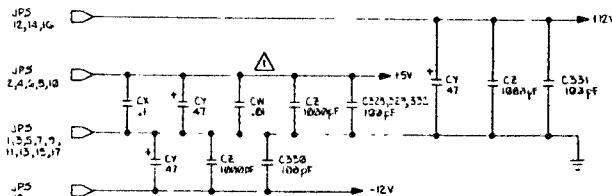
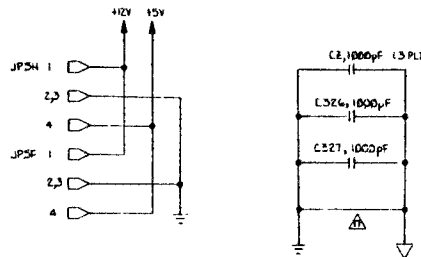


NOTES: UNLESS OTHERWISE SPECIFIED

- ⚠️ 0W CAPS ARE USED NEAR IC'S WITH 10 MHz.
- ⚠️ PIN 14 SHOULD CONNECT TO -2V; PIN 1 TO -12V.
- ⚠️ THESE GATES MUST BE IN THE SAME PACKAGE (PAGES 3,16) (LAYOUT)
- ⚠️ ALL OUTPUT TRACES ON 74LS259 SHOULD BE AS SHORT AS POSSIBLE. (LAYOUT)
- ⚠️ SHOULD BE A SHORT TRACE AND NO HIGH FREQUENCY TRACE NEARBY. (LAYOUT)
- ⚠️ STUFFING OPTIONS: WITH 74LS124 STUFF R34 (NOT R35). C300 SHOULD BE 27pF WITH 74LS259 STUFF R35 (NOT R34). C300 SHOULD BE 50pF
- ⚠️ MPS 4250 IS AN ALTERNATE PART.
- ⚠️ THESE COMPONENTS ARE ONLY TO BE STUFFED WHEN USING CONTROLLERS OTHER THAN WD2797.
- 9 DELETED
- ⚠️ INSERT ONLY FOR 256K RAM CHIPS. ALSO CUT TRACE BETWEEN E2 AND E3 AND ADD J11 FROM E1 TO E2.
- ⚠️ THESE CAPACITORS SHOULD BE LOCATED NEXT TO T1 AND T2. (LAYOUT)
- 12. HEAVY TRACE LINES INDICATE 25 MIL TRACES, 50 MIL AIR GAP. (LAYOUT)
- ⚠️ ALL 1/2 W RESISTORS SHOULD BE FUSEABLE AND NON-FLAMMABLE.
- 14. ALL 1/2 W RESISTORS ARE TO BE NON-FLAMMABLE.
- 15. ⚡ INDICATES ANALOG GROUND.
- 16. ⚡ INDICATES DIGITAL GROUND.
- ⚠️ DIGITAL AND ANALOG GROUND SHOULD ONLY BE CONNECTED AT SUPPLY ORIGIN. (LAYOUT)
- 18. ALL RELAYS ARE SHOWN AS DE-ACTIVATED.
- ⚠️ CAPACITORS INDICATED SHOULD BE AS CLOSE TO IC'S AS POSSIBLE. (LAYOUT)
- 20. ⚡ INDICATES USING THE SHORTEST TRACE POSSIBLE BETWEEN THE COMPONENT AND ANALOG GROUND. (LAYOUT)
- 21. +12V AND -12V TO BE CONNECTED ONLY FROM SUPPLY ORIGIN. (LAYOUT)
- ⚠️ SPEAKER MOUNTED ON MONITOR CASE.
- 23. ⚡ INDICATES CHASSIS GROUND.
- 24. ALL RESISTOR VALUES ARE IN OHMS, 5%, 1/4W.
- 25. ALL 1/2 W RESISTORS ARE 1/4W.
- 26. CAPACITOR VALUES ARE IN MICROFARADS.



REV	DESCRIPTION	DATE	CHK	APPROVED
A	RELEASE TO CONTROL PER CO # 5099 0516	10/4/85		
D	REVISED PER CO # 5119	10/27/85		
C	REVISED PER CO # 5131	10/27/85		
D	REVISED PER CO # 5132	10/27/85		
E	REVISED PER CO # 5164 # 5165	10/27/85		
F	REVISED PER CO # 5167	10/27/85		
G	REVISED PER CO # 5168	10/27/85		
H	REVISED PER CO # 5321	10/27/85		
J	REVISED PER CO # 5494	6/18/86		

REFERENCE DESIGNATIONS	
LAST USED	NOT USED
C339	C1-35, 47, 64, 67, 87, 89, 97, 101, 154, 170, 182, 195, 193, 199, 235, 237, 238, 245, 247, 257, 259, 260, 261, 263, 274, 275, 276, 285, 289, 278, 300, 302, 319, 327, 328
CP129	
B1	
E9	E6, E7
F2	
H6	
L5	
Q15	
R146	R3, 18, 103, 107, 111, 117, 125, 132, 134
RV 20	
SR1	
T2	
VP2	
Y1	
JP4	JP3

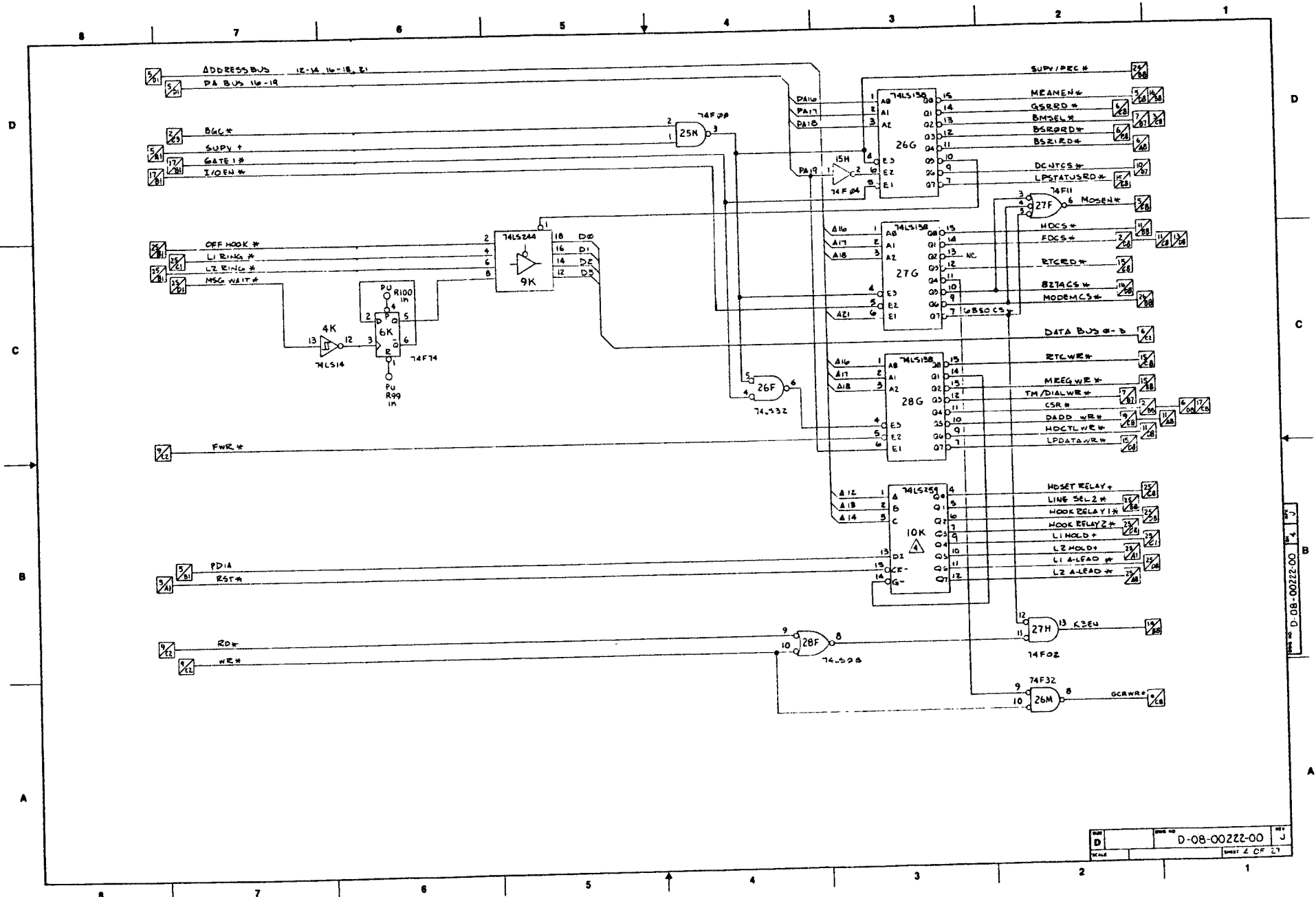
SPARE GATES		
DEVICE	REFERENCE DESIGNATION	QTY
261532	13H	1
74F10	13M	1
74F00	24N	3
74LS27	26W	2
74F244	25G	2
74S269	27N	1
74S112	21E	1
74S51	12M	1
74LS273	20D	1
74LS32	26F	2
LM358	1D	1
1409	10P	1

INCHES		SCALE		DATE		REVISION	
1/8"	1/4"	1/2"	3/4"	1-2-85	1-9-85	1-9-85	1-9-85
THIRD ANGLE PROJECTION		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS AND DECIMALS		APPROVALS		DATE	
MATERIAL		FINISH		DRAWN		CHECKED	
NEXT ASSEMBLY		USED ON		BILL BLACK		1-9-85	
APPLICATION		DO NOT SCALE DRAWING		SCALE		SHEET 1 OF 27	

**Convergent Technologies**  
 TITLE: SCHEMATIC: S4, CPU  
 PART NO: D-05-00222-00  
 REV: D



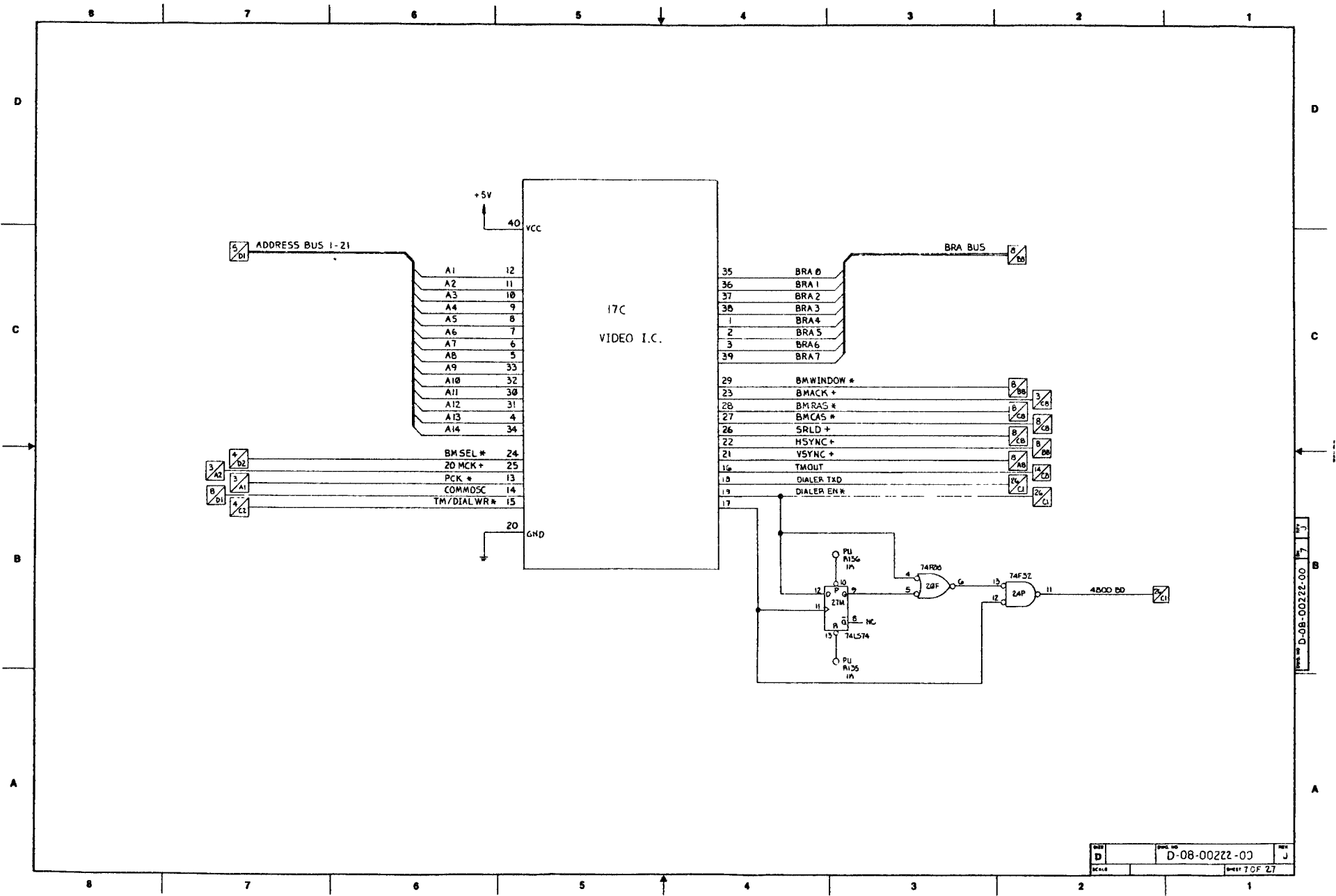




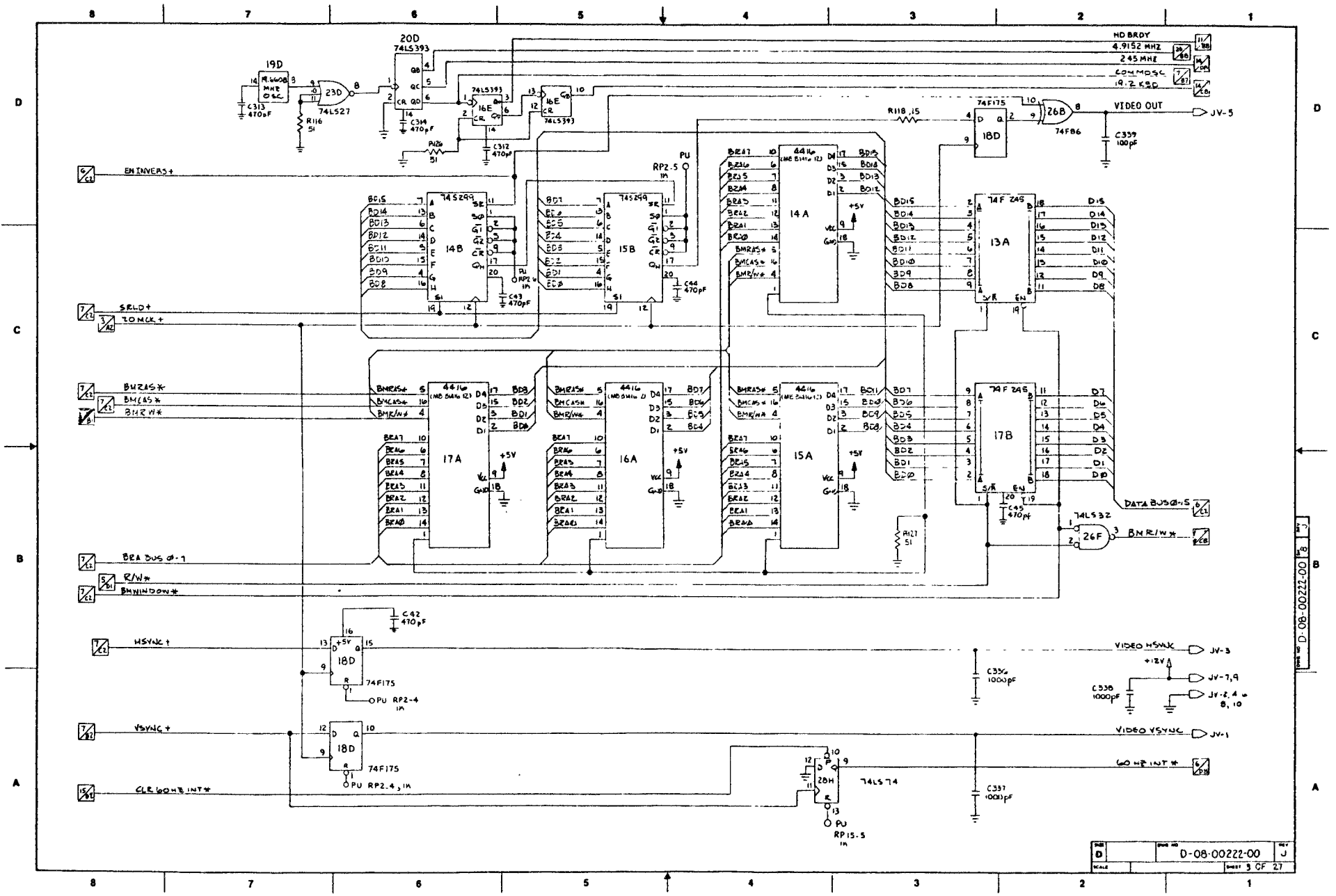
D-08-00222-00  
 SHEET 2 OF 27





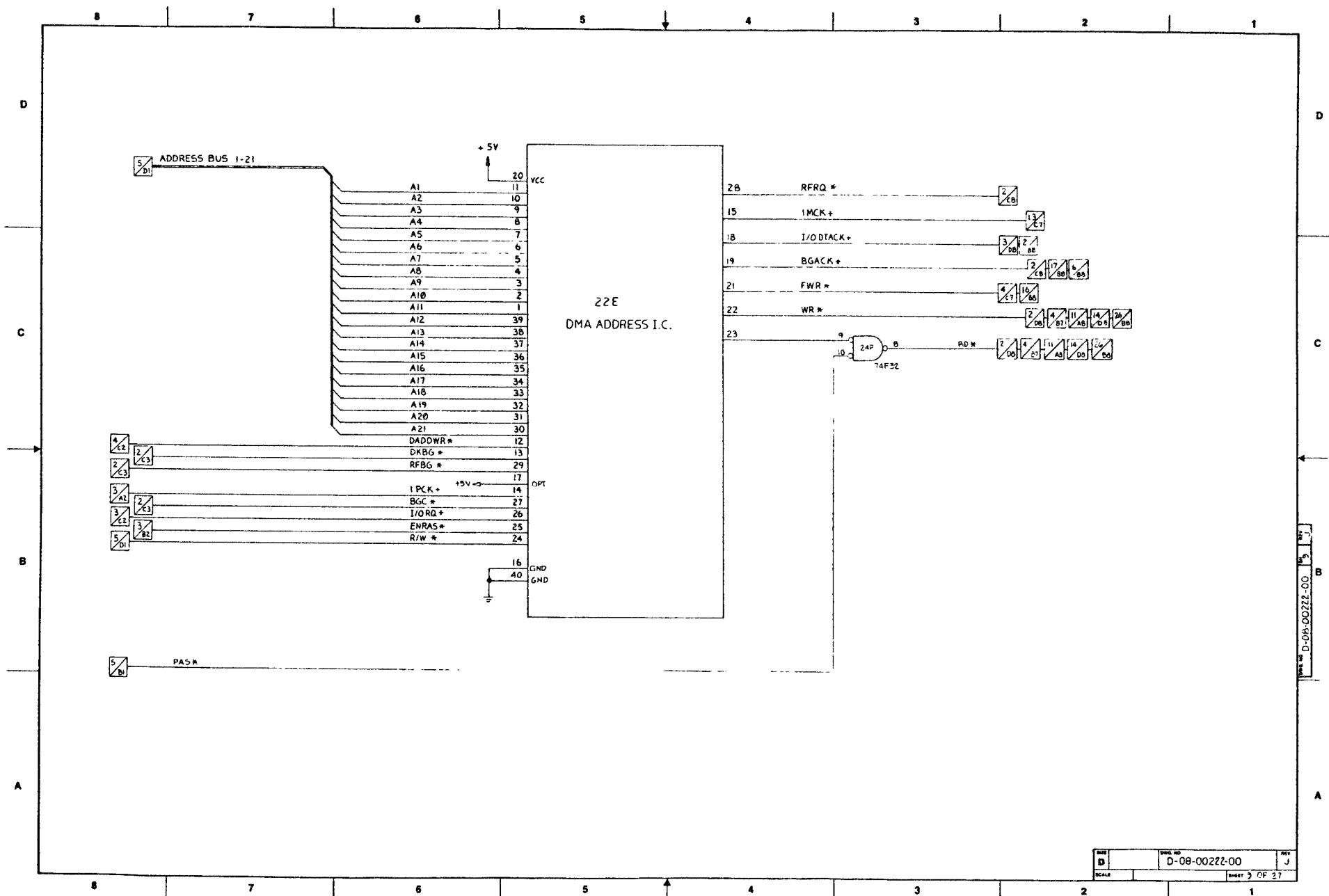


17C  
 00-22700-80-0  
 D-08-00222-00

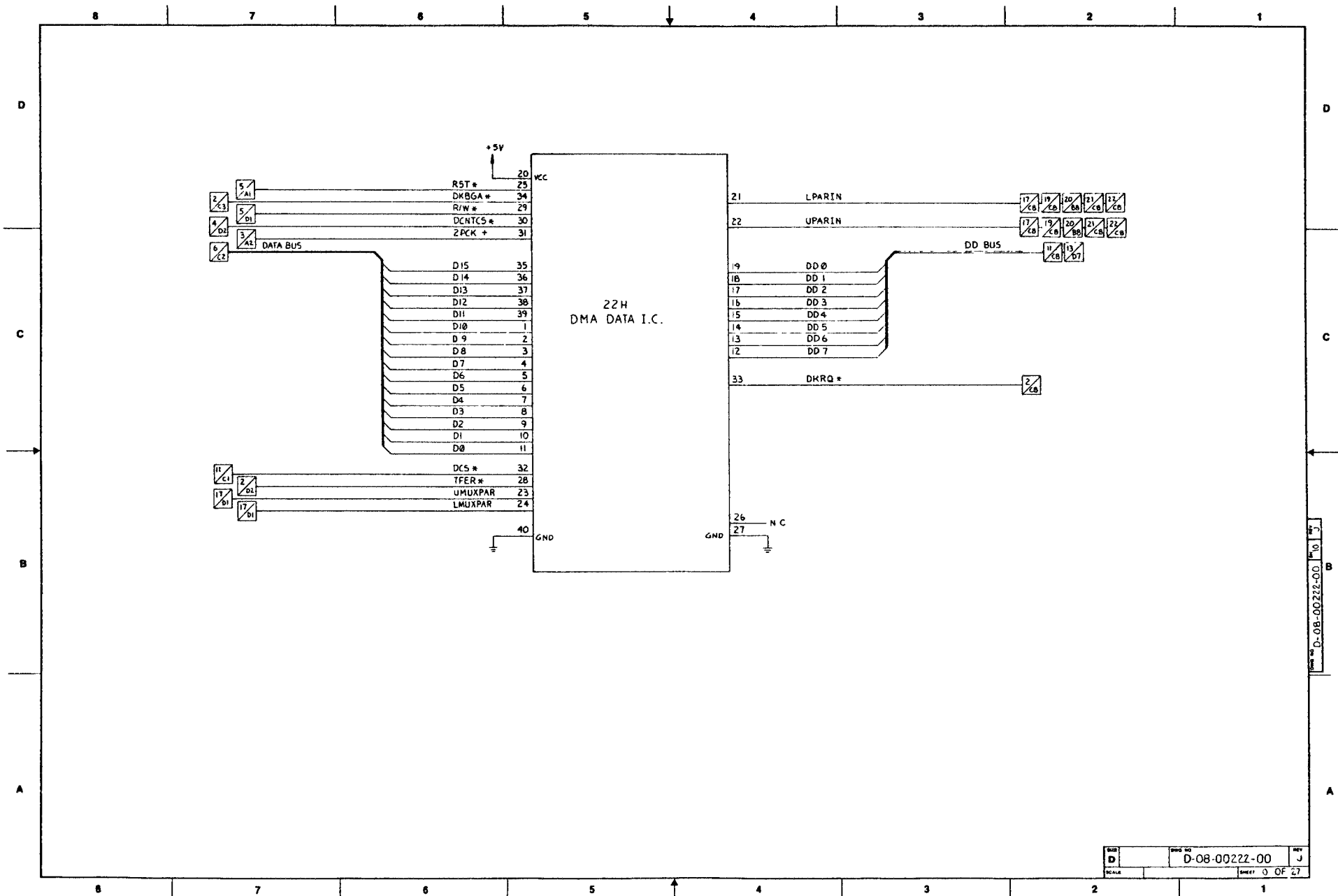


D-08-00222-00

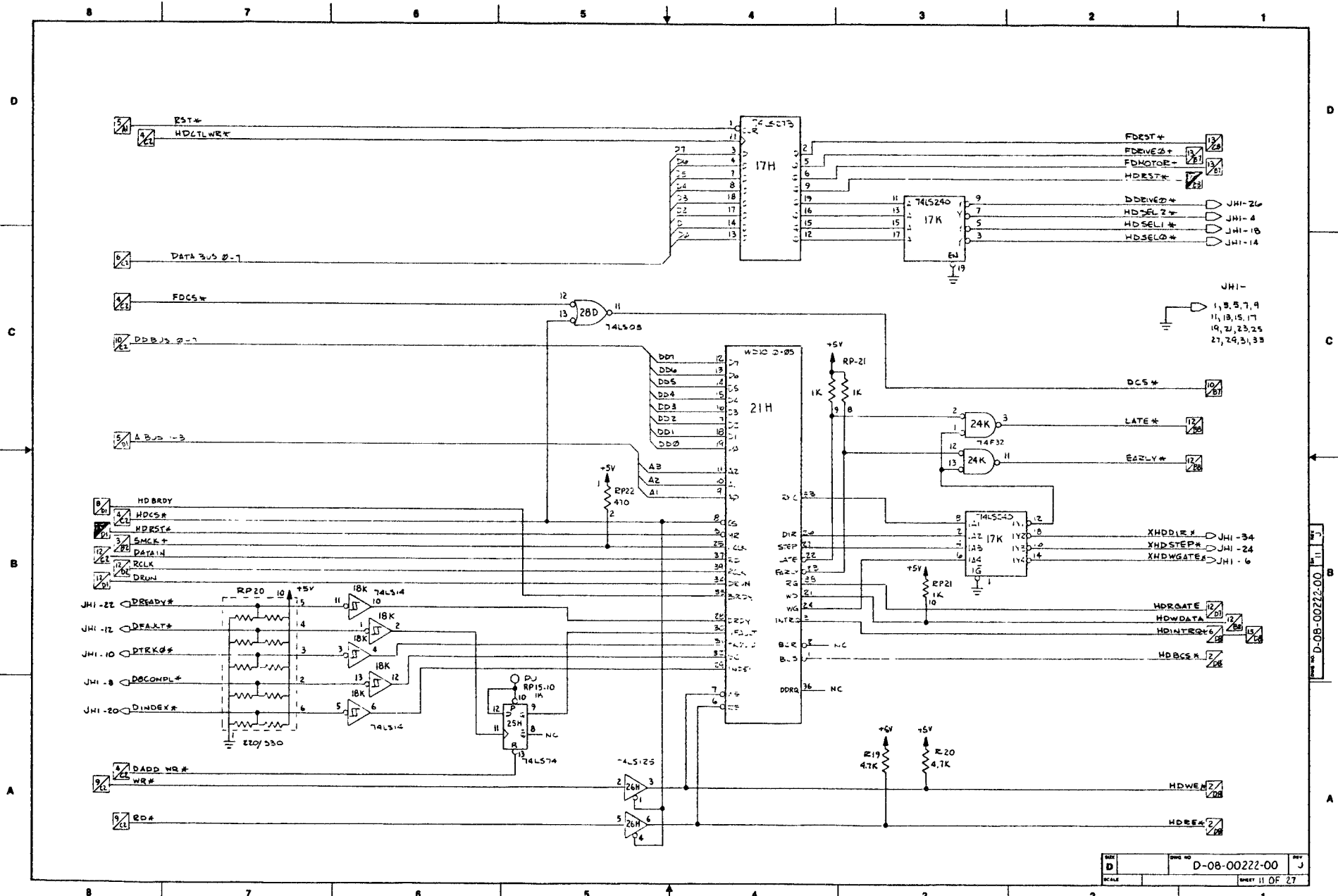




D-08-0022Z-00

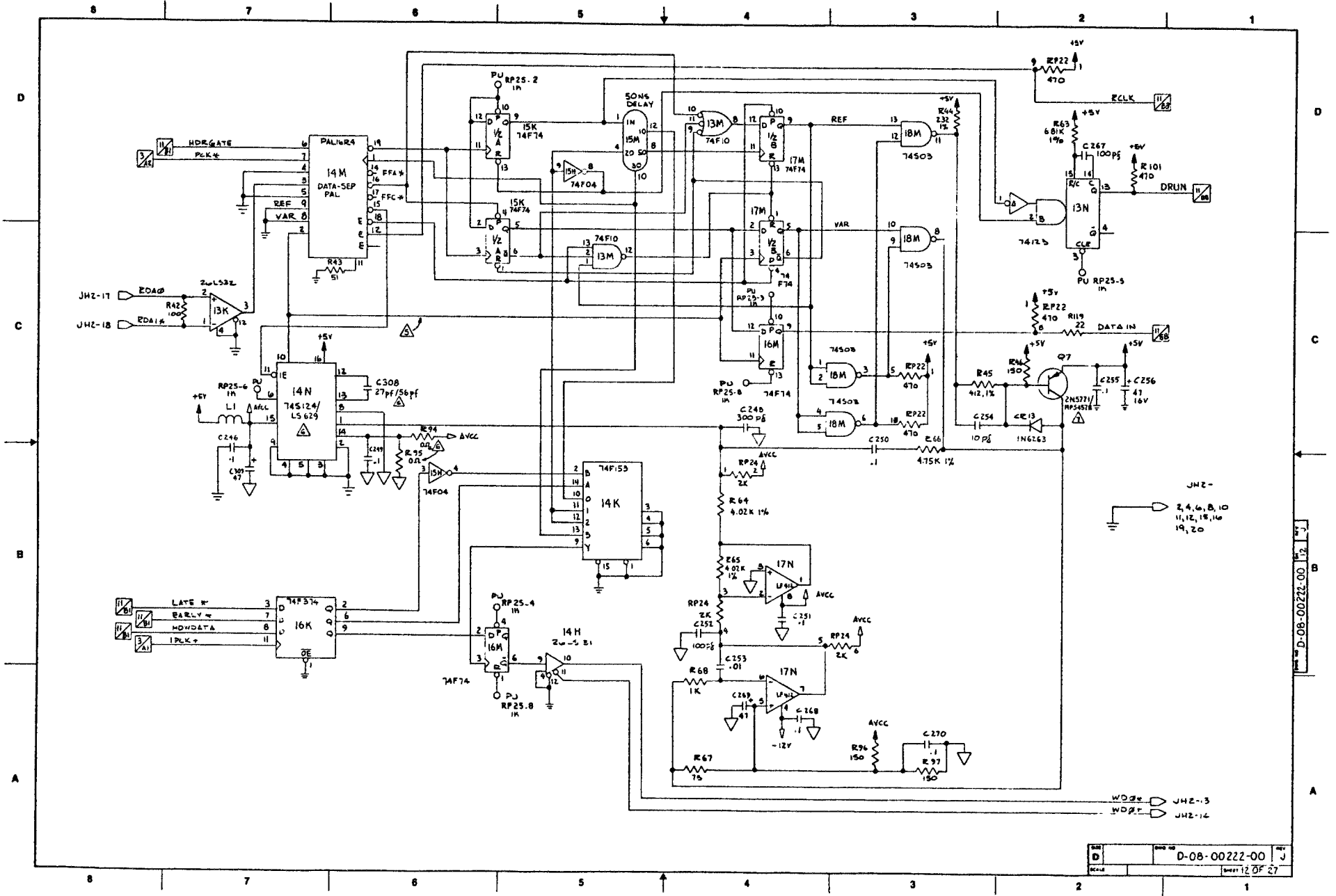


D-08-0022Z-00



JH1-  
1, 5, 5, 7, 9  
11, 13, 15, 17  
19, 21, 23, 25  
27, 29, 31, 33

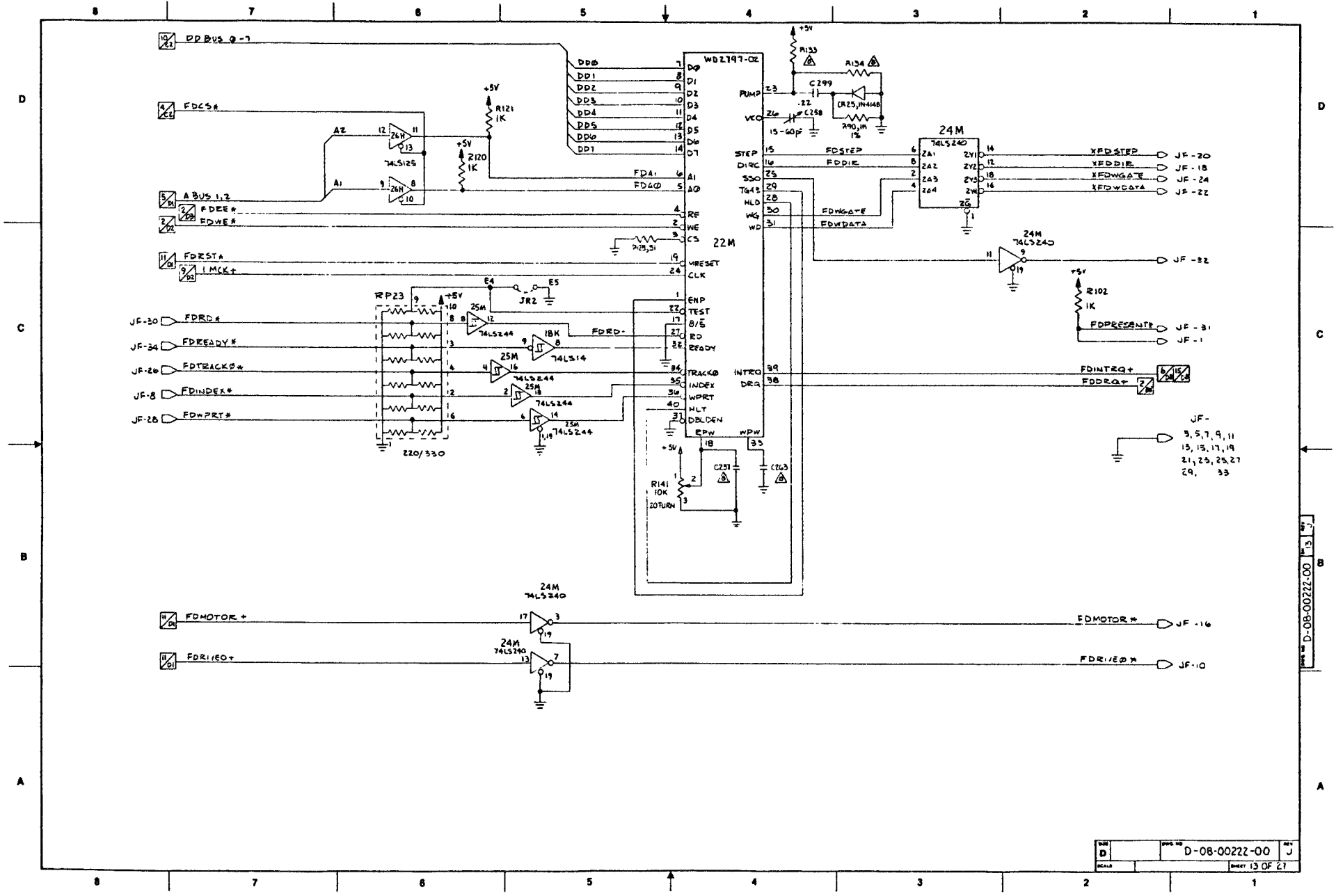
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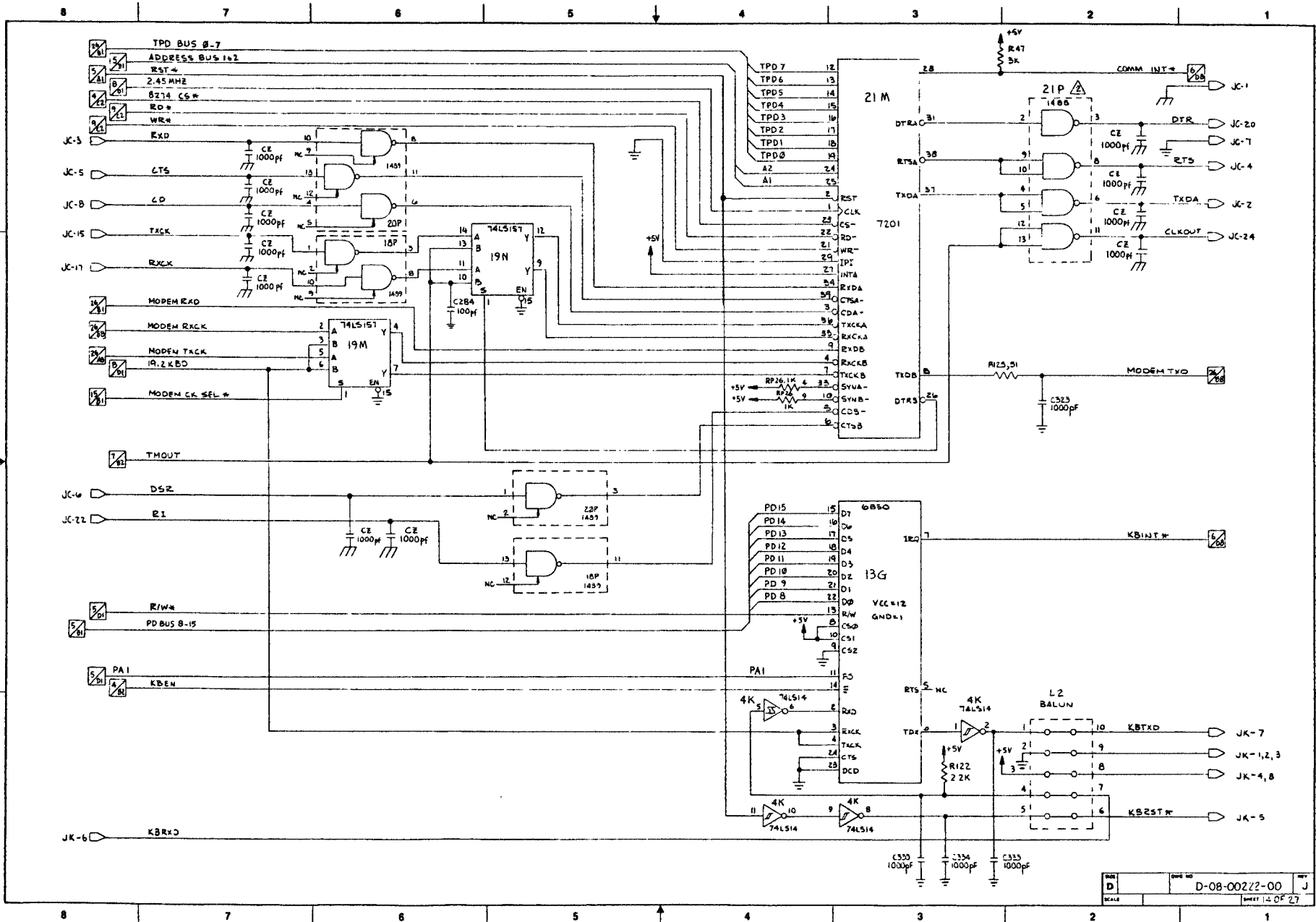


D-08-00222-00

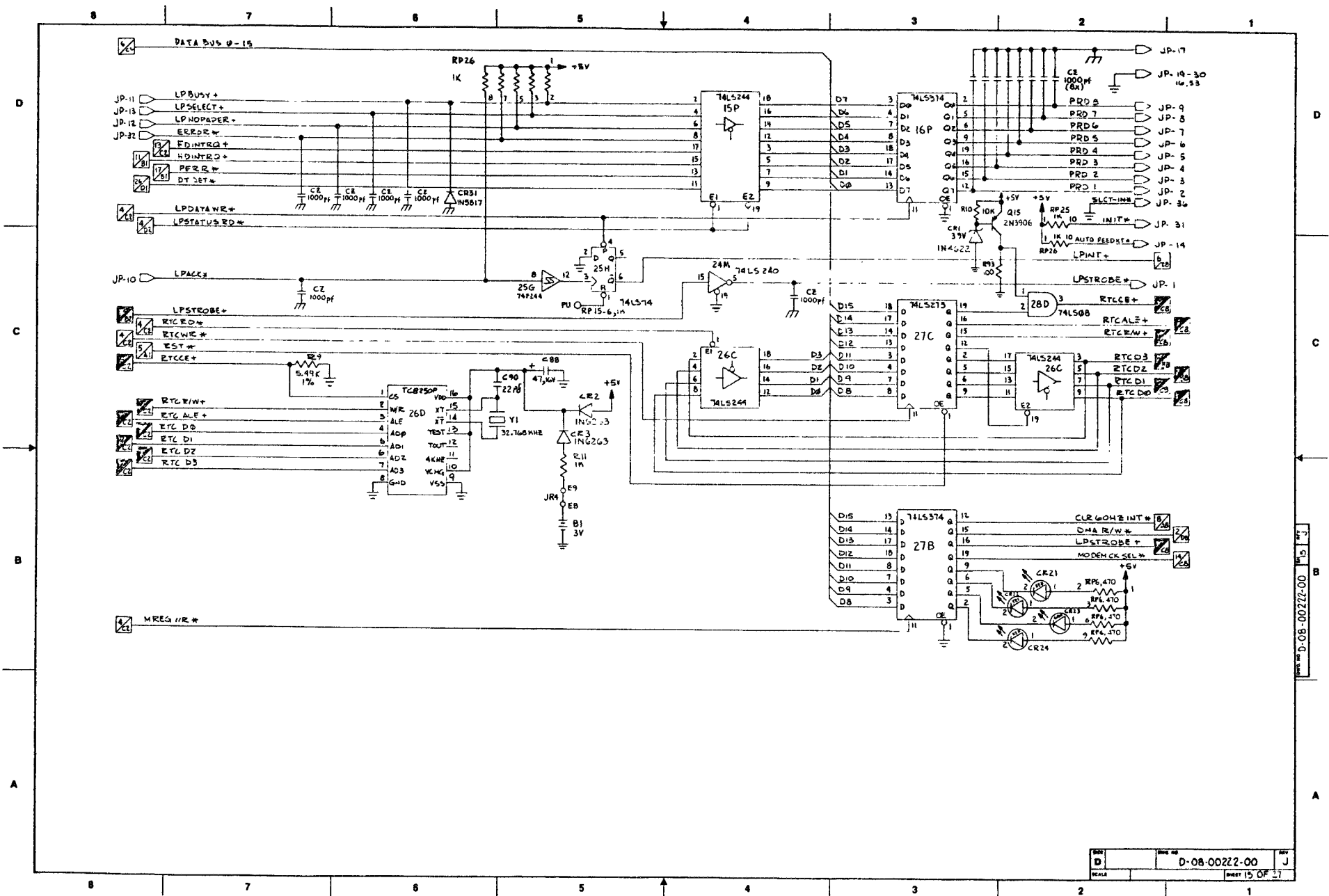
JMZ-  
2, 4, 6, 8, 10  
11, 12, 18, 19  
19, 20

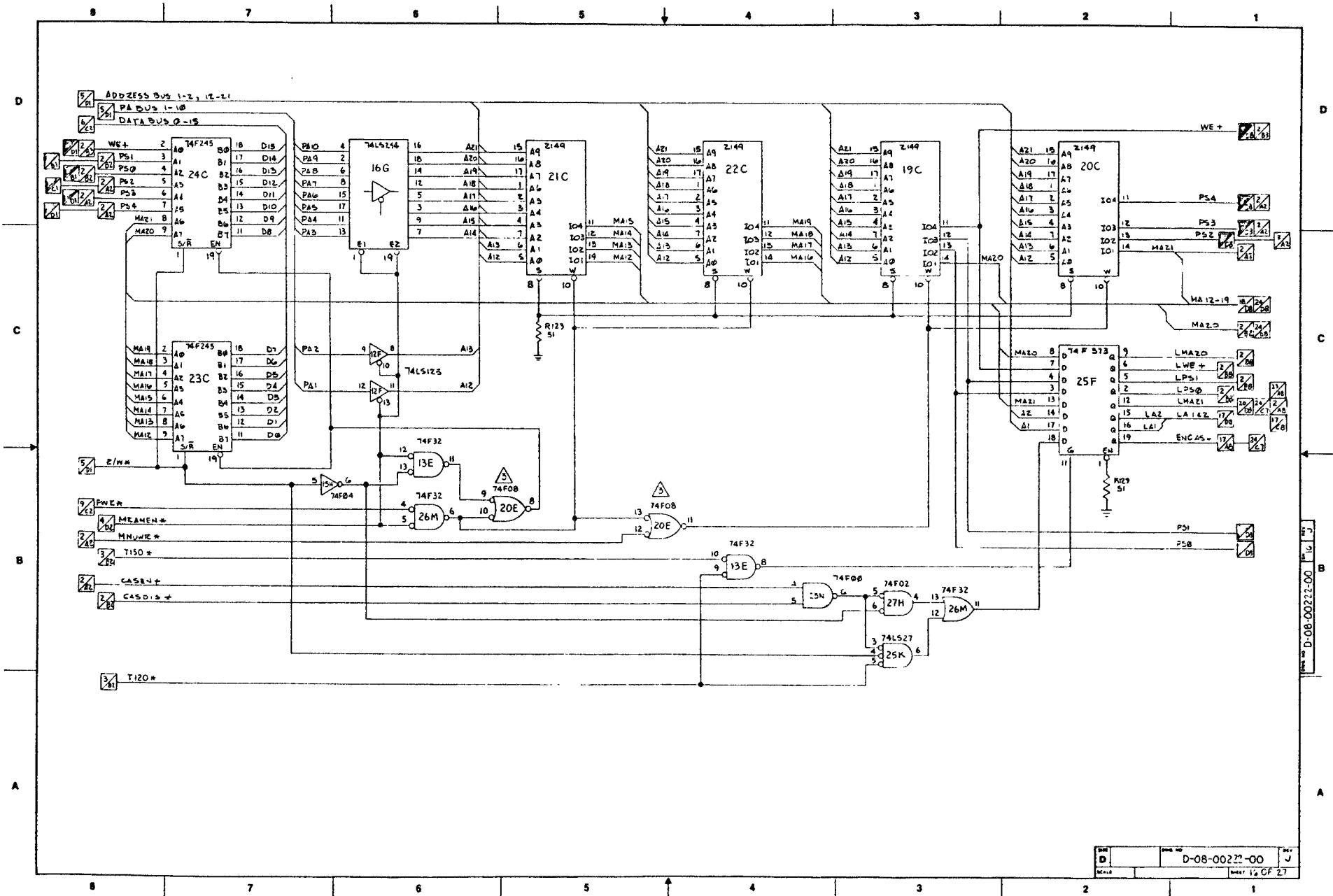
WDG = JHZ-3  
WDR = JHZ-14





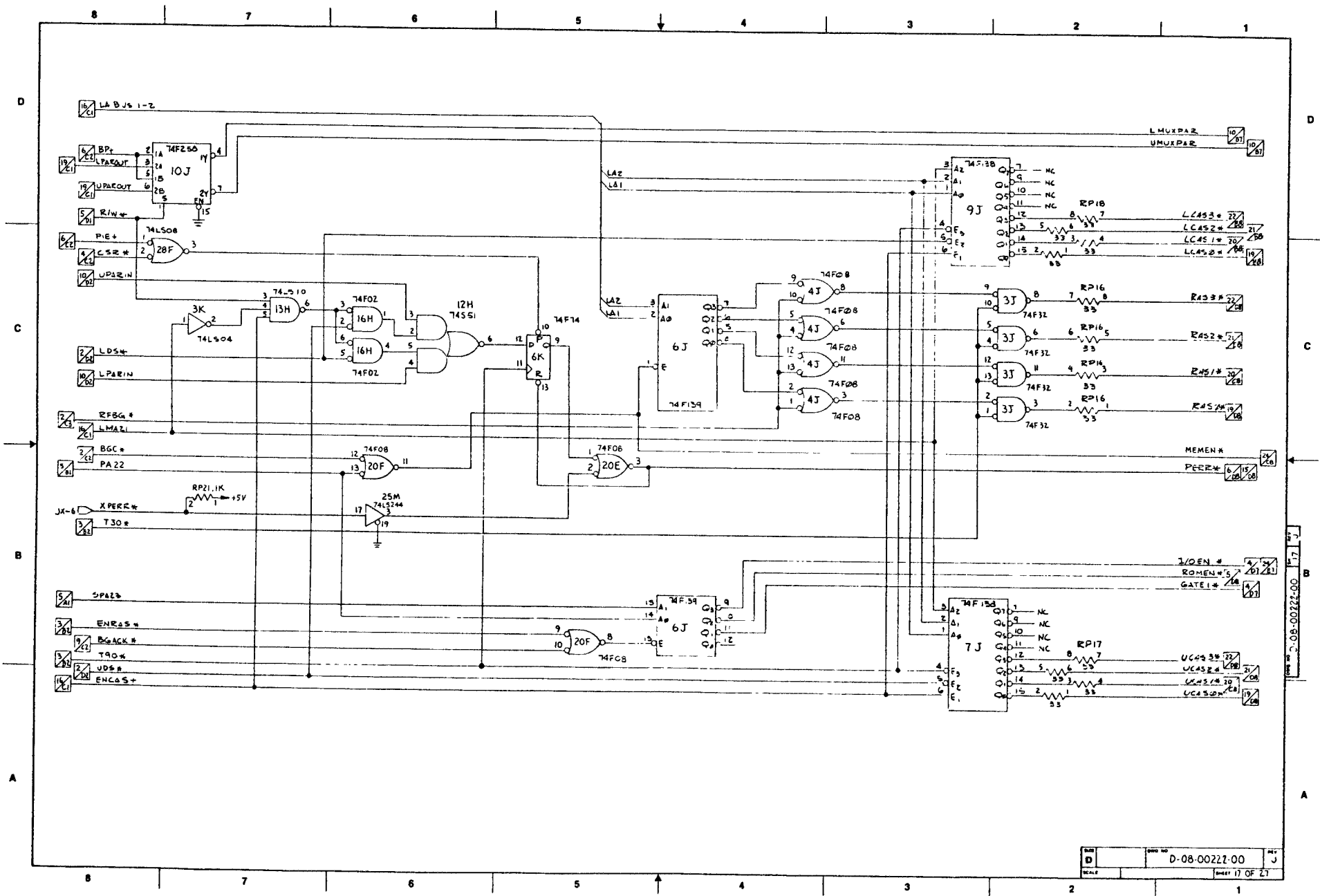
D-08-00222-00 14 J

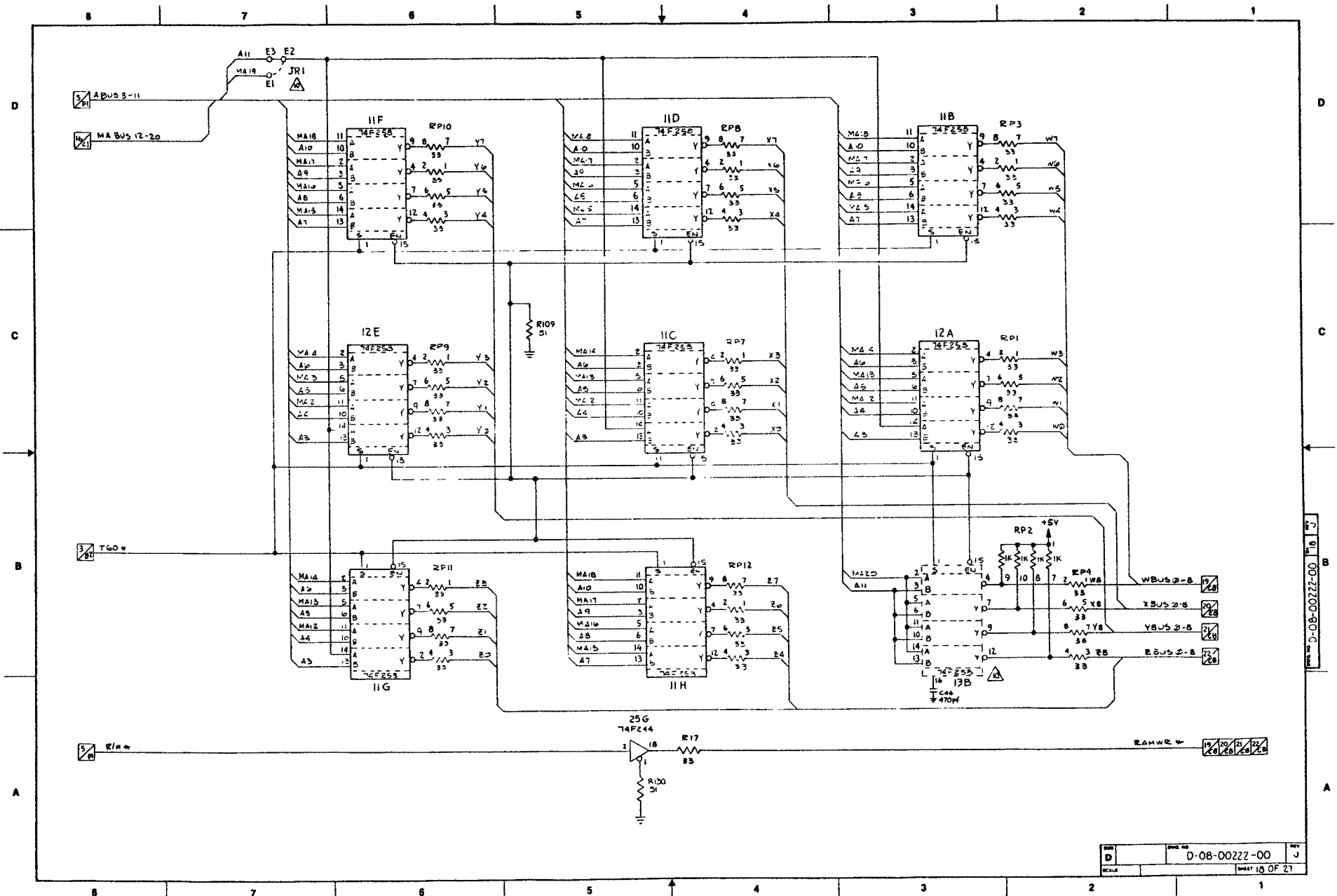




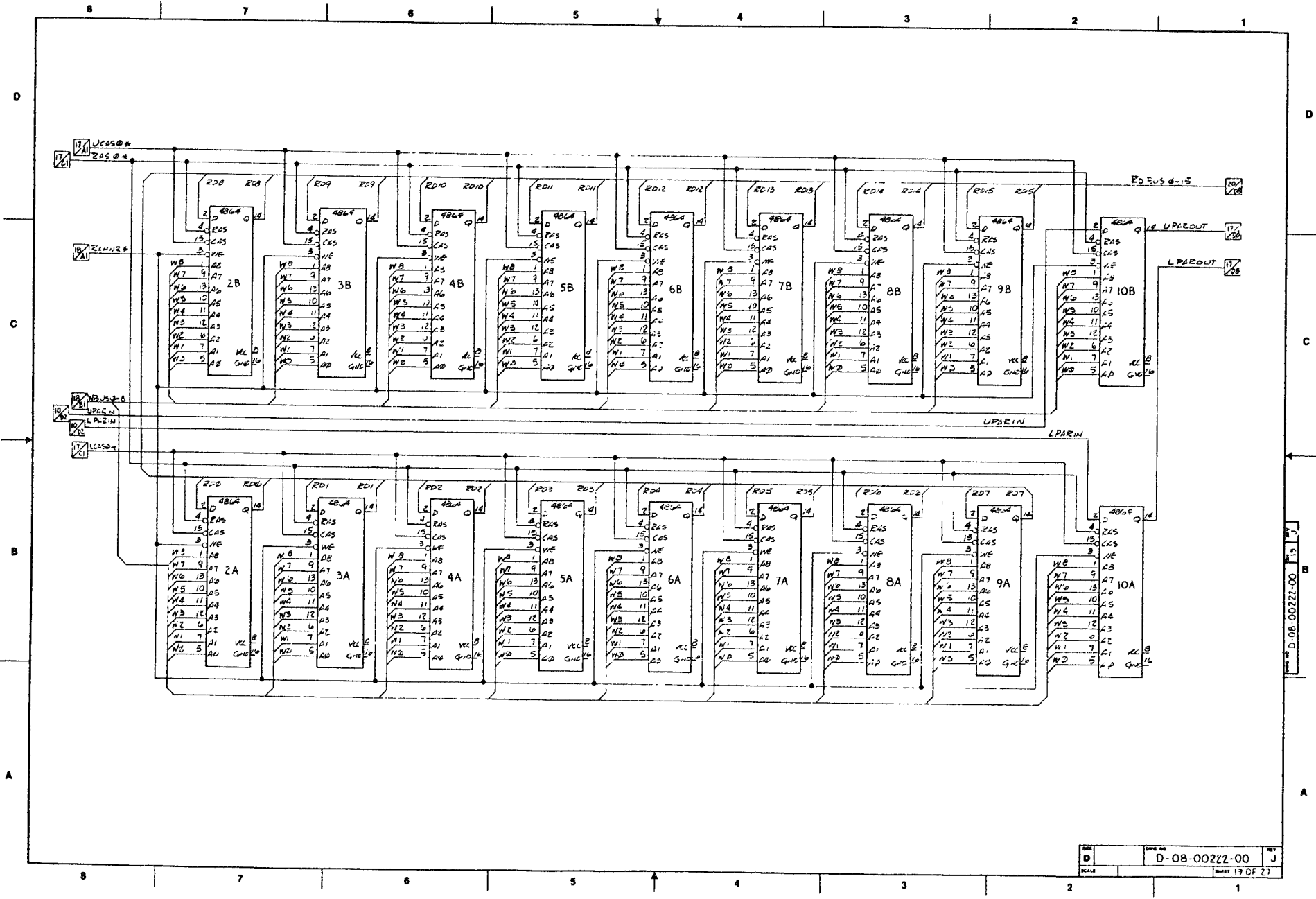
D-08-00222-00  
 REV J  
 SHEET 12 OF 27



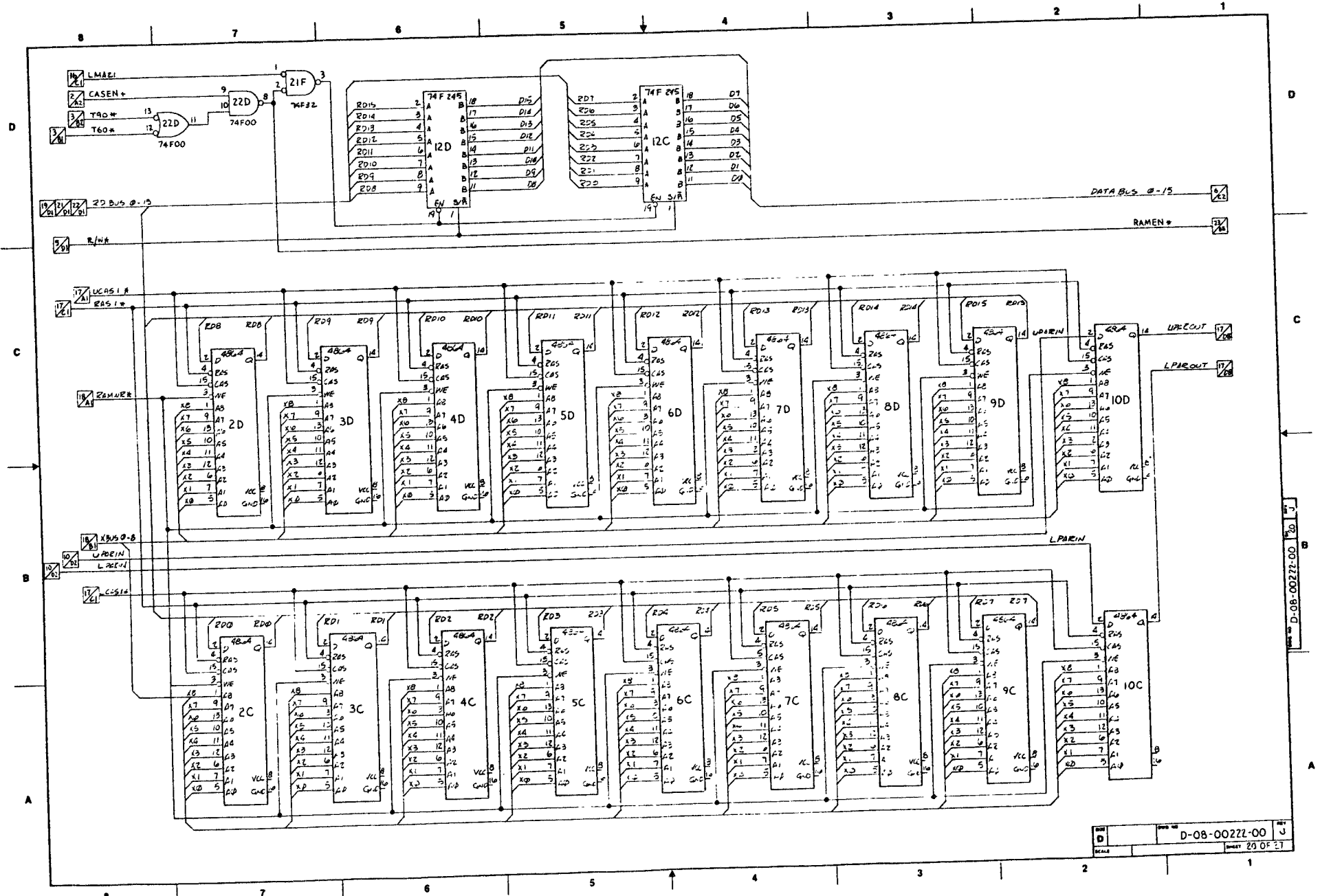


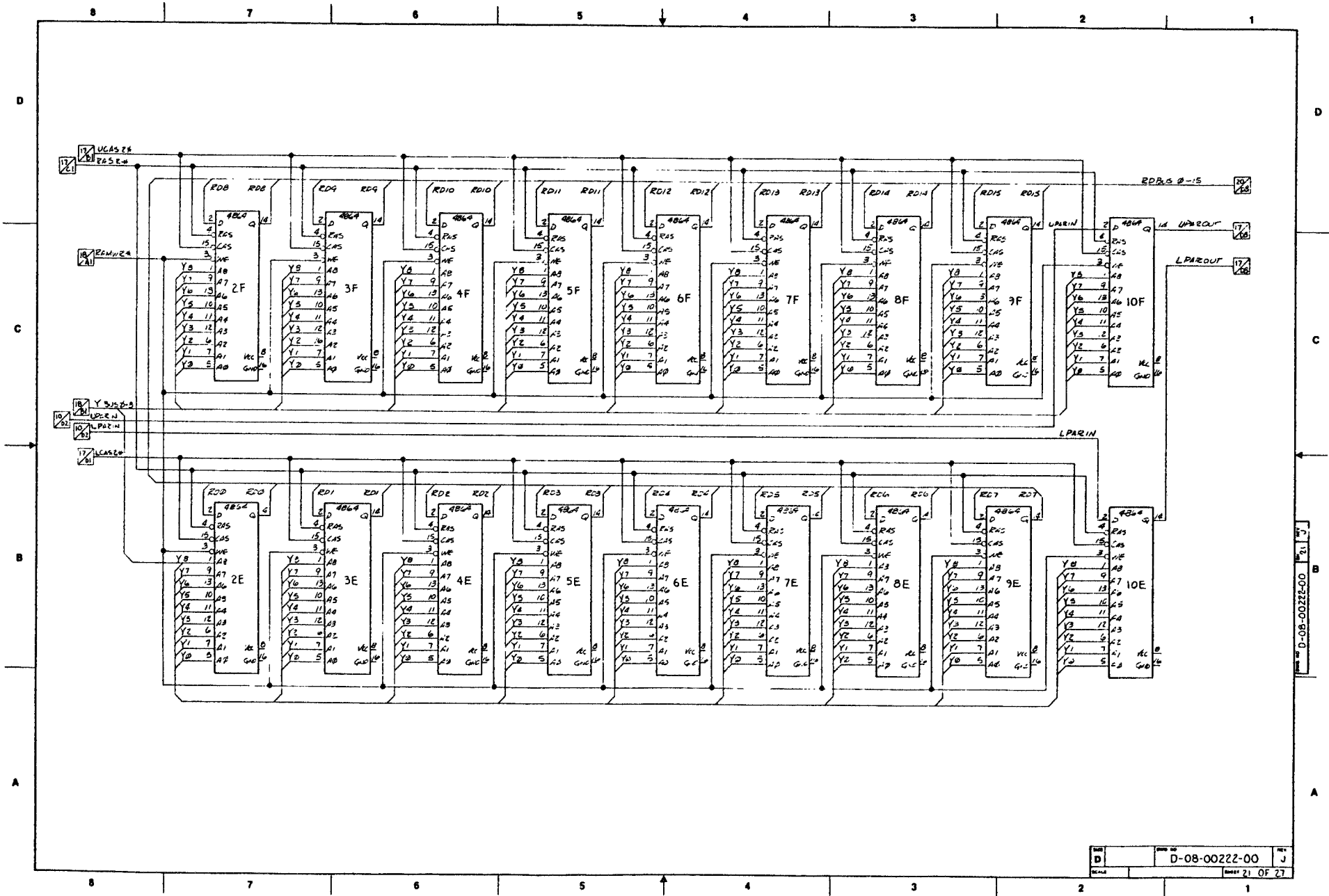


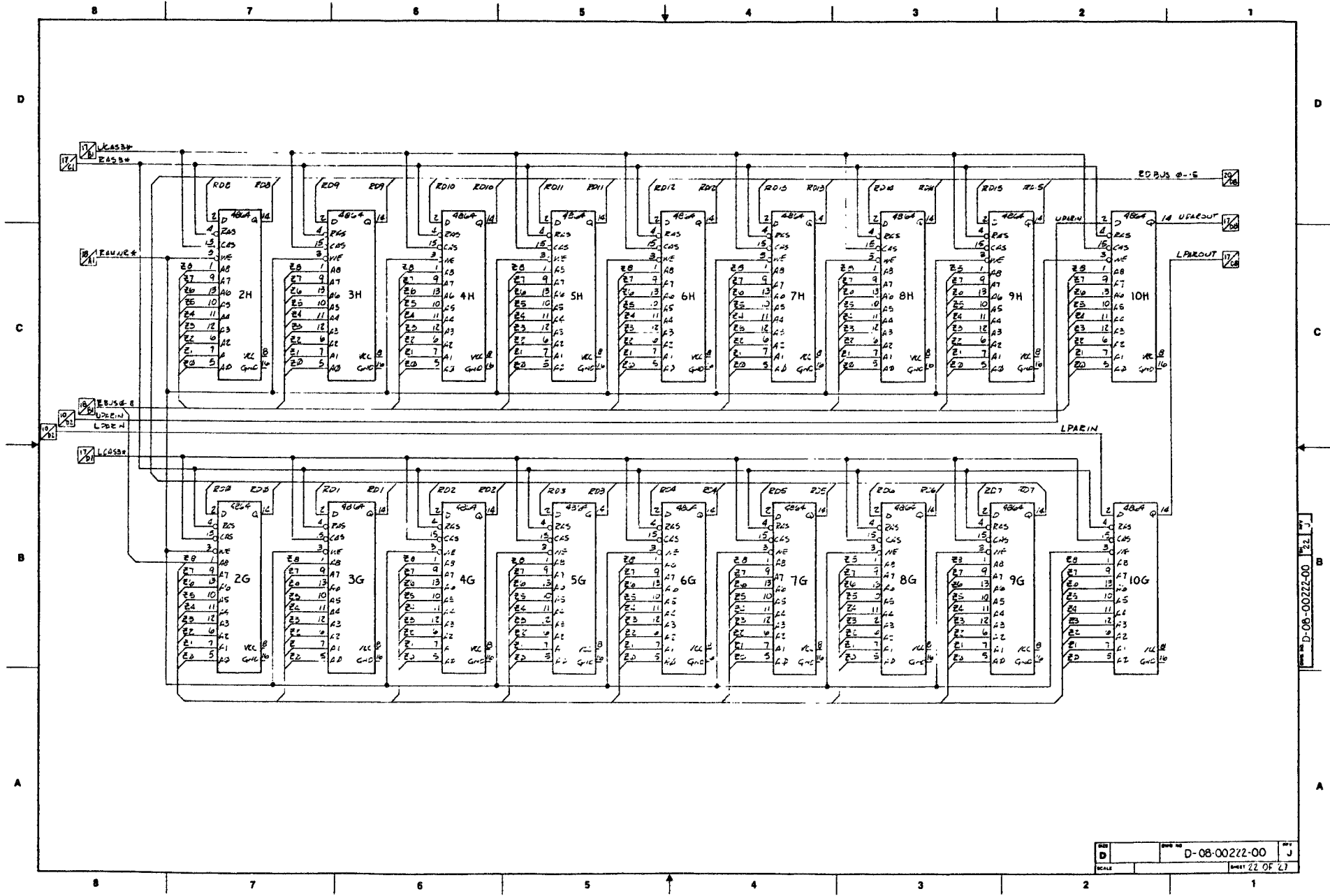
REV	DESIGN NO.	D-08-00222-00	REV
D			J
SHEET 18 OF 27			

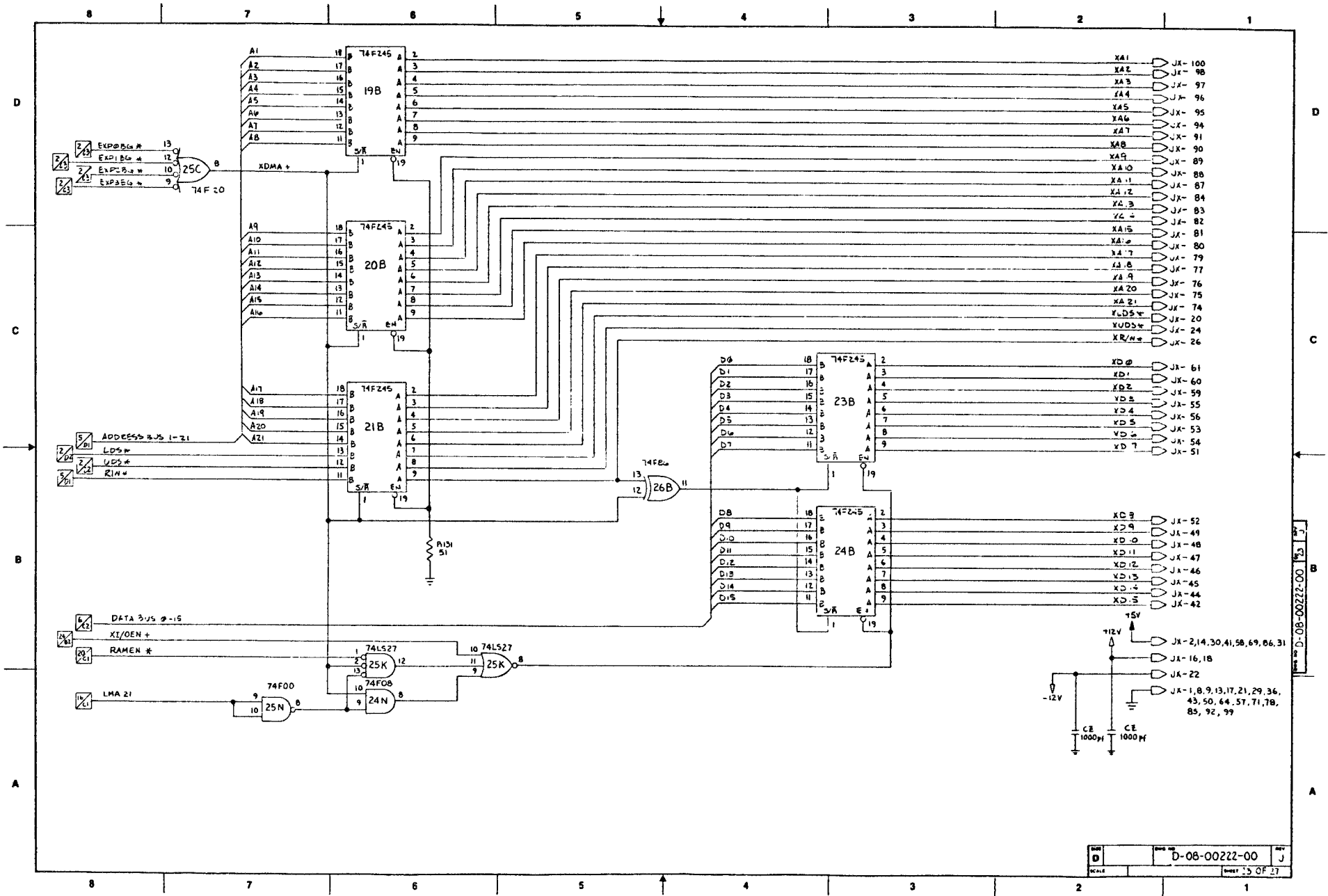


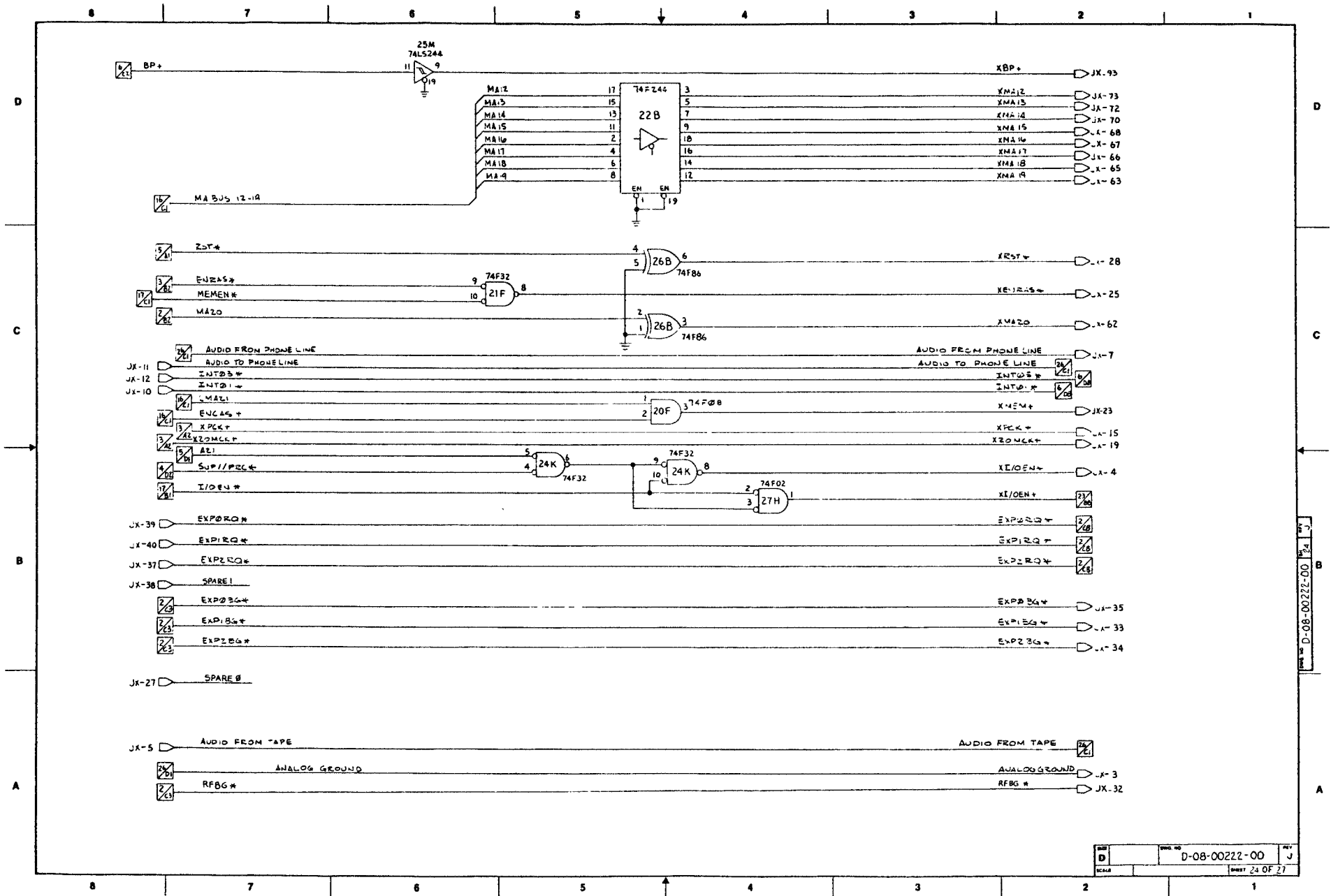
D-08-00272-00





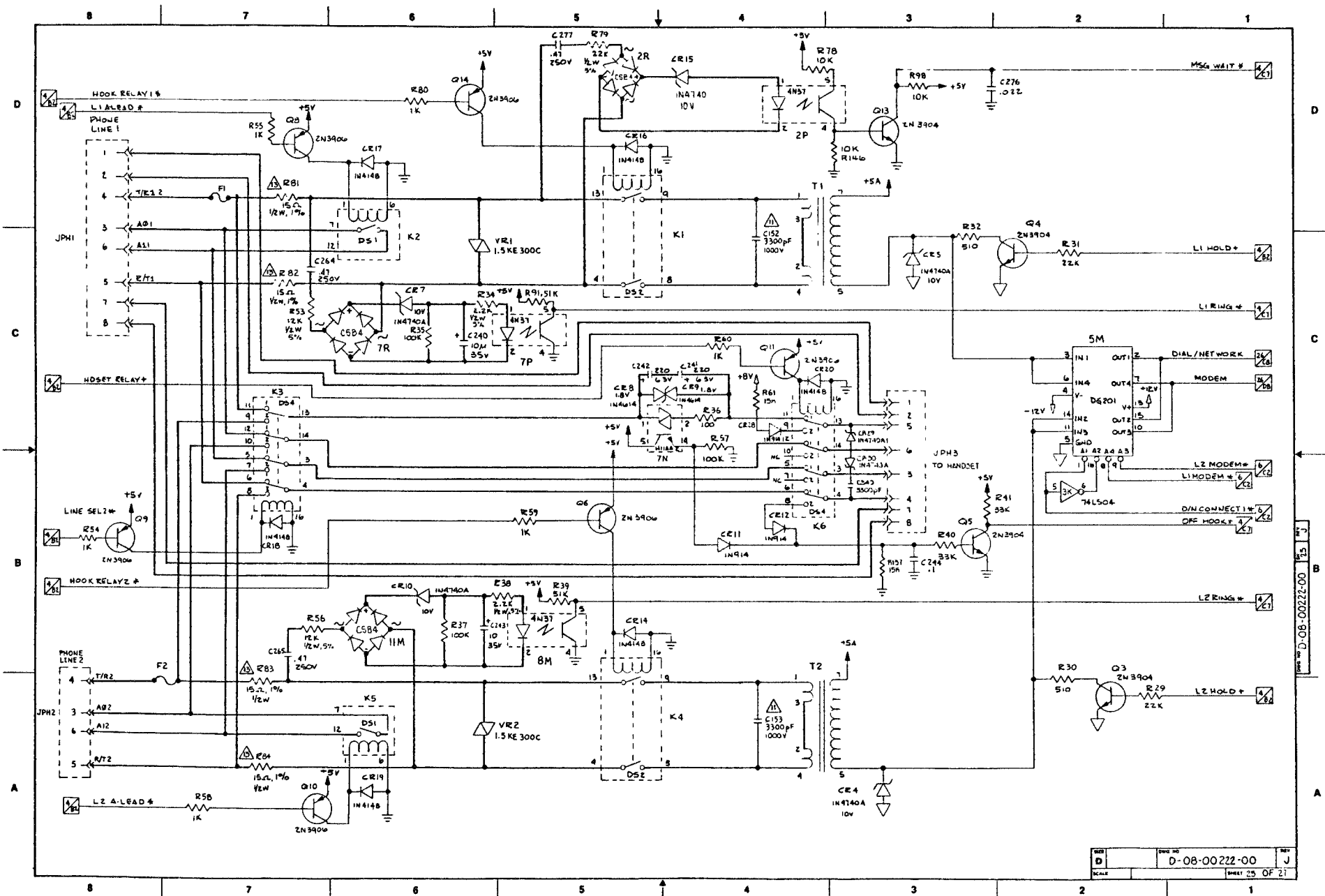




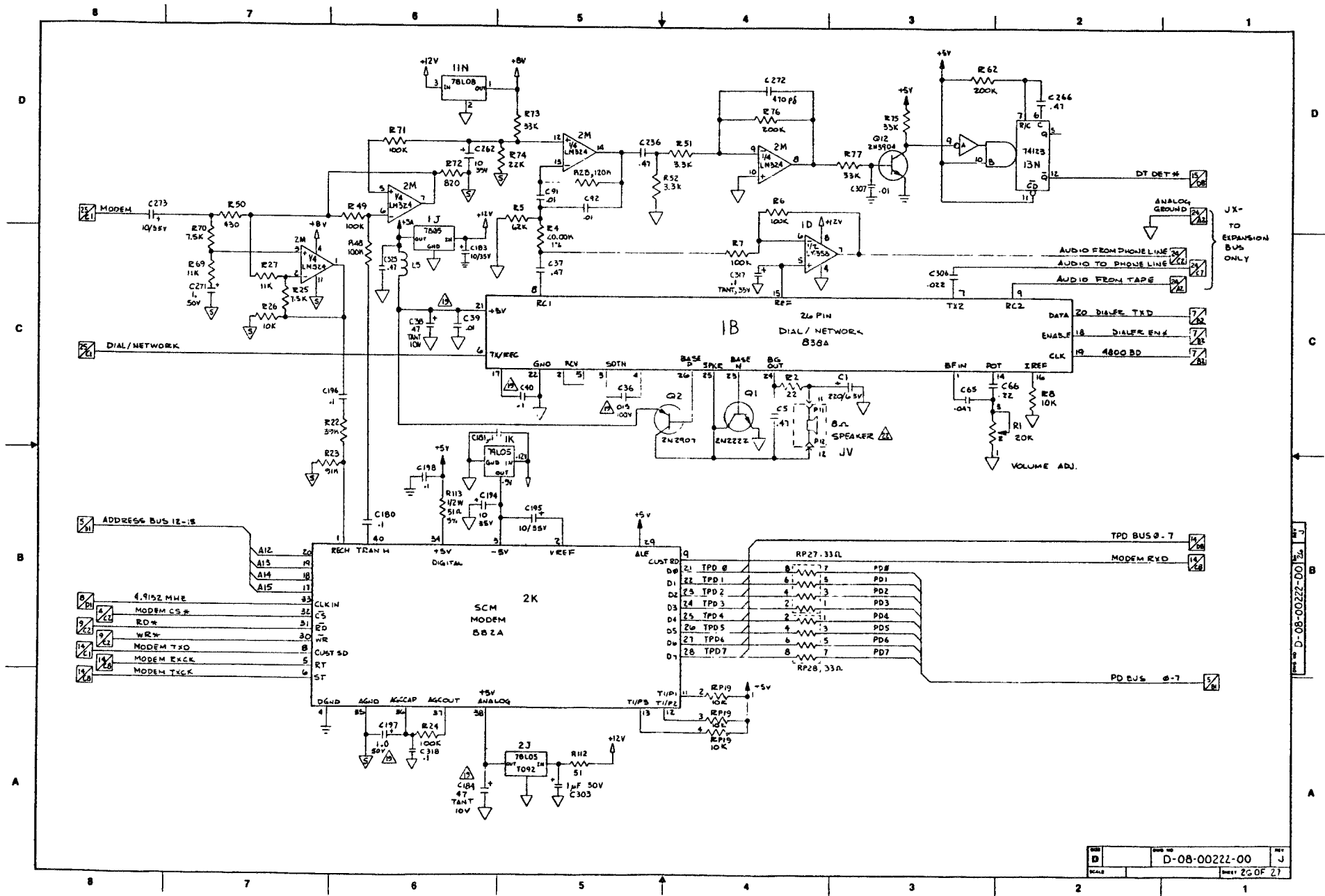


PART NO D-08-00222-00





D-08-00222-00 REV J



I. C. VOLTAGE CHART

DEVICE	REFERENCE DESIGNATION	15V	DGND	PAGE NO.
74F08	22D, 25N	14	7	2, 4, 5, 16, 20, 23
74F02	16H, 27H	14	7	2, 4, 5, 16, 17, 24
74S03	15M	14	7	12
74LS04	3K	14	7	3, 9, 6, 17, 25
74F04	15H	14	7	2, 4, 12, 16
74F06	4J, 28E, 28F, 24N	14	7	2, 7, 16, 17, 23, 24
74LS06	28D, 28F	14	7	3, 4, 5, 6, 11, 15, 17
74LS08	13H	14	7	5, 17
74F10	13M	14	7	12
74F11	27F	14	7	2, 4
74LS14	4N, 15M	14	7	4, 5, 11, 13, 14
74F20	25C	14	7	2, 23
74LS27	23D, 25M, 26N	14	7	2, 6, 8, 16, 23
74F32	33, 35E, 21F, 24M, 24P, 26M	14	7	2, 3, 4, 5, 7, 9, 11, 16, 17, 20, 24
74S51	12H, 19M	14	7	3, 17
74F64	18G	14	7	3
74LS74	25H, 27M, 25H	16	8	2, 6, 7, 8, 11, 19
74F74	6M, 15M, 16M, 17M	14	7	4, 12, 17
74F06	26D	14	7	8, 23, 24
74S112	21E, 28G	16	8	3
74125	15N	16	8	12, 26
74S24	14N	16	9	12
74LS150	24G, 27G, 25G	16	8	4
74F155	7J, 9J	16	8	17
74LS125	12F, 26H	16	8	5, 11, 13, 16
74F139	6J	16	8	17
74F155	14M	16	8	12
74LS157	19M, 19N	16	8	14
74F175	18D, 18M	16	8	3, 8
74LS240	17M, 24M	20	10	11, 15, 15
74LS244	9M, 15P, 16G, 24F, 25M, 26C	20	10	2, 4, 5, 6, 13, 15, 16, 17, 24
74F244	16F, 17F, 19G, 22B, 25G	20	10	2, 3, 5, 5, 10, 24
74F245	18C, 12D, 13A, 13C, 13D, 17B, 19B, 28D, 21B, 23B, 23C, 24B, 24C	20	10	5, 8, 16, 20, 23
74F250	18J, 11B, 11C, 11D, 11F, 11G, 11H, 12A, 12E, 19F	16	8	5, 17, 18
74LS259	7M, 18M	16	8	4, 4
74S260	27N	14	7	3
74LS273	17H, 27C	20	10	11, 15
74S279	14B, 15D	14	7	8
74LS340	18F	16	8	6
74LS373	16B, 18C, 21D, 24D, 25D	20	10	6
74F373	17G, 25F	20	10	5, 16
74F374	16M	20	10	2, 3, 6, 12
74LS374	16P, 27B	20	10	15
74LS393	16E, 20D	14	7	7
74LS52	26F	14	7	4, 3, 8

I. C. VOLTAGE CHART

DEVICE	REFERENCE DESIGNATION	15V	DGND	PAGE NO.
74LS51	14H	16	8	6, 12
74LS52	13M	16	8	12
1480	21P		7	14
1482	18P, 23P	14	7	14
2149	19C, 23C, 21C, 22C	18	9	16
2764 / 126	14C, 15C	28	14	5
6050	15G	12	1	14
4416	14A, 15A, 14A, 17A	9	10	8
4864	2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 10A, 28, 30, 40, 50, 60, 70, 80, 90, 100, 2C, 3C, 4C, 5C, 6C, 7C, 8C, 9C, 10C, 2D, 3D, 4D, 5D, 6D, 7D, 8D, 9D, 10D, 2E, 3E, 4E, 5E, 6E, 7E, 8E, 9E, 10E, 2F, 3F, 4F, 5F, 6F, 7F, 8F, 9F, 10F, 2G, 3G, 4G, 5G, 6G, 7G, 8G, 9G, 10G, 2H, 3H, 4H, 5H, 6H, 7H, 8H, 9H, 10H	8	16	19, 20, 21, 22
68018	14E	14, 19	6, 55	5
8038A	1B			26
882A	2M			26
7281	21M	40	20	14
C581	2R, 2M, 11M			23
DG281	5M			23
H11A2	7N			25
LM224	2M			26
LM355	1D			26
LF412	17N			12
4N37	2P, 7P, 8M			25
PAL16L8A	24G	20	10	2
PAL16R4	14M	20	10	12
PAL16M4	24H	20	10	2
PAL16R8A	25D	20	10	2
TC5220P	26D	N/A	8	15
WD180-05	21H	40	20	11
WD2197	22M	21	20	12
79L05	1K			26
7805	1J			26
78L08	11N			26
78L05	2J			26
VIDEO ARRAY	17C	40	20	7
DNA DATA ARRAY	22H	20	40	10
DNA ADDRESS ARR	22E	20	40	9

REV D-06-00222-00 21 J