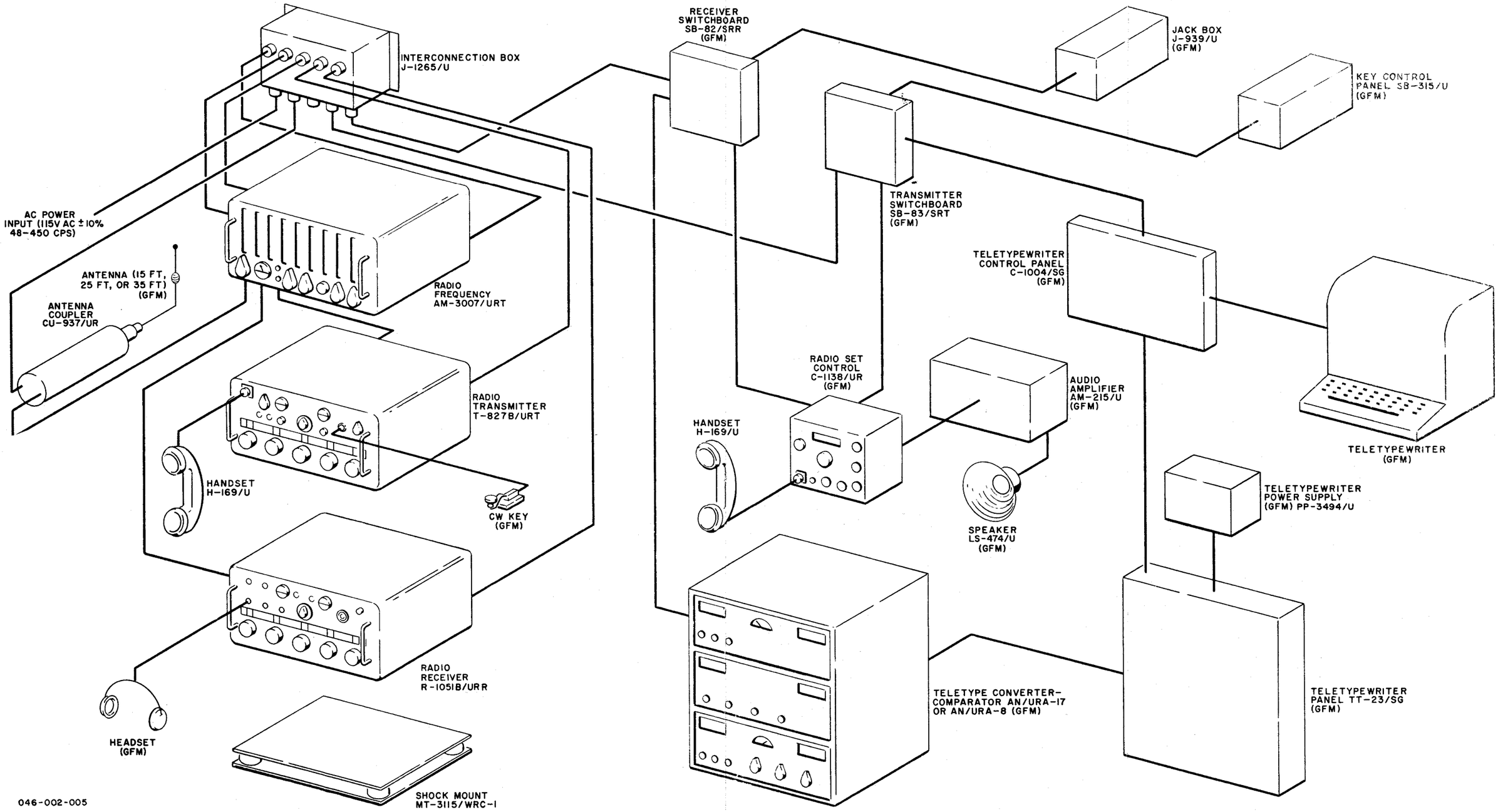


Figure 1-1. Radio Set AN/WRC-1B and Antenna Coupler CU-937/UR, Typical Unit Relationships

Blank/1-0

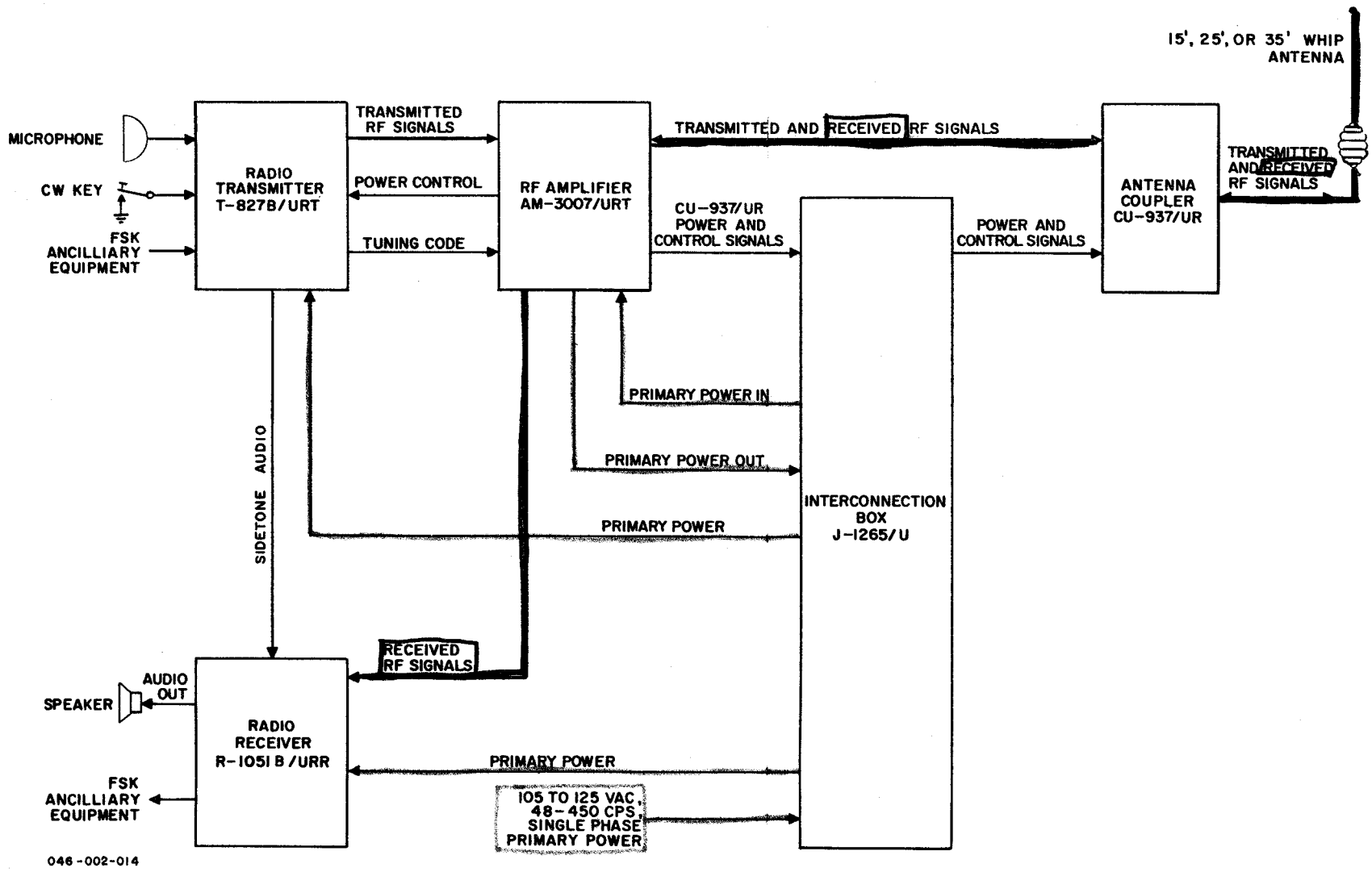


Figure 3-1. Radio Set AN/WRC-1B, Functional Block Diagram

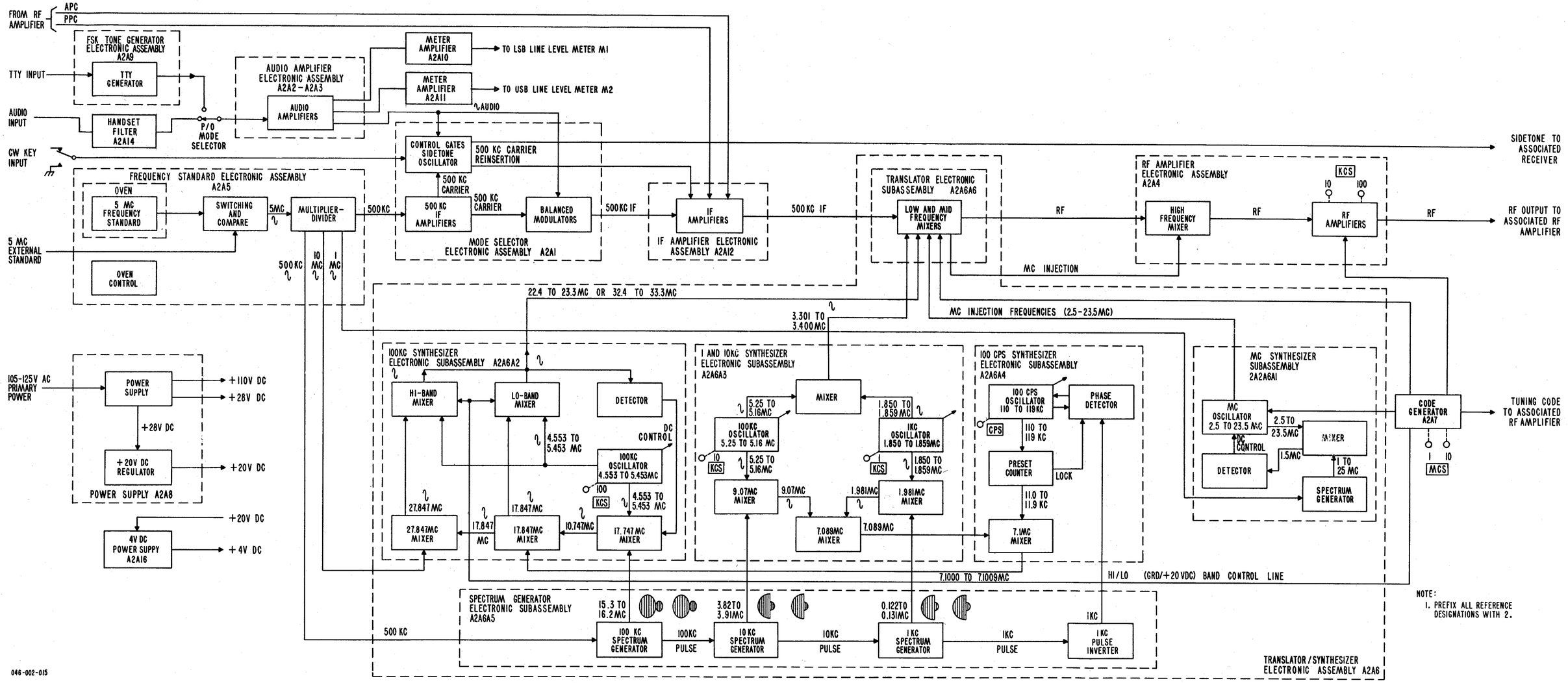


Figure 3-2. Radio Transmitter T-827B/URT, Functional Block Diagram

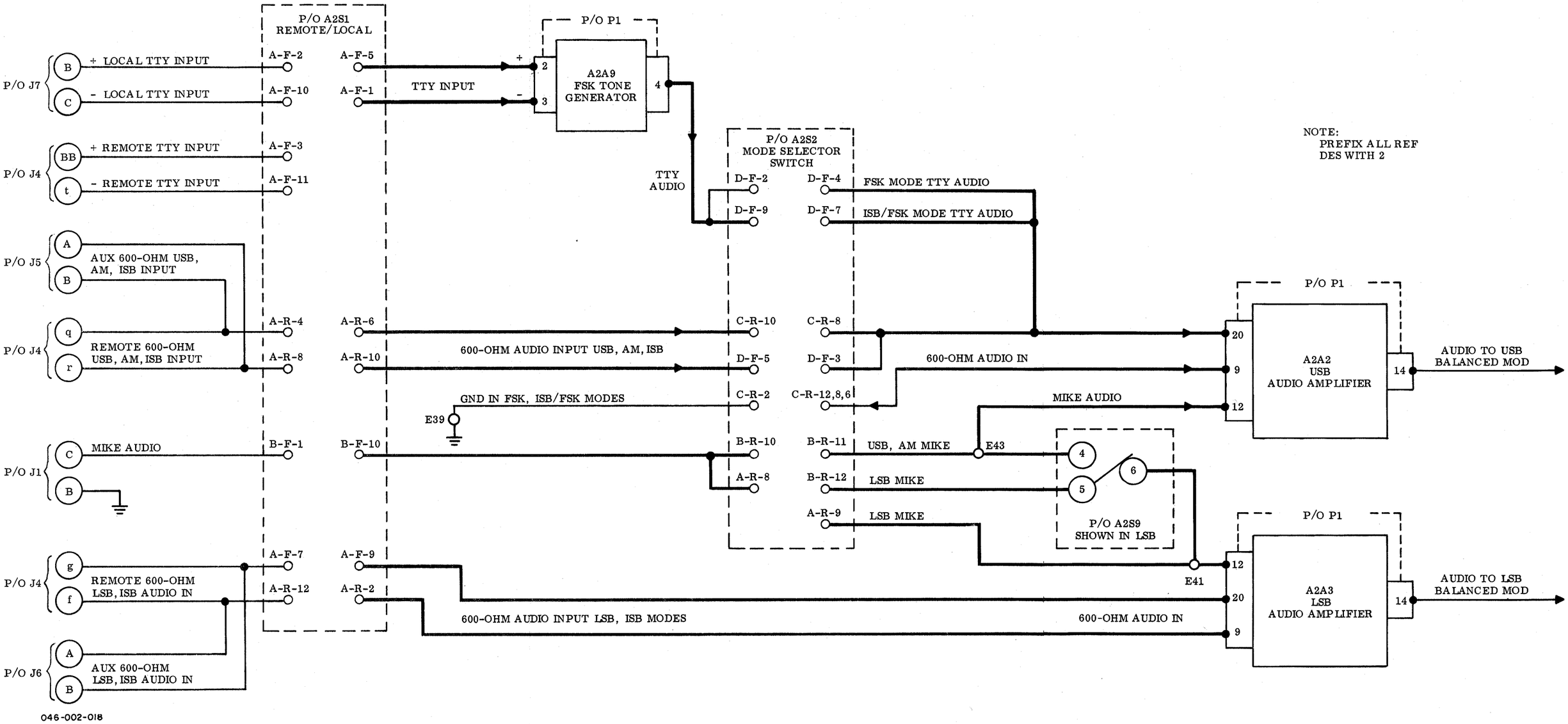


Figure 3-5. T-827B/URT, Audio Signal Flow Section, Simplified Block Diagram

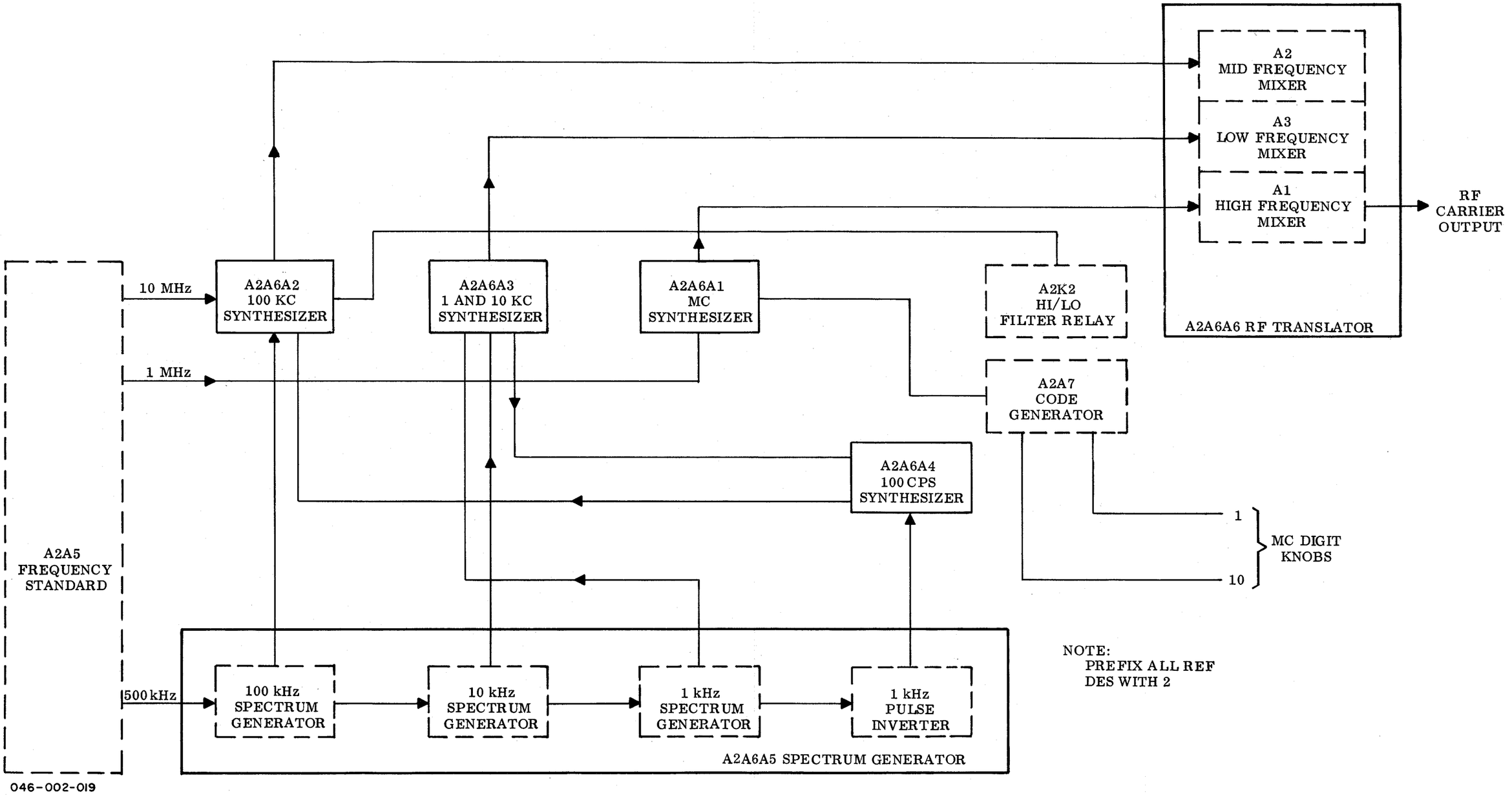
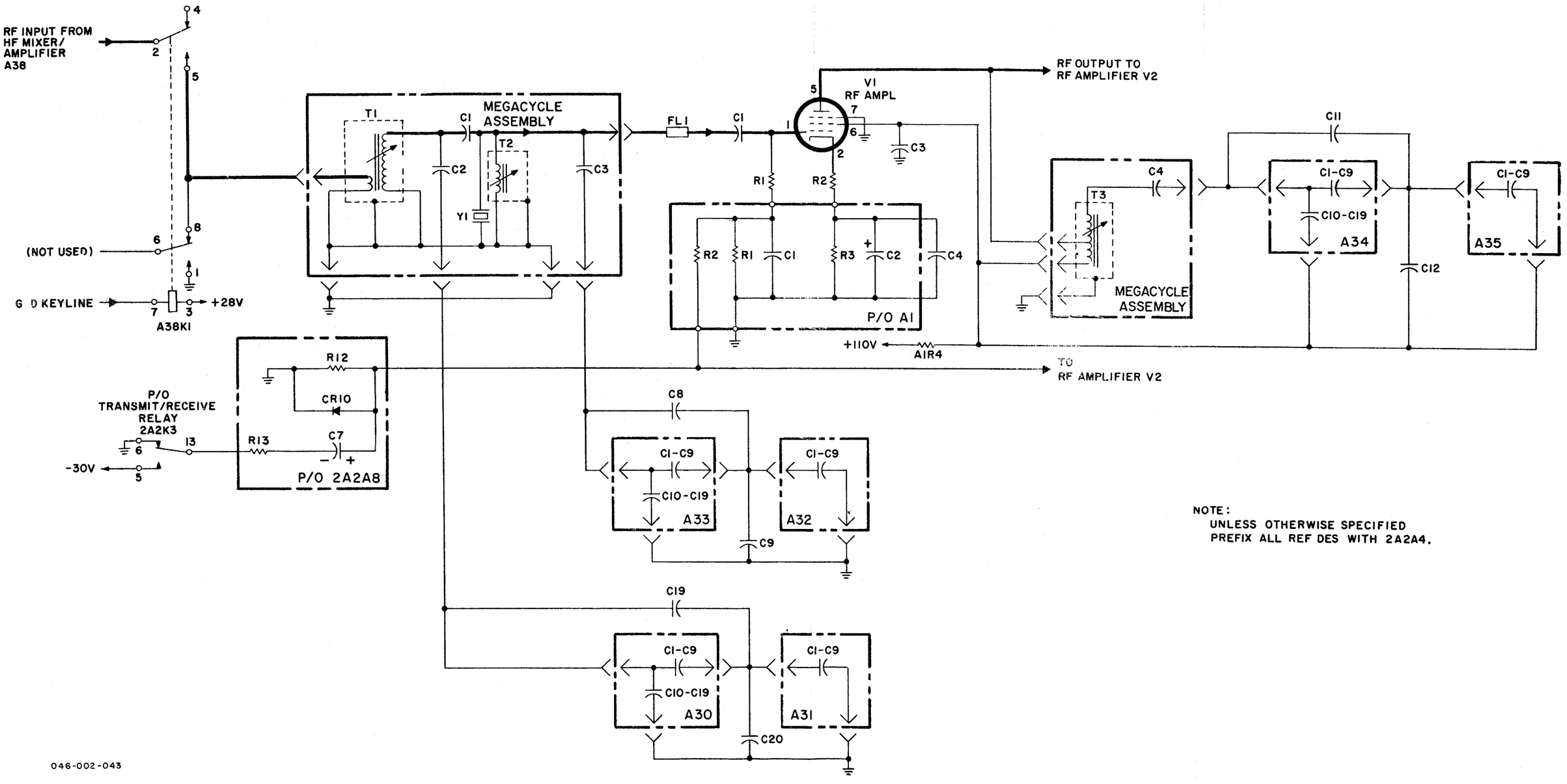


Figure 3-6. T-827B/URT, Frequency Synthesization Section, Simplified Block Diagram



NOTE:
UNLESS OTHERWISE SPECIFIED
PREFIX ALL REF DES WITH 2A2A4.

Figure 3-26. T-827B/URT, RF Amplifier V1, Simplified Schematic Diagram

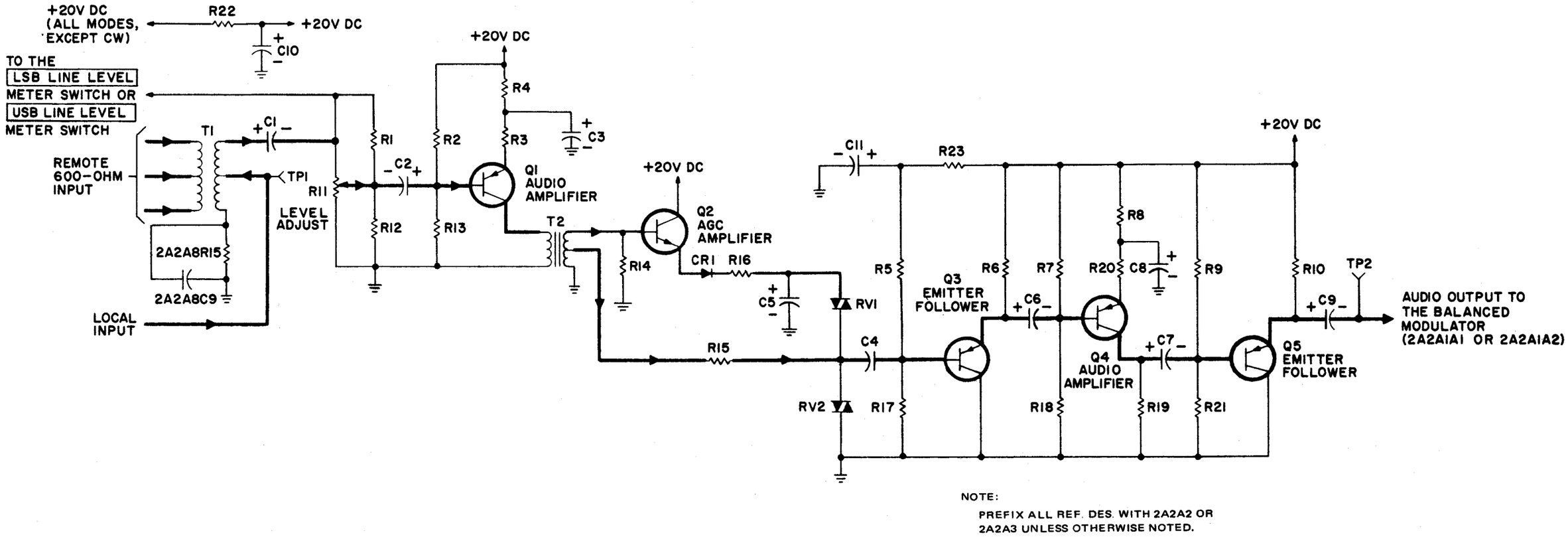
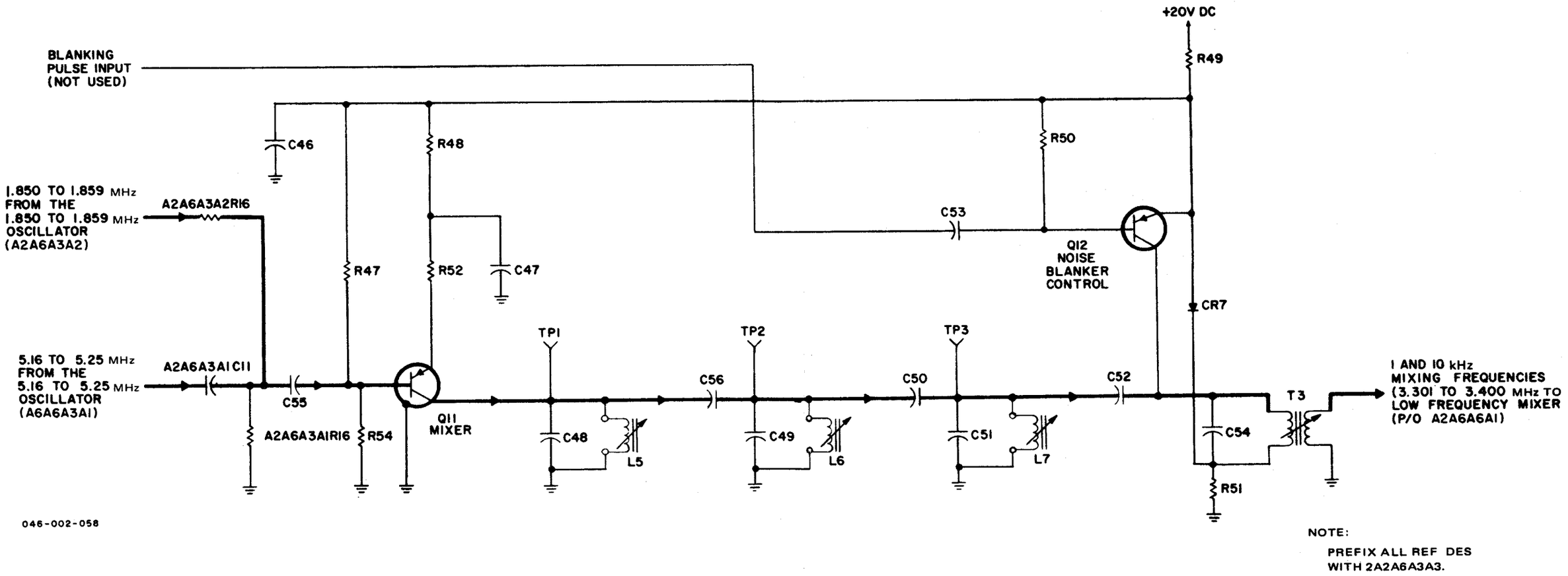


Figure 3-28. T-827B/URT, Audio Amplifier, Simplified Schematic Diagram



NOTE:

PREFIX ALL REF DES
WITH 2A2A6A3A3.

Figure 3-40. T-827B/URT, 1- and 10-kHz Output and Blanker, Simplified Schematic Diagram

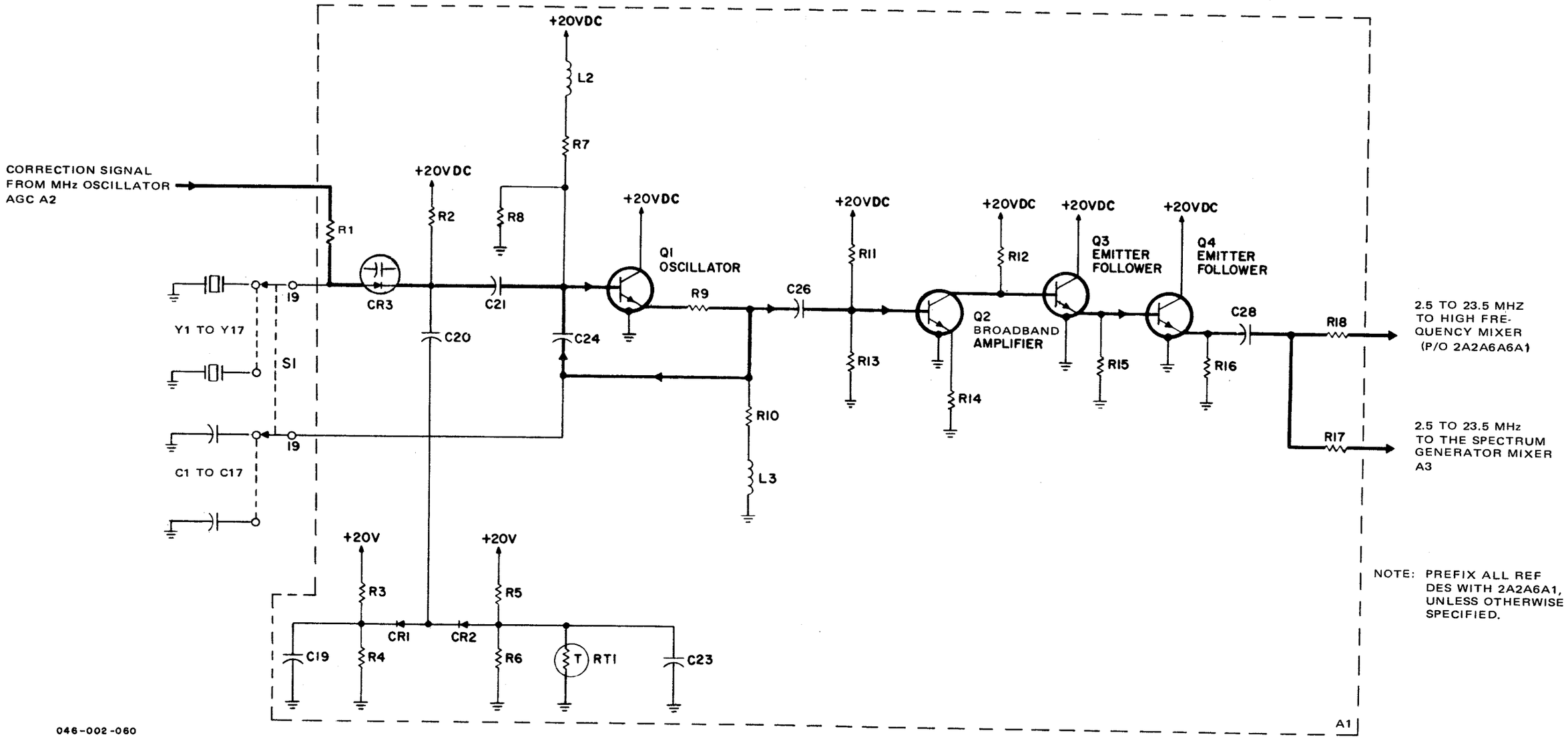


Figure 3-42. T-827B/URT, MHz Oscillator, Simplified Schematic Diagram

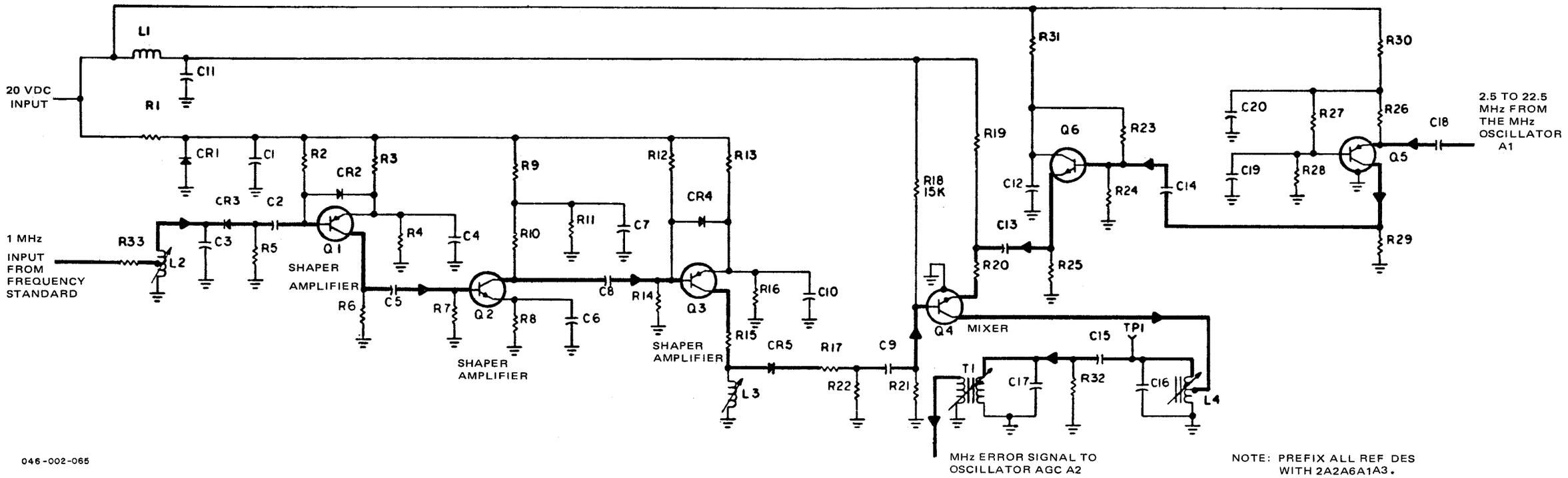


Figure 3-43. T-827B/URT, Spectrum Generator/Mixer, Simplified Schematic Diagram

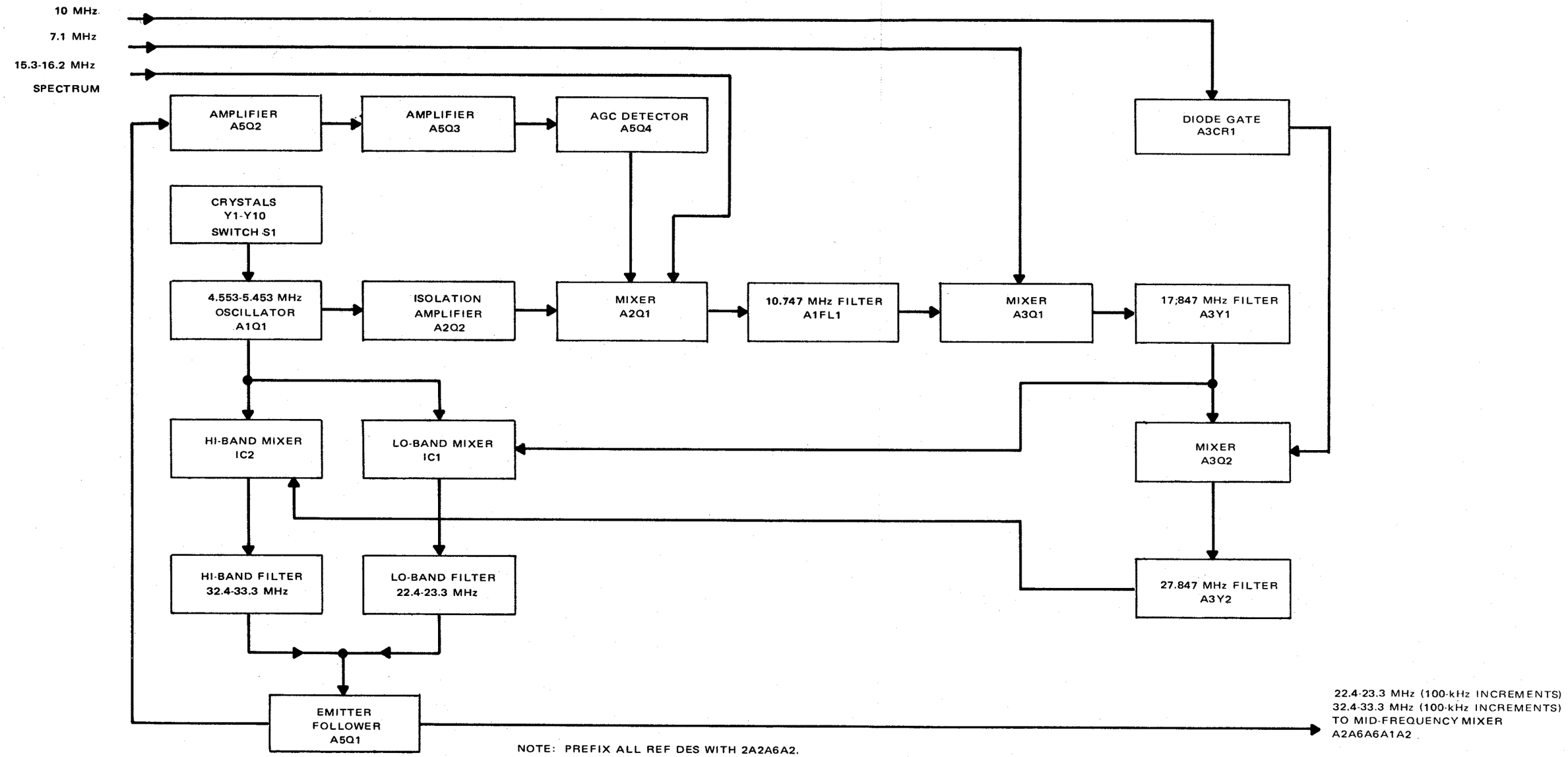
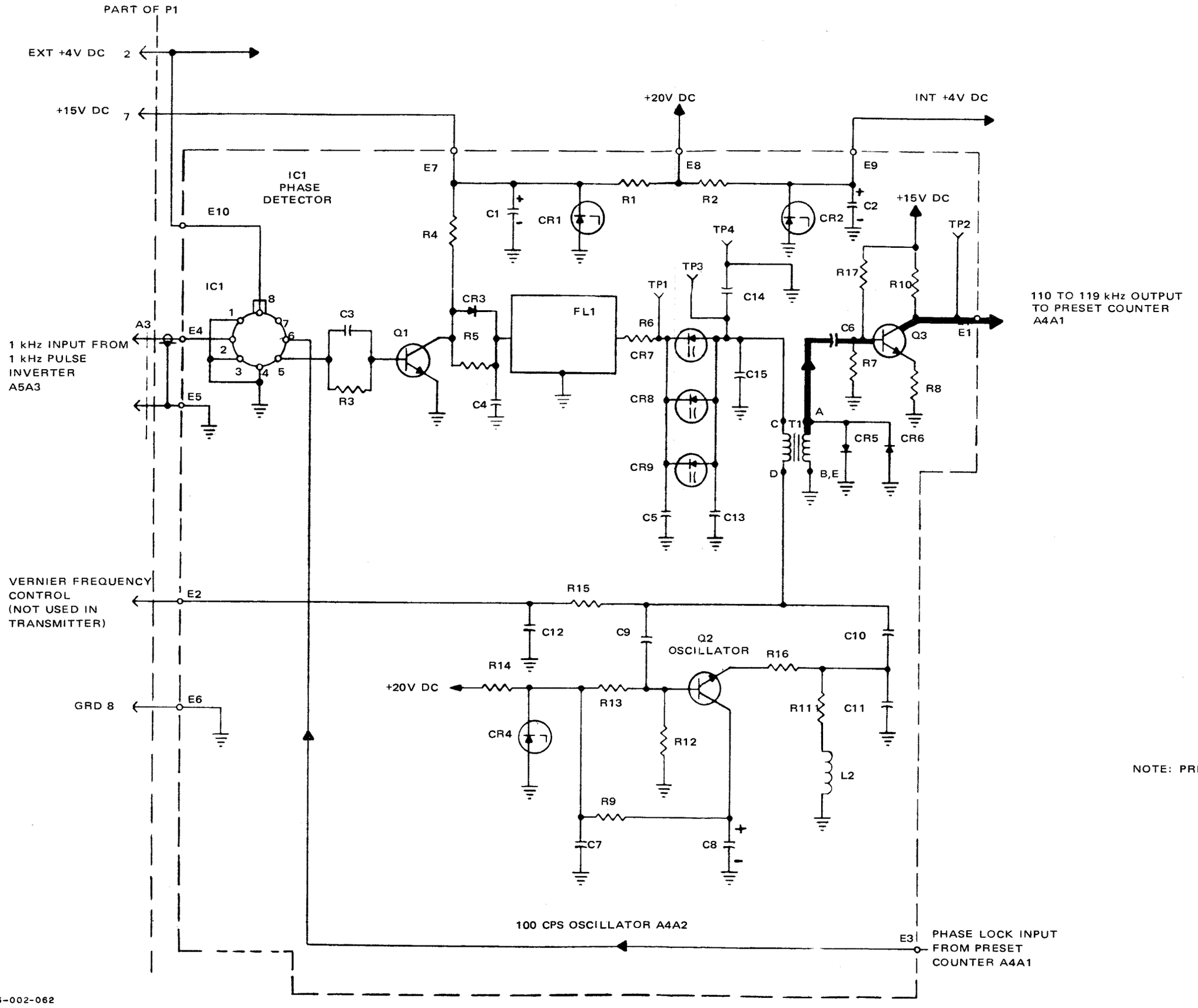


Figure 3-45. T-827B/URT, 100-KC Synthesizer, Simplified Schematic Diagram



NOTE: PREFIX ALL REF DES WITH 2A2A6.

Figure 3-46. T-827B/URT, 100-Hz Oscillator, Simplified Schematic Diagram

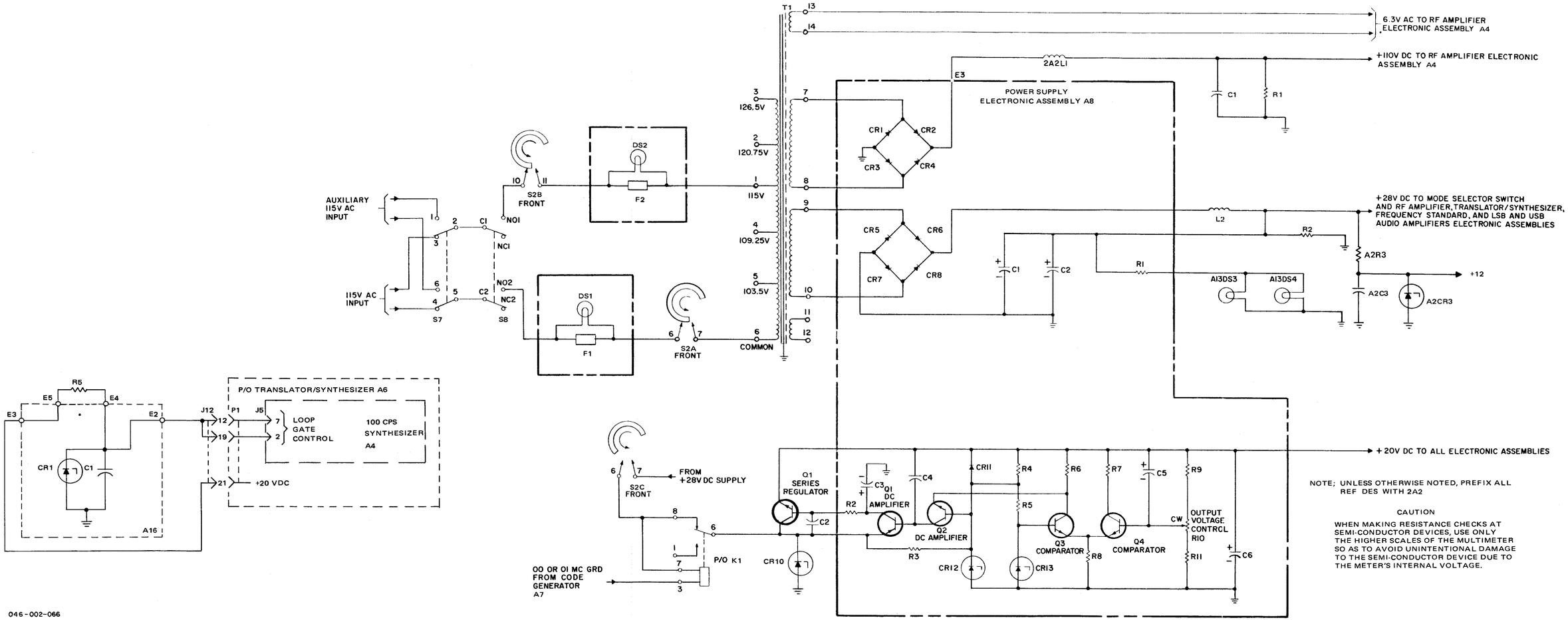


Figure 3-49. T-827B/URT, Power Supply, Simplified Schematic Diagram

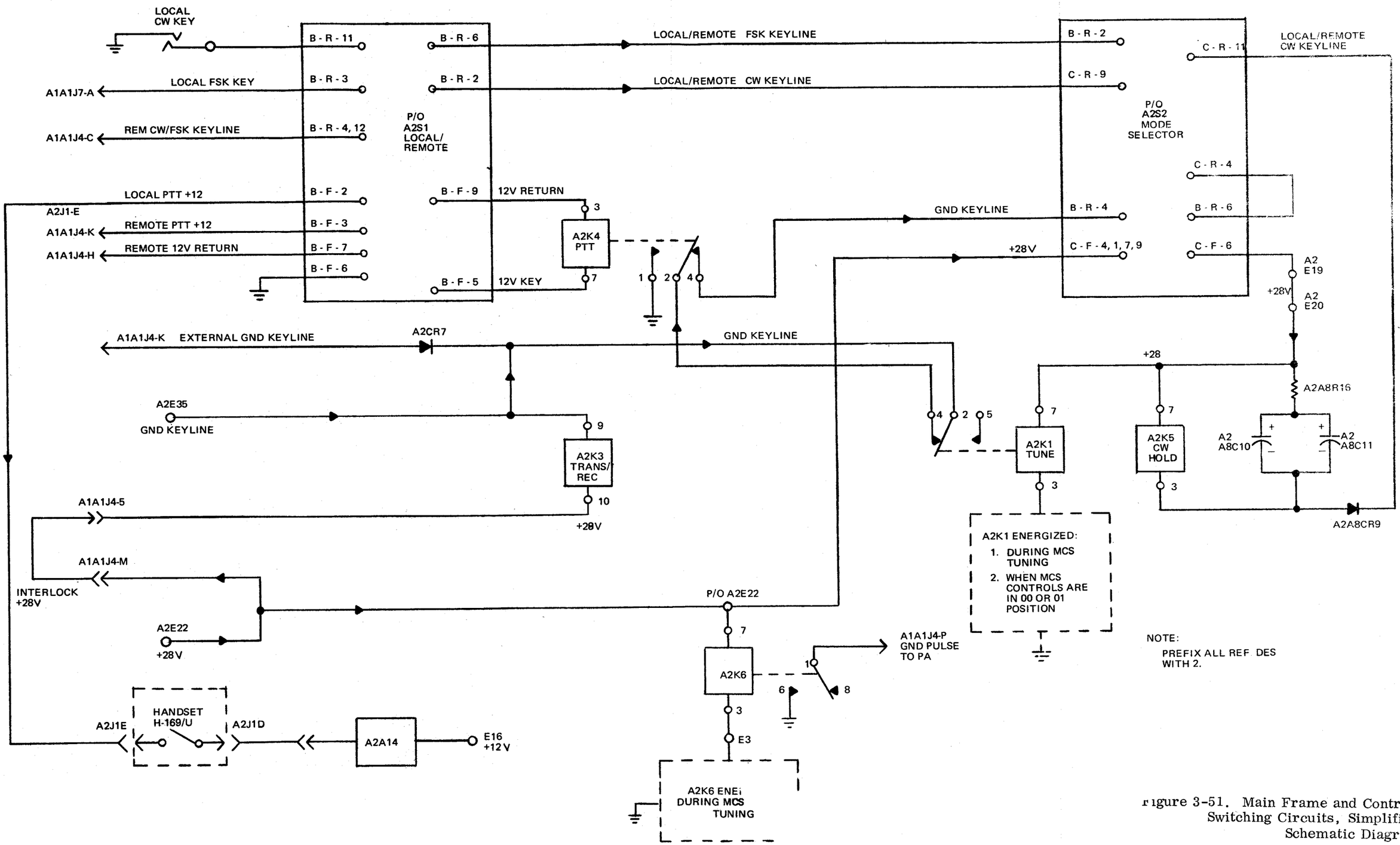
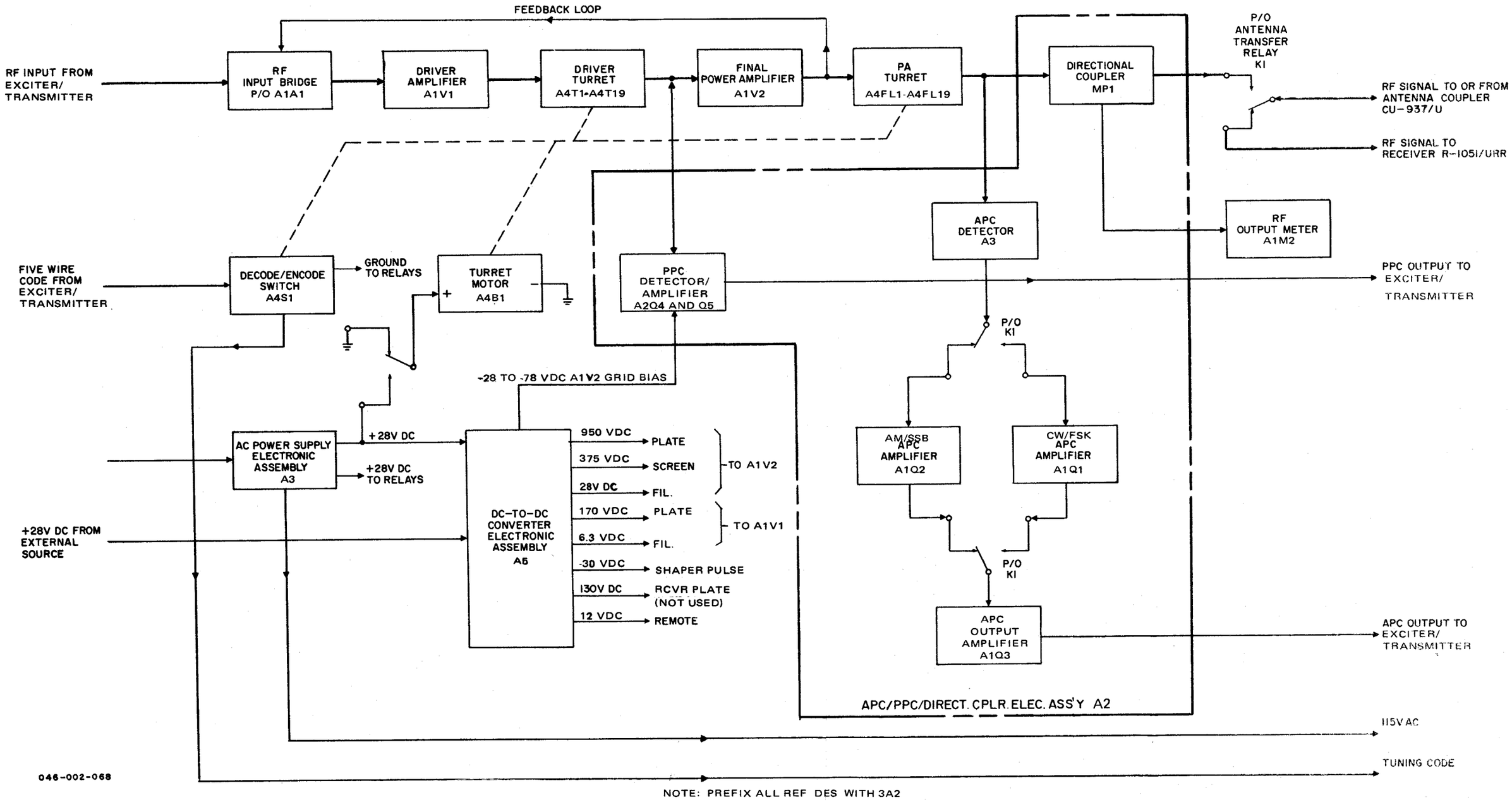


Figure 3-51. Main Frame and Control Switching Circuits, Simplified Schematic Diagram



NOTE: PREFIX ALL REF DES WITH 3A2

Figure 3-52. Radio Frequency Amplifier AM-3007/URT, Functional Block Diagram

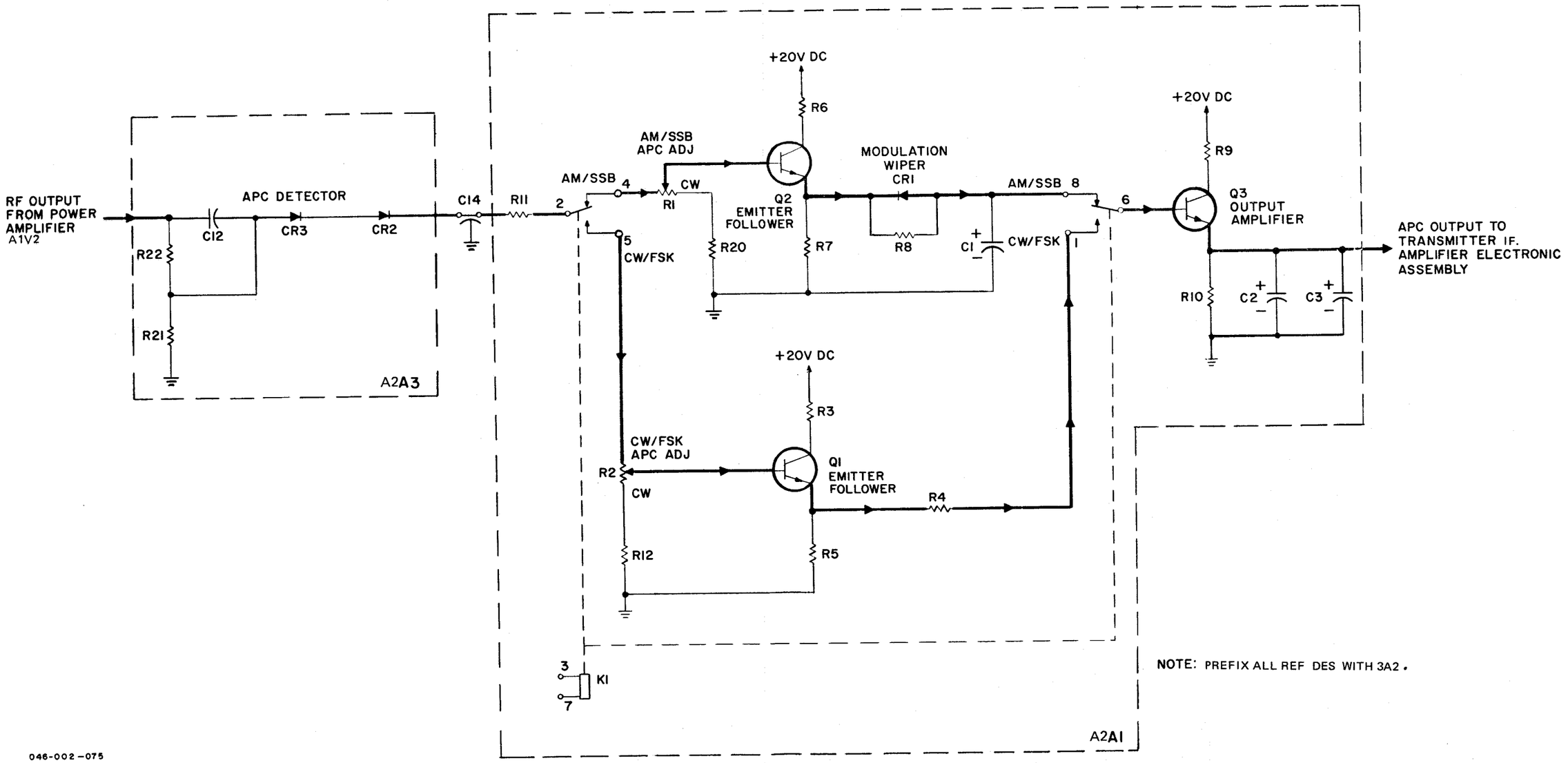
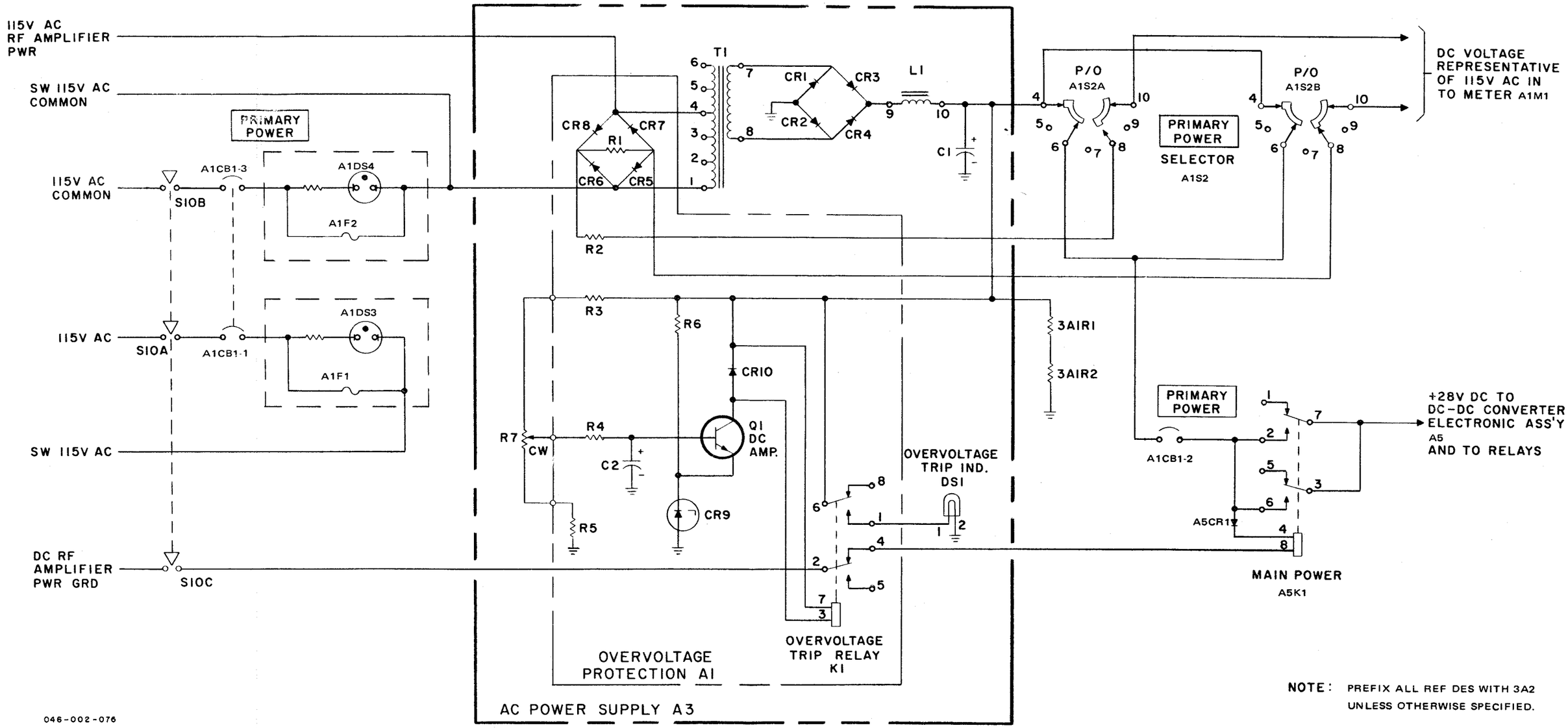
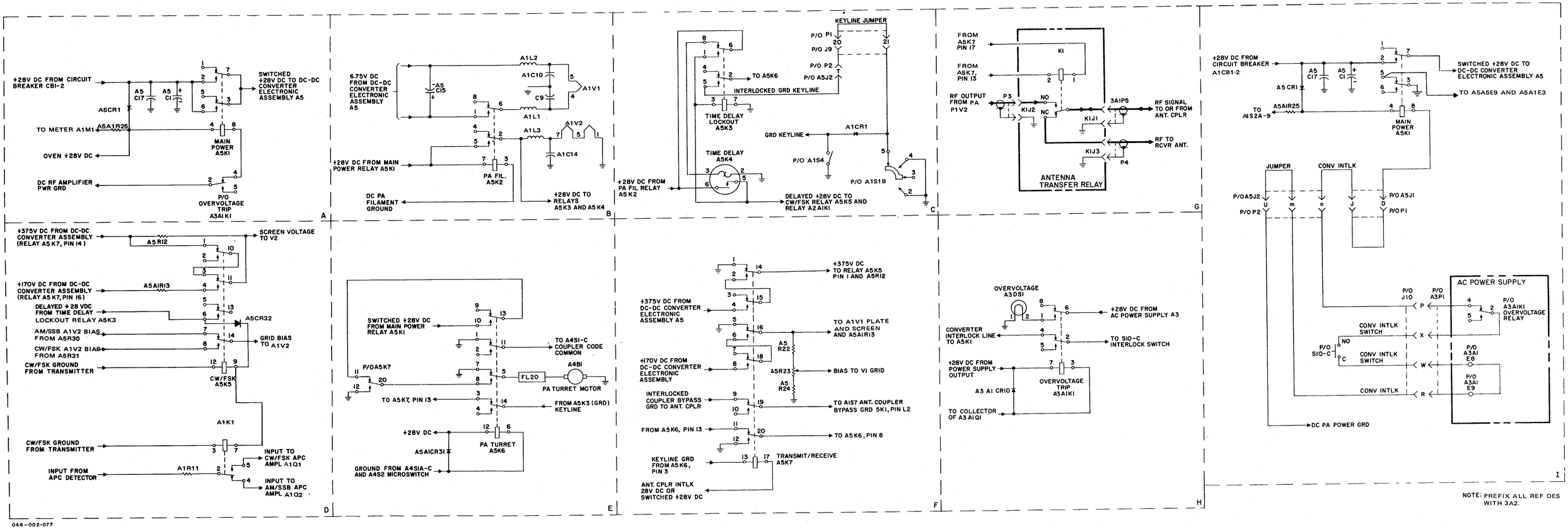


Figure 3-58. AM-3007/URT, APC Amplifier, Simplified Schematic Diagram



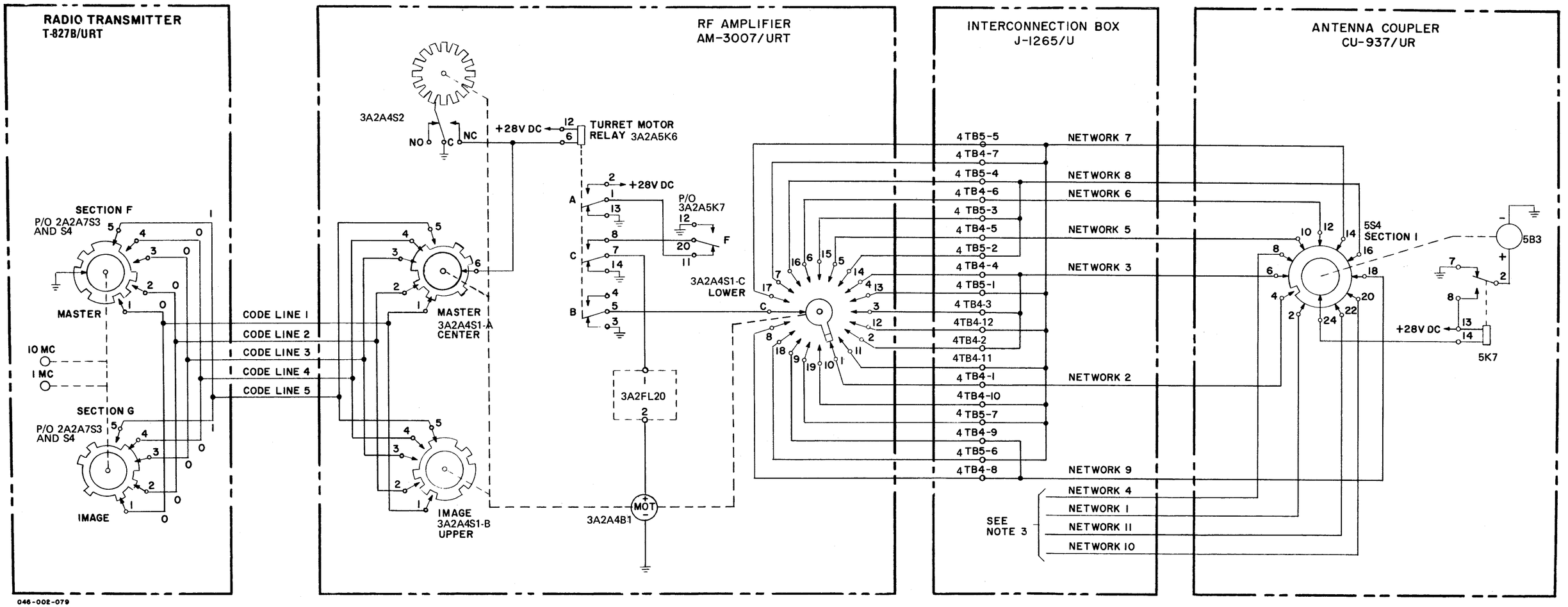
NOTE: PREFIX ALL REF DES WITH 3A2 UNLESS OTHERWISE SPECIFIED.

Figure 3-59. AM-3007/URT, AC Power Supply, Simplified Schematic Diagram



NOTE: PREFIX ALL REF DES WITH 3A2.

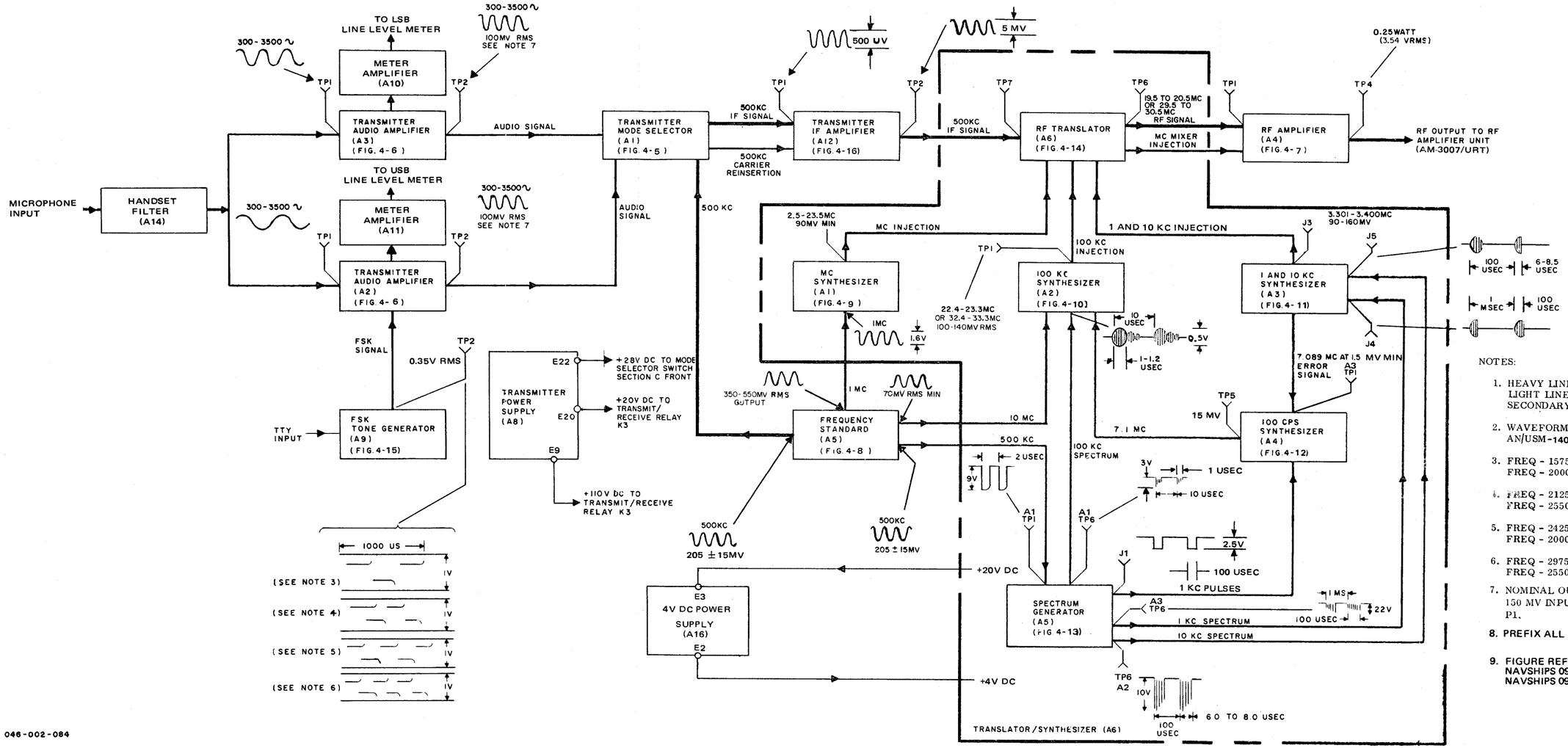
Figure 3-60. AM-3007/URT, Relay Circuits, Simplified Schematic Diagram



NOTES:

1. AS SHOWN, UNITS ARE TUNED FOR 2.0 TO 2.499 MHz.
2. 5TB4 AND 5TB5 IN CU-937/UR ARE SHOWN PROGRAMMED FOR 35-FOOT WHIP ANTENNA.
3. USED ONLY WHEN PROGRAMMED FOR 15- OR 25-FOOT WHIP ANTENNA.

Figure 3-62. System Tuning Circuits, Simplified Schematic Diagram

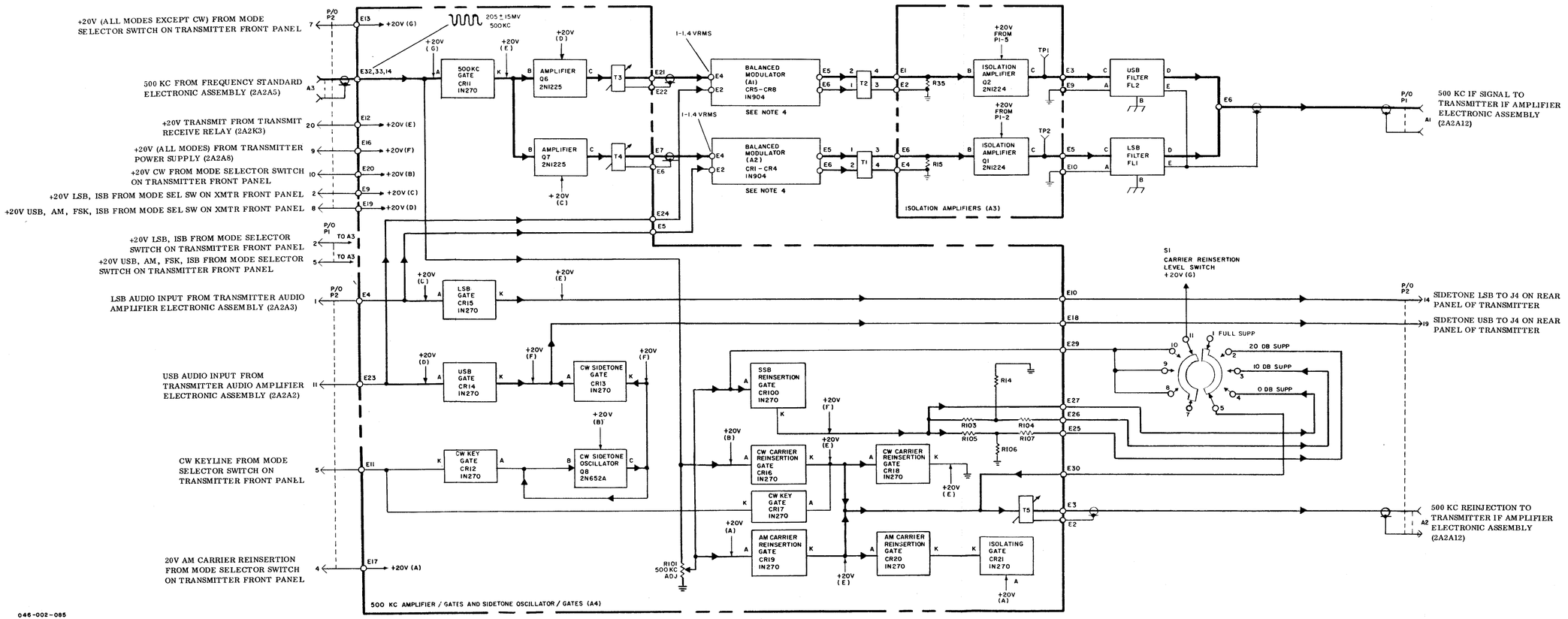


NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. WAVEFORMS RECORDED ON OSCILLOSCOPE AN/USM-140.
3. FREQ - 1575 CPS, FUNCTION - SPACE, CENTER FREQ - 2000 CPS.
4. FREQ - 2125 CPS, FUNCTION - SPACE, CENTER FREQ - 2550 CPS.
5. FREQ - 2425 CPS, FUNCTION - MARK, CENTER FREQ - 2000 CPS.
6. FREQ - 2975 CPS, FUNCTION - MARK, CENTER FREQ - 2550 CPS.
7. NOMINAL OUTPUT 100MV RMS - SINGLE TONE 150 MV INPUT AT PINS 20 AND 9 OF CONNECTOR P1.
8. PREFIX ALL REF DES WITH 2A2.
9. FIGURE REFERENCES APPLICABLE TO BOTH NAVSHIPS 0967-200-3010 AND NAVSHIPS 0967-427-5010.

046-002-084

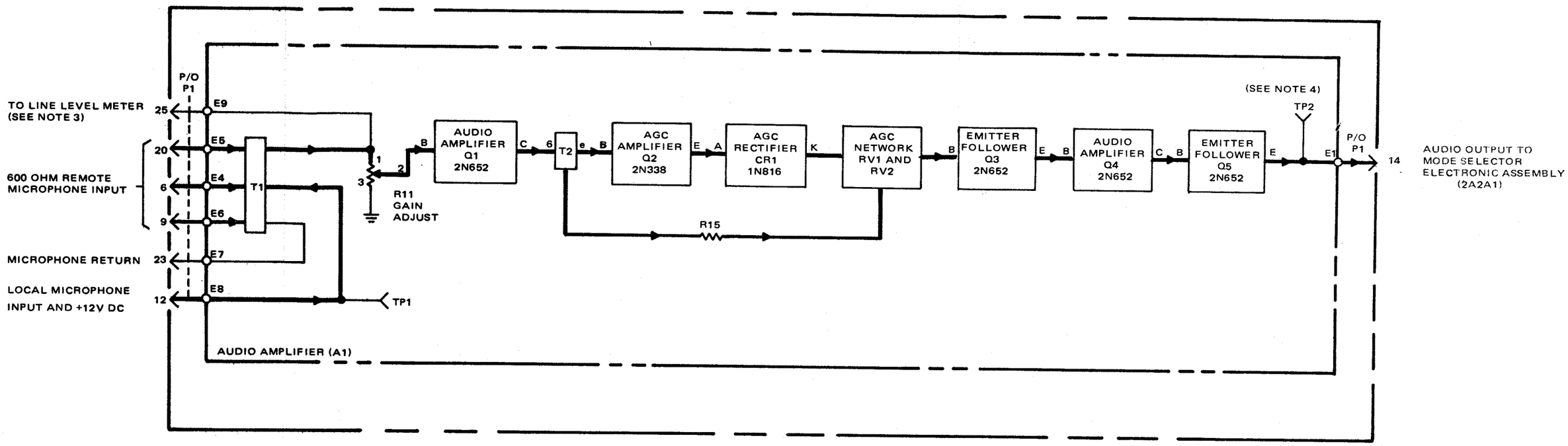
Figure 4-4. Radio Transmitter T-827B/URT, Overall Servicing Block Diagram



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. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
3. THE INPUT AT P1-2, 5 AND P2-2, 4, 7, 8, 9, 10, AND 20 ARE GATE CONTROL SIGNALS. THE APPLICATIONS OF THESE ARE INDICATED ON THIS DIAGRAM BY →
4. SEE FIGURE 5-5 IN NAVSHIPS 0967-200-3010 SEE FIGURE 5-14 IN NAVSHIPS 0967-427-5010 FOR A DETAILED SCHEMATIC OF BALANCED MODULATOR.
5. ALL VOLTAGES ARE DC UNLESS OTHERWISE SPECIFIED.
6. PREFIX ALL REF DES WITH 2A2A1.

Figure 4-5. Transmitter Mode Selector Assembly 2A2A1, Servicing Block Diagram

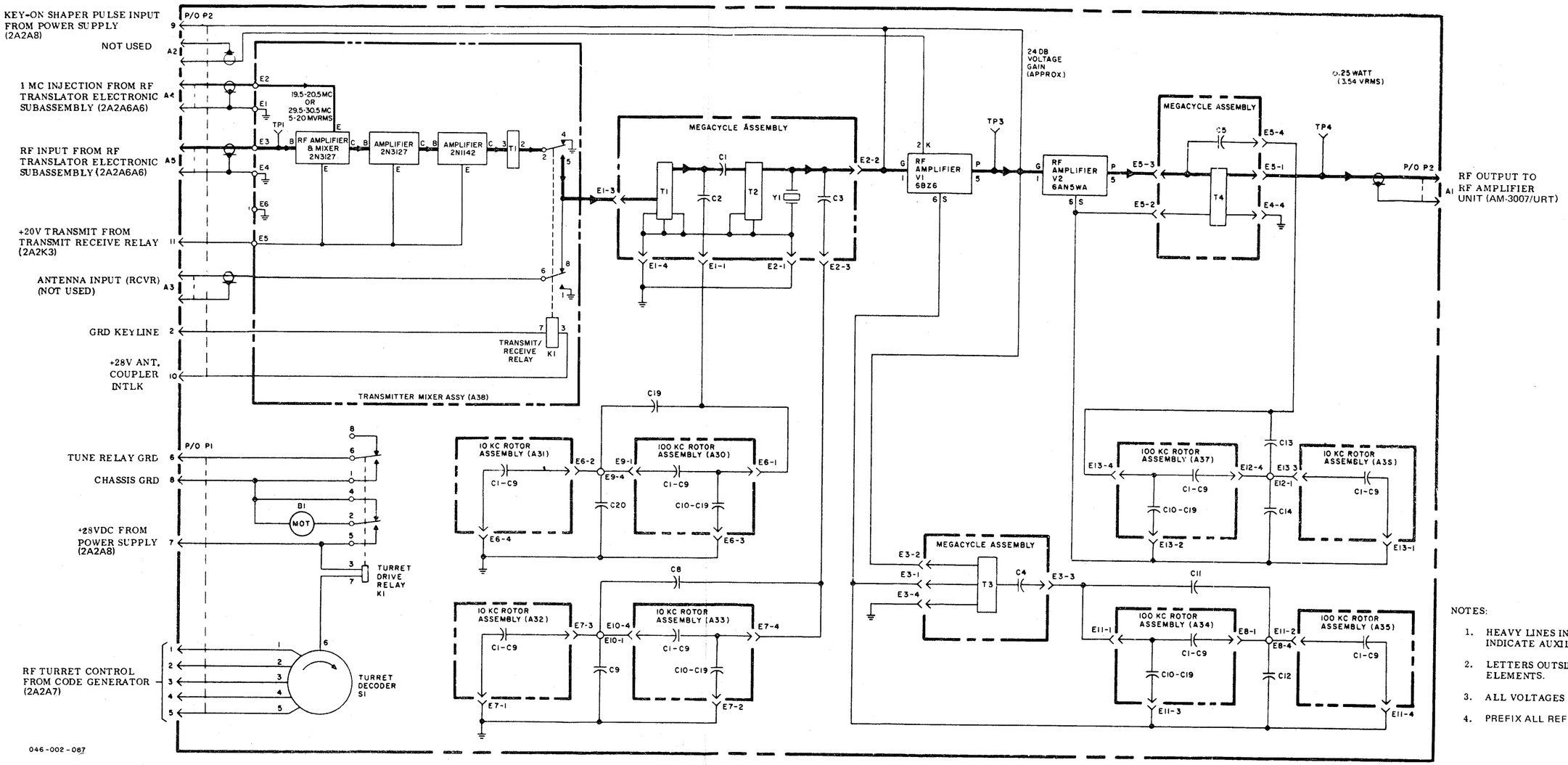


NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
3. DURING LSB OPERATION THE AUDIO LEVEL AT P1-25 IS OBSERVED ON THE LSB LINE LEVEL METER (M1). DURING USB OPERATION THE AUDIO LEVEL AT P1-25 IS OBSERVED ON THE USB LINE LEVEL METER (M2).
4. NOMINAL OUTPUT 100 MV RMS - SINGLE TONE 150 MV INPUT AT PINS 20 AND 9 OF CONNECTOR P1 OR 44 MV AT A2J1-C TO GROUND.
5. PREFIX ALL REF DES WITH 2A2A2 (USB) OR 2A2A3 (LSB).

046-002-086

Figure 4-6. Transmitter Audio Amplifier Assemblies 2A2A2 or 2A2A3, 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. PREFIX ALL REF DES WITH 2A2A4.

Figure 4-7. RF Amplifier Assembly 2A2A4, Servicing Block Diagram

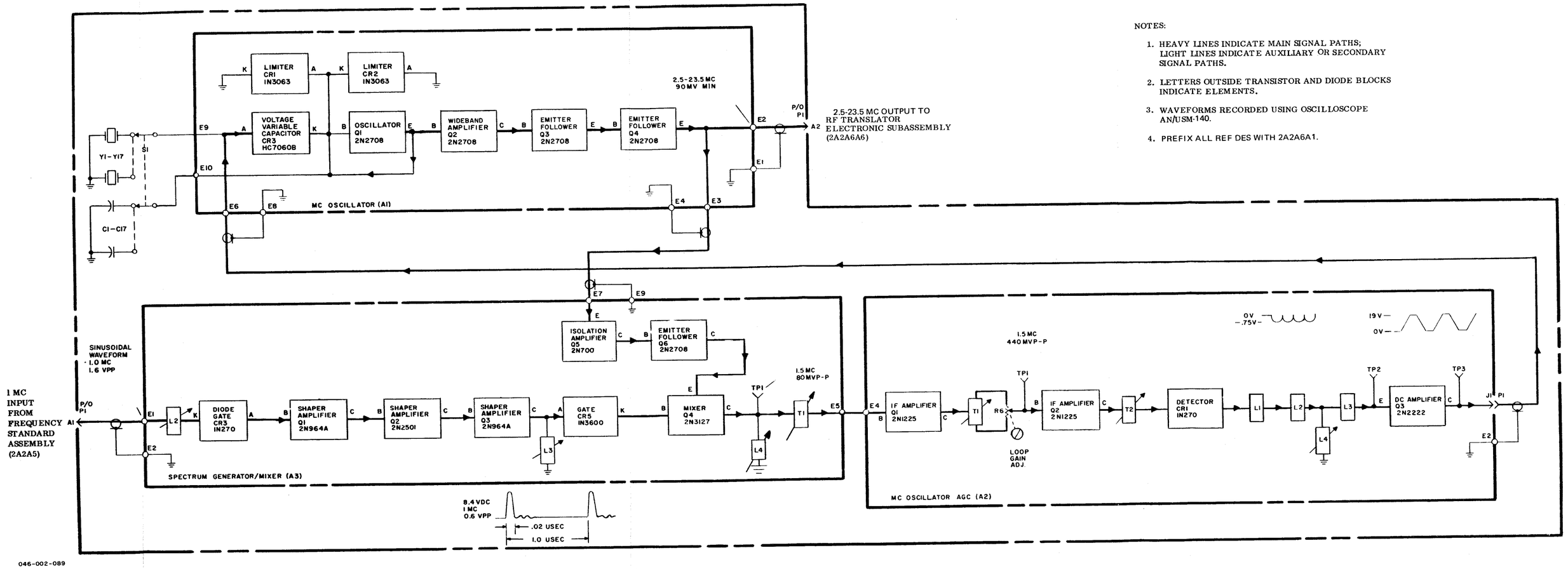
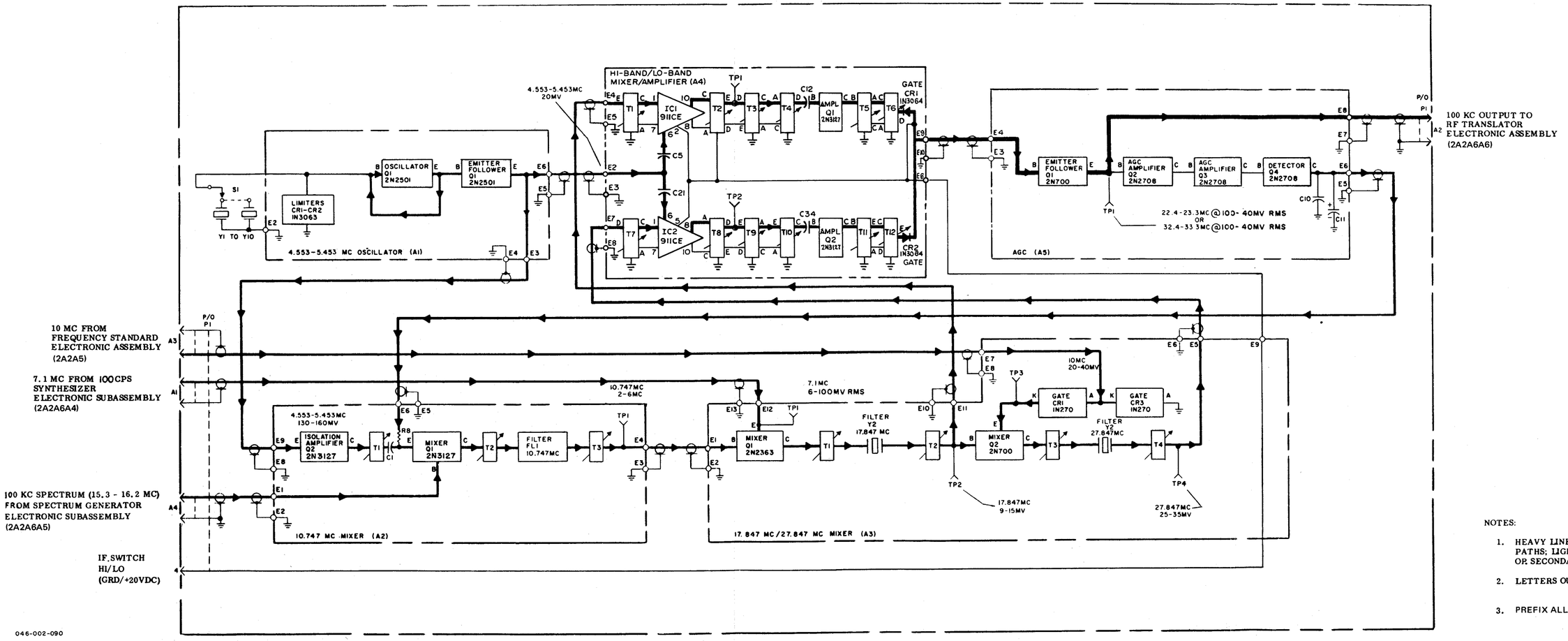


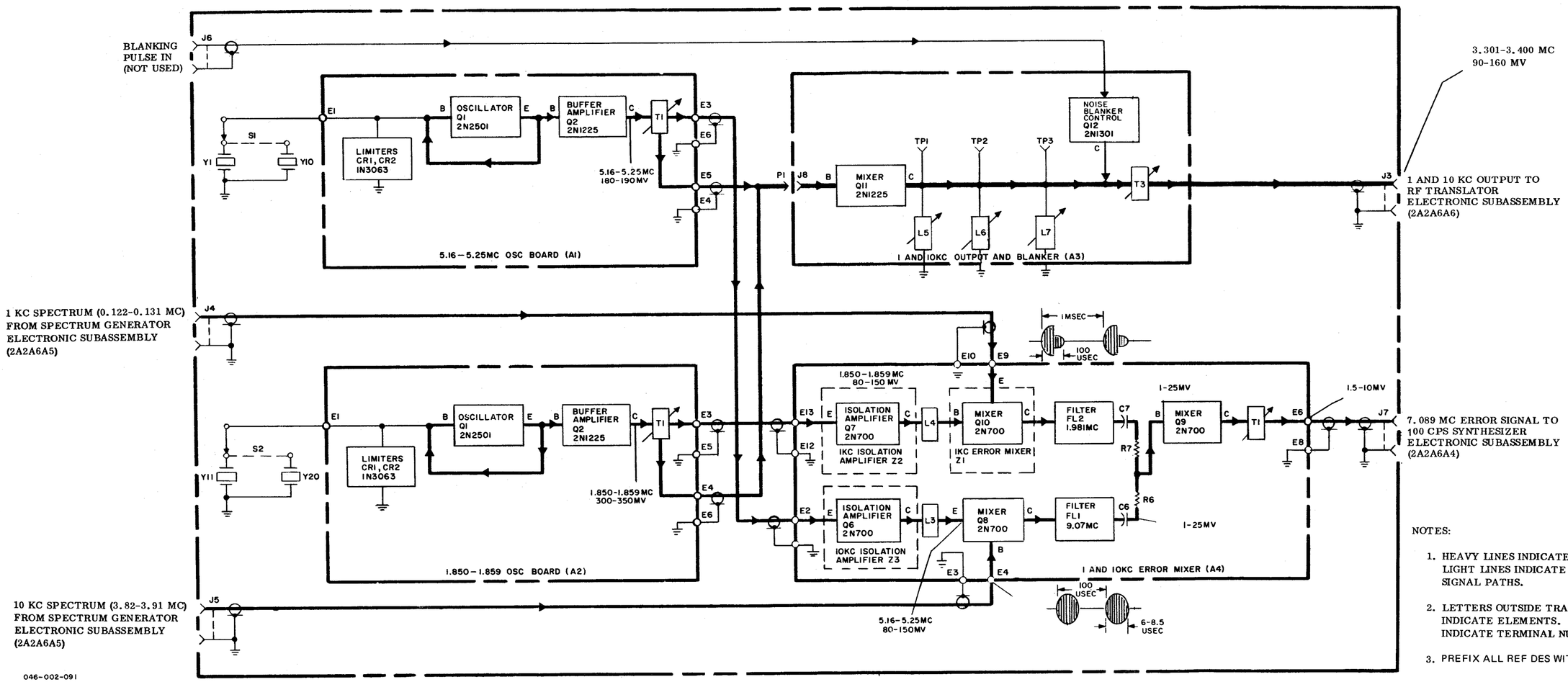
Figure 4-9. MC Synthesizer Subassembly 2A2A6A1, Servicing Block Diagram



NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. LETTERS OUTSIDE TRANSISTOR AND DIODE
3. PREFIX ALL REF DES WITH 2A2A6A2.

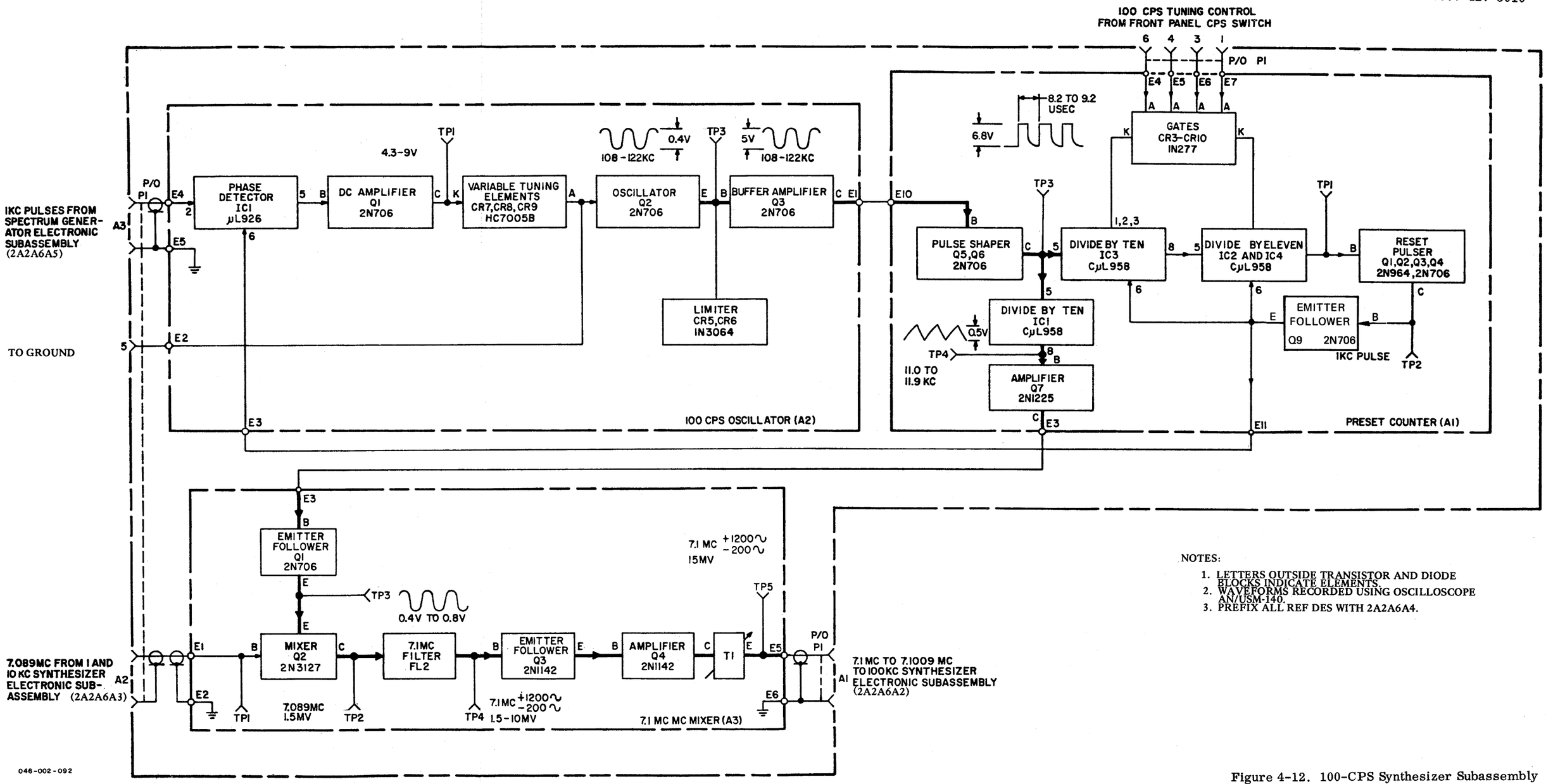
Figure 4-10. 100 KC Synthesizer Subassembly 2A2A6A2, Servicing Block Diagram



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. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
3. PREFIX ALL REF DES WITH 2A2A6A3.

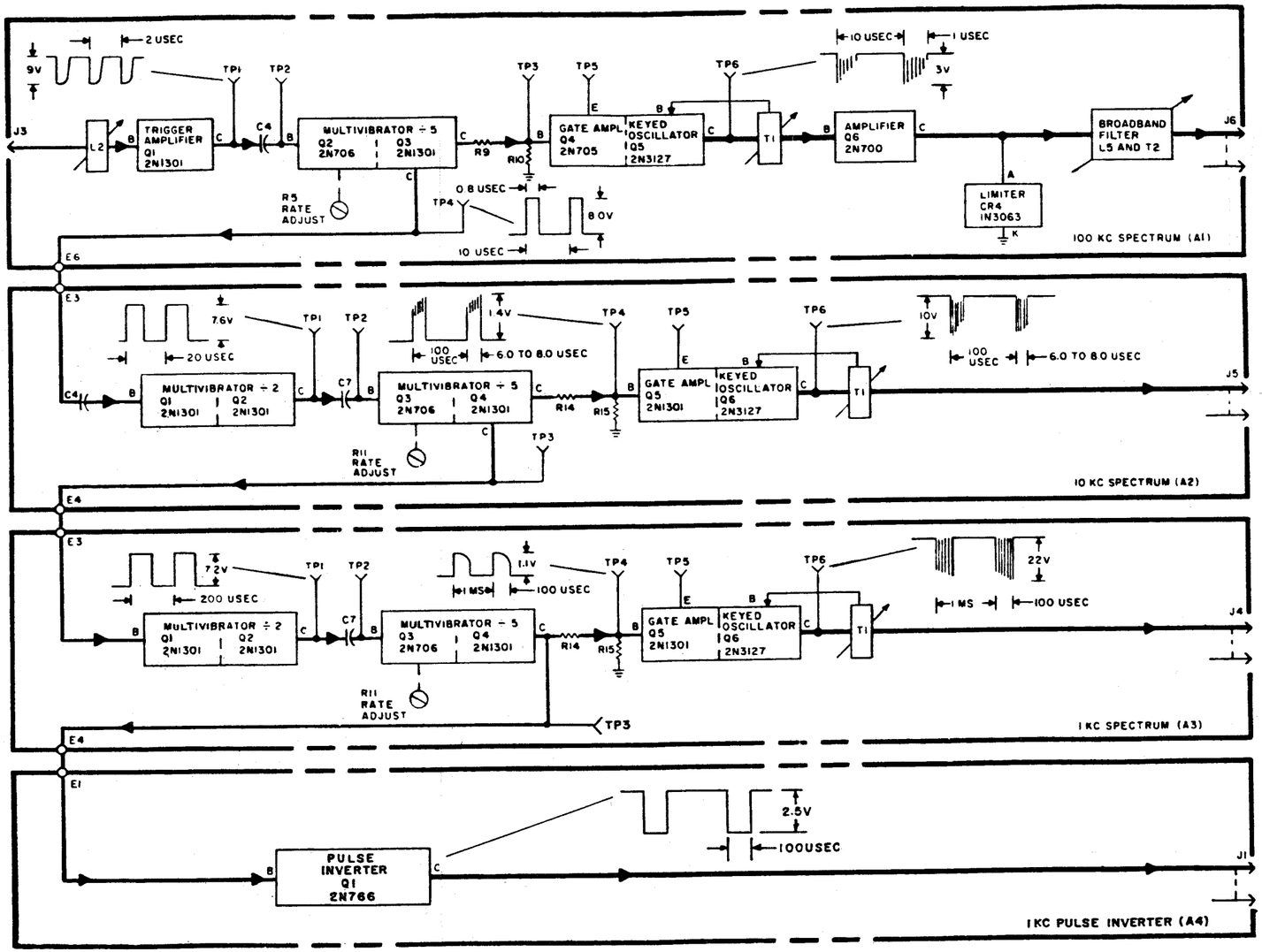
Figure 4-11. 1- and 10-KC Synthesizer Subassembly 2A2A6A3, Servicing Block Diagram



NOTES:

1. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS.
2. WAVEFORMS RECORDED USING OSCILLOSCOPE AN/USM-140.
3. PREFIX ALL REF DES WITH 2A2A6A4.

Figure 4-12. 100-CPS Synthesizer Subassembly 2A2A6A4, 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 BLOCK INDICATE ELEMENTS.
3. WAVEFORMS RECORDED USING OSCILLOSCOPE AN USM-140.
4. PREFIX ALL REF DES WITH 2A2A6A5.

Figure 4-13. Spectrum Generator Subassembly 2A2A6A5, Servicing Block Diagram

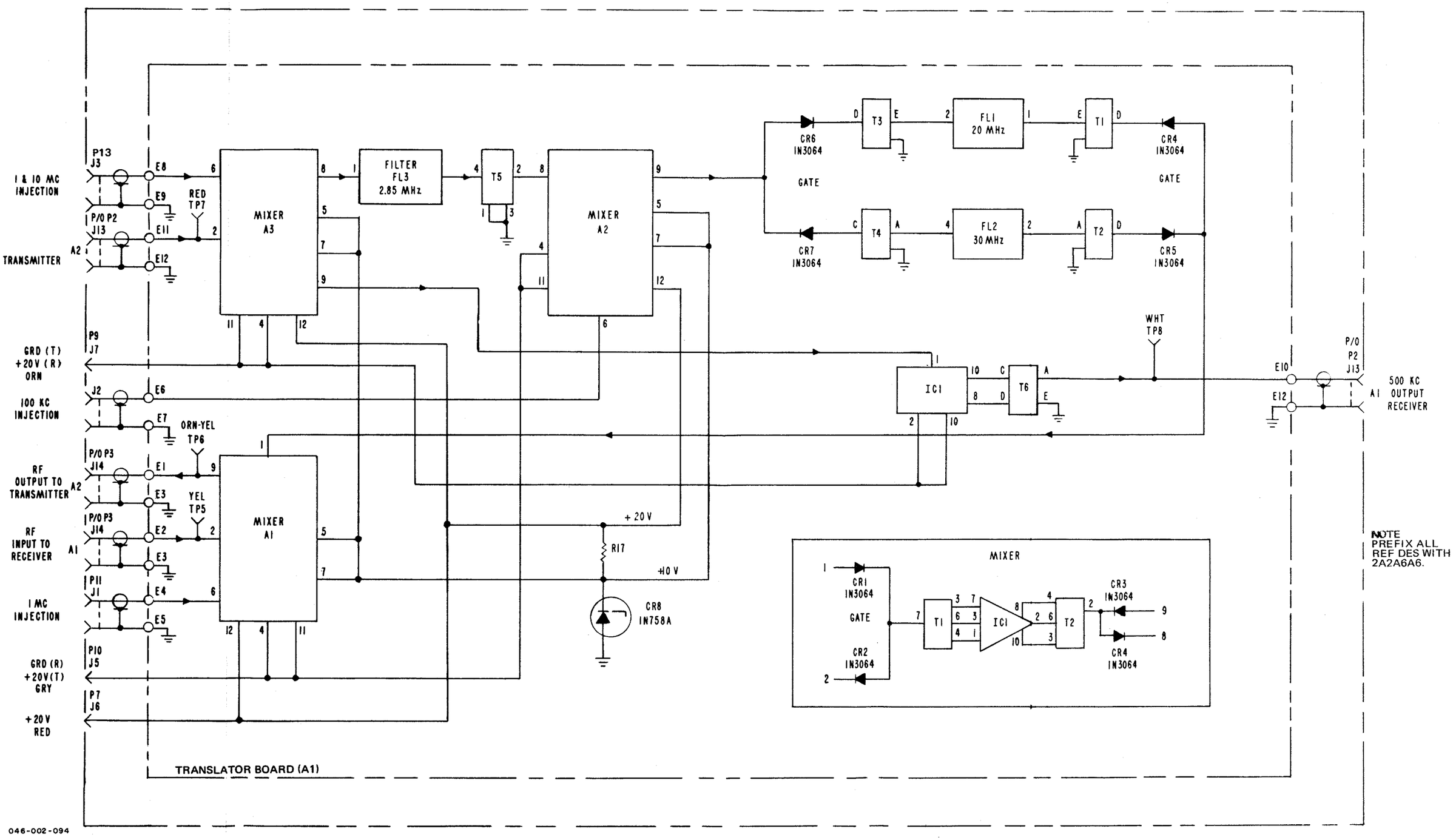
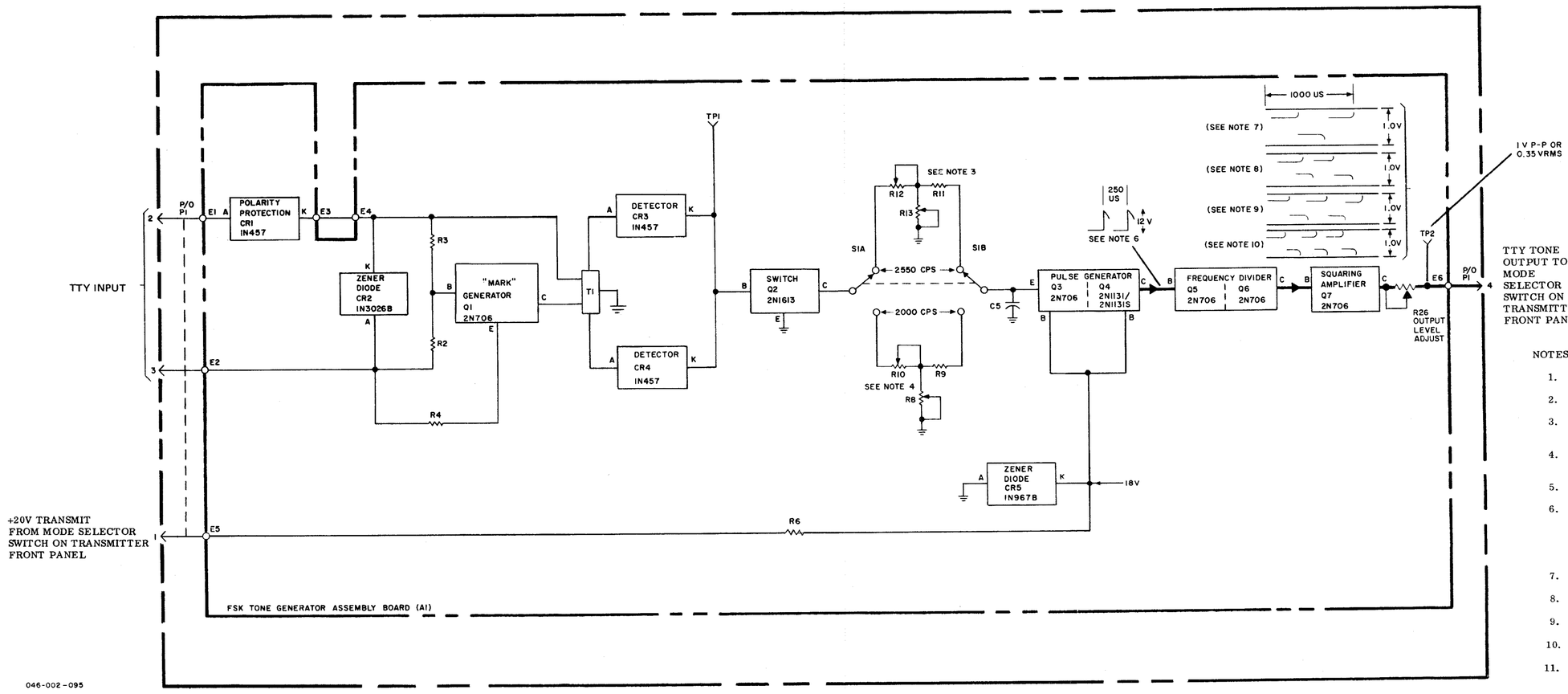


Figure 4-14. RF Translator Subassembly 2A2A6A6, Servicing Block Diagram

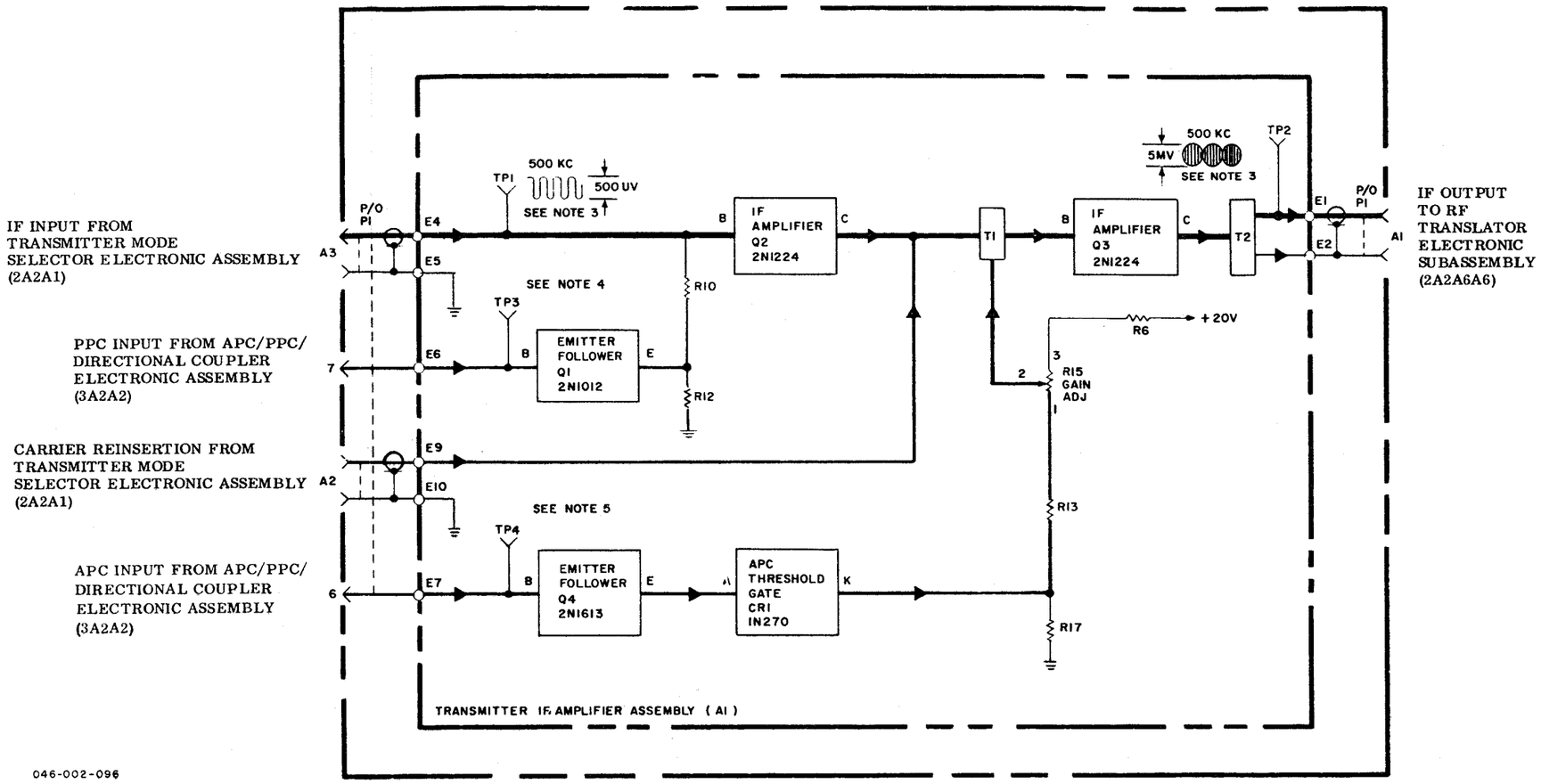


NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. LETTERS OUTSIDE OF TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS.
3. R 12 ADJUSTED FOR 2550 CPS CENTER FREQ "MARK" (2975 CPS)
   R 13 ADJUSTED FOR 2550 CPS CENTER FREQ "SPACE" (2125 CPS).
4. R 10 ADJUSTED FOR 2000 CPS CENTER FREQ "MARK" (2425 CPS)
   R 8 ADJUSTED FOR 2000 CPS CENTER FREQ "SPACE" (1575 CPS).
5. WAVEFORMS RECORDED ON OSCILLOSCOPE AN/USM-281.
6. COLLECTOR OF Q4 TTY FUNCTION: SPACE
   OSCILLOSCOPE SETTING: 0.5 V/CM X 10, 100 USEC/CM.

   NOTES 7, 8, 9, 10 APPLY TO WAVEFORM AT TP2.
   OSCILLOSCOPE SETTING: 0.5V/CM X 10, 100 USEC/CM.
7. FREQ - 1575 CPS, FUNCTION - SPACE, CENTER FREQ - 2000 CPS.
8. FREQ - 2125 CPS, FUNCTION - SPACE, CENTER FREQ - 2550 CPS.
9. FREQ - 2425 CPS, FUNCTION - MARK, CENTER FREQ - 2000 CPS.
10. FREQ - 2975 CPS, FUNCTION - MARK, CENTER FREQ - 2550 CPS.
11. PREFIX ALL REF DES WITH 2A2A9.

Figure 4-15. FSK Tone Generator Assembly 2A2A9, Servicing Block Diagram

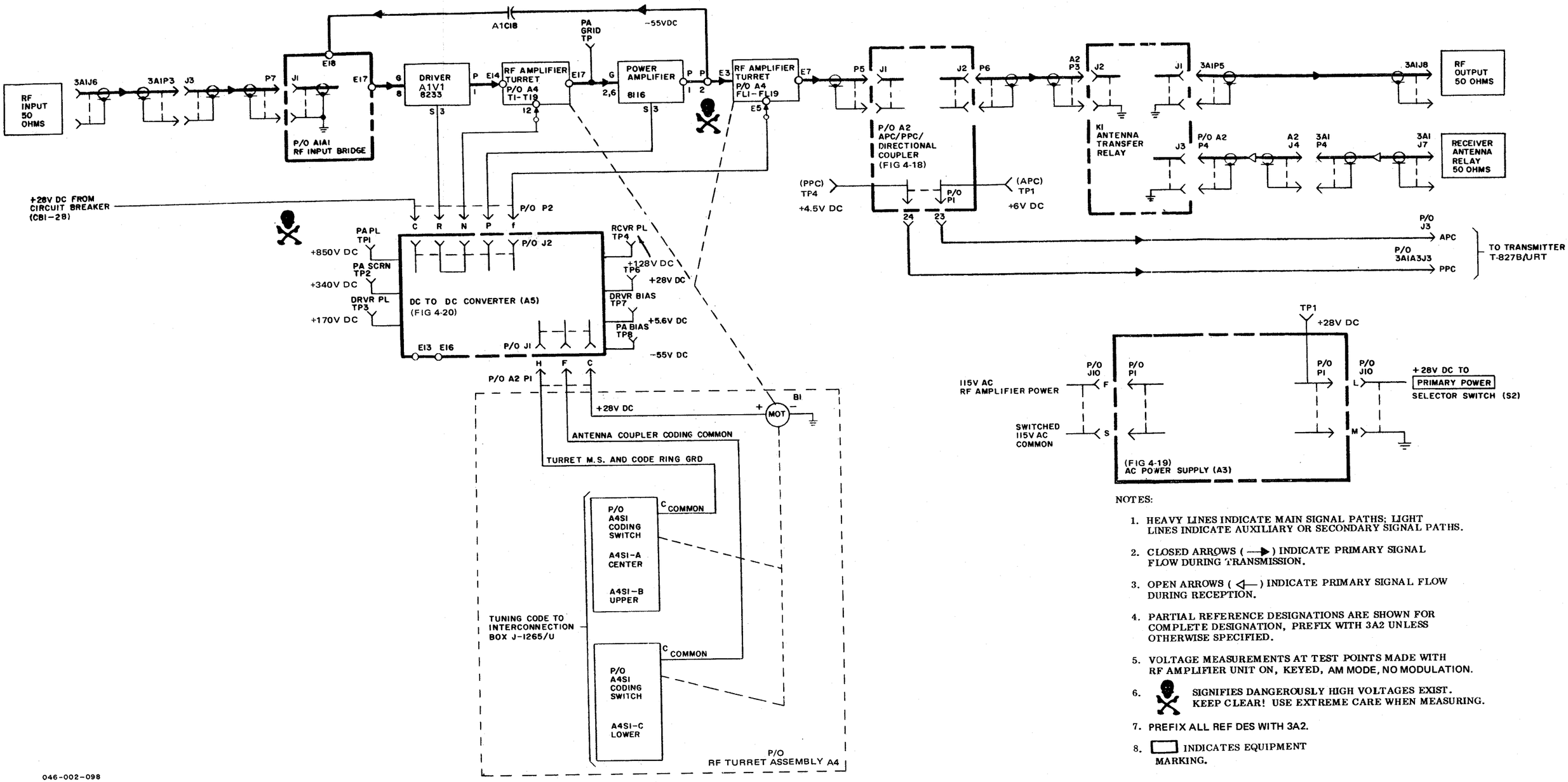


046-002-096

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. AM MODE, CARRIER, WITH SINGLE TONE MODULATION.
4. VOLTAGE AT THIS POINT (TP3) IS A FUNCTION OF THE DRIVE LEVEL TO THE OUTPUT STAGE OF THE AM-3007/URT. UNDER CONDITION OF NO DRIVE OR INSUFFICIENT DRIVE TO DRAW GRID CURRENT IN THE FINAL STAGE, (TP3) IS NOMINALLY AT 5V DC. APPLICATION OF MODULATION TO THE FINAL STAGE, OF SUFFICIENT AMPLITUDE TO DRAW GRID CURRENT, WILL SUPERIMPOSE GRID CURRENT PULSES ON THE LINE.
5. TP4 WILL SHOW 0V DC UNLESS AM-3007/URT HAS RF OUTPUT. IN AM MODE, WITH 25W RF OUTPUT FROM AM-3007/URT, TP4 WILL SHOW +5.2 TO +5.8V DC.
6. WAVEFORMS RECORDED USING OSCILLOSCOPE AN/USM-140.
7. ALL VOLTAGES DC UNLESS OTHERWISE SPECIFIED.
8. PREFIX ALL REF DES WITH 2A2A12.

Figure 4-16. Transmitter IF. Amplifier Assembly 2A2A12, Servicing Block Diagram

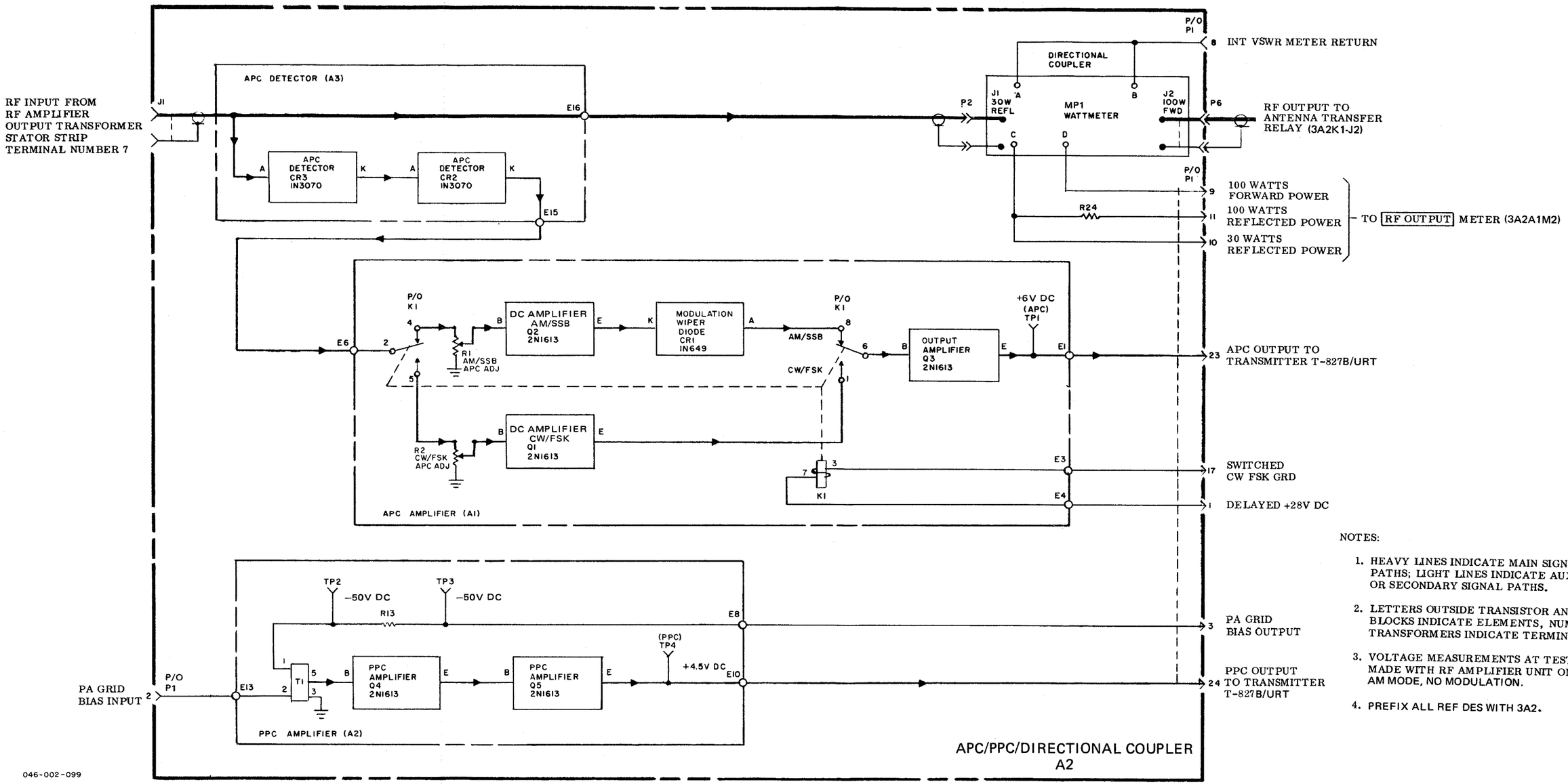


NOTES:

1. HEAVY LINES INDICATE MAIN SIGNAL PATHS; LIGHT LINES INDICATE AUXILIARY OR SECONDARY SIGNAL PATHS.
2. CLOSED ARROWS (—▶) INDICATE PRIMARY SIGNAL FLOW DURING TRANSMISSION.
3. OPEN ARROWS (◁—) INDICATE PRIMARY SIGNAL FLOW DURING RECEPTION.
4. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION, PREFIX WITH 3A2 UNLESS OTHERWISE SPECIFIED.
5. VOLTAGE MEASUREMENTS AT TEST POINTS MADE WITH RF AMPLIFIER UNIT ON, KEYED, AM MODE, NO MODULATION.
6. ☠ SIGNIFIES DANGEROUSLY HIGH VOLTAGES EXIST. KEEP CLEAR! USE EXTREME CARE WHEN MEASURING.
7. PREFIX ALL REF DES WITH 3A2.
8. ▭ INDICATES EQUIPMENT MARKING.

046-002-098

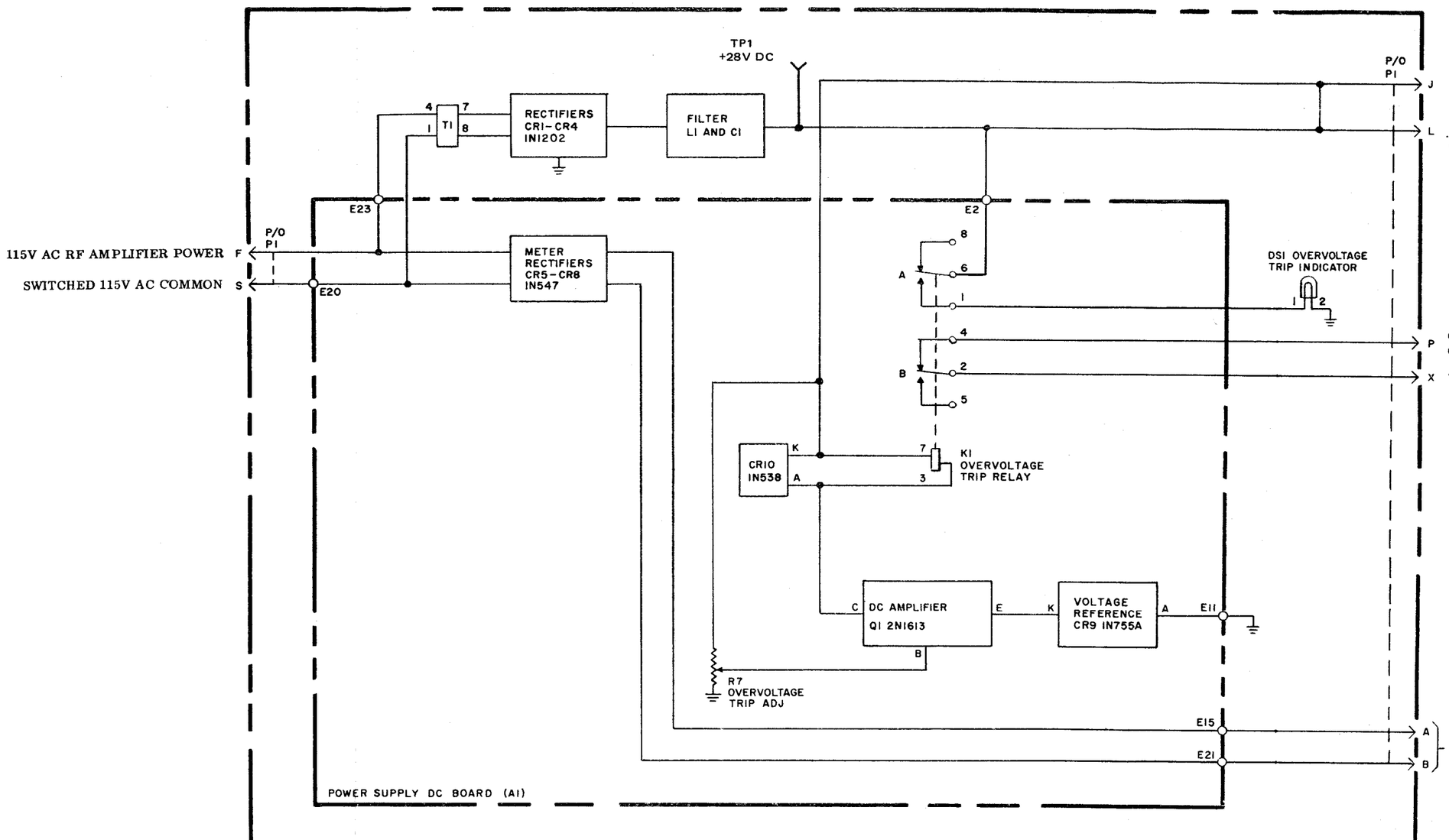
Figure 4-17. RF Amplifier AM-3007/URT, Overall Servicing Block Diagram



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, NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
3. VOLTAGE MEASUREMENTS AT TEST POINTS MADE WITH RF AMPLIFIER UNIT ON; KEYED, AM MODE, NO MODULATION.
4. PREFIX ALL REF DES WITH 3A2.

Figure 4-18. APC/PPC/Directional Coupler Assembly 3A2A2, Servicing Block Diagram

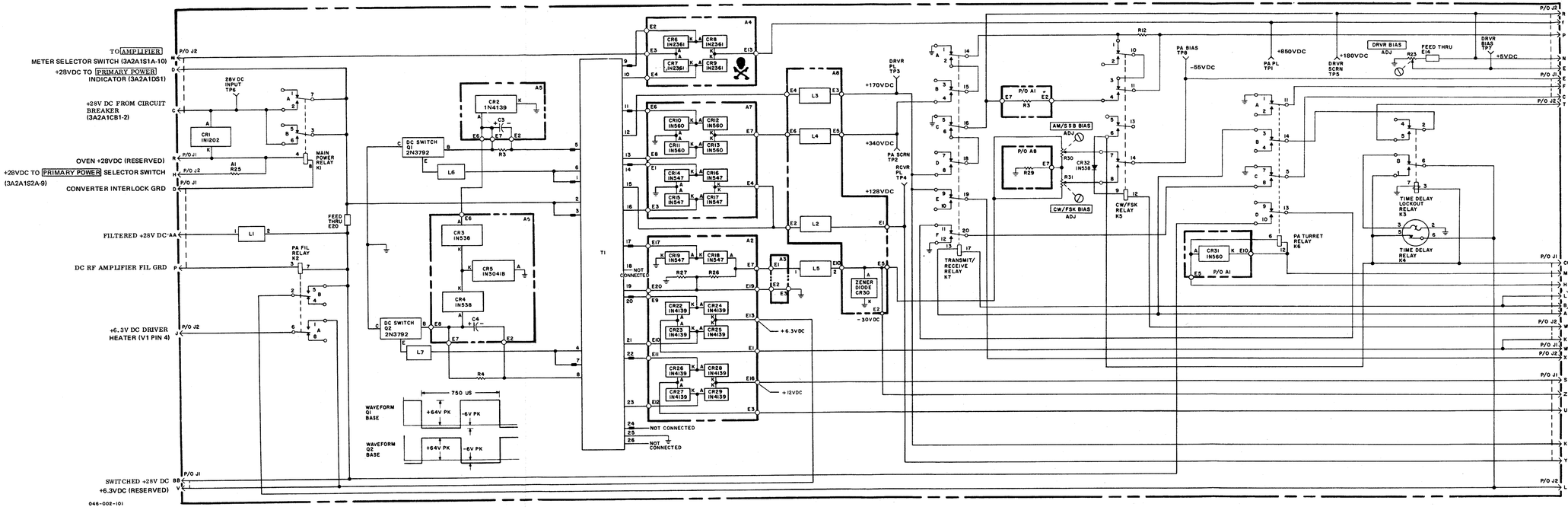


NOTES:

1. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
2. PREFIX ALL REF DES WITH 3A2.

046-002-100

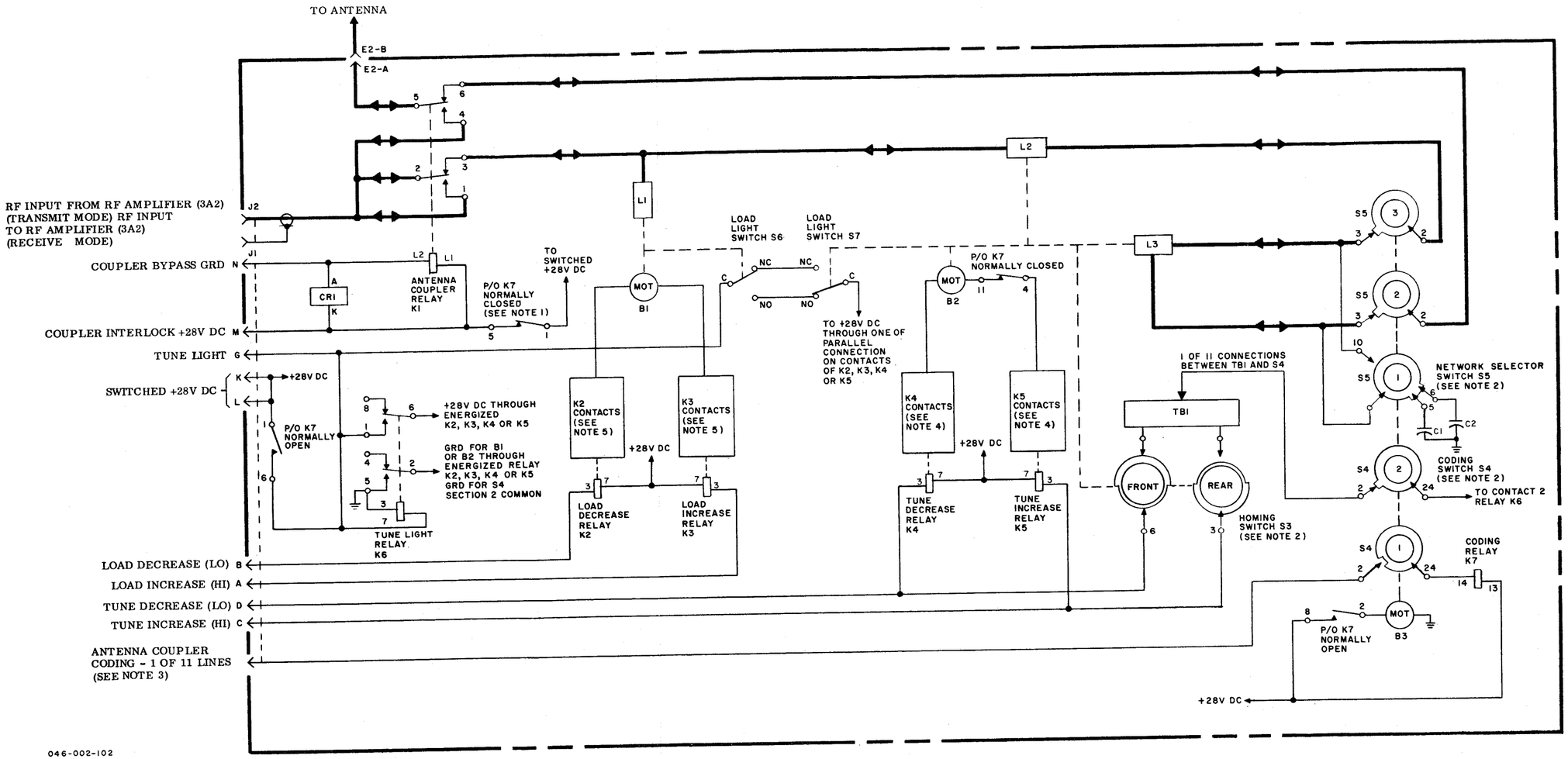
Figure 4-19. AC Power Supply Assembly 3A2A3, Servicing Block Diagram



NOTES:

1. LETTERS OUTSIDE TRANSISTOR AND DIODE BLOCKS INDICATE ELEMENTS. NUMBERS ON TRANSFORMERS INDICATE TERMINAL NUMBERS.
2. VOLTAGE MEASUREMENTS AT TEST POINTS MADE WITH RF AMPLIFIER UNIT ON, KEYED, AM MODE, NO MODULATION.
3. WAVEFORMS RECORDED ON OSCILLOSCOPE AN/USM-281.
4. INDICATES POLARITY.
5. SIGNIFIES DANGEROUSLY HIGH VOLTAGES EXIST. KEEP CLEAR! USE EXTREME CARE WHEN MEASURING.
6. PREFIX ALL REF DES WITH A3A2A5.

Figure 4-20. DC-to-DC Converter Assembly 3A2A5, Servicing Block Diagram

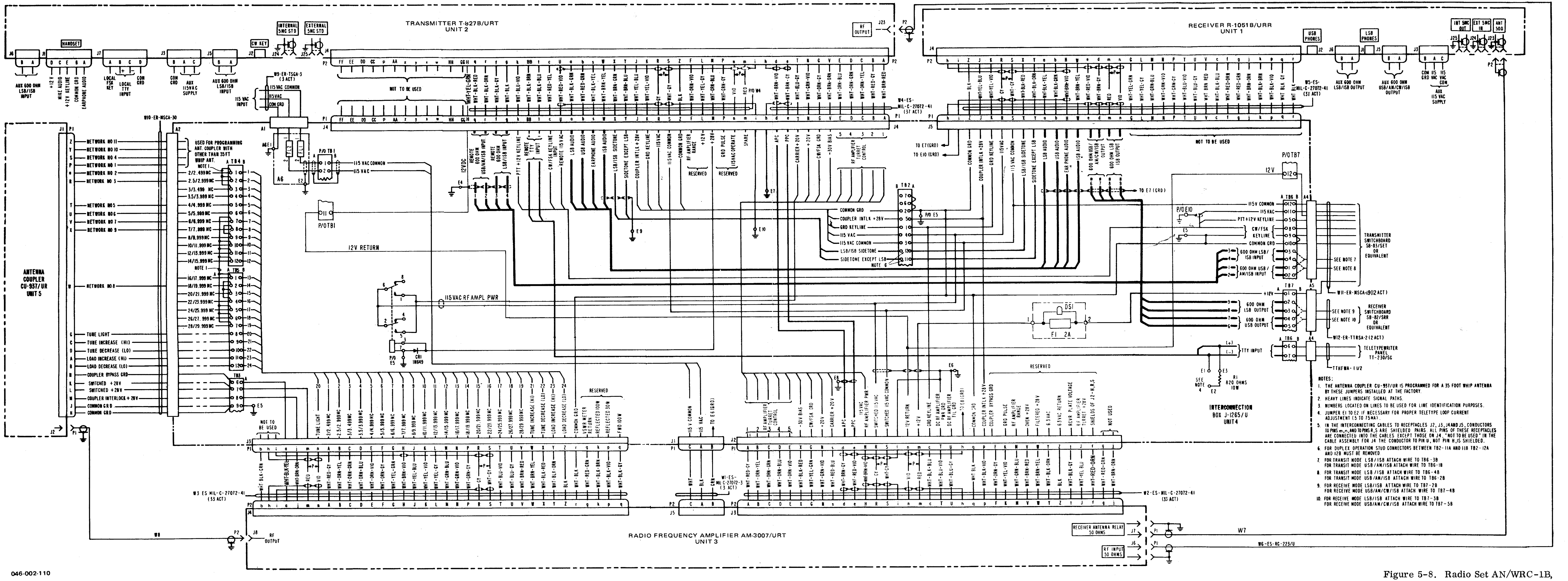


NOTES:

1. WHEN K7 ENERGIZES INTERLOCKED +28V IS INTERRUPTED TO PREVENT ACCIDENTAL KEYING OF TRANSMITTER WHEN COUPLER IS TUNING.
2. ON SWITCHES S3, S4 AND S5 ONLY 1 REPRESENTATIVE CONTACT SHOWN FOR CLARITY. NONE OF THE CAPACITORS SWITCHED INTO L2 CIRCUIT BY S5 SHOWN.
3. RELAY K7 ENERGIZED TO START TUNE CYCLE WHEN GROUND PULSE IS RECEIVED OVER 1 OF THE ELEVEN COUPLER CODING WIRES, FROM THE RF AMPLIFIER THROUGH SECTION 1 OF CODING SWITCH S4.
4. CONTACTS OF RELAYS K4 AND K5 SUPPLY VOLTAGE TO MOTOR B2 WHEN MOTOR B2 OPERATES, ONE RELAY (EITHER K4 OR K5) WILL BE ENERGIZED, SUPPLYING VOLTAGE FROM +28V LINE TO MOTOR, THE OTHER RELAY WILL BE DE-ENERGIZED PROVIDING GROUND RETURN FOR MOTOR.
5. RELAYS K2 AND K3 OPERATE IN THE SAME MANNER AS RELAYS K4 AND K5 FOR MOTOR B1.
6. HEAVY LINES INDICATE SIGNAL FLOW FOR TRANSMIT AND RECEIVE MODE OF OPERATION.
7. PREFIX ALL REF DES WITH 5.

046-002-102

Figure 4-21. Antenna Coupler CU-937/UR, Overall Servicing Block Diagram



046-002-110

Figure 5-8. Radio Set AN/WRC-1B, Interconnecting Diagram

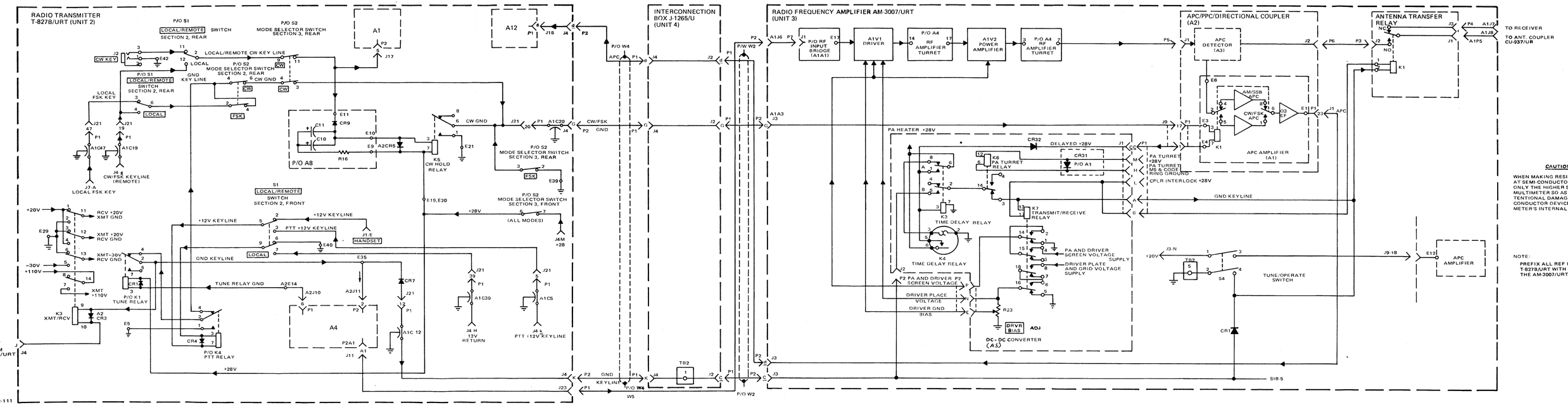


Figure 5-9. Radio Set AN/WRC-1B, System Keying Diagram

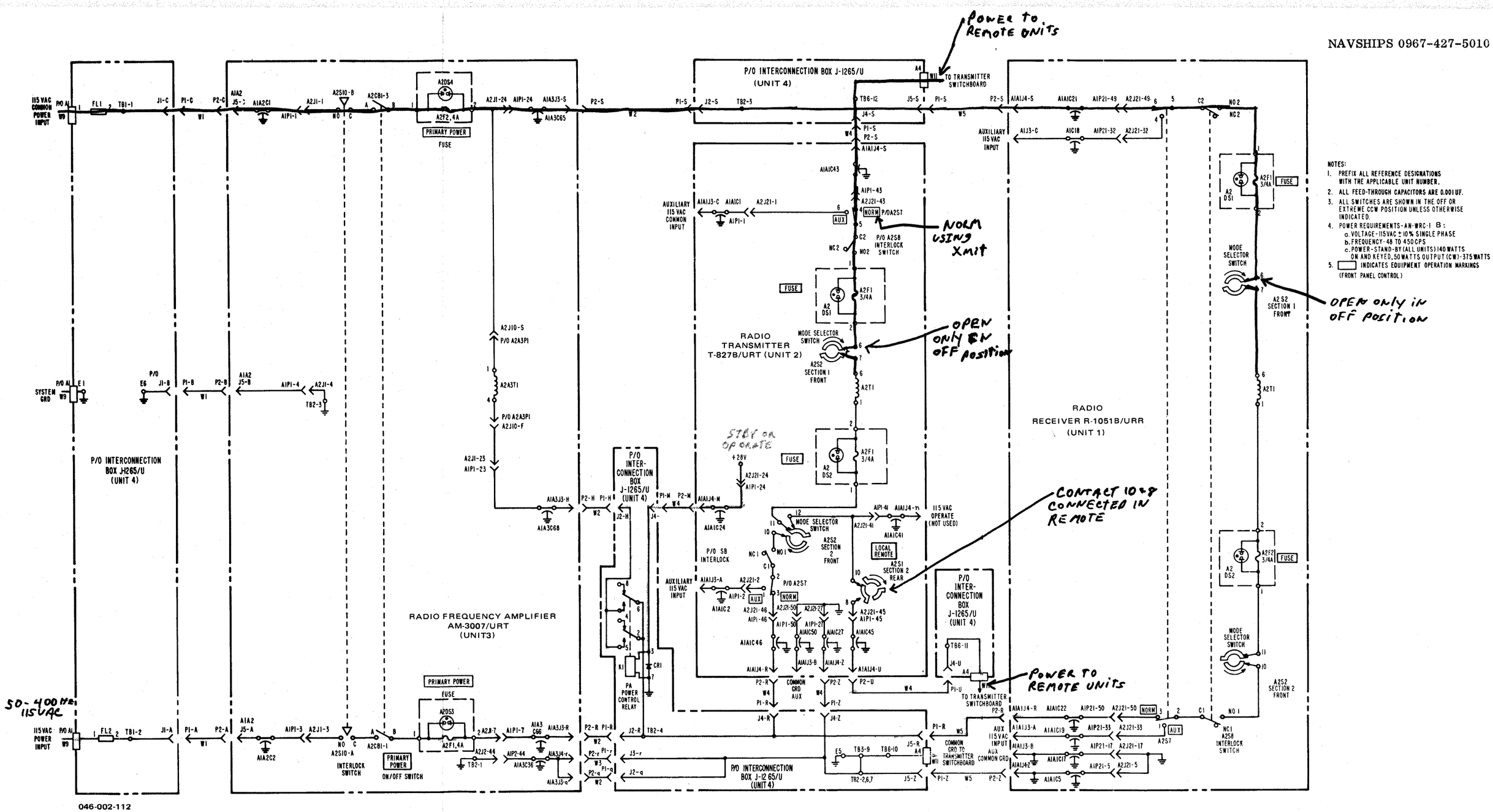


Figure 5-10. Radio Set AN/WRC-1B Primary Power Distribution Diagram

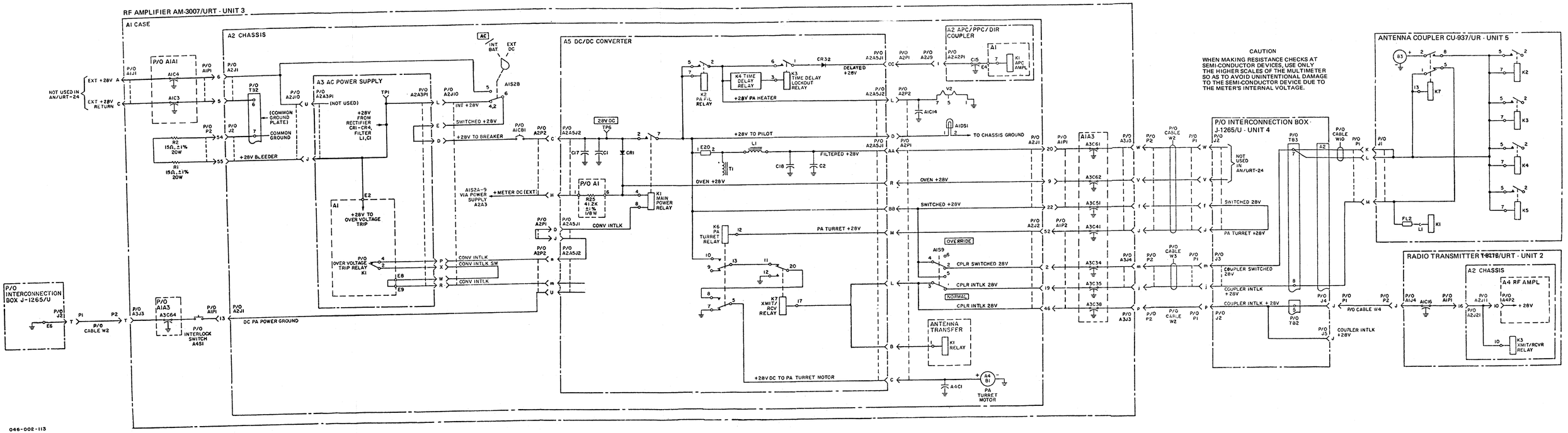


Figure 5-11. Radio Set AN/WRC-1B, System 28-Vdc Power Distribution

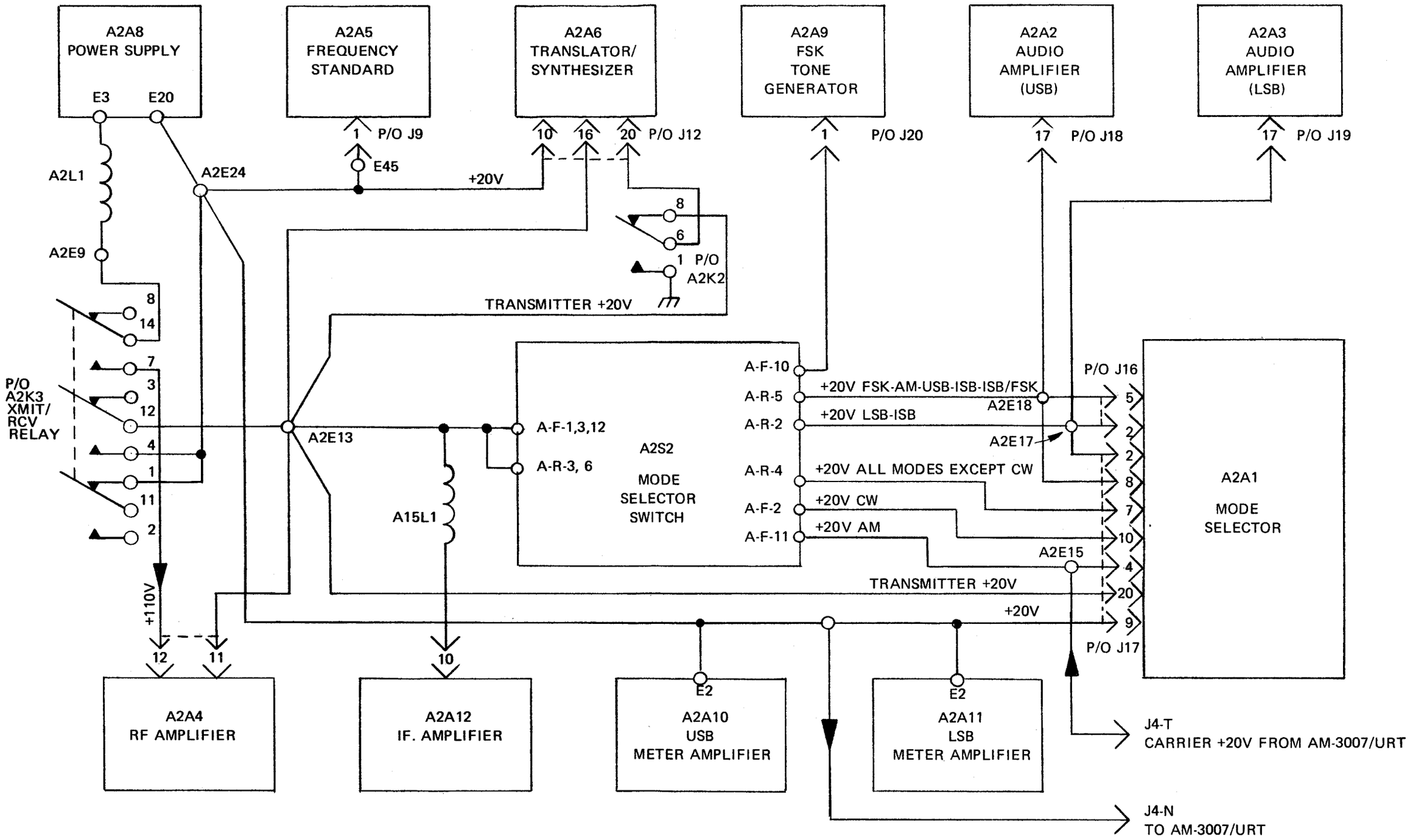


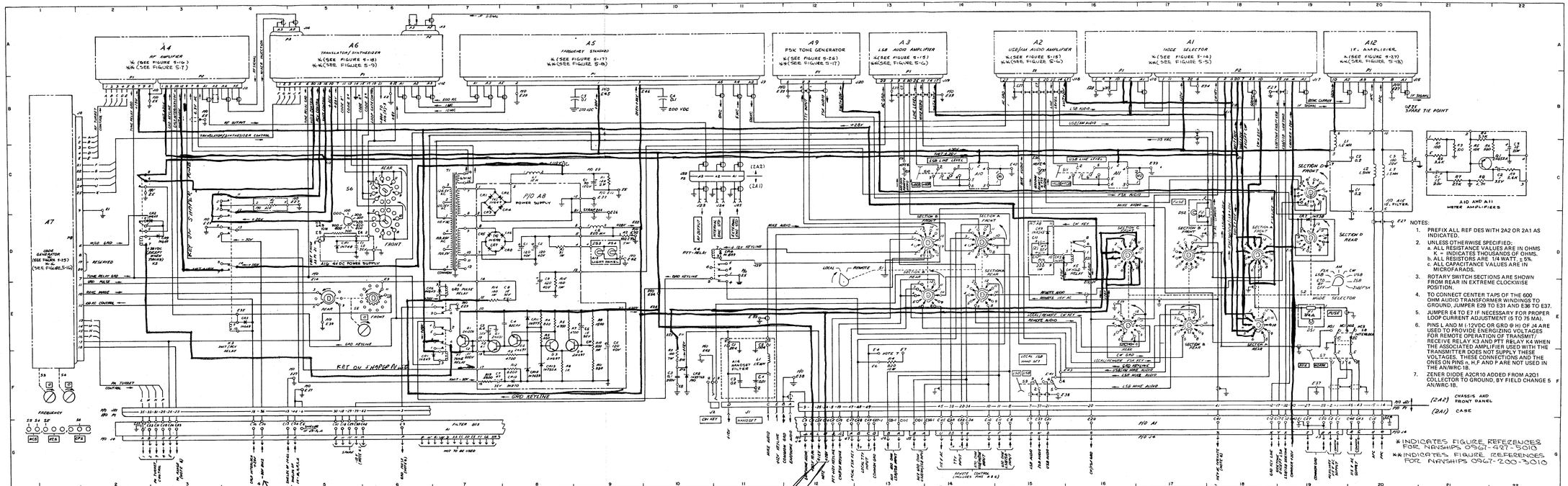
Figure 5-12. Radio Transmitter T-827B/URT, +110-Vdc and +20-Vdc Distribution Diagram

PARTS LOCATION INDEX FOR 2A1

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
A1C14	20G	A1C29	5G	A1C44	5G
A1C15	20G	A1C30	5G	A1C45	14G
A1C16	4G	A1C31	3G	A1C46	20G
A1C17	19G	A1C32	19G	A1C47	13G
A1C18	5G	A1C33	2G	A1C48	13G
A1C19	12G	A1C34	14G	A1C49	13G
A1C20	16G	A1C34-1	13G	A1C50	19G
A1C21	15G	A1C35	2G	A1J3	19G
A1C22	14G	A1C36	4G	A1J4	2G, 12G, 17G, 20G
A1C23	3G	A1C37	15G	A1J5	13G
A1C24	12G	A1C38	14G	A1J6	13G
A1C25	12G	A1C39	5G	A1J7	13G
A1C26	3G	A1C40	19G	J23	10C
A1C27	19G	A1C41	18G	J24	11C
A1C27-1	13G	A1C42	6G	J25	11C
A1C28	3G	A1C43	20G	P1	2F, 20F

PARTS LOCATION INDEX FOR 2A2

A8R13	7F	C3	10F	E45	9B
A8R14	7E	C4	10B	E46	9B
A8R15	8E	C5	9B	F1	19E
A8R16	10D	CR1	7F	F2	17D
A9	12A	CR2	3D	J1	11F
A9P1	12B	CR3	4E	J2	10F
A10	14C	CR4	11D	J8	2B
A10C1	21C	CR5	15D	J9	11B
A10C2	22C	CR6	7E	J10	3B
A10C3	22C	CR7	19D	J11	4B
A10Q1	21C	CR8	10F	J12	7B
A10R1	21C	CR9	3D	J13	7A
A10R2	21C	DS1	19E	J14	5A
A10R3	21C	DS2	17D	J15	20B
A10R4	21C	E1	2C	J16	17B
A10R5	21C	E2	6B	J17	19B
A10R6	22C	E3	6E	J18	16B
A10R7	21C	E4	13F	J19	14B
A10R8	21C	E5	2C, 3B, 9C, 11D	J20	13B
A10R9	22C	E6	13F	J21	3F
A11	16C	E7	13F	J22	10C
A11C1	21C	E8	10F	K1	7F
A11C2	22C	E9	9C	K2	2D
A11C3	22C	E10	9C	K3	4E
A11Q1	21C	E11	10E	K4	11D
A11R1	21C	E12	10F	K5	16D
A11R2	21C	E13	5C, 18C	K6	7E
A11R3	21C	E14	5D	L1	8C
A11R4	21C	E15	19D	L2	9D
A11R5	21C	E16	10F	M1	15C
A11R6	22C	E17	18B	M2	17C
A11R7	21C	E18	18B	Q1	7E
A11R8	21C	E19	16E	R1	9C
A11R9	22C	E20	16E	R2	9D
A12	20A	E21	16D	R3	10F
A12P1	20B	E22	9D	R4	13F
A13	9D	E23	10E	R5	5D
A13D83	9D	E24	10E	S1-1-F	14D
A13D84	9D	E26	9C	S1-1-R	14E
A14	11F	E27	5C, 5F, 15B, 20B, 20D	S1-2-F	14D
A14C1	11E			S1-2-R	14E
A14C2	11E	E28	16B	S1-3-F	18D
A14C3	11F	E29	3D, 7E, 8B, 13C, 15B	S1-3-R	18E
A14C4	11F			S2-2-F	17D
A14L1	11F	E30	16B	S2-2-R	17E
A15	1C, 20C	E31	13C	S2-3-F	16D
A15C1	20C	E32	9D	S2-3-R	16E
A15C2	20C	E33	9C, 11E, 12B	S2-4-F	19C
A15C3	20C	E34	17B	S2-4-R	19D
A15L1	19C	E35	4E	S3	1F, 1G
A15L2	20C	E36	15C	S4	1F, 1G
A15L3	20C	E37	5F, 13B, 15C, 19F	S5	1G, 5E, 6E
A15R1	4C	E38	12F, 15F	S6	1G, 6C, 6D
A16	2D	E39	5E, 14B, 16E, 17C	S7	19F
A16C1	5D	E40	15C	S8	20E
A16CR1	5D	E41	15F	S9	15F
C1	9C	E42	9D, 10F	S10	14C
C2	7E	E43	15F	S11	15C
		E44	9C	T1	7C



NOTES:

1. PREFIX ALL REF DES WITH 2A2 OR 2A1 AS INDICATED.
2. UNLESS OTHERWISE SPECIFIED:
   a. ALL RESISTANCE VALUES ARE IN OHMS K = INDICATES THOUSANDS OF OHMS.
   b. ALL RESISTORS ARE 1/4 WATT, ±5%.
   c. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ROTARY SWITCH SECTIONS ARE SHOWN FROM REAR IN EXTREME CLOCKWISE POSITION.
4. TO CONNECT CENTER TAPS OF THE 600 OHM AUDIO TRANSFORMER WINDINGS TO GROUND, JUMPER E29 TO E31 AND E36 TO E37.
5. JUMPER E4 TO E7 IF NECESSARY FOR PROPER LOOP CURRENT ADJUSTMENT (5 TO 75 MA).
6. PINS L AND M (-12VDC OR GRD @ H) OF J4 ARE USED TO PROVIDE ENERGIZING VOLTAGES FOR REMOTE OPERATION OF TRANSMIT/RECEIVE RELAY K3 AND PTT RELAY K4 WHEN THE ASSOCIATED AMPLIFIER USED WITH THE TRANSMITTER DOES NOT SUPPLY THESE VOLTAGES. THESE CONNECTIONS AND THE ONES ON PINS n, H, F AND P ARE NOT USED IN THE AN/WRC-1B.
7. ZENER DIODE A2CR10 ADDED FROM A2D1 COLLECTOR TO GROUND, BY FIELD CHANGE 5 AN/WRC-1B.

(2A2) CHASSIS AND FRONT PANEL
(2A1) CASE

*INDICATES FIGURE REFERENCES FOR NAVSHIPS 0967-427-5010
**INDICATES FIGURE REFERENCES FOR NAVSHIPS 0967-200-3010

046-002-115.1

Figure 5-13. Radio Transmitter T-827B/URT, Overall Schematic Diagram (Sheet 1 of 2)

GREEN +28VDC
BLUE +20VDC

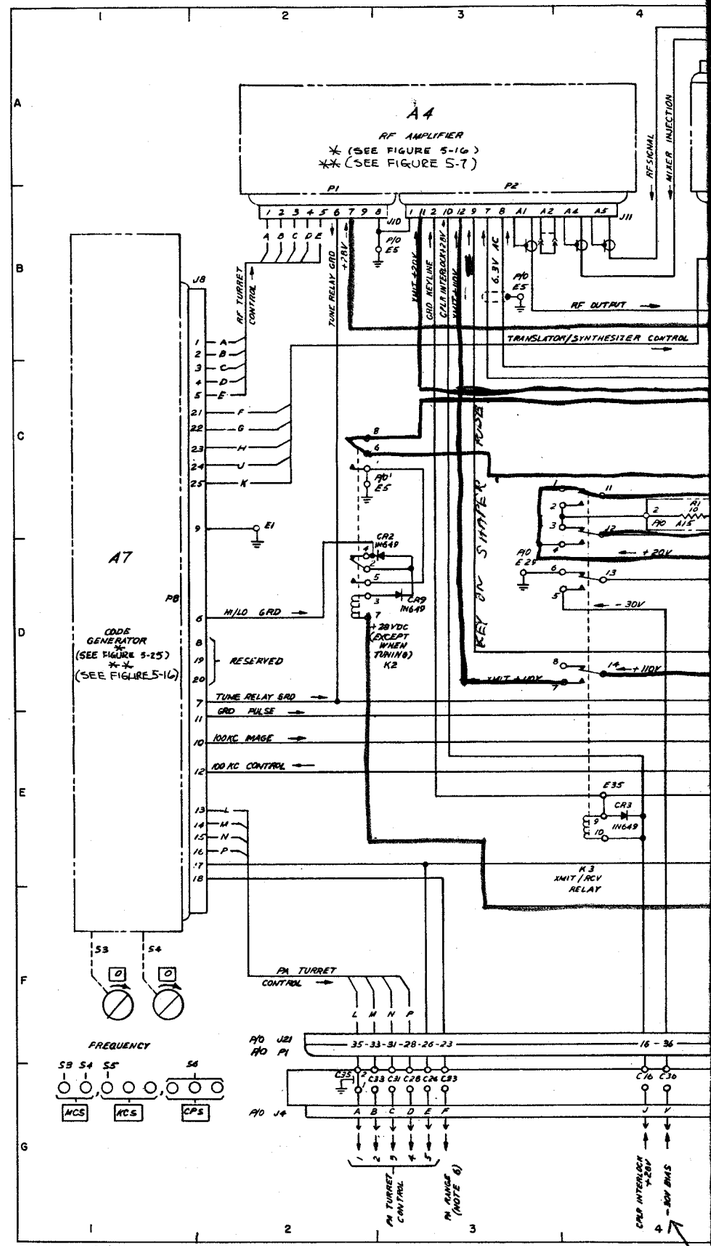
VIOLET +110VDC

PARTS LOCATION INDEX FOR 2A1

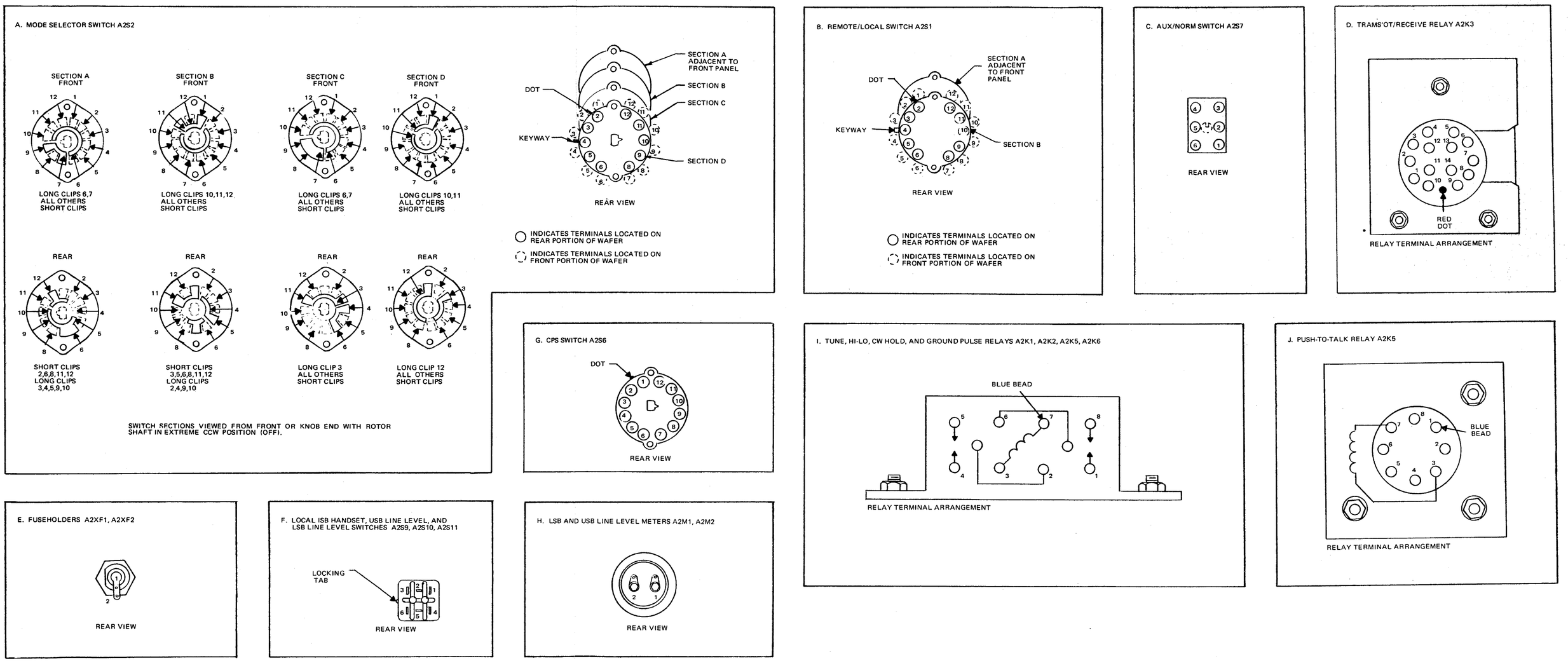
REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
A1C1	19G	A1C14	20G	A1C29	5G	A1C44	5G
A1C2	19G	A1C15	20G	A1C30	5G	A1C45	14G
A1C3	6G	A1C16	4G	A1C31	3G	A1C46	20G
A1C4	12G	A1C17	19G	A1C32	19G	A1C47	12G
A1C5	12G	A1C18	5G	A1C33	2G	A1C48	13G
A1C6	5G	A1C19	12G	A1C34	14G	A1C49	13G
A1C7	15G	A1C20	16G	A1C34-1	13G	A1C50	19G
A1C8	15G	A1C21	15G	A1C35	2G	A1J3	19G
A1C8-1	13G	A1C22	14G	A1C36	4G	A1J4	2G, 12G, 17G, 20G
A1C9	12G	A1C23	3G	A1C37	15G	A1J5	13G
A1C10	14G	A1C24	12G	A1C38	14G	A1J6	13G
A1C10-1	13G	A1C25	12G	A1C39	5G	A1J7	12G
A1C11	15G	A1C26	3G	A1C40	19G	J23	10C
A1C11-1	13G	A1C27	19G	A1C41	18G	J24	11C
A1C12	18G	A1C27-1	13G	A1C42	6G	J25	11C
A1C13	4G	A1C28	3G	A1C43	20G	P1	2F, 20F

PARTS LOCATION INDEX FOR 2A2

A1	17A	A8R13	7F	C3	10F	E45	9B
A1P1	16B	A8R14	7E	C4	10B	E46	9B
A1P2	18B	A8R15	8E	C5	9B	F1	19E
A2	15A	A8R16	15D	CR1	7F	F2	17D
A2P1	15B	A9	12A	CR2	3D	J1	11F
A3	13A	A9P1	12B	CR3	4E	J2	10F
A3P1	13B	A10	14C	CR4	11D	J8	2B
A4	3A	A10C1	21C	CR5	15D	J9	11B
A4P1	2B	A10C2	22C	CR6	7E	J10	3B
A4P2	3B	A10C3	22C	CR7	19D	J11	4B
A5	9A	A10Q1	21C	CR8	10F	J12	7B
A5P1	9B	A10R1	21C	CR9	3D	J13	7A
A6	5A	A10R2	21C	DS1	19E	J14	5A
A6P1	6B	A10R3	21C	DS2	17D	J15	20B
A6P2	6A	A10R4	21C	E1	2C	J16	17B
A6P3	5A	A10R5	21C	E2	6B	J17	19B
A7	1D	A10R6	22C	E3	6E	J18	16B
A7P8	1D	A10R7	21C	E4	13F	J19	14B
A8	8C, 15D	A10R8	21C	E5	2C, 3B, 9C, 11D	J20	13B
A8C1	8D	A10R9	22C	E6	13F	J21	2F
A8C2	8D	A11	16C	E7	13F	J22	10C
A8C3	7E	A11C1	21C	E8	10F	K1	7F
A8C4	8E	A11C2	22C	E9	9C	K2	2D
A8C5	9E	A11C3	22C	E10	9C	K3	4E
A8C6	9E	A11Q1	21C	E11	10E	K4	11D
A8C7	7F	A11R1	21C	E12	10F	K5	16D
A8C8	8E	A11R2	21C	E13	5C, 18C	K6	7E
A8C9	8E	A11R3	21C	E14	5D	L1	8C
A8C10	15D	A11R4	21C	E15	19D	L2	9D
A8C11	15D	A11R5	21C	E16	10F	M1	15C
A8CR1	7C	A11R6	22C	E17	18B	M2	17C
A8CR2	8C	A11R7	21C	E18	18B	Q1	7E
A8CR3	7C	A11R8	21C	E19	16E	R1	9C
A8CR4	8C	A11R9	22C	E20	16E	R2	9D
A8CR5	7D	A12	20A	E21	16D	R3	10F
A8CR6	8D	A12P1	20B	E22	9D	R4	13F
A8CR7	7D	A13	9D	E23	10E	R5	5D
A8CR8	8D	A13DS3	9D	E24	10E	S1-1-F	14D
A8CR9	15D	A13DS4	9D	E26	9C	S1-1-R	14E
A8CR10	8F	A14	11F	E27	5C, 5F, 15B, 20B,	S1-2-F	14D
A8CR11	8E	A14C1	11E		20D	S1-2-R	14E
A8CR12	8F	A14C2	11E	E28	16B	S2-1-F	18D
A8CR13	8F	A14C3	11F	E29	3D, 7E, 8B, 13C,	S2-1-R	18E
A8Q1	7E	A14C4	11F		18B	S2-2-F	17D
A8Q2	8E	A14L1	11F	E30	16B	S2-2-R	17E
A8Q3	8E	A15	4C, 20C	E31	13C	S2-3-F	16D
A8Q4	8E	A15C1	20C	E32	9D	S2-3-R	16E
A8R1	8D	A15C2	20C	E33	9C, 11E, 12B	S2-4-F	19C
A8R2	7E	A15C3	20C	E34	17B	S2-4-R	19D
A8R3	8F	A15L1	19C	E35	4E	S3	1F, 1G
A8R4	8E	A15L2	20C	E36	15C	S4	1F, 1G
A8R5	8E	A15L3	20C	E37	5F, 13B, 15C, 19F	S5	1G, 5E, 6E
A8R6	8E	A15R1	4C	E38	12F, 15F	S6	1G, 6C, 6D
A8R7	8E	A16	5D	E39	5E, 14B, 16E, 17C	S7	19F
A8R8	8F	A16C1	5D	E40	15C	S8	20E
A8R9	9E	A16CR1	5D	E41	15F	S9	15F
A8R10	9E	C1	9C	E42	9D, 10F	S10	14C
A8R11	9F	C2	7E	E43	15F	S11	15C
A8R12	8F			E44	9C	T1	7C



046-002-115.1



NOTE: SEE TABLE 5-2 FOR WIRING INFORMATION ON ALL COMPONENTS.

Figure 5-13. Radio Transmitter T-827B/URT, Overall Schematic Diagram (Sheet 2 of 2)

PART LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
C10	19B	A2R2	10B	A4C38	14I	A4R71	14H
C11	21D	A2R3	10B	A4C39	13G	A4R72	14H
C21	19D	A2R4	10C	A4C40	12F	A4R73	14I
FL1	20B	A2R5	10C	A4C41	6E	A4R74	16H
FL2	20D	A2R6	11B	A4C42	6E	A4R75	15G
P1	3F, 3G, 16E	A2R7	12B	A4C43	7E	A4R76	15H
P2	3A, 3B, 3C, 3D, 3E, 3I 16F, 16H, 22D	A2R8	13B	A4C44	8E	A4R77	13G
		A2R9	12B	A4C45	8E	A4R78	14G
R41	21D	A2R10	12C	A4C46	6F	A4R79	14G
S1	10G	A2R11	14B	A4C47	8F	A4R80	13F
T1	16B	A2R12	15B	A4C48	4B	A4R81	13F
T2	16D	A2R13	14B	A4C49	8G	A4R82	12F
A1C12	11D	A2R14	15B	A4C50	6H	A4R83	14F
A1C13	13D	A3C7	17B	A4C51	7H	A4R84	14F
A1C14	13D	A3C8	18B	A4C52	7E	A4R85	6E
A1C15	14D	A3C9	18A	A4CR11	5B	A4R86	6E
A1C16	14C	A3C10	17D	A4CR12	14I	A4R87	6E
A1C17	14D	A3C19	18C	A4CR13	15H	A4R88	7E
A1C18	14D	A3C20	18C	A4CR14	15G	A4R89	7E
A1C19	12D	A3Q1	17B	A4CR15	14F	A4R90	7E
A1C20	12D	A3Q2	17D	A4CR16	7E	A4R91	8E
A1C21	12C	A3R15	16B	A4CR17	7F	A4R92	8E
A1C22	13D	A3R16	17B	A4CR18	8E	A4R93	8E
A1R21	10C	A3R17	17B	A4CR19	7F	A4R94	6F
A1R22	10C	A3R18	17A	A4CR20	8G	A4R95	6F
A1R23	10D	A3R19	17B	A4CR21	7G	A4R96	6G
A1R24	10D	A3R20	16B	A4CR100	7H	A4R97	7G
A1R25	10D	A3R35	16D	A4Q6	7C	A4R98	7F
A1R26	11D	A3R36	17D	A4Q7	7B	A4R99	8G
A1R27	12C	A3R37	17C	A4Q8	13H	A4R100	7G
A1R28	13D	A3R38	17C	A4R53	6B	A4R101	5G
A1R29	12D	A3R39	17C	A4R54	6C	A4R102	8F
A1R30	12D	A3R40	18D	A4R55	6B	A4R103	8H
A1R31	14D	A3TP2	18B	A4R56	6C	A4R104	9H
A1R32	15D	A3TP3	18D	A4R57	7C	A4R105	8H
A1R33	14D	A4C25	5B	A4R58	7D	A4R106	8H
A1R34	15D	A4C26	5B	A4R59	8C	A4R107	9H
A2C1	11C	A4C27	7C	A4R60	7A	A4R108	7H
A2C2	13B	A4C28	8C	A4R61	7B	A4R109	7H
A2C3	13B	A4C29	8C	A4R62	8A	A4R110	6H
A2C4	14B	A4C30	7B	A4R63	13H	A4R111	6H
A2C5	14B	A4C31	8B	A4R64	13H	A4R112	6H
A2C6	14C	A4C32	8A	A4R65	13H	A4R113	9F
A2CR1	12B	A4C33	14H	A4R66	13H	A4R114	8H
A2CR2	12C	A4C34	13H	A4R67	13H	A4R115	7D
A2CR3	12B	A4C35	12H	A4R68	12H	A4RT1	13H
A2CR4	13B	A4C36	12H	A4R69	14H	A4RT3	9C, 9D
A2R1	10B	A4C37	14H	A4R70	14H	A4T3	9D
						A4T4	9B
						A4T5	15E

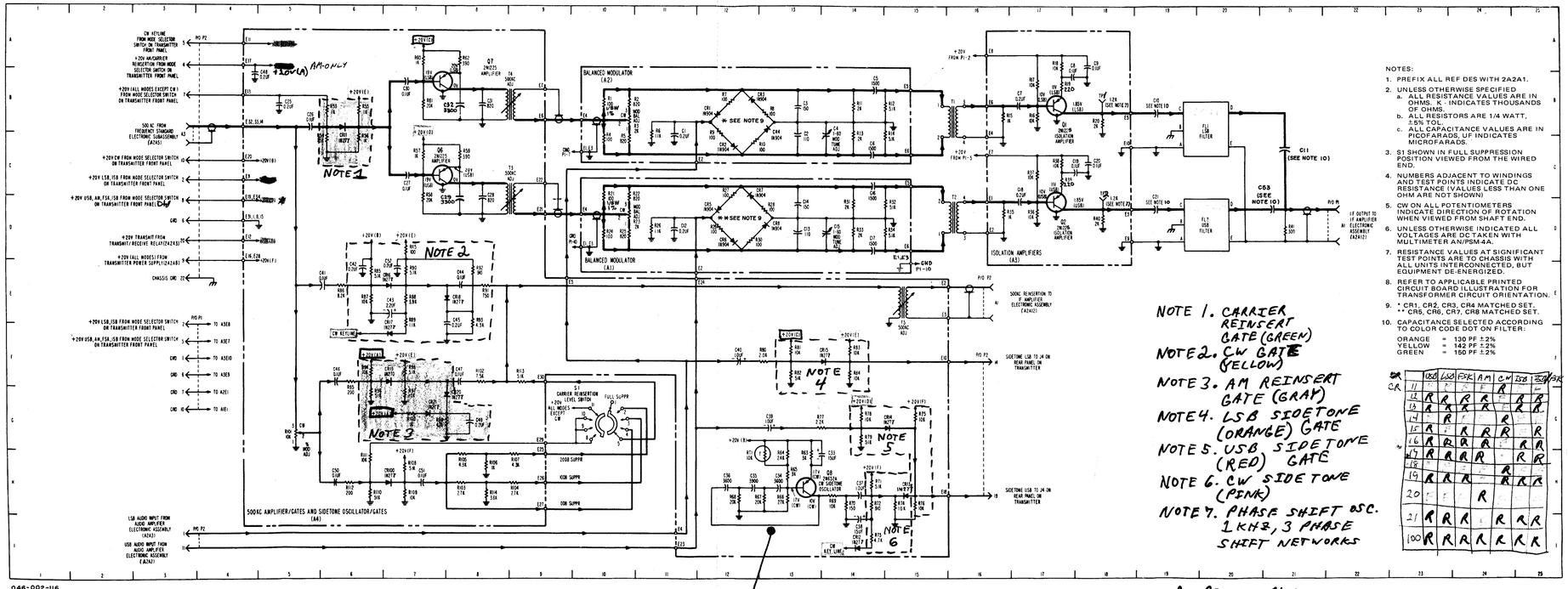


Figure 5-14. Mode Selector Assembly 2A2A1, Schematic Diagram

NOTE 1. R-3 UNBYPASSED TO ENABLE DEGENERATION TI INCREASES STABILITY

NOTE 2. VARISISTORS E↑ R↓ I↑

NOTE 3. SPEACH COMPASSION REDUCES THE PEAK TO AVERAGE RATION OF VOICE SIGNALS IN ORDER TO MAINTAIN AN AVERAGE OF 60% MODULATION

NOTE 4. REMOTE AUDIO OR FSK

NOTE 5. GROUND

NOTE 6. NOT USED

PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN
P1	2A, 2B, 2C 2D, 2E, 12D	A1R6	9C
		A1R7	10C
A1C1	3C	A1R8	10B
A1C2	4C	A1R9	11C
A1C3	6C	A1R10	11C
A1C4	8D	A1R11	3C
A1C5	8D	A1R12	4D
A1C6	9D	A1R13	5D
A1C7	10D	A1R14	6D
A1C8	10C	A1R15	7D
A1C9	12D	A1R16	7D
A1C10	3B	A1R17	9D
A1C11	9C	A1R18	10D
A1CR1	7D	A1R19	10D
A1Q1	5C	A1R20	10C
A1Q2	6D	A1R21	11D
A1Q3	9D	A1R22	3A
A1Q4	10D	A1R23	9B
A1Q5	11D	A1RV1	7D
A1R1	4C	A1RV2	7D
A1R2	4C	A1T1	3C
A1R3	5C	A1T2	5D
A1R4	5C	A1TP1	3C
A1R5	9C	A1TP2	12C

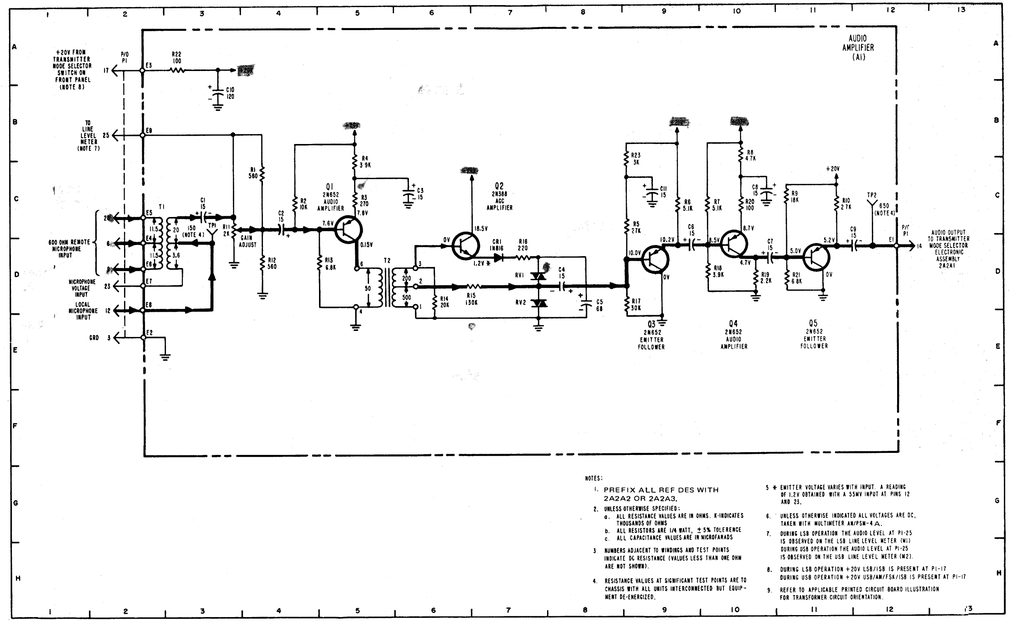
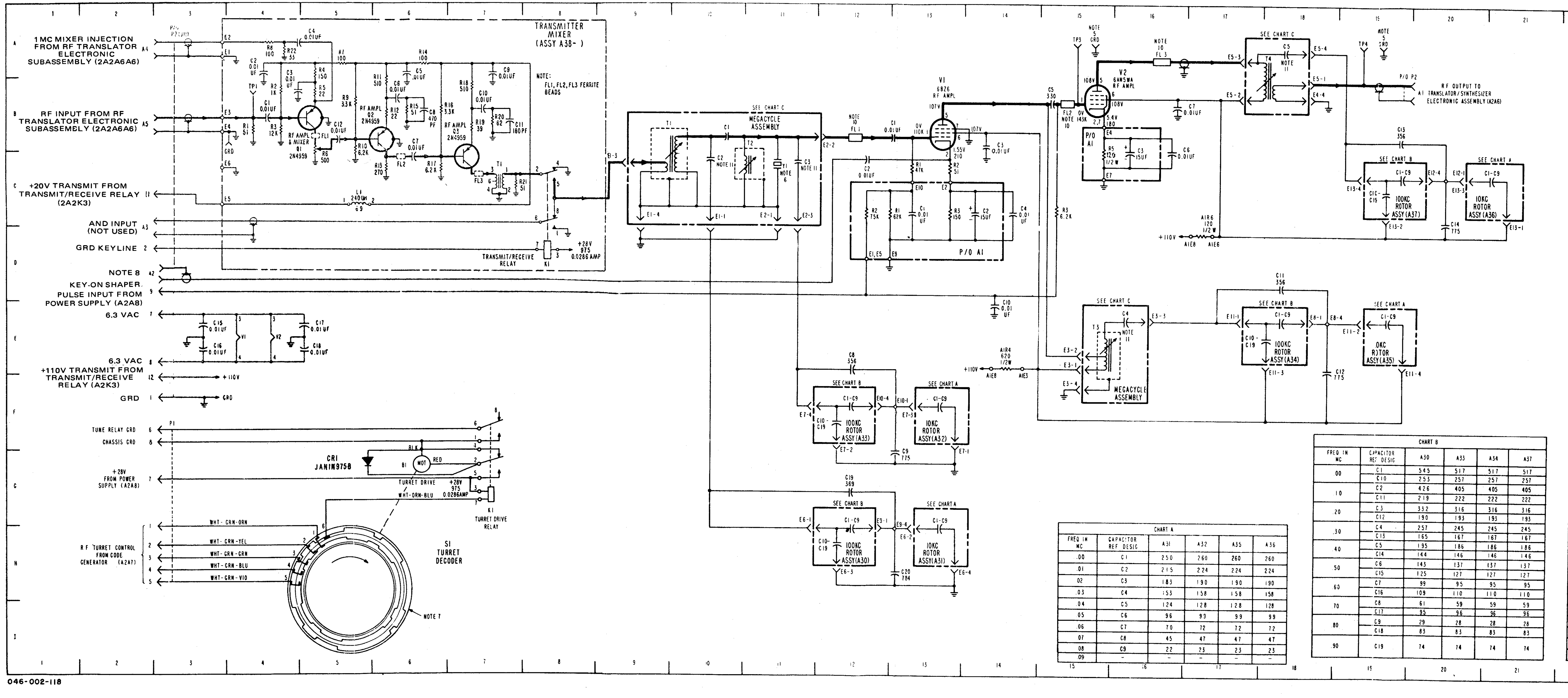


Figure 5-15. Transmitter Audio Amplifier Assembly 2A2A2 or 2A2A3, Schematic Diagram

PARTS LOCATION INDEX

REF DES	LCTN
B1	6G
C1	12B
C2	12C
C3	14B
C4	14C
C5	15B
C6	16C
C7	16B
C8	12E
C9	13F
C10	14E
C11	18D
C12	18E
C13	19B
C14	20C
C15	3E
C16	3E
C17	5E
C18	5E
C19	12G
C20	12H
CR1	6G
FL1	12B
FL2	15B
FL3	16A
K1	7G
P1	3F, 3G, 3H 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
A1R1	12C
A1R2	12C
A1R3	13C
A1R4	14E
A1R5	15B
A1R6	16D
A2C1 thru A29C1	10B
A2C2 thru A29C3	10C
A2C3 thru A29C3	11C
A2C4 thru A29C4	16D
A2C5 thru A29C5	18A
A2T1 thru A29T1	9B
A2T2 thru A29T2	11B
A2T3 thru A29T3	15E
A2T4 thru A29T4	17A
A9Y1	11C
A10Y1	11C
A19Y1	11C
A30C1 thru A30C9	12H
A30C10 thru A30C19	12H
A31C1 thru A31C9	13H
A32C1 thru A32C9	13F
A33C1 thru A33C9	12F
A33C10 thru A33C19	12F
A34C1 thru A34C9	18E
A34C10 thru A34C19	18E
A35C1 thru A35C9	19E
A36C1 thru A36C9	20C
A37C1 thru A37C9	19C
A37C10 thru A37C19	19C
A38C1	4B
A38C2	4A
A38C3	4B
A38C4	4A
A38C5	6A
A38C6	6B
A38C7	6C
A38C8	6B
A38C9	7A
A38C10	7B
A38C11	7B
A38C12	5B
A38FL1	5B
A38FL2	6C
A38FL3	7C
A38K1	8D
A38L1	5C
A38Q1	5B
A38Q2	6B
A38Q3	7C
A38R1	4B
A38R2	4B
A38R3	4B
A38R4	5A
A38R5	5B
A38R6	5B
A38R7	5A
A38R8	4A
A38R9	5B
A38R10	5B
A38R11	6A
A38R12	6B
A38R13	6C
A38R14	6A
A38R15	6B
A38R16	6B
A38R17	6C
A38R18	7B
A38R19	7B
A38R20	7B
A38R21	7C
A38R22	4A
A38T1	7C
A38TP1	4B



NOTES:

1. PREFIX ALL REF DES WITH 2A2A4.
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 IS WIRED BUT NOT USED IN AN/WRC-1 SYSTEM.
9. CAPACITORS IN CHARTS A, B, AND C WHICH ARE 100PF AND GREATER ARE 1/2%. CAPACITORS LESS THAN 100PF ARE 1%, EXCEPT C1 IN CHART C WHICH IS 5%.
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-4A.
13. REFER TO APPLICABLE PRINTED CIRCUIT BOARD ILLUSTRATION FOR TRANSFORMER CIRCUIT ORIENTATION.
14. A38C5 VALUE CHANGES TO 0.0022UF ON UNIT SER. NO 111 AND ABOVE.

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	93	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
2	A20	9.1	A20	SHORT	A20	SHORT	A25	SHORT	A2	SHORT
3	A21	6.2	A21	1247	A21	1253	A26	1247	A3	1253
4	A22	5.6	A22	623	A22	629	A21	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	163
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	2.0	A12	64	A12	68	A17	64	A22	68
23	A13	2.0	A13	61	A13	66	A18	61	A23	66
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

Figure 5-16. RF Amplifier Assembly 2A2A4, Schematic Diagram

PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
A1	4A	A1R24	5C	A2C42	12H	A2R24	14C	A4	8E
A1C1	2B	A1Y1	3B	A2C44T	10B	A2R25	13D	A4C1	8D
A1C2	3B	A2	14I	A2CR1	12H	A2R26	13A	A4C2	9E
A1C3	3B	A2C1	8C	A2CR2	11F	A2R27	14B	A4CR1	9D
A1C4	4B	A2C2	7C	A2J1S1	12H	A2R28	14D	A4R1	8E
A1C5	4B	A2C3	8B	A2J1	1H, 2F, 17B	A2R29	15A	A4Q1	8E
A1C6	5B	A2C4	8D	A2J2	7E	A2R30T	15D		
A1C7	6A	A2C5	8B	A2L1	9B	A2R31T	16B		
A1C8T	2B	A2C6	8B	A2L2	12B	A2R32	5G		
A1C9	6B	A2C7	10B	A2L3	7G	A2R33	6F		
A1C10	4C	A2C8	10B	A2L4	11G	A2R34	5G		
A1C11T	3B	A2C9	10B	A2Q1	8C	A2R36	6G		
A1C12	2D	A2C10	10C	A2Q2	9B	A2R37	6H		
A1CR1	6A	A2C11	11B	A2Q3	11C	A2R38	6H		
A1CR2	5C	A2C12	11B	A2Q4	13C	A2R39	7F		
A1Q1	4B	A2C13	11B	A2Q5	15C	A2R40	8G		
A1Q2	5B	A2C14	12C	A2Q6	5G	A2R41	8H		
A1Q3	6B	A2C15	12B	A2Q7	7H	A2R42	8F		
A1Q4	3E	A2C16	14B	A2Q8	8G	A2R43	8H		
A1Q5	4E	A2C17	14C	A2Q9	11G	A2R44T	9G		
A1Q6	4C	A2C18	10B	A2Q10	12G	A2R46	10H		
A1Q7	5D	A2C19	10B	A2Q11	13G	A2R47	10G		
A1R1	2B	A2C20	14A	A2R1	7C	A2R48	11F		
A1R2	4B	A2C21	15B	A2R2	8C	A2R49	11H		
A1R3	4A	A2C22	15B	A2R3	8B	A2R51	12G		
A1R4	4A	A2C23	5G	A2R4	8B	A2R52	12H		
A1R5	4B	A2C24	5G	A2R5	9B	A2R53	12G		
A1R6	5B	A2C25	5G	A2R6	9C	A2P54	12H		
A1R7	5A	A2C26	5H	A2R7	5A	A2R55	13G		
A1R8	6A	A2C27	6H	A2R8	9A	A2R56	13H		
A1R9	2A	A2C28	6H	A2R9	8D	A2P57	13F		
A1R10T	3C	A2C29	7G	A2R10	9C	A2R58	14F		
A1R11	4C	A2C30	7H	A2R11	9D	A2R60	7G		
A1R12	6B	A2C31	8G	A2R12	9B	A2R61	9H		
A1R13	2D	A2C32	8H	A2R13	10C	A2R62	5H		
A1R14	3D	A2C33	8G	A2R14	11B	A2S1	3G		
A1R15	3E	A2C34	8G	A2R15	11D	A2T1	12B		
A1R16	3E	A2C35	6G	A2R16	11A	A2T2	15B		
A1R17	3C	A2C36	10G	A2R17	11D	A2T3	9G		
A1R18	4C	A2C37	10G	A2R18T	12B	A3	5D		
A1R19	4E	A2C38	11G	A2R19	12C	A3J2	2E, 5E		
A1R20	4E	A2C39	11G	A2R20	13B	A3Q1	6E		
A1R21	5E	A2C40	11H	A2R21	13D	A3R1	6D		
A1R22	4C	A2C41	11H	A2R22	13B	A3R2	2E		
A1R23T	4D	A2C42	13H	A2R23	13C				

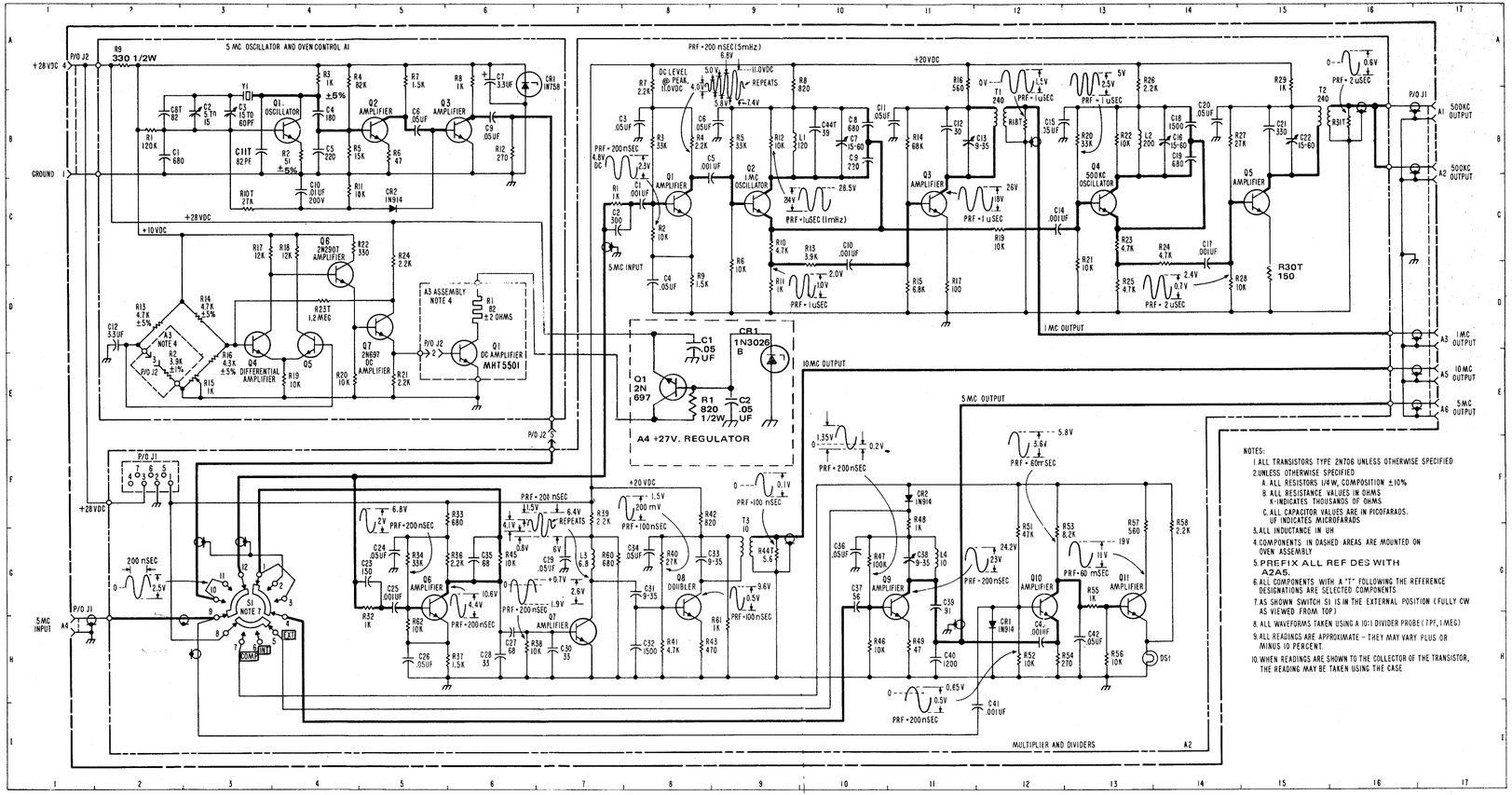


Figure 5-17. Frequency Standard Assembly 2A2A5, Schematic Diagram

PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN
A1	4A	C1	4E
A1P1	3A	C2	10C
A2	6H	J4	3B
A2P1	5H	J5	3G
A3	8H	J6	6G
A3J1	8H	P1	1B
A3J3	9H	P2	9G
A3J4	8H	P3	11G
A3J5	8H	P7	10C
A3J6	9H	P8	10D
A3J7	8H	P9	10D
A4	4H	P10	10D
A4P1	3H	P11	10D
A5	7A	P12	10E
A5J1	6A	P13	10E
A5J2	7A	P14	8G
A5J3	5A	P15	8G
A5J4	8A	P16	9G
A5J5	8A	P17	8G
A5J6	6A	P18	8G
A6	11D	P19	9G
A6J1	11D	P21	5B
A6J2	11E	P22	6B
A6J3	11E	P23	6B
A6J4	11D	P24	8B
A6J5	11D	P25	8B
A6J6	11C	P26	7B
A6J7	11D		

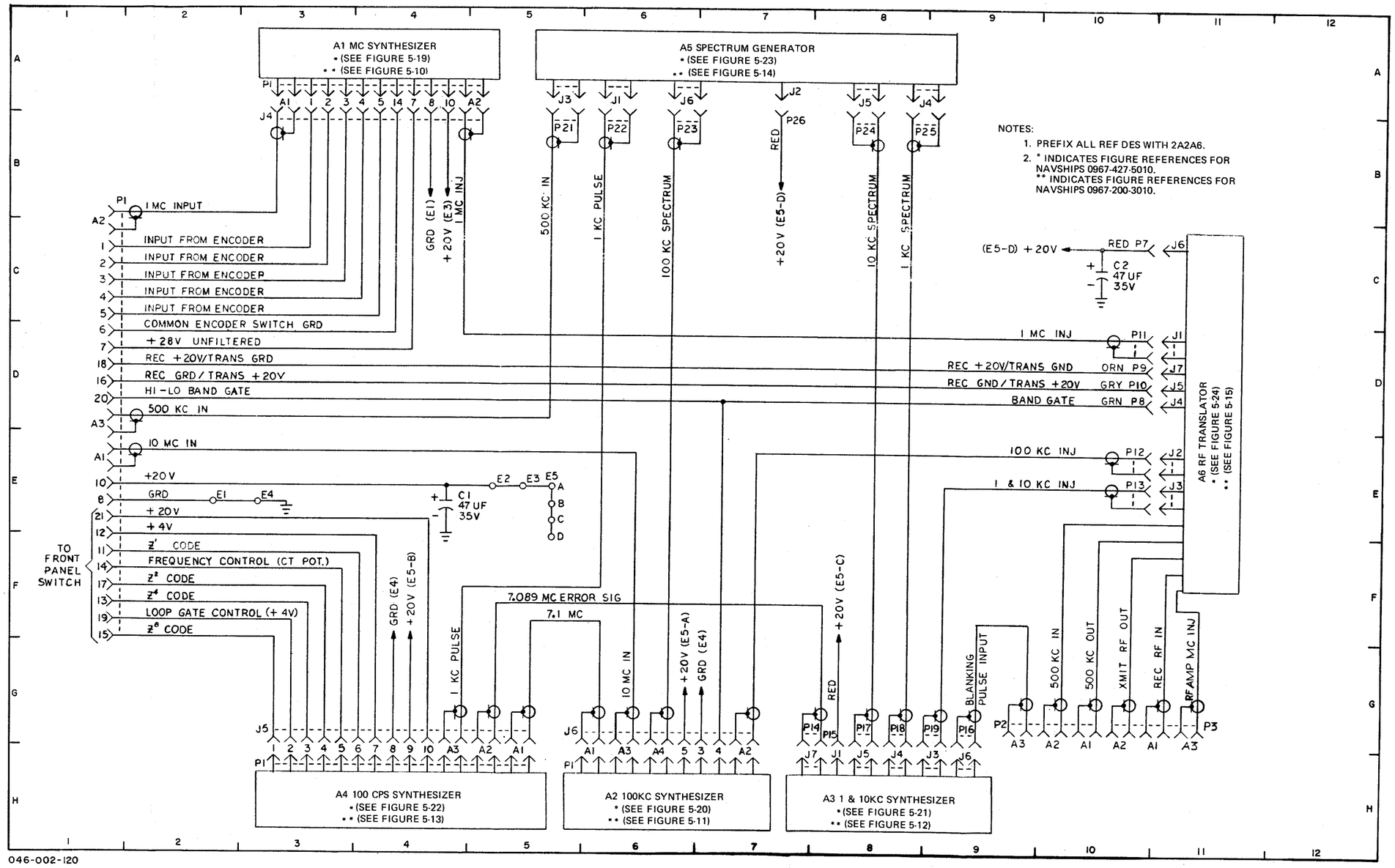


Figure 5-18. Translator/Synthesizer Assembly 2A2A6, Schematic Diagram

PART LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
B1	3F	A1R14	9C	A2R13	21G	A3L3	9H
C1 thru C17	4C	A1R15	10C	A2R14	22G	A3L4	13G
C1	4G	A1R16	11C	A2R15	22F	A3Q1	7G
C2	16E	A1R17	11C	A2R16	22G	A3Q2	8G
K1	3E, 3D	A1R18	12C	A2R17	22G	A3Q3	9G
L1	4G	A1RT1	6B	A2R18	22H	A3Q4	13G
L2	15E	A2C1	15G	A2R19	22H	A3Q5	10F
P1	2D, 2E, 4G, 12C	A2C2	16F	A2R20	22H	A3Q6	11G
S1	3E, 4C, 4E	A2C3	16G	A2R21	23G	A3R1	5F
Y1 thru Y17	4C	A2C4	16F	A2R22	15F	A3R2	6F
A1C18	11B	A2C5	19G	A2RT1	22H	A3R3	7F
A1C19	5B	A2C6	19G	A2T1	18G	A3R4	7G
A1C20	6B	A2C7	21G	A2T2	19G	A3R5	6G
A1C21	7C	A2C8	21G	A2TP1	18G	A3R6	7G
A1C23	7B	A2C9	21H	A2TP2	21G	A3R7	7G
A1C24	8C	A2C10	21F	A2TP3	23F	A3R8	8H
A1C25	11B	A2C11	22H	A3C1	6F	A3R9	8F
A1C26	9C	A2C12	18G	A3C2	6G	A3R10	8G
A1C27	10B	A2C13	20G	A3C3	5G	A3R11	8G
A1C28	11C	A2C14	15F	A3C4	7G	A3R12	9F
A1CR1	6A	A2CR1	20G	A3C5	7G	A3R13	9F
A1CR2	6A	A2J1	23G	A3C6	8H	A3R14	9G
A1CR3	5C	A2J2	22F	A3C7	8G	A3R15	9G
A1L1	11A	A2L1	20G	A3C8	8G	A3R16	9G
A1L2	8B	A2L2	21G	A3C9	10H	A3R17	10H
A1L3	9C	A2L3	21G	A3C10	10G	A3R18	11G
A1Q1	8C	A2L4	21H	A3C11	5F	A3R19	12G
A1Q2	9C	A2P1	23G	A3C12	12G	A3R20	12G
A1Q3	10C	A2P2	22F	A3C13	12G	A3R21	11H
A1Q4	11C	A2Q1	16G	A3C14	11G	A3R22	10H
A1R1	5D	A2Q2	19G	A3C15	13G	A3R23	11G
A1R2	5B	A2Q3	22G	A3C16	13G	A3R24	11G
A1R3	5A	A2R1	16F	A3C17	14G	A3R25	12G
A1R4	6B	A2R2	16G	A3C18	10F	A3R26	10F
A1R5	7A	A2R3	16F	A3C19	11G	A3R27	10F
A1R6	7B	A2R4	16F	A3C20	11F	A3R28	10G
A1R7	8B	A2R5	16G	A3CR1	5F	A3R29	10G
A1R8	7B	A2R6	17G	A3CR2	7G	A3R30	10F
A1R9	8C	A2R7	18G	A3CR3	6G	A3R31	11F
A1R10	9C	A2R8	18G	A3CR4	9G	A3R32	14G
A1R11	9B	A2R9	19F	A3CR5	10H	A3R33	5G
A1R12	10B	A2R10	19G	A3L1	5F	A3T1	13G
A1R13	9C	A2R11	19G	A3L2	5G	A3TP1	13F
		A2R12	20G				

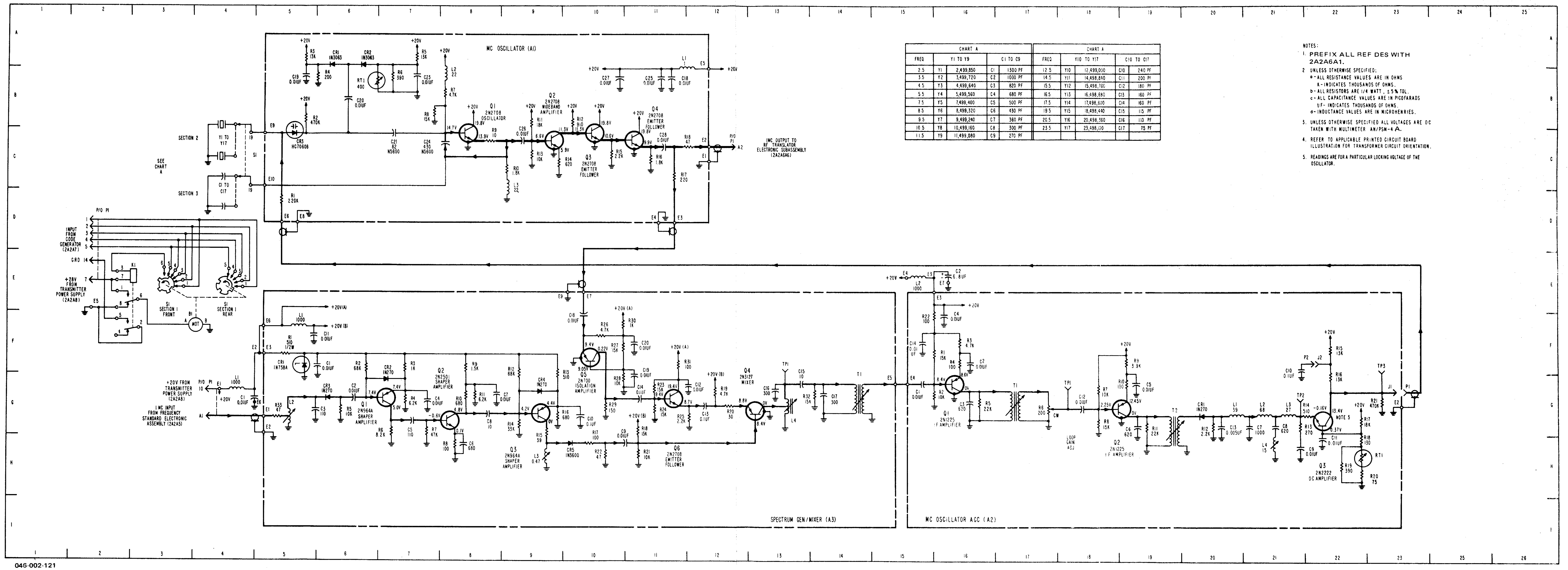


CHART A						CHART A					
FREQ	Y1 TO Y9		C1 TO C9			FREQ	Y10 TO Y17		C10 TO C17		
2.5	Y1	2,499,850	C1	1300 PF		12.5	Y10	12,499,000	C10	240 PF	
3.5	Y2	3,499,720	C2	1000 PF		14.5	Y11	14,498,840	C11	200 PF	
4.5	Y3	4,499,640	C3	820 PF		15.5	Y12	15,498,760	C12	180 PF	
5.5	Y4	5,499,560	C4	680 PF		16.5	Y13	16,498,680	C13	160 PF	
7.5	Y5	7,499,400	C5	500 PF		17.5	Y14	17,498,600	C14	160 PF	
8.5	Y6	8,499,320	C6	430 PF		19.5	Y15	18,498,440	C15	115 PF	
9.5	Y7	9,499,240	C7	360 PF		20.5	Y16	20,498,360	C16	110 PF	
10.5	Y8	10,499,160	C8	300 PF		23.5	Y17	23,498,120	C17	75 PF	
11.5	Y9	11,499,080	C9	270 PF							

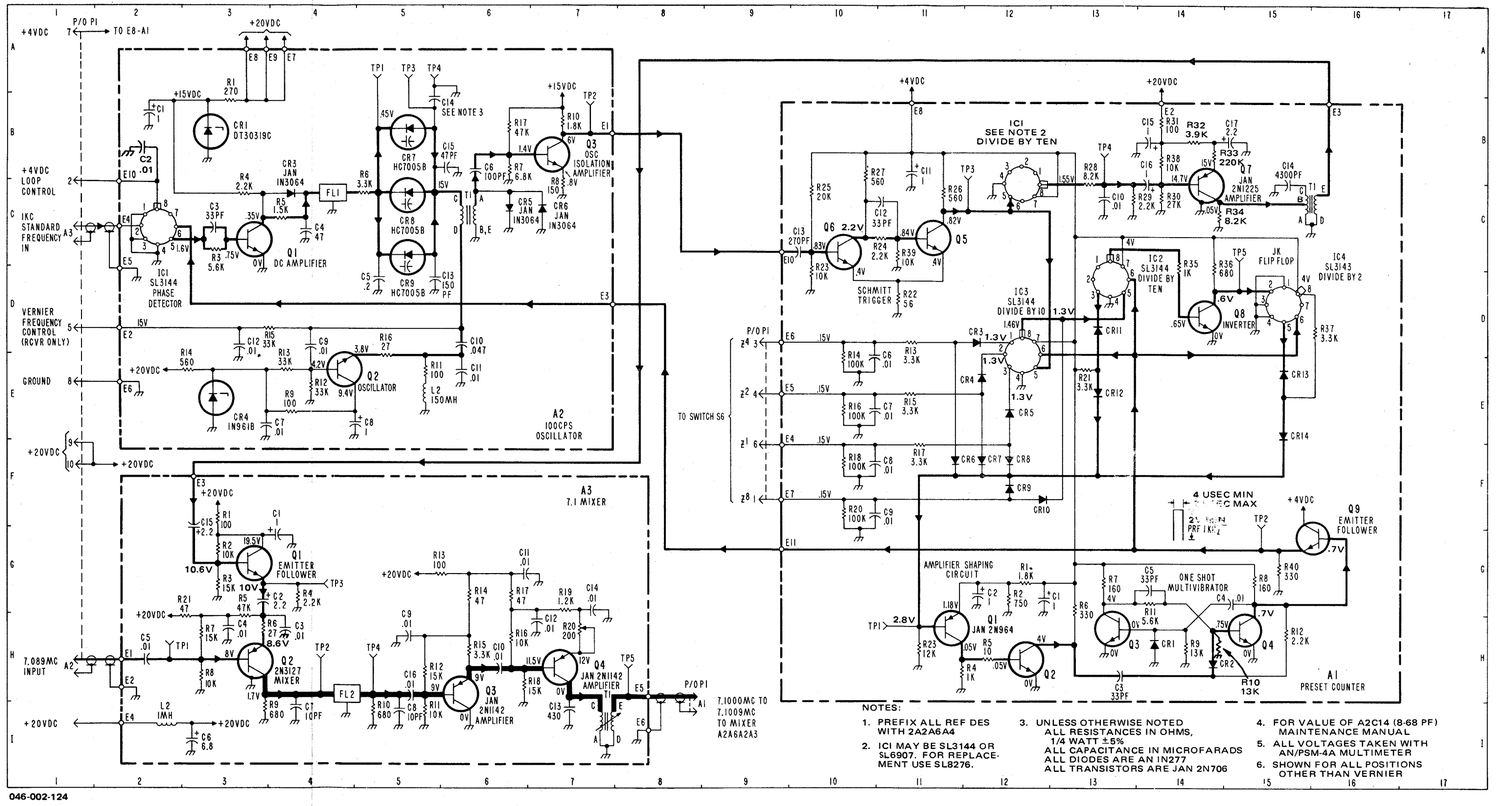
NOTES:

1. PREFIX ALL REF DES WITH 2A2A6A1.
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 THOUSANDS OF OHMS.
   d - INDUCTANCE VALUES ARE IN MICROHENRIES.
3. UNLESS OTHERWISE SPECIFIED ALL VOLTAGES ARE DC TAKEN WITH MULTIMETER AN/PSM-4 A.
4. REFER TO APPLICABLE PRINTED CIRCUIT BOARD ILLUSTRATION FOR TRANSFORMER CIRCUIT ORIENTATION.
5. READINGS ARE FOR A PARTICULAR LOCKING VOLTAGE OF THE OSCILLATOR.

Figure 5-19. MC Synthesizer Subassembly 2A2A6A1, Schematic Diagram

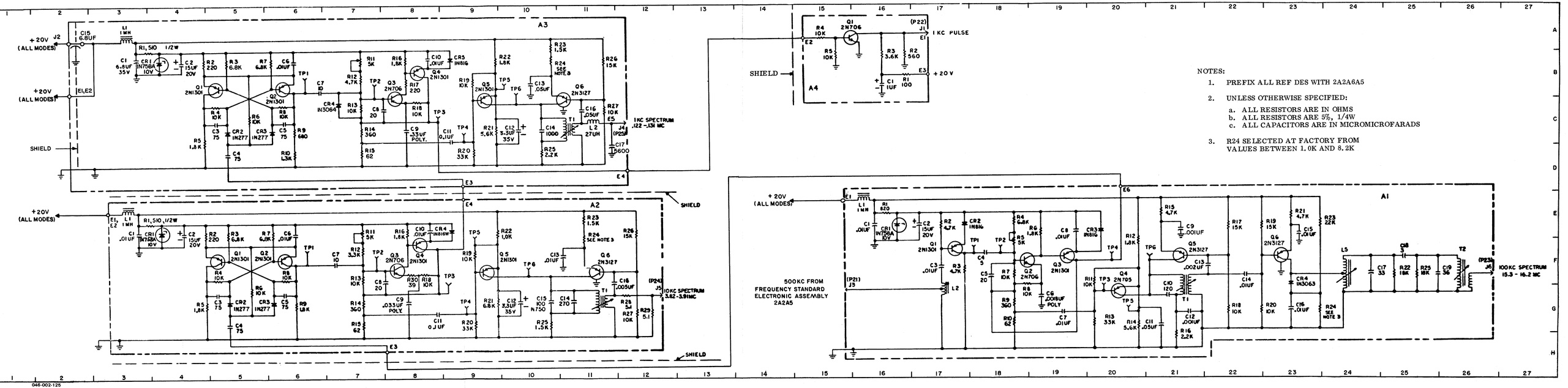
PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
P1	1A, 1C, 1D, 1E, 1F, 1H, 1I, 8H, 9D, 9E, 9F	A1Q2	12H	A1R33	14B	A2L2	5E	A3C13	7I
		A1Q3	13H	A1R34	14C	A2IC1	2C	A3C14	7G
		A1Q4	15H	A1R35	14C	A2Q1	3C	A3C15	3F
		A1Q5	11C	A1R36	14C	A2Q2	4E	A3C16	5H
A1C1	12G	A1Q6	10C	A1R37	16D	A2Q3	7B	A3FL1	Not used
A1C2	12G	A1Q7	14B	A1R38	14B	A2R1	3B	A3FL2	4H
A1C3	13H	A1Q8	14D	A1R39	11C	A2R2	Not used	A3L1	Not used
A1C4	15G	A1Q9	16G	A1R40	15G	A2R3	3C	A3L2	2I
A1C5	14G	A1R1	12G	A1T1	15C	A2R4	3C	A3Q1	3G
A1C6	10E	A1R2	12G	A1TP1	11H	A2R5	4C	A3Q2	3H
A1C7	10E	A1R3	11H	A1TP2	15F	A2R6	5C	A3Q3	6H
A1C8	10F	A1R4	12H	A1TP3	12B	A2R7	6B	A3Q4	7H
A1C9	10F	A1R5	12H	A1TP4	13B	A2R8	7C	A3R1	3F
A1C10	13C	A1R6	13G	A1TP5	15C	A2R9	4E	A3R2	3G
A1C11	11B	A1R7	13G	A2C1	2B	A2R10	7B	A3R3	3G
A1C12	11C	A1R8	15G	A2C2	2B	A2R11	5E	A3R4	4G
A1C13	10C	A1R9	14H	A2C3	3C	A2R12	4E	A3R5	3H
A1C14	15C	A1R10	14H	A2C4	4C	A2R13	4E	A3R6	3H
A1C15	14B	A1R11	14G	A2C5	5D	A2R14	3E	A3R7	3H
A1C16	14C	A1R12	15H	A2C6	6B	A2R15	3D	A3R8	3H
A1C17	15B	A1R13	11D	A2C7	3E	A2R16	5E	A3R9	3I
A1CRI	14H	A1R14	10E	A2C8	4E	A2R17	6B	A3R10	5I
A1CR2	14H	A1R15	11E	A2C9	4D	A2T1	6C	A3R11	5I
A1CR3	12D	A1R16	10E	A2C10	6D	A2TP1	5A	A3R12	5H
A1CR4	12E	A1R17	11F	A2C11	6E	A2TP2	7B	A3R13	6G
A1CR5	12E	A1R18	10F	A2C12	3D	A2TP3	5A	A3R14	6G
A1CR6	11F	A1R19	Not used	A2C13	5D	A2TP4	5A	A3R15	6H
A1CR7	12F	A1R20	10F	A2C14	5B	A3C1	4G	A3R16	6H
A1CR8	12F	A1R21	13E	A2C15	6B	A3C2	3G	A3R17	6G
A1CR9	12F	A1R22	11D	A2CR1	3B	A3C3	4H	A3R18	6H
A1CR10	12F	A1R23	10C	A2CR2	Not used	A3C4	3H	A3R19	7G
A1CR11	13D	A1R24	11C	A2CR3	4C	A3C5	2H	A3R20	7H
A1CR12	13E	A1R25	10C	A2CR4	3E	A3C6	3I	A3R21	3H
A1CR13	15E	A1R26	11C	A2CR5	6C	A3C7	4I	A3T1	7I
A1CR14	15E	A1R27	10B	A2CR6	7C	A3C8	5I	A3TP1	2H
A1IC1	12B	A1R28	13C	A2CR7	5B	A3C9	5H	A3TP2	4H
A1IC2	13D	A1R29	13C	A2CR8	5C	A3C10	6H	A3TP3	4G
A1IC3	12D	A1R30	14C	A2CR9	5C	A3C11	6G	A3TP4	5H
A1IC4	15D	A1R31	14B	A2FL1	4C	A3C12	7H	A3TP5	8H
A1Q1	11H	A1R32	14B	A2L1	Not used				



046-002-124

Figure 5-22. 100-CPS Synthesizer Subassembly 2A2A6A4, Schematic Diagram



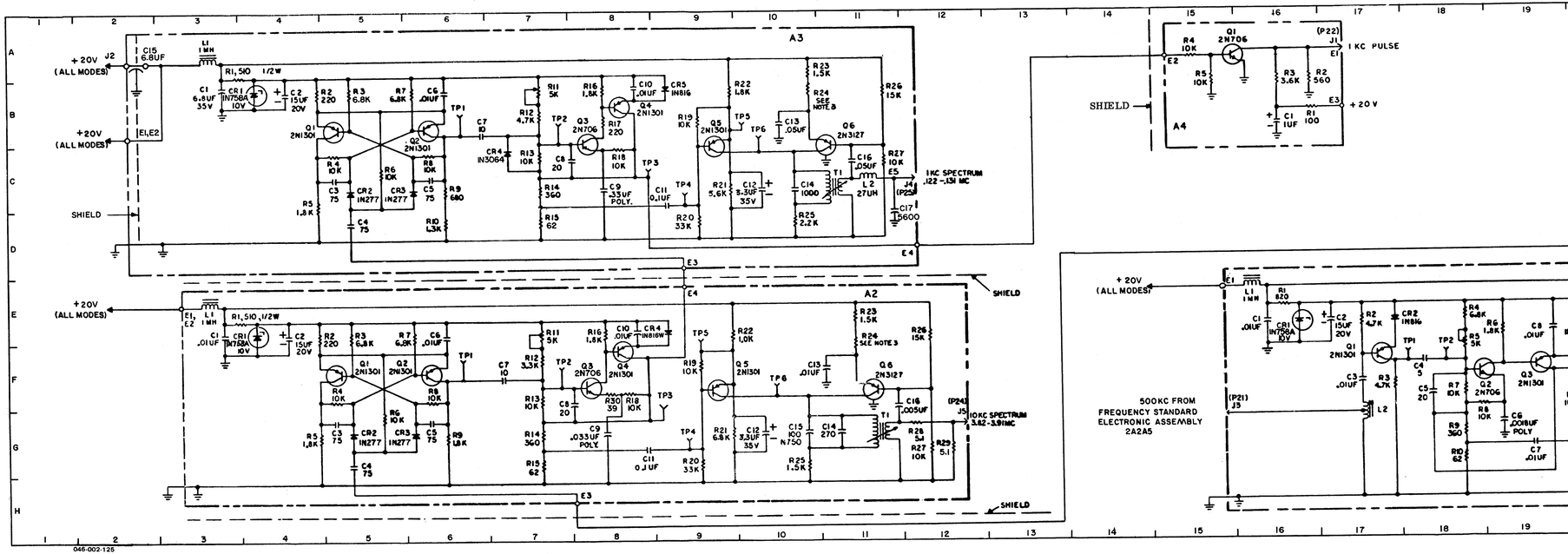
NOTES:

1. PREFIX ALL REF DES WITH 2A2A6A5
2. UNLESS OTHERWISE SPECIFIED:
   a. ALL RESISTORS ARE IN OHMS
   b. ALL RESISTORS ARE 5%, 1/4W
   c. ALL CAPACITORS ARE IN MICROMICROFARADS
3. R24 SELECTED AT FACTORY FROM VALUES BETWEEN 1.0K AND 8.2K

Figure 5-23. Spectrum Generator Subassembly 2A2A6A5, Schematic Diagram

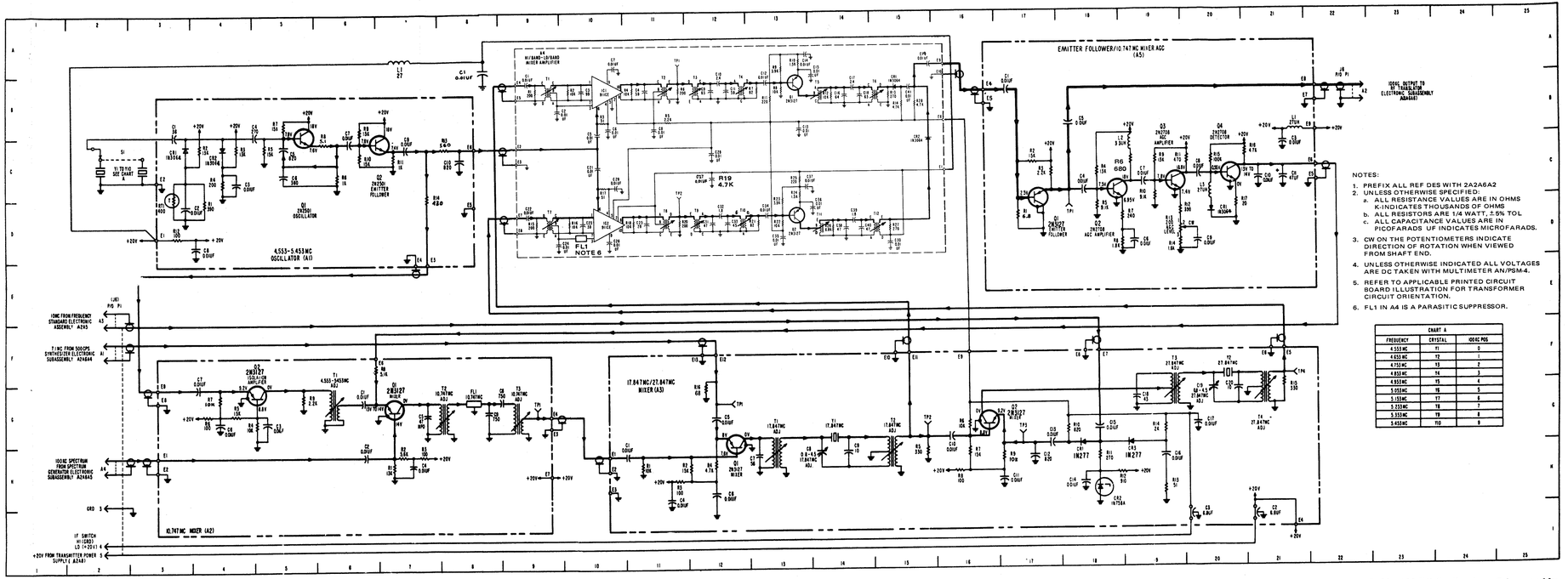
PART LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
J2	2A	A1R6	19E	A2C14	11G	A2R27	12G	A3Q6	11C
A1C1	16E	A1R7	18F	A2C15	10G	A2R28	12G	A3R1	4A
A1C2	17E	A1R8	18G	A2C16	11F	A2R29	12G	A3R2	4B
A1C3	17F	A1R9	18G	A2CR1	4E	A2R30	8F	A3R3	5B
A1C4	18F	A1R10	18G	A2CR2	5G	A2T1	11G	A3R4	5C
A1C5	18F	A1R11	20F	A2CR3	6G	A2TP1	6F	A3R5	4C
A1C6	19G	A1R12	20F	A2CR4	9E	A2TP2	7F	A3R6	5C
A1C7	19G	A1R13	20G	A2J5	12G	A2TP3	9F	A3R7	6B
A1C8	19E	A1R14	20G	A2L1	3E	A2TP4	9G	A3R8	6C
A1C9	21E	A1R15	21E	A2Q1	5F	A2TP5	9E	A3R9	6C
A1C10	21G	A1R16	21H	A2Q2	6F	A2TP6	10F	A3R10	6D
A1C11	21G	A1R17	22E	A2Q3	8F	A3C1	3B	A3R11	7B
A1C12	21G	A1R18	22G	A2Q4	8F	A3C2	4B	A3R12	7B
A1C13	22F	A1R19	23E	A2Q5	9F	A3C3	5C	A3R13	7C
A1C14	22F	A1R20	22G	A2Q6	11F	A3C4	5D	A3R14	7C
A1C15	23E	A1R21	23E	A2R1	4E	A3C5	6C	A3R15	7D
A1C16	23G	A1R22	25F	A2R2	4E	A3C6	6B	A3R16	8B
A1C17	24F	A1R23	23E	A2R3	5E	A3C7	6B	A3R17	8B
A1C18	25F	A1R24	23G	A2R4	5F	A3C8	8C	A3R18	8C
A1C19	25F	A1R25	25F	A2R5	4G	A3C9	8C	A3R19	9B
A1CR1	16E	A1T1	21G	A2R6	5G	A3C10	8B	A3R20	9D
A1CR2	17E	A1T2	26F	A2R7	6E	A3C11	9C	A3R21	9C
A1CR3	20E	A1TP1	18F	A2R8	6F	A3C12	10C	A3R22	9B
A1CR4	23F	A1TP2	18F	A2R9	6G	A3C13	10B	A3R23	10A
A1J3	15G	A1TP3	20F	A2R10	Not used	A3C14	10C	A3R24	10B
A1J6	26F	A1TP4	20F	A2R11	7E	A3C15	2A	A3R25	10D
A1L1	16E	A1TP5	20G	A2R12	7F	A3C16	11C	A3R26	11B
A1L2	17G	A1TP6	21F	A2R13	7F	A3C17	11D	A3R27	11C
A1L3	Not used	A2C1	3E	A2R14	7G	A3CR1	4B	A3T1	11C
A1L4	Not used	A2C2	4E	A2R15	7G	A3CR2	5C	A3TP1	6B
A1Q1	17F	A2C3	5G	A2R16	8E	A3CR3	6C	A3TP2	7B
A1Q2	18F	A2C4	5G	A2R17	Not used	A3CR4	7C	A3TP3	8C
A1Q3	19F	A2C5	6G	A2R18	8F	A3CR5	9B	A3TP4	9C
A1Q4	20G	A2C6	6E	A2R19	9F	A3J4	12C	A3TP5	10B
A1Q5	21F	A2C7	7F	A2R20	9G	A3L1	3A	A3TP6	10B
A1Q6	23F	A2C8	8F	A2R21	9G	A3L2	11C	A4C1	16B
A1R1	16E	A2C9	8G	A2R22	9E	A3Q1	5B	A4J1	17A
A1R2	17E	A2C10	8E	A2R23	11E	A3Q2	6B	A4Q1	15A
A1R3	17F	A2C11	8G	A2R24	11F	A3Q3	8B	A4R1	16B
A1R4	18E	A2C12	10G	A2R25	10G	A3Q4	8B	A4R2	16B
A1R5	18F	A2C13	11F	A2R26	12E	A3Q5	9C	A4R3	16B
								A4R4	15A
								A4R5	15B



PART LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
2C4	7H	A3C20	20G	A4C10	12B	A4R3	10B	A5C2	17D
2C5	7G	A3CR1	18H	A4C11	12B	A4R4	11B	A5C3	21C
2C6	4G	A3CR2	18H	A4C12	13B	A4R5	11B	A5C4	18C
2C7	4G	A3CR3	19H	A4C13	13B	A4R6	11B	A5C5	18B
2C8	9G	A3Q1	12H	A4C14	13A	A4R7	13B	A5C6	19B
2C9	8G	A3Q2	16G	A4C15	14B	A4R8	13B	A5C7	19C
2FL1	8G	A3R1	11H	A4C16	14B	A4R9	13A	A5C8	20C
2Q1	7G	A3R2	12H	A4C17	14B	A4R10	13A	A5C9	20D
2Q2	5G	A3R3	11H	A4C18	14B	A4R11	13B	A5C10	21C
2R1	7H	A3R4	12H	A4C19	15A	A4R12	14B	A5C11	21C
2R2	7H	A3R5	15H	A4C20	Not used	A4R13	15B	A5CR1	20D
2R3	7H	A3R6	16G	A4C21	10C	A4R14	15B	A5L1	21B
2R4	5G	A3R7	16H	A4C22	9D	A4R15	9D	A5L2	19C
2R5	4G	A3R8	16H	A4C23	10D	A4R16	10D	A5L3	20C
2R6	4G	A3R9	17H	A4C24	9D	A4R17	10C	A5Q1	17D
2R7	4G	A3R10	18G	A4C25	11D	A4R18	11D	A5Q2	18C
2R8	6F	A3R11	18H	A4C26	10D	A4R19	12C	A5Q3	19C
2R9	5G	A3R12	18H	A4C27	12C	A4R20	11D	A5Q4	20C
2T1	6G	A3R13	19H	A4C28	12C	A4R21	13D	A5R1	17D
2T2	8G	A3R14	19G	A4C29	10C	A4R22	13D	A5R2	17C
2T3	9G	A3R15	21G	A4C30	15D	A4R23	13D	A5R3	17C
2TP1	9G	A3R16	12G	A4C31	12D	A4R24	13D	A5R4	18C
3C1	11H	A3T1	13H	A4C32	12D	A4R25	13C	A5R5	18D
3C2	21I	A3T2	15H	A4C33	12D	A4R26	14D	A5R6	19C
3C3	20I	A3T3	19G	A4C34	13D	A4R27	15D	A5R7	19D
3C4	11H	A3T4	21G	A4C35	13D	A4R28	15B	A5R8	19D
3C5	12G	A3TP1	12G	A4C36	14D	A4T1	9B	A5R9	19C
3C6	12H	A3TP2	15G	A4C37	13C	A4T2	11B	A5R10	19D
3C7	13H	A3TP3	17G	A4C38	14D	A4T3	12B	A5R11	20C
3C8	14H	A3TP4	21F	A4C39	14D	A4T4	12B	A5R12	19D
3C9	14H	A3Y1	14G	A4C40	14D	A4T5	14B	A5R13	19D
3C10	16G	A3Y2	20F	A4C41	15B	A4T6	15B	A5R14	19D
3C11	17H	A4C1	9B	A4CR1	15B	A4T7	9D	A5R15	20C
3C12	17H	A4C2	9B	A4CR2	15C	A4T8	11D	A5R16	21C
3C13	17G	A4C3	10B	A4FL1	10D	A4T9	12D	A5R17	20D
3C14	18H	A4C4	11B	A4IC1	10B	A4T10	12D	A5TP1	18D
3C15	18G	A4C5	10C	A4IC2	10D	A4T11	14D		
3C16	19H	A4C6	10B	A4Q1	13B	A4T12	15D		
3C17	20G	A4C7	10A	A4Q2	13D	A4TP1	11A		
3C18	19G	A4C8	11B	A4R1	9B	A4TP2	11D		
3C19	20G	A4C9	12B	A4R2	10B	A5C1	17B		



046-002-122

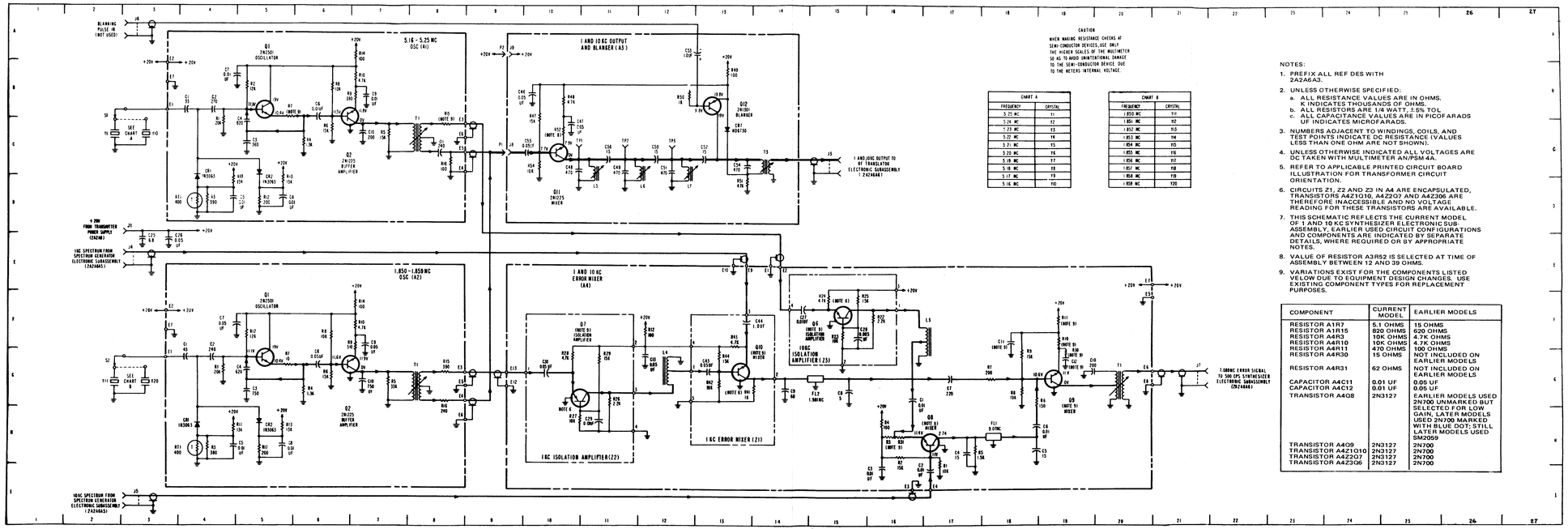
Figure 5-20. 100 KC Synthesizer Subassembly 2A2A6A2, Schematic Diagram

PART LOCATION INDEX

REF DES	LCTN
C1	8A
L1	7A
P1	2E, 2F
	2H, 2I
	22B
S1	2C
Y1	
thru	2C
Y10	
A1C1	3C
A1C2	3D
A1C3	4C
A1C4	5C
A1C5	5C
A1C6	5C
A1C7	6C
A1C8	4D
A1C9	7C
A1C10	8C
A1CR1	3C
A1CR2	4C
A1Q1	5C
A1Q2	7C
A1R1	4C
A1R2	4C
A1R3	4C
A1R4	4C
A1R5	5C
A1R6	6C
A1R7	5B
A1R8	6C
A1R9	6B
A1R10	6C
A1R11	7C
A1R12	3D
A1R13	8C
A1R14	7C
A1RT1	3C
A2C1	6G
A2C2	6H
A2C3	5G
A2C4	7H
A2C5	7G
A2C6	4G
A2C7	4G
A2C8	9G
A2C9	8G
A2FL1	8G
A2Q1	7G
A2Q2	5G
A2R1	7H
A2R2	7H
A2R3	7H
A2R4	5G
A2R5	4G
A2R6	4G
A2R7	4G
A2R8	6F
A2R9	5G
A2T1	6G
A2T2	8G
A2T3	9G
A2TP1	9G
A3C1	11H
A3C2	21I
A3C3	20I
A3C4	11H
A3C5	12G
A3C6	12H
A3C7	13H
A3C8	14H
A3C9	14H
A3C10	16G
A3C11	17H
A3C12	17H
A3C13	17G
A3C14	18H
A3C15	18G
A3C16	19H
A3C17	20G
A3C18	19G
A3C19	20G
A3C20	20G
A3CR1	18H
A3CR2	18H
A3CR3	19H
A3Q1	12H
A3Q2	16G
A3R1	11H
A3R2	12H
A3R3	11H
A3R4	12H
A3R5	15H
A3R6	16G
A3R7	16H
A3R8	16H
A3R9	17H
A3R10	18G
A3R11	18H
A3R12	18H
A3R13	19H
A3R14	19G
A3R15	21G
A3R16	12G
A3T1	13H
A3T2	15H
A3T3	19G
A3T4	21G
A3TP1	12G
A3TP2	15G
A3TP3	17G
A3TP4	21F
A3Y1	14G
A3Y2	20F
A4C1	9B
A4C2	9B
A4C3	10B
A4C4	11B
A4C5	10C
A4C6	10B
A4C7	10A
A4C8	11B
A4C9	12B
A4C10	12B
A4C11	12B
A4C12	13B
A4C13	13B
A4C14	13A
A4C15	14B
A4C16	14B
A4C17	14B
A4C18	14B
A4C19	15A
A4C20	Not used
A4C21	10C
A4C22	9D
A4C23	10D
A4C24	9D
A4C25	11D
A4C26	10D
A4C27	12C
A4C28	12C
A4C29	10C
A4C30	15D
A4C31	12D
A4C32	12D
A4C33	12D
A4C34	13D
A4C35	13D
A4C36	14D
A4C37	13C
A4C38	14D
A4C39	14D
A4C40	14D
A4C41	15B
A4CR1	15B
A4CR2	15C
A4FL1	10D
A4IC1	10B
A4IC2	10D
A4Q1	13B
A4Q2	13D
A4R1	9B
A4R2	10B
A4R3	10B
A4R4	11B
A4R5	11B
A4R6	11B
A4R7	13B
A4R8	13B
A4R9	13A
A4R10	13A
A4R11	13B
A4R12	14B
A4R13	15B
A4R14	15B
A4R15	9D
A4R16	10D
A4R17	10C
A4R18	11D
A4R19	12C
A4R20	11D
A4R21	13D
A4R22	13D
A4R23	13D
A4R24	13D
A4R25	13C
A4R26	14D
A4R27	15D
A4R28	15B
A4T1	9B
A4T2	11B
A4T3	12B
A4T4	12B
A4T5	14B
A4T6	15B
A4T7	9D
A4T8	11D
A4T9	12D
A4T10	12D
A4T11	14D
A4T12	15D
A4TP1	11A
A4TP2	11D
A5C1	17B
A5C2	17D
A5C3	21C
A5C4	18C
A5C5	18B
A5C6	19B
A5C7	19C
A5C8	20C
A5C9	20D
A5C10	21C
A5C11	21C
A5CR1	20D
A5L1	21B
A5L2	19C
A5L3	20C
A5Q1	17D
A5Q2	18C
A5Q3	19C
A5Q4	20C
A5R1	17D
A5R2	17C
A5R3	17C
A5R4	18C
A5R5	18D
A5R6	19C
A5R7	19D
A5R8	19D
A5R9	19C
A5R10	19D
A5R11	20C
A5R12	19D
A5R13	19D
A5R14	19D
A5R15	20C
A5R16	21C
A5R17	20D
A5TP1	18D

PART LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
C2S	3E	A1RT1	4D	A3CR7	13C	A4R7	18G
C26	3E	A1T1	8C	A3J8	9C	A4R8	18G
J1	3D	A2C1	4C	A3J9	9A	A4R9	18F
J3	15C	A2C2	4G	A3J10	9D	A4R10	19F
J4	3E	A2C3	5G	A3L5	11C	A4R11	19F
J5	3I	A2C4	5G	A3L6	12C	A4R12	12F
J6	3A	A2C5	4H	A3L7	12C	A4R30	19F
J7	21G	A2C6	6G	A3Q11	10C	A6R31	16H
P1	9C	A2C7	4F	A3Q12	13B	A4T1	20G
P2	9A	A2C8	5H	A3R47	10B	A4Z1C43	13G
S1	2B	A2C9	7F	A3R48	10B	A4Z1C44	13F
S2	2G	A2C10	7G	A3R49	13B	A4Z1Q10	13G
Y1 thru Y10	2C,3C	A2CR1	4H	A3R50	12B	A4Z1R41	13G
Y11thru Y20	2G,3G	A2CR2	5H	A3R51	13D	A4Z1R42	13G
A1C1	4B	A2Q1	5G	A3R52	10C	A4Z1R43	13F
A1C2	4B	A2Q2	6G	A3R54	10C	A4Z1R44	13G
A1C3	5C	A2R1	4G	A3T3	14C	A4Z2C29	11H
A1C4	5C	A2R2	5F	A3TP1	10C	A4Z2C30	10G
A1C5	4D	A2R3	4H	A3TP2	11C	A4Z2Q7	10G
A1C6	6B	A2R4	6G	A3TP3	12C	A4Z2R26	11G
A1C7	4B	A2R5	7G	A4C1	16G	A4Z2R27	10H
A1C8	5D	A2R6	6G	A4C2	17I	A4Z2R28	10G
A1C9	7B	A2R7	5G	A4C3	16I	A4Z2R29	11G
A1C10	7C	A2R8	6F	A4C4	17H	A4Z3C27	14F
A1C11	8C	A2R9	7F	A4C5	19H	A4Z3C28	15F
A1CR1	4C	A2R10	7F	A4C6	19H	A4Z3Q6	15F
A1CR2	5C	A2R11	4H	A4C7	17G	A4Z3R22	16F
A1Q1	5B	A2R12	5H	A4C8	15G	A4Z3R23	15F
A1Q2	6B	A2R13	5H	A4C9	14G	A4Z3R24	15F
A1R1	4B	A2R14	7F	A4C10	19G	A4Z3R25	15F
A1R2	5B	A2R15	8G	A4C11	18F		
A1R3	4D	A2R16	8G	A4C12	19G		
A1R4	6C	A2RT1	4H	A4C13	12G		
A1R5	7C	A2T1	8G	A4FL1	18H		
A1R6	6C	A3C46	10B	A4FL2	15G		
A1R7	5B	A3C47	10C	A4L3	17F		
A1R8	6B	A3C48	10C	A4L4	12G		
A1R9	7B	A3C49	11C	A4Q8	17H		
A1R10	7B	A3C50	12C	A4Q9	19G		
A1R11	4D	A3C51	13C	A4R1	17I		
A1R12	5D	A3C52	13C	A4R2	16H		
A1R13	5C	A3C53	13A	A4R3	16H		
A1R14	7A	A3C54	13C	A4R4	16H		
A1R15	8C	A3C55	10C	A4R5	17H		
A1R16	8C	A3C56	11C	A4R6	19H		

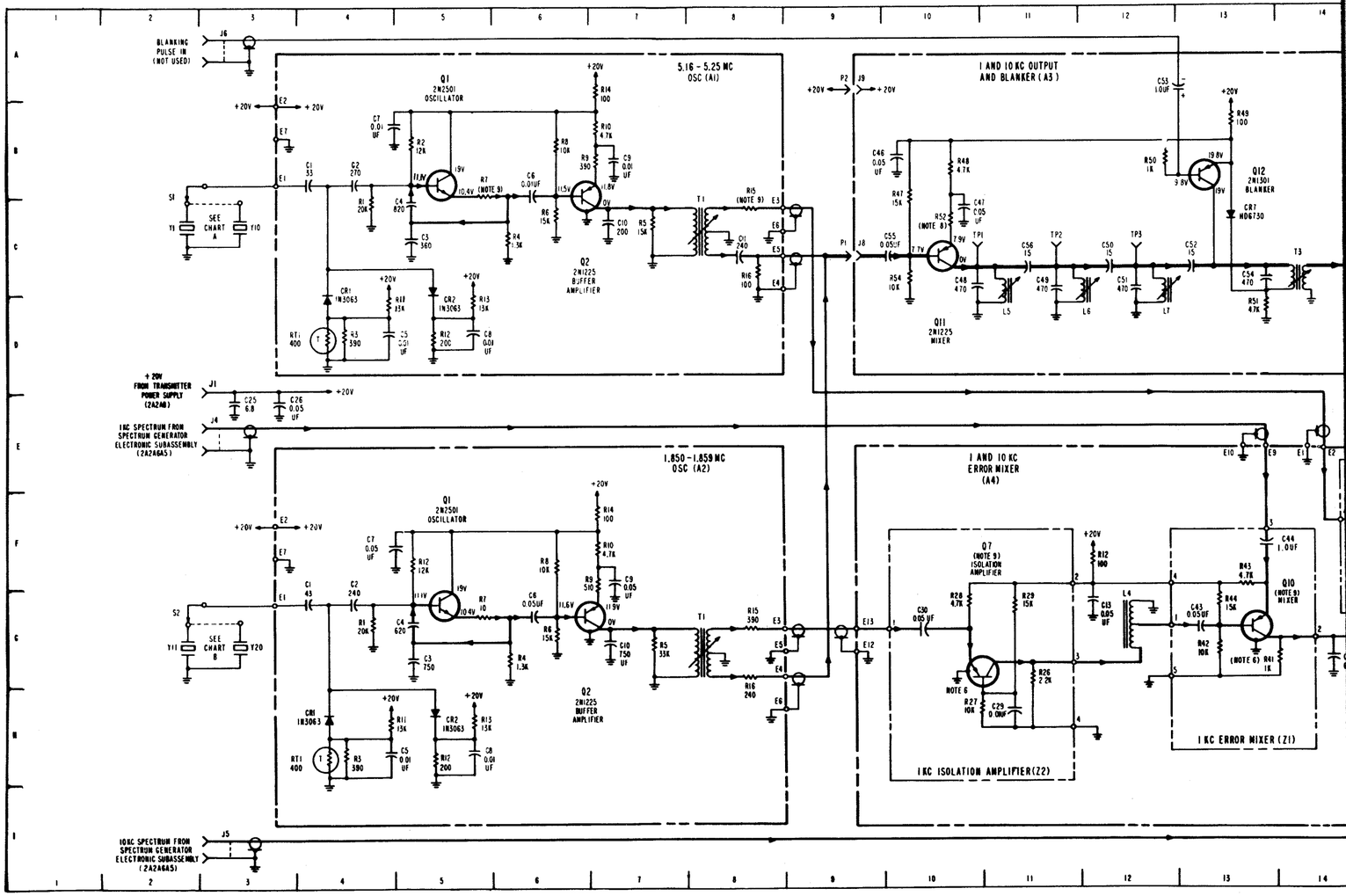


046-002-123

Figure 5-21. 1 and 10 KC Synthesizer Subassembly 2A2A6A3, Schematic Diagram

PART LOCATION INDEX

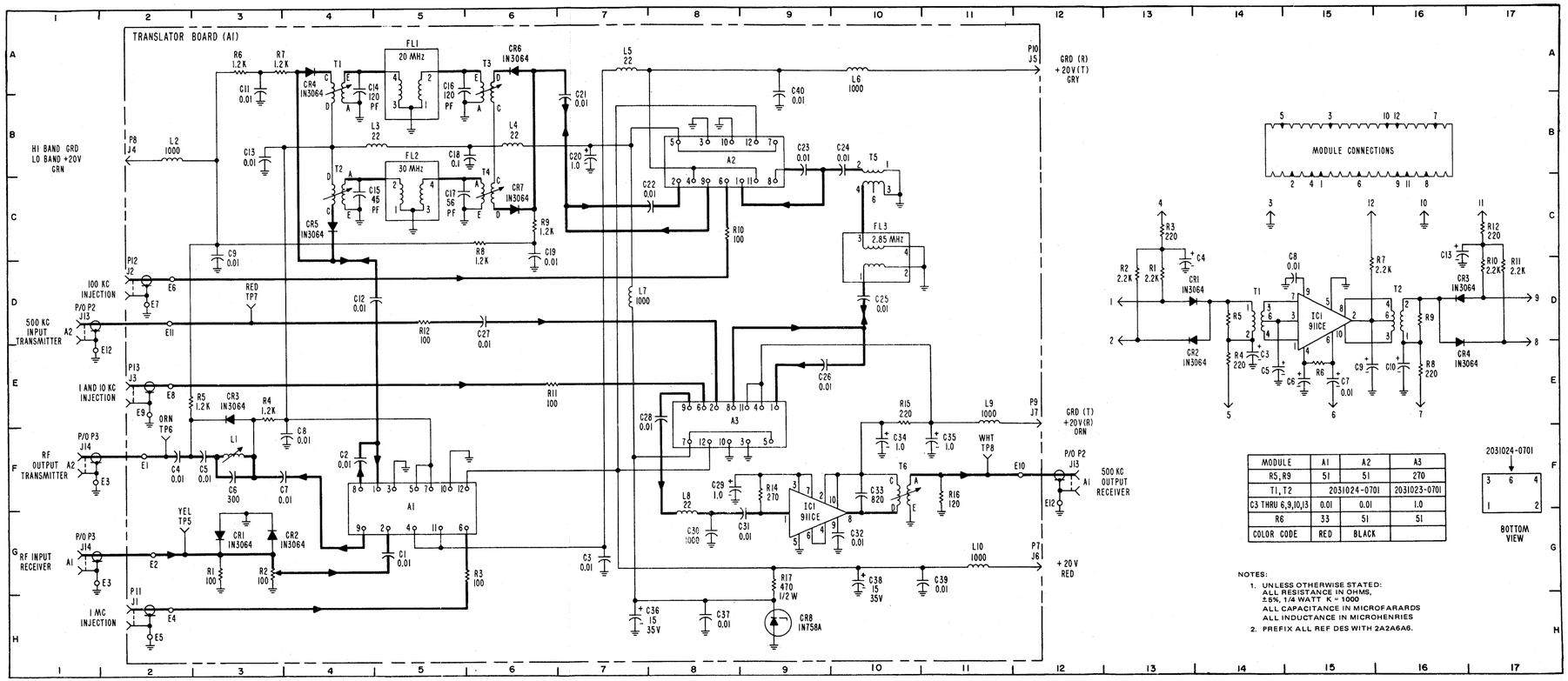
REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
C25	3E	A1RT1	4D	A3CR7	13C	A4R7	18G
C26	3E	A1T1	8C	A3J8	9C	A4R8	18G
J1	3D	A2C1	4G	A3J9	9A	A4R9	18F
J3	15C	A2C2	4G	A3J10	9D	A4R10	19F
J4	3E	A2C3	5G	A3L5	11C	A4R11	19F
J5	3I	A2C4	5G	A3L6	12C	A4R12	12F
J6	3A	A2C5	4H	A3L7	12C	A4R30	19F
J7	21G	A2C6	6G	A3Q11	10C	A4R31	16H
P1	9C	A2C7	4F	A3Q12	13B	A4T1	20G
P2	9A	A2C8	5H	A3R47	10B	A4Z1C43	13G
S1	2B	A2C9	7F	A3R48	10B	A4Z1C44	13F
S2	2G	A2C10	7G	A3R49	13B	A4Z1Q10	13G
Y1 thru Y10	2C, 3C	A2CR1	4H	A3R50	12B	A4Z1R41	13G
Y11thru Y20	2G, 3G	A2CR2	5H	A3R51	13D	A4Z1R42	13G
A1C1	4B	A2Q1	5G	A3R52	10C	A4Z1R43	13F
A1C2	4B	A2Q2	6G	A3R54	10C	A4Z1R44	13G
A1C3	5C	A2R1	4G	A3T3	14C	A4Z2C29	11H
A1C4	5C	A2R2	5F	A3TP1	10C	A4Z2C30	10G
A1C5	4D	A2R3	4H	A3TP2	11C	A4Z2Q7	10G
A1C6	6B	A2R4	6G	A3TP3	12C	A4Z2R26	11G
A1C7	4B	A2R5	7G	A4C1	16G	A4Z2R27	10H
A1C8	5D	A2R6	6G	A4C2	17I	A4Z2R28	10G
A1C9	7B	A2R7	5G	A4C3	16I	A4Z2R29	11G
A1C10	7C	A2R8	6F	A4C4	17H	A4Z3C27	14F
A1C11	8C	A2R9	7F	A4C5	19H	A4Z3C28	15F
A1CR1	4C	A2R10	7F	A4C6	19H	A4Z3Q6	15F
A1CR2	5C	A2R11	4H	A4C7	17G	A4Z3R22	16F
A1Q1	5B	A2R12	5H	A4C8	15G	A4Z3R23	15F
A1Q2	6B	A2R13	5H	A4C9	14G	A4Z3R24	15F
A1R1	4B	A2R14	7F	A4C10	19G	A4Z3R25	15F
A1R2	5B	A2R15	8G	A4C11	18F		
A1R3	4D	A2R16	8G	A4C12	19G		
A1R4	6C	A2RT1	4H	A4C13	12G		
A1R5	7C	A2T1	8G	A4FL1	18H		
A1R6	6C	A3C46	10B	A4FL2	15G		
A1R7	5B	A3C47	10C	A4L3	17F		
A1R8	6B	A3C48	10C	A4L4	12G		
A1R9	7B	A3C49	11C	A4Q8	17H		
A1R10	7B	A3C50	12C	A4Q9	19G		
A1R11	4D	A3C51	12C	A4R1	17I		
A1R12	5D	A3C52	13C	A4R2	16H		
A1R13	5C	A3C53	13A	A4R3	16H		
A1R14	7A	A3C54	13C	A4R4	16H		
A1R15	8C	A3C55	10C	A4R5	17H		
A1R16	8C	A3C56	11C	A4R6	19H		



046-002-123

PARTS LOCATION INDEXD

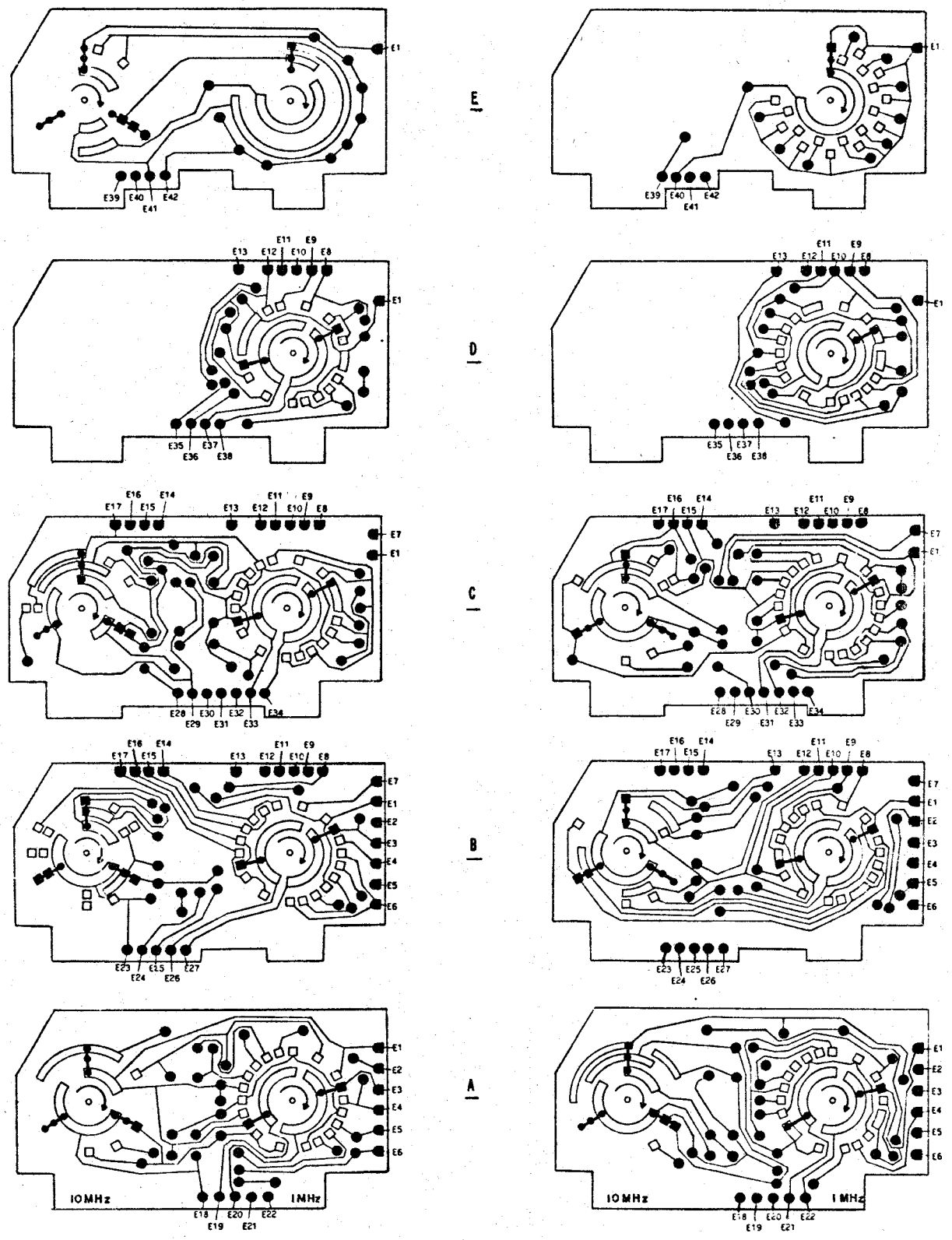
REF DES	LCTN	REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
J13	1D, 12F	A1A2	8B	A1C32	10G	A1L8	8G
J14	1F, 1G		(See A1A1)	A1C33	10F	A1L9	11E
A1A1	5F	A1A3	8E	A1C34	10F	A1L10	11G
A1A1C1	Not used		(See A1A1)	A1C35	11F	A1R1	3G
A1A1C2	Not used	A1C1	5G	A1C36	7H	A1R2	3G
A1A1C3	14E	A1C2	4F	A1C37	8H	A1R3	6G
A1A1C4	13D	A1C3	7G	A1C38	10G	A1R4	3E
A1A1C5	14E	A1C4	2F	A1C39	11G	A1R5	3E
A1A1C6	15E	A1C5	3F	A1C40	9B	A1R6	3A
A1A1C7	15E	A1C6	3F	A1CR1	3G	A1R7	3A
A1A1C8	15D	A1C7	4F	A1CR2	3G	A1R8	6C
A1A1C9	15E	A1C8	4F	A1CR3	3E	A1R9	6C
A1A1C10	16E	A1C9	3C	A1CR4	4A	A1R10	8C
A1A1C11	Not used	A1C10	Not used	A1CR5	4C	A1R11	6E
A1A1C12	Not used	A1C11	3A	A1CR6	6A	A1R12	5D
A1A1C13	16C	A1C12	5D	A1CR7	6C	A1R13	Not used
A1A1CR1	13D	A1C13	3B	A1CR8	9H	A1R14	9F
A1A1CR2	13E	A1C14	4A	A1FL1	5A	A1R15	10E
A1A1CR3	16D	A1C15	4C	A1FL2	5C	A1R16	11F
A1A1CR4	16D	A1C16	5A	A1FL3	10C	A1R17	9G
A1A1IC1	15D	A1C17	5C	A1IC1	9G	A1T1	4A
A1A1R1	13D	A1C18	6B	A1J1	2H	A1T2	4C
A1A1R2	13D	A1C19	6C	A1J2	2D	A1T3	6A
A1A1R3	13C	A1C20	7B	A1J3	2E	A1T4	6C
A1A1R4	14E	A1C21	7B	A1J4	2B	A1T5	10C
A1A1R5	14D	A1C22	8C	A1J5	12A	A1T6	10F
A1A1R6	15E	A1C23	9B	A1J6	12G	A1TP1	Not used
A1A1R7	15D	A1C24	10B	A1J7	12E	A1TP2	Not used
A1A1R8	16E	A1C25	10D	A1L1	3F	A1TP3	Not used
A1A1R9	16D	A1C26	9E	A1L2	2B	A1TP4	Not used
A1A1R10	17D	A1C27	6D	A1L3	5B	A1TP5	2G
A1A1R11	17D	A1C28	8E	A1L4	6B	A1TP6	2F
A1A1R12	17C	A1C29	8F	A1L5	7A	A1TP7	3D
A1A1T1	14D	A1C30	8G	A1L6	10A	A1TP8	11F
A1A1T2	16D	A1C31	9G	A1L7	7D		



MODULE	A1	A2	A3
R5, R9	51	51	270
T1, T2	2031024-0701		2031023-0701
C3 THRU 6,9,10,13	0.01	0.01	1.0
R6	33	51	51
COLOR CODE	RED	BLACK	

NOTES:
1. UNLESS OTHERWISE STATED:
   ALL RESISTANCE IN OHMS, ±5%, 1/4 WATT K = 1000
   ALL CAPACITANCE IN MICROFARARDS
   ALL INDUCTANCE IN MICROHENRIES
2. PREFIX ALL REF DES WITH 2A2A6A6.

Figure 5-24. RF Translator Subassembly 2A2A6A6, Schematic Diagram



FRONT SIDES

REAR SIDES (VIEWED THRU BOARD FROM FRONT SIDE)

046-002-127

INTER-BOARD AND PLUG P1 WIRING DATA

FROM	TO	FUNCTION
E21A E22A E19A E20A E27B	P1-1 P1-2 P1-3 P1-4 P1-5	RF AMPLIFIER CODE
E25B E36D E35D E38D E37D	P1-21 P1-22 P1-23 P1-24 P1-25	MHZ SYNTHESIZER CODE
E32C E31C E34C E33C E26B	P1-13 P1-14 P1-15 P1-16 P1-17	TA AMPLIFIER CODE
E24B E39E	P1-6 P1-7	HI/LO CONTROL TUNE RELAY GRD.
E29C E30C	P1-10 P1-12	100 KC IMAGE CONTROL
E42E	T1-11	GRD PULSE
E41E	P1-9	GROUND

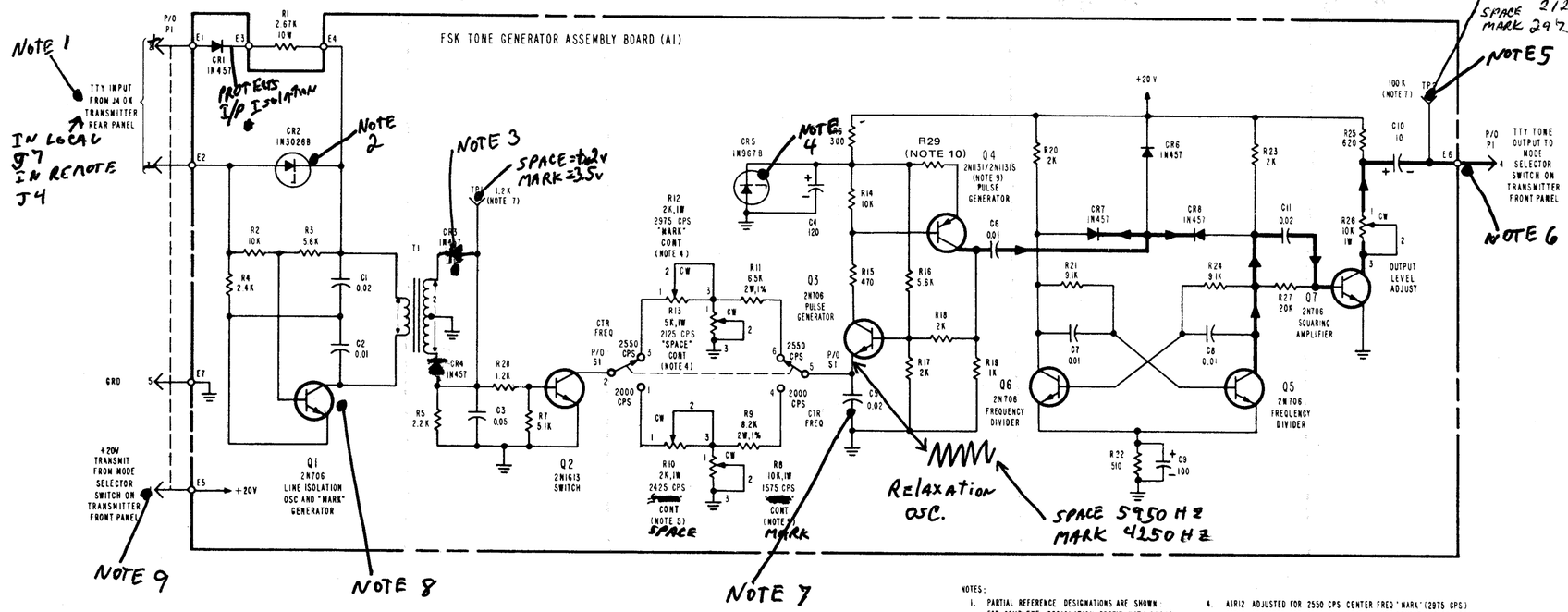
E1 OF BOARDS A,B,C,D, AND E ARE CONNECTED TOGETHER
E2 OF BOARDS A AND B ARE CONNECTED TOGETHER
E3 OF BOARDS A AND B ARE CONNECTED TOGETHER
E4 OF BOARDS A AND B ARE CONNECTED TOGETHER
E5 OF BOARDS A AND B ARE CONNECTED TOGETHER
E6 OF BOARDS A AND B ARE CONNECTED TOGETHER
E7 OF BOARDS B AND C ARE CONNECTED TOGETHER
E8 OF BOARDS B, C AND D ARE CONNECTED TOGETHER
E9 OF BOARDS B, C AND D ARE CONNECTED TOGETHER
E10 OF BOARDS B, C AND D ARE CONNECTED TOGETHER
E11 OF BOARDS B, C AND D ARE CONNECTED TOGETHER
E12 OF BOARDS B, C AND D ARE CONNECTED TOGETHER
E13 OF BOARDS B, C AND D ARE CONNECTED TOGETHER
E14 OF BOARDS B AND C ARE CONNECTED TOGETHER
E15 OF BOARDS B AND C ARE CONNECTED TOGETHER
E16 OF BOARDS B AND C ARE CONNECTED TOGETHER
E17 OF BOARDS B AND C ARE CONNECTED TOGETHER

NOTES:

1. SOLID CIRCLES INDICATE FRONT AND REAR OF PC BOARD ARE CONNECTED TOGETHER AT THAT POINT.
2. SWITCH WIPERS SHOWN IN 00 MCS POSITION.
3. BOARD A IS LOCATED CLOSEST TO FRONT PANEL.

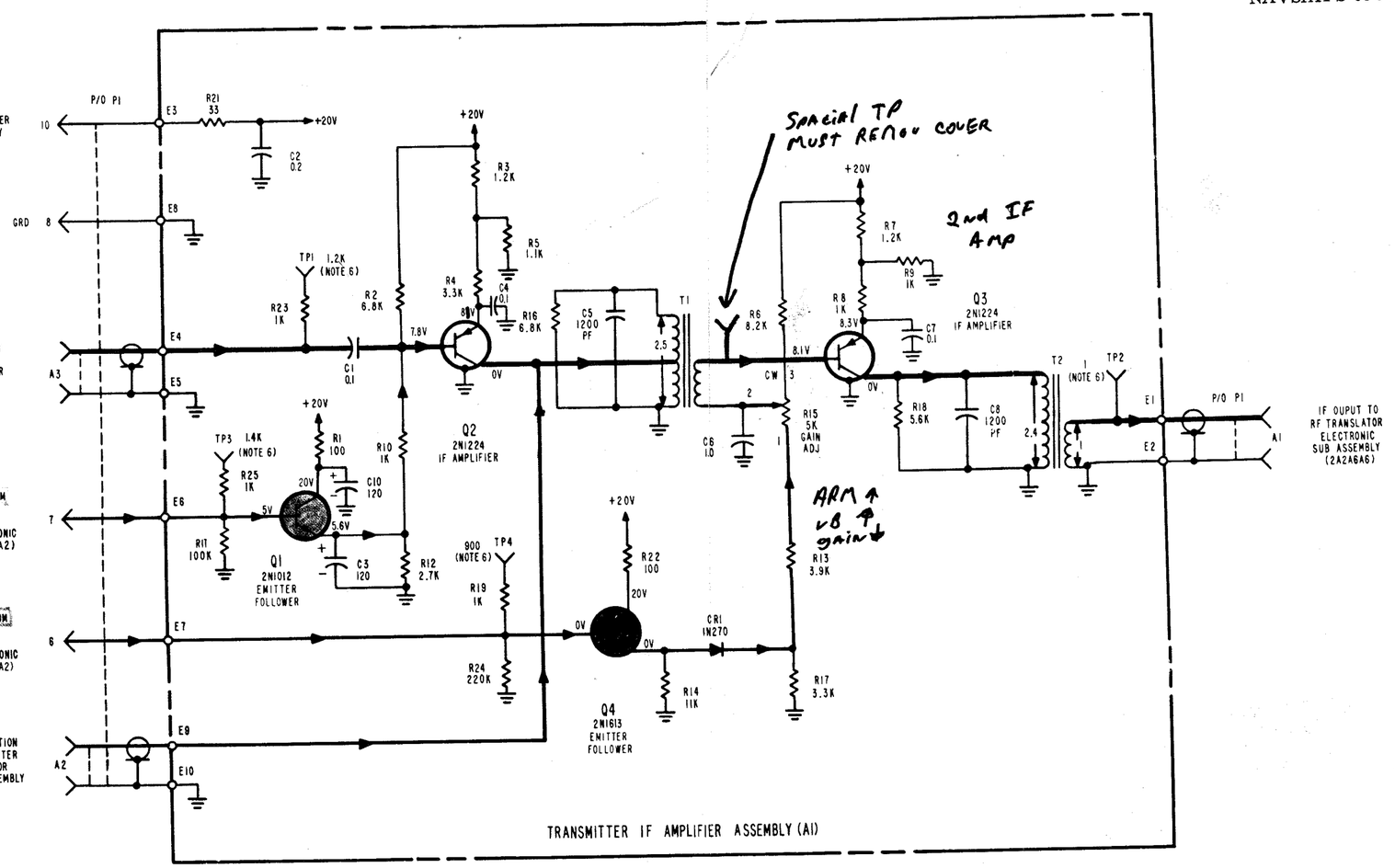
Figure 5-25. Code Generator Assembly 2A2A7, Schematic Diagram

NOTE 1. 5-10ma DC
NOTE 2. 18V ZENER
NOTE 3. FULL WAVE RECTIFIER
NOTE 4. 18V ZENER
NOTE 5. 1V P/P SQUARE WAVE —⊓⊓⊓— 1V P/P
NOTE 6. SPACE 2975 HZ
MARK 2125 HZ
DIFFER. 425 HZ
NOTE 7. C-5 INSENITY CHARGES
THROUGH Q-3 UNTIL Q-3
CUTS OFF THEN DISCHARGES
THROUGH Q-2, R-13, R-12
R-11 IN SPACE
CONDITION
THROUGH R-13, R-11 IN
MARK CONDITION
(DISCHARGES FASTER IN
SPACE CAUSES HIGHER
O/P FREQ OF Q-3)
NOTE 8. MODIFIED COLPITS MARK
I/P PRODUCES A 50-80
KHZ O/P THROUGH T-1.
SPACE NO O/P
NOTE 9. ONLY IN FSK & ISB/FSK



NOTES:
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION PREFIX WITH 2A2A9
2. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTANCE VALUES ARE IN OHMS. X-INDICATES THOUSANDS OF OHMS.
   B. ALL RESISTORS ARE 1/4 WATT, ±5% TOL
   C. ALL CAPACITANCE VALUES ARE IN MICROFARADS
3. CW ON ALL POTENTIOMETERS INDICATE DIRECTION OF ROTATION WHEN VIEWED FROM SHAFT END.
4. A1R12 ADJUSTED FOR 2550 CPS CENTER FREQ "MARK" (2975 CPS)
   A1R13 ADJUSTED FOR 2550 CPS CENTER FREQ "SPACE" (2125 CPS)
5. A1R10 ADJUSTED FOR 2000 CPS CENTER FREQ "MARK" (2425 CPS)
   A1R8 ADJUSTED FOR 2000 CPS CENTER FREQ "SPACE" (1575 CPS)
6. NUMBERS ADJACENT TO WINDINGS AND TEST POINTS INDICATE DC RESISTANCE
7. RESISTANCE VALUES AT SIGNIFICANT TEST POINTS ARE TO CHASSIS WITH ALL UNITS INTERCONNECTED, BUT EQUIPMENT DE-ENERGIZED
8. REFER TO APPLICABLE PRINTED CIRCUIT BOARD ILLUSTRATION FOR TRANSFORMER CIRCUIT ORIENTATION
9. Q4 IS REPLACED WITH 2N1131 OR 2N1131S
   REPLACEMENT TRANSISTOR MUST HAVE FOLLOWING PARAMETERS:
   f: 1KC/S V_{CE}: 10V DC
   I_C: 2MADC h_{fe}: <42
10. R29 SELECTED AT FACTORY FROM VALUES BETWEEN 270 AND 470 OHMS.

Figure 5-26. FSK Tone Generator Assembly 2A2A9, Schematic Diagram



PPC Q-1 INCREASING conduction
ER 12 ↑ BIAS Q2 ↓ GAIN Q-2 ↓

APC CR1 Fwd BIAS AFTER AVERAGE POWER HAS INCREASED TO A SUFFICIENT level
REDUCE Q3 GAIN

ER 1 FWD BIAS
ER 17 ↑ Q3 BIAS ↓
GAIN ↓

046-002-129

NOTES

1. PREFIX ALL REF DES WITH 2A2A12.
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 MICROFARADS, PF INDICATES PICOFARADS.
3. NUMBERS ADJACENT TO WINDINGS AND TEST POINTS INDICATE DC RESISTANCE (VALUES LESS THAN ONE OHM ARE NOT SHOWN).
4. CW ON ALL POTENTIOMETERS INDICATE DIRECTION OF ROTATION WHEN VIEWED FROM SHAFT END.
5. UNLESS OTHERWISE INDICATED ALL VOLTAGES ARE DC TAKEN WITH MULTIMETER AN/PSM-4A.
6. RESISTANCE VALUES AT SIGNIFICANT TEST POINTS ARE TO CHASSIS WITH ALL UNITS INTERCONNECTED, BUT EQUIPMENT DE-ENERGIZED.
7. REFER TO APPLICABLE PRINTED CIRCUIT BOARD ILLUSTRATION FOR TRANSFORMER CIRCUIT ORIENTATION.

Figure 5-27. Transmitter IF. Amplifier Assembly 2A2A12, Schematic Diagram

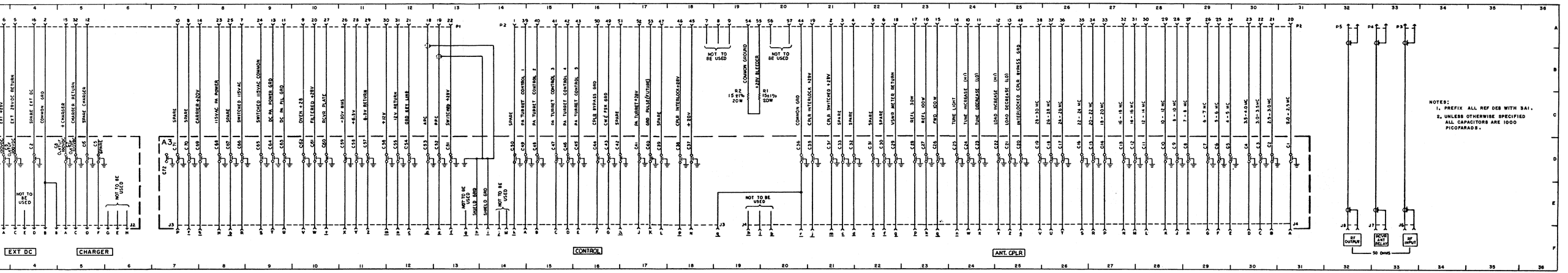
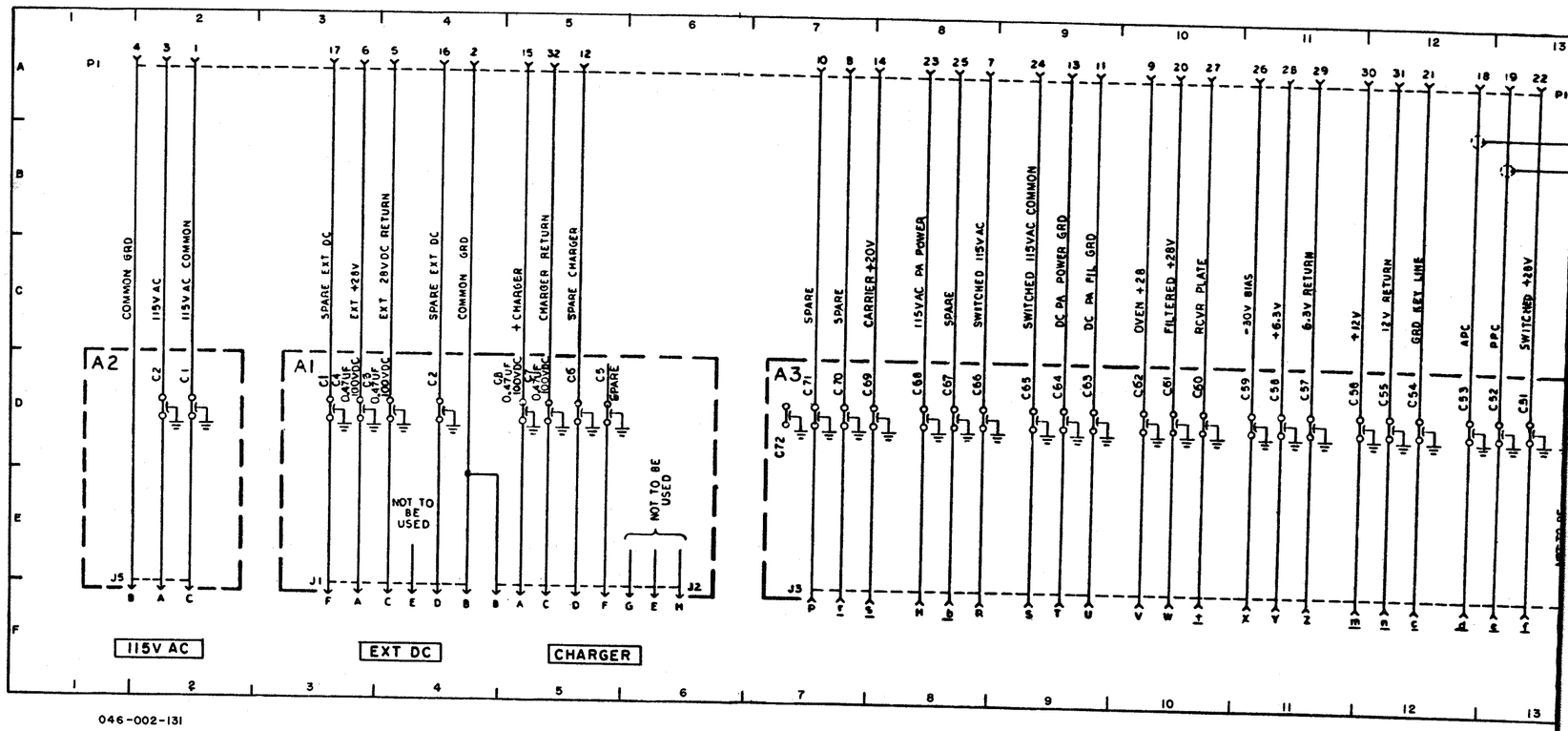


Figure 5-29. Case 3A1, Schematic Diagram

PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
J1	3F	A3C9	28D	A3C41	17D
J2	6F	A3C10	28D	A3C42	16D
J3	7F	A3C11	28D	A3C43	16D
J4	19F	A3C12	27D	A3C44	16D
J5	1F	A3C13	27D	A3C45	16D
J6	33F	A3C14	27D	A3C46	15D
J7	33F	A3C15	27D	A3C47	15D
J8	32F	A3C16	26D	A3C48	15D
P1	1A	A3C17	26D	A3C49	14D
P2	14A	A3C18	26D	A3C50	14D
P3	33A	A3C19	25D	A3C51	13D
P4	33A	A3C20	25D	A3C52	13D
P5	32A	A3C21	25D	A3C53	12D
R1	20C	A3C22	25D	A3C54	12D
R2	19C	A3C23	24D	A3C55	12D
A1C1	3D	A3C24	24D	A3C56	11D
A1C2	4D	A3C25	24D	A3C57	11D
A1C3	4D	A3C26	23D	A3C58	11D
A1C4	3D	A3C27	23D	A3C59	11D
A1C5	5D	A3C28	23D	A3C60	10D
A1C6	5D	A3C29	22D	A3C61	10D
A1C7	5D	A3C30	22D	A3C62	10D
A1C8	5D	A3C31	22D	A3C63	9D
A2C1	2D	A3C32	21D	A3C64	9D
A2C2	2D	A3C33	21D	A3C65	9D
A3C1	31D	A3C34	21D	A3C66	8D
A3C2	30D	A3C35	21D	A3C67	8D
A3C3	30D	A3C36	20D	A3C68	8D
A3C4	30D	A3C37	18D	A3C69	8D
A3C5	29D	A3C38	18D	A3C70	7D
A3C6	29D	A3C39	17D	A3C71	7D
A3C7	29D	A3C40	17D	A3C72	7D
A3C8	29D				



PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
A1C1	4D	A1R25	6C	A3C12	8D
A1C2	6D	A1TP1	6C	A3C14	7A
A1C3	6D	A2C5	2F	A3CR2	8B
A1CR1	3C	A2C6	2F	A3CR3	8C
A1K1	4E	A2C7	3F	A3P2	8E
A1Q1	3B	A2C8	4F	A3R21	8C
A1Q2	3C	A2Q4	3E	A3R22	8D
A1Q3	5C	A2Q5	4F	C15	6H
A1R1	2C	A2R13	1E	C16	6H
A1R2	2B	A2R14	4E	C17	6H
A1R3	3B	A2R15	3F	C18	5H
A1R4	3B	A2R16	3F	C19	2H
A1R5	3B	A2R17	4F	C20	1H
A1R6	3C	A2R18	4F	C21	4H
A1R7	3D	A2R19	5E	C22	5H
A1R8	3C	A2R23	5F	DC1	9E
A1R9	5C	A2T1	2F	DC1J1	8E
A1R10	5D	A2TP2	2E	DC1J2	11E
A1R11	1C	A2TP3	1E	J1	11D
A1R12	2B	A2TP4	5F	P1	1H
A1R20	2D	A2TP5	3F		

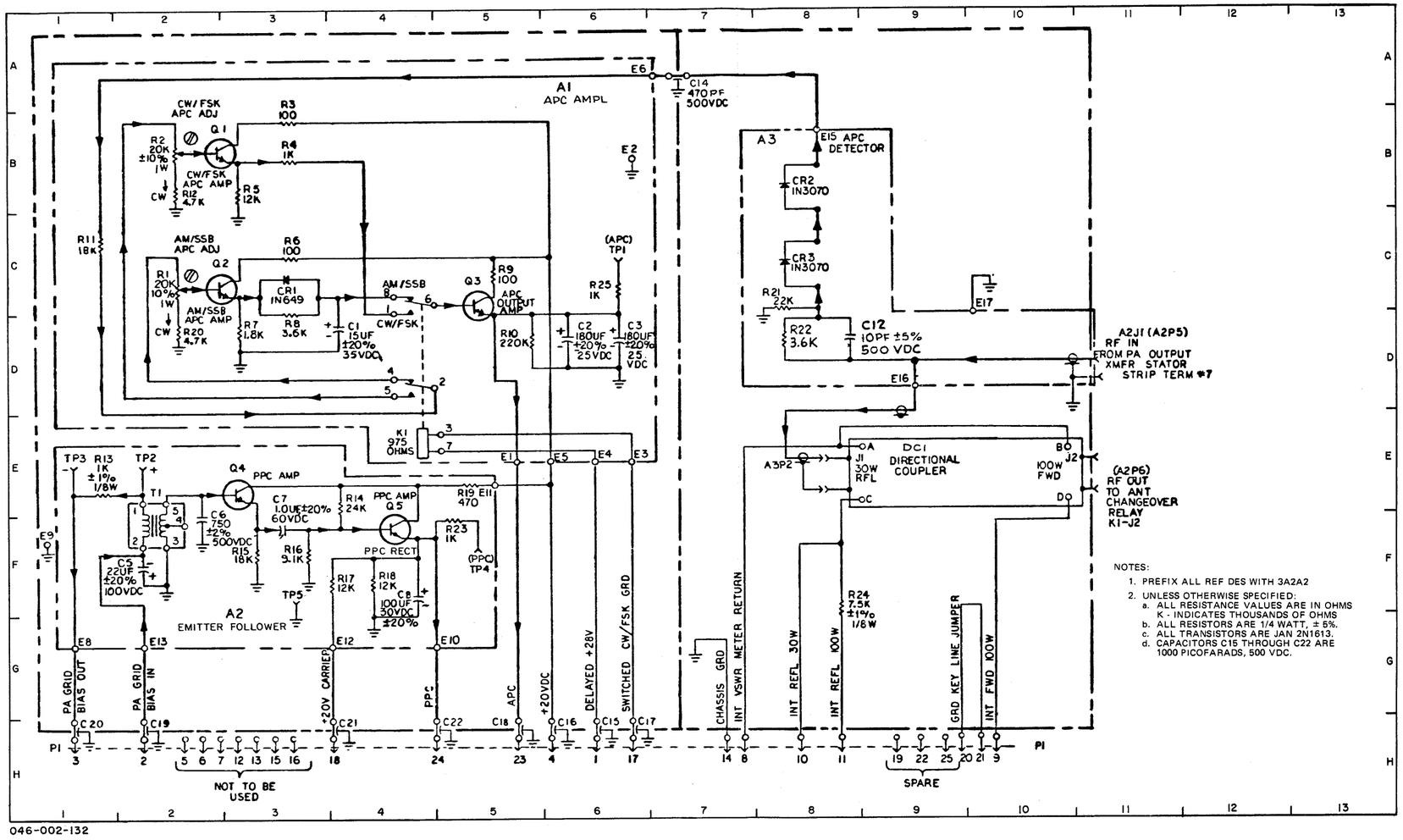
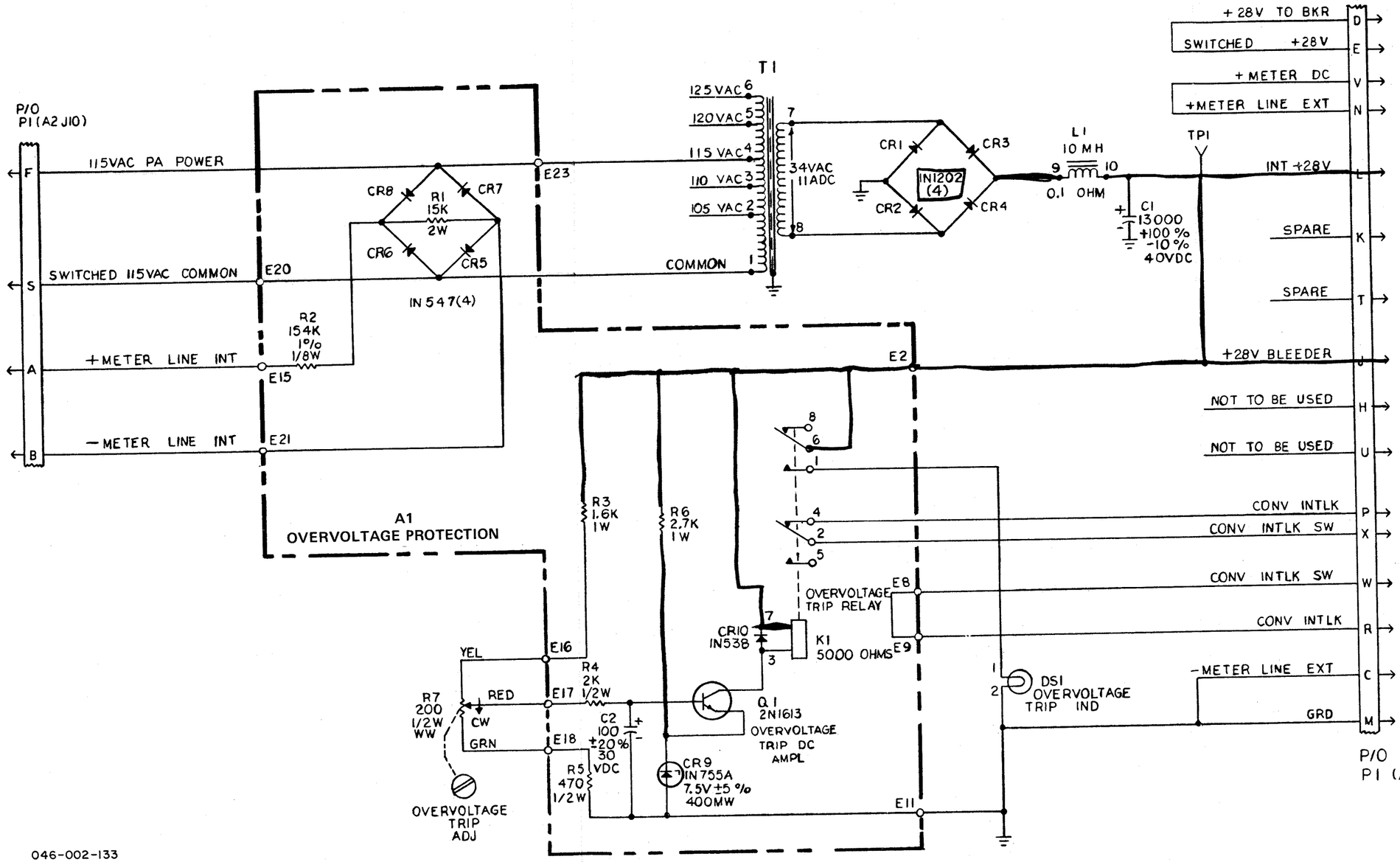


Figure 5-30. APC/PPC/Directional Coupler 3A2A2, Schematic Diagram



NOTES:

1. PREFIX ALL REF DES WITH 3A2A3.
2. UNLESS OTHERWISE SPECIFIED:
   a. ALL RESISTANCE VALUES ARE IN OHMS K -- INDICATES THOUSANDS OF OHMS
   b. ALL RESISTORS ARE ±5%.
   c. ALL CAPACITANCE VALUES ARE IN MICROFARADS.

046-002-133

Figure 5-31. AC Power Supply 3A2A3, Schematic Diagram

PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN
C1	5E	A2C15	7E
C2	3D	A2C16	7F
C6	8B	A2CR18	7D
C7	7B	A2CR19	6D
C8	8B	A2CR22	6D
C9	7C	A2CR23	6E
C10	8C	A2CR24	7D
C11	7C	A2CR25	7E
C12	8C	A2CR26	6E
C17	5E	A2CR27	6F
C18	3D	A2CR28	7E
CR1	3E	A2CR29	7F
CR32	10C	A2R18	7E
J1	3G	A2R19	7F
J2	2E, 16A	A2R26	7D
K1	4F	A2R27	6D
K2	8F	A3C13	8D
K3	10G	A3C14	8D
K4	9F	A4CR6	6A
K5	10D	A4CR7	6B
K6	11F	A4CR8	7A
K7	13E	A4CR9	7B
L1	3D	A4R6	7A
L2	7C	A4R7	7A
L3	7C	A4R8	7B
L4	7B	A4R9	7B
L5	8D	A5CR3	5C
L6	4C	A5CR2	5C
L7	4D	A5R32	4C
Q1	4C	A6C4	5D
Q2	4D	A6CR3	4D
R3	5C	A6CR4	4D
R4	5D	A6CR5	5D
R12	10B	A6R33	4D
R22	14B	A7CR10	6B
R23	14B	A7CR11	6B
R24	14B	A7CR12	7B
R30	9C	A7CR13	7B
R31	9D	A7CR14	6C
T1	6A	A7CR15	6C
TP1	8A	A7CR16	7C
TP2	8B	A7CR17	7C
TP3	8B	A8C19	8D
TP4	8C	A8CR20	9D
TP5	15B	A8R10	8B
TP6	5E	A8R11	8C
TP7	15B	A8R14	8C
TP8	12C	A8R15	9D
A1CR31	11F	A8R28	9D
A1R13	12B	A8R29	9D
A1R25	3F		

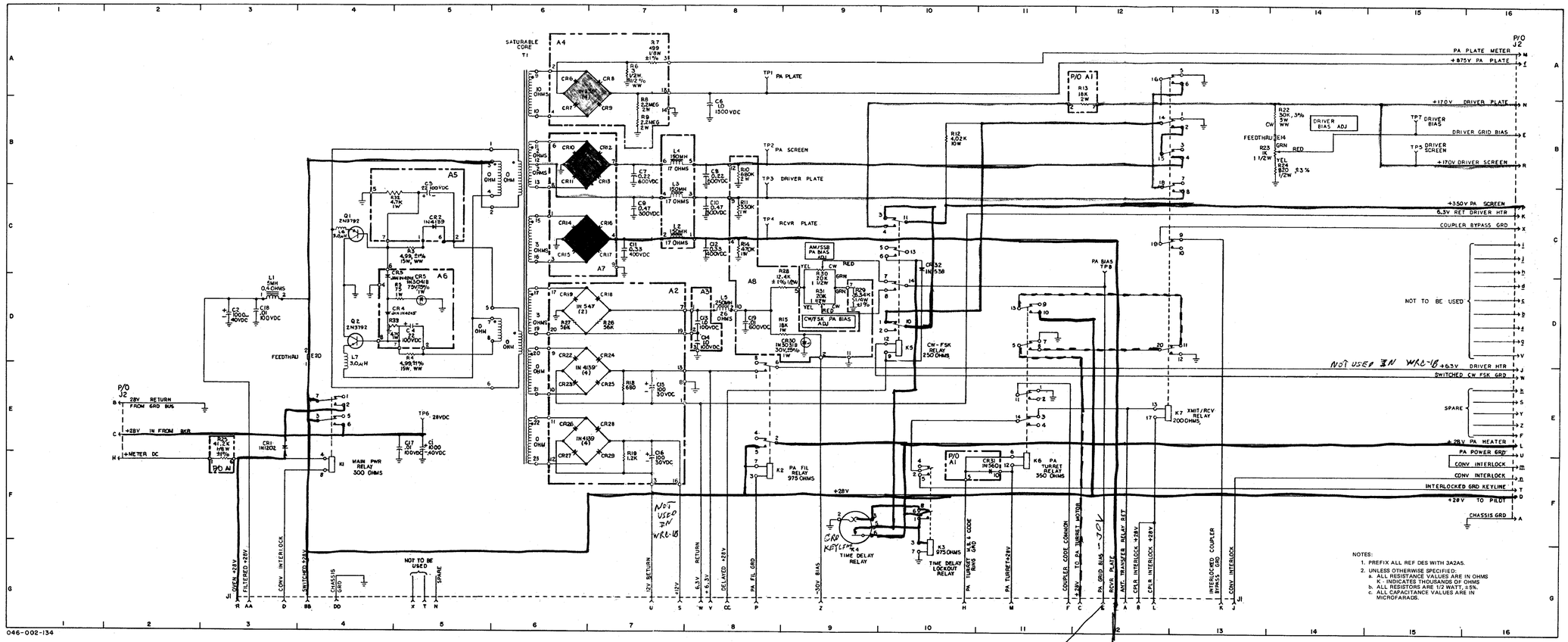
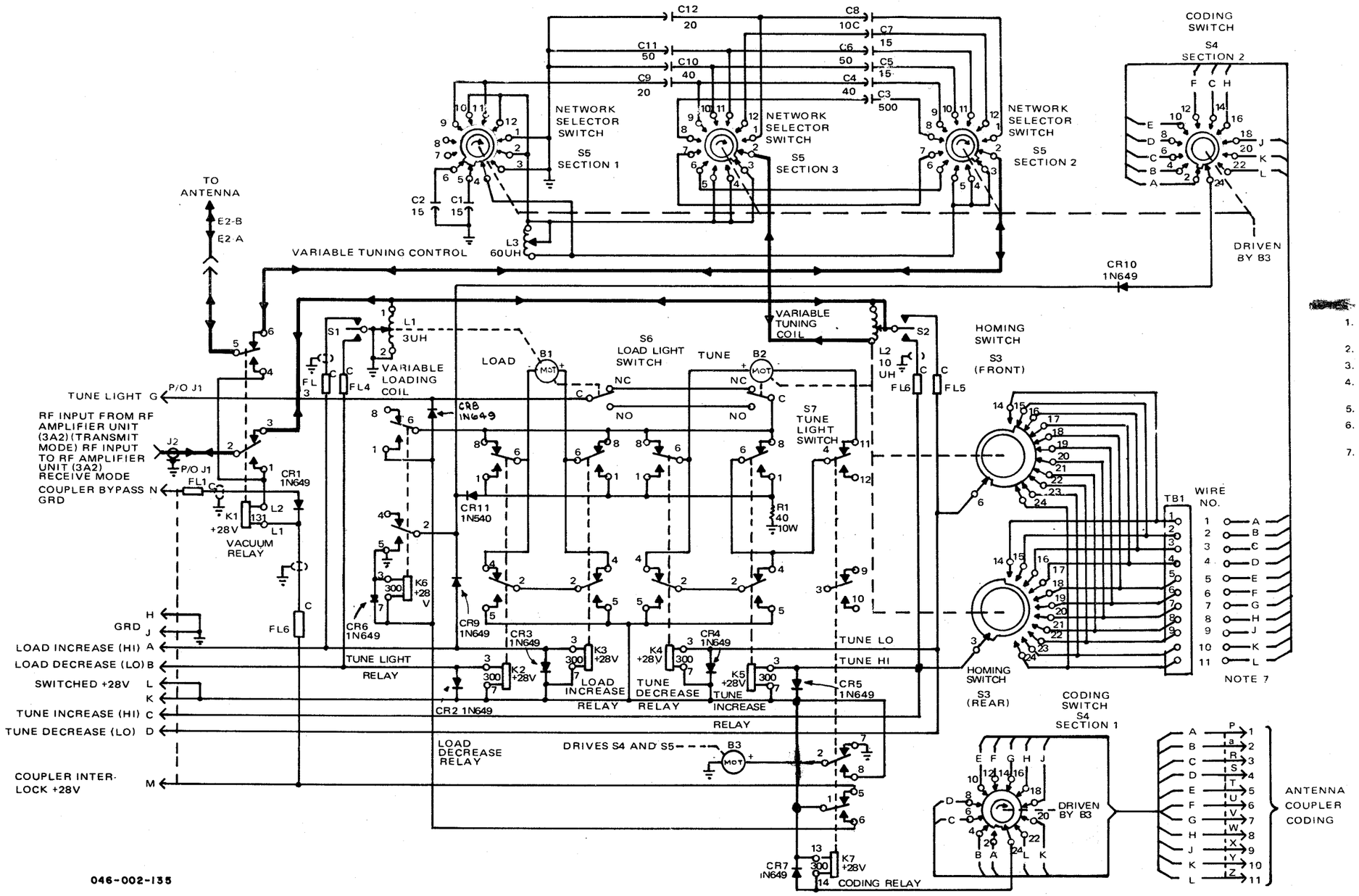


Figure 5-32. DC-to-DC Converter 3A2A5, Schematic Diagram



1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION, PREFIX WITH 5.
2. ALL CAPACITANCE VALUES ARE IN PICOFARADS.
3. ALL RESISTANCE VALUES ARE IN OHMS.
4. NUMBERS ADJACENT TO COILS INDICATE DC RESISTANCE (VALUES LESS THAN ONE OHM ARE NOT SHOWN).
5. UNLESS OTHERWISE INDICATED, ALL VOLTAGES ARE DC.
6. HEAVY LINES INDICATE SIGNAL FLOW FOR TRANSMIT AND RECEIVE MODES OF OPERATION.
7. REFER TO THE INSTALLATION SECTION FOR PATCHING TO TB1.

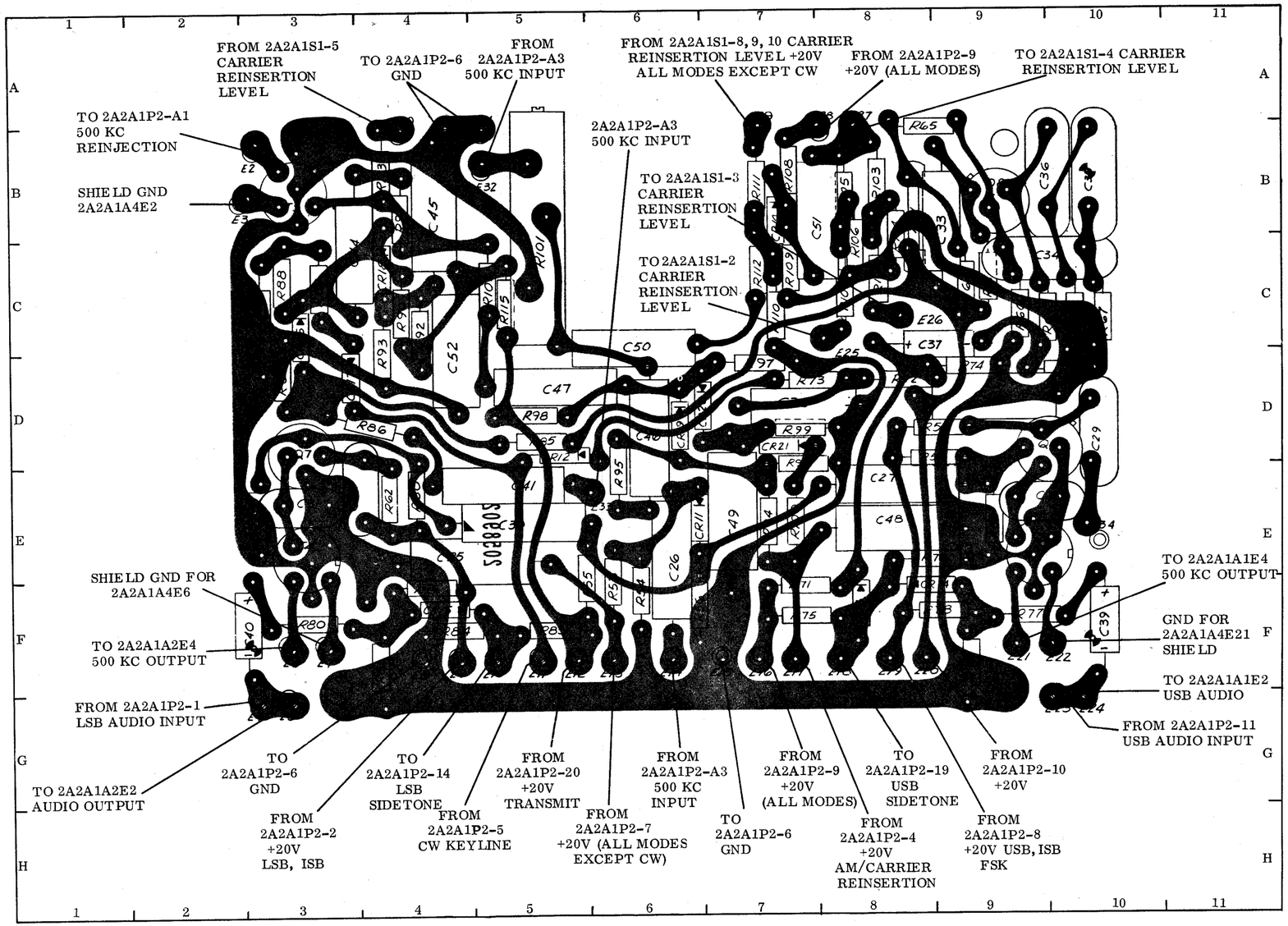
1 REVACTION 001 TUNE CIRCUIT BLINKS
01 OF B2

Figure 5-33. Antenna Coupler CU-937/UR, Schematic Diagram

PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN	REF DES	LCTN
C25	4E	E9	4F	R72	8D
C26	6E	E10	5F	R73	8D
C27	8E	E11	5F	R74	9D
C28	9E	E12	5F	R75	7F
C29	10D	E13	6F	R76	9E
C30	5E	E14	6F	R77	9F
C31	3E	E15	7F	R78	9F
C32	4E	E16	7F	R79	9F
C33	9B	E17	7F	R80	3F
C34	10C	E18	8F	R81	4F
C35	10B	E19	8F	R82	4F
C36	10B	E20	8F	R83	5F
C37	9C	E21	9F	R84	4F
C38	7D	E22	10F	R85	5D
C39	10F	E23	10G	R86	4D
C40	3F	E24	10G	R87	3D
C41	5E	E25	8C	R88	3C
C42	9D	E26	8C	R89	3C
C43	3C	E27	8B	R90	4C
C44	4C	E28	8B	R91	4B
C45	4B	E29	7B	R92	4C
C46	6D	E30	4B	R93	4C
C47	5D	E31	4B	R94	7E
C48	8E	E32	5B	R95	6E
C49	7E	E33	6E	R96	7E
C50	6C	E34	10E	R97	7D
C51	8B	Q6	10D	R98	5D
C52	4C	Q7	3D	R99	7D
CR10	7B	Q8	9B	R100	7F
CR11	7E	R53	6F	R101	5B
CR12	5D	R54	6E	R102	5C
CR13	8F	R55	6F	R103	8B
CR14	9F	R56	6F	R104	8C
CR15	4F	R57	9D	R105	8B
CR16	3C	R58	9E	R106	8C
CR17	3D	R59	9D	R107	8C
CR18	4C	R60	4E	R108	7B
CR19	6D	R61	3E	R109	7C
CR20	7D	R62	4E	R110	7C
CR21	7D	R63	9C	R111	7B
E1	5B	R64	9C	R112	7C
E2	3B	R65	9B	R113	4B
E3	3B	R66	9C	R114	8C
E4	3G	R67	10C	R115	5C
E5	3G	R68	10C	RT1	8B
E6	3F	R69	10C	T3	9E
E7	3F	R70	10D	T4	3E
E8	4F	R71	7F	T5	3B

NOTE:
PREFIX ALL REF DES WITH 2A2A1A4.



046-002-148

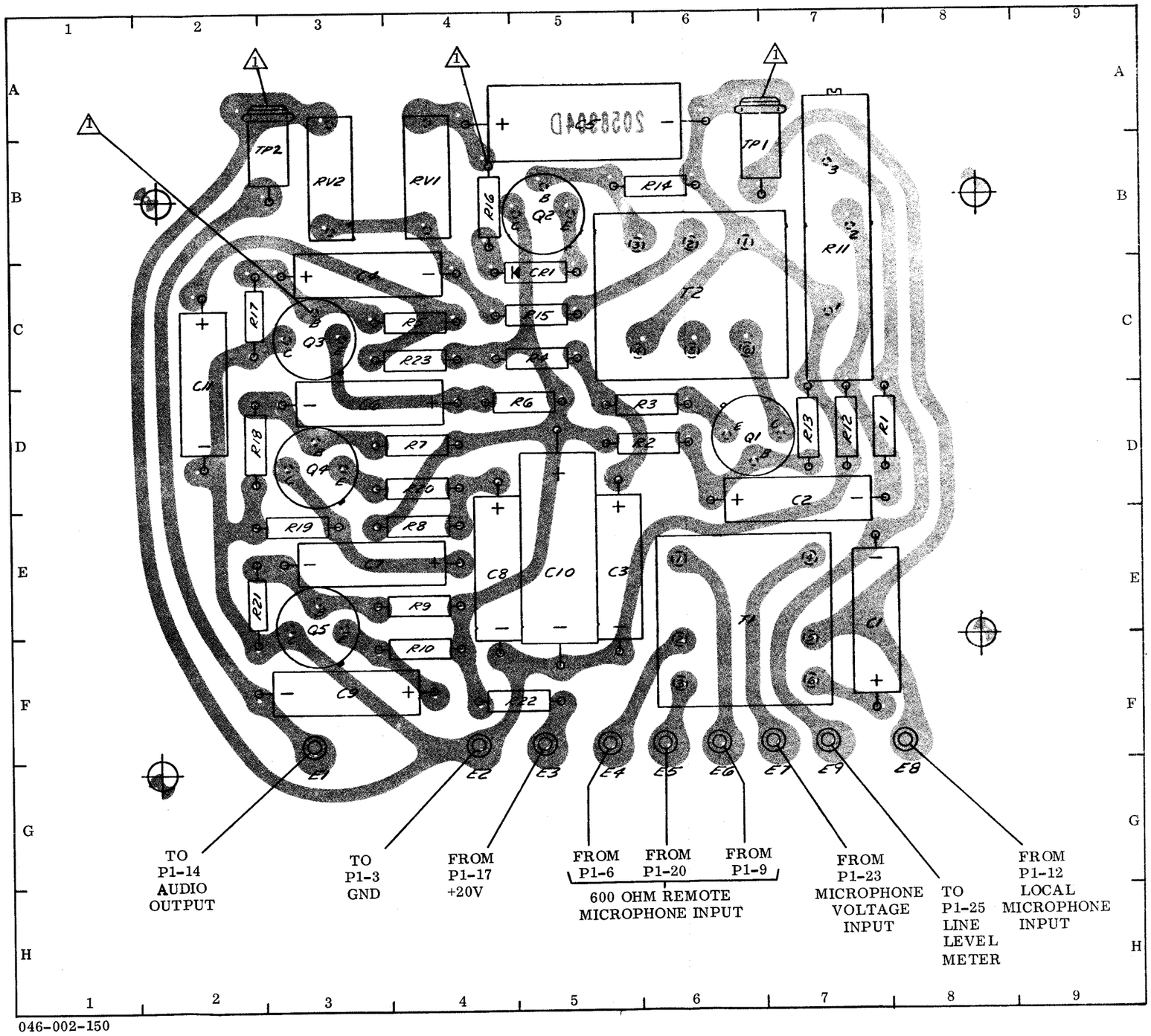
Figure 5-46. 500-KC Amplifiers/Gates and Sidetone Oscillator PCB (P/O 2A2A1), Component Location

PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN
C1	7E	R3	6D
C2	7D	R4	5C
C3	5E	R5	4C
C4	3C	R6	5D
C5	5A	R7	4D
C6	3D	R8	4E
C7	3E	R9	4E
C8	4E	R10	4F
C9	3F	R11	7B
C10	5E	R12	7D
C11	2C	R13	7D
CR1	5C	R14	6B
E1	3F	R15	5C
E2	4F	R16	4B
E3	5F	R17	2C
E4	5F	R18	2D
E5	6F	R19	3E
E6	6F	R20	4D
E7	7F	R21	2E
E8	8F	R22	5F
E9	7E	R23	4C
Q1	6D	RV1	4B
Q2	5B	RV2	3B
Q3	3C	T1	6E
Q4	3D	T2	6C
Q5	3E	TP1	6B
R1	7D	TP2	3B
R2	6D		

NOTES:

1. PREFIX ALL REF DES WITH 2A2A2A1 or 2A2A3A1.
2. ⚠1 THESE TEST POINTS ARE THE SAME FOR BOTH 2A2A2A1 AND 2A2A3A1.



046-002-150

Figure 5-48. Transmitter Audio Amplifier PCB, Component Location.

PARTS LOCATION INDEX

REF DES	LCTN	REF DES	LCTN
C1	7B	E10	7G
C2	7B	E11	6G
C3	3G	E12	7G
C4	3E	E13	6G
C5	3B	E14	5G
C6	5B	E15	5G
C7	4F	E16	5G
C8	5D	E17	4G
C9	6D	E18	4G
C10	5B	E19	3G
C11	6D	E20	5G
CR1	9E	E21	9G
CR2	9E	Q1	3F
CR3	9E	Q2	2E
CR4	9E	Q3	2C
CR5	7E	Q4	3C
CR6	7E	R1	8B
CR7	8E	R2	3G
CR8	8E	R3	3E
CR9	6F	R4	2D
CR10	4D	R5	3D
CR11	2D	R6	3D
CR12	3E	R7	2C
CR13	3D	R8	4D
E1	9E	R9	3A
E2	9E	R10	4B
E3	9F	R11	4C
E4	9G	R12	4D
E5	9G	R13	5F
E6	8G	R14	5F
E7	7G	R15	6F
E8	7G	R16	6B
E9	7F		

NOTE:
PREFIX ALL REF DES WITH 2A2A8.

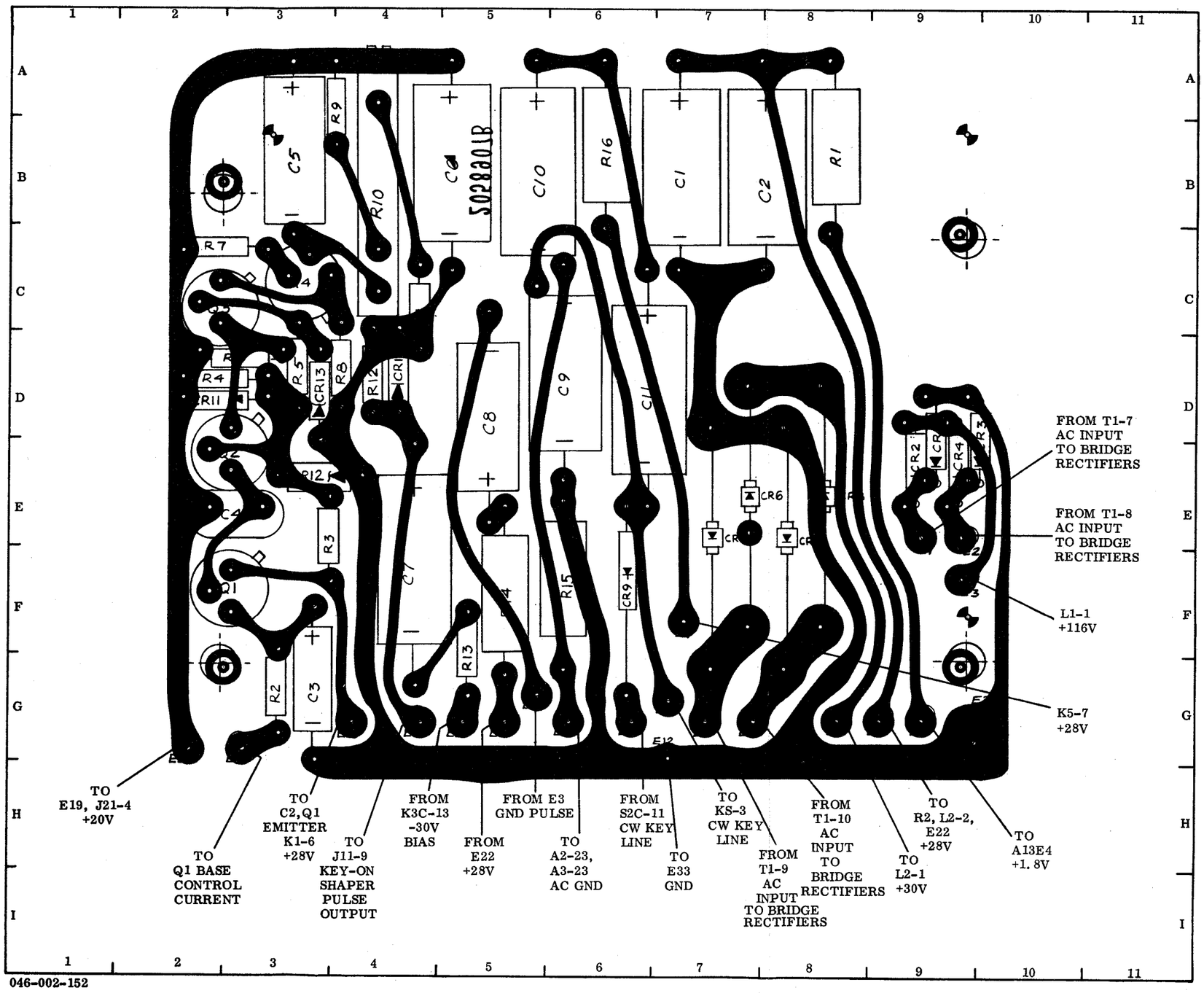
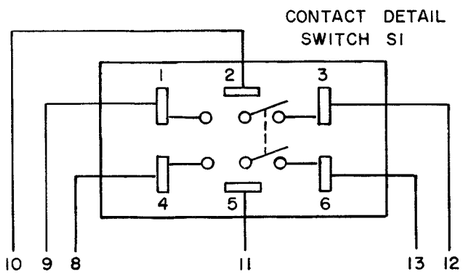


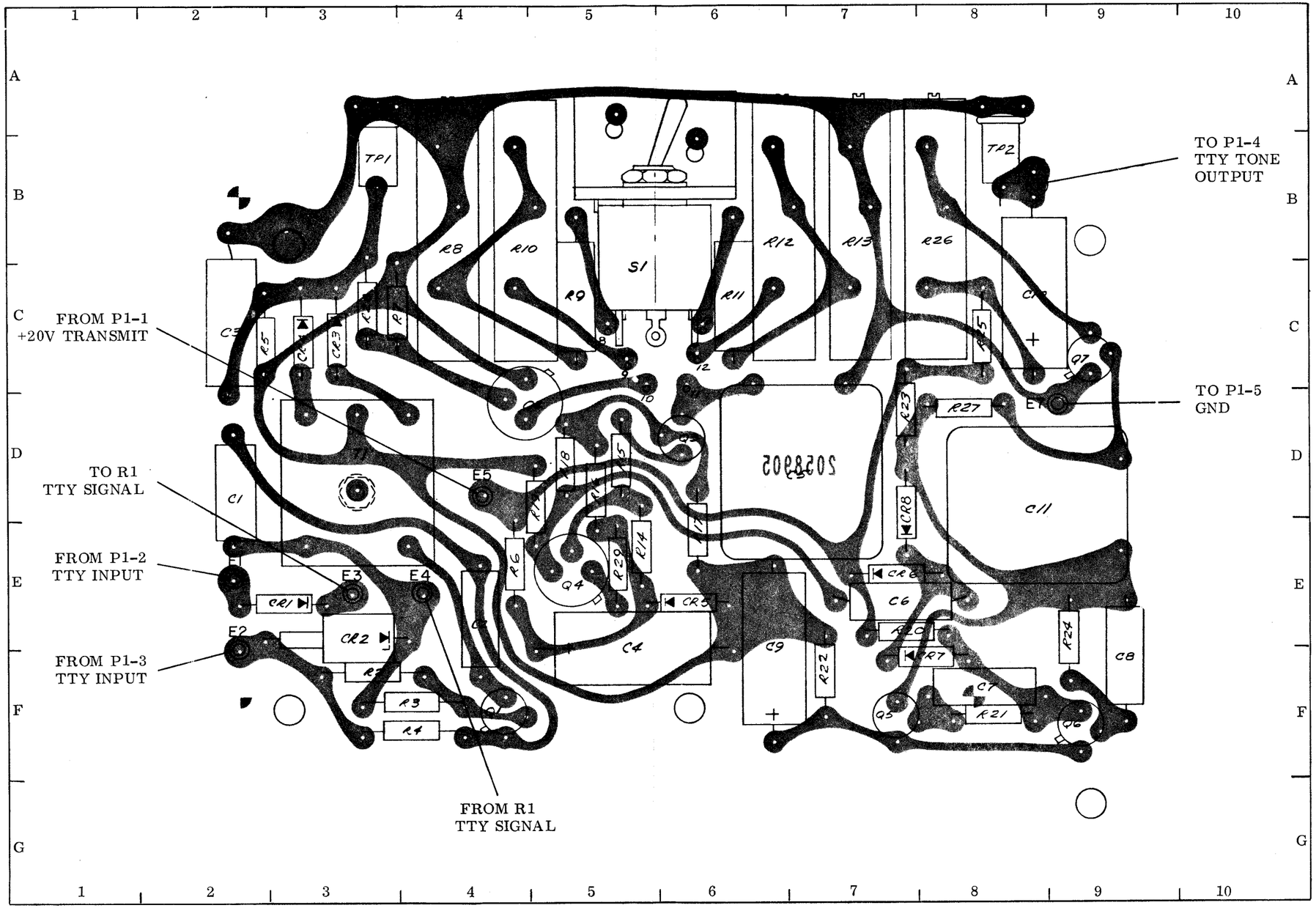
Figure 5-50. Power Supply PCB (P/O 2A2A8), Component Location

NOTE:
REF DES PREFIX 2A2A9A1

PART LOCATION INDEX

REF DES	LCTN	REF DES	LCTN
C1	2D	R1	Not used
C2	4E	R2	3F
C3	2C	R3	4F
C4	5F	R4	4F
C5	7D	R5	2C
C6	7E	R6	4E
C7	8F	R7	3C
C8	9F	R8	4B
C9	6F	R9	5C
C10	8C	R10	4B
C11	8D	R11	6C
CR1	3E	R12	6B
CR2	3E	R13	7B
CR3	3C	R14	5E
CR4	3C	R15	5D
CR5	6E	R16	5D
CR6	7E	R17	6E
CR7	8F	R18	5D
CR8	7D	R19	5D
E1	2E	R20	7E
E2	2E	R21	8F
E3	3E	R22	7F
E4	4E	R23	7D
E5	4D	R24	9E
E6	8B	R25	8C
E7	9D	R26	8B
Q1	4F	R27	8D
Q2	5D	R28	3C
Q3	6D	R29	5E
Q4	5E	S1	5C
Q5	7F	T1	3D
Q6	9F	TP1	3B
Q7	9C	TP2	8B





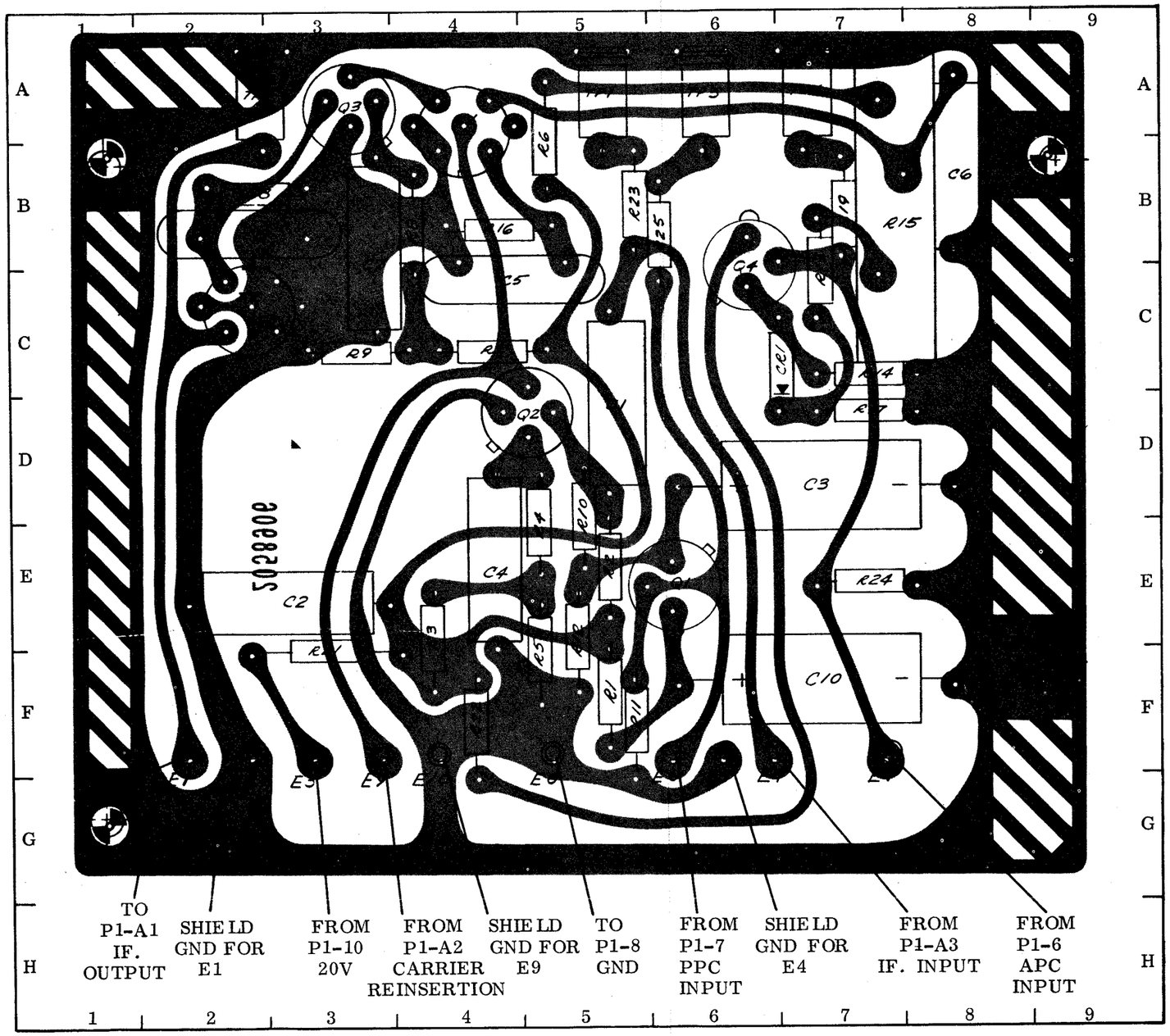
046-002-154

Figure 5-52. FSK Tone Generator PCB (P/O 2A2A9), Component Location

PARTS LOCATION INDEX

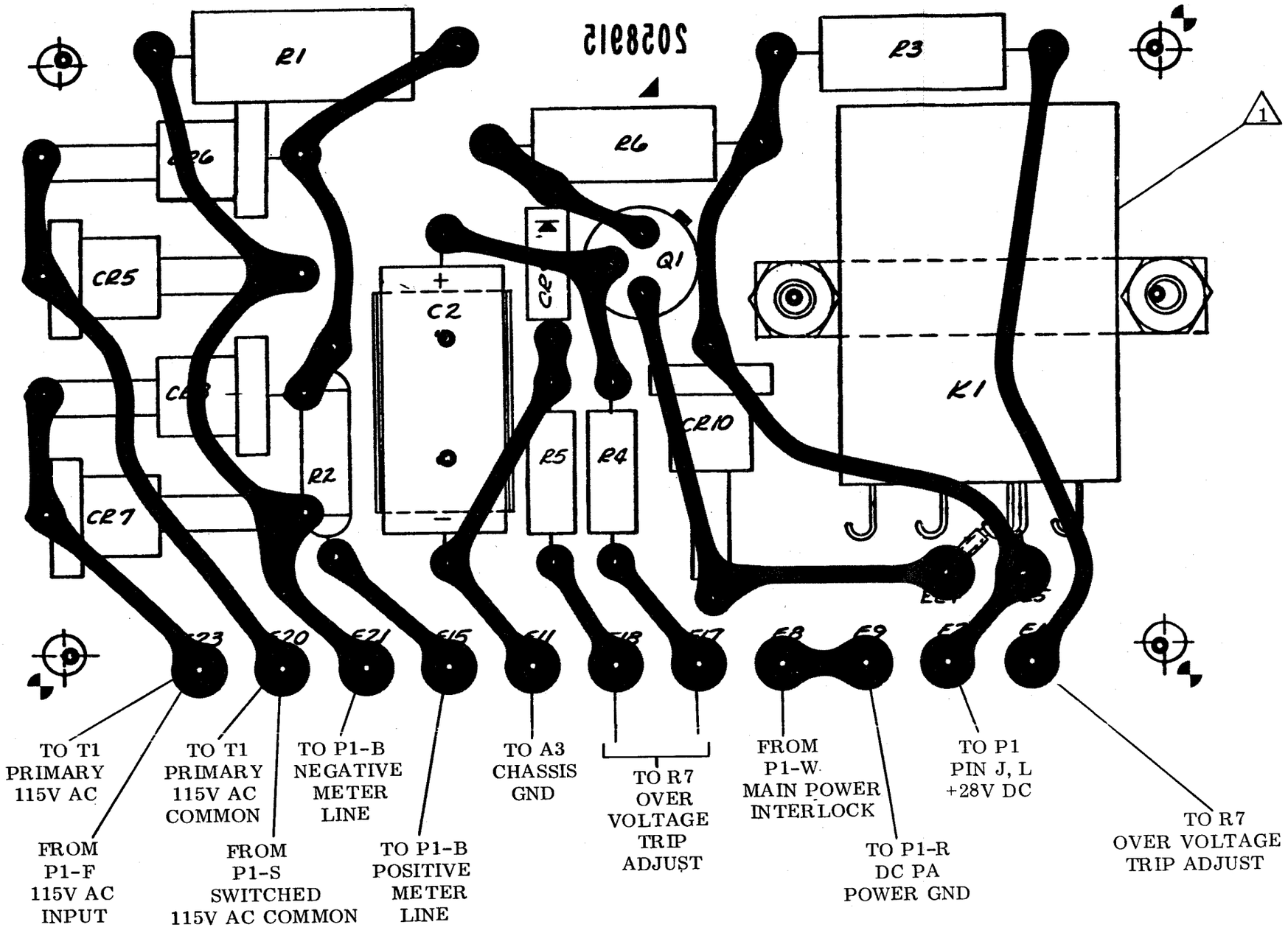
REF DES	LCTN	REF DES	LCTN
C1	5D	R4	5E
C2	3E	R5	5F
C3	7D	R6	5A
C4	4E	R7	4C
C5	4C	R8	4B
C6	8B	R9	3C
C7	3B	R10	5D
C8	2B	R11	5F
C9	Not used	R12	5E
C10	7F	R13	7C
CR1	7C	R14	7C
E1	2F	R15	7B
E2	2F	R16	4B
E3	3F	R17	7D
E4	6F	R18	2B
E5	6F	R19	7B
E6	6F	R20	Not used
E7	7F	R21	3F
E8	5F	R22	4F
E9	3F	R23	5B
E10	4F	R24	7E
Q1	6E	R25	6A
Q2	5D	T1	4A
Q3	3A	T2	2C
Q4	6A	TP1	5A
R1	5F	TP2	2A
R2	5E	TP3	6A
R3	4E	TP4	7A

NOTE:
PREFIX ALL REF DES WITH 2A2A12A1



046-002-157

Figure 5-55. Transmitter IF. Amplifier PCB (P/O 2A2A12), Component Location



046-002-174

NOTES:

1. PREFIX ALL REF DES WITH 3A2A3A1.
2. (1)

K1-1	TO DS1-1 +28V
K1-2	TO P1-X MAIN POWER INTERLOCK
K1-3	FROM Q1 COLLECTOR
K1-4	TO P1-1 INTERLOCK GND
K1-5	NO CONNECTION
K1-6	FROM E2 +28V
K1-7	FROM E2 +28V
K1-8	NO CONNECTION

Figure 5-72. Overvoltage Protection PCB (3A2A3A1), Component Location

3A2A4 TURRET ASSEMBLY MFR 58189 666230-063

CALL OUT	REF DES	CALL OUT	REF DES	CALL OUT	REF DES
1	MP48, MP49, MP50 (P/O MP24)	30	T3	59	MP8
2	MP51, MP52, MP53 (P/O MP24)	31	T13	60	MP5
3	MP54, MP55, MP56 (P/O MP24)	32	T4	61	MP2, 3, 4
4	MP57, MP58, MP59 (P/O MP24)	33	T14	62	MP6
5	MP45 (P/O MP24)	34	T5	63	FL20
6	MP46 (P/O MP24)	35	T15	64	NO REF DES
7	FL1	36	T6	65	MP10
8	FL11	37	T16	66	A1B1
9	FL2	38	T7	67	A1MP4
10	FL12	39	T17	68	A1MP6
11	FL3	40	T8	69	A1MP2
12	FL13	41	T18	70	A1MP5
13	FL4	42	T9	71	A1MP3
14	FL14	43	T19	72	A1MP1
15	FL5	44	T10	73	MP47
16	FL15	45	MP27	74	MP25
17	FL6	46	MP28	75	MP60
18	FL16	47	MP11	76	MP44
19	FL7	48	MP12	77	R20
20	FL17	49	MP1	78	S2
21	FL8	50	MP7	79	H1 - H4
22	FL18	51	MP13	80	MP29 - MP32
23	FL9	52	MP14-MP19	81	MP40 - MP43
24	FL19	53	MP61	82	MP33 - MP39
25	FL10	54	MP20	83	A1H5 - H8
26	T1	55	MP21	84	A1MP7
27	T11	56	MP22	85	A1MP8
28	T2	57	MP23	86	A1H1 - A1H4
29	T12	58	MP9		

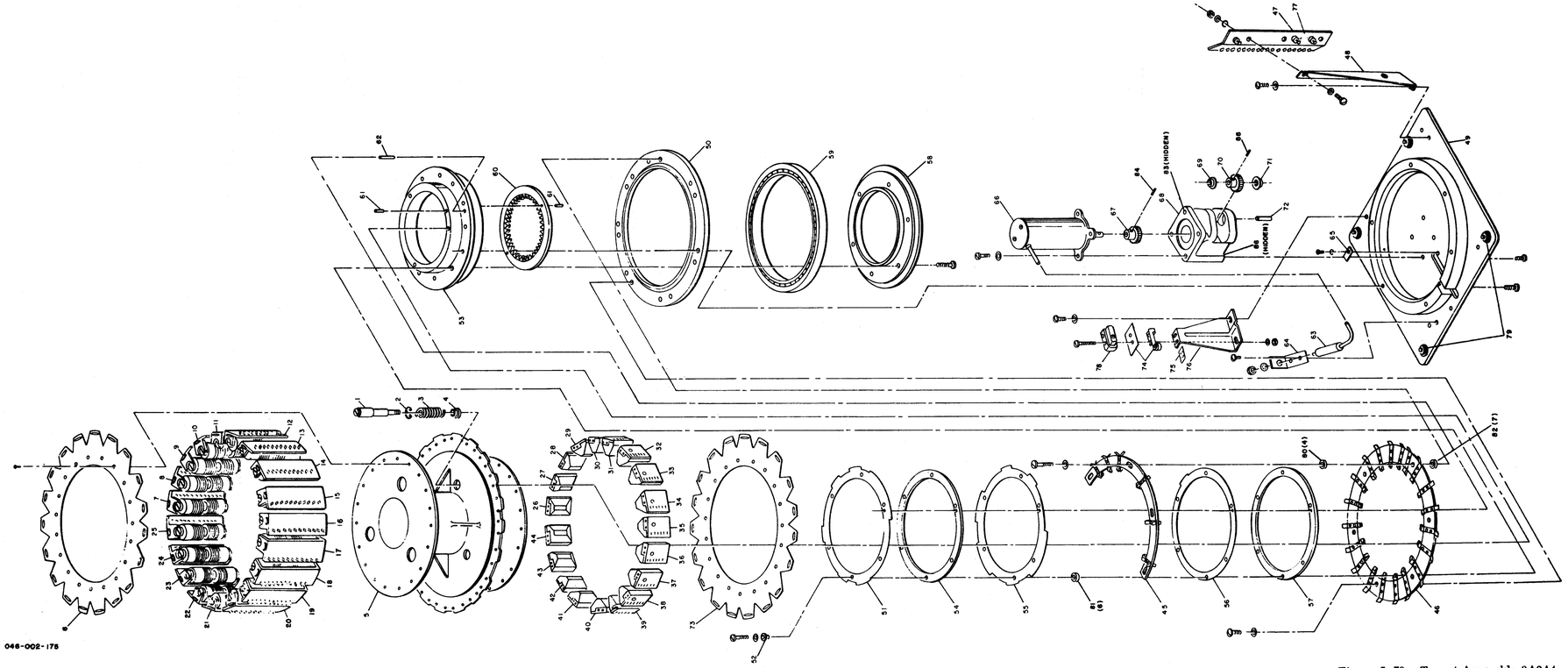
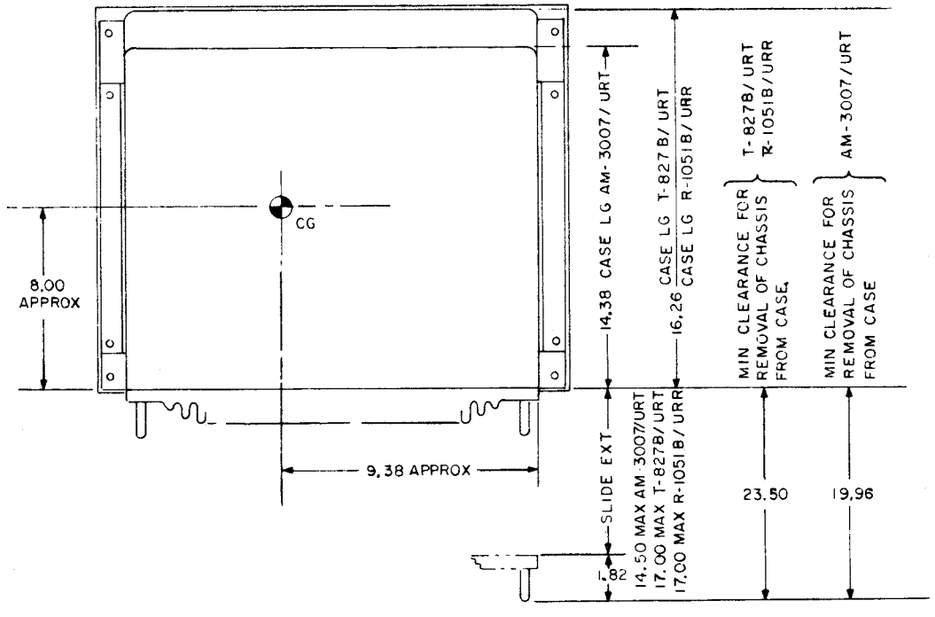
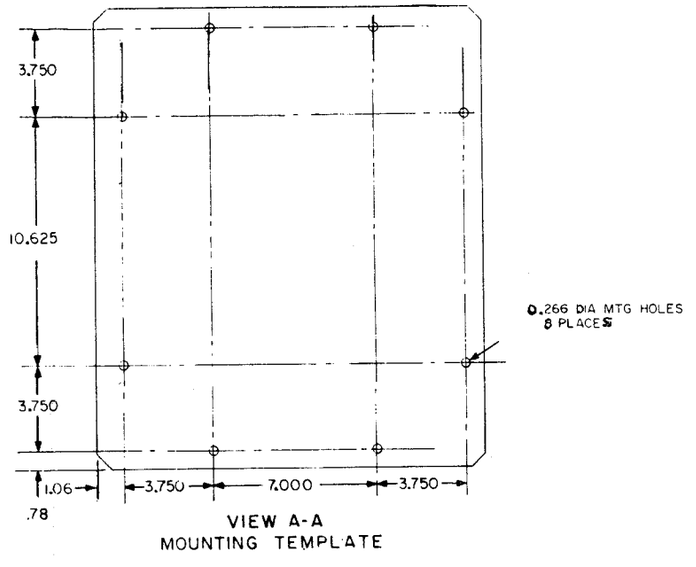


Figure 5-73. Turret Assembly 3A2A4, Exploded View





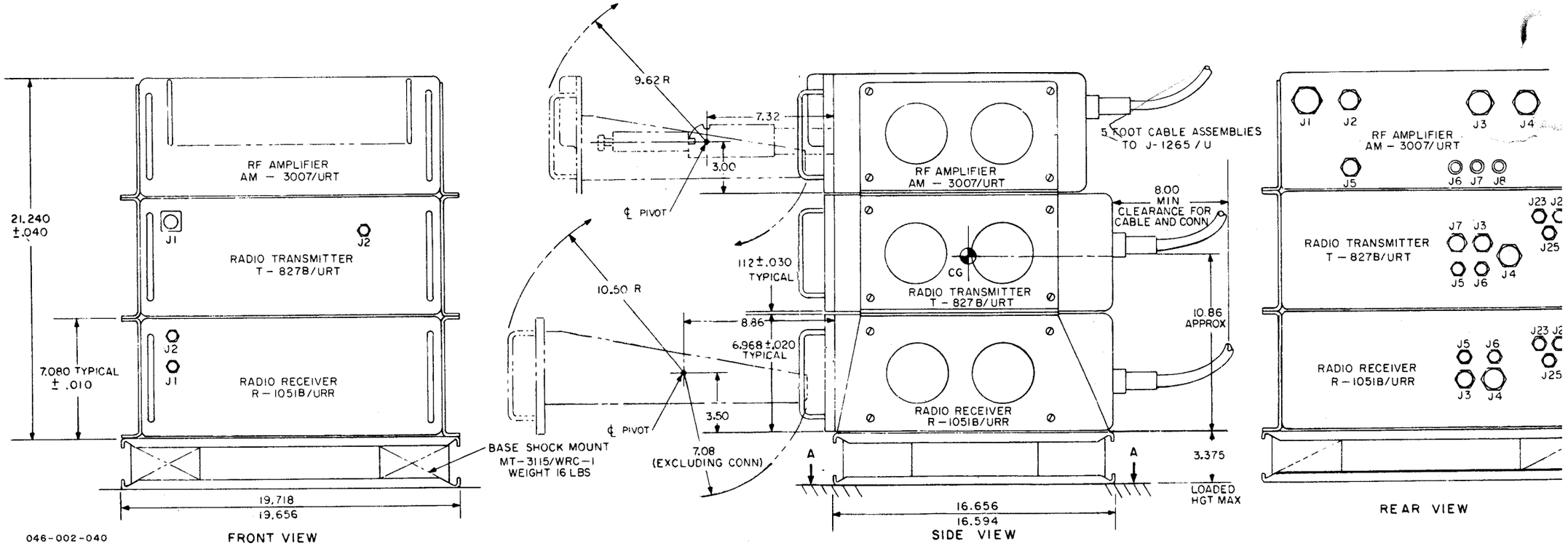
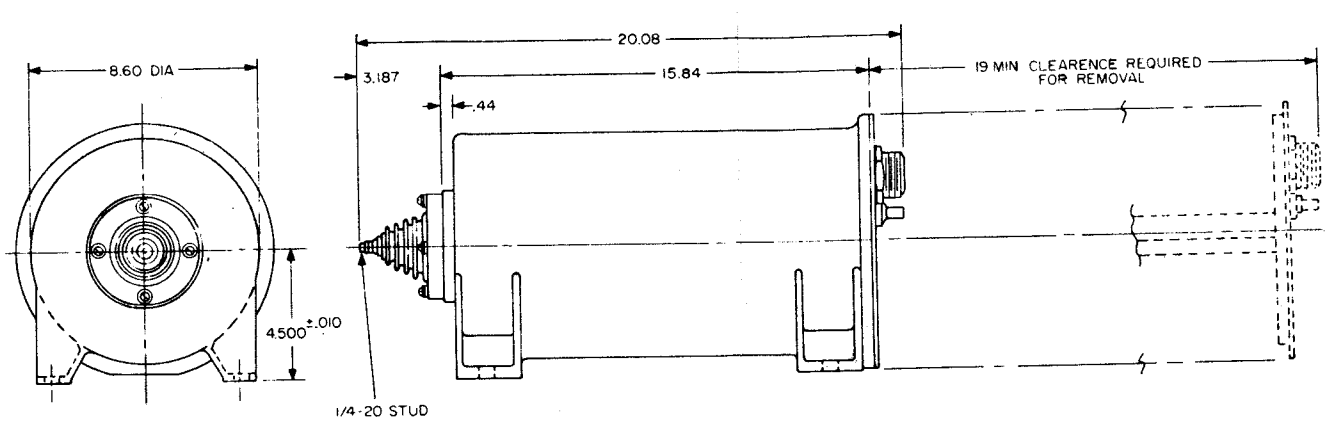
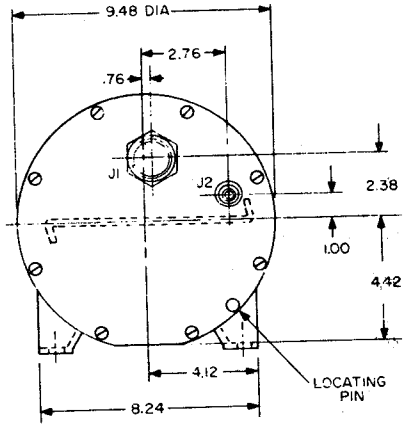


Figure 7-1. Radio Set AN/WRC-
System Instal

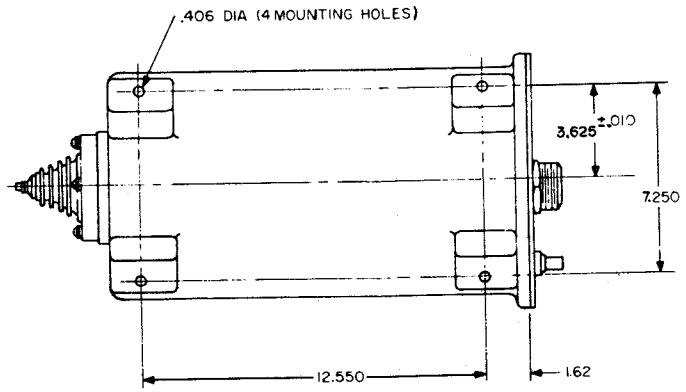


REAR VIEW

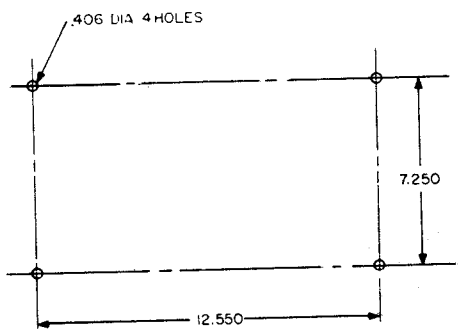
SIDE VIEW



FRONT VIEW



BOTTOM VIEW



MOUNTING TEMPLATE

NOTES:

1. SPECIFICATIONS
   SIZE 935 IN3
   WEIGHT 30 LBS (APPROX)
   HEAT DISSIPATION 50 WATTS MAX
   TEMPERATURE -28°C TO +65°C (OPERATING)
   FREQUENCY RANGE 2-30 MHZ

046-002-039

Figure 7-2. Interconnection Box J-1265/U, Dimensions

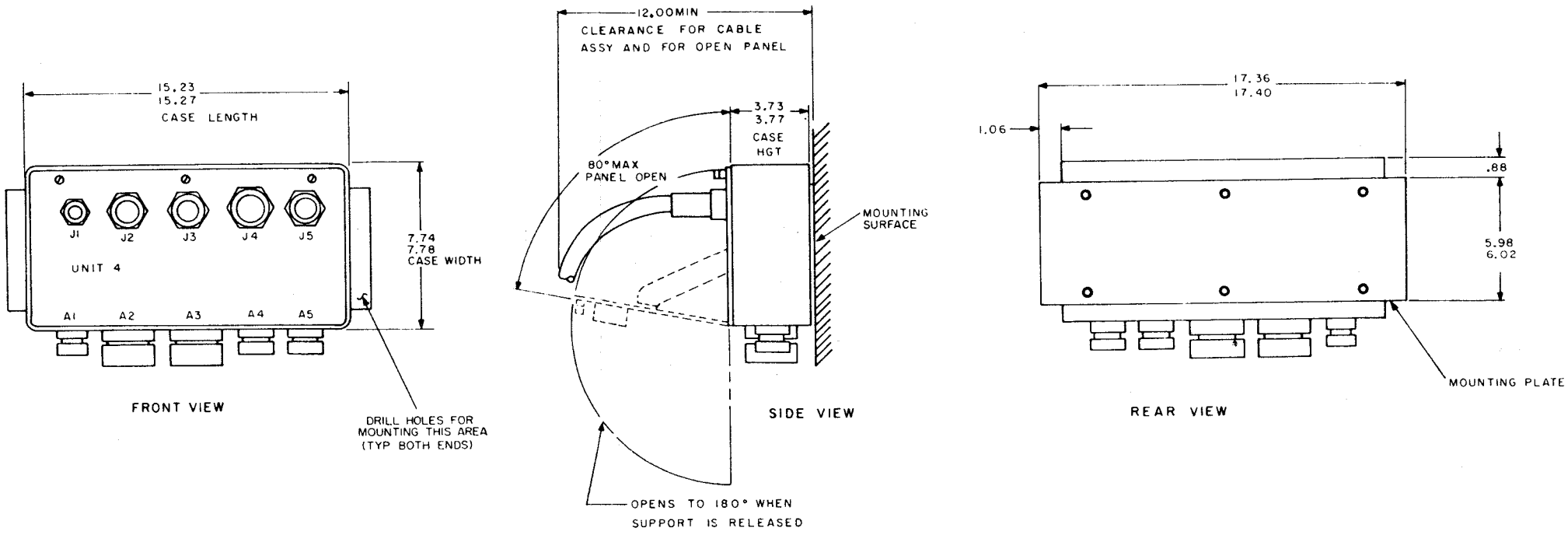
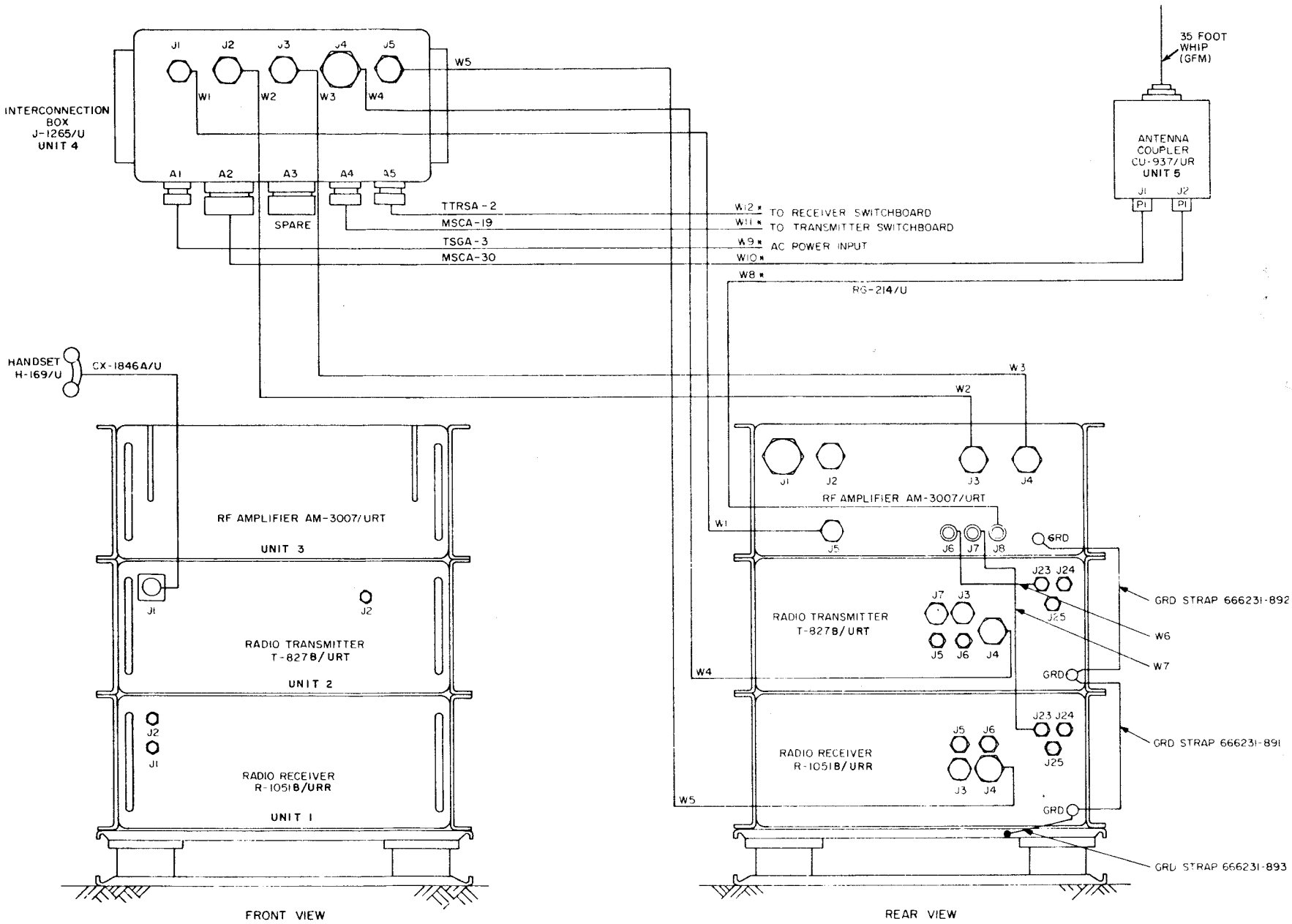


Figure 7-3. Antenna Coupler CU-937/UR, Dimensions



NOTE:

* CABLE ASSEMBLIES OTHER THAN W1 THRU W7 ARE SUPPLIED BY THE INSTALLING ACTIVITY

046-002-041

Figure 7-5. Radio Set AN/WRC-1B, Interconnection Diagram