1R1	12C
A1R2	12C
A1R3	13C
A1R4	14E
A1R5	15B
A1R6	16D
A2C1	10B
thru	
A29C1	
A2C2	10C
thru	
A29C3	
A2C3	11C
thru	
A29C3	
A2C4	16D
thru	
A29C4	
A2C5	18A
thru	
A29C5	
A2 thru A29	
E1-1	10C
E1-2	10B
E1-3	9C
E1-4	9C
E2-1	11C
E2-2	11B
E2-3	11C
E3-1	15D
E3-2	15D
E3-3	16E
E3-4	15D
E5-1	18B
E5-2	17B
E5-3	17A
E5-4	18A
A2T1	9B
thru	
A29T1	
A2T2	11B
thru	
A29T2	
A2T3	15E
thru	
A29T3	

REF DESIG	LOC
A2T4	17A
thru	
A29T4	
A9Y1	11C
A10Y1	11C
A19Y1	11C
A30C1	12H
thru	
A30C9	
A30C10	12H
thru	
A30C19	
A30E6-1	11H
A30E6-3	12H
A30E9-1	12H
A31C1	13H
thru	
A31C9	
A31E6-2	13H
A31E6-4	13H
A32C1	13F
thru	
A32C9	
A32E7-1	14F
A32E7-3	13F
A33C1	12F
thru	
A33C9	
A33C10	12F
thru	
A33C19	
A33E7-2	12F
A33E7-4	11F
A33E10-4	12F
A34C1	18E
thru	
A34C9	
A34C10	18E
thru	
A34C19	
A34E8-1	18E
A34E11-1	17E
A34E11-3	18E
A35C1	19E
thru	
A35C9	
A35E11-2	19E
A35E11-4	19E

REF DESIG	LOC
A36C1	20C
thru	
A36C9	
A36E12-1	20C
A36E13-1	21C
A37C1	19C
thru	
A37C9	
A37C10	19C
thru	
A37C19	
A37E12-4	20C
A37E13-2	19C
A37E13-4	19C
A38C1	4B
A38C2	5C
A38C3	6B
A38C4	6A
A38C5	6B
A38C6	7C
A38E1	3A
A38E2	3A
A38E3	3B
A38E4	3B
A38E5	3C
A38E6	3C
A38K1	8D
A38L1	4C
A38Q1	5B
A38Q2	6B
A38R1	4B
A38R2	4B
A38R3	4B
A38R5	5C
A38R6	5B
A38R7	6B
A38R8	6B
A38R9	7B
A38R10	7B
A38TP1	4A
A38TP2	6A

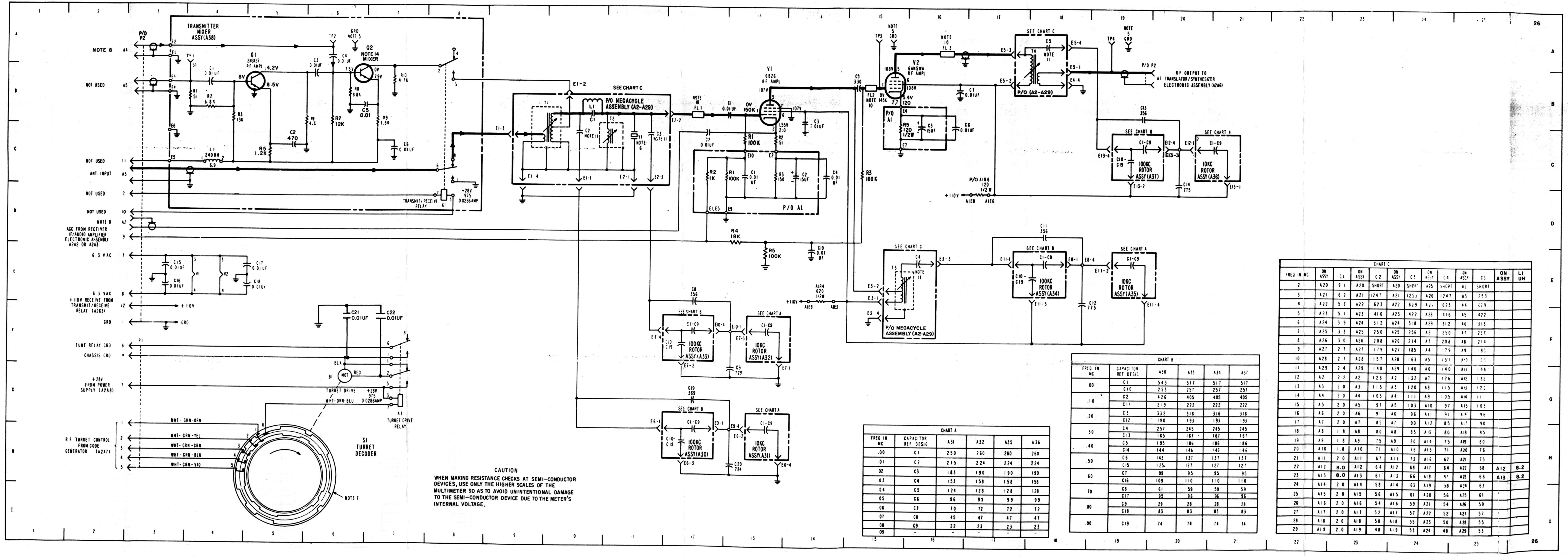


CHART A					
FREQ IN MC	CAPACITOR REF DESIG	A31	A32	A35	A36
.00	C1	250	260	260	260
.01	C2	215	224	224	224
02	C3	183	190	190	190
.03	C4	153	158	158	158
.04	C5	124	128	128	128
05	C6	96	99	99	99
.06	C7	70	72	72	72
07	C8	45	47	47	47
08	C9	22	23	23	23
.09	-	-	-	-	-

CHART B					
FREQ IN MC	CAPACITOR REF DESIG	A30	A33	A34	A37
00	C1	545	517	517	517
	C10	253	257	257	257
.10	C2	426	405	405	405
	C11	219	222	222	222
.20	C3	332	316	316	316
	C12	190	193	193	193
30	C4	257	245	245	245
	C13	165	167	167	167
.40	C5	195	186	186	186
	C14	144	146	146	146
.50	C6	143	137	137	137
	C15	125	127	127	127
.60	C7	99	95	95	95
	C16	109	110	110	110
70	C8	61	59	59	59
	C17	95	96	96	96
.80	C9	29	28	28	28
	C18	83	83	83	83
.90	C19	74	74	74	74

CHART C											
FREQ IN MC	ON ASSY	C1	ON ASSY	C2	ON ASSY	C3	ON ASSY	C4	ON ASSY	C5	ON ASSY	L1 UH
2	A20	9.1	A20	SHORT	A20	SHORT	A25	SHORT	A2	SHORT		
3	A21	6.2	A21	1247	A21	1253	A26	1247	A3	253		
4	A22	5.6	A22	623	A22	629	[illegible]	623	A4	629		
5	A23	5.1	A23	416	A23	422	A28	416	A5	422		
6	A24	3.9	A24	312	A24	318	A29	312	A6	318		
7	A25	3.3	A25	250	A25	256	A2	250	A7	256		
8	A26	3.0	A26	208	A26	214	A3	208	A8	214		
9	A27	2.7	A27	179	A27	185	A4	179	A9	185		
10	A28	2.7	A28	157	A28	163	A5	157	A10	[illegible]		
11	A29	2.4	A29	140	A29	146	A6	140	A11	146		
12	A2	2.2	A2	126	A2	132	A7	126	A12	132		
13	A3	2.0	A3	115	A3	120	A8	115	A13	120		
14	A4	2.0	A4	105	A4	111	A9	105	A14	111		
15	A5	2.0	A5	97	A5	103	A10	97	A15	103		
16	A6	2.0	A6	91	A6	96	A11	91	A16	96		
17	A7	2.0	A7	85	A7	90	A12	85	A17	90		
18	A8	1.8	A8	80	A8	85	A13	80	A18	85		
19	A9	1.8	A9	75	A9	80	A14	75	A19	80		
20	A10	1.8	A10	71	A10	76	A15	71	A20	76		
21	A11	2.0	A11	67	A11	73	A16	67	A21	73		
22	A12	8.0	A12	64	A12	68	A17	64	A22	68	A12	8.2
23	A13	8.0	A13	61	A13	66	A18	[illegible]	A23	66	A13	8.2
24	A14	2.0	A14	58	A14	63	A19	58	A24	63		
25	A15	2.0	A15	56	A15	61	A20	56	A25	61		
26	A16	2.0	A16	54	A16	59	A21	54	A26	59		
27	A17	2.0	A17	52	A17	57	A22	52	A27	57		
28	A18	2.0	A18	50	A18	55	A23	50	A28	55		
29	A19	2.0	A19	48	A19	53	A24	48	A29	53		

NOTES

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION PREFIX WITH A2A4
2. UNLESS OTHERWISE SPECIFIED
   a. ALL RESISTANCE VALUES ARE IN OHMS K-INDICATES THOUSANDS OF OHMS.
   b. ALL RESISTORS ARE 1/4 WATT, ± 5% TOL
   c. ALL CAPACITANCE VALUES ARE IN PICOFARADS, UF INDICATES MICROFARADS.
3. NUMBERS ADJACENT TO COILS AND TEST POINTS INDICATE DC RESISTANCE (VALUES LESS THAN ONE OHM ARE NOT SHOWN).
4. ALL RESISTANCE READINGS TAKEN WITH RF AMPLIFIER ELECTRONIC ASSEMBLY REMOVED FROM CHASSIS AND REFERENCED TO GROUND.
5. DURING MEASUREMENT AT A TEST POINT USE GROUND MARKED ADJACENT TO TEST POINT.
6. CRYSTAL Y1 USED ONLY ON ASSEMBLIES A9, A10 AND A19, AND FUNCTION ONLY WHEN USED IN T-827/URT
7. S1 SHOWN IN 2MC POSITION.
8. P2-A2 AND P2-A4 ARE WIRED BUT NOT USED IN AN/WRC-1 SYSTEM
9. CAPACITORS IN CHARTS A, B AND C WHICH ARE 100 PF AND GREATER ARE 1/2%, EXCEPT C1 IN CHART C WHICH IS 5%. CHART C WHICH IS 5%. IN COLUMN C1 AT A2 AND A13 WHICH IS 1%. CAPACITORS LESS THAN 100 PF ARE 1%.
10. FL1, FL2, AND FL3 ARE PARASITIC SUPPRESSORS.
11. NOT USED IN 2MC POSITION
12. UNLESS OTHERWISE INDICATED ALL VOLTAGES ARE DC, TAKEN WITH MULTIMETER AN/PSM-4.
13. REFER TO APPLICABLE PRINTED CIRCUIT BOARD ILLUSTRATION FOR TRANSFORMER CIRCUIT ORIENTATION.
14. A38Q2 TO BE MOTOROLA SM2437 OR TEXAS INSTRUMENT 6M1151

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 5-12. RF Amplifier Electronic Assembly A2A4, Schematic Diagram

PARTS LOCATION INDEX

REF DESIG	LOC
C1	5D
E1	8C
E2	8D
E3	11G
E4	5H
E6	5H
E7	11G
E8	11H
E9	8C
HR1	10D
P1	4B, 4C, 4F, 21D, 21E, 21G, 21H
Q1	11H
R1	5I
RT1	5G
S1	12C
A1C1	19F
A1C2	19F
A1C3	20F
A1C4	18F
A1C5	19G
A1C6	16E
A1C7	16E
A1C8	16F
A1C9	17E
A1C10	16G
A1C11	18E
A1C12	17E
A1C13	15G
A1C14	16F
A1C15	13G
A1C16	13H
A1C17	12H
A1C18	13F
A1C19	12F
A1C20	12B
A1C21	11B
A1C22	14B
A1C23	14C
A1C24	16C
A1C25	15D
A1C26	11F
A1CR1	14C
A1CR2	16C
A1DS1	17D
A1E1	20G
A1E2	20G
A1E3	20E
A1E4	10C

REF DESIG	LOC
A1E5	10B
A1E6	20H
A1E7	11F
A1E8	12E
A1E9	11E
A1E10	12C
A1E13	10B
A1E14	13D
A1E15	12E
A1E17	12C
A1E18	13C
A1E19	20E
A1E22	11G
A1E25	10B
	20H
A1E26	10C
	13D
A1E27	10C
A1E28	11C
A1E30	13C
A1E31	20D
A1E32	12E
	11C
A1L1	11F
A1L2	11A
A1Q1	19F
A1Q2	16E
A1Q3	16G
A1Q4	13H
A1Q5	13F
A1Q6	16D
A1Q7	15C
A1R1	19F
A1R2	18F
A1R3	19F
A1R4	18F
A1R5	15E
A1R6	15E
A1R7	16F
A1R8	17E
A1R9	16E
A1R10	16F
A1R11	16F
A1R12	15F
A1R13	16G
A1R14	13G
A1R15	12G
A1R16	12H
A1R17	13E

REF DESIG	LOC
A1R18	13D
A1R19	12F
A1R20	13E
A1R21	12E
A1R22	11C
A1R23	11B
A1R24	13B
A1R25	13B
A1R26	16C
A1R27	16C
A1R28	15C
A1R29	15D
A1R30	16D
A1R31	14B
A1T1	18G
A1T2	15E
A1T3	18E
A1T4	14H
A1T5	14F
A1T6	14C
A1TP1	14C
A1TP2	18G
A2C1	6H
A2C2	7G
A2C3	7G
A2C4	8H
A2C5	8G
A2C6	10H
A2C12	9C
A2C13	9D
A2C40	10G
A2CR1	9G
A2CR2	10H
A2CR3	8C
A2CR4	8E
A2E1	5H
A2E3	5E
A2E5	10G
A2E6	5I
A2E10	8E
A2E12	10H
A2E14	8D
A2E16	8D
A2E18	8C
A2E22	10C
A2E23	10D
A2Q1	6G
A2Q2	7G
A2Q3	10G

REF DESIG	LOC
A2Q6	9D
A2R1	6G
A2R2	6H
A2R3	7H
A2R4	7H
A2R6	8H
A2R7	6G
A2R8	9H
A2R9	10H
A2R10	19H
A2R11	9G
A2R12	9C
A2R17	9C
A2R18	6F
A2RT2	6F
A2T1	8G
A2T3	9D
A3C7	6C
A3C8	7E
A3C9	6E
A3C10	6D
A3CR5	6C
A3CR6	6D
A3E1	8C
A3E2	8C
A3E3	8D
A3E4	5D
A3E5	5D
A3E6	8E
A3Q5	7D
A3R14	7D
A3R15	6E
A3R16	6E
A3T2	7C
A3Y1	6E

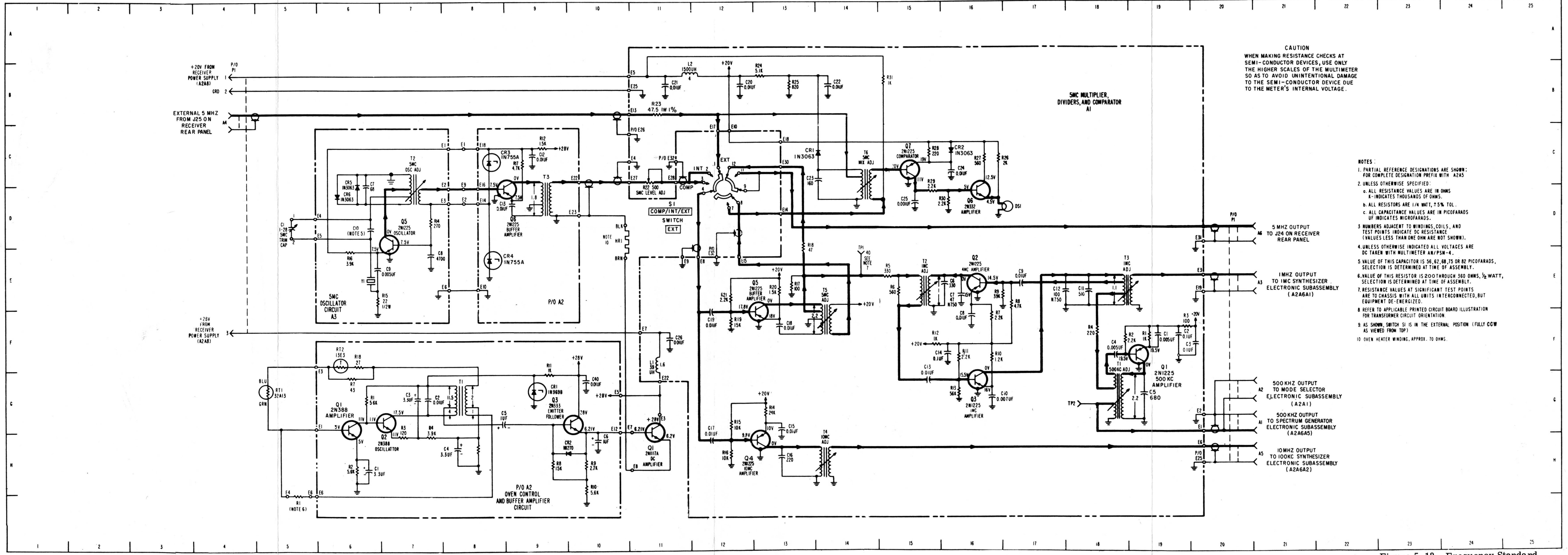


Figure 5-13. Frequency Standard Electronic Assembly A2A5, Schematic Diagram

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
A1A2	4C	A1L3	9C	A2Q2	19G	A3C20	11F	A3R28	10G
Y1		A1Q1	8C	A2Q3	22G	A3CR1	5F	A3R29	10G
thru		A1Q2	9C	A2R1	16F	A3CR2	7G	A3R30	10F
A1A2		A1Q3	10C	A2R2	16G	A3CR3	6G	A3R31	11F
Y17		A1Q4	11C	A2R3	16F	A3CR4	9G	A3R32	14G
A1A3	4C	A1R1	5D	A2R4	16F	A3CR5	10H	A3R33	5G
C1		A1R2	5B	A2R5	16G	A3E1	5G	A3T1	13G
thru		A1R3	5A	A2R6	17G	A3E2	5G	A3TP1	13F
A1A3		A1R4	6B	A2R7	18G	A3E3	5F	A4C1	13C
C17		A1R5	7A	A2R8	18G	A3E5	15G	A4C2	14D
B1	3F	A1R6	7B	A2R9	19F	A3E6	5F	A4C3	16C
C1	4G	A1R7	8B	A2R10	19G	A3E7	10E	A4C4	15D
E1	4G	A1R8	7B	A2R11	19G	A3L1	5F	A4C6	18D
E2	4F	A1R9	8C	A2R12	20G	A3L2	5G	A4C7	18C
E3	15E	A1R10	9C	A2R13	21G	A3L3	9H	A4C8	20C
E4	15E	A1R11	9B	A2R14	22G	A3L4	13G	A4C9	20C
E5	2E	A1R12	10B	A2R15	22F	A3Q1	7G	A4C10	23B
E6	5G	A1R13	9C	A2R16	22G	A3Q2	8G	A4CR1	19D
K1	3E, 3D	A1R14	9C	A2R17	22G	A3Q3	9G	A4E2	13D
L1	4G	A1R15	10C	A2R18	22H	A3Q4	13G	A4E3	23D
L2	15E	A1R16	11C	A2R19	22H	A3Q5	10H	A4E4	23D
P1	2D, 2E	A1R17	11C	A2R20	22H	A3Q6	11G	A4E5	13C
	4G, 12C	A1R18	12C	A2R21	23G	A3R1	5F	A4E6	13C
S1	3E, 4C,	A1RT1	6B	A2R22	15F	A3R2	6F	A4Q1	14C
	4E	A2C1	15G	A2RT1	22H	A3R3	7F	A4Q2	17C
A1C18	11B	A2C2	16F	A2T1	18G	A3R4	7G	A4Q3	21B
A1C19	5B	A2C3	16G	A2T2	19G	A3R5	6G	A4Q4	22B
A1C20	6B	A2C4	16F	A2TP1	18G	A3R6	7G	A4R1	13C
A1C21	7C	A2C5	19G	A2TP2	21G	A3R7	7G	A4R2	13D
A1C23	7B	A2C6	19G	A2TP3	23F	A3R8	8H	A4R3	15B
A1C24	8C	A2C7	21G	A3C1	6F	A3R9	8F	A4R4	14C
A1C25	11B	A2C8	21G	A3C2	6G	A3R10	8G	A4R5	14C
A1C26	9C	A2C9	21H	A3C3	5G	A3R11	8G	A4R6	15C
A1C27	10B	A2C10	21F	A3C4	7G	A3R12	9F	A4R7	16B
A1C28	11C	A2C11	22H	A3C5	7G	A3R13	9F	A4R8	16B
A1CR1	6A	A2C12	18G	A3C6	8H	A3R14	9G	A4R9	16D
A1CR2	6A	A2C13	20G	A3C7	8G	A3R15	9G	A4R10	17D
A1CR3	5C	A2C14	15F	A3C8	8G	A3R16	9G	A4R11	17C
A1E1	12C	A2CR1	20G	A3C9	10H	A3R17	10H	A4R12	20C
A1E2	12C	A2E2	23G	A3C10	10G	A3R18	11G	A4R13	18C
A1E3	11D	A2E3	16E	A3C11	5F	A3R19	12G	A4R14	20D
A1E4	11D	A2E4	15F	A3C12	12G	A3R20	12G	A4R15	19C
A1E5	12B	A2J1	23G	A3C13	12G	A3R21	11H	A4R16	22C
A1E6	5D	A2L1	20G	A3C14	11G	A3R22	10H	A4R17	22B
A1E8	5D	A2L2	21G	A3C15	13G	A3R23	11G	A4R18	22D
A1E9	5C	A2L3	21G	A3C16	13G	A3R24	11G	A4R19	23A
A1E10	5C	A2L4	21H	A3C17	14G	A3R25	12G	A4TP1	21C
A1L1	11A	A2P1	23G	A3C18	10F	A3R26	10F		
A1L2	8B	A2Q1	16G	A3C19	11G	A3R27	10F		

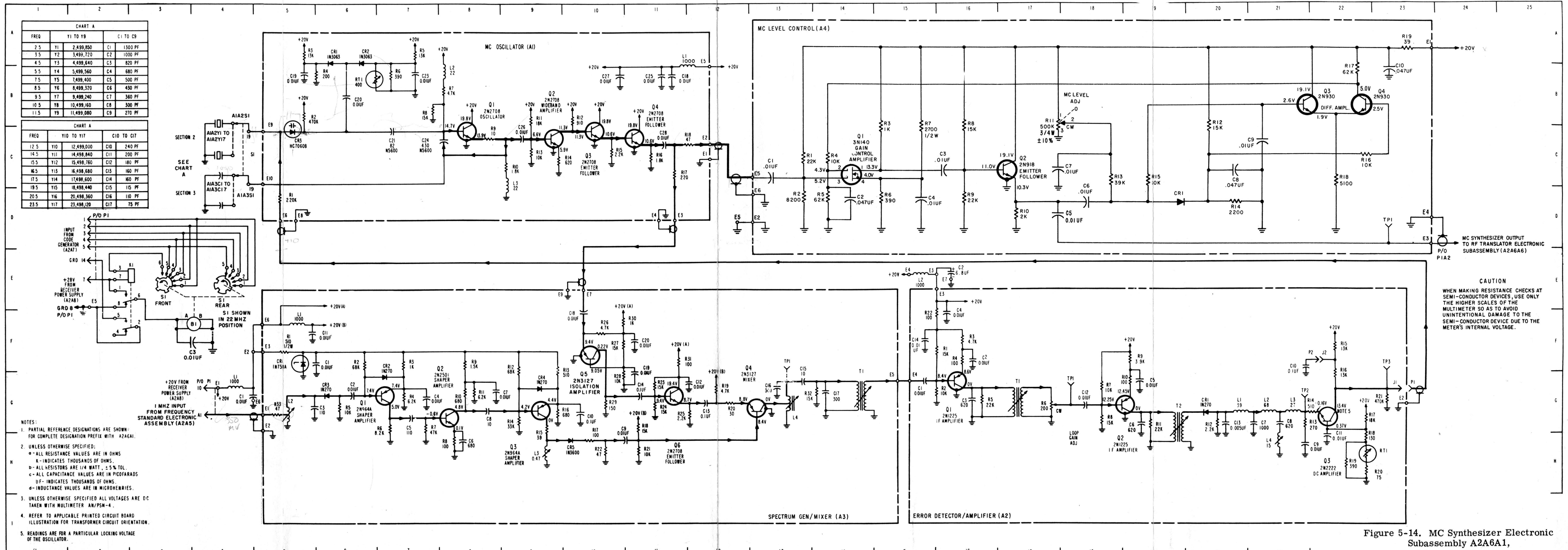


Figure 5-14. MC Synthesizer Electronic Subassembly A2A6A1, Schematic Diagram

PART LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
C1	8A	A2E1	3H	A3E4	21I	A4C13	11D	A4R15	14D	A5R6	19C
P1	2E, 2F	A2E2	3H	A3E5	21F	A4C14	12B	A4R16	14D	A5R7	19D
	2H, 2I,	A2E3	9G	A3E6	21F	A3C15	12B	A4R17	14C	A5R8	19D
	22B	A2E4	9G	A3E7	18F	A4C16	12D	A4R18	14E	A5R9	19C
S1	2C	A2E5	6F	A3E8	18F	A4C17	12D	A4R19	13E	A5R10	19D
Y1 thru Y10	2C	A2E6	6F	A3E9	16F	A4C18	13B	A4R20	10C	A5R11	20C
A1C1	3C	A2E7	9H	A3E10	15F	A4C19	13D	A4R21	15B	A5R12	19D
A1C2	3D	A2E8	3G	A3E11	15F	A4C20	14B	A4R22	15D	A5R13	19D
A1C3	4C	A2E9	3G	A3E12	12F	A4C21	14E	A4R23	15C	A5R14	19D
A1C4	5C	A2FL1	8G	A3E13	12F	A3C22	9B	A4T1	12B	A5R15	20C
A1C5	5C	A2Q1	7G	A3Q1	12H	A4C23	14C	A4T2	13D	A5R16	21C
A1C6	5C	A2Q2	5G	A3Q2	16G	A4C24	14D	A4TP1	10B	A5R17	20D
A1C7	6C	A2R1	7H	A3R1	11H	A4C25	14C	A4TP2	11B	A5RT1	20C
A1C8	4D	A2R2	7H	A3R2	12H	A4C26	15E	A4TP3	13B	A5TP1	18D
A1C9	6C	A2R3	7H	A3R3	11H	A4C27	14C	A4TP4	11D		
A1C10	7C	A2R4	5G	A3R4	12H	A4E1	9A	A4TP5	12D		
A1C11	8C	A2R5	4G	A3R5	15H	A4E2	9C	A4TP6	13D		
A1CR1	3C	A2R6	4G	A3R6	16G	A4E4	9D	A5C1	17B		
A1CR2	4C	A2R7	4G	A3R7	16H	A4E5	9D	A5C2	17D		
A1L1	7C	A2R8	6F	A3R8	16H	A4E6	16E	A5C3	21C		
A1E1	3D	A2R9	5G	A3R9	17H	A4E7	9B	A5C4	18C		
A1E2	3C	A2T1	6G	A3R10	18G	A4E8	9B	A5C5	18B		
A1E3	6E	A2T2	8G	A3R11	18H	A4E9	16D	A5C6	19D		
A1E4	5E	A2T3	9G	A3R12	18H	A4E10	16D	A5C7	19C		
A1E5	8D	A2TP1	9G	A3R13	19H	A4E11	16B	A5C8	20C		
A1E6	8C	A3C1	11H	A3R14	19G	A4E12	16B	A5C9	20D		
A1E7	8D	A3C2	21I	A3R15	21G	A4L1	11B	A5C10	21C		
A1Q1	5C	A3C3	20I	A3R16	12G	A4L2	11B	A5C11	21C		
A1R1	4C	A3C4	11H	A3T1	13H	A4L3	15B	A5CR1	20D		
A1R2	4C	A3C5	12G	A3T2	15H	A4L4	11D	A5E1	16B		
A1R3	4C	A3C6	12H	A3T3	19G	A4L5	12D	A5E2	16B		
A1R4	4C	A3C7	13H	A3T4	21G	A3L6	15D	A5E3	16D		
A1R5	5C	A3C8	14H	A3TP1	12G	A4Q1	10B	A5E4	16D		
A1R6	6C	A3C9	14H	A3TP2	15G	A4Q2	10D	A5E5	22C		
A1R7	5B	A3C10	16G	A3TP3	17G	A4Q3	14B	A5E6	22C		
A1R8	6C	A3C11	17H	A3TP4	21F	A4Q4	14D	A5E7	22B		
A1R9	3D	A3C12	17H	A3Y1	14G	A4R1	9B	A5E8	22B		
A1R10	6D	A3C13	17G	A3Y2	20F	A4R2	10C	A5E9	22B		
A1R11	6C	A3C14	18H	A4C1	9B	A4R3	9A	A5L1	21B		
A1RT1	3C	A3C15	18G	A4C2	9D	A4R4	10B	A5L2	19C		
A1T1	7C	A3C16	19H	A4C3	9A	A4R5	10D	A5L3	20C		
A2C1	6G	A3C17	20G	A4C4	9B	A4R6	10B	A5Q1	17D		
A2C2	6H	A3C18	19G	A4C5	10C	A4R7	10D	A5Q2	18C		
A2C3	5G	A3C19	20G	A4C6	9D	A4R8	10D	A5Q3	19C		
A2C4	7H	A3C20	20G	A4C7	10B	A4R9	12D	A5Q4	20C		
A2C5	7G	A3CR1	18H	A4C8	10C	A4R10	13B	A5R1	17D		
A2C6	4G	A3CR2	18H	A4C9	10D	A4R11	13C	A5R2	17C		
A2C7	4G	A3CR3	19H	A4C10	11B	A4R12	13D	A5R3	17C		
A2C8	9G	A3E1	10H	A4C11	11B	A4R13	14B	A5R4	18C		
A2C9	8G	A3E2	10H	A4C12	11D	A4R14	14B	A5R5	18D		

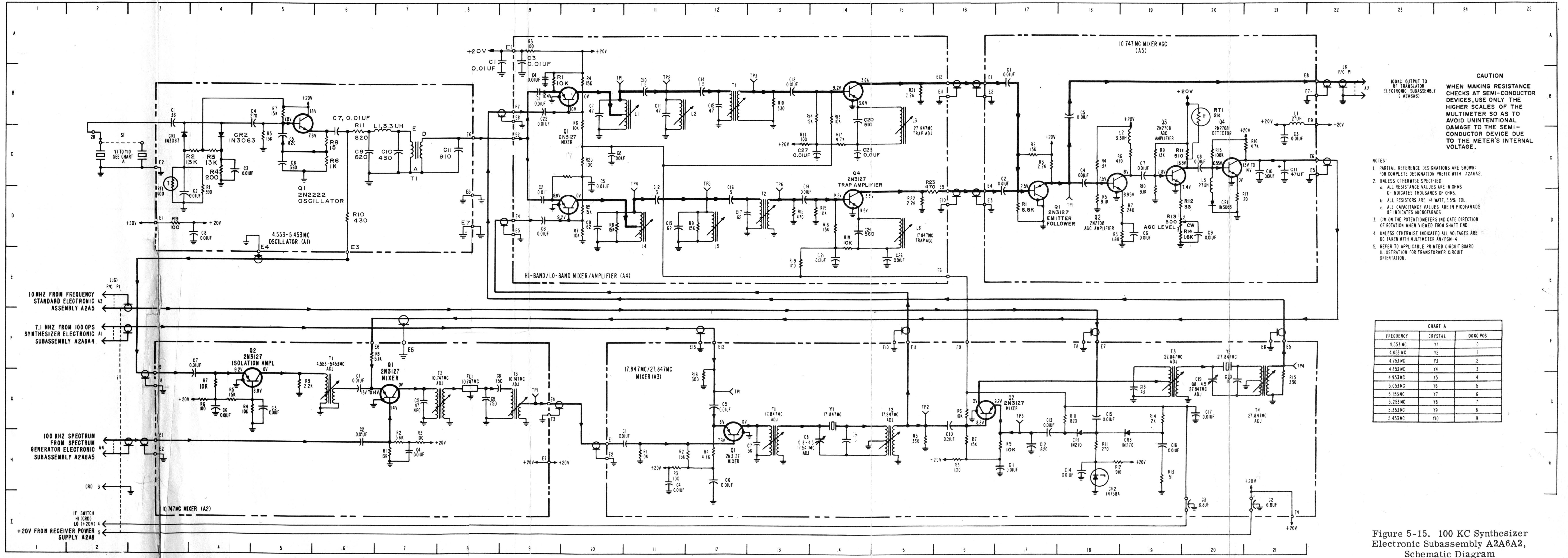


Figure 5-15. 100 KC Synthesizer Electronic Subassembly A2A6A2, Schematic Diagram

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
C25	3E	A1R13	5C	A2T1	8G	A4C13	12G	A4Z2Q7	10G
C26	3E	A1R14	7A	A3C46	10B	A4E1	14E	A4Z2R26	11G
J1	3D	A1R15	8C	A3C47	10C	A4E2	14E	A4Z2R27	10H
J3	15C	A1R16	8C	A3C48	10C	A4E3	16I	A4Z2R28	10G
J4	3E	A1RT1	4D	A3C49	11C	A4E4	17I	A4Z2R29	11G
J5	3I	A1T1	8C	A3C50	12C	A4E5	20F	A4Z3C27	14F
J6	3A	A2C1	4G	A3C51	12C	A4E6	20G	A4Z3C28	15F
J7	21G	A2C2	4G	A3C52	13C	A4E7	20E	A4Z3Q6	15F
P1	9C	A2C3	5G	A3C53	13A	A4E8	20G	A4Z3R22	16F
P2	9A	A2C4	5G	A3C54	13C	A4E9	13E	A4Z3R23	15F
A1C1	4B	A2C5	4H	A3C55	10C	A4E10	13E	A4Z3R24	15F
A1C2	4B	A2C6	6G	A3C56	11C	A4E11		A4Z3R25	15F
A1C3	5C	A2C7	4F	A3CR7	13C	A4E12	9G	A5S2	3G
A1C4	5C	A2C8	5H	A3J8	9C	A4E13	9G	A5Y11	3G
A1C5	4D	A2C9	7F	A3J9	9A	A4FL1	18H	thru	
A1C6	6B	A2C10	7G	A3J10	9D	A4FL2	15G	A5Y20	
A1C7	4B	A2CR1	4H	A3L5	11C	A4L3	17F	A6S1	3C
A1C8	5D	A2CR2	5H	A3L6	12C	A4L4	12G	A6Y1	3C
A1C9	7B	A2E1	3G	A3L7	12C	A4Q8	17H	thru	
A1C10	7C	A2E2	3F	A3Q11	10C	A4Q9	19G	A6Y10	
A1C11	8C	A2E3	8G	A3Q12	13B	A4R1	17I		
A1CR1	4C	A2E4	8G	A3R47	10B	A4R2	16H		
A1CR2	5C	A2E5	8G	A3R48	10B	A4R3	16H		
A1E1	3B	A2E6	8H	A3R49	13B	A4R4	16H		
A1E2	3A	A2E7	3F	A3R50	12B	A4R5	17H		
A1E3	8C	A2Q1	5G	A3R51	13D	A4R6	19H		
A1E4	8C	A2Q2	6G	A3R52	10C	A4R7	18G		
A1E5	8C	A2R1	4G	A3R54	10C	A4R8	18G		
A1E6	8C	A2R2	5F	A3T3	14C	A4R9	18F		
A1E7	3B	A2R3	4H	A3TP1	10C	A4R10	19F		
A1Q1	5B	A2R4	6G	A3TP2	11C	A4R11	19F		
A1Q2	6B	A2R5	7G	A3TP3	12C	A4R12	12F		
A1R1	4B	A2R6	6G	A4C1	16G	A4R30	19F		
A1R2	5B	A2R7	5G	A4C2	17I	A4R31	16H		
A1R3	4D	A2R8	6F	A4C3	16I	A4T1	20G		
A1R4	6C	A2R9	7F	A4C4	17H	A4Z1C43	13G		
A1R5	7C	A2R10	7F	A4C5	19H	A4Z1C44	13F		
A1R6	6C	A2R11	4H	A4C6	19H	A4Z1Q10	13G		
A1R7	5B	A2R12	5H	A4C7	17G	A4Z1R41	13G		
A1R8	6B	A2R13	5H	A4C8	15G	A4Z1R42	13G		
A1R9	7B	A2R14	7F	A4C9	14G	A4Z1R43	13F		
A1R10	7B	A2R15	8G	A4C10	19G	A4Z1R44	13G		
A1R11	4D	A2R16	8G	A4C11	18F	A4Z2C29	11H		
A1R12	5D	A2RT1	4H	A4C12	19G	A4Z2C30	10G		

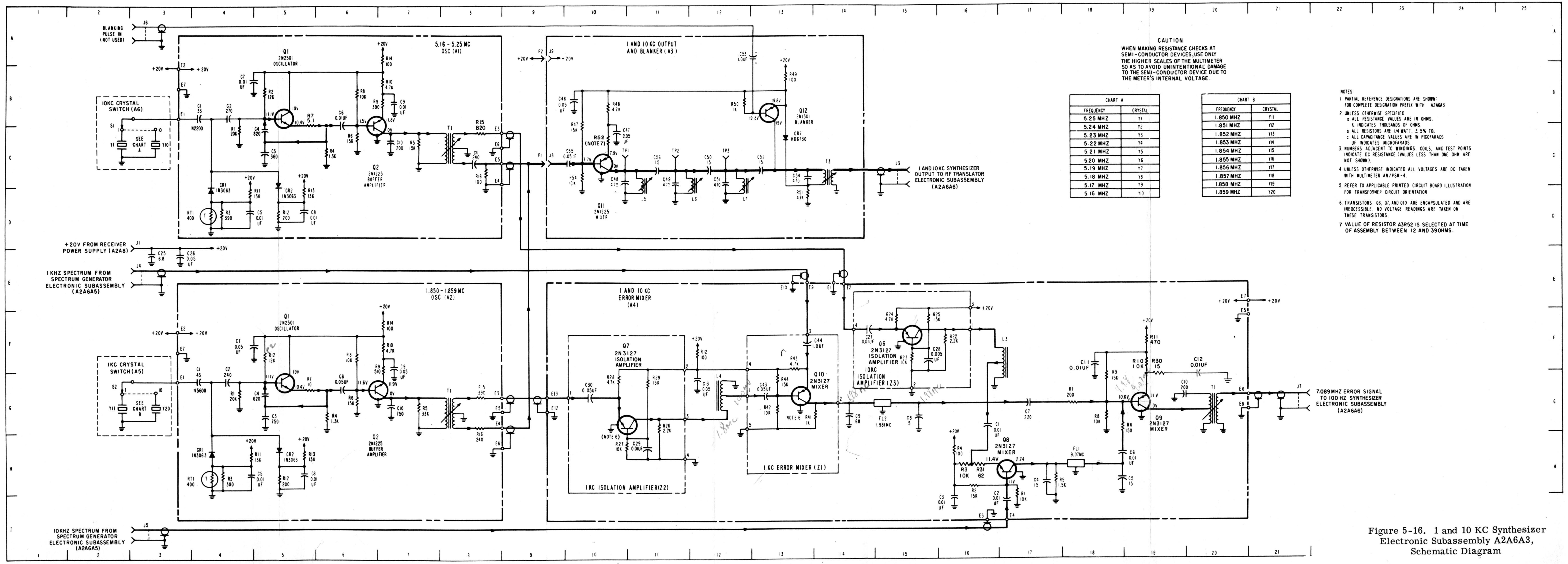
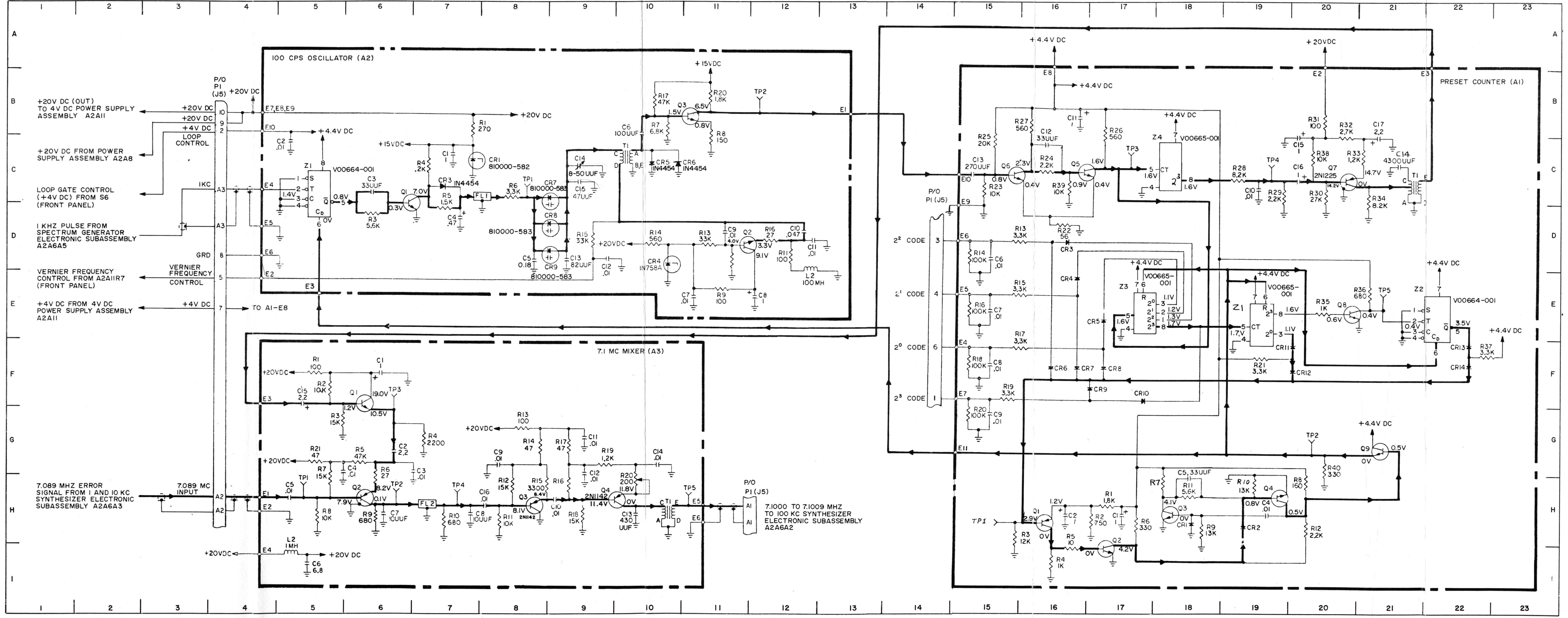


Figure 5-16. 1 and 10 KC Synthesizer Electronic Subassembly A2A6A3, Schematic Diagram

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
P1	B3, C3, D3,	A1Q6	C15	A1TP5	E21	A2R9	E11	A3R10	H7
	E3, F3, G3,	A1Q7	C20	A1Z1	E19	A2R11	D12	A3R11	H8
	H3, H11, D14,	A1Q8	E20	A1Z2	E21	A2R13	D11	A3R12	H8
	E14, F14	A1Q9	G21	A1Z3	E17	A2R14	D10	A3R13	G8
A1C1	H17	A1R1	H17	A1Z4	C18	A2R15	D9	A3R14	G8
A1C2	H16	A1R2	H17	A2C1	C7	A2R16	D12	A3R15	H8
A1C4	H19	A1R3	H15	A2C2	C5	A2R17	B10	A3R16	H9
A1C5	H18	A1R4	I16	A2C3	C6	A2R20	B11	A3R17	G9
A1C6	D15	A1R5	I16	A2C4	D7	A2T1	C9	A3R18	H9
A1C7	E15	A1R6	H17	A2C5	D8	A2TP1	C8	A3R19	G9
A1C8	F15	A1R7	H18	A2C6	B10	A2TP2	B11	A3R20	H10
A1C9	G15	A1R8	H20	A2C7	E10	A2Z1	C5	A3R21	G5
A1C10	C19	A1R9	H18	A2C8	E11	A3C1	F6	A3T1	H10
A1C11	B16	A1R10	H19	A2C9	D11	A3C2	G6	A3TP1	H5
A1C12	C16	A1R11	H18	A2C10	D12	A3C3	H6	A3TP2	H6
A1C13	C15	A1R12	H20	A2C11	D12	A3C4	H5	A3TP3	G6
A1C14	C21	A1R13	D15	A2C12	D9	A3C5	H5	A3TP4	H7
A1C15	B19	A1R14	D15	A2C13	D9	A3C6	I5	A3TP5	H10
A1C16	C19	A1R15	E15	A2C14	C9	A3C7	H6		
A1C17	B21	A1R16	E15	A2C15	C9	A3C8	H7		
A1CR1	H18	A1R17	F15	A2CR1	C7	A3C9	G8		
A1CR2	H19	A1R18	F15	A2CR3	C7	A3C10	H8		
A1CR3	D16	A1R19	F15	A2CR4	D10	A3C11	G9		
A1CR4	E16	A1R20	G15	A2CR5	C10	A3C12	H9		
A1CR5	E17	A1R21	F19	A2CR6	C10	A3C13	H10		
A1CR6	F16	A1R22	D16	A2CR7	C8	A3C14	G10		
A1CR7	F16	A1R23	C15	A2CR8	D8	A3C15	G5		
A1CR8	F17	A1R24	C16	A2CR9	D8	A3C16	H7		
A1CR9	F16	A1R25	C15	A2E1	B13	A3E1	H4		
A1CR10	F17	A1R26	B17	A2E2	E4	A3E2	H4		
A1CR11	F19	A1R27	B15	A2E4	C4	A3E3	G4		
A1CR12	F19	A1R28	C19	A2E5	D4	A3E4	I4		
A1CR13	F22	A1R29	C19	A2E6	D4	A3E5	H11		
A1CR14	F22	A1R30	C20	A2E7	B4	A3E6	H11		
A1E2	A20	A1R31	B20	A2E8	B4	A3FL2	H7		
A1E3	A21	A1R32	B20	A2E9	B4	A3L2	I5		
A1E4	F14	A1R33	C20	A2E10	B4	A3Q1	G6		
A1E5	E14	A1R34	C21	A2FL1	C7	A3Q2	H6		
A1E6	D14	A1R35	E20	A2FL2	D12	A3Q3	H8		
A1E7	F14	A1R36	E21	A2Q1	D6	A3Q4	H9		
A1E8	A16	A1R37	F22	A2Q2	D11	A3R1	F5		
A1E9	D14	A1R38	C20	A2Q3	B10	A3R2	F5		
A1E10	C14	A1R39	C16	A2R1	B7	A3R3	G5		
A1E11	G14	A1R40	G20	A2R3	D6	A3R4	G7		
A1Q1	H16	A1T1	C21	A2R4	C7	A3R5	G6		
A1Q2	I17	A1TP1	H15	A2R5	D7	A3R6	H6		
A1Q3	H18	A1TP2	G20	A2R6	C8	A3R7	H5		
A1Q4	H19	A1TP3	C17	A2R7	B10	A3R8	H5		
A1Q5	C16	A1TP4	C19	A2R8	C11	A3R9	H6		



NOTES:
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION PREFIX WITH A2A6A4.
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTORS ARE IN OHMS, 1/4W, ±5%
   ALL CAPACITORS ARE IN MICROFARADS
   ALL DIODES ARE 1N277
   ALL TRANSISTORS ARE 2N706

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 5-17. 100 CPS Synthesizer Electronic Subassembly, A2A6A4, Schematic Diagram

PART LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
A1C1	3D	A1R15	8G	A2Q6	13B	A3C15	11D	A3TP1	13E
A1C2	4D	A1R16	8H	A2R1	7A	A3C16	18E	A3TP2	14E
A1C3	4E	A1R17	9G	A2R2	7A	A3C17	19F	A3TP3	14E
A1C4	5E	A1R18	9G	A2R3	8A	A3CR1	11D	A3TP4	16F
A1C5	6E	A1R19	9G	A2R4	8B	A3CR2	12F	A3TP5	16D
A1C6	7F	A1R20	9H	A2R5	7C	A3CR3	13F	A3TP6	17E
A1C7	7H	A1R21	9G	A2R6	7B	A3CR4	15F	A4C1	14G
A1C8	6D	A1R22	11I	A2R7	8A	A3CR5	14E	A4E2	14H
A1C9	8G	A1R23	10G	A2R8	8B	A3E1	10D	A4E3	14G
A1C10	8H	A1R24	10I	A2R9	9B	A3E2	10D	A4J1	19H
A1C11	8H	A1R25	11I	A2R11	10A	A3E3	10F	A4Q1	15H
A1C12	8H	A1T1	8H	A2R12	10B	A3E4	14F	A4R1	14G
A1C13	9H	A1T2	12H	A2R13	10B	A3J2	10D	A4R2	15H
A1C14	9H	A1TP1	5E	A2R14	10C	A3J4	10E	A4R3	15G
A1C15	9H	A1TP2	6E	A2R15	10C	A3L1	11D	A4R4	14H
A1C16	9I	A1TP3	7G	A2R16	10A	A3L2	18E	A4R5	14H
A1C17	11I	A1TP4	7F	A2R18	10C	A3Q1	12E		
A1C18	11H	A1TP5	7H	A2R19	11B	A3Q2	13E		
A1C19	12I	A1TP6	8G	A2R20	11C	A3Q3	15E		
A1CR1	4D	A2C1	6A	A2R21	12B	A3Q4	14E		
A1CR2	5D	A2C2	7A	A2R22	12A	A3Q5	16E		
A1CR3	5D	A2C3	8B	A2R23	13A	A3Q6	17E		
A1CR4	9H	A2C4	8C	A2R24	13A	A3R1	11D		
A1E1	3D	A2C5	8B	A2R25	12C	A3R2	12D		
A1E6	8D	A2C6	9A	A2R26	14E	A3R3	12D		
A1J3	3E	A2C7	9B	A2R27	14B	A3R4	12E		
A1J6	13I	A2C8	10B	A2R28	14B	A3R5	12F		
A1L1	3D	A2C9	11C	A2R29	14B	A3R6	12E		
A1L2	4E	A2C10	9A	A2R30	11B	A3R7	13D		
A1L5	10H	A2C11	10C	A2T1	13B	A3R8	13E		
A1Q1	5E	A2C12	12B	A2TP1	9B	A3R9	13F		
A1Q2	7E	A2C13	13A	A2TP2	9B	A3R10	13F		
A1Q3	6E	A2C14	13B	A2TP3	9B	A3R11	15D		
A1Q4	7H	A2C15	12B	A2TP4	11C	A3R12	15E		
A1Q5	8G	A2C16	14B	A2TP5	11A	A3R13	14F		
A1Q6	9H	A2CR1	7A	A2TP6	12B	A3R14	14F		
A1R1	3D	A2CR2	8C	A3C1	12D	A3R15	14F		
A1R2	4D	A3CR3	8C	A3C2	12D	A3R16	14E		
A1R3	5E	A2CR4	9A	A3C3	12F	A3R17	15E		
A1R4	7D	A2E1	6A	A3C4	11F	A3R18	15F		
A1R5	7D	A2E2	6A	A3C5	13E	A3R19	16E		
A1R6	6D	A2E3	8C	A3C6	13D	A3R20	16F		
A1R7	6E	A2E4	9C	A3C7	13E	A3R21	16E		
A1R8	7F	A2J5	15B	A3C8	14E	A3R22	16D		
A1R9	6G	A2L1	6A	A3C9	15F	A3R23	18D		
A1R10	6H	A2Q1	7B	A3C10	14D	A3R24	17D		
A1R11	7G	A2Q2	8B	A3C11	15F	A3R25	17F		
A1R12	7G	A2Q3	11B	A3C12	16E	A3R26	18D		
A1R13	7H	A2Q4	10B	A3C13	17D	A3R27	19E		
A1R14	7H	A2Q5	12B	A3C14	17E	A3T1	18E		

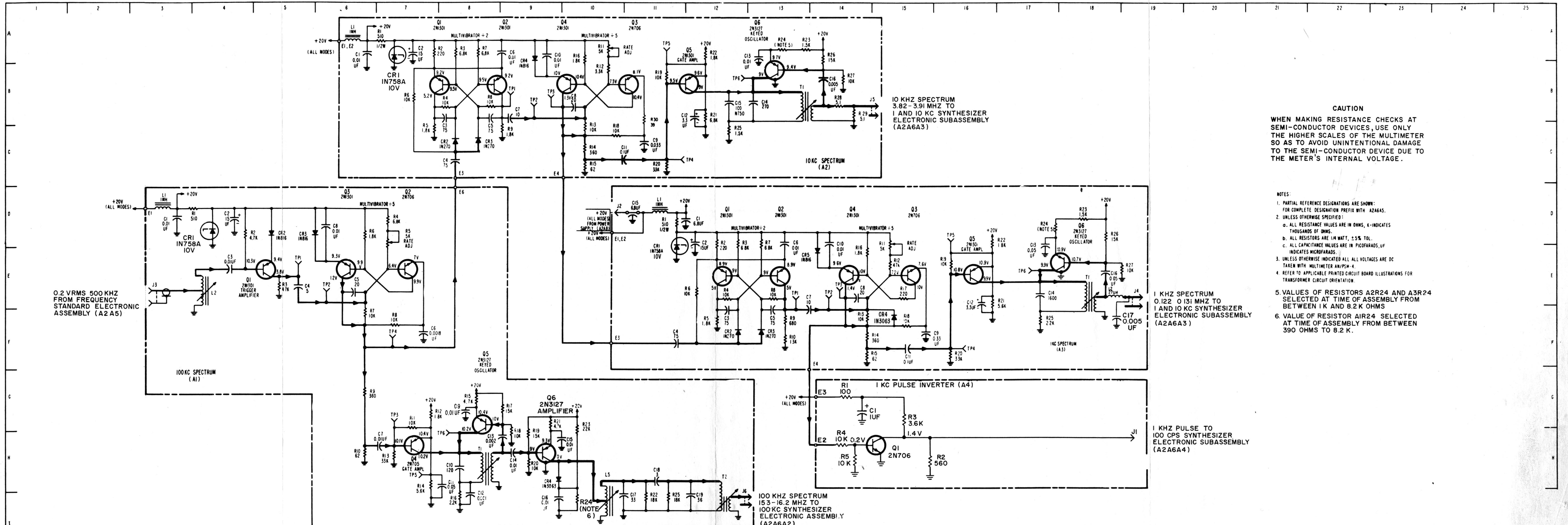


Figure 5-18. Spectrum Generator Electronic Subassembly A2A6A5, Schematic Diagram

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
A2A6J4	I9	A1C45	D14	A1E8	H9	A1R21	C21	A1Z1	F26
A2A6J6	I20	A1C46	D12	A1E9	H8	A1R22	D17	A1Z2	E19
A2A6P2	A30, G32	A1C47	H3	A1E10	F3	A1R23	C21	A1Z3	F8
A2A6P3	G3, A12	A1C48	F13	A1E11	G3,	A1R24	E17		
A2A6P19	I26	A1C49	C5		B12	A1R25	C21		
A1C1	H24	A1C50	C6	A1E12	B12	A1R26	F18		
A1C2	E30	A1C51	F6	A1FL1	D14	A1R27	E20		
A1C3	F30	A1C52	F6	A1FL2	F14	A1R28	E21		
A1C4	G24	A1C53	F9	A1FL3	D23	A1R29	E18		
A1C5	H25	A1C54	E8	A1J4	B16	A1R30	G21		
A1C6	G26	A1C55	F8	A1J5	B22	A1R31	E19		
A1C7	F24	A1C56	E11	A1J6	H31	A1R32	G18		
A1C8	G25	A1C57	E11	A1J7	B28	A1R33	F19		
A1C9	E29	A1C58	E10	A1L1	C28	A1R34	C16		
A1C10	E29	A1C59	F10	A1L2	E28	A1R35	D16		
A1C11	F28	A1C60	G8	A1L3	G21	A1R36	D14		
A1C12	F28	A1C61	F10	A1L4	H31	A1R37	D12		
A1C13	E28	A1C62	G8	A1L5	B22	A1R38	D13		
A1C14	F24	A1C63	G7	A1L6	G17	A1R39	B6		
A1C15	F25	A1C64	F7	A1L7	B18	A1R40	F9		
A1C16	E26	A1C65	H4	A1L8	D16	A1R41	C5		
A1C17	F26	A1C66	G29	A1L9	E16	A1R42	C6		
A1C18	C24	A1CR2	E24	A1L10	E15	A1R43	F6		
A1C19	E24	A1CR3	E27	A1L11	E13	A1R44	D10		
A1C20	E25	A1CR4	E25	A1L12	B16	A1R45	B6		
A1C21	D27	A1CR5	E27	A1L13	D13	A1R46	F6		
A1C22	B22	A1CR6	D21	A1L14	E10	A1R47	F9		
A1C23	H30	A1CR7	D18	A1L15	G29	A1R48	F7		
A1C24	C23	A1CR8	D21	A1Q1	E30	A1R49	G10		
A1C25	C22	A1CR9	E18	A1R1	E31	A1R50	F8		
A1C26	F17	A1CR10	D16	A1R2	G27	A1R51	G5		
A1C27	D21	A1CR11	F16	A1R3	G26	A1R52	G6		
A1C28	H30	A1CR12	D13	A1R4	F26	A1R53	F9		
A1C29	E20	A1CR13	F13	A1R5	F30	A1R54	G8		
A1C30	D19	A1CR14	E10	A1R6	D30	A1R55	G8		
A1C31	E19	A1CR15	E9	A1R7	F29	A1RT1	G26		
A1C32	E19	A1CR16	E7	A1R8	E29	A1RT3	G9		
A1C33	E21	A1CR17	E10	A1R9	F29	A1T1	E30		
A1C34	F19	A1CR18	F7	A1R10	G25	A1T2	F25		
A1C35	E18	A1CR19	G5	A1R11	F26	A1T3	F27		
A1C36	H19	A1CR20	G6	A1R12	G27	A1T4	E20		
A1C37	F18	A1E1	G31	A1R13	E29	A1T5	E19		
A1C38	C20	A1E2	B30,	A1R14	F24	A1T6	F9		
A1C39	H16		G31	A1R15	E24	A1T7	F8		
A1C40	D16	A1E3	B31	A1R16	E28	A1TP5	F4		
A1C41	D15	A1E4	H26	A1R17	E24	A1TP6	E11		
A1C42	F15	A1E5	H26	A1R18	D24	A1TP7	G30		
A1C43	C15	A1E6	H19	A1R19	E27	A1TP8	E31		
A1C44	F14	A1E7	H20	A1R20	D26	A1VR1	H25		

NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION PREFIX WITH A2A6A6.
2. UNLESS OTHERWISE SPECIFIED:
   ALL RESISTANCE VALUES ARE IN OHMS.
   ALL RESISTOR RATINGS ARE 1/4W.
   ALL RESISTOR TOLERANCES ARE ±5%.
   ALL CAPACITANCE VALUES ARE IN MICROFARADS.
   ALL INDUCTANCE VALUES ARE IN MICROHENRIES.
3. VOLTAGES ARE TAKEN WITH NO SIGNAL APPLIED.

CAUTION

WHEN MAKING RESISTANCE CHECKS AT SEMI-CONDUCTOR DEVICES, USE ONLY THE HIGHER SCALES OF THE MULTIMETER SO AS TO AVOID UNINTENTIONAL DAMAGE TO THE SEMI-CONDUCTOR DEVICE DUE TO THE METER'S INTERNAL VOLTAGE.

Figure 5-19. RF Translator Electronic Subassembly, A2A6A6, Schematic Diagram

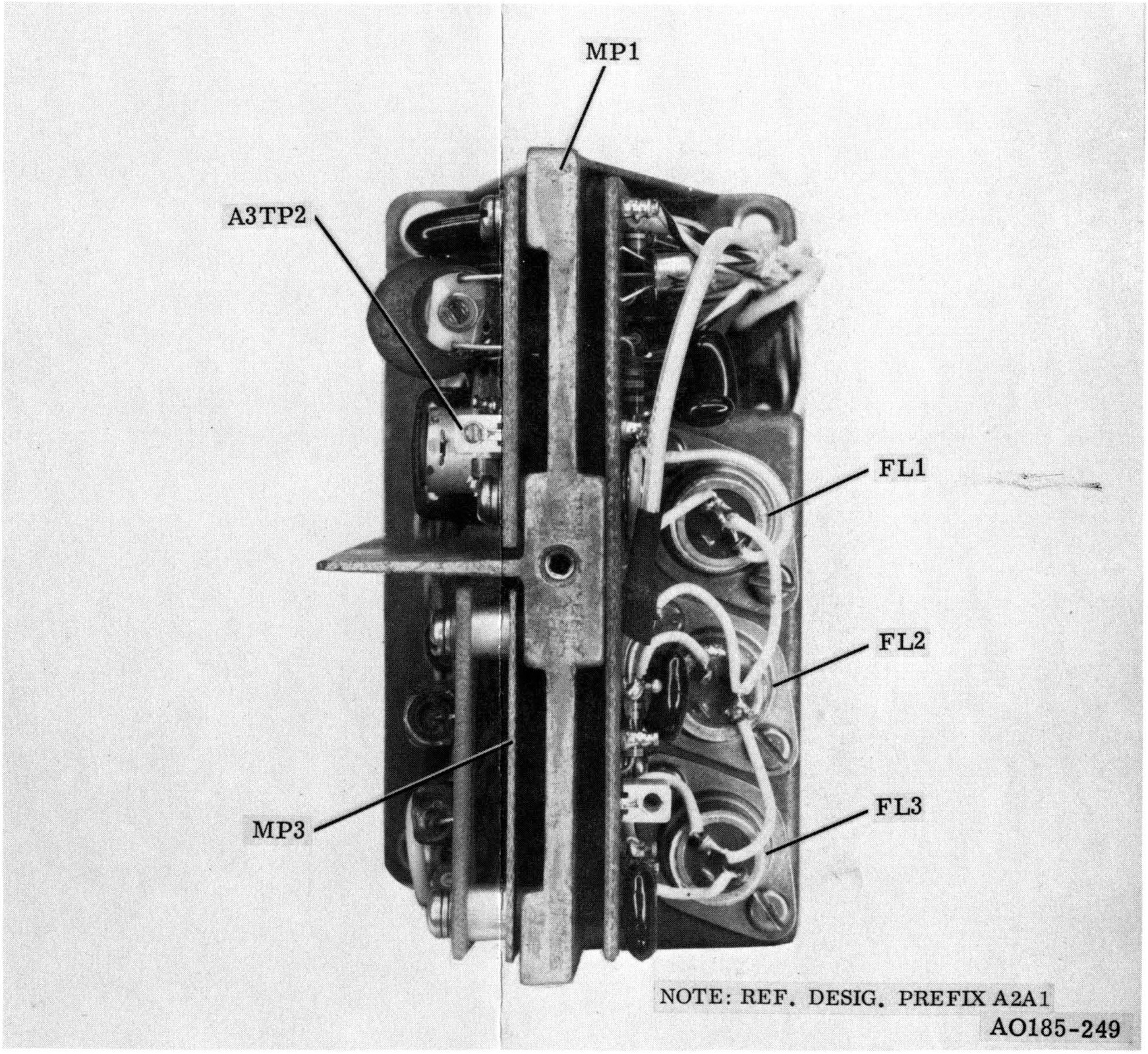
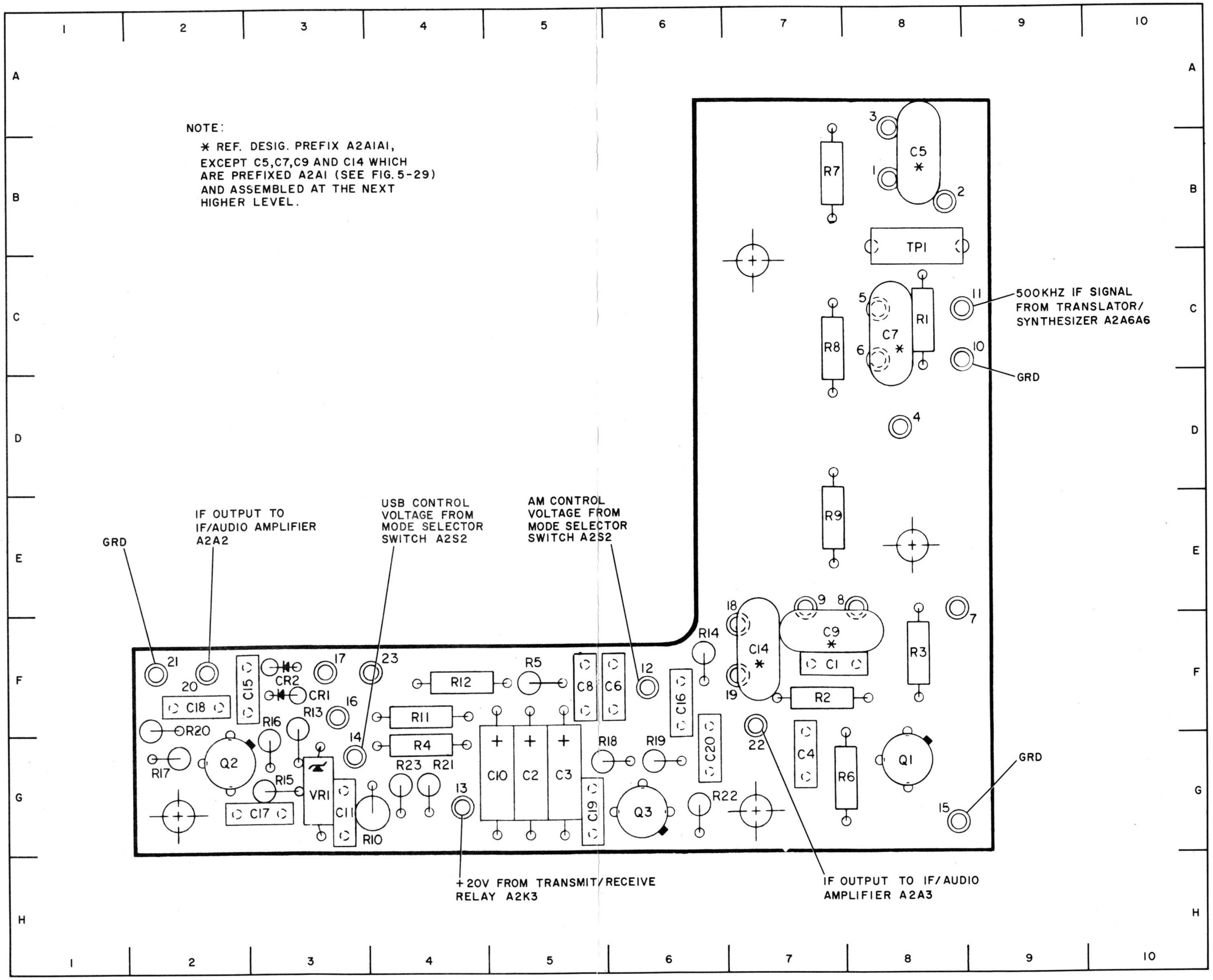


Figure 5-31. Mode Selector Electronic Assembly A2A1, Top View, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
A2A1A1-1	B8	A2A1A1CR1	F3
A2A1A1-2	B8	A2A1A1CR2	F3
A2A1A1-3	A8	A2A1A1Q1	G8
A2A1A1-4	D8	A2A1A1Q2	G2
A2A1A1-7	E8	A2A1A1Q3	G6
A2A1A1-8	E8	A2A1A1R1	C8
A2A1A1-9	E7	A2A1A1R2	F7
A2A1A1-10	C8	A2A1A1R3	F8
A2A1A1-11	C8	A2A1A1R4	G4
A2A1A1-12	F6	A2A1A1R5	F5
A2A1A1-13	G4	A2A1A1R6	G7
A2A1A1-14	G3	A2A1A1R7	B7
A2A1A1-15	G8	A2A1A1R8	C7
A2A1A1-16	F3	A2A1A1R9	E7
A2A1A1-17	F3	A2A1A1R10	G4
A2A1A1-18	F7	A2A1A1R11	F4
A2A1A1-19	F7	A2A1A1R12	F4
A2A1A1-20	F2	A2A1A1R13	F3
A2A1A1-21	F2	A2A1A1R14	F6
A2A1A1-22	F7	A2A1A1R15	G3
A2A1A1-23	F4	A2A1A1R16	F3
A2A1A1C1	F7	A2A1A1R17	G2
A2A1A1C2	G5	A2A1A1R18	G5
A2A1A1C3	G5	A2A1A1R19	G6
A2A1A1C4	G7	A2A1A1R20	F2
A2A1A1C6	F6	A2A1A1R21	G4
A2A1A1C8	F5	A2A1A1R22	G6
A2A1A1C10	G5	A2A1A1R23	G4
A2A1A1C11	G3	A2A1A1TP1	B8
A2A1A1C15	F2	A2A1A1VR1	G3
A2A1A1C16	F6	A2A1C5	B8
A2A1A1C17	G3	A2A1C7	C8
A2A1A1C18	F2	A2A1C9	F7
A2A1A1C19	G5	A2A1C14	F7
A2A1A1C20	G6		



Figures 5-32. Mode Gates A2A1A1, Component Location

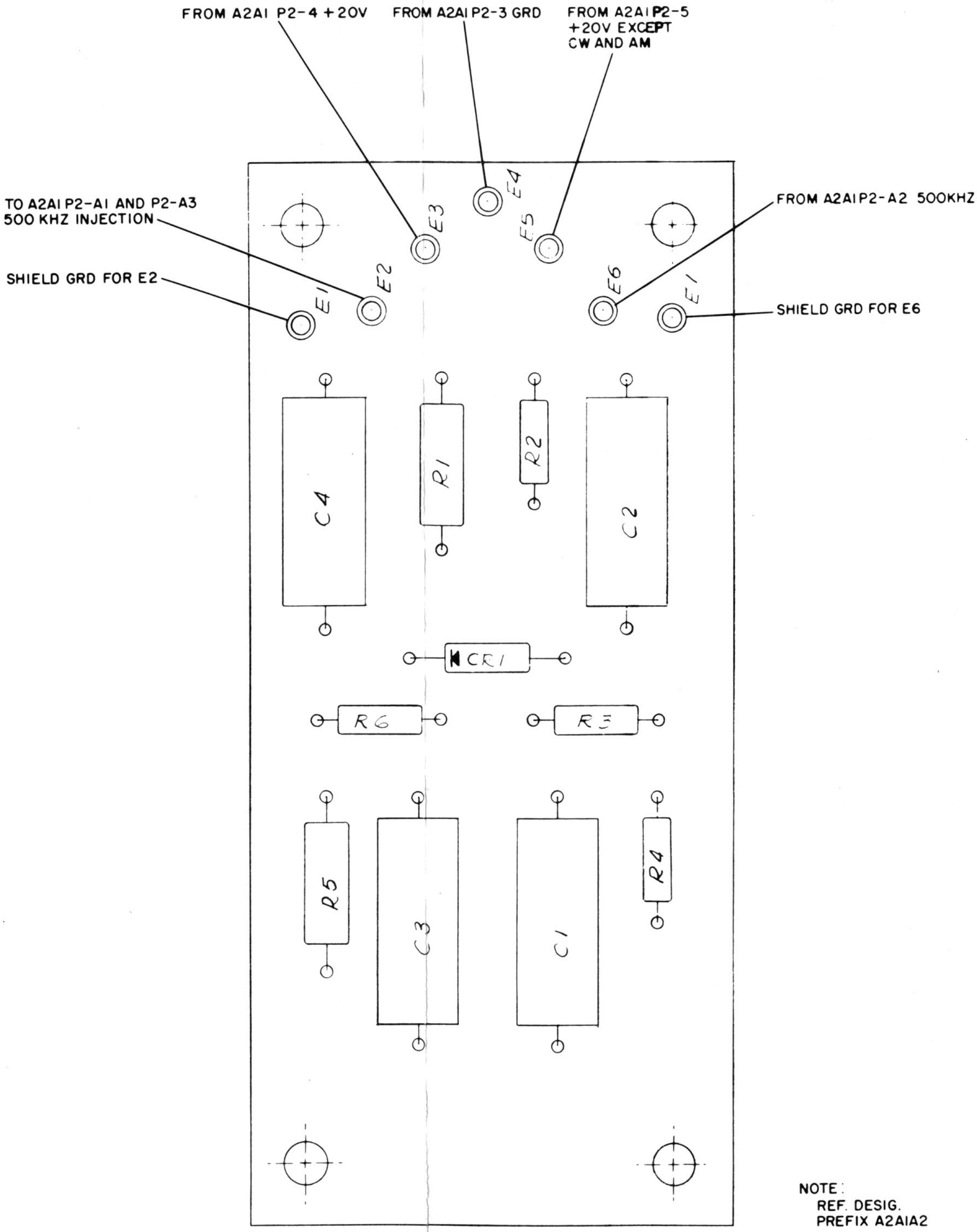
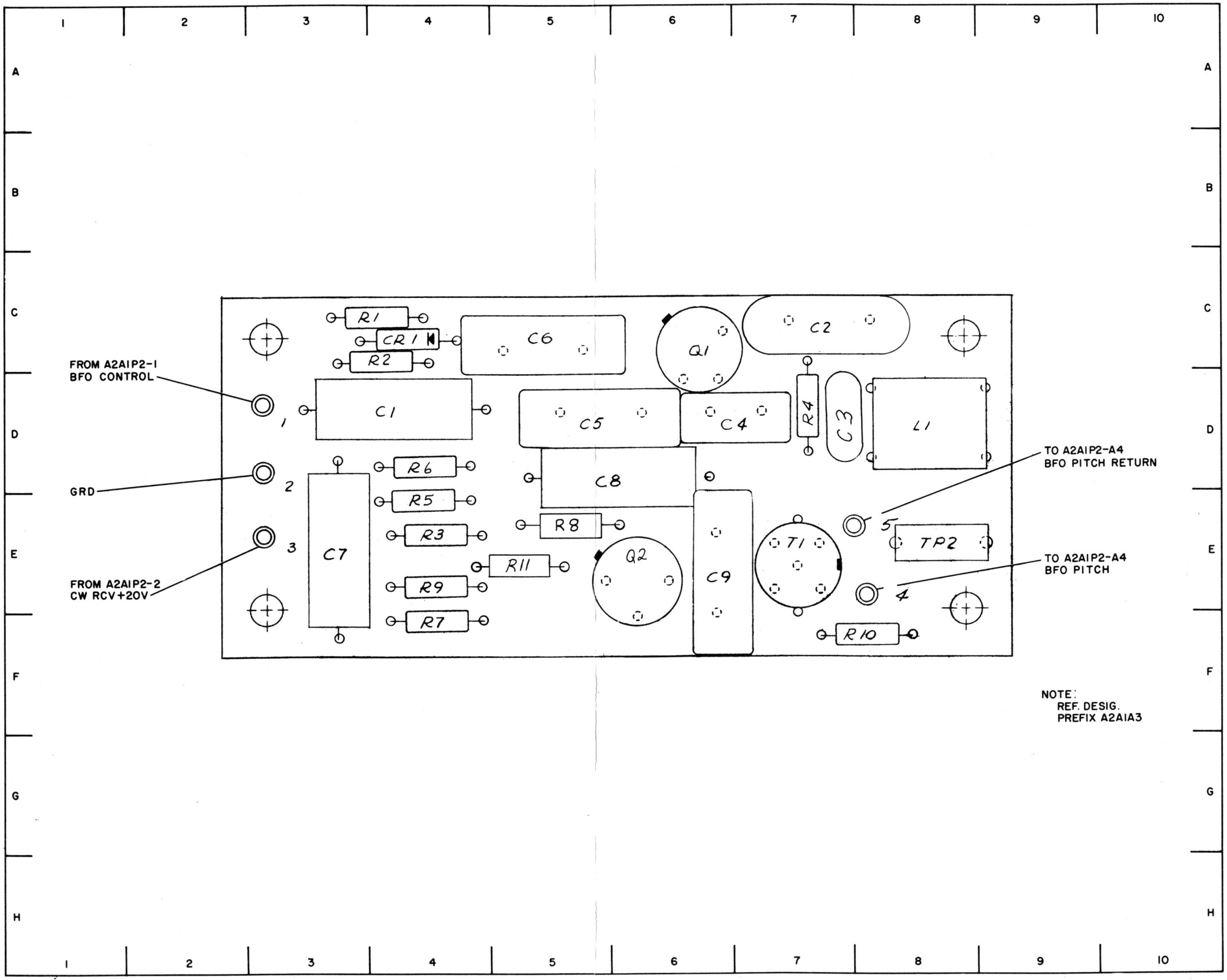


Figure 5-33. 500 KC Filter A2A1A2, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	D4
C2	C7
C3	E7
C4	D6
C5	D5
C6	C5
C7	E3
C8	D5
C9	E6
CR1	C4
CR2	E6
CR3	E6
E1	D3
E2	E3
E3	E3
E4	F8
E5	E8
L1	D8
Q1	C6
Q2	E5
R1	C4
R2	C4
R3	E4
R4	D7
R5	D4
R6	E4
R7	F4
R8	E5
R9	E4
R10	F8
T1	E7
TP2	E8



NOTE:
REF. DESIG.
PREFIX A2A1A3

Figure 5-34. BFO A2A1A3, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	B7	R3	C8
C2	C5	R4	B9
C3	E4	R5	C8
C4	F8	R6	D7
C5	E3	R7	D6
C6	C7	R8	D7
C7	F7	R9	D6
C8	G5	R10	C6
C9	F6	R11	C6
C10	F7	R12	C5
C11	F8	R13	E4
C12	C4	R14	D5
C13	C4	R15	F4
C14	D3	R16	F4
C15	C8	R17	D6
CR1	E9	R18	F7
CR2	D6	R19	E5
CR3	C6	R20	E8
CR4	F4	R21	F6
CR5	F5	R22	E8
E1	D9	R23	E8
E2	D8	R24	E7
E3	D6	R25	D7
E4	D6	R26	F8
E5	D4	R27	D5
E6	D4	R28	C3
E7	D4	R29	D3
E8	F9	R30	C3
E9	D8	R31	C5
E10	D5	R32	D6
E11	E9	R33	E6
E12	D5	R34	E6
Q1	C8	R35	D6
Q2	C6	R36	E6
Q3	C6	R37	E6
Q4	B5	R38	E5
Q5	D6	RT1	F3
Q6	F4	T1	F5
Q7	E7	T2	F6
Q8	F8	TP1	B8
Q9	C3	TP2	D8
Q10	E4		
Q11	E5		
Q12	E6		
Q13	F5		
R1	C9		
R2	E9		

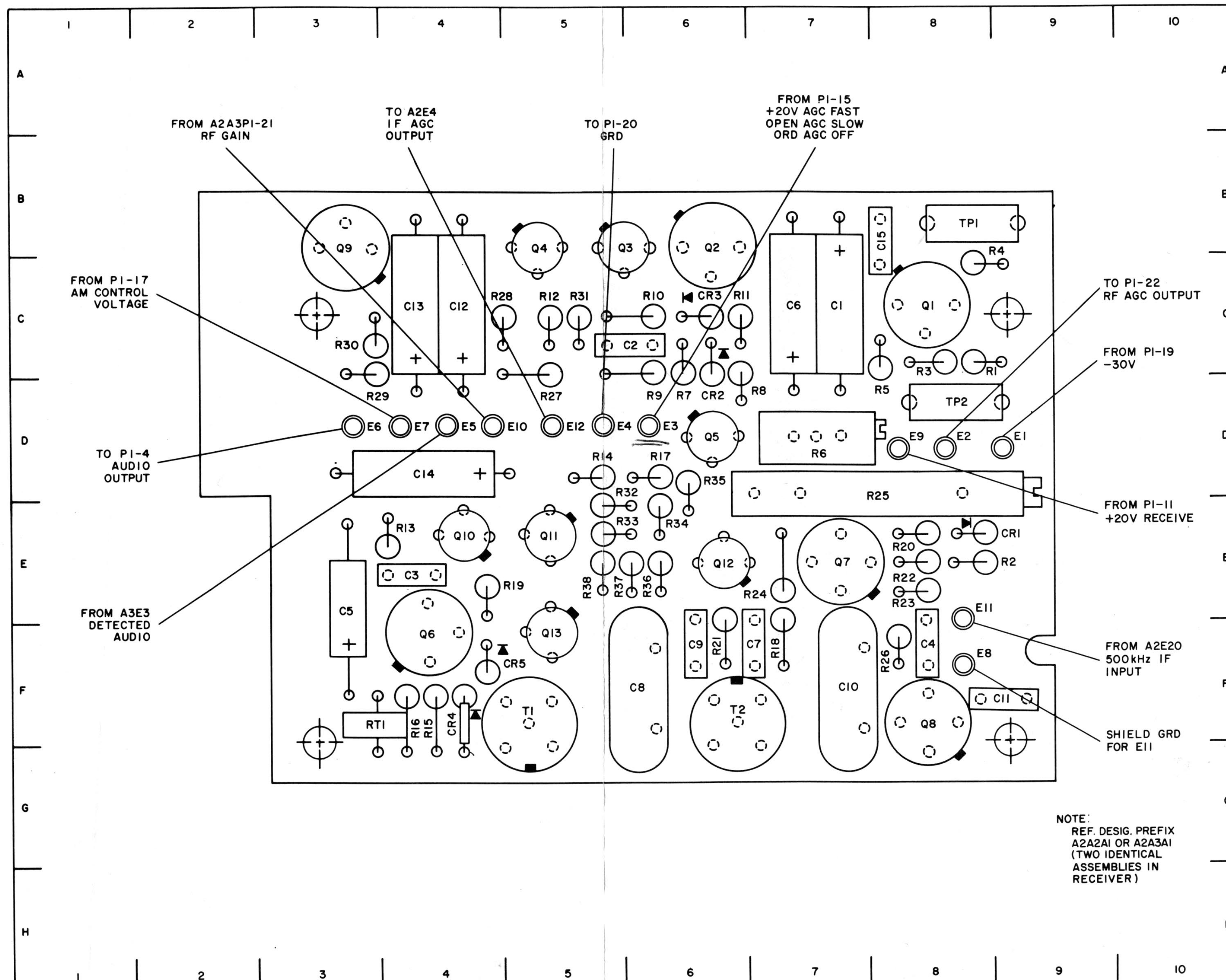


Figure 5-37. Step AGC and Audio Amplifier, A2A2A1 and A2A3A1, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
C1	A6	Q1	A6	T1	A5
C2	B5	Q2	B3	T2	C4
C3	A5	Q3	C6	T3	D3
C4	A4	Q4	C5	T4	E3
C5	B5	Q5	D4	T5	F6
C6	B3	Q6	E3		
C7	B5	Q7	D5		
C8	C4	Q8	E5		
C9	C5	Q9	E7		
C10	D3	Q10	F7		
C11	D4	R1	A6		
C12	D5	R2	A7		
C13	E3	R3	B5		
C14	E4	R5	A4		
C15	F5	R6	B5		
C16	G4	R7	A4		
C17	C7	R8	C6		
C18	D7	R9	B3		
C19	D7	R10	B5		
C20	E7	R11	C5		
C21	G5	R12	B5		
C22	E6	R13	C3		
C23	F7	R14	C5		
C24	G6	R15	D4		
C25	B7	R16	D5		
C26	E6	R17	D5		
CR1	A3	R18	E3		
E1	A8	R19	E5		
E2	A8	R20	E4		
E3	B8	R21	F4		
E4	B7	R22	F5		
E5	G5	R23	F3		
E6	E8	R24	F4		
E7	G7	R25	G4		
E8	C8	R26	C7		
E9	D8	R27	C7		
E10	C8	R28	C7		
E11	F8	R29	D6		
E12	G8	R30	D6		
E13	G7	R31	D6		
E14	G6	R32	D7		
E15	F4	R33	E6		
E16	G4	R34	E8		
E17	G3	R35	G6		
E18	G3	R36	G5		
E19	C3	R37	G6		
E20	C3	R38	C6		
L1	B7	R39	C5		

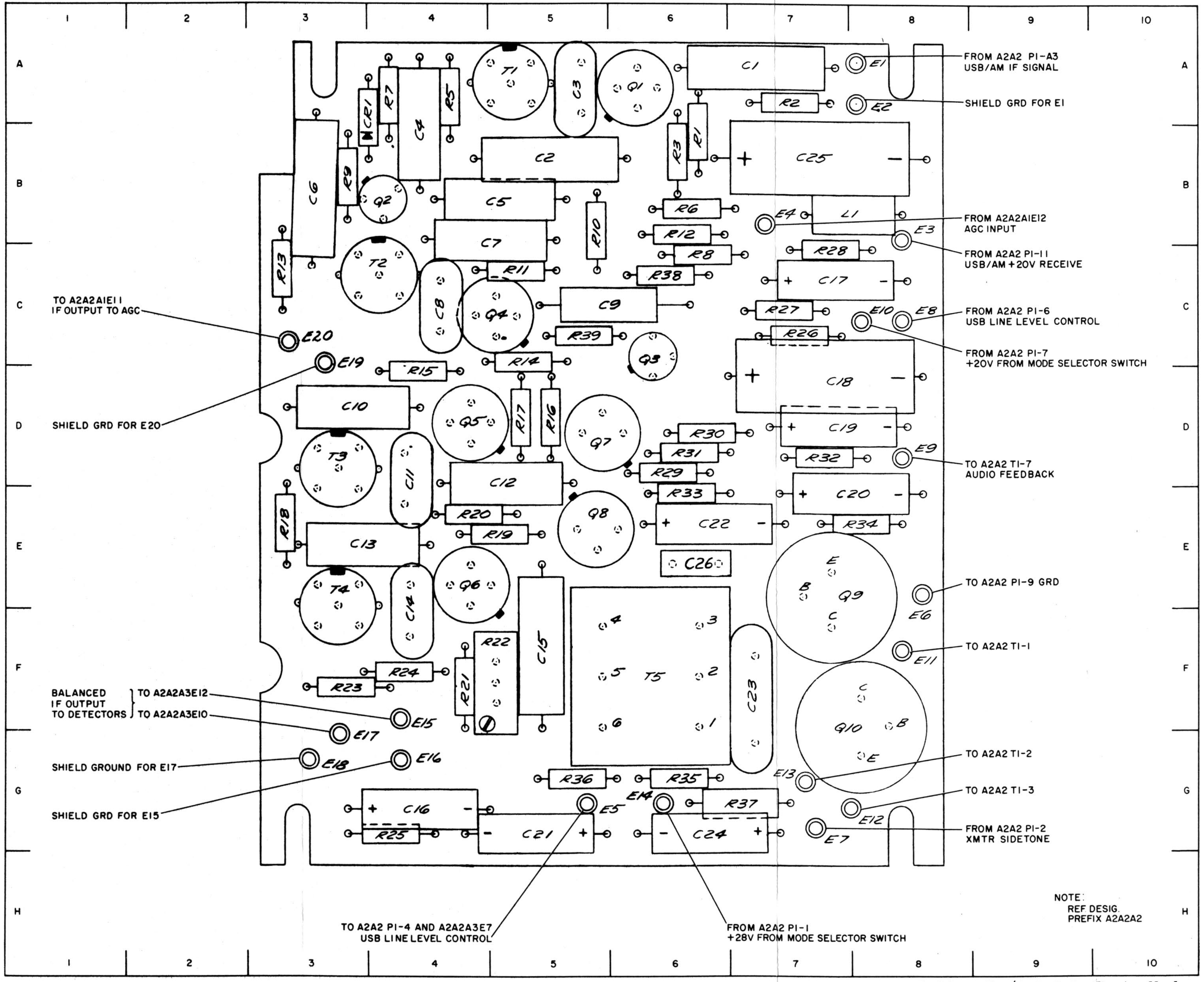


Figure 5-38. USB/AM Gain Controlled IF./Audio Amplifier A2A2A2, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
C1	A7	Q2	B4	T3	D3
C2	B5	Q3	D6	T4	F3
C3	A5	Q4	C5	T5	F5
C4	B4	Q5	D5		
C5	B5	Q6	E4		
C6	B3	Q7	D5		
C7	C4	Q8	E5		
C8	C4	Q9	F7		
C9	C5	Q10	F7		
C10	D3	R1	B6		
C11	E4	R2	A7		
C12	E4	R3	B6		
C13	E3	R5	A4		
C14	F4	R6	B6		
C15	F5	R7	A4		
C16	G4	R8	C6		
C17	C7	R9	B3		
C18	D7	R10	C5		
C19	D7	R11	C5		
C20	D7	R12	C6		
C21	G5	R13	C3		
C22	E6	R14	D5		
C23	G7	R15	D4		
C24	G6	R16	D5		
C25	B7	R17	D5		
C26	E6	R18	E3		
CR1	B3	R19	E4		
E1	A8	R20	E4		
E2	A8	R21	F4		
E3	B8	R22	F5		
E4	B7	R23	F3		
E5	G5	R24	F4		
E6	E8	R25	H4		
E7	G7	R26	C7		
E8	C8	R27	C7		
E9	D8	R28	B7		
E10	C8	R29	E6		
E11	F8	R30	D6		
E12	G7	R31	D6		
E13	G7	R32	D7		
E14	G6	R33	E6		
E15	G4	R34	E8		
E16	G4	R35	G6		
E17	G3	R36	G5		
E18	G3	R37	G7		
E19	D3	R38	C6		
E20	C3	R39	C5		
L1	B7	T1	A5		
Q1	A6	T2	C4		

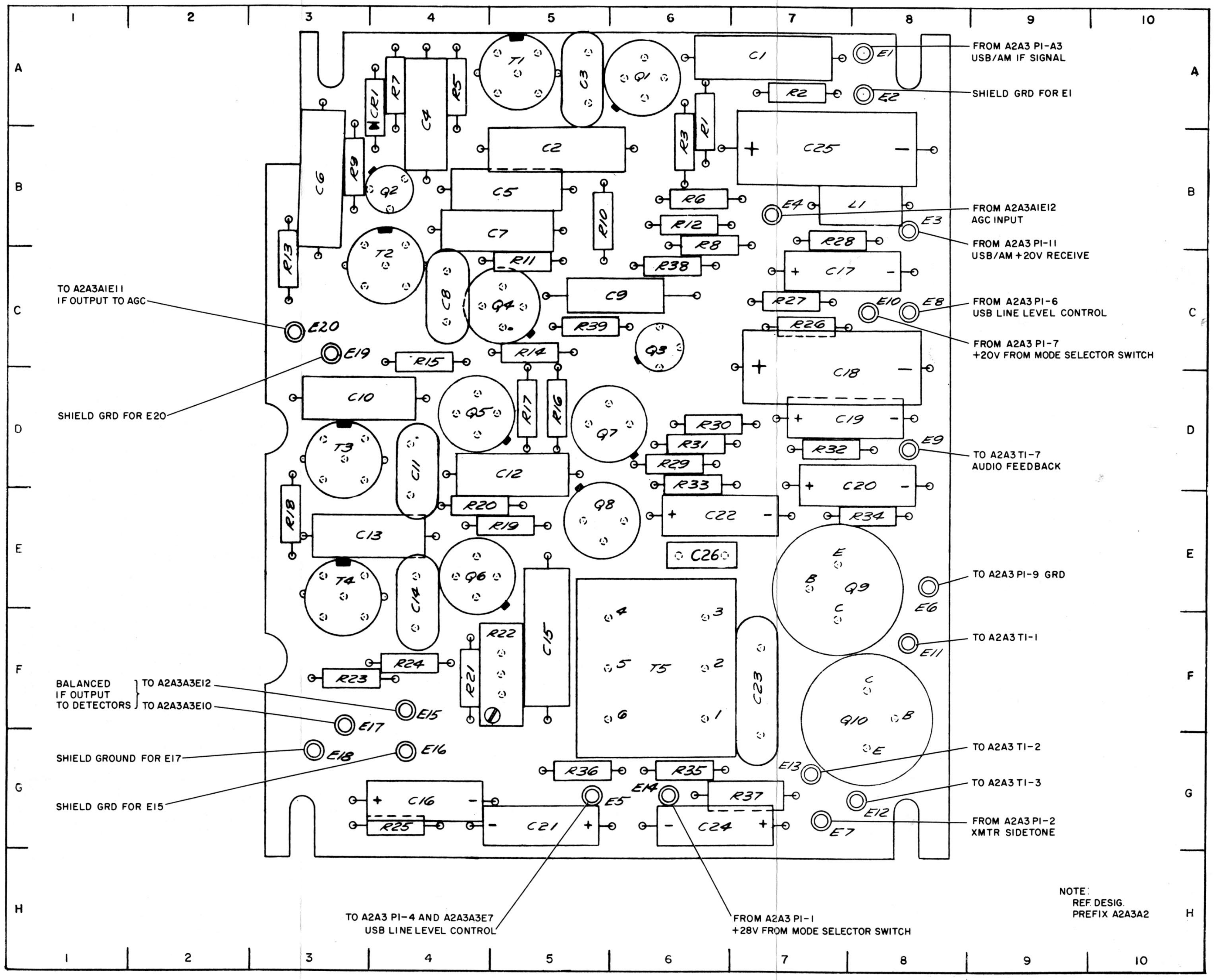


Figure 5-39. LSB Gain Controlled IF./Audio Amplifier A2A3A2, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	D3
C2	D3
C3	C4
C4	D4
C5	D6
C6	C6
C7	E6
CR1	C6
CR2	E6
E1	D6
E2	C5
E3	E6
E4	E2
E5	E3
E6	D6
E7	E4
E8	D3
E9	E6
E10	D5
E11	C5
E12	D3
E13	D3
L1	D6
Q1	C3
Q2	C4
Q3	C5
R1	E3
R2	C4
R3	E3
R4	C4
R5	C5
R6	E5
T1	D5
TP3	D3

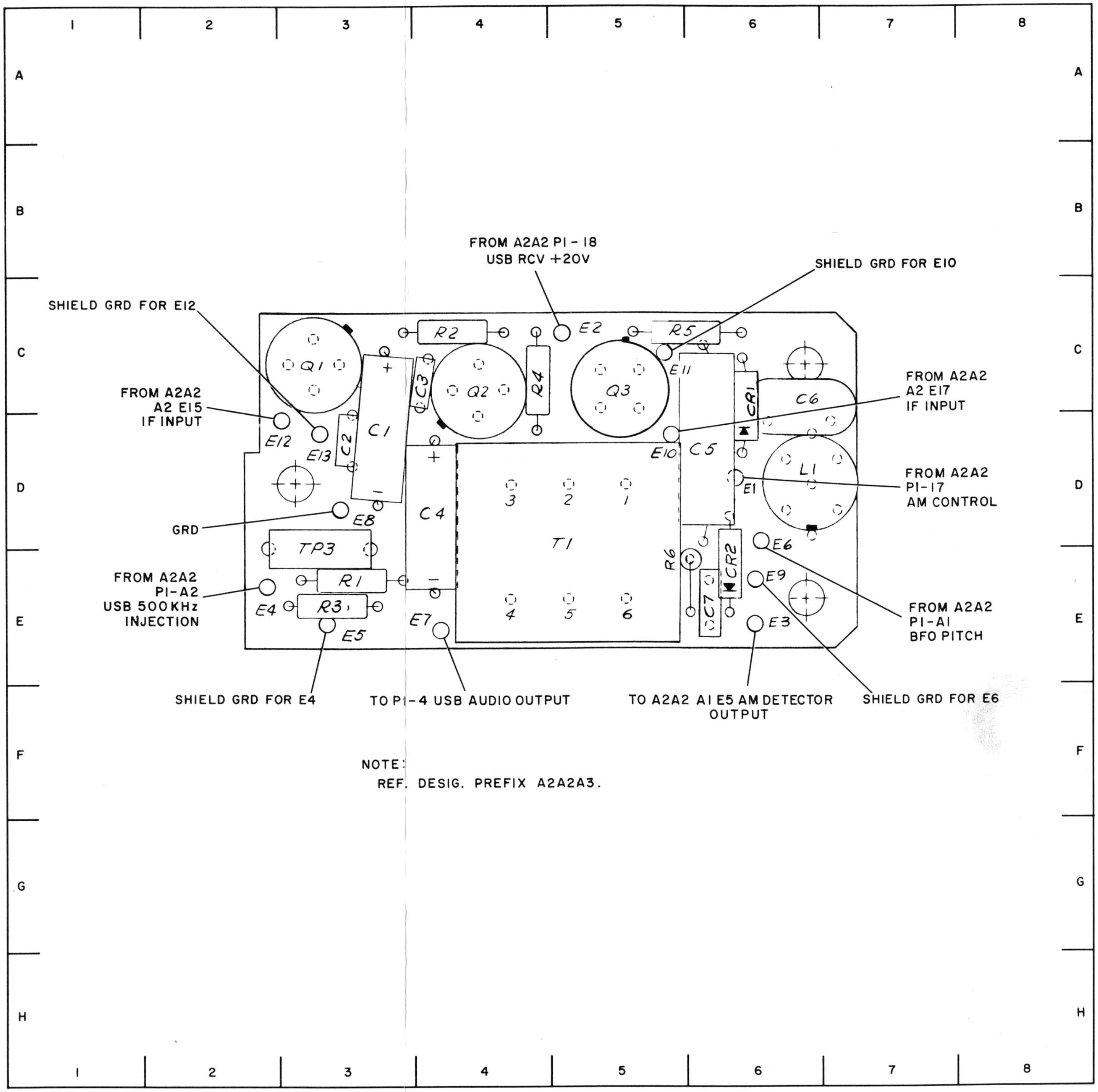


Figure 5-40. SSB/AM Detector A2A2A3, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	D3
C2	D3
C3	C4
C4	D4
C5	D6
C6	C6
C7	E6
CR1	C6
CR2	E6
E1	D6
E2	C5
E3	E6
E4	E2
E5	E3
E6	D6
E7	E4
E8	D3
E9	E6
E10	D5
E11	C5
E12	D3
E13	D3
L1	D6
Q1	C3
Q2	C4
Q3	C5
R1	E3
R2	C4
R3	E3
R4	C4
R5	C5
T1	D5
TP3	D3

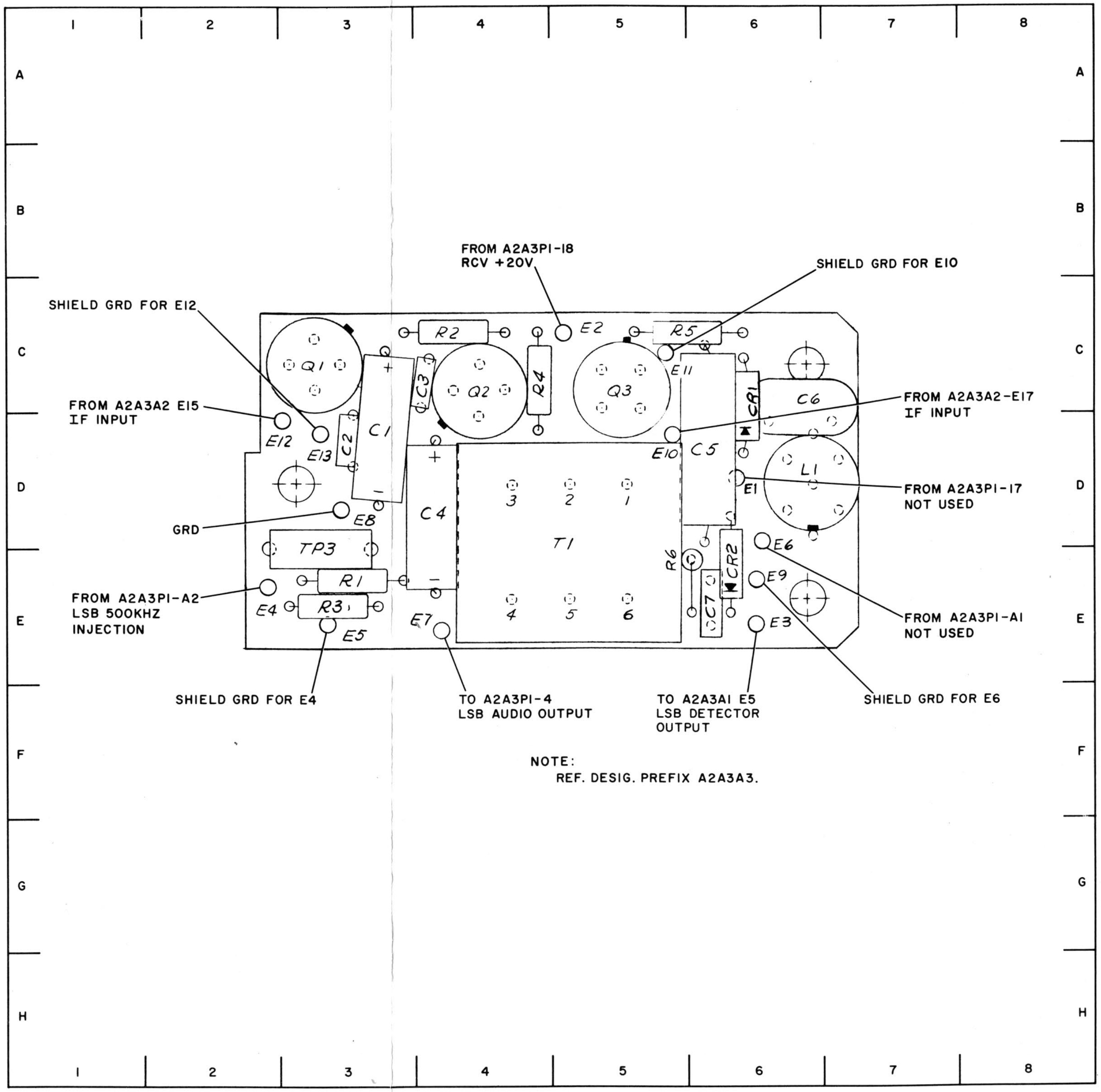


Figure 5-41. SSB/AM Detector A2A3A3, Component Location

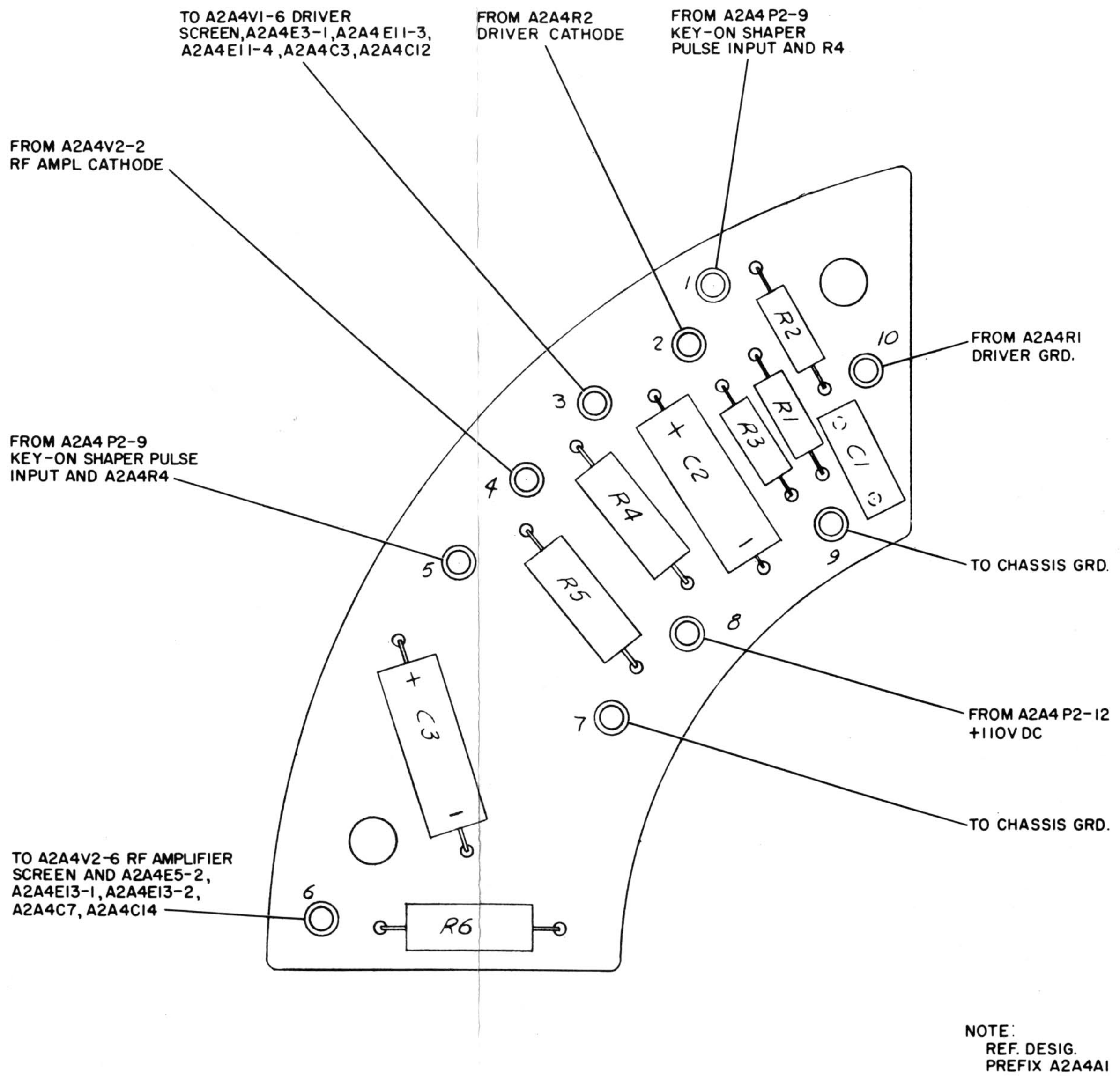
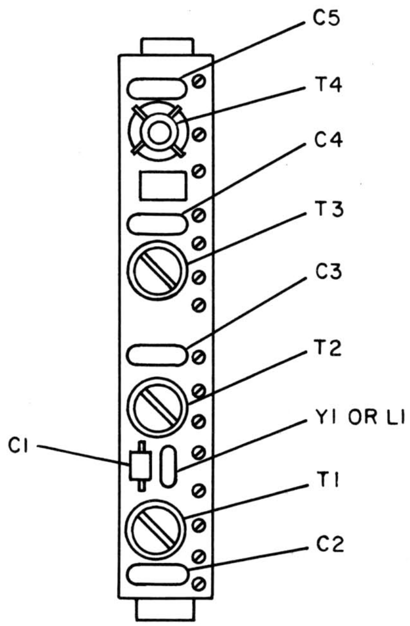


Figure 5-48. RF Amplifier Bias Circuit A2A4A1, Component Location

ASS'Y	C1	C2	C3	C4	C5	L1	T1	T2	T3	T4	Y1
A2	X	X	X	X	wire	none	dot left	dot top	dot top	dot top	none
A3	X	X	X	X	X	none	dot left	dot top	dot top	dot top	none
A4	X	X	X	X	X	none	dot rght	dot top	dot top	dot top	none
A5	X	X	X	X	X	none	dot top	dot top	dot top	dot top	none
A6	X	X	X	X	X	none	dot rght	dot top	dot rght	dot top	none
A7	X	X	X	X	X	none	dot rght	dot top	dot rght	dot top	none
A8	X	X	X	X	X	none	dot top	dot top	dot top	dot top	none
A9	X	X	X	X	X	none	dot left	dot top	dot left	dot top	X
A10	X	X	X	X	X	none	dot left	dot top	dot top	dot top	X
A11	X	X	X	X	X	none	dot left	dot top	dot top	dot top	none
A12	X	X	X	X	X	X	dot left	dot top	dot bttm	dot top	none
A13	X	X	X	X	X	X	dot left	dot top	dot bttm	dot top	none
A14	X	X	X	X	X	none	dot rght	dot top	dot top	dot top	none
A15	X	X	X	X	X	none	dot left	dot top	dot top	dot top	none
A16	X	X	X	X	X	none	dot left	dot top	dot top	dot top	none
A17	X	X	X	X	X	none	dot rght	dot top	dot left	dot top	none
A18	X	X	X	X	X	none	dot bttm	dot top	dot left	dot top	none
A19	X	X	X	X	X	none	dot top	dot top	dot left	dot top	X
A20	X	wire	wire	X	X	none	dot bttm	dot top	dot top	dot top	none
A21	X	X	X	X	X	none	dot top	dot top	dot top	dot top	none
A22	X	X	X	X	X	none	dot rght	dot top	dot bttm	dot top	none
A23	X	X	X	X	X	none	dot left	dot top	dot bttm	dot top	none
A24	X	X	X	X	X	none	dot bttm	dot top	dot top	dot top	none
A25	X	X	X	wire	X	none	dot bttm	dot top	dot top	dot top	none
A26	X	X	X	X	X	none	dot left	dot top	dot top	dot top	none
A27	X	X	X	X	X	none	dot bttm	dot top	dot top	dot top	none
A28	X	X	X	X	X	none	dot bttm	dot top	dot top	dot top	none
A29	X	X	X	X	X	none	dot top	dot top	dot top	dot top	none



NOTES:

1. There are twenty-eight megacycle assemblies designated A2 through A29 which are substantially the same. To locate components of any given assembly, select its designator from the table on the left, then locate the individual component on the illustration above.
2. The use of (X) in the table denotes the presence of a component whose part number and description may be found in the parts list.
3. The word 'wire' in the table denotes that the points across which a component appears in other assemblies are wired together in the particular assembly.
4. The word 'none' in the table denotes that the component which appears in other assemblies is not used, and that the points across which a component appears in other assemblies are left open.
5. The orientation of transformers is very important. Each transformer should be oriented with the dot in the position indicated in the table for each assembly. Left, right, top and bottom are referenced to the position shown in the illustration above.
6. Ref Desig Prefix A2A4A2 through A2A4A29.

Figure 5-49. Megacycle Assemblies A2A4A2 through A2A4A29, Component Location Diagram

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	D4
C2	E4
C3	D4
C4	D5
C5	D5
C6	G5
E1	D5
E2	D5
E3	D3
E4	E3
E5	G4
E6	G5
E9	F5
E10	G5
GRD	C3
K1	F4
L1	G4
Q1	C4
Q2	E5
R1	D3
R2	D4
R3	E4
R5	E4
R6	D5
R7	F4
R8	D5
R9	E5
R10	F5
TP1	C4
TP2	C4

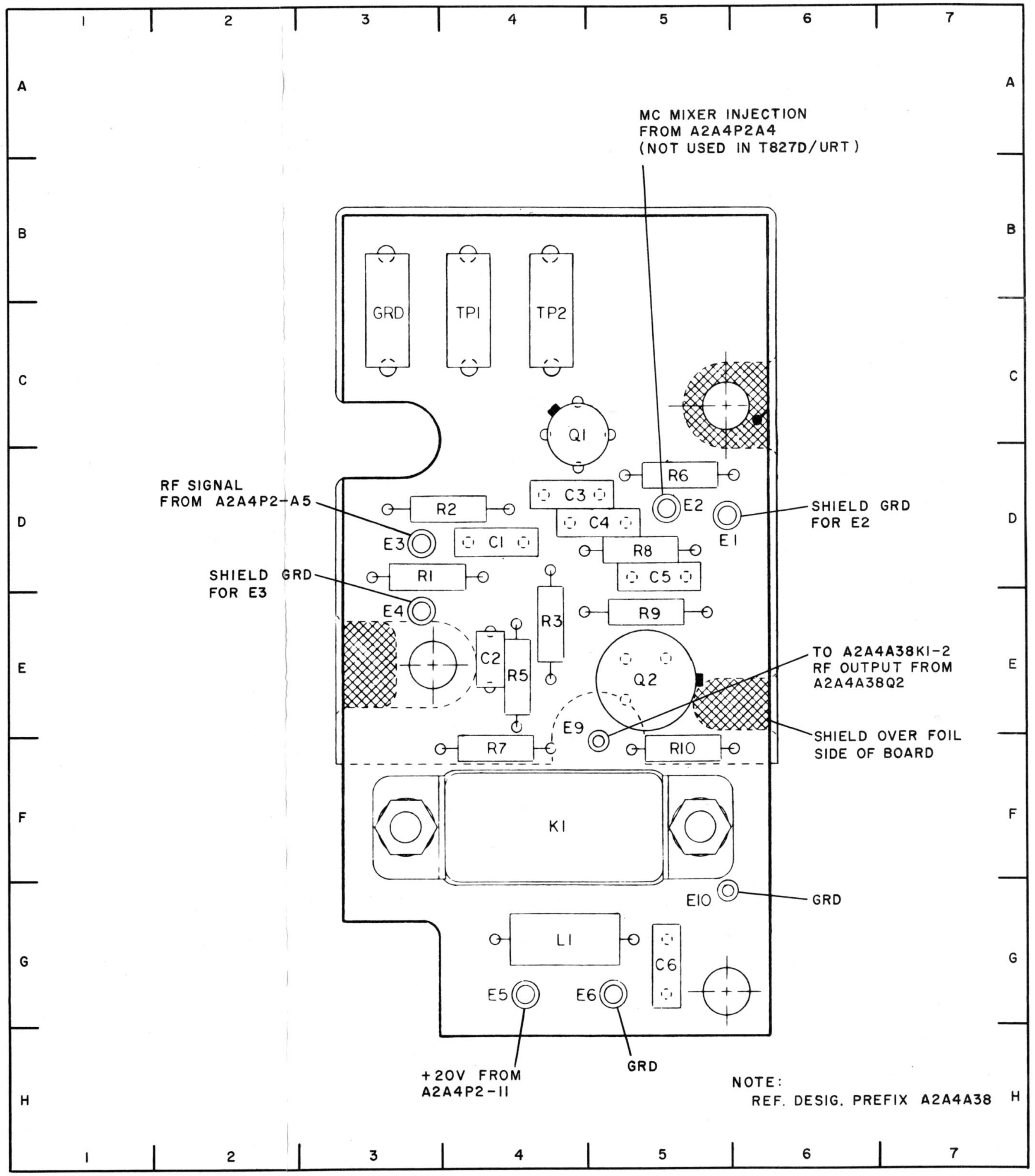


Figure 5-58. Transmit Mixer Assembly, A2A4A38, Component Location

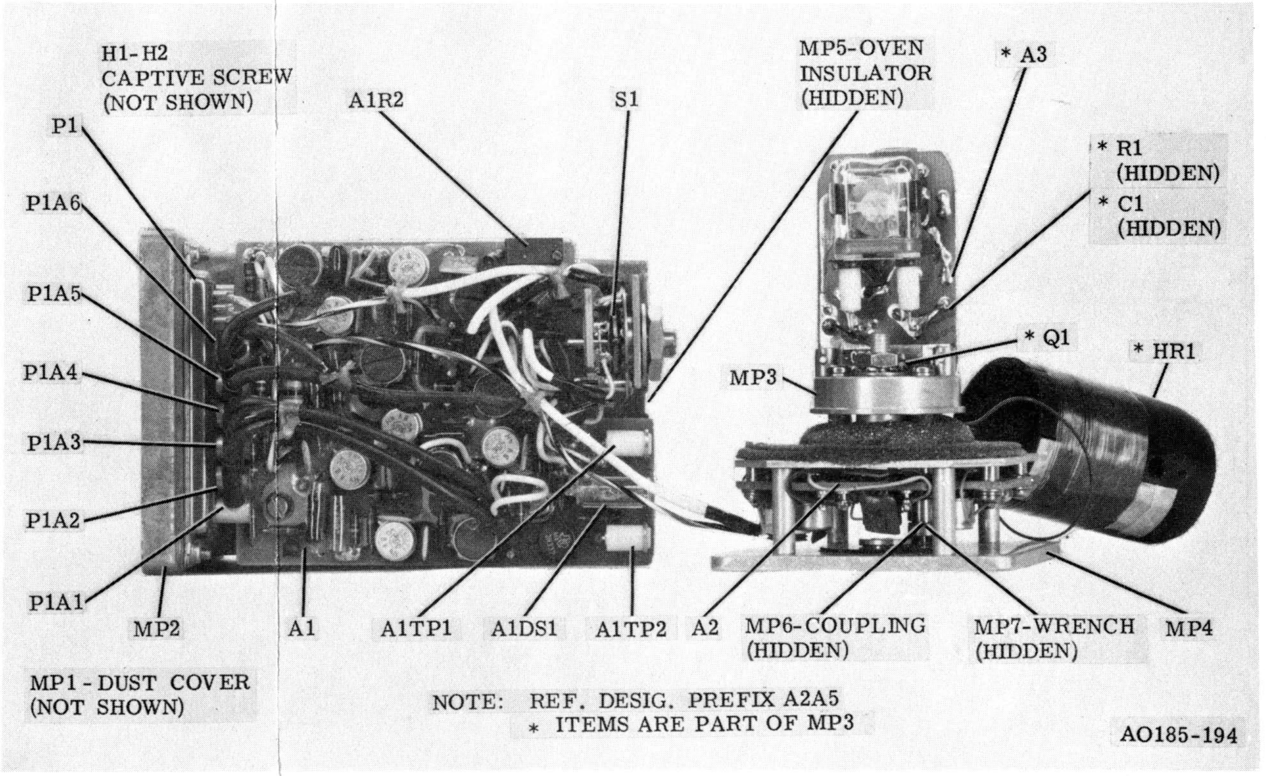


Figure 5-59. Frequency Standard Electronic Assembly A2A5, Front View (Oven Disassembled), Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
C1	D4	E26	D6	T2	D6
C2	B4	E27	E8	T3	D4
C3	B6	E28	F7	T4	B8
C4	D3	E30	G5	T5	E7
C5	E4	E31	G5	T6	E5
C6	C6	E32	F8	TP1	G5
C7	C6	L1	B6	TP2	G3
C8	C5	L2	E6		
C9	C4	Q1	D3		
C10	C3	Q2	D5		
C11	E5	Q3	C4		
C12	E5	Q4	B7		
C13	D4	Q5	D8		
C14	B5	Q6	F3		
C15	C8	Q7	E5		
C16	C8	R1	C4		
C17	C7	R2	C3		
C18	E8	R3	A6		
C19	C7	R4	D3		
C20	F6	R5	D7		
C21	E6	R6	D6		
C22	F6	R7	A5		
C23	F5	R8	A5		
C24	F5	R9	A6		
C25	E4	R10	B3		
C26	B4	R11	A4		
CR1	F6	R12	B6		
CR2	F5	R13	C3		
DS1	G4	R14	A7		
E1	F3	R15	A7		
E3	E4	R16	A8		
E4	E7	R17	E8		
E5	E7	R18	F7		
E6	B7	R19	C8		
E7	B5	R20	C7		
E8	C8	R21	D7		
E9	C8	R22	F8		
E10	F6	R23	D6		
E13	D6	R24	F7		
E14	E5	R25	F6		
E15	E7	R26	G4		
E17	D6	R27	F4		
E18	G5	R28	F5		
E19	E5	R29	E4		
E20	B4	R30	F4		
E22	B7	R31	D6		
E25	A8	T1	E3		

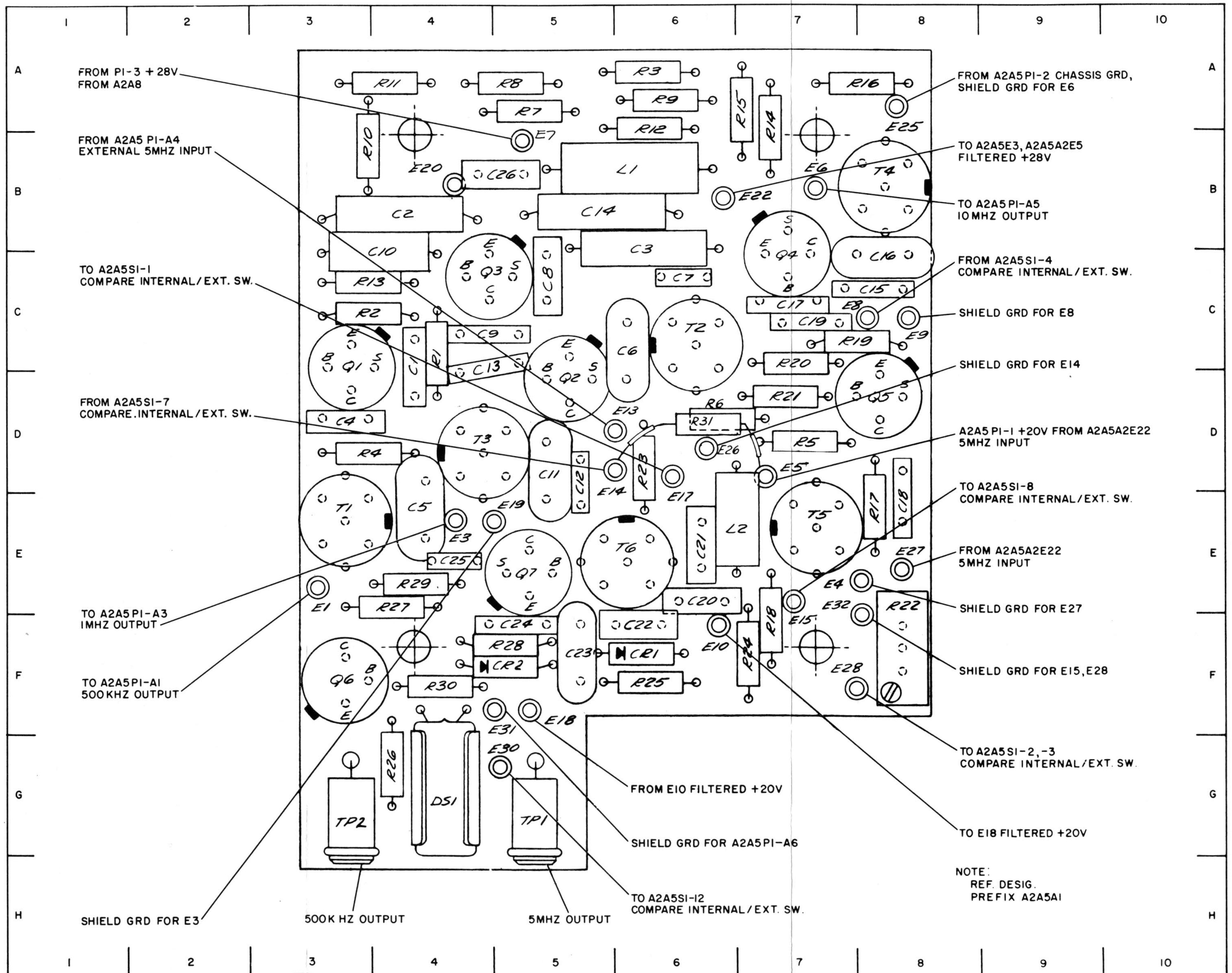


Figure 5-60. 5 MC Multiplier and Dividers A2A5A1, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	E3
C2	D3
C3	D3
C4	E5
C5	C5
C6	D6
C12	D5
C13	E6
C40	D7
CR1	E4
CR2	D6
CR3	F5
CR4	F5
E1	E3
E3	C5
E5	D6
E6	B5
E10	C6
E12	C6
E14	F4
E16	F5
E18	F6
E22	E6
E23	E7
Q1	E3
Q2	C4
Q3	D5
Q6	F6
R1	E4
R2	E3
R3	D3
R4	D4
R6	E5
R7	C5
R8	D5
R9	D6
R10	D6
R11	D5
R12	E5
R17	F5
R18	C5
RT2	C5
T1	C4
T3	E6

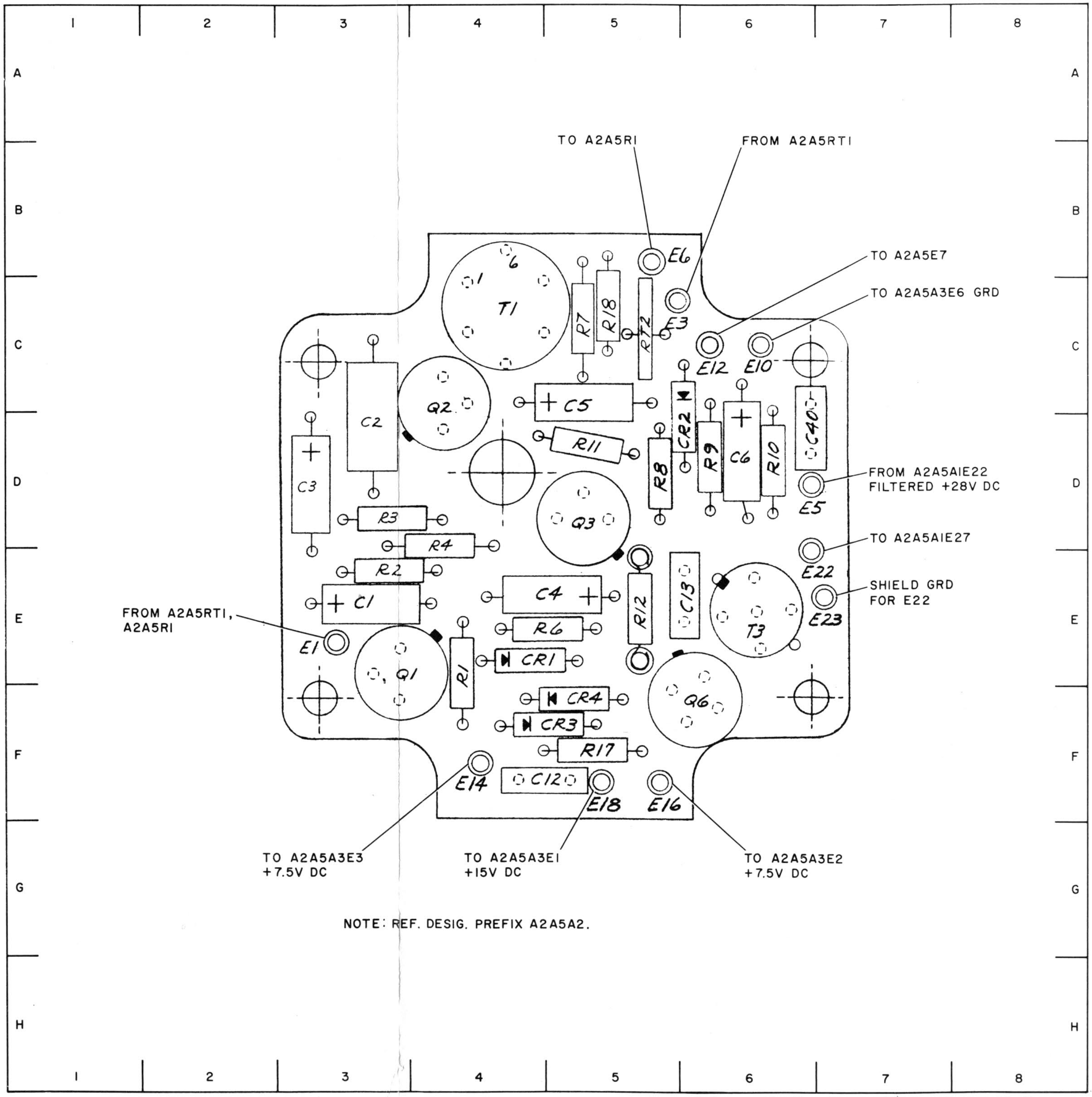


Figure 5-61. Oven Control and Buffer Amplifier A2A5A2, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC
C18	F3
C19	D4
C20	C4
C21	C5
C23	D3
C24	D6
C25	F5
C26	E7
C27	E7
C28	F5
CR1	D4
CR2	D4
CR3	C4
E1	F7
E2	F6
E3	F4
E4	F4
E5	F4
E6	B4
E8	C3
E9	C3
E10	C7
L1	F3
L2	D5
L3	C6
Q1	D6
Q2	E7
Q3	E6
Q4	E5
R1	C4
R2	C5
R3	E4
R4	E4
R5	E4
R6	D3
R7	C5
R8	C6
R9	C6
R10	C7
R11	E6
R12	E6
R13	D7
R14	E7
R15	F7
R16	F6
R17	F5
R18	F6
RT1	E3

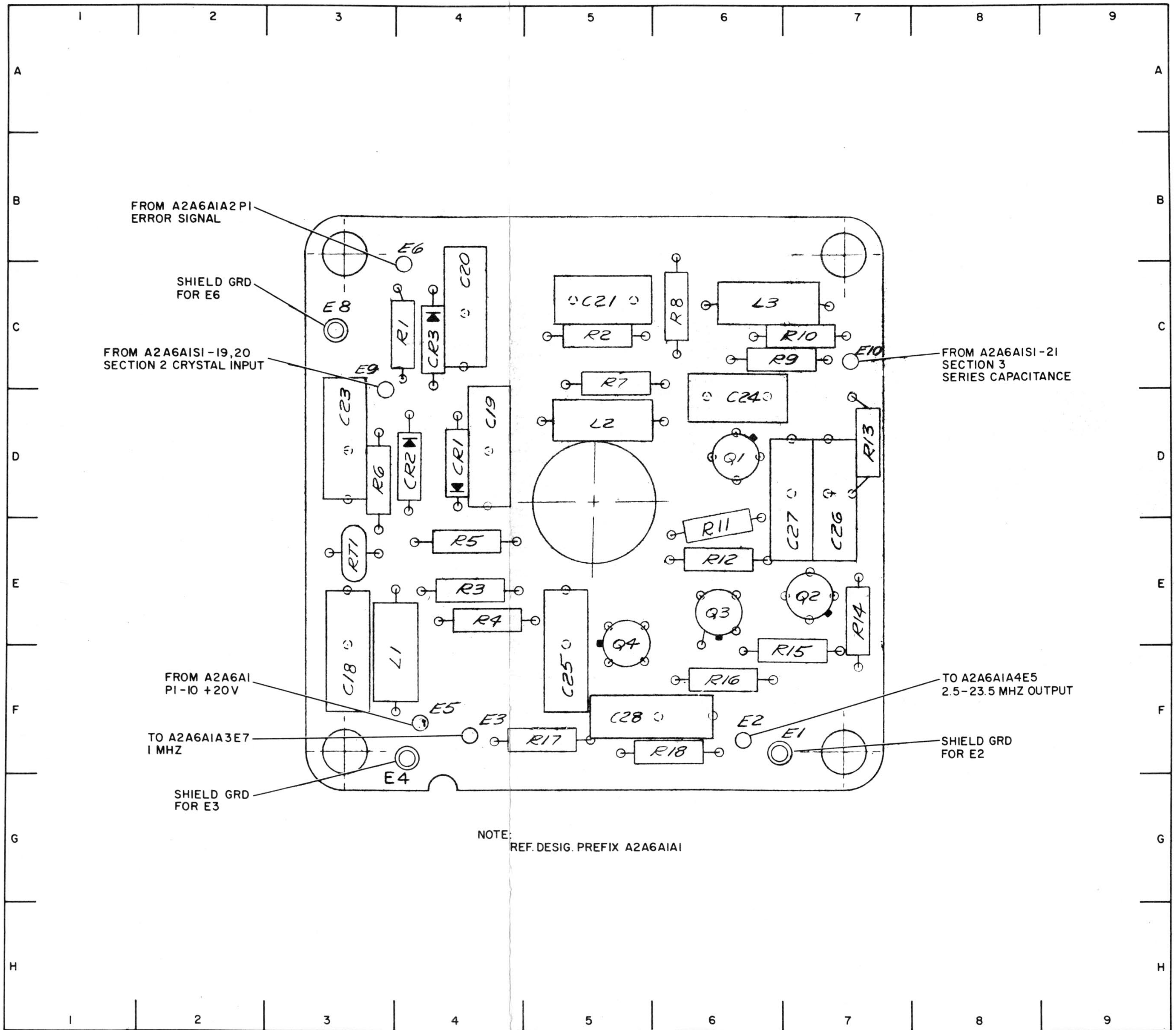


Figure 5-66. Mc Oscillator A2A6A1A1A1, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	C3	RT1	D6
C2	C3	T1	C4
C3	C4	T2	F4
C4	F4	TP1	D4
C5	E4	TP2	D6
C6	F3	TP3	C6
C7	E5		
C8	D5		
C9	C5		
C10	F5		
C11	F6		
C12	D4		
C13	F5		
C14	D3		
CR1	E5		
E2	C7		
E3	E3		
E4	D3		
J1	D6		
J2	F6		
L1	E5		
L2	D5		
L3	D5		
L4	C5		
P2	G6		
Q1	C4		
Q2	E3		
Q3	E6		
R1	D4		
R2	C3		
R3	D3		
R4	C3		
R5	B4		
R6	D4		
R7	E4		
R8	E4		
R9	E4		
R10	E4		
R11	F3		
R12	F5		
R13	C5		
R14	D6		
R15	F6		
R16	E6		
R17	E6		
R18	D6		
R19	D7		
R20	D6		
R21	C6		

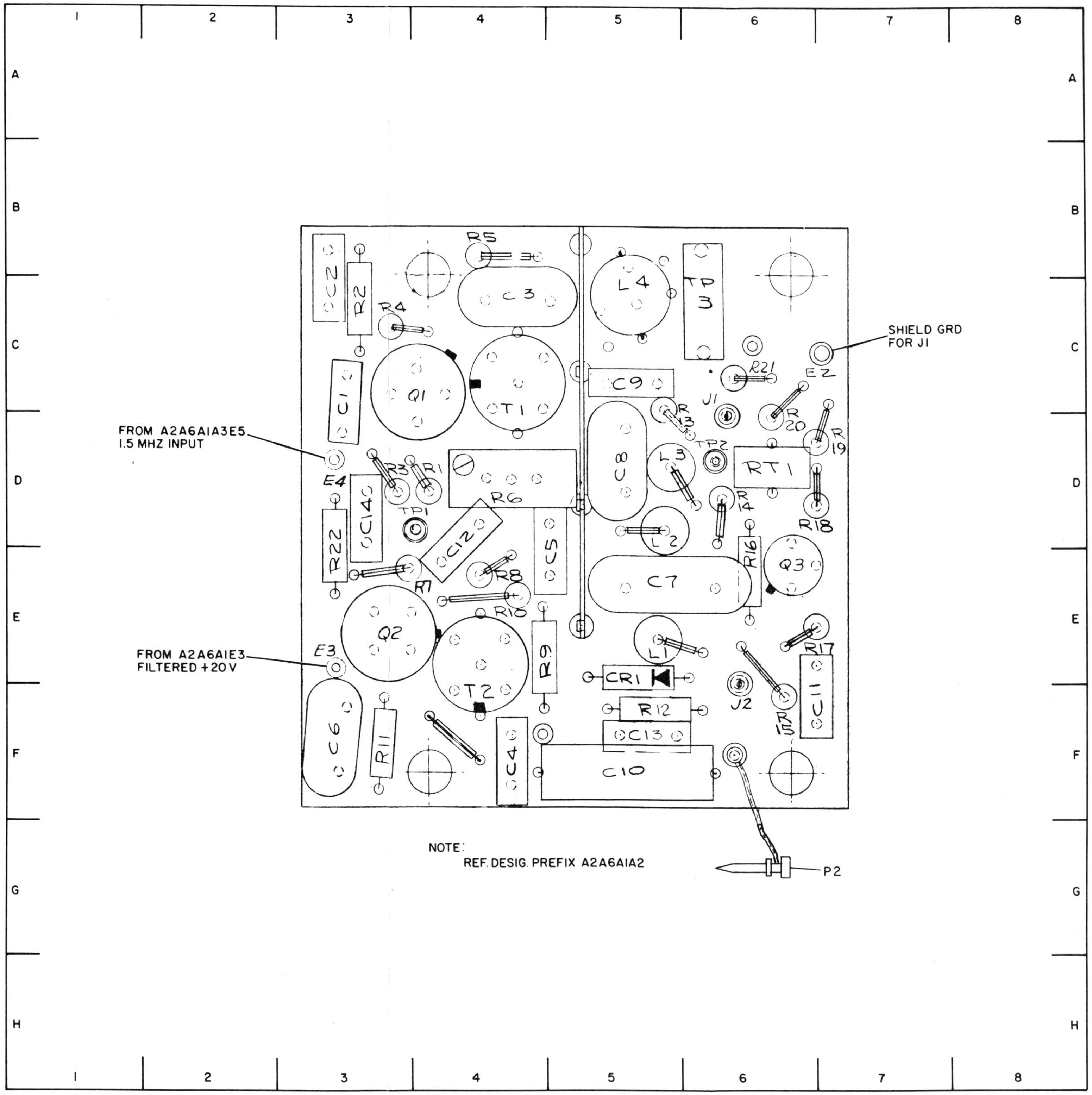


Figure 5-67. IF./DC Amplifier A2A6A1A2, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	B3	R8	D5
C2	C3	R9	B5
C3	D3	R10	B5
C4	C4	R11	C5
C5	D4	R12	C6
C6	D4	R13	C6
C7	C5	R14	C6
C8	C5	R15	D6
C9	E6	R16	C6
C10	B7	R17	D6
C11	E6	R18	E6
C12	F6	R19	E6
C13	F7	R20	E6
C14	F4	R21	D5
C15	E3	R22	D6
C16	E4	R23	F5
C17	E3	R24	F5
C18	F3	R25	F6
C19	F3	R26	F3
C20	F4	R27	F3
CR1	B3	R28	F3
CR2	C4	R29	F4
CR3	D3	R30	G5
CR4	C6	R31	F6
CR5	D6	R32	E3
E1	B3	R33	C2
E2	B3	TP1	E4
E3	B7	T1	E3
E5	E3		
E6	F6		
E7	F3		
E9	F3		
L1	F7		
L2	C3		
L3	D5		
L4	E4		
Q1	C4		
Q2	C5		
Q3	C6		
Q4	E5		
Q5	F3		
Q6	F6		
R1	B6		
R2	C3		
R3	B4		
R4	C4		
R5	D4		
R6	C4		
R7	C6		

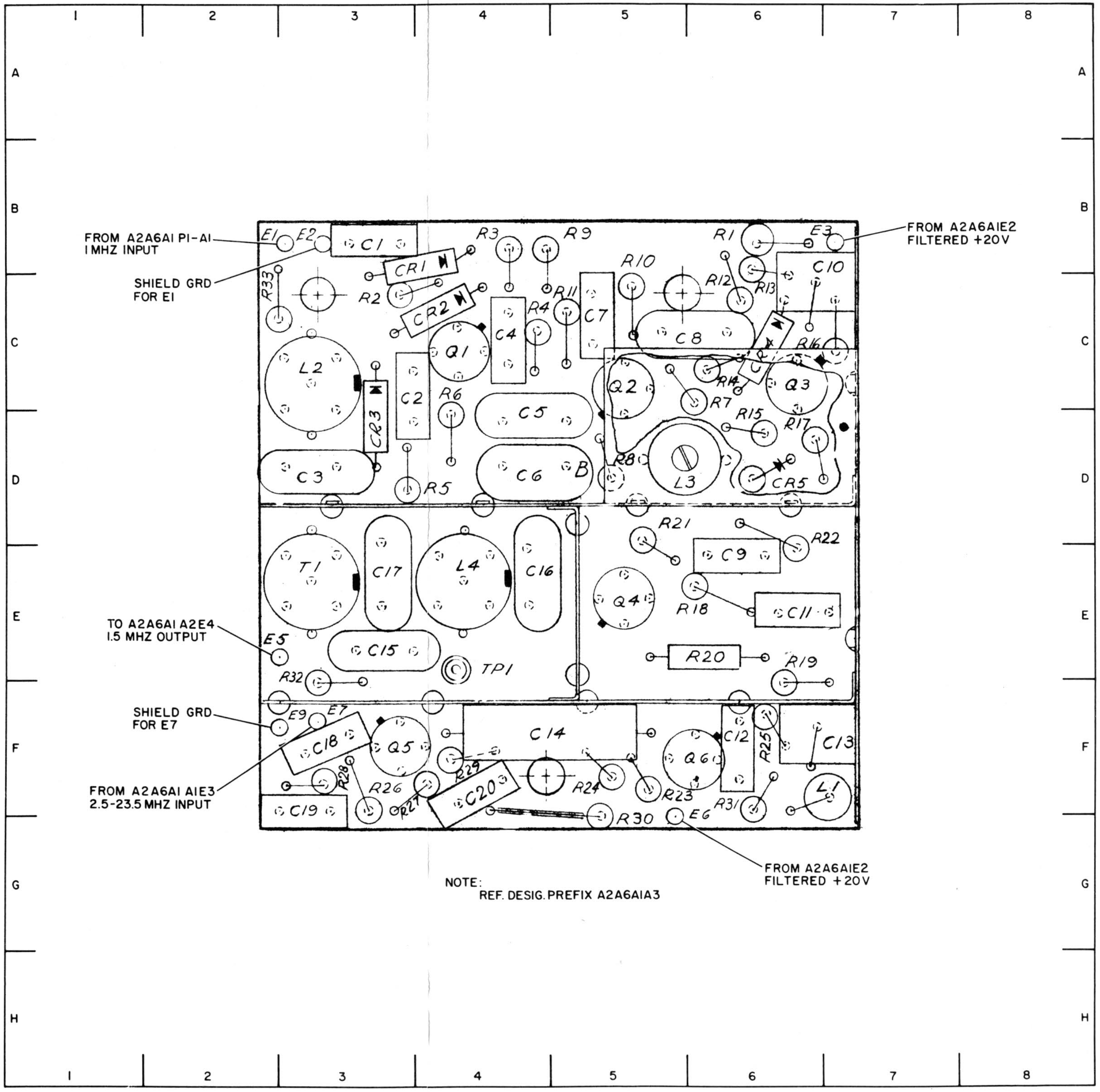


Figure 5-68. Spectrum Generator/Mixer, A2A6A1A3, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	C6
C2	C6
C3	C5
C4	D6
C5	D5
C6	D5
C7	E6
C8	E5
C9	E4
C10	F3
CR1	E4
E1	E3
E2	E3
E3	E6
E4	E6
E5	C6
E6	C6
Q1	C5
Q2	D4
Q3	E3
Q4	F4
R1	C5
R2	C6
R3	C5
R4	D6
R5	C6
R6	D6
R7	D5
R8	D5
R9	D5
R10	D5
R11	F5
R12	E5
R13	E6
R14	E6
R15	E4
R16	E4
R17	E3
R18	F3
R19	E3
TP1	E6

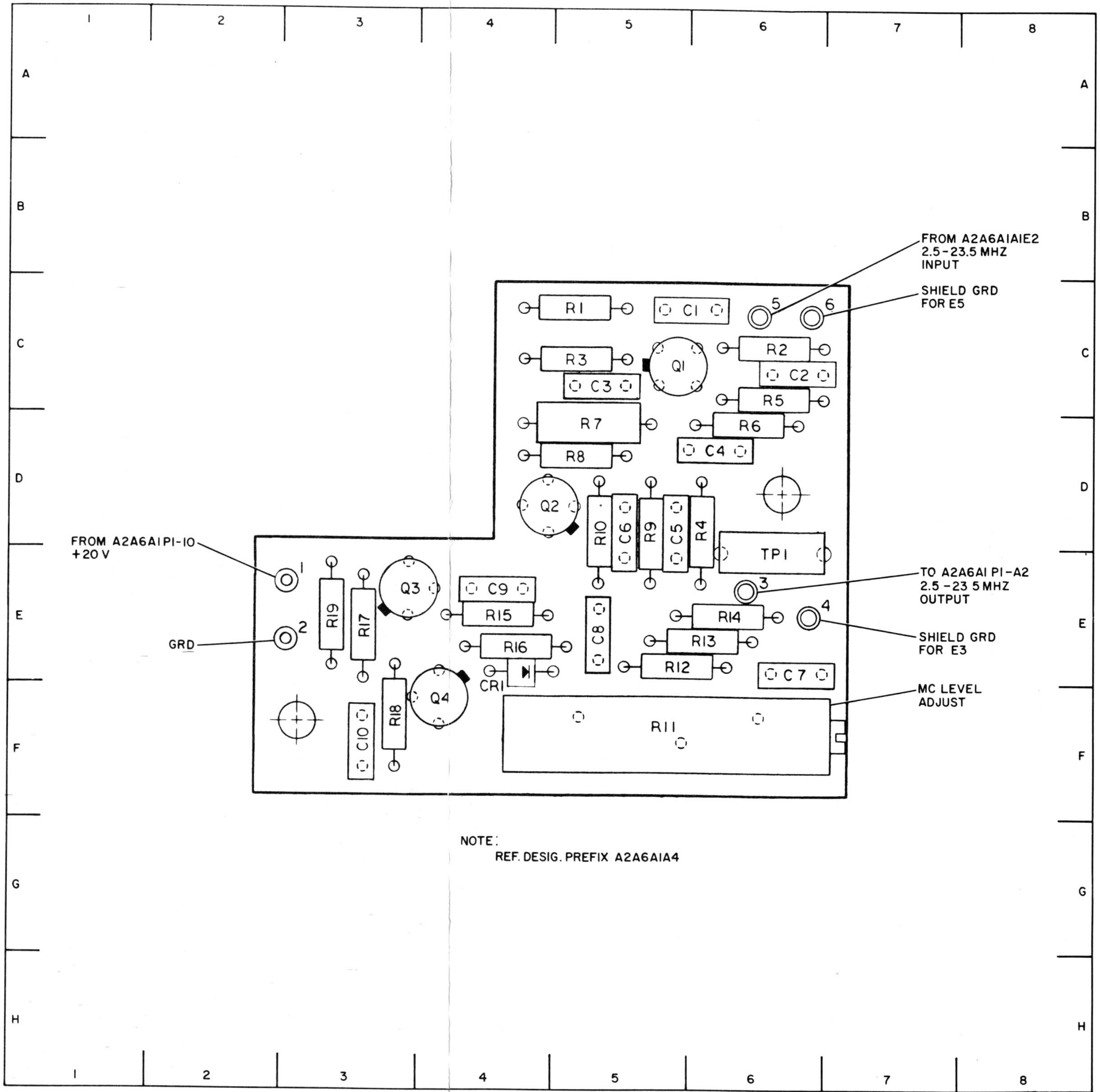


Figure 5-69. MC Level Control, A2A6A1A4, Component Location

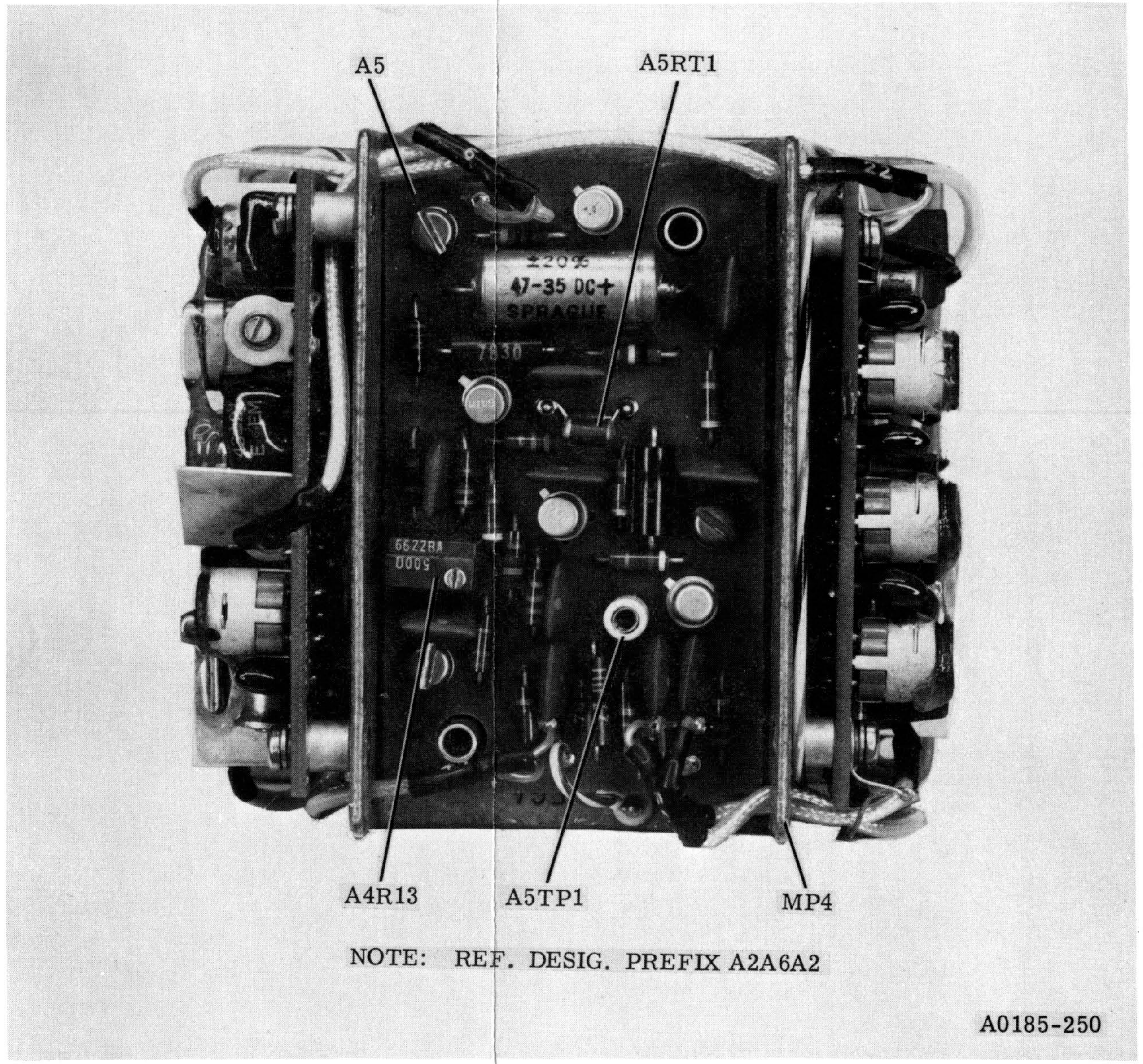


Figure 5-74. 100 KC Synthesizer Electronic Subassembly A2A6A2, Top View, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	E3
C2	E3
C3	F5
C4	E3
C5	E4
C6	E5
C7	D4
C8	D3
C9	D5
C10	D3
C11	C5
CR1	F4
CR2	F5
L1	D4
Q1	D3
R1	F3
R2	E3
R3	E4
R4	F5
R5	E5
R6	E5
R7	E3
R8	E4
R9	D3
R10	D5
R11	E4
RT1	F4
T1	D4
1	D3
2	F3
3	D5
4	D5
5	C5
6	C5

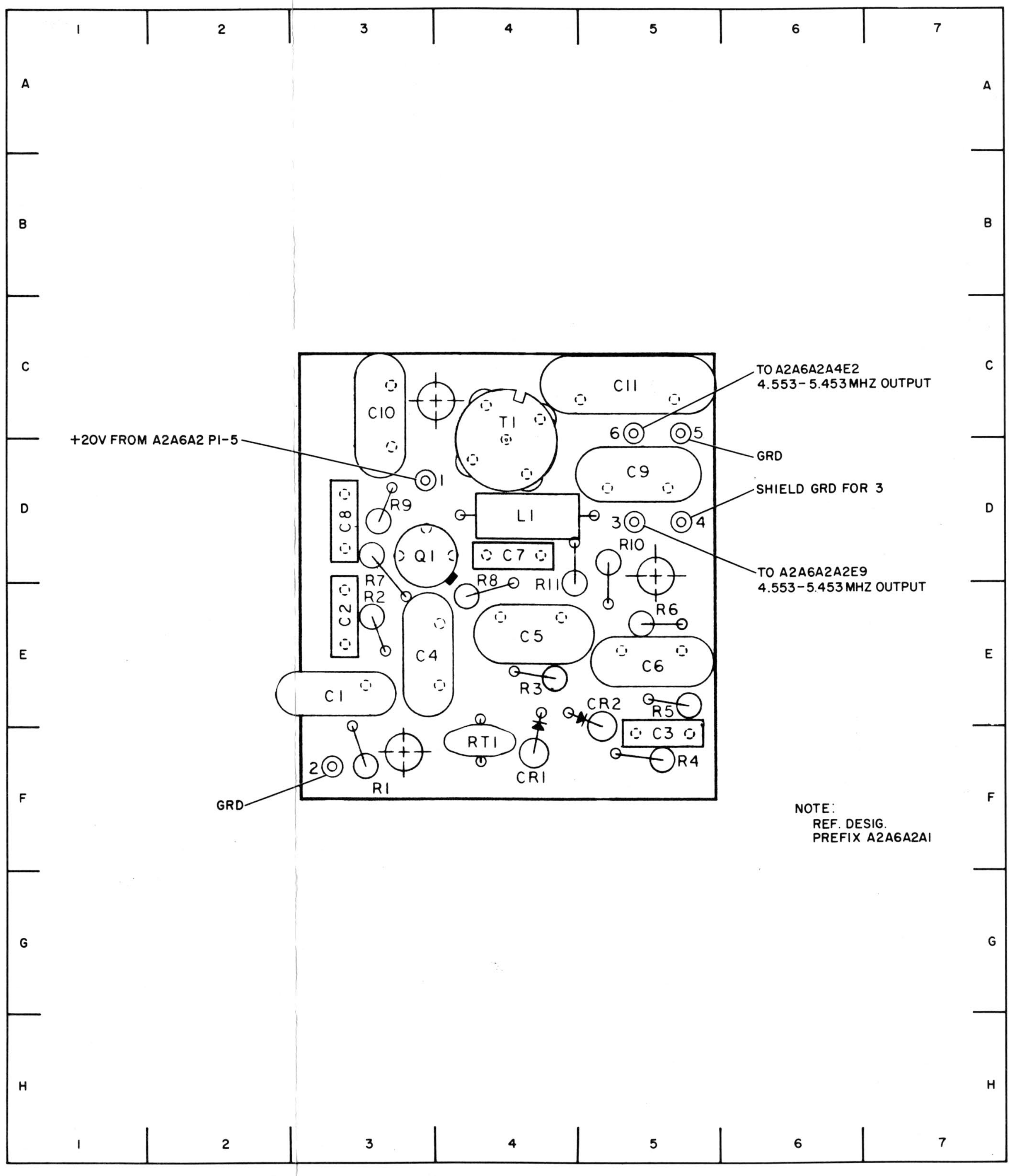


Figure 5-75. 4.553-5.453 MC Oscillator, A2A6A2A1, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	D3
C2	D3
C3	C4
C4	C4
C5	D4
C6	C5
C7	B5
C8	G3
C9	F3
E1	D3
E2	E3
E3	F5
E4	F5
E5	E3
E6	D3
E7	C5
E8	C5
E9	B5
FL1	E3
Q1	D4
Q2	C4
R1	E3
R2	D4
R3	C5
R4	C4
R5	C4
R6	C5
R7	C4
R8	D3
R9	C3
T1	C3
T2	D5
T3	G4
TP1	F5

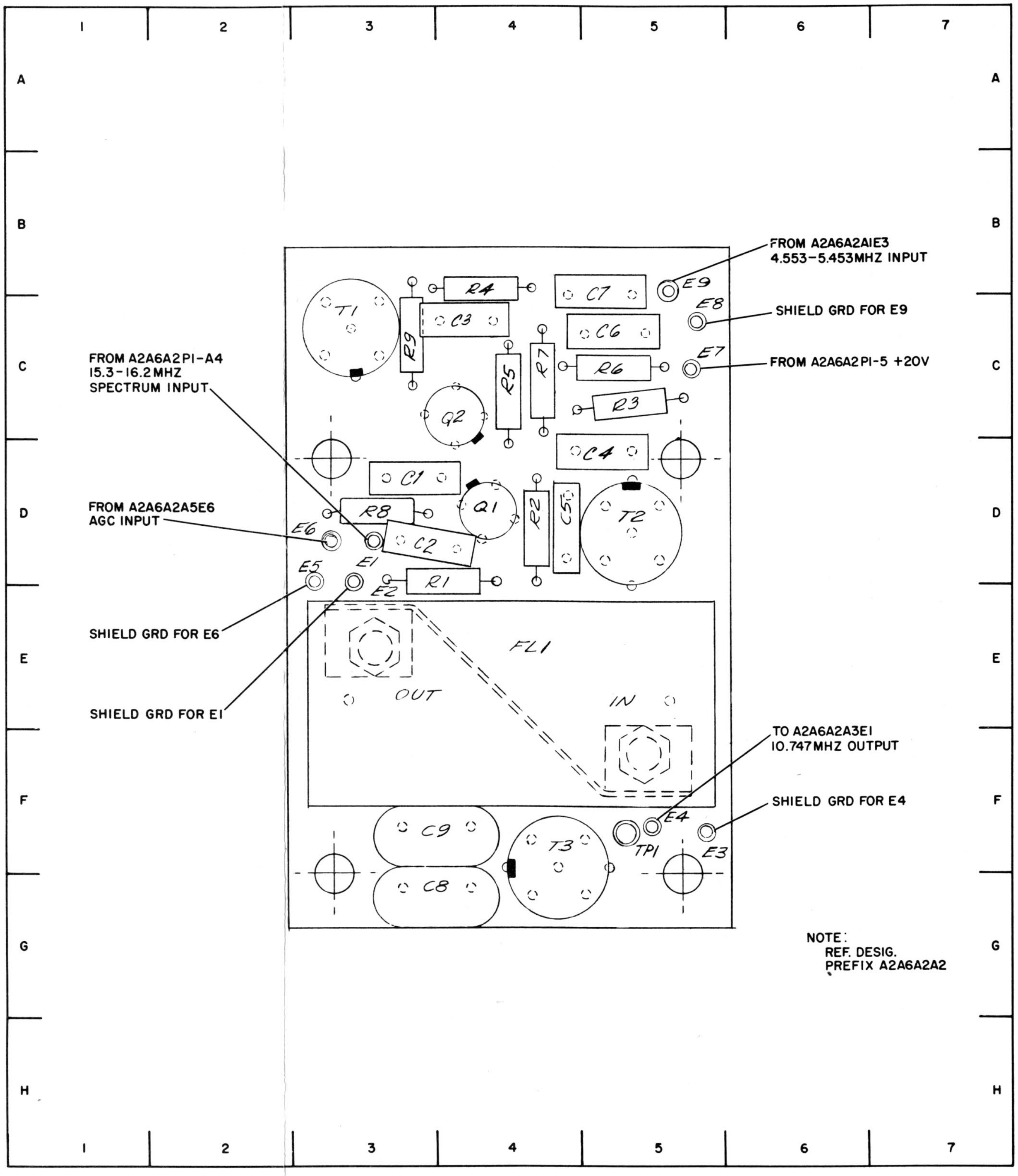


Figure 5-76. 10.724 MC Mixer A2A6A2A2, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	D3	R14	D6
C2	C7	R15	E7
C3	C6	R16	B3
C4	D3	Q1	D3
C5	C3	Q2	E5
C6	C3	T1	D3
C7	D3	T2	F4
C8	E3	T3	F5
C9	F3	T4	E7
C10	E4	TP1	B3
C11	E7	TP2	F4
C12	D4	TP3	F6
C13	D5	TP4	E6
C14	C5	Y1	E4
C15	C5	Y2	F6
C16	D5		
C17	E7		
C18	G5		
C19	F6		
C20	F7		
CR1	D5		
CR2	C5		
CR3	C5		
E1	D3		
E2	E3		
E3	B7		
E4	D7		
E5	E6		
E6	E7		
E7	C6		
E8	C6		
E9	D7		
E10	G4		
E11	F4		
E12	B3		
E13	A3		
R1	B3		
R2	C3		
R3	C4		
R4	C3		
R5	F4		
R6	E5		
R7	E5		
R8	E5		
R9	E6		
R10	D5		
R11	C4		
R12	C4		
R13	D5		

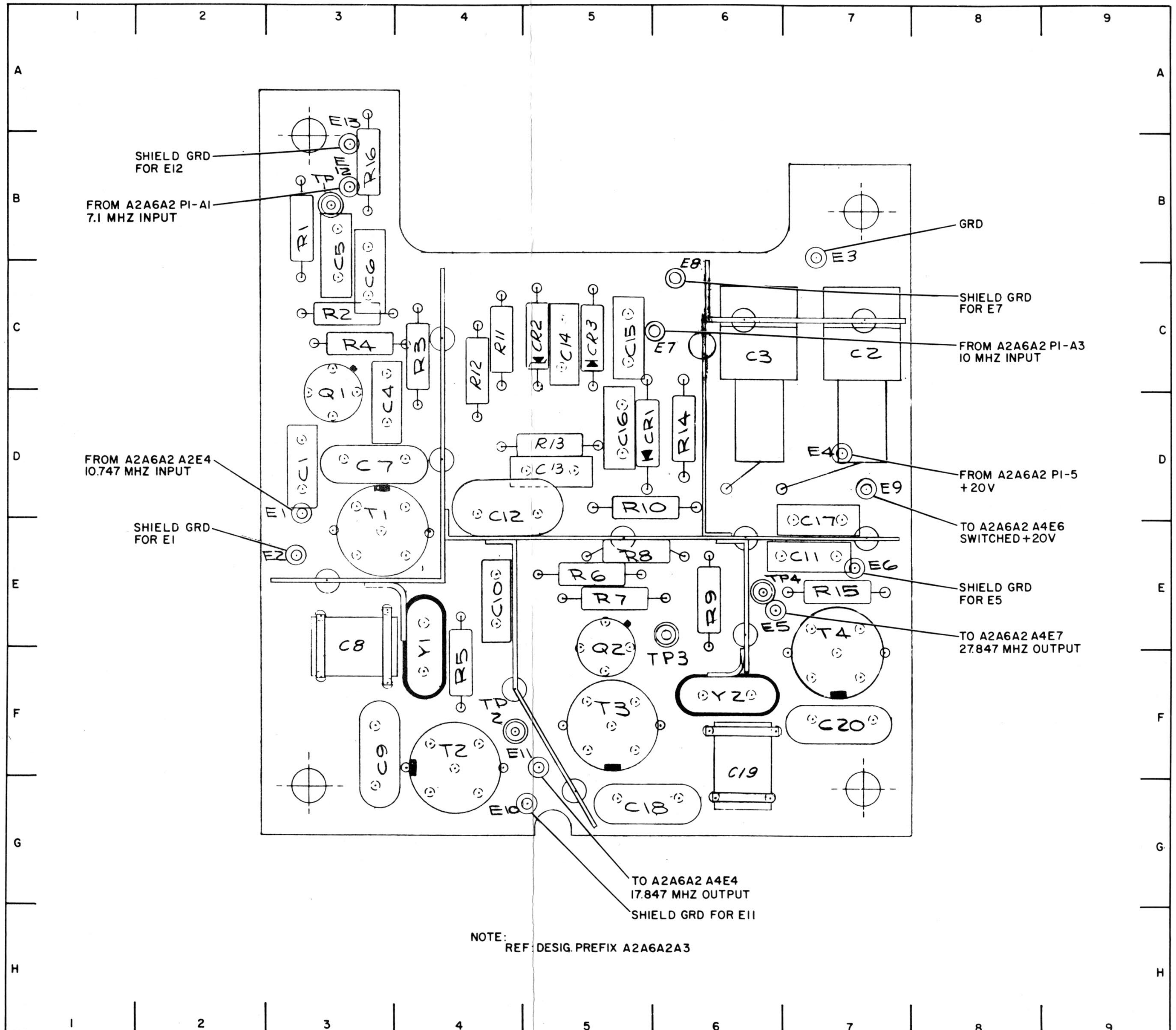


Figure 5-77. 17.847/27.847 MC Mixer A2A6A2A3, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	D7	R9	G5
C2	E7	R10	C3
C3	E7	R11	C5
C4	C6	R12	G3
C5	F6	R13	C3
C6	F7	R14	C4
C7	B6	R15	F3
C8	D6	R16	F4
C9	G6	R17	C4
C10	C5	R18	F4
C11	B5	R19	E5
C12	F5	R20	E6
C13	G5	R21	D2
C14	C4	R22	F3
C15	B4	R23	F3
C16	F4	L1	B6
C17	F4	L2	B4
C18	C3	L3	D4
C19	F3	L4	G6
C20	D3	L5	G4
C21	F5	L6	E4
C22	C7	Q1	C6
C23	C4	Q2	F7
C24	E4	Q3	D3
C25	F6	Q4	E3
C26	E5	T1	B3
C27	C5	T2	G4
E1	D7	TP1	C6
E2	E6	TP2	C5
E4	F7	TP3	C3
E5	E7	TP4	F6
E6	E7	TP5	F4
E7	B7	TP6	F3
E8	B7		
E9	E3		
E10	E2		
E11	C2		
E12	C2		
R1	D7		
R2	E6		
R3	D6		
R4	D7		
R5	F6		
R6	C7		
R7	F6		
R8	G7		

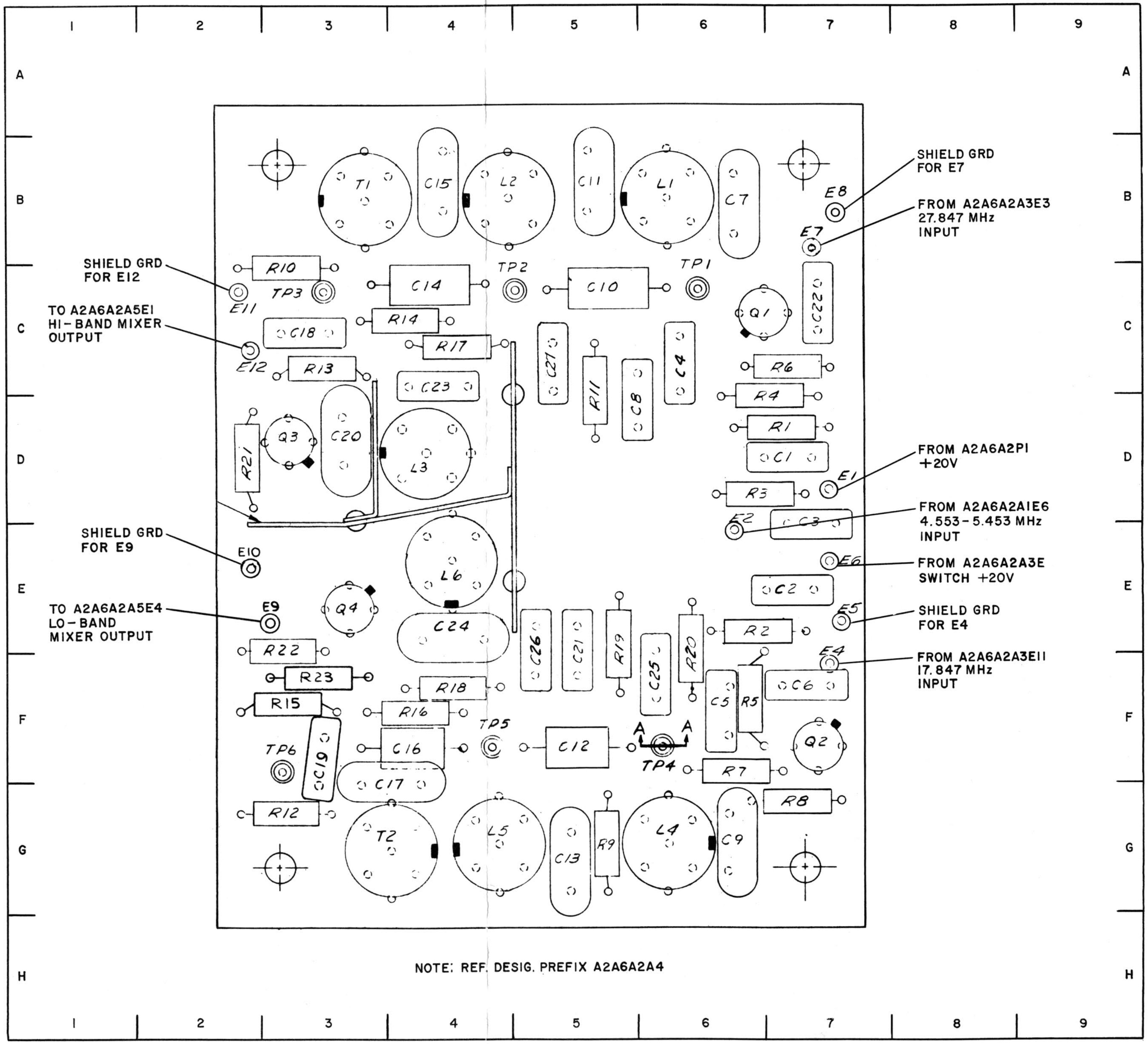


Figure 5-78. Hi-Band/Lo-Band Mixer/Amplifier A2A6A2A4, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	E4	L3	D6
C2	E4	Q1	E4
C3	F5	Q2	D5
C4	D4	Q3	D6
C5	D4	Q4	E7
C6	C4	R1	F3
C7	D5	R2	E3
C8	D6	R3	D3
C9	C5	R4	D4
C10	F7	R5	E5
C11	D7	R6	E5
CR1	C6	R7	D5
E1	E3	R8	D4
E2	E3	R9	D5
E3	E3	R10	D5
E4	E3	R11	E6
E5	D8	R12	D5
E6	D8	R13	C5
E7	D.	R14	C5
E8	D3	R15	E6
E9	D3	R16	F6
E10	D6	R17	D7
E11	E6	RT1	E6
L1	E3	TP1	E4
L2	E5		

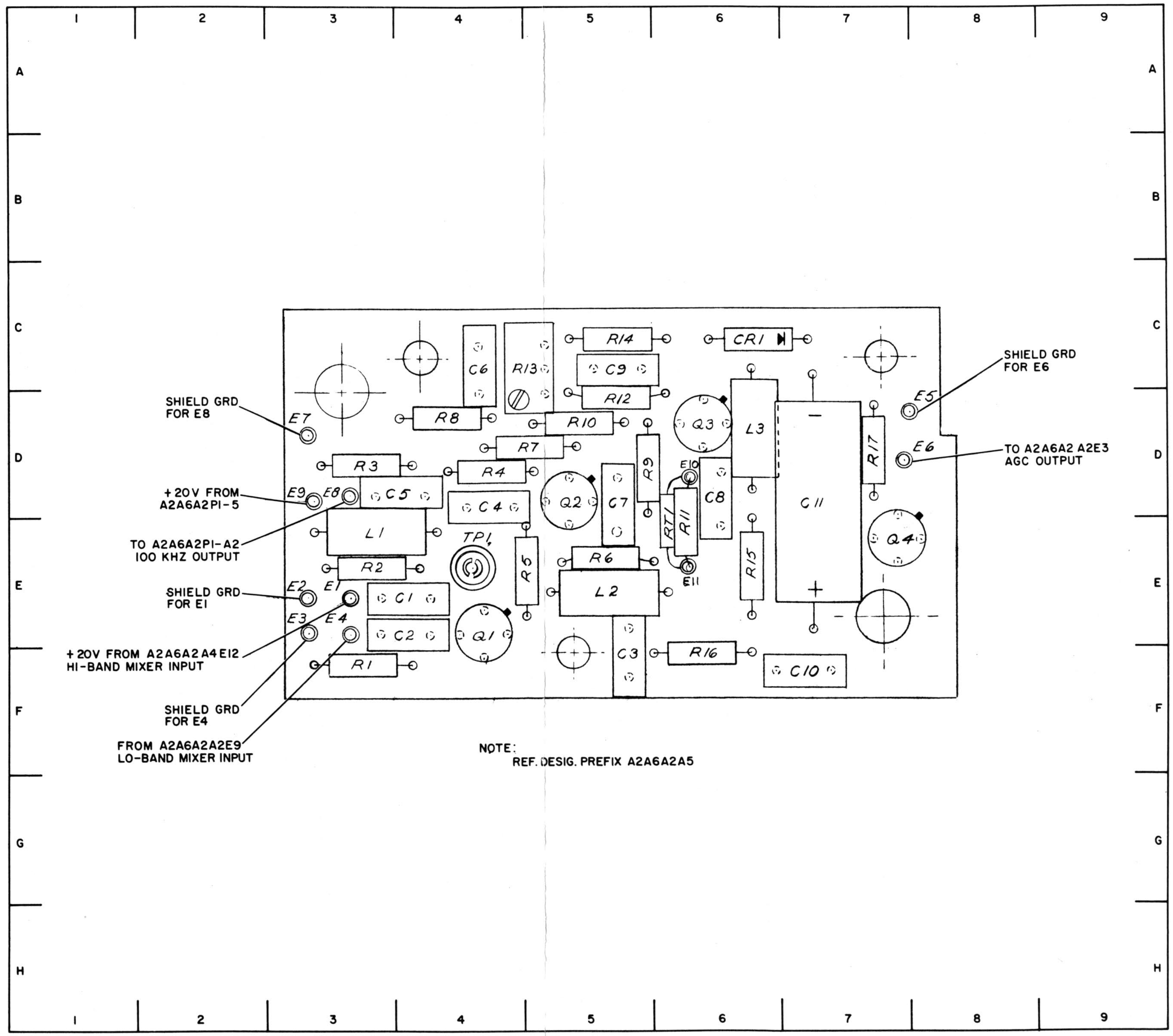


Figure 5-79. 10.747 MC Mixer AGC A2A6A2A5, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	C3
C2	D3
C3	D3
C4	D3
C5	C3
C6	E4
C7	E4
C8	B4
C9	D5
C10	C4
C11	C5
CR1	C4
CR2	C4
E1	D3
E2	C3
E3	E5
E4	C5
E5	C5
E6	E5
E7	D3
Q1	E4
Q2	E5
R1	F3
R2	F4
R3	B3
R4	E3
R5	D5
R6	F5
R7	E3
R8	E4
R9	E4
R10	E4
R11	C3
R12	B3
R13	C4
R14	E4
R15	D5
R16	C5
RT1	C3
T1	C5

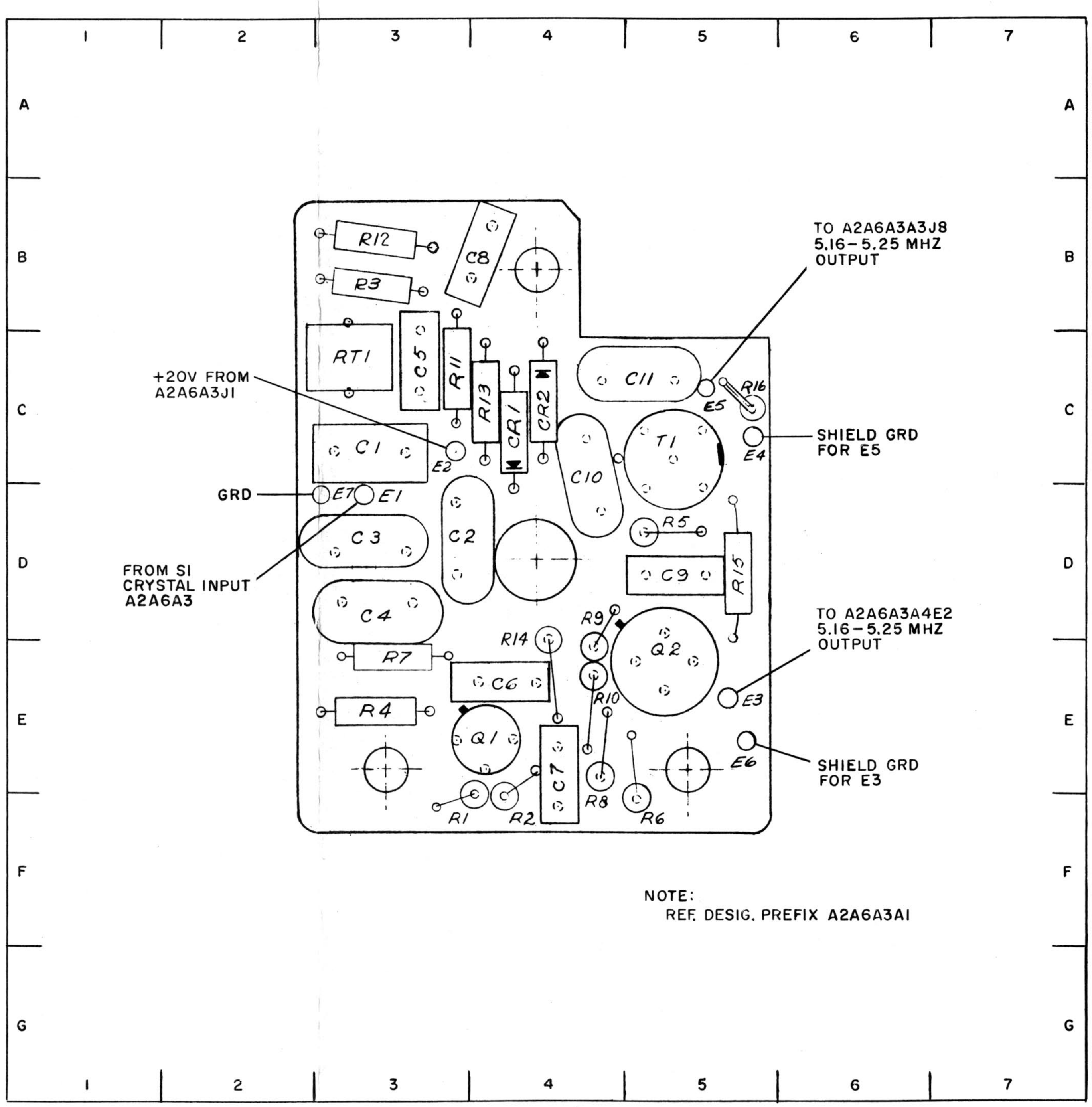


Figure 5-82. 5.16-5.25 MC Oscillator
A2A6A3A1, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C1	C5
C2	D4
C3	D5
C4	D5
C5	C5
C6	E4
C7	F4
C8	C4
C9	E4
C10	D3
CR1	C4
CR2	C4
E1	D5
E2	C5
E3	D3
E4	C3
E5	E3
E6	B3
E7	D5
Q1	E4
Q2	E3
R1	F4
R2	F4
R3	B5
R4	E5
R5	C4
R6	D4
R7	E5
R8	E4
R9	E3
R10	E4
R11	C5
R12	B5
R13	C4
R14	E4
R15	D3
R16	C3
RT1	C5
T1	C3

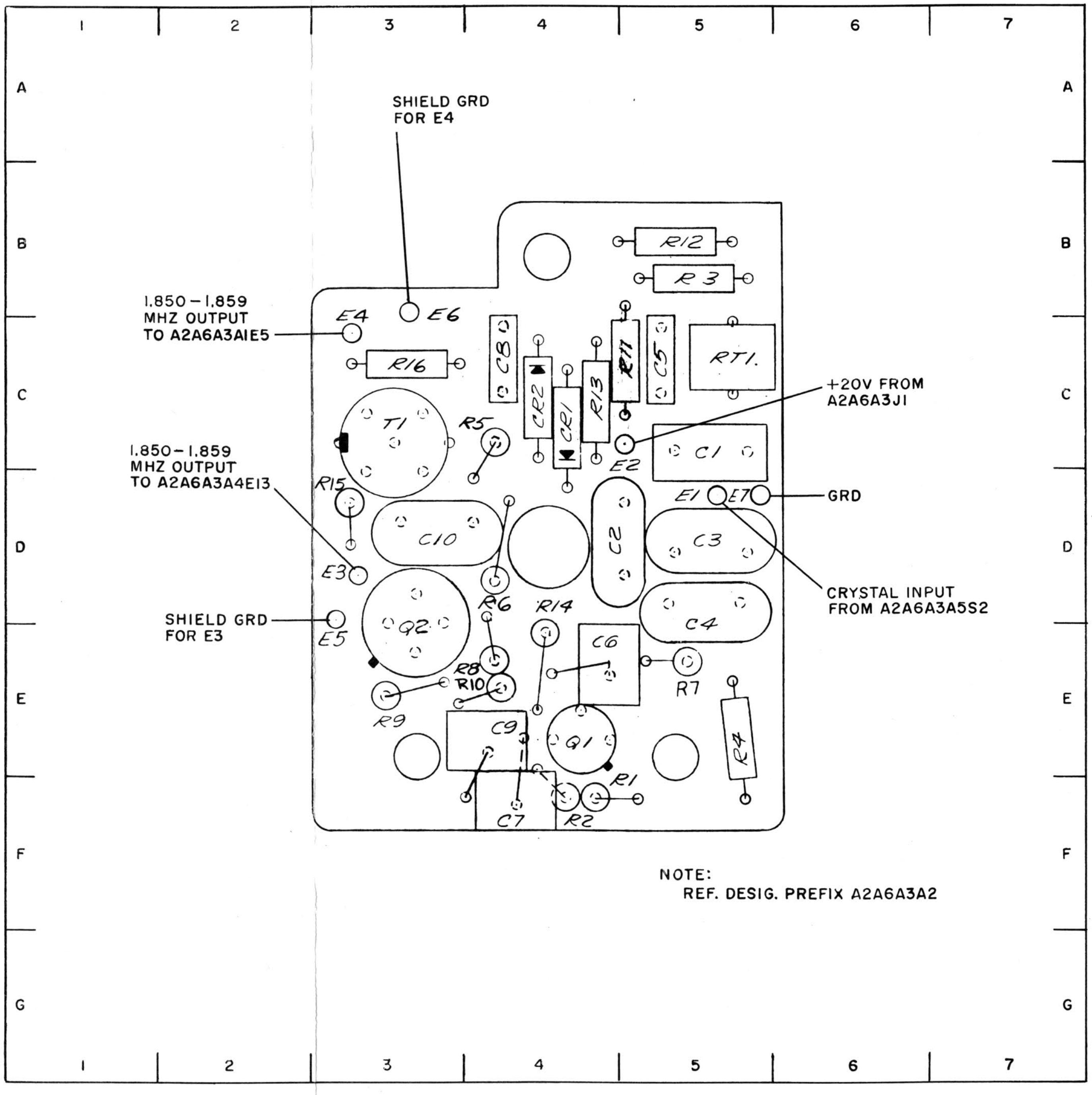


Figure 5-83. 1.850-1.859 MC Oscillator A2A6A3A2, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC
C46	E3
C47	E5
C48	E8
C49	D8
C50	D7
C51	D6
C52	D6
C53	D3
C54	D5
C55	E7
C56	E8
CR7	D5
J3	D3
J6	E3
J8	E6
J9	E4
L5	D8
L6	D7
L7	D6
Q11	E7
Q12	E4
R47	E6
R48	E4
R49	E4
R50	E3
R51	D5
R52	E6
R54	E6
T3	D4
TP1	E8
TP2	D8
TP3	D6

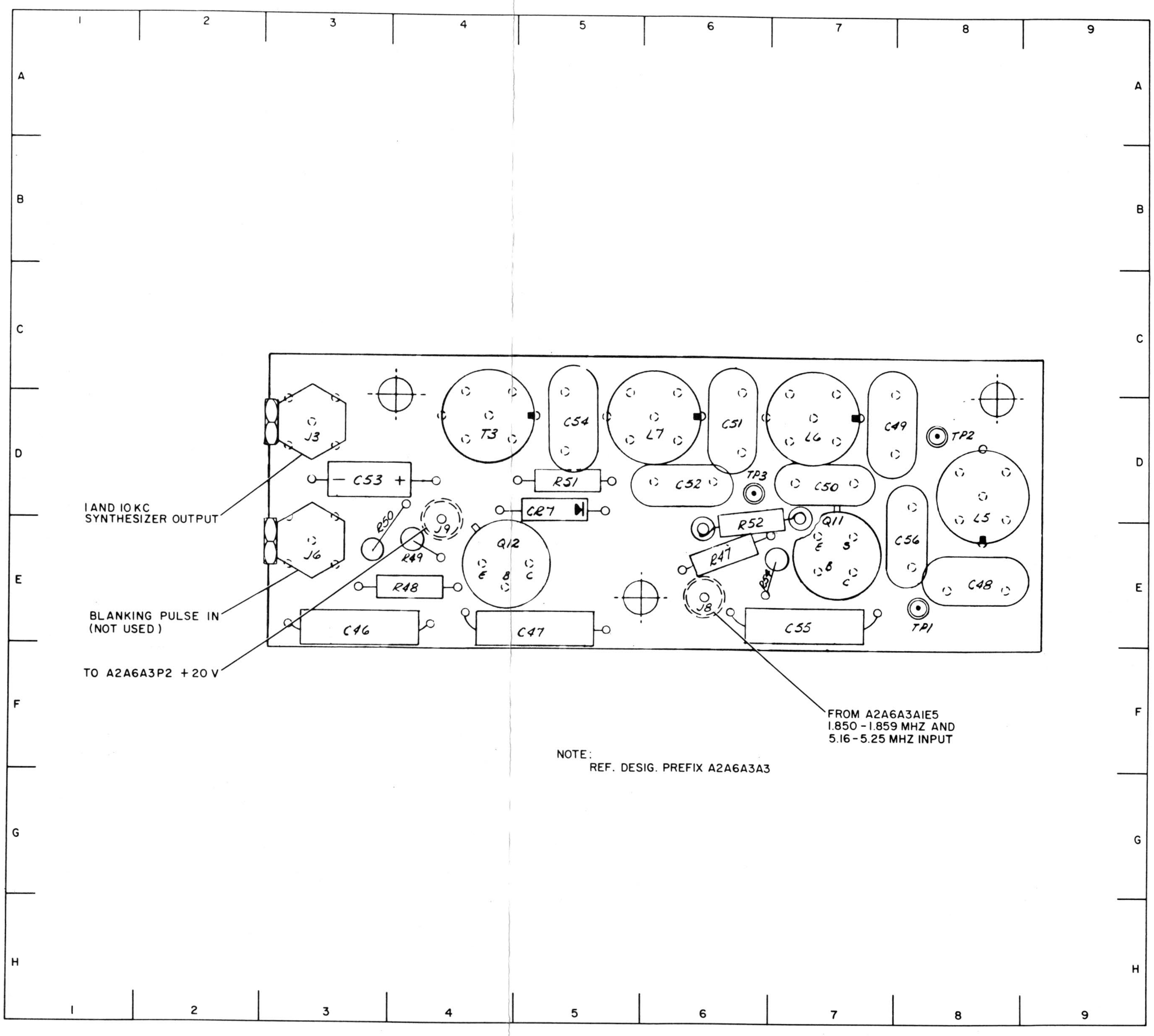


Figure 5-84. 1 and 10 KC Output and Blanker A2A6A3A3, Component Location

PARTS
LOCATION
INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	E10	L3	E10
C2	C10	L4	E2
C3	D11	Q8	D10
C4	D9	Q9	D6
C5	D7	R1	D9
C6	E7	R2	D10
C7	E5	R3	D10
C8	D5	R4	E11
C9	D2	R5	D9
C10	C6	R6	E7
C11	C5	R7	E6
C12	D5	R8	D7
C13	E2	R9	D6
E1	F11	R10	D6
E2	E10	R11	C5
E3	C11	R12	D2
E4	C10	R30	D6
E5	C7	R31	D10
E6	C7	T1	C6
E7	C5	Z1	D3
E8	D7	Z2	E3
E9	C2	Z3	E9
E10	C1		
E12	F1		
E13	F2		
FL1	D9		
FL2	E4		

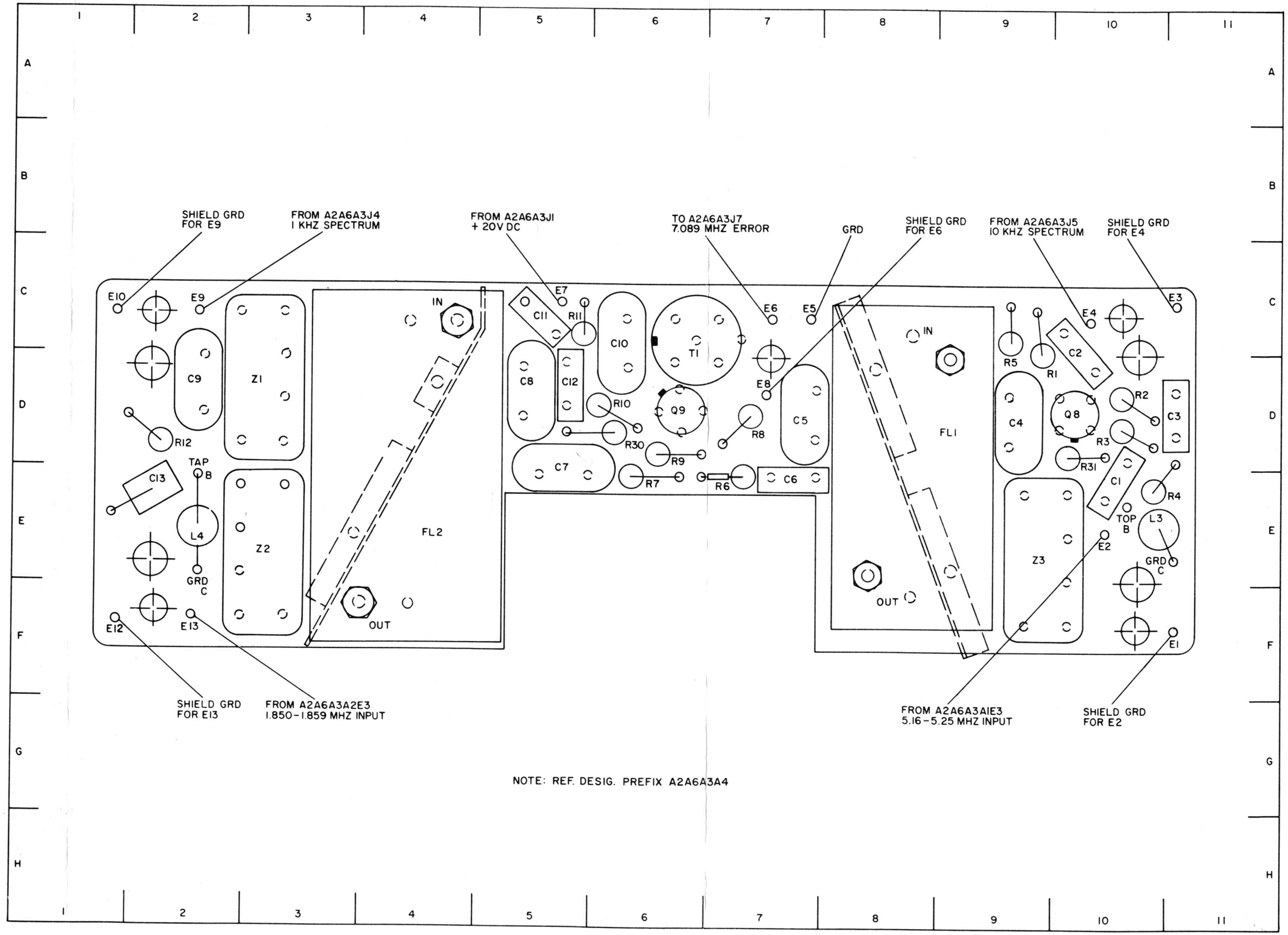


Figure 5-85. 1 and 10 KC Error Mixer
A2A6A3A4, Component Location

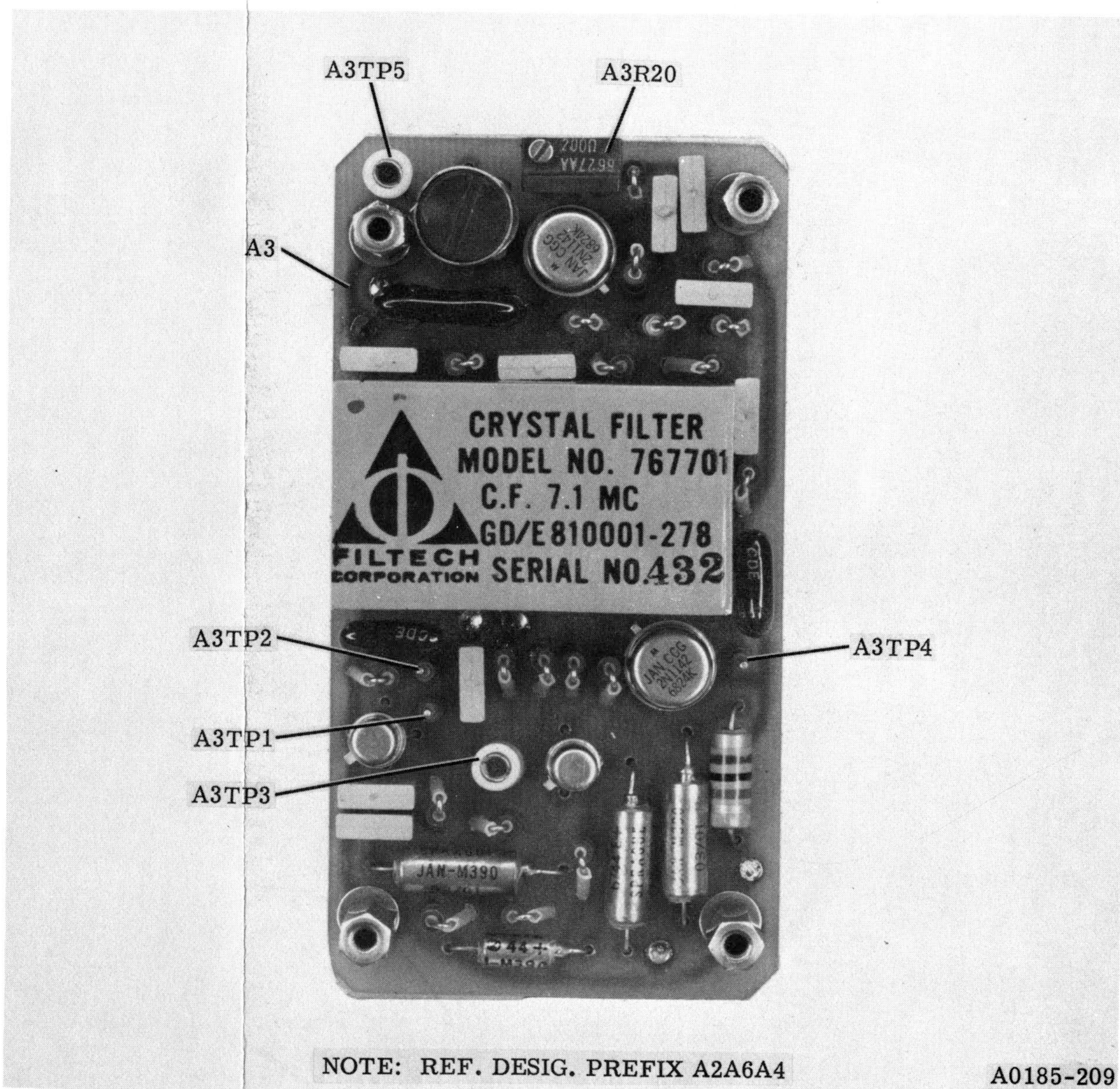


Figure 5-88. 100 CPS Synthesizer Electronic Subassembly A2A6A4, Top View, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
C1	E4	Q7	C7	TP4	C7
C2	F4	Q8	D2	TP5	D3
C3	E3	Q9	C3	Z1	D3
C4	F2	R1	E4	Z2	C3
C5	F3	R2	F3	Z3	C4
C6	E5	R3	G4	Z4	C6
C7	E5	R4	F4		
C8	E5	R5	F4		
C9	E4	R6	E3		
C10	F6	R7	E3		
C11	F5	R8	E3		
C12	D6	R9	F2		
C13	F5	R10	F2		
C14	F6	R11	G2		
C15	E8	R12	E2		
C16	C7	R13	E5		
C17	F6	R14	F5		
CR1	F3	R15	D5		
CR2	F2	R16	D5		
CR3	D4	R17	C5		
CR4	D4	R18	D5		
CR5	C5	R19	D4		
CR6	E4	R20	E4		
CR7	D4	R21	E2		
CR8	D5	R22	E6		
CR9	E2	R23	E5		
CR10	D4	R24	D6		
CR11	D3	R25	E6		
CR12	D2	R26	D6		
CR13	C2	R27	E6		
CR14	C2	R28	C6		
E2	F7	R29	C6		
E3	F7	R30	D7		
E4	C5	R31	E7		
E5	D5	R32	D7		
E6	G5	R33	C7		
E7	G5	R34	E7		
E8	C3	R35	D2		
E9	G6	R36	D2		
E10	G6	R37	C2		
E11	C4	R38	D7		
Q1	F5	R39	D5		
Q2	F4	R40	C3		
Q3	F3	T1	D7		
Q4	E2	TP1	F5		
Q5	D6	TP2	C4		
Q6	E6	TP3	C5		

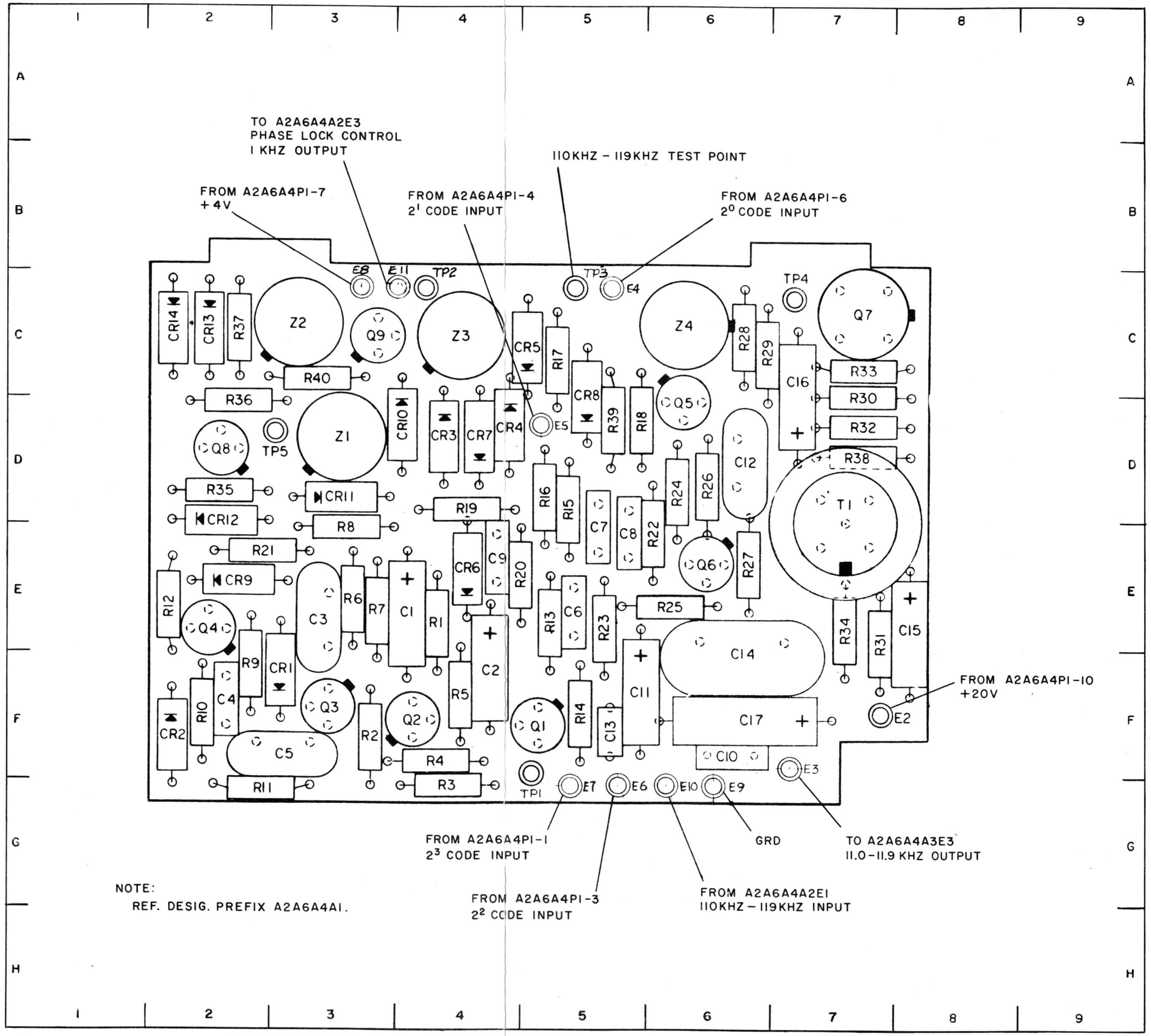


Figure 5-89. Preset Counter A2A6A4A1,
Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	E7	R14	E7
C2	F7	R15	D5
C3	E8	R16	D6
C4	D8	R17	D2
C5	C2	T1	E5
C6	E3	TP1	C3
C7	E7	TP2	E3
C8	E7	Z1	F8
C9	D6		
C10	D6		
C11	E6		
C12	E5		
C13	C3		
C14	D3		
C15	E4		
CR1	D7		
CR3	C8		
CR4	D7		
CR5	E4		
CR6	E4		
CR7	C4		
CR8	C3		
CR9	D7		
E1	E2		
E2	D6		
E3	E8		
E4	F8		
E5	F8		
E6	E8		
E7	F7		
E8	F7		
E9	F7		
E10	F7		
FL1	C6		
Q1	D8		
Q2	E6		
Q3	E3		
R1	E7		
R3	E8		
R4	D8		
R5	D8		
R6	C4		
R7	E2		
R8	D4		
R9	E7		
R10	E3		
R11	E6		
R12	D7		
R13	D7		

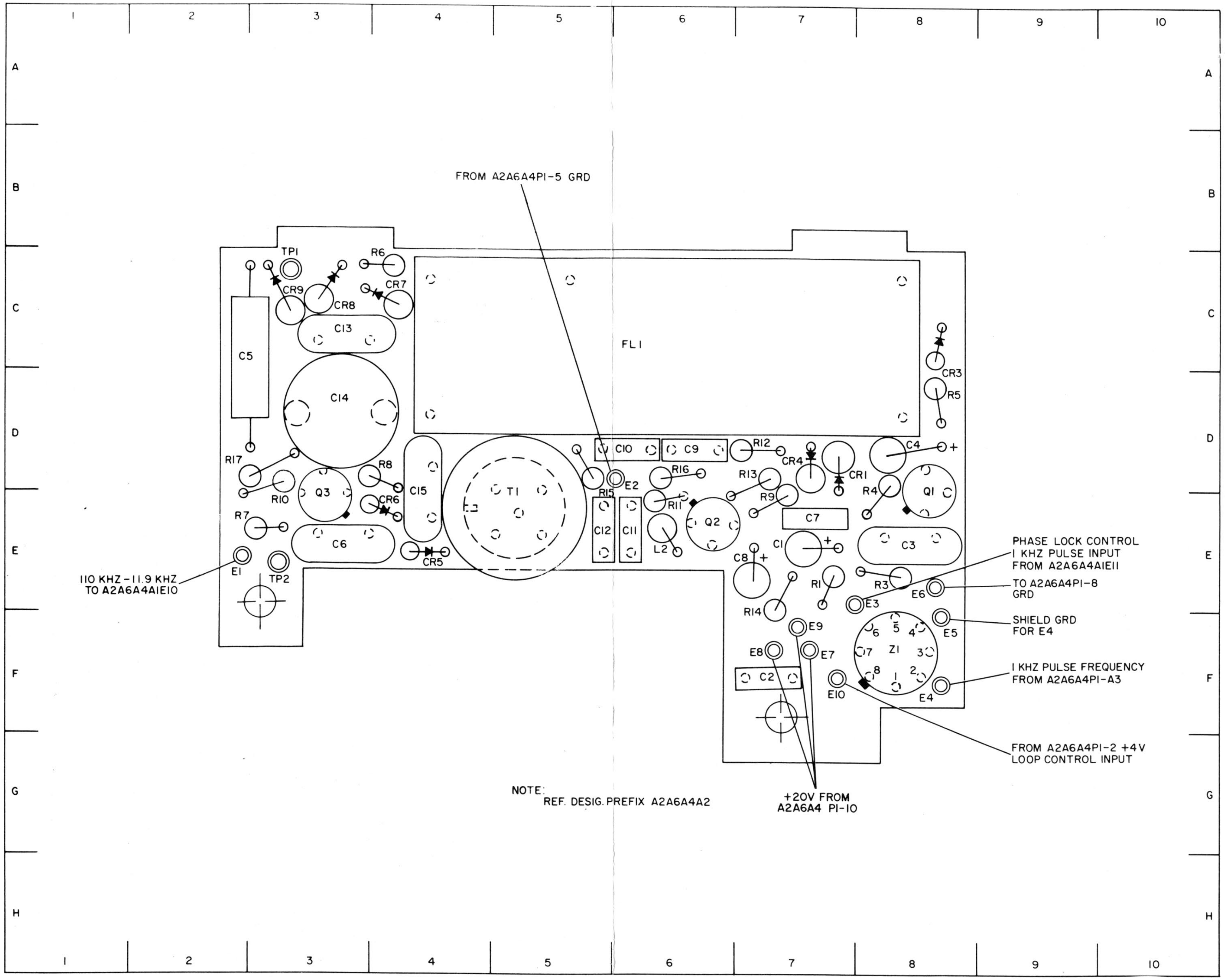


Figure 5-90. Oscillator A2A6A4A2, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	D8	R1	D6
C2	E8	R2	D6
C3	E7	R3	D7
C4	E7	R4	D8
C5	E6	R5	E8
C6	C7	R6	E7
C7	E6	R7	D7
C8	C5	R8	E6
C9	E4	R9	F6
C10	D4	R10	C5
C11	C3	R11	C3
C12	C3	R12	C4
C13	E3	R13	C4
C14	C3	R14	D4
C15	D7	R15	D4
C16	C4	R16	D3
E1	E6	R17	D4
E2	D6	R18	E4
E3	C8	R19	D2
E4	C8	R20	D2
E5	F3	R21	D6
E6	F4	T1	E3
FL2	D5	TP1	E6
L2	C7	TP2	E6
Q1	D7	TP3	E7
Q2	E7	TP4	C6
Q3	C6	TP5	E2
Q4	D3		

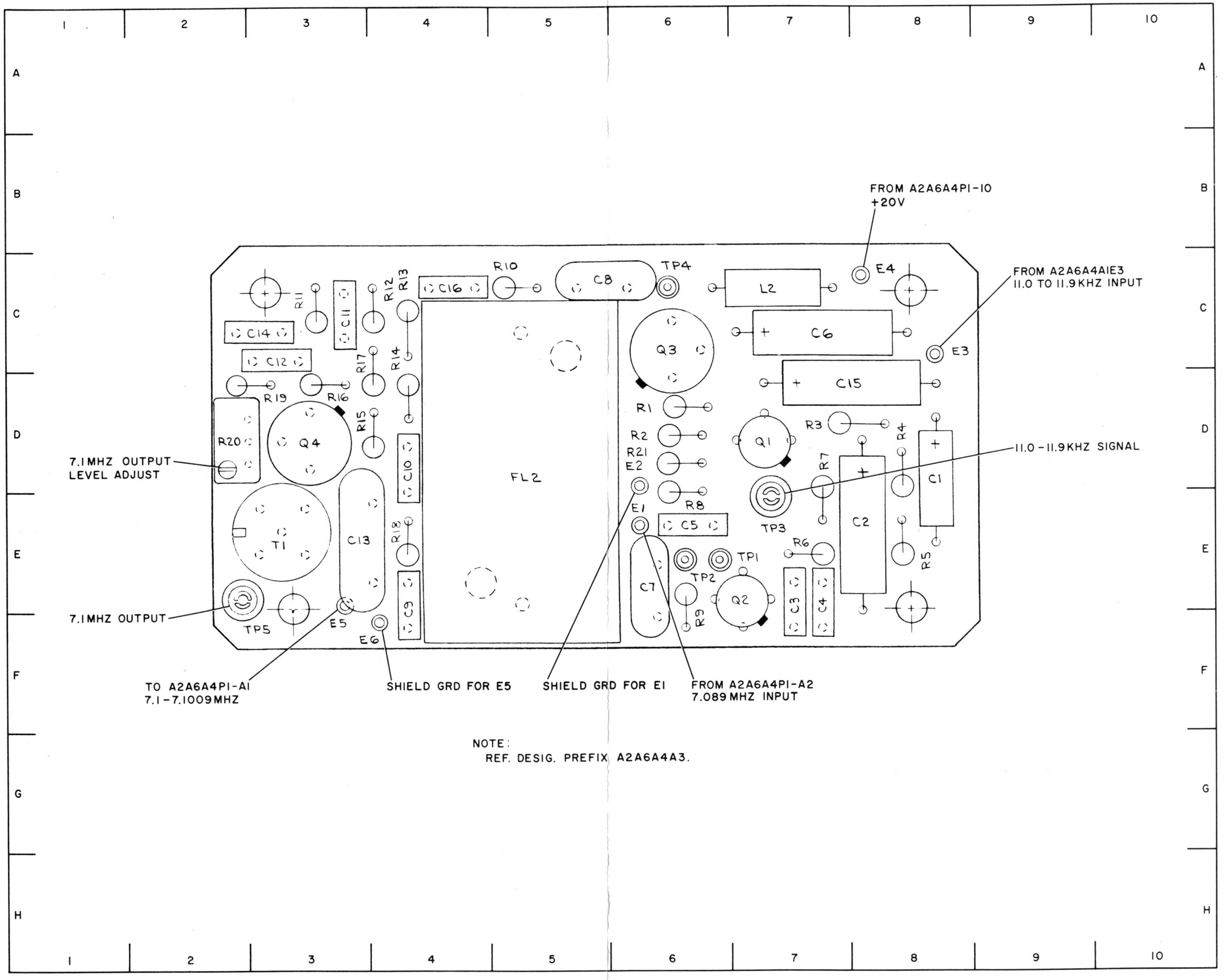


Figure 5-91. 7.1 MC Mixer A2A6A4A3, Component Location

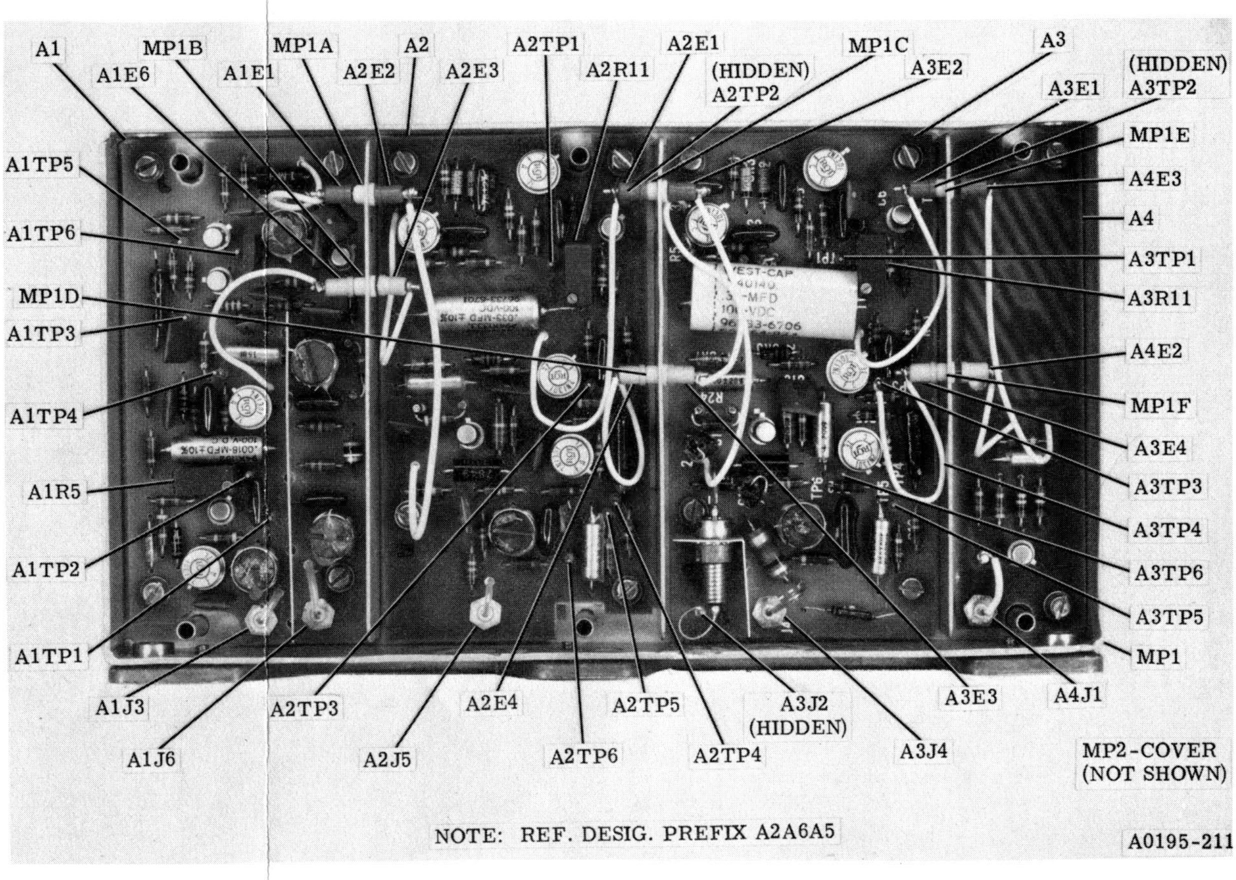


Figure 5-92. Spectrum Generator Electronic Subassembly A2A6A5, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	E5	R12	F4
C2	E6	R13	E5
C3	F10	R14	F4
C4	E8	R15	E3
C5	F7	R16	E5
C6	F7	R17	F4
C7	F6	R18	E3
C8	F7	R19	D5
C9	E4	R20	E5
C10	E4	R21	D4
C11	G5	R22	D7
C12	E5	R23	D5
C13	E3	R24	D6
C14	D4	R25	D8
C15	D4	T1	D4
C16	D5	T2	D9
C17	D7	TP1	E8
C18	D7	TP2	E8
C19	D8	TP3	F5
CR1	G9	TP4	E6
CR2	F9	TP5	F4
CR3	F7	TP6	E4
CR4	D5		
E1	E2		
E6	B6		
J3	E10		
J6	D10		
L1	E3		
L2	E9		
L5	D6		
Q1	F9		
Q2	F8		
Q3	E7		
Q4	F5		
Q5	F4		
Q6	D4		
R1	G6		
R2	G9		
R3	F9		
R4	G7		
R5	F8		
R6	F8		
R7	F7		
R8	F7		
R9	F6		
R10	F5		
R11	F5		

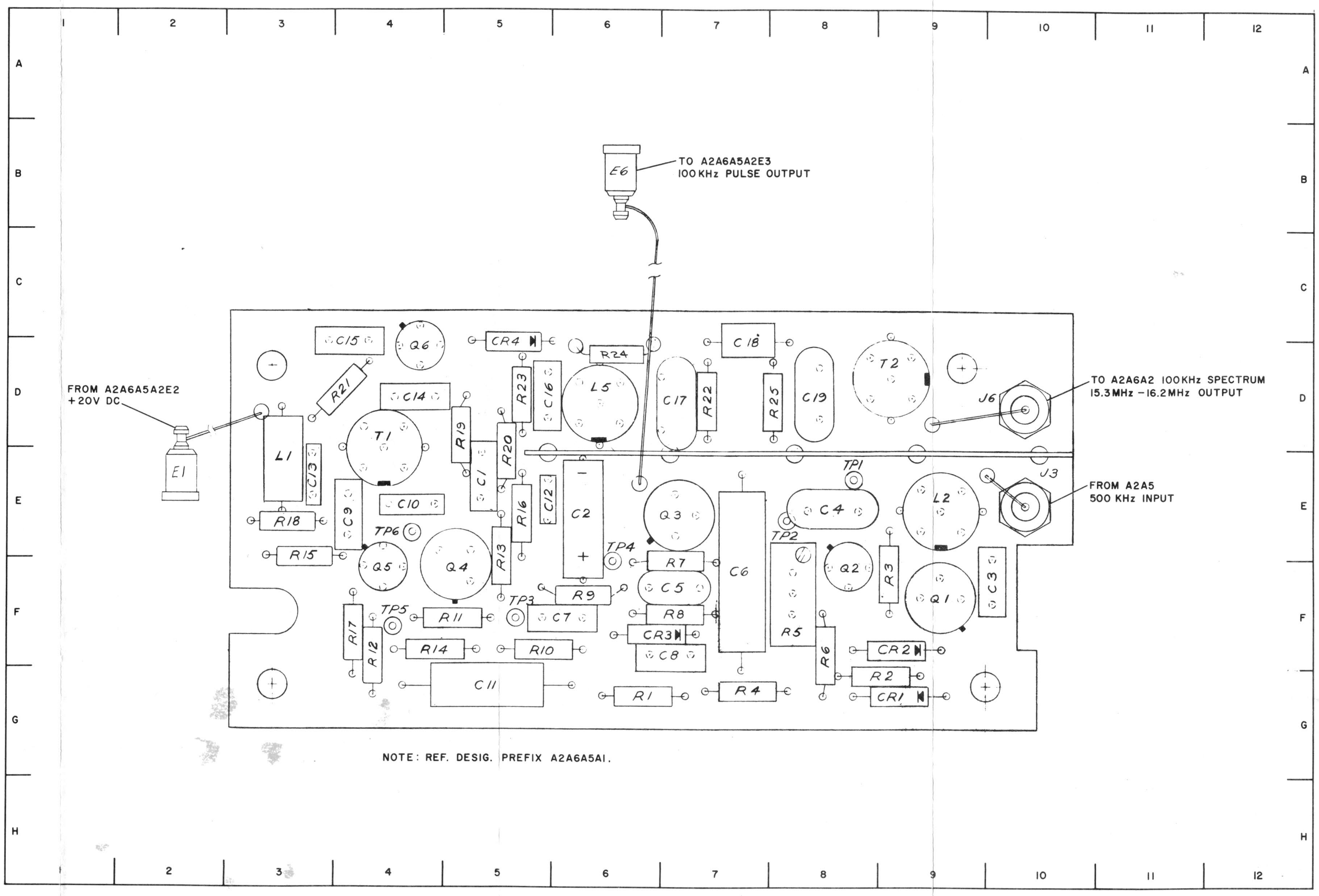


Figure 5-93. 100 KC Spectrum Generator A2A6A5A1, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC
C1	E5
C2	C6
C3	D9
C4	C9
C5	D9
C6	F9
C7	E9
C8	F7
C9	D7
C10	E6
C11	F5
C12	F4
C13	C5
C14	E4
C15	E4
C16	D4
CR1	C7
CR2	D9
CR3	D9
CR4	D7
E1	G7
E2	A5
E3	A8
E4	G6
J5	D3
L1	D5
Q1	C9
Q2	E10
Q3	F9
Q4	F6
Q5	F5
Q6	D5
R1	D6
R2	F9
R3	E9
R4	D8
R5	C8
R6	C9
R7	E9
R8	D9
R9	D8
R11	F8
R12	F8
R13	F7
R14	F6
R15	F6
R16	E7
R18	F7
R19	F4
R20	F5
R21	F4
R22	F5
R23	E6
R24	C6
R25	E4
R26	D5
R27	C5
R28	D4
R29	D3
R30	F8
T1	E4
TP1	E8
TP2	F9
TP3	F6
TP4	F5
TP5	F4

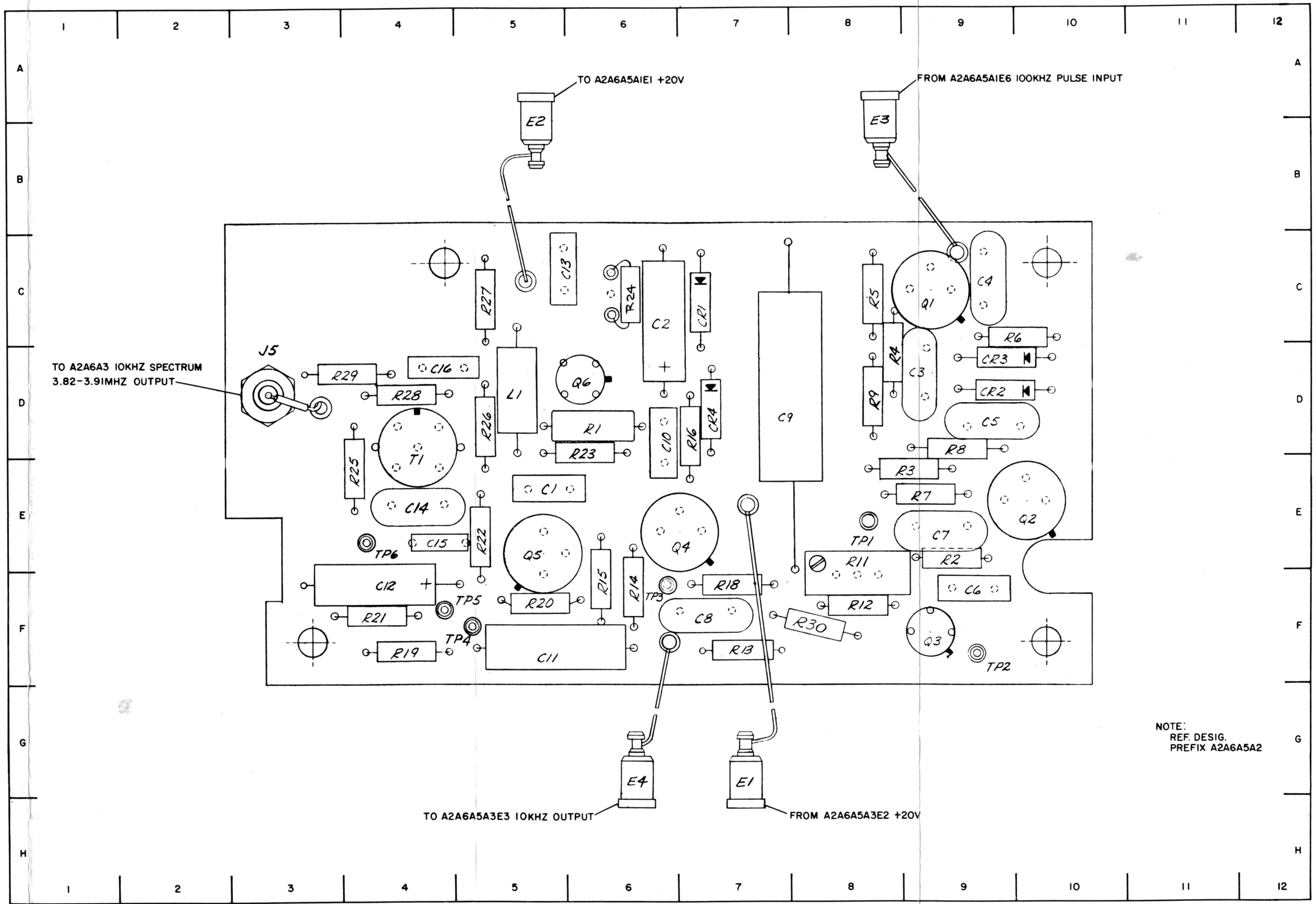


Figure 5-94. 10 KC Spectrum Generator A2A6A5A2, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C1	E5	R12	F8
C2	C6	R13	F7
C3	D8	R14	E6
C4	C9	R15	E6
C5	D9	R16	D6
C6	F9	R17	F8
C7	E9	R18	E7
C8	F6	R19	F4
C9	D7	R20	F5
C10	D6	R21	F3
C11	F5	R22	E4
C12	F3	R23	D5
C13	C5	R24	C6
C14	E4	R25	D3
C15	C3	R26	D4
C16	C4	R27	C4
C17	E2	T1	D4
CR1	C6	TP1	E8
CR2	D9	TP2	F9
CR3	C9	TP3	E6
CR4	F7	TP4	F4
CR5	D7	TP5	F4
E1	G8	TP6	E5
E2	B5		
E3	B9		
E4	G7		
J2	C3		
J4	D2		
L1	D5		
L2	D3		
Q1	C8		
Q2	E9		
Q3	F9		
Q4	E6		
Q5	E5		
Q6	D5		
R1	D5		
R2	E9		
R3	D8		
R4	C8		
R5	B8		
R6	C9		
R7	E8		
R8	D9		
R9	D8		
R10	C8		
R11	E8		

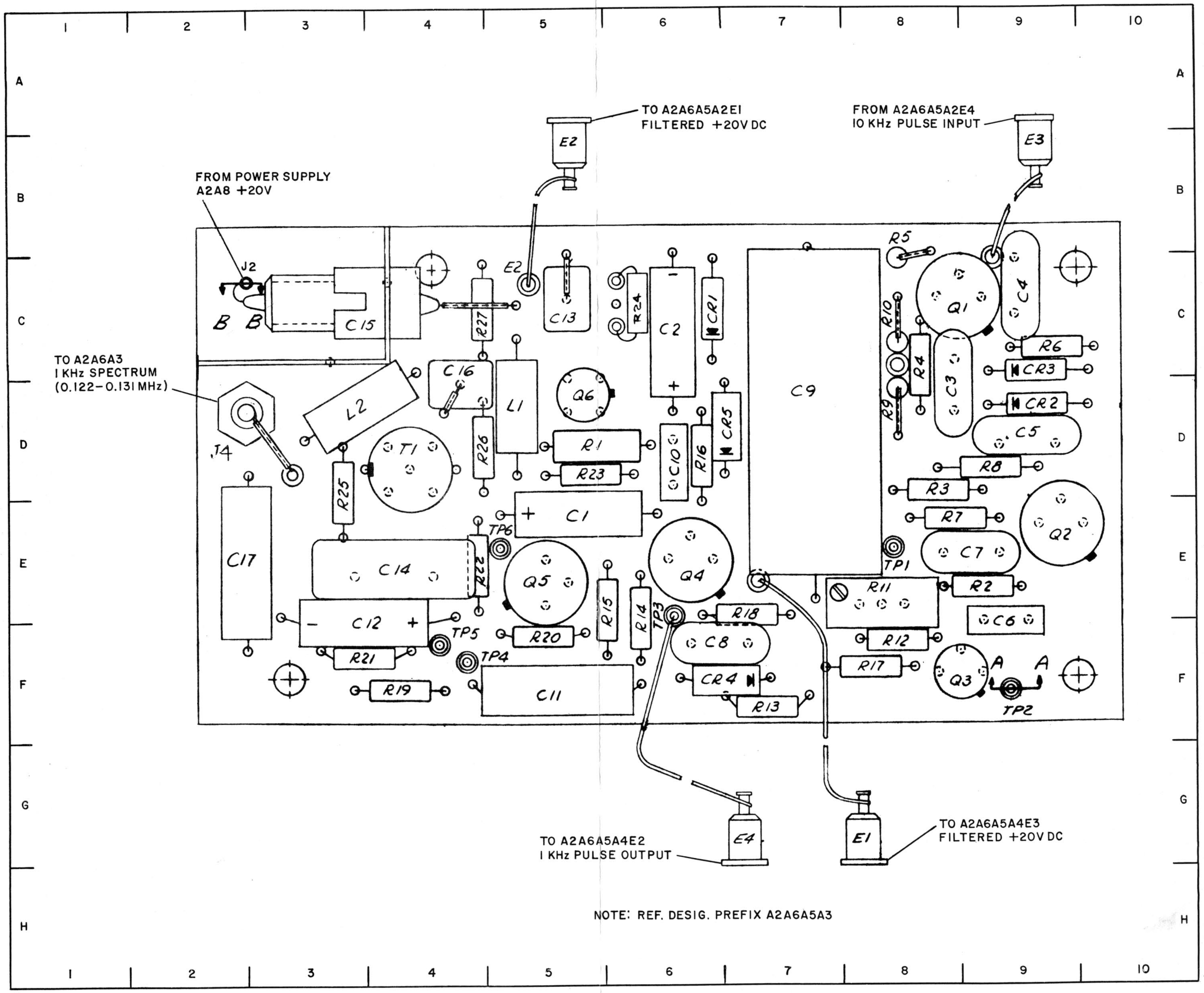


Figure 5-95. 1 KC Spectrum Generator, A2A6A5A3, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC	REF DESIG	LOC
C1	E5	C50	D15	FL1	B9	R27	D7
C2	E4	C51	E15	FL2	A11	R28	A7
C3	F3	C52	E15	FL3	A5	R29	E7
C4	B3	C53	D13	J4	H8	R30	B7
C5	G5	C54	E13	J5	H6	R31	D7
C6	C3	C55	F13	J6	H6	R32	E7
C7	A4	C56	B15	J7	H7	R33	D8
C8	C4	C57	A13	L1	G6	R34	B11
C9	E3	C58	B13	L2	E5	R35	B10
C10	F4	C59	A14	L3	F6	R36	G11
C11	E5	C60	E14	L4	G6	R37	C11
C12	G4	C61	C13	L5	G7	R38	E11
C13	E4	C62	E14	L6	A8	R39	E15
C14	B3	C63	D15	L7	G7	R40	D13
C15	C5	C64	F13	L8	B11	R41	F15
C16	D5	C65	C13	L9	A10	R42	D15
C17	D5	C66	B3	L10	C11	R43	F15
C18	B5	CR1	F5	L11	E11	R44	A13
C19	C3	CR2	A4	L12	G8	R45	D15
C20	B3	CR3	D4	L13	G12	R46	F15
C21	C2	CR4	A4	L14	B13	R47	C14
C22	E7	CR5	D3	L15	B3	R48	G14
C23	G5	CR6	B8	Q1	F3	R49	B13
C24	F7	CR7	F8	R1	F3	R50	E14
C25	E8	CR8	B8	R2	G5	R51	C15
C26	G8	CR9	F8	R3	D3	R52	C14
C27	C8	CR10	A9	R4	G6	R53	C13
C28	G8	CR11	A10	R5	G3	R54	F13
C29	B7	CR12	F12	R6	E4	R55	F14
C30	C8	CR13	F12	R7	F3	RT1	D3
C31	E7	CR14	B14	R8	F4	RT3	E15
C32	D8	CR15	D15	R9	G4	T1	F3
C33	A7	CR16	F15	R10	A5	T2	B4
C34	C8	CR17	D14	R11	C4	T3	D4
C35	E7	CR18	G18	R12	E5	T4	B7
C36	F7	CR19	C15	R13	G4	T5	D7
C37	C9	CR20	C15	R14	A4	T6	D14
C38	B8	E1	B3	R15	B4	T7	F14
C39	A8	E2	B2	R16	E3	TP5	A16
C40	A11	E3	B2	R17	B4	TP6	A15
C41	B10	E4	D4	R18	C3	TP7	A3
C42	A11	E5	D3	R19	E3	TP8	A2
C43	C11	E6	E8	R20	C3	Z1	C4
C44	E11	E7	F8	R21	D8	Z2	C7
C45	G12	E8	F15	R22	E8	Z3	E14
C46	D11	E9	F14	R23	C8		
C47	F13	E10	B16	R24	E8		
C48	E15	E11	C16	R25	C8		
C49	G15	E12	B15	R26	F9		

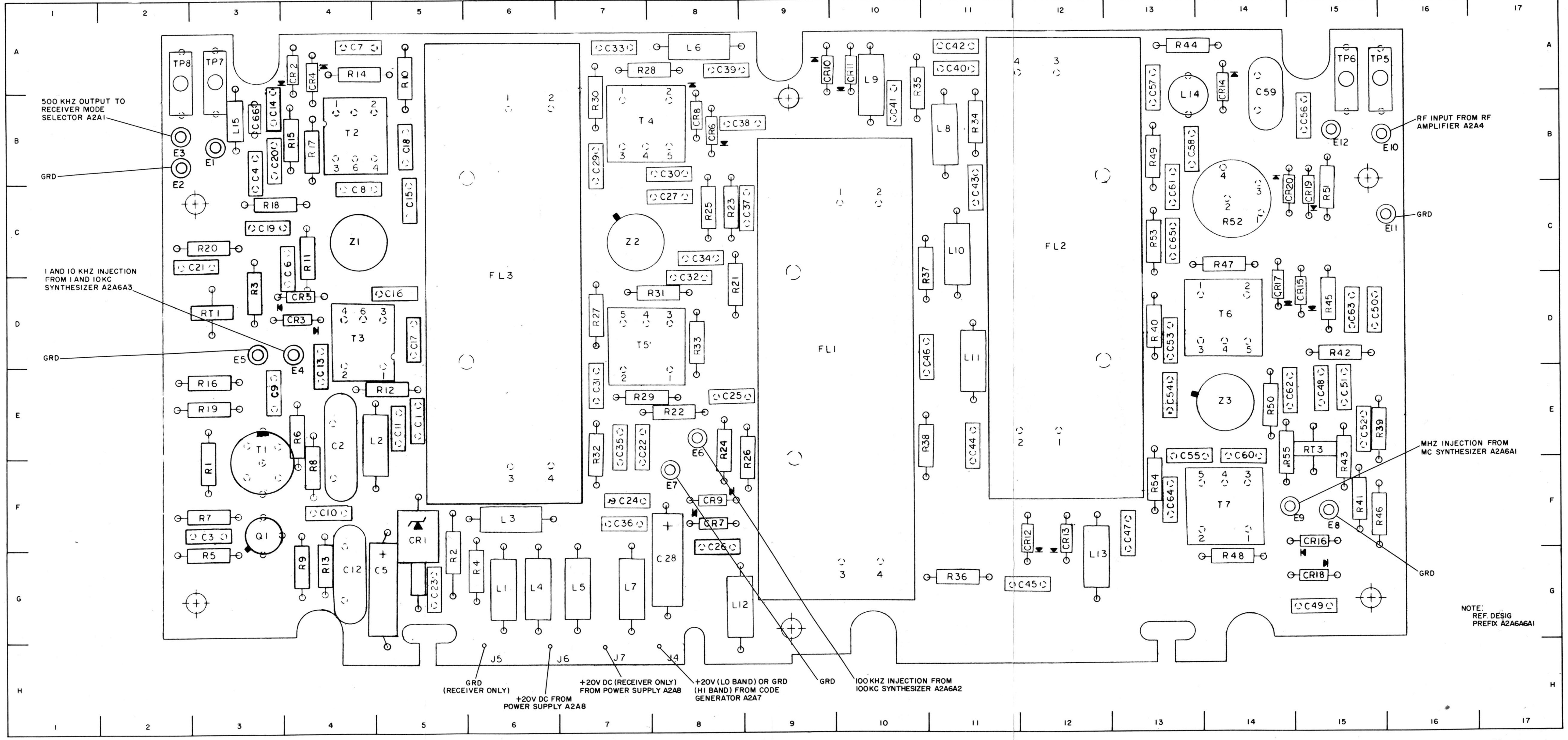


Figure 5-98. RF Translator Electronic Subassembly A2A6A6A1, Component Location

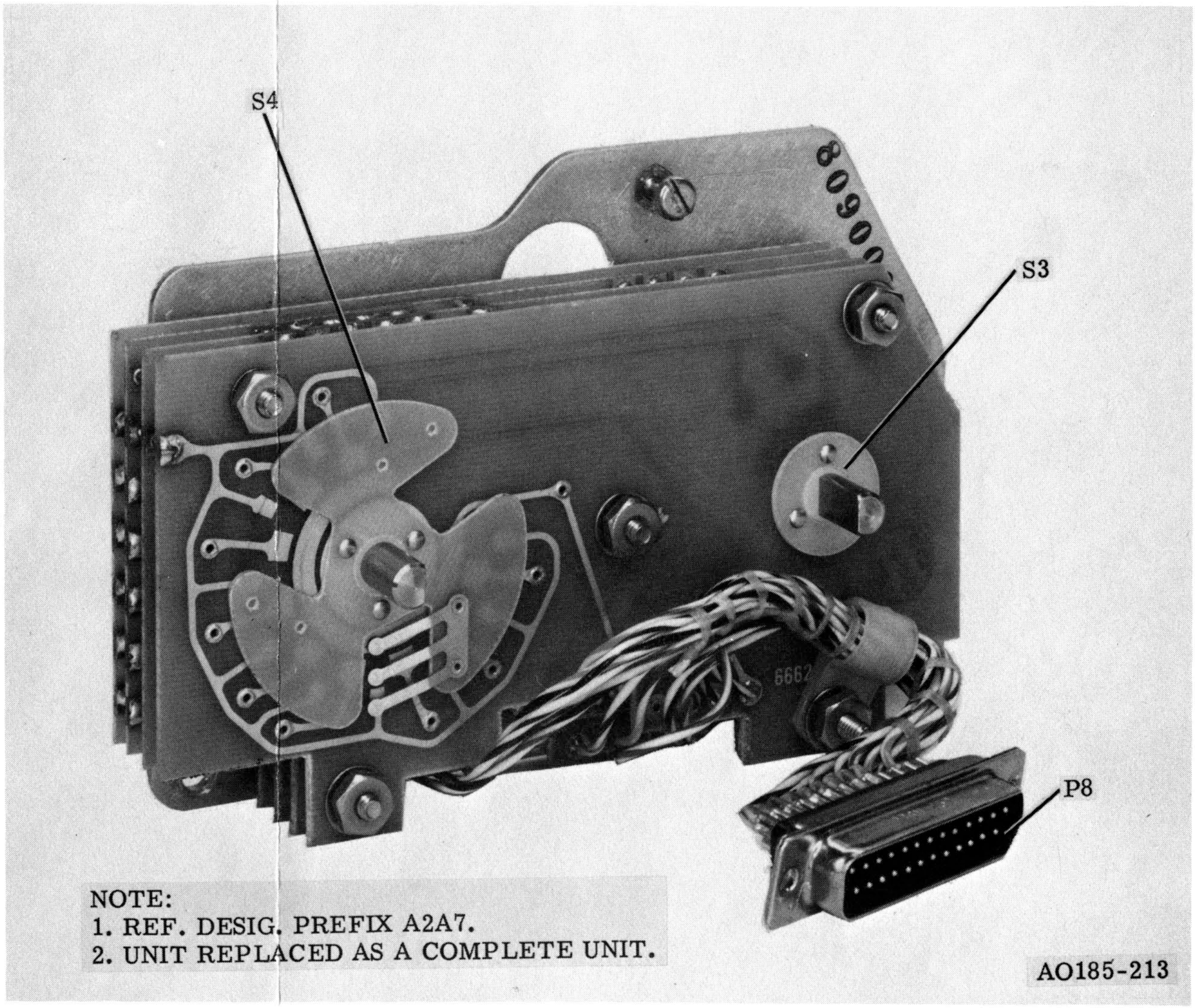


Figure 5-99. Code Generator Electronic Assembly A2A7, Rear View, Component Location

PARTS LOCATION INDEX

REF DESIG	LOC	REF DESIG	LOC
C3	D6	R7	F7
C4	D5	R8	D8
C6	C8	R9	D7
C7	B7	R10	D8
CR1	F4	R11	D8
CR2	F4	R12	D6
CR3	F4	R13	C8
CR4	F5	R14	C7
CR5	D2	R15	C6
CR6	D2		
CR7	E3		
CR8	E3		
CR9	F5		
CR10	F6		
CR11	F5		
CR12	F5		
CR13	C5		
CR14	B5		
CR15	E8		
CR16	E6		
CR17	E6		
E1	G2		
E2	G2		
E3	G3		
E4	G3		
E5	G4		
E7	G4		
E8	G5		
E9	G5		
E10	G5		
E11	G6		
E12	G6		
E13	G6		
E14	G7		
E15	G8		
E16	G8		
E17	G2		
E18	B5		
Q1	F7		
Q2	E7		
Q3	D7		
Q4	D6		
R1	D3		
R2	F3		
R3	E5		
R4	D5		
R5	F7		

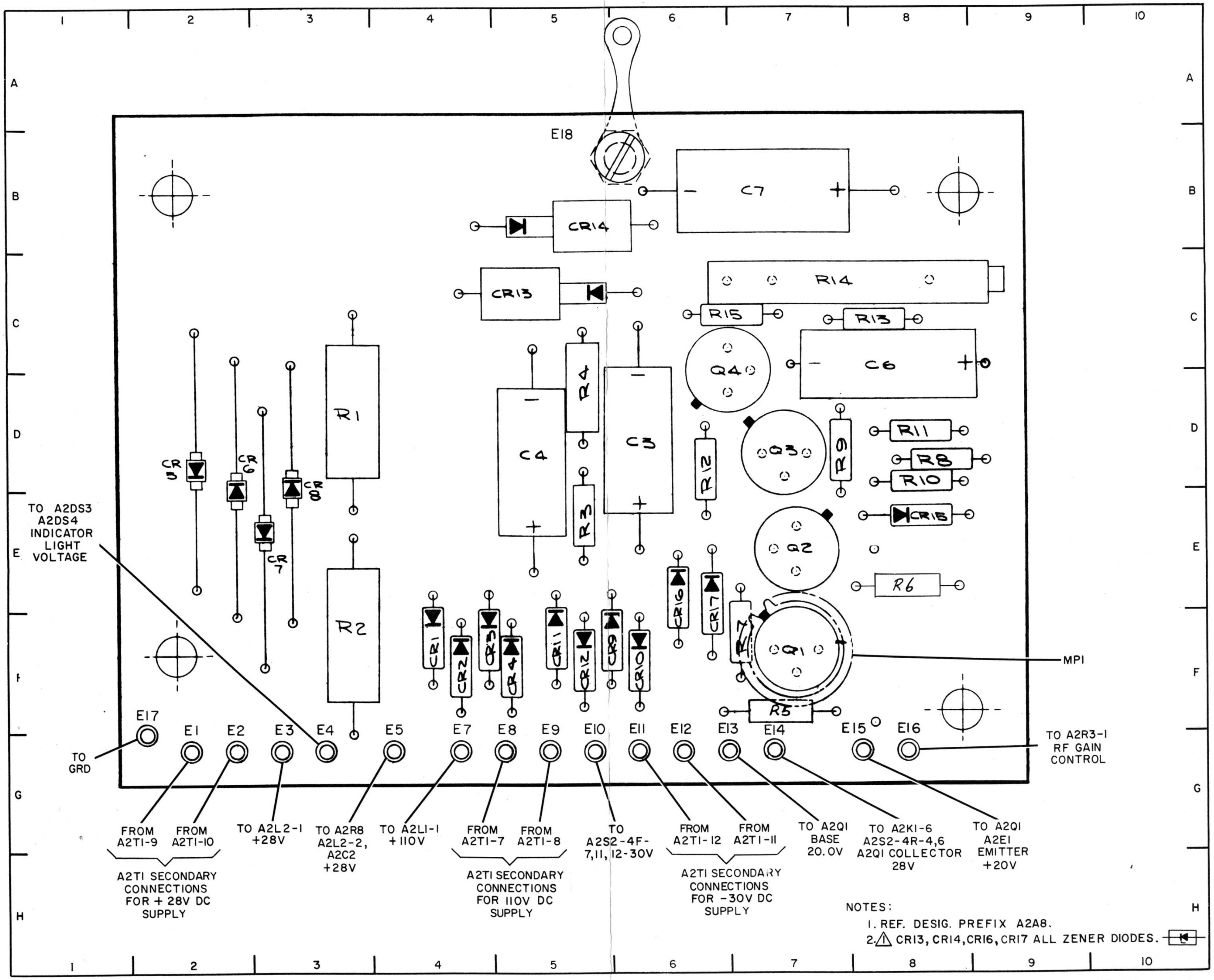


Figure 5-100. Power Supply Electronic Assembly A2A8, Component Location

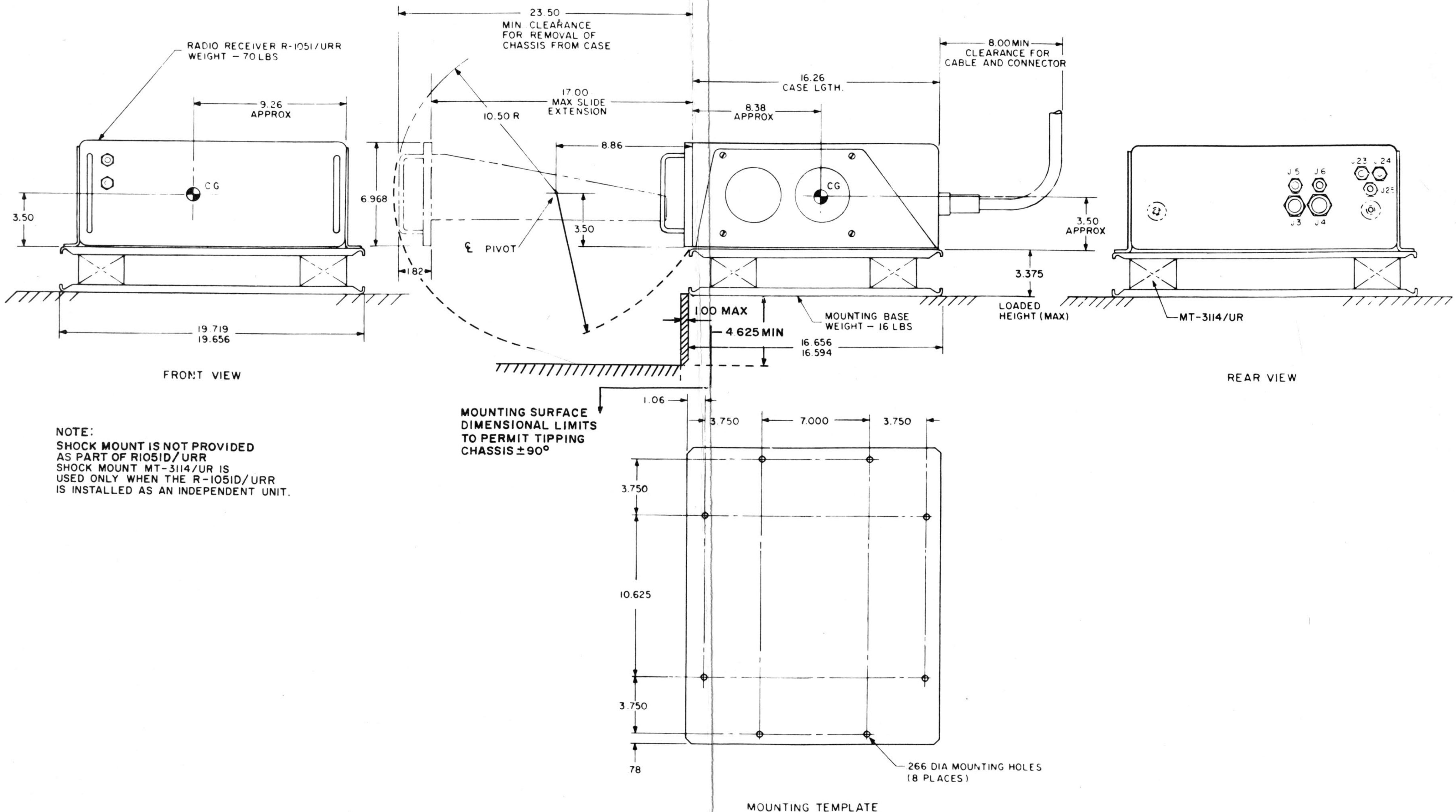


Figure 7-1. Radio Receiver R-1051D/URR, Dimensions