

Figure 8-33. Overall Block Diagram

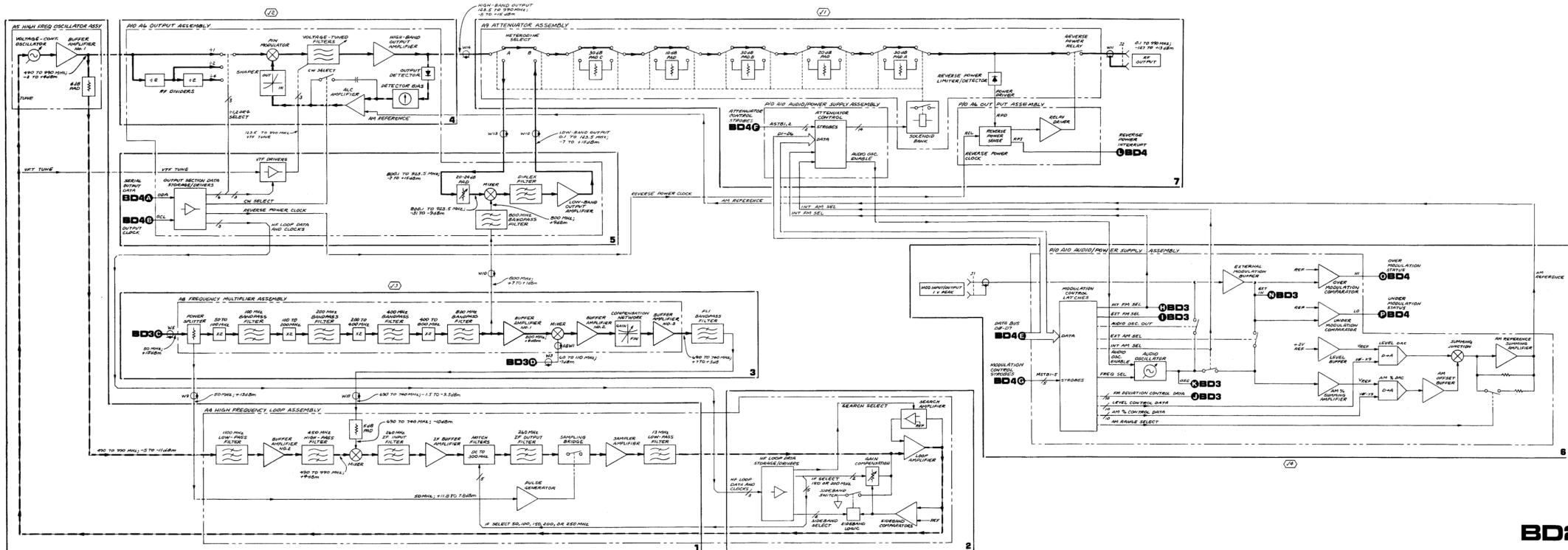


Figure 8-34. High Frequency and Output Section Block Diagram

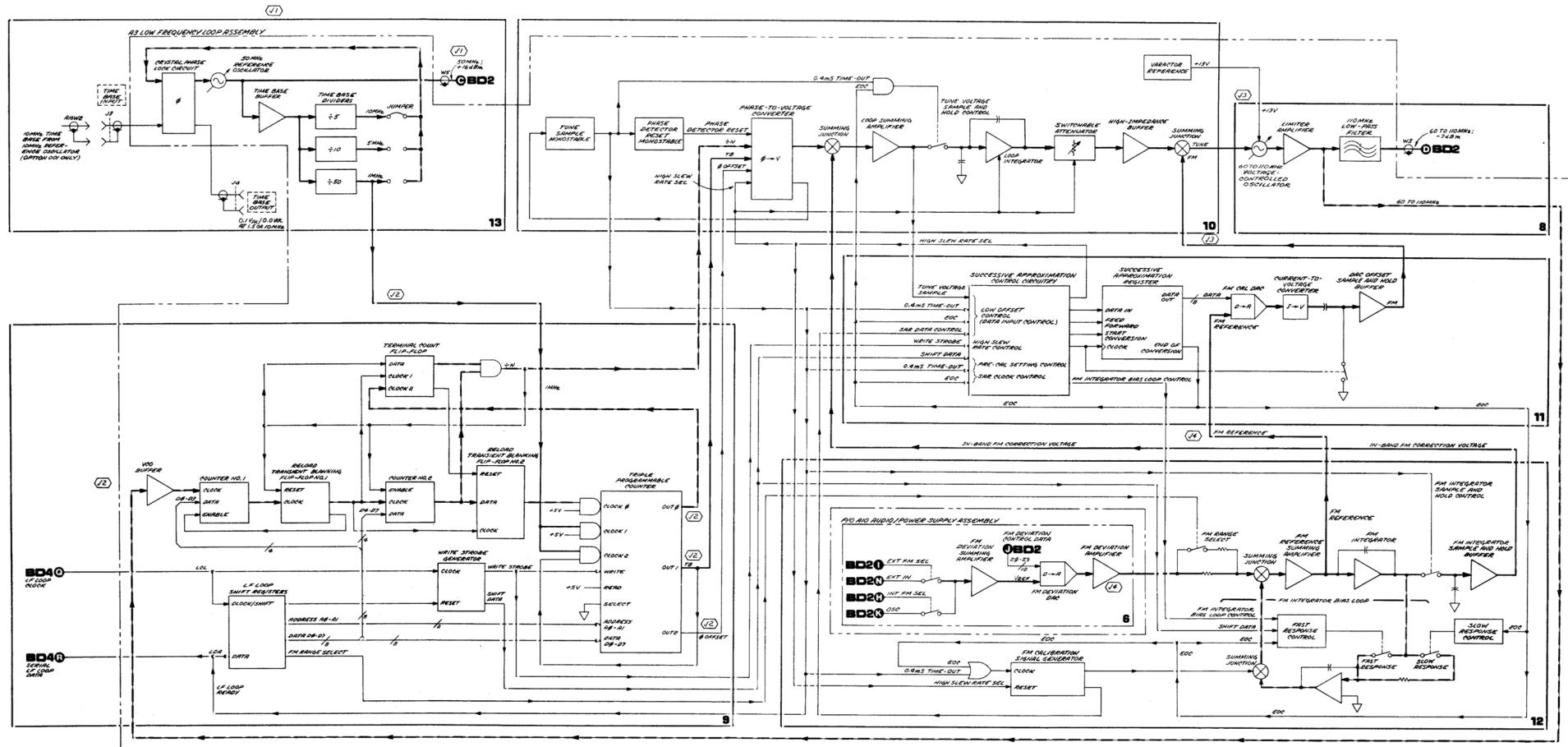
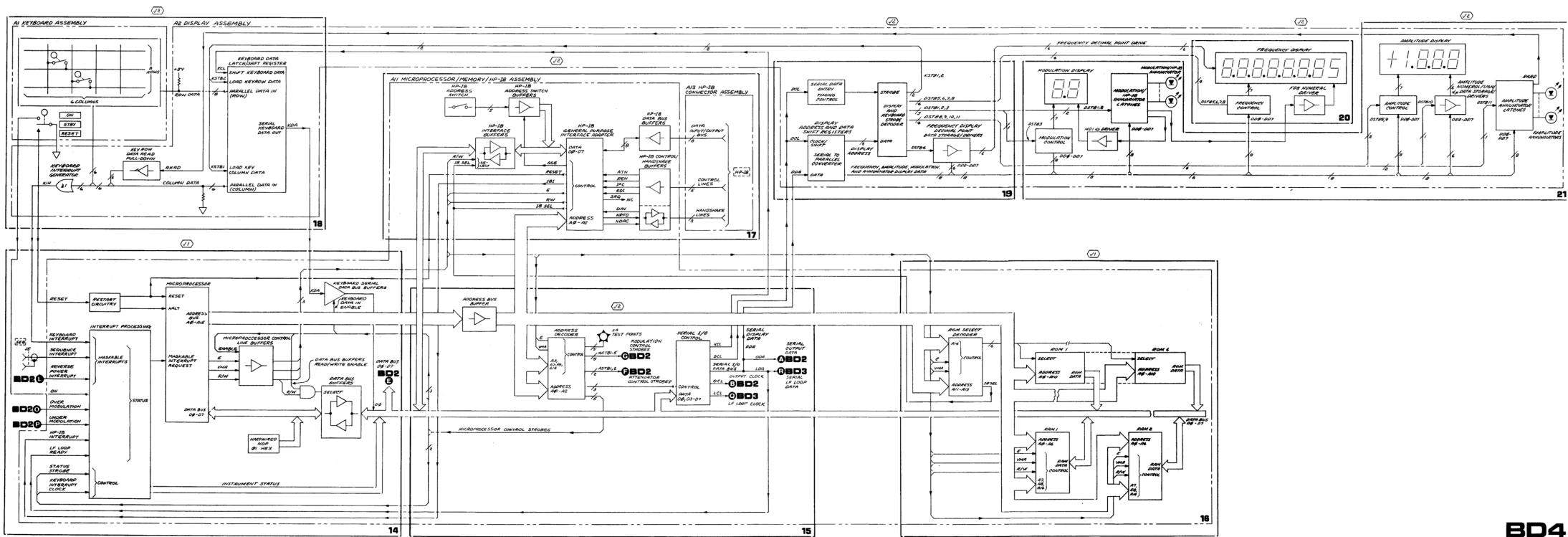


Figure 8-35. Low Frequency and FM Section Block Diagram

Figure 8-36. Microprocessor, Keyboard and Display Section Block Diagram



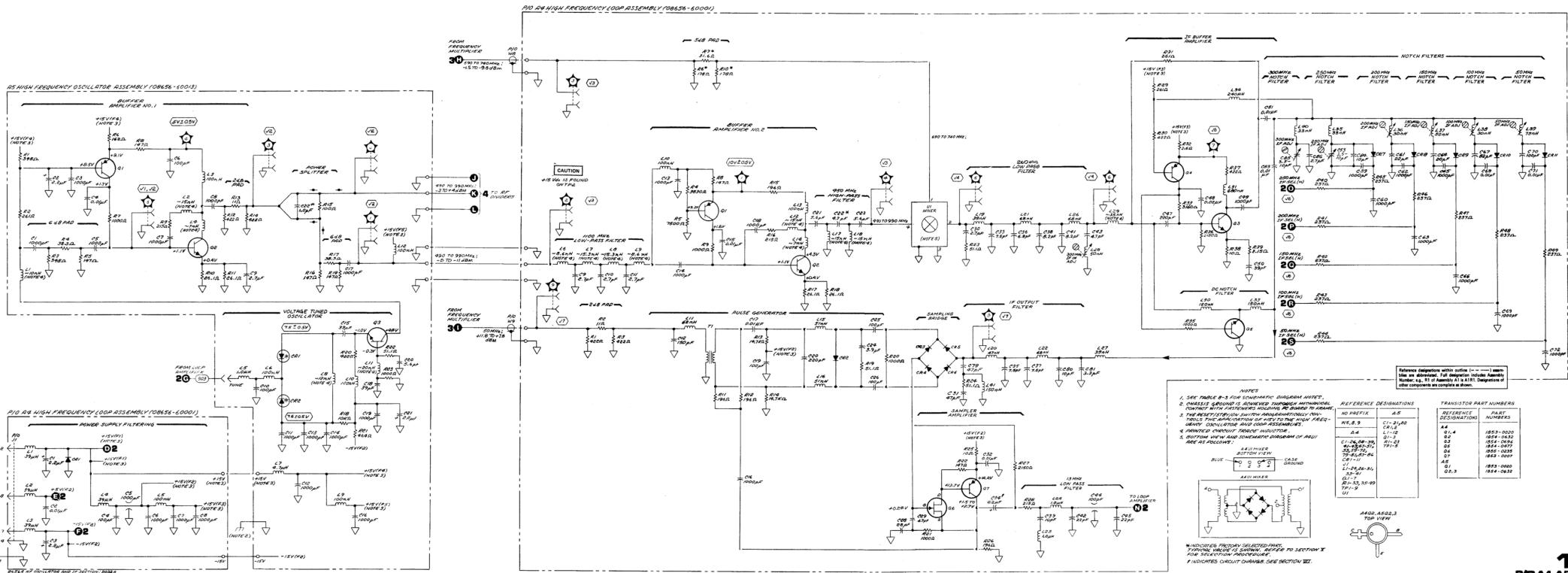


Figure 8-40. High Frequency Oscillator and IF Section Schematic Diagram

P/0 A4 HIGH FREQUENCY LOOP ASSEMBLY (08656-60001)

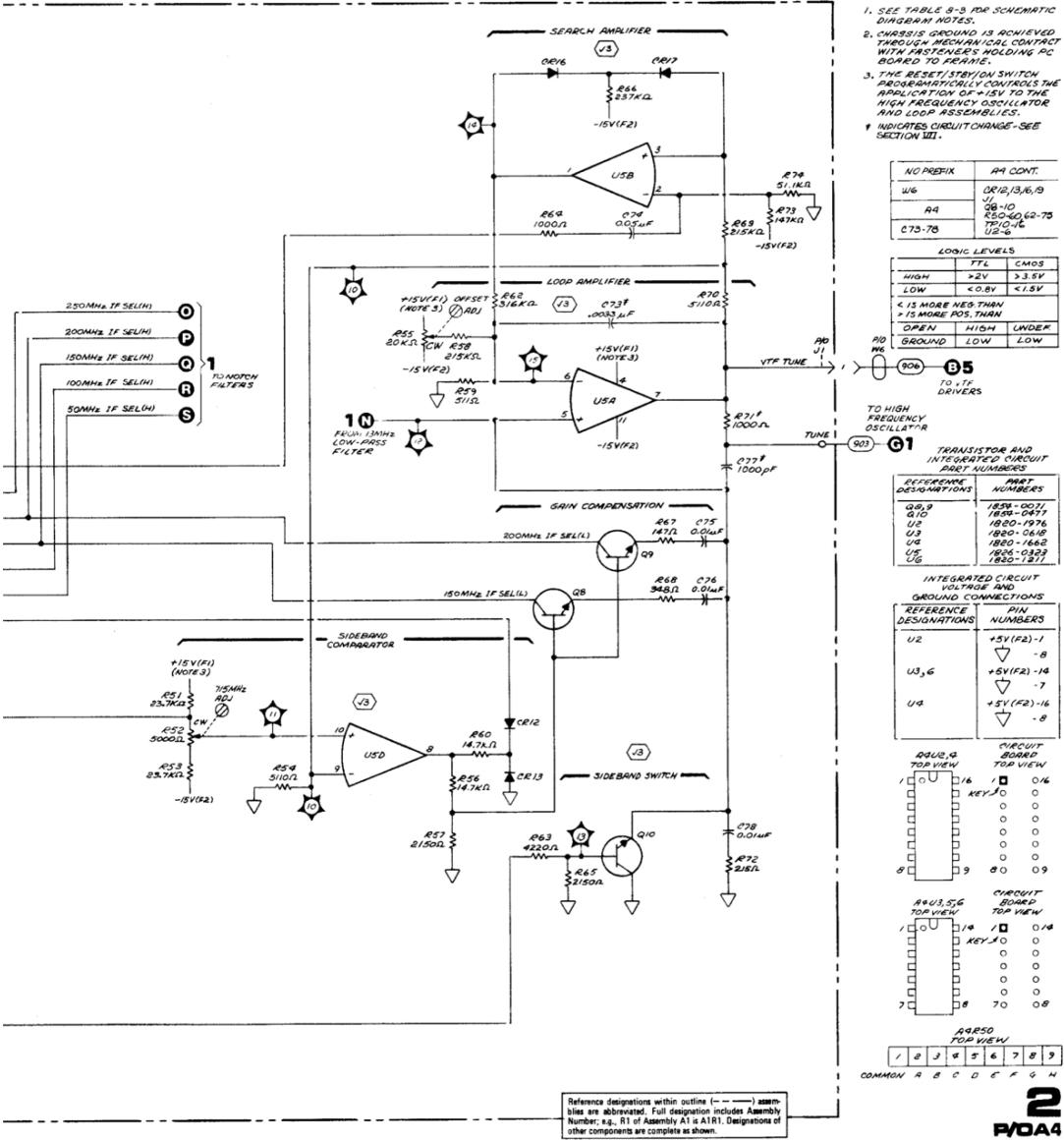
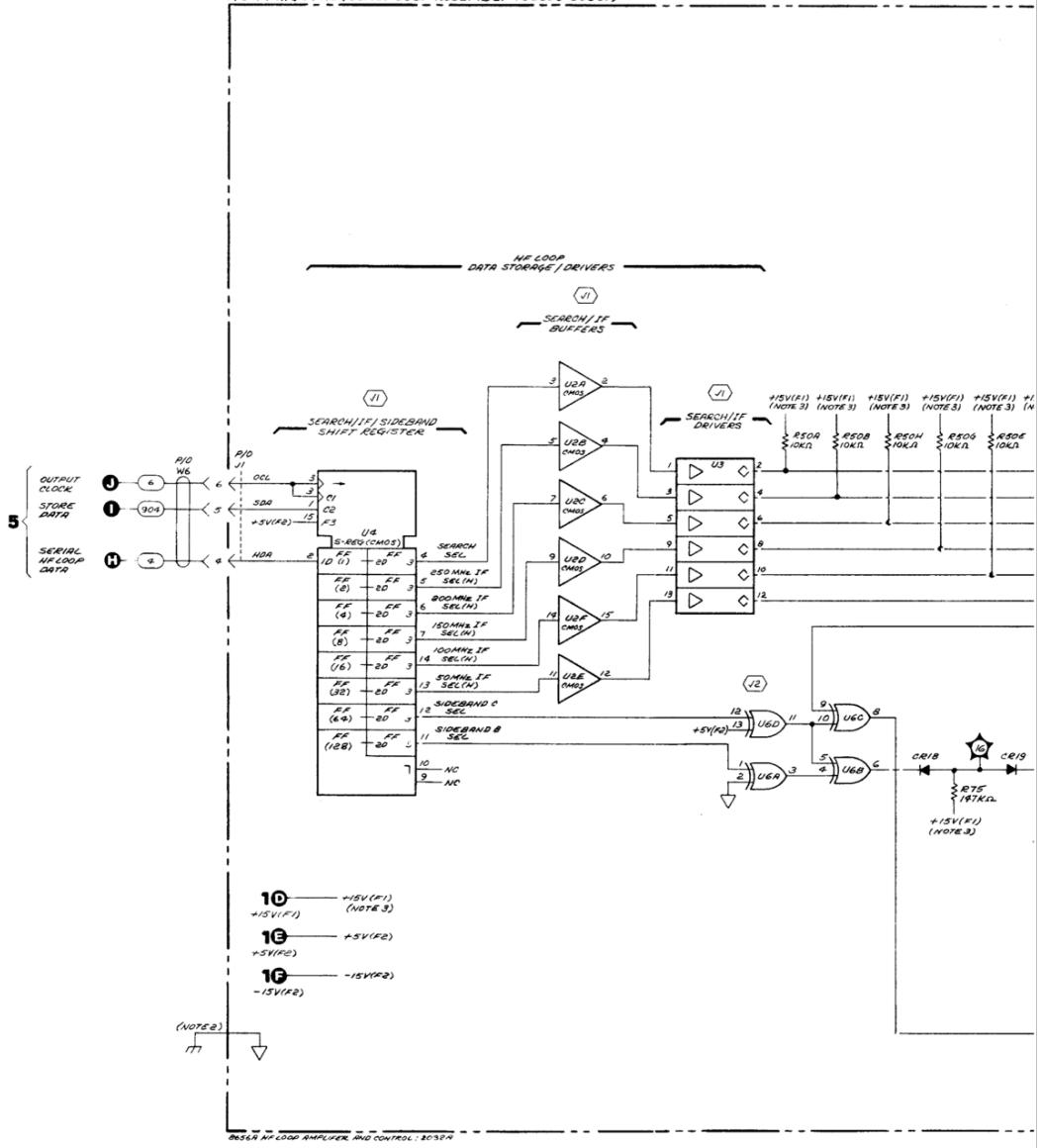


Figure 8-43. High Frequency Loop Amplifier and Control Schematic Diagram

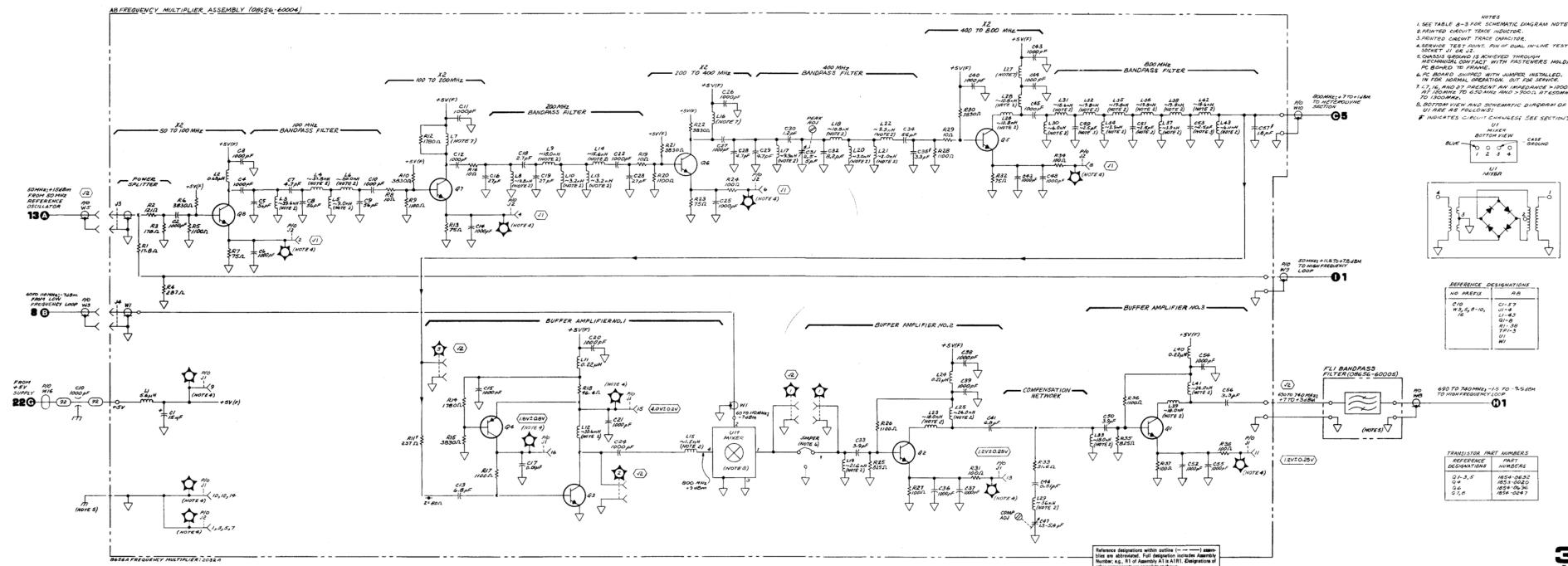


Figure 8-46. Frequency Multiplier Schematic Diagram

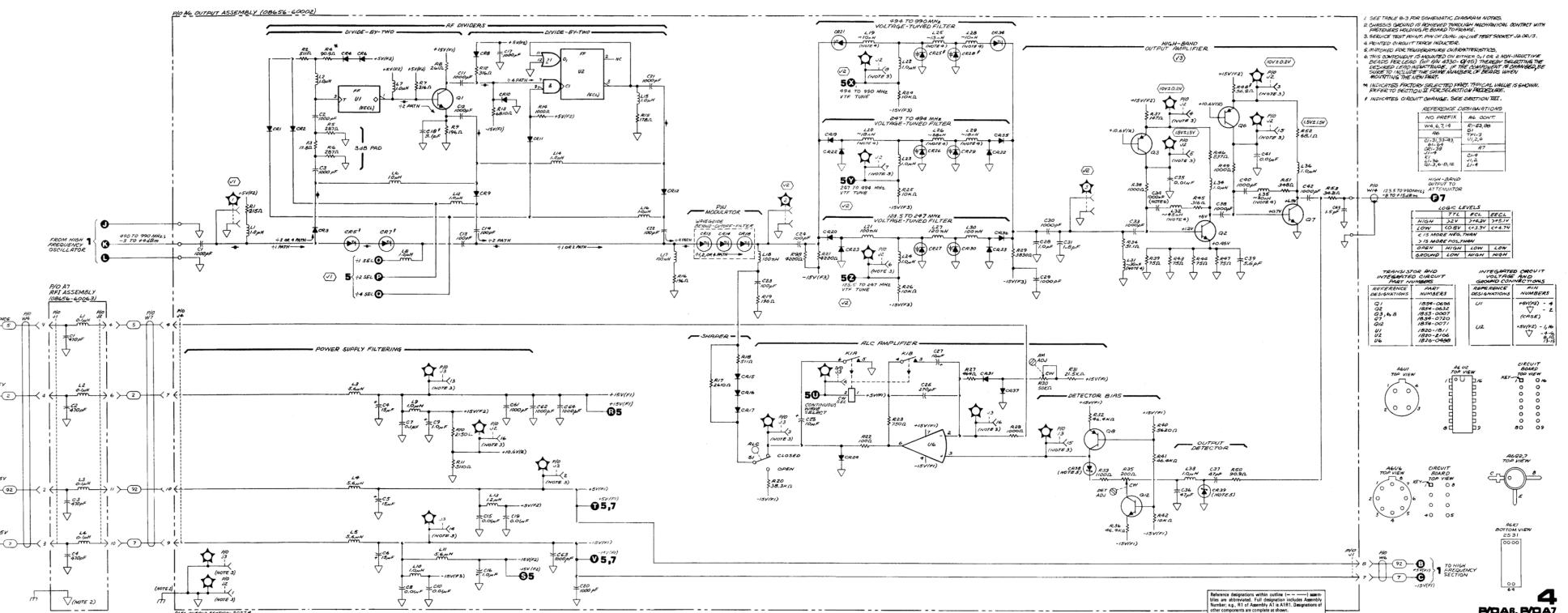


Figure 8-50. Output Section Schematic Diagram

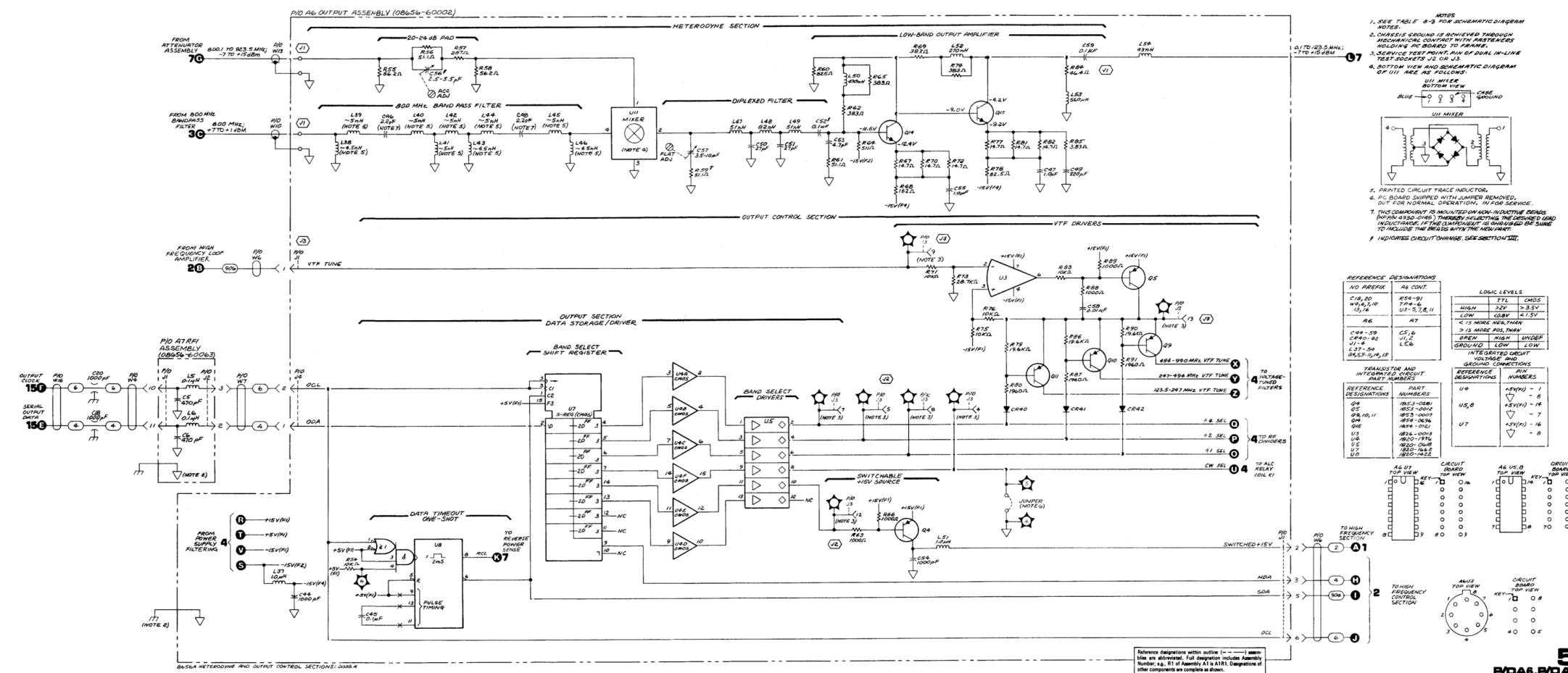


Figure 8-54. Heterodyne and Output Control Schematic Diagram

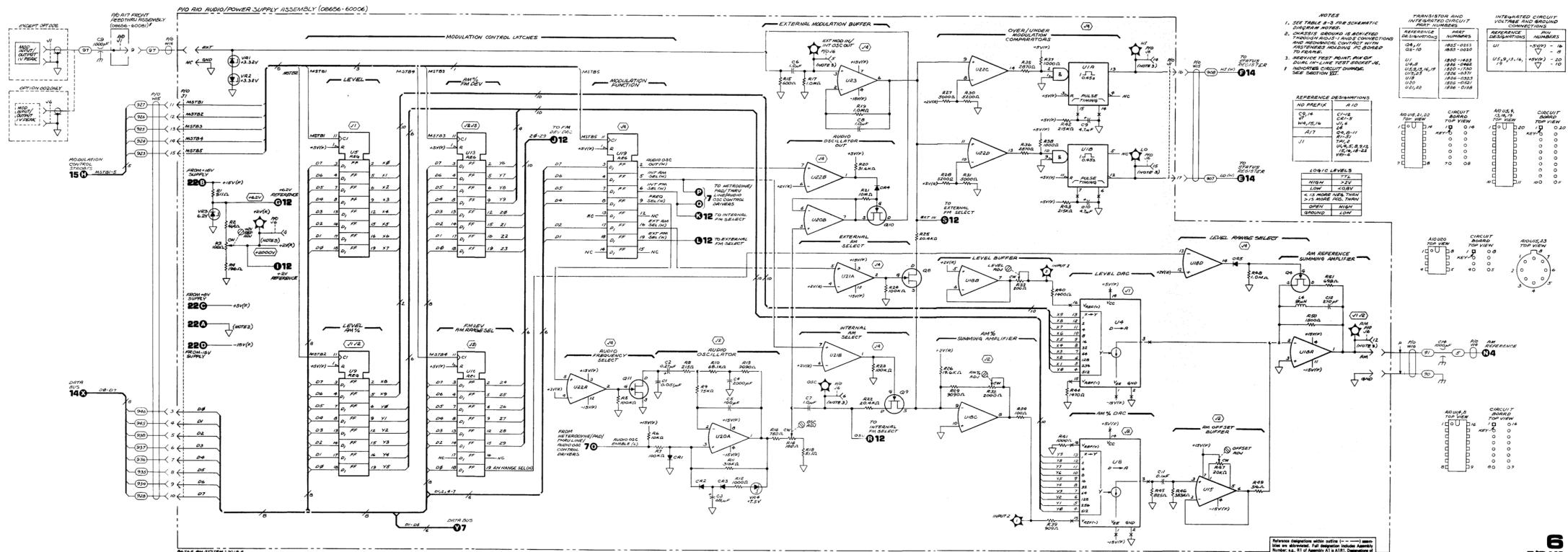
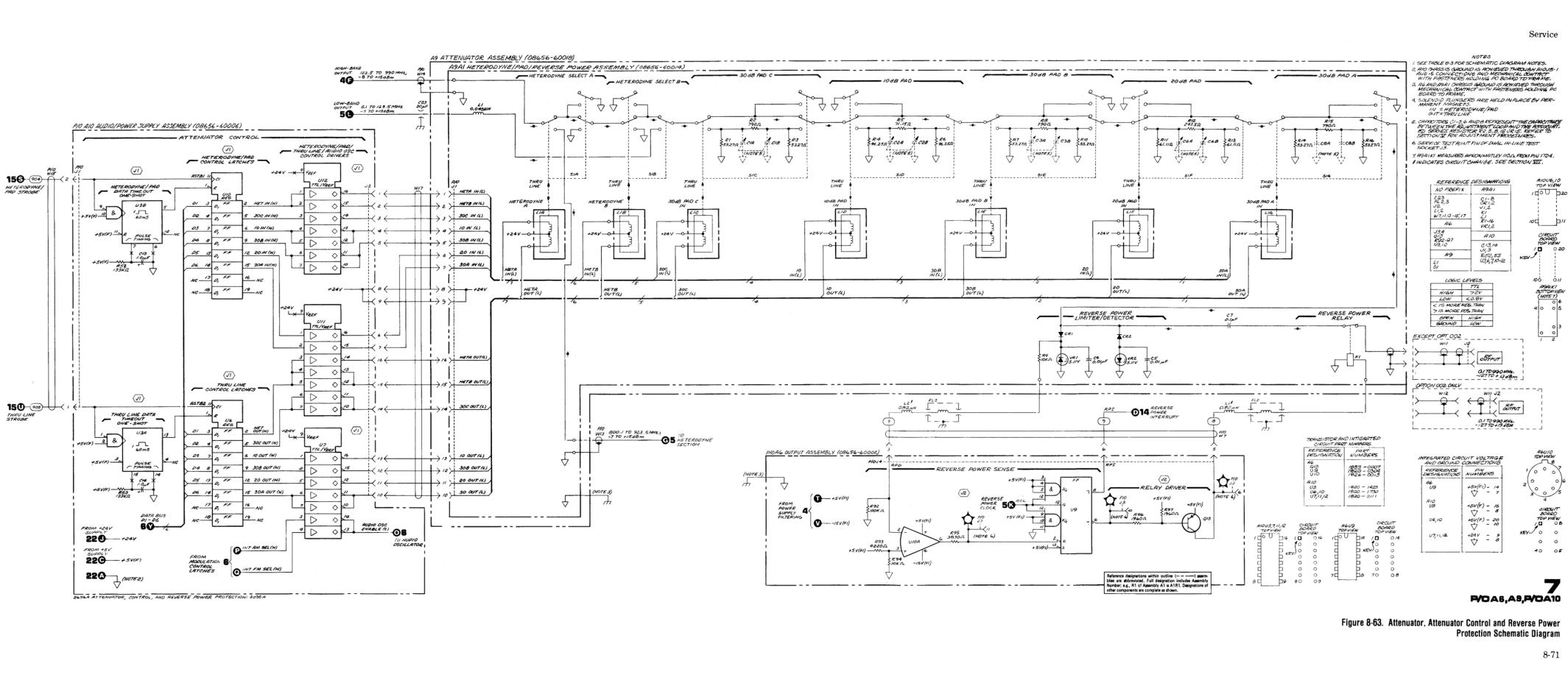
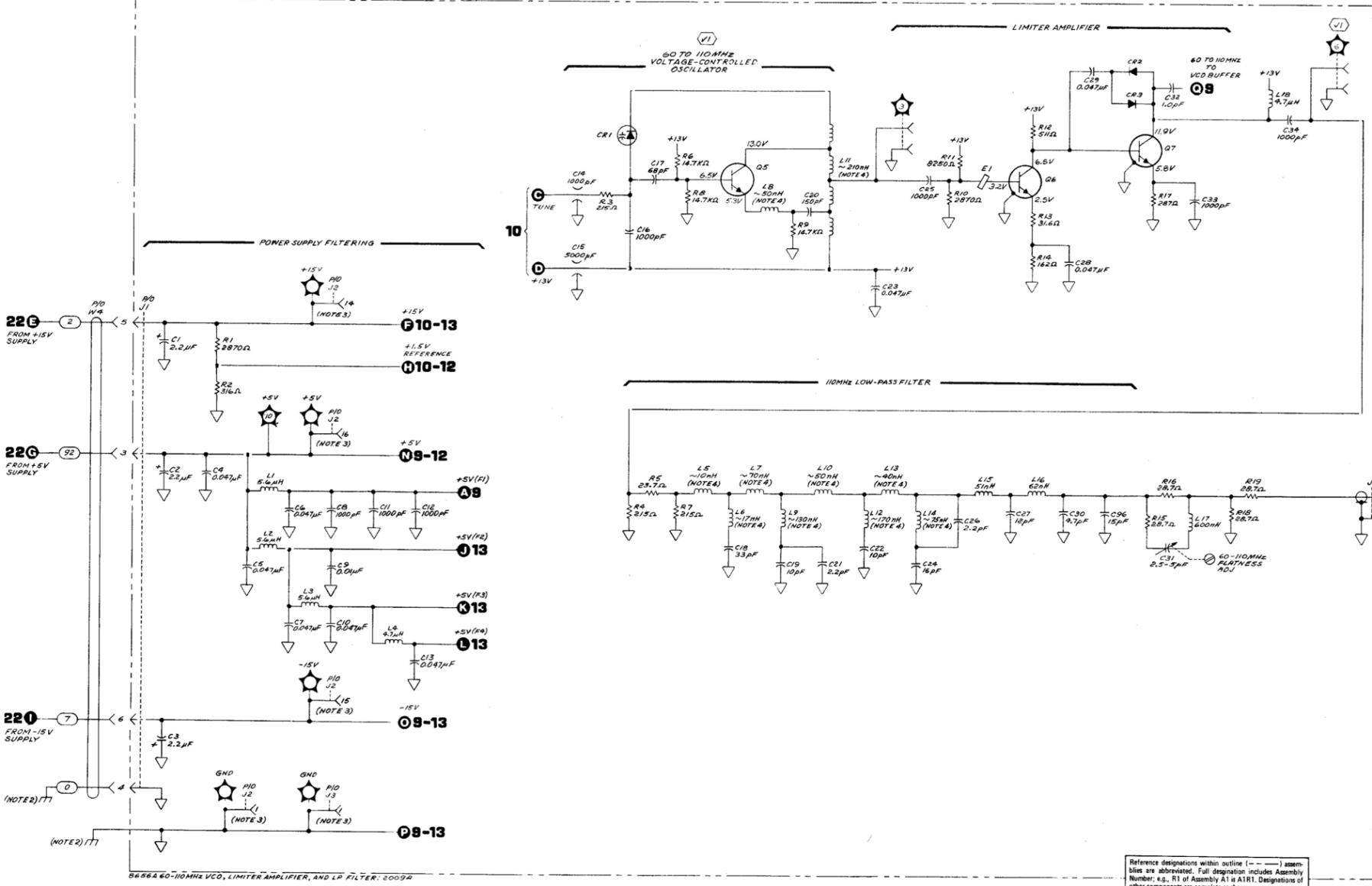


Figure 8-57. Modulation and RF Amplitude Control Schematic Diagram



P/O A3 LOW FREQUENCY LOOP ASSEMBLY (08656-60003)



Reference designations within outline (— — —) assemblies are abbreviated. Full designation includes Assembly Number; e.g., R1 of Assembly A1 is A1R1. Designations of other components are compiled in the Index.

REFERENCE DESIGNATIONS	
NO PREFIX	A3 CONT.
W3, 4	L1-1B Q5-7
A3	R1-19 TP3, 6, 10
C1-34, 96 CR1-3 E1 J1-4	

TRANSISTOR PART NUMBERS	
REFERENCE DESIGNATIONS	PART NUMBERS
Q5	1854-0610
Q6	1854-0345
Q7	1854-0696

8
BRAZ

Figure 8-66. LF Loop VCO Schematic Diagram

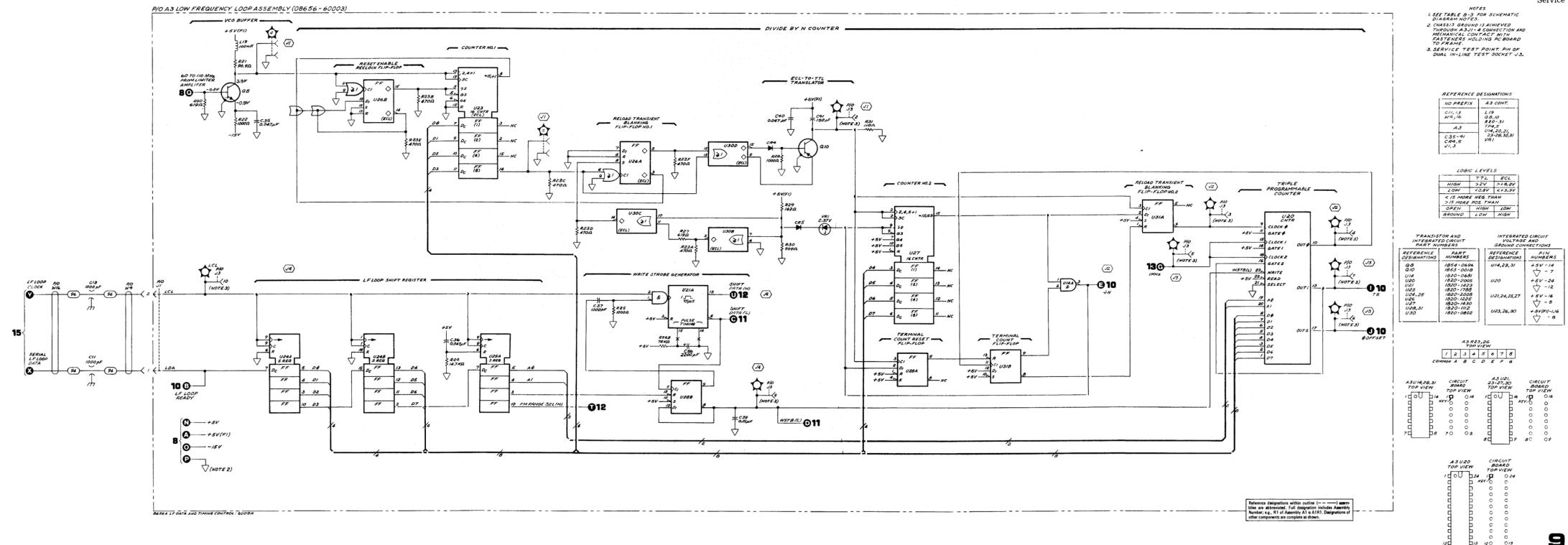
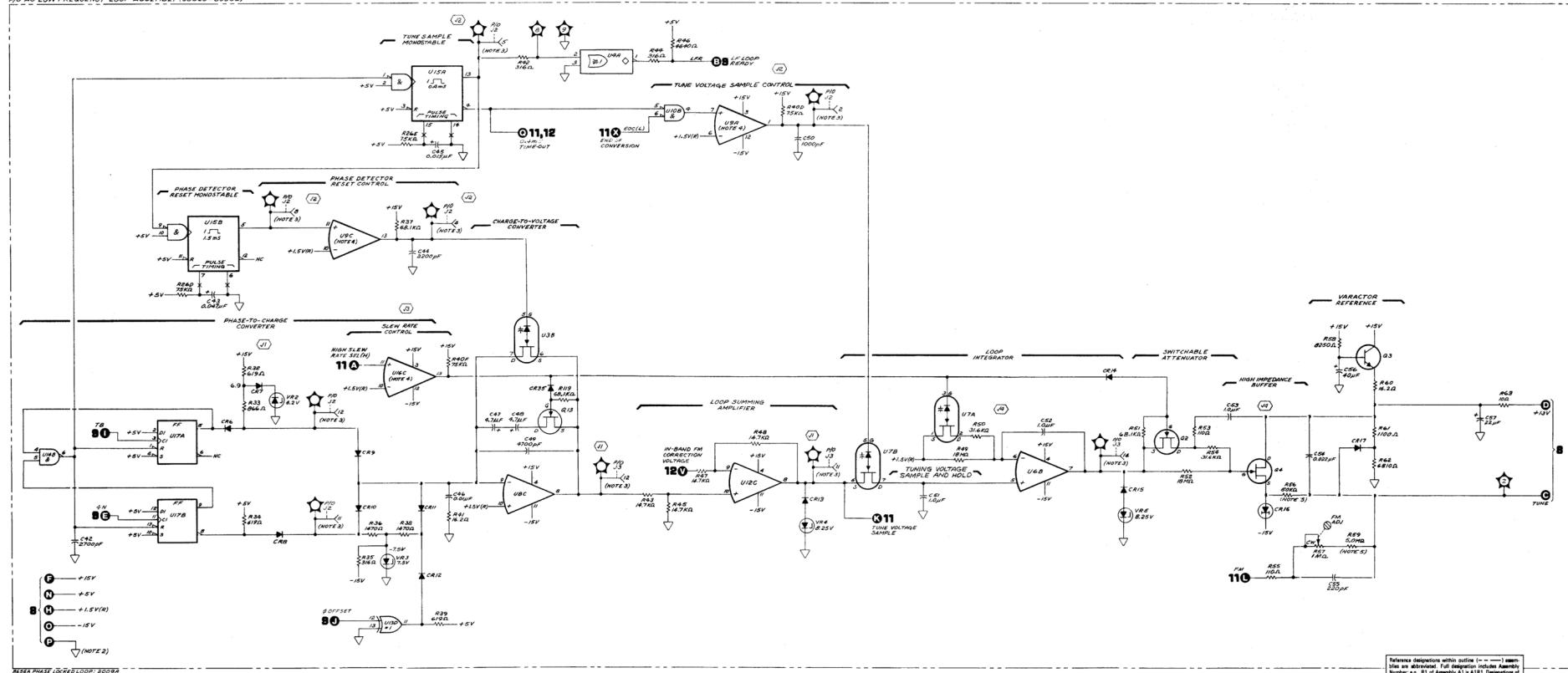


Figure 8-69. LF Loop Data and Timing Control Schematic Diagram

RIO A3 LOW FREQUENCY LOOP ASSEMBLY (08656-60003)



1. SEE TABLE 8-3 FOR SCHEMATIC DIAGRAM NOTES.
 2. USE PLASTIC ACROSS TABS AND PLATE TO PLATE CONNECTION FOR MECHANICAL CONTACT WITH FASTENERS HOLDING PCB BOARD IN FRAME.
 3. USE TEST POINTS FOR DUAL IN-LINE TEST SOCKET J2 OR J3.
 4. OPEN COLLECTOR DEVICE.
 5. AMPLIFIER FOR TEMPERATURE CHARACTERISTICS.

REFERENCE DESIGNATIONS	
A3	
C42-57	1855-3414
J1A	1855-3288
J1B	1855-3289
R1A	1855-3285
R1B	1855-3286
R1C	1855-3287
R1D	1855-3288
R1E	1855-3289
R1F	1855-3290
R1G	1855-3291
R1H	1855-3292
R1I	1855-3293
R1J	1855-3294
R1K	1855-3295
R1L	1855-3296
R1M	1855-3297
R1N	1855-3298
R1O	1855-3299
R1P	1855-3300
R1Q	1855-3301
R1R	1855-3302
R1S	1855-3303
R1T	1855-3304
R1U	1855-3305
R1V	1855-3306
R1W	1855-3307
R1X	1855-3308
R1Y	1855-3309
R1Z	1855-3310
V1	1855-3311

LOGIC LEVELS	
HIGH	>2.5V
LOW	<0.5V
1/2 MORE NEGATIVE	-2.5V
1/2 MORE POSITIVE	2.5V
OPEN	OPEN
GROUND	LOW

TRANSISTOR AND INTEGRATED CIRCUIT PART NUMBERS	
REFERENCE DESIGNATION	PART NUMBER
Q1, Q2	1855-3414
Q3	1855-3288
Q4	1855-3289
Q5	1855-3290
Q6	1855-3291
Q7	1855-3292
Q8	1855-3293
Q9	1855-3294
Q10	1855-3295
Q11	1855-3296
Q12	1855-3297
Q13	1855-3298
Q14	1855-3299
Q15	1855-3300
Q16	1855-3301
Q17	1855-3302
Q18	1855-3303
Q19	1855-3304
Q20	1855-3305
Q21	1855-3306
Q22	1855-3307
Q23	1855-3308
Q24	1855-3309
Q25	1855-3310
U1	1855-3414
U1A	1855-3288
U1B	1855-3289
U1C	1855-3290
U1D	1855-3291
U1E	1855-3292
U1F	1855-3293
U1G	1855-3294
U1H	1855-3295
U1I	1855-3296
U1J	1855-3297
U1K	1855-3298
U1L	1855-3299
U1M	1855-3300
U1N	1855-3301
U1O	1855-3302
U1P	1855-3303
U1Q	1855-3304
U1R	1855-3305
U1S	1855-3306
U1T	1855-3307
U1U	1855-3308
U1V	1855-3309
U1W	1855-3310

INTEGRATED CIRCUIT PIN CONNECTIONS	
REFERENCE DESIGNATION	PIN NUMBER
U1A, U1B, U1C, U1D, U1E, U1F, U1G, U1H, U1I, U1J, U1K, U1L, U1M, U1N, U1O, U1P, U1Q, U1R, U1S, U1T, U1U, U1V, U1W	1, 2, 3, 4, 5, 6, 7, 8

CIRCUIT BOARD TOP VIEW	
AB103, 7, 15	AB104, 1, 2, 3, 4, 5, 6, 7, 8
AB104, 1, 2, 3, 4, 5, 6, 7, 8	AB103, 7, 15
COMMON	COMMON
A, B, C, D, E, F, G	A, B, C, D, E, F, G

CIRCUIT BOARD TOP VIEW	
AB103, 1, 2, 3, 4, 5, 6, 7, 8	AB104, 1, 2, 3, 4, 5, 6, 7, 8
COMMON	COMMON
A, B, C, D, E, F, G	A, B, C, D, E, F, G
I, O	I, O

Figure 8-72. LF Loop Phase Lock Circuits Schematic Diagram

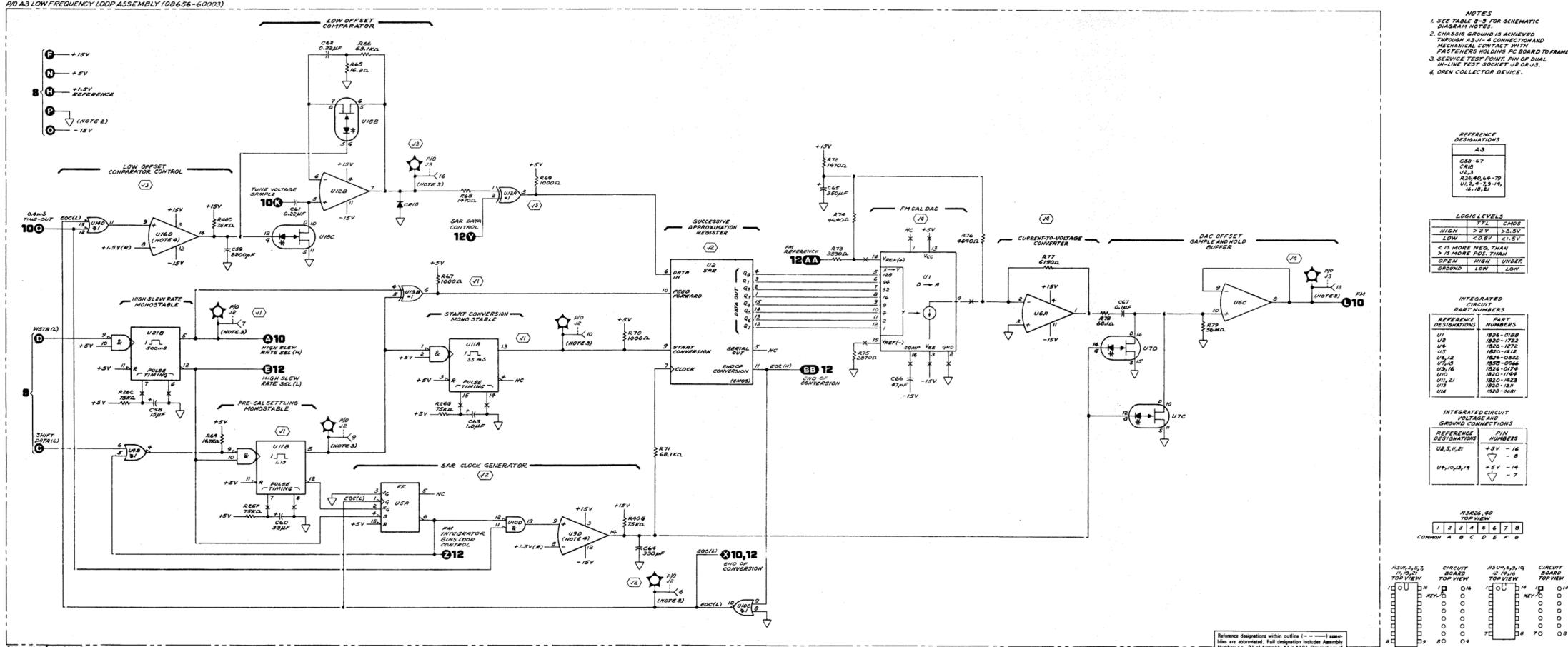
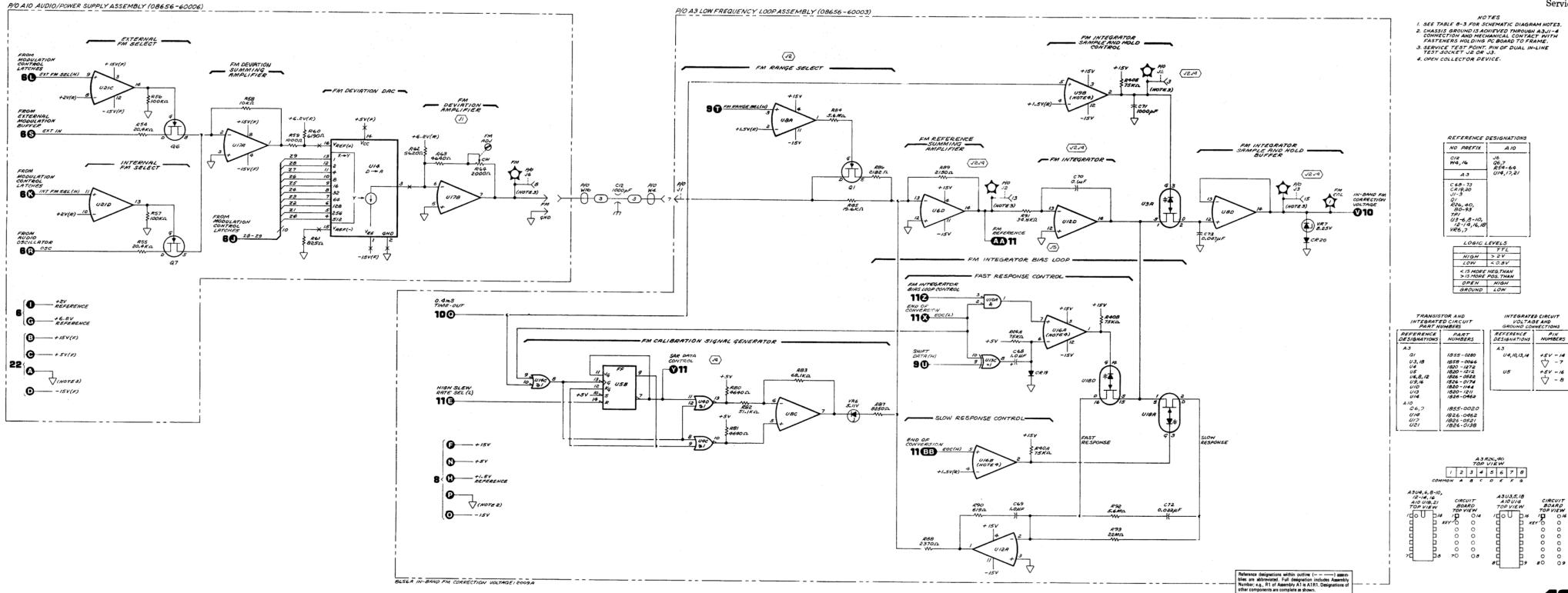


Figure 8-75. LF Loop FM Calibrator Schematic Diagram



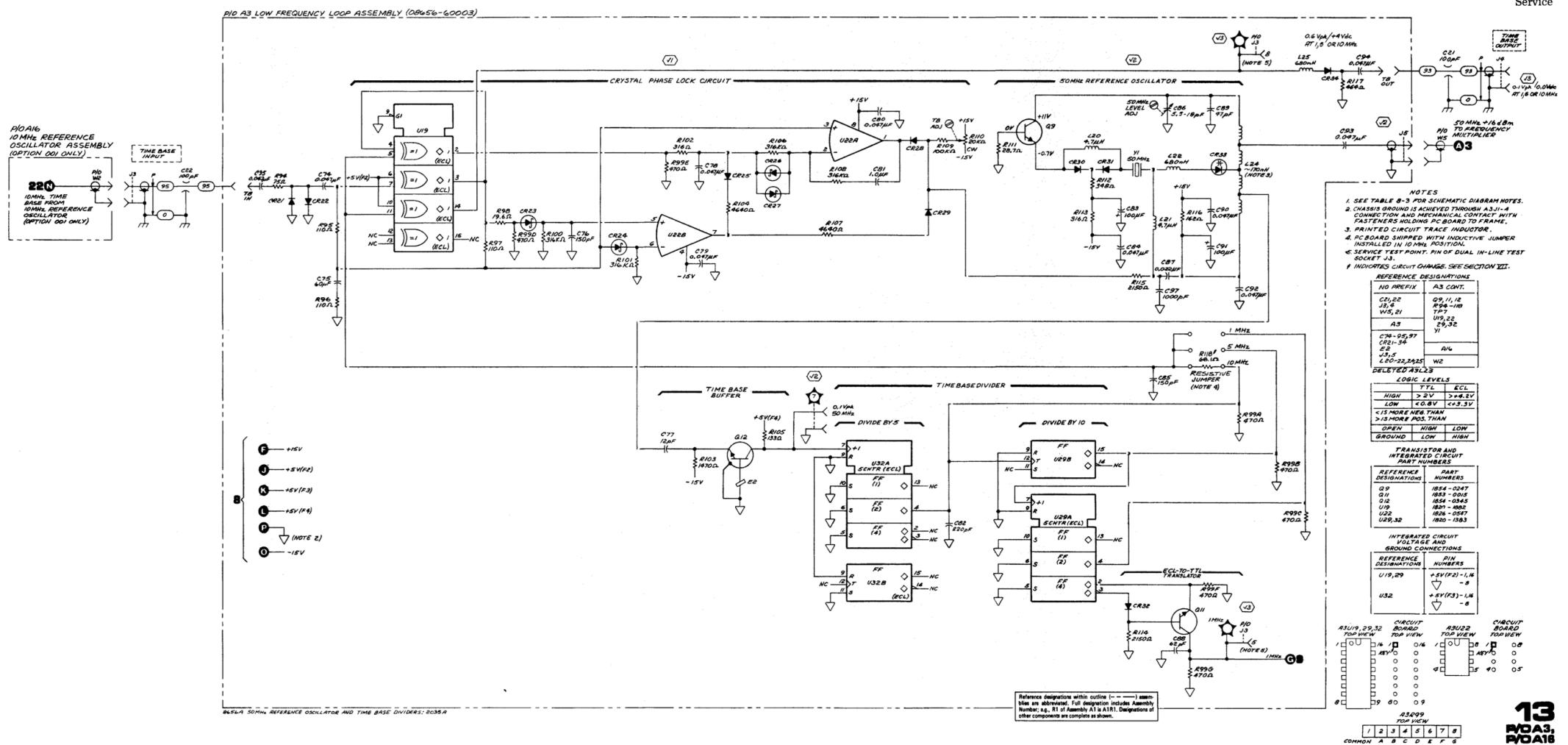


Figure 8-82. Reference Oscillators and Phase Lock Loop Schematic Diagram

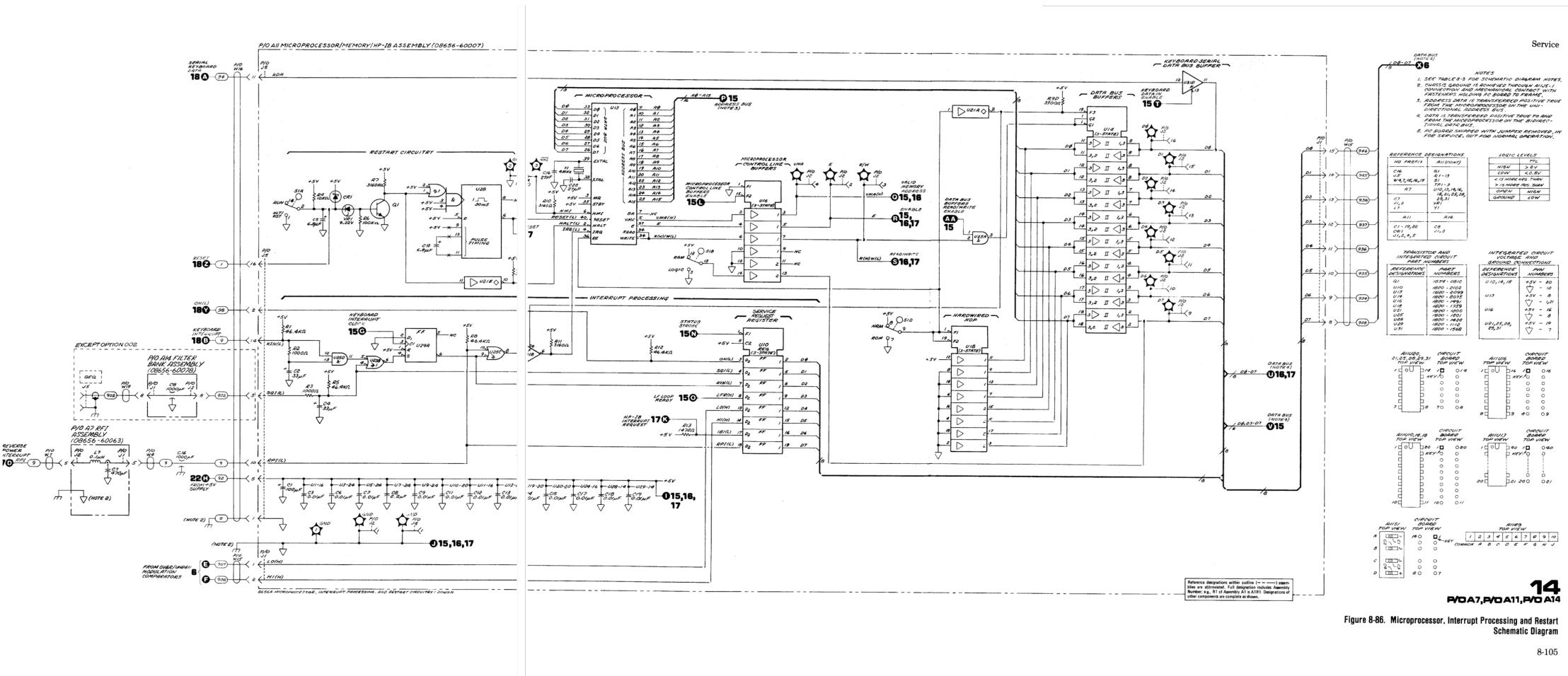


Figure 8-86. Microprocessor, Interrupt Processing and Restart Schematic Diagram

Service

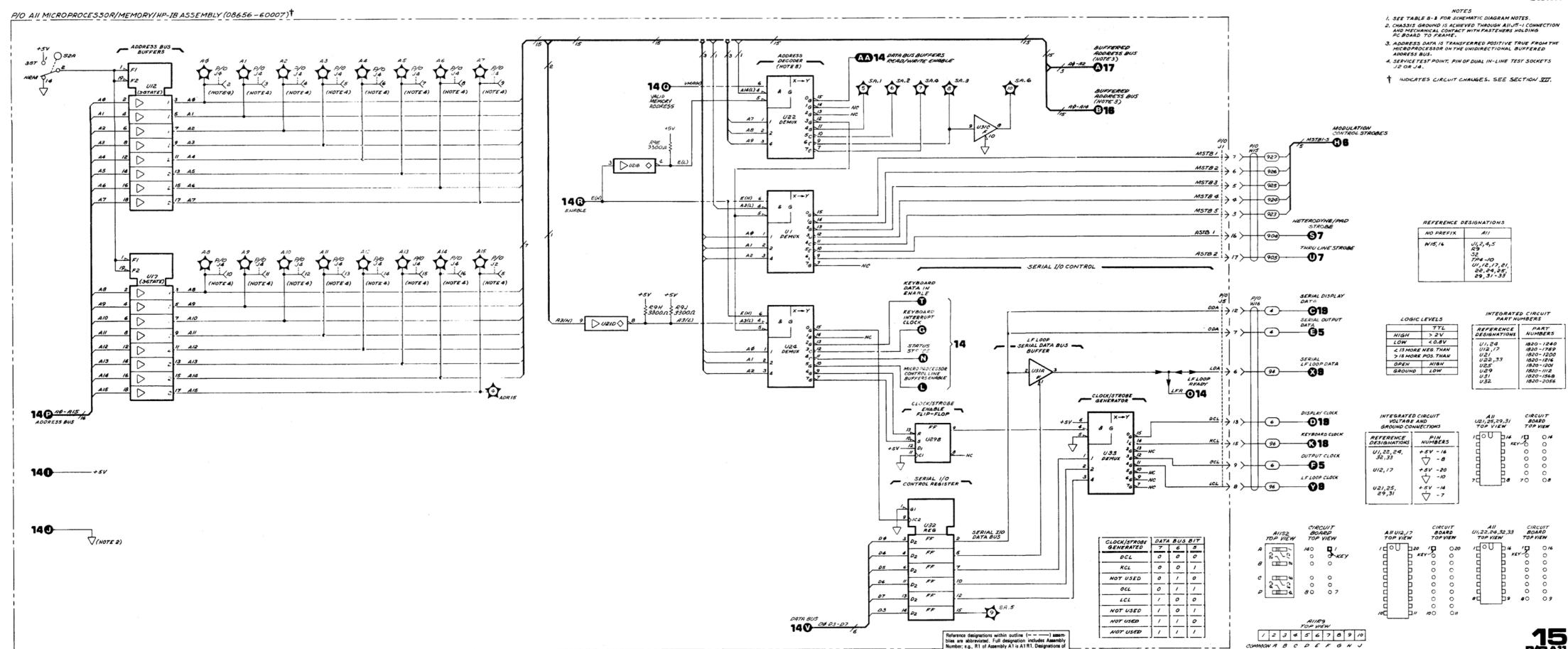


Figure 8-89. Address Buffering and Decoding, Serial I/O and Control Schematic Diagram

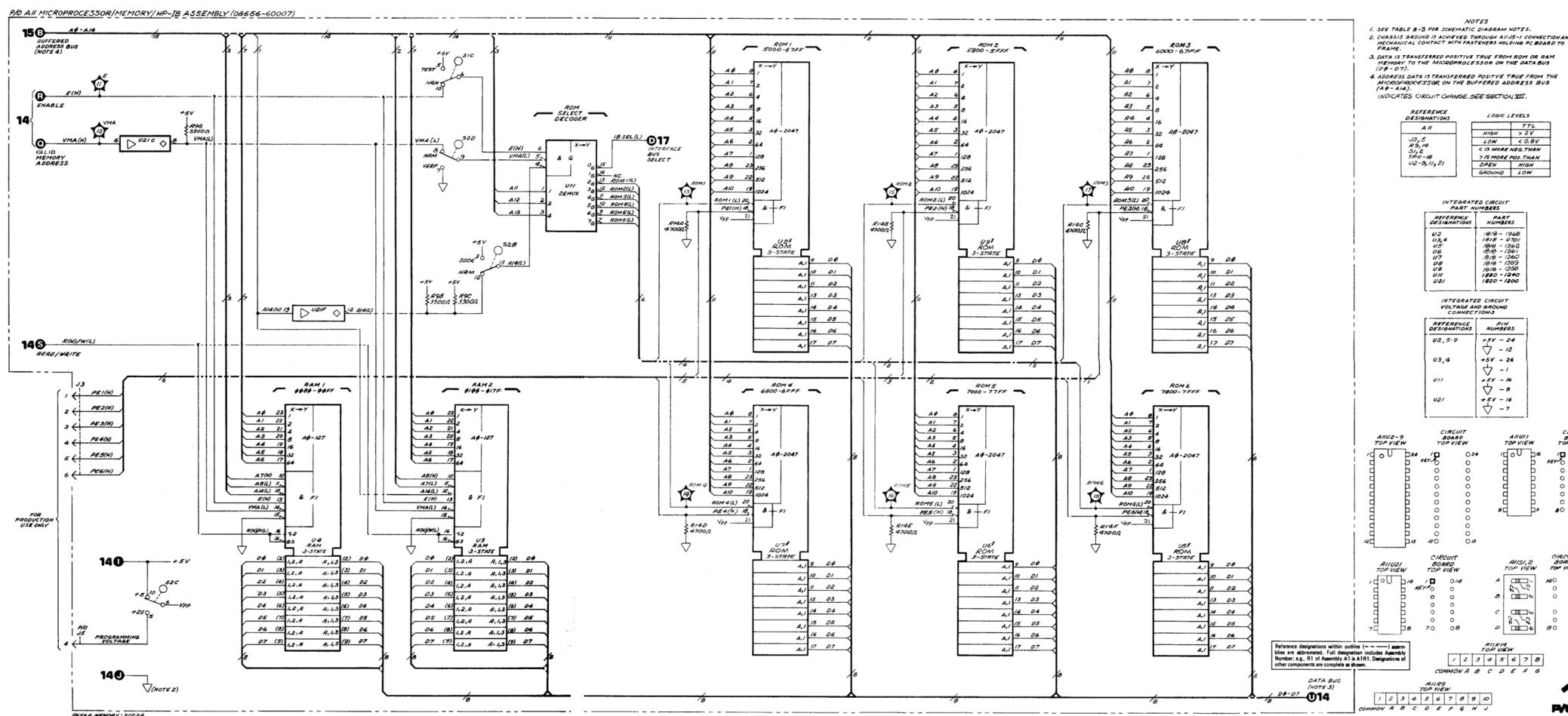
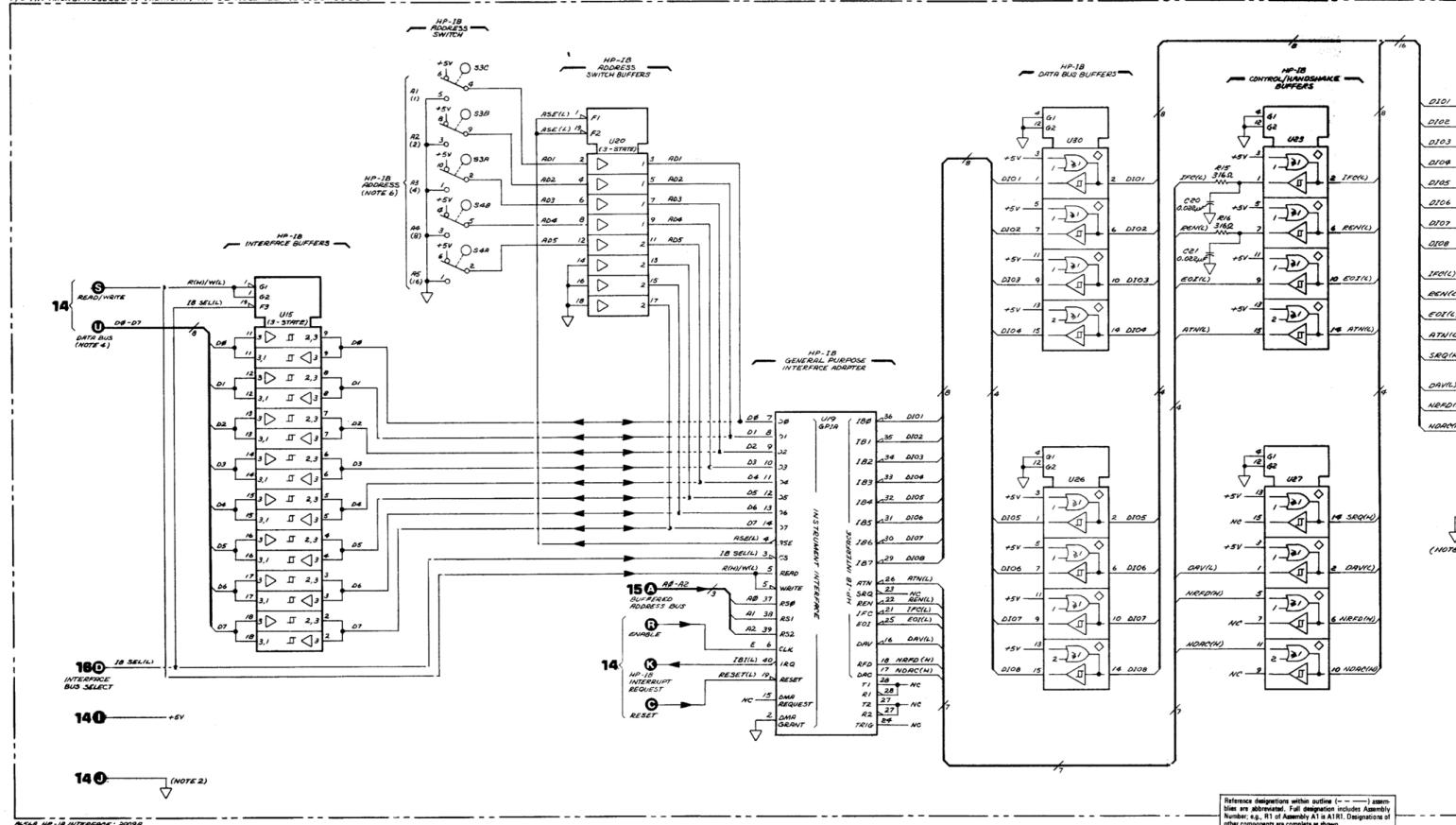


Figure 8-92. Memory Schematic Diagram

P/O AII MICROPROCESSOR / MEMORY / HP -IB ASSEMBLY (08656-60007)



Reference designations within outline (— — —) assemblies are abbreviated. Full designation includes Assembly Number; e.g., R1 of Assembly A1 is A1R1. Designations of other components are complete as shown.

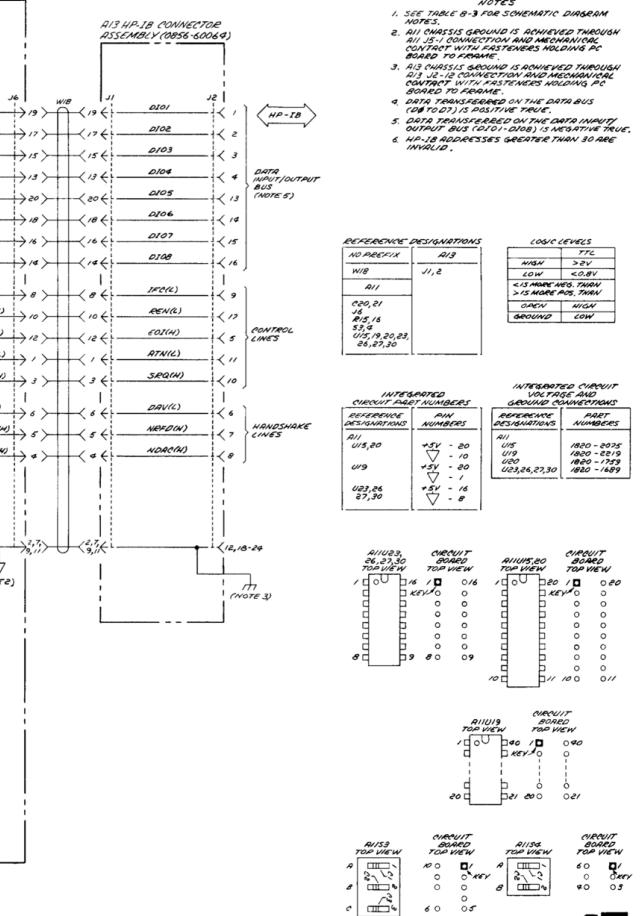


Figure 8-96. HP-IB Interface Schematic Diagram

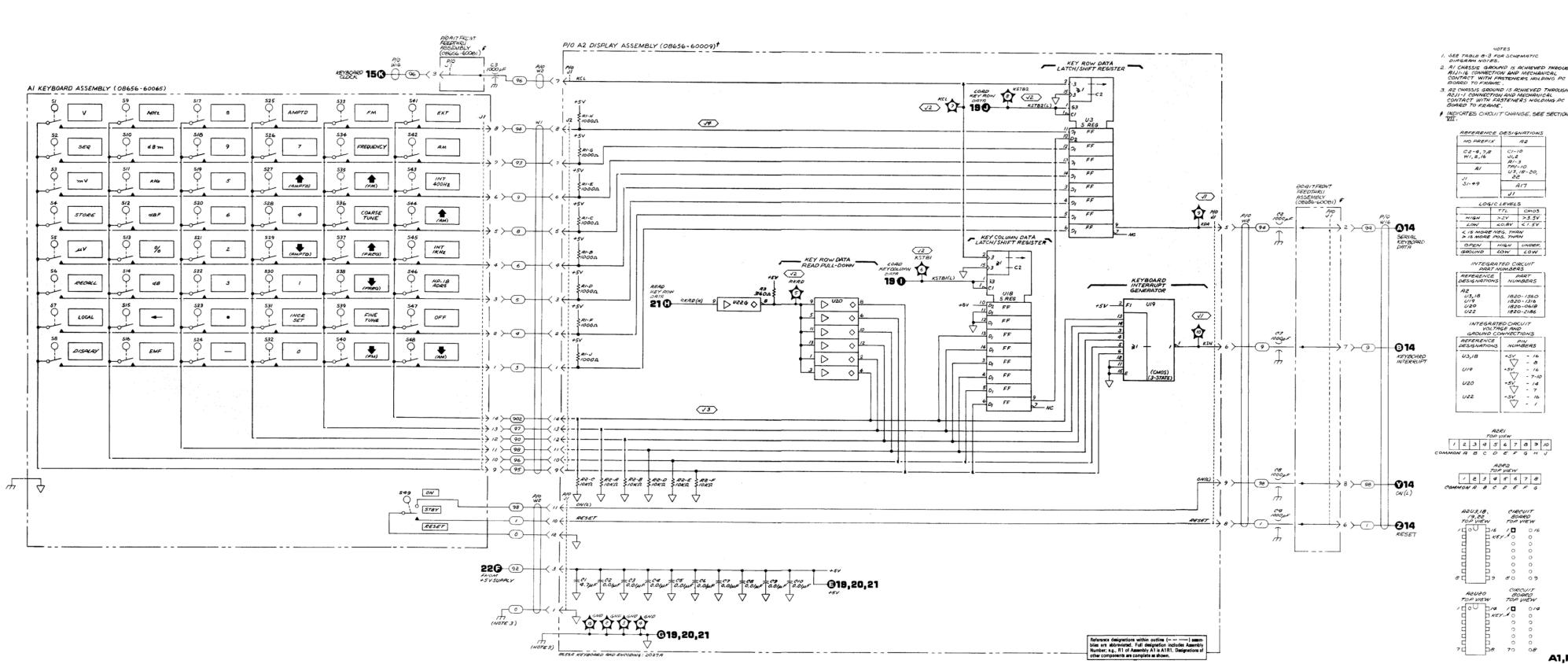


Figure 8-100. Keyboard and Encoder Schematic Diagram

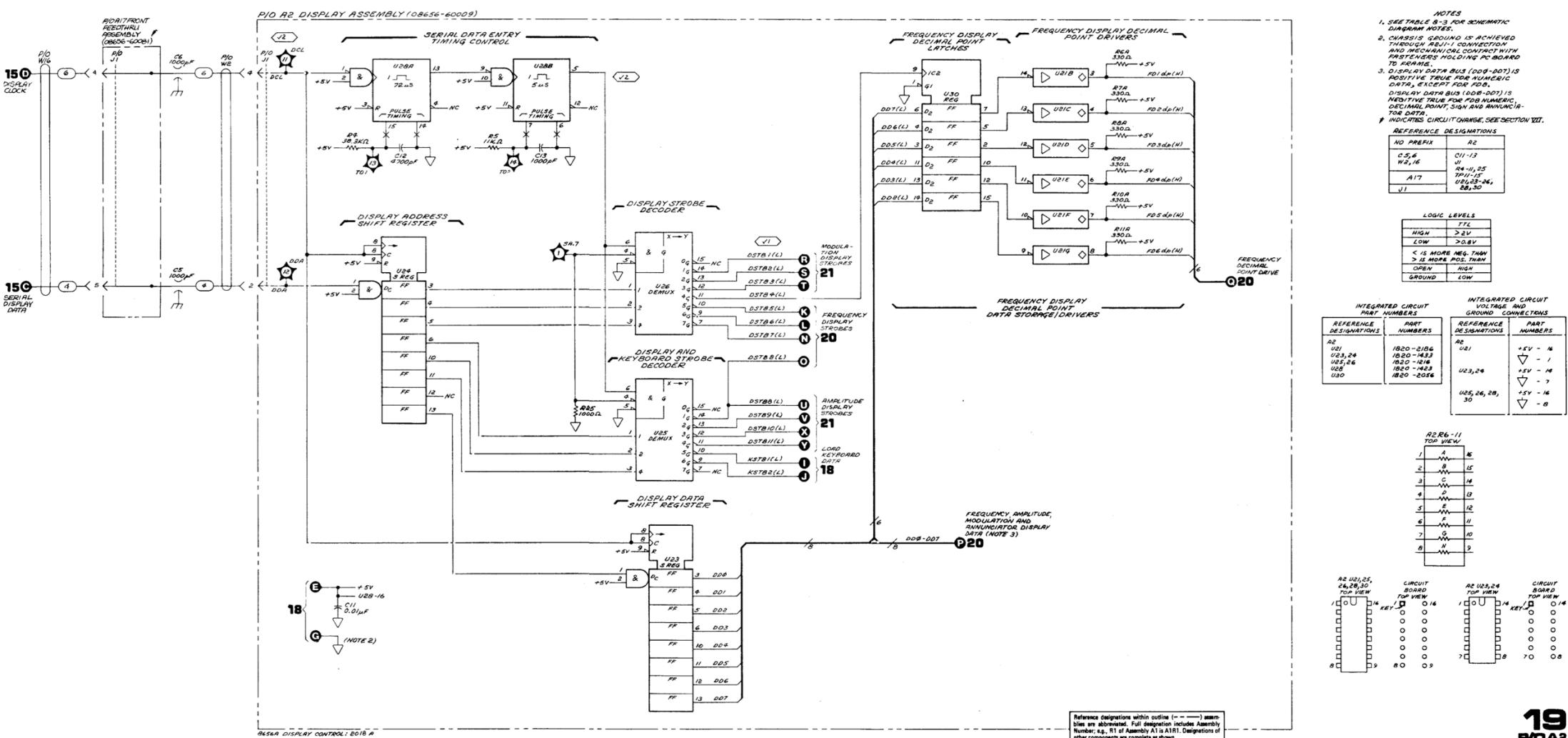
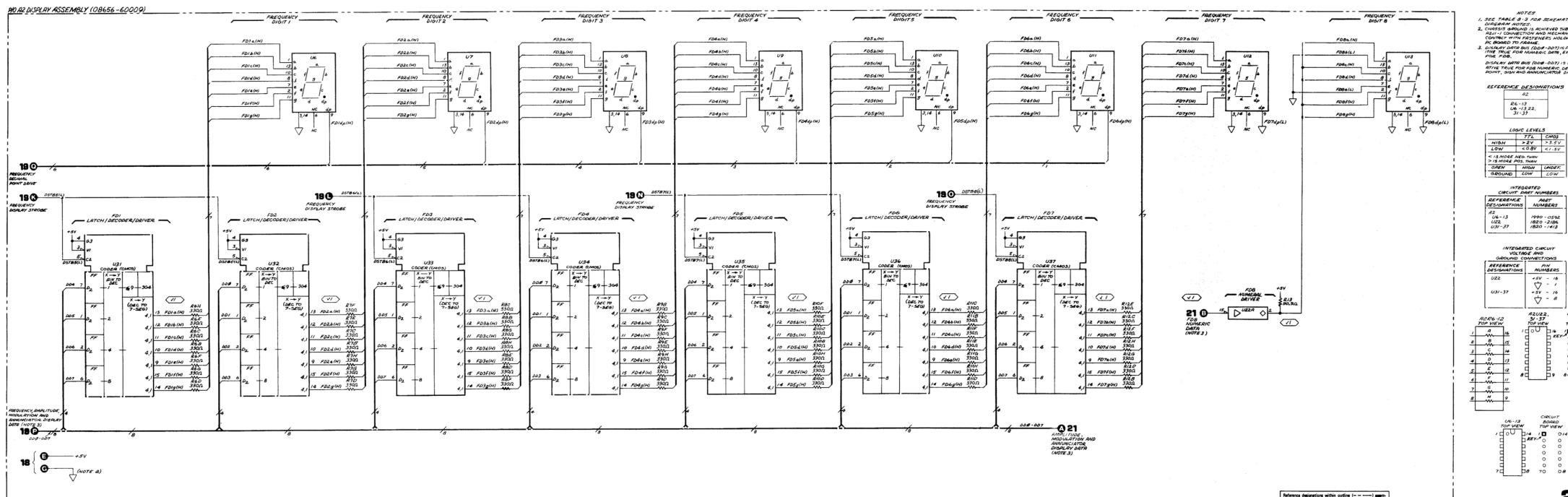


Figure 8-103. Display Control Schematic Diagram



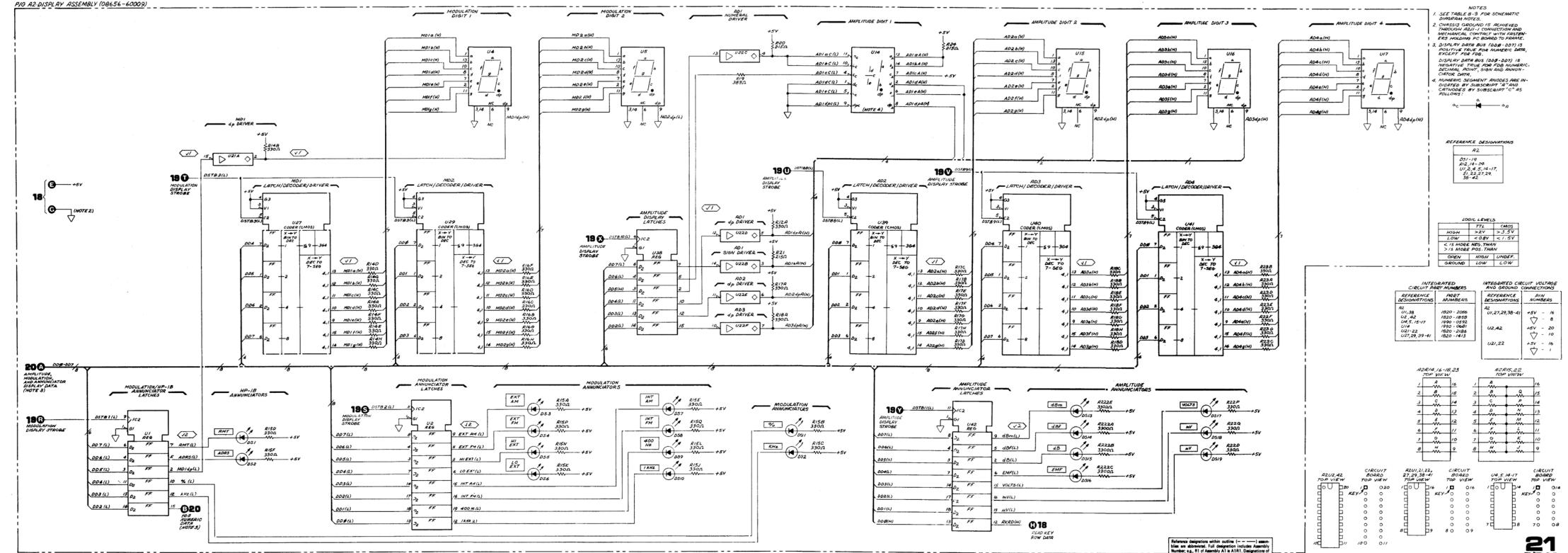


Figure 8-109. Amplitude, Modulation and Annunciator Displays Schematic Diagram

