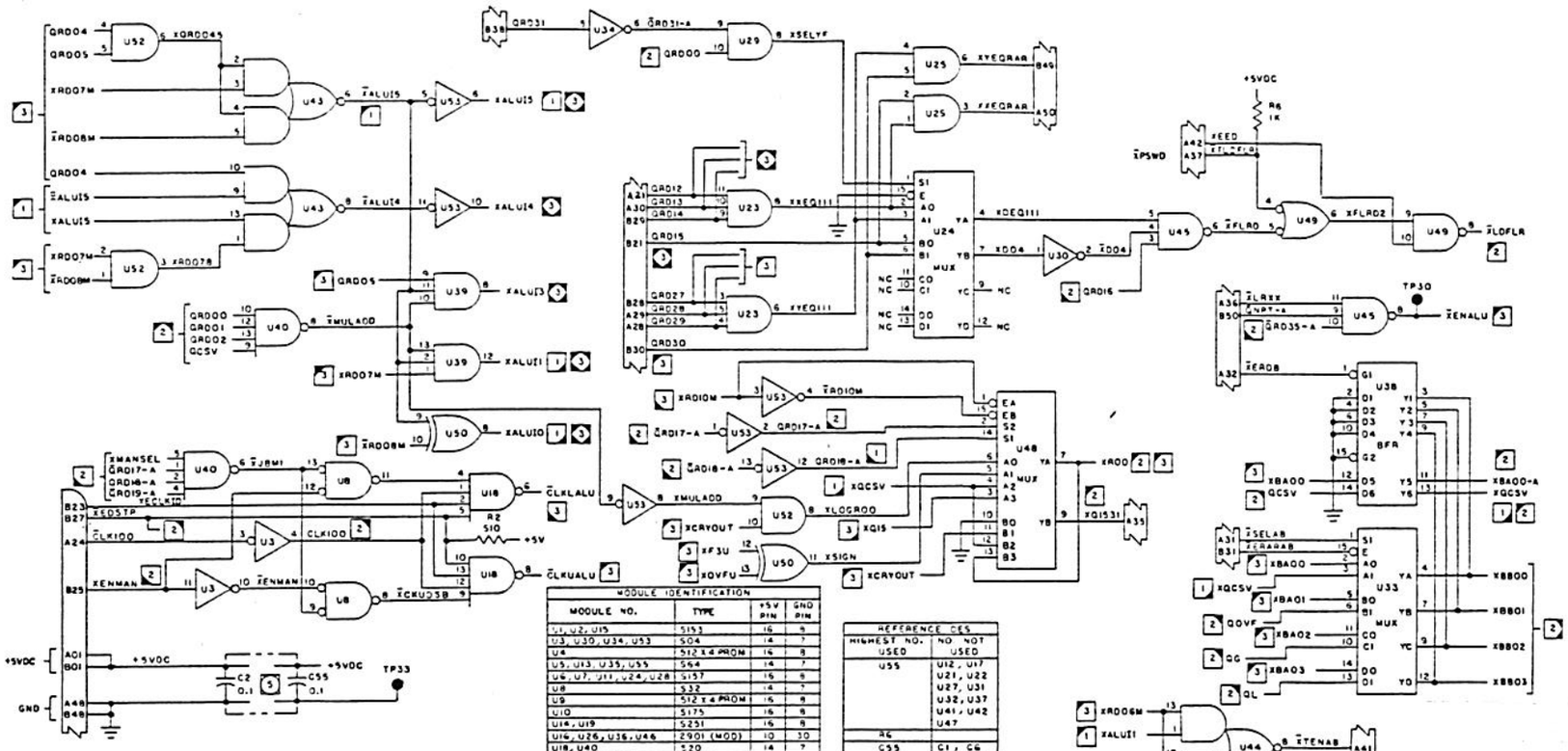


NOTES-UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS ±2%, 1/8W.
2. CAPACITANCE VALUES ARE MICROFARADS ±20%, 100V.
3. SYMBOL [*] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR CONNECTION. (* APPLICABLE SHEET NO.)
4. PARTIAL REF DES ARE SHOWN. FOR COMPLETE REF DES, PREFIX WITH UNIT NO. OR SUBASSY DES.
5. C2 THRU C5, C7 THRU C10, C12 THRU C15, C19, C20, C24 THRU C26, C29, C30, C34 THRU C36, C39, C40, C44 THRU C46, C49, C50, C52 THRU C55 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
6. SYMBOL [ ] MEANS: SEE NOTE NUMBER INDICATED.
7. U4, U14, U16, U19, U26, U33, U36, U38 AND U46 ARE TRI-STATE DEVICES.

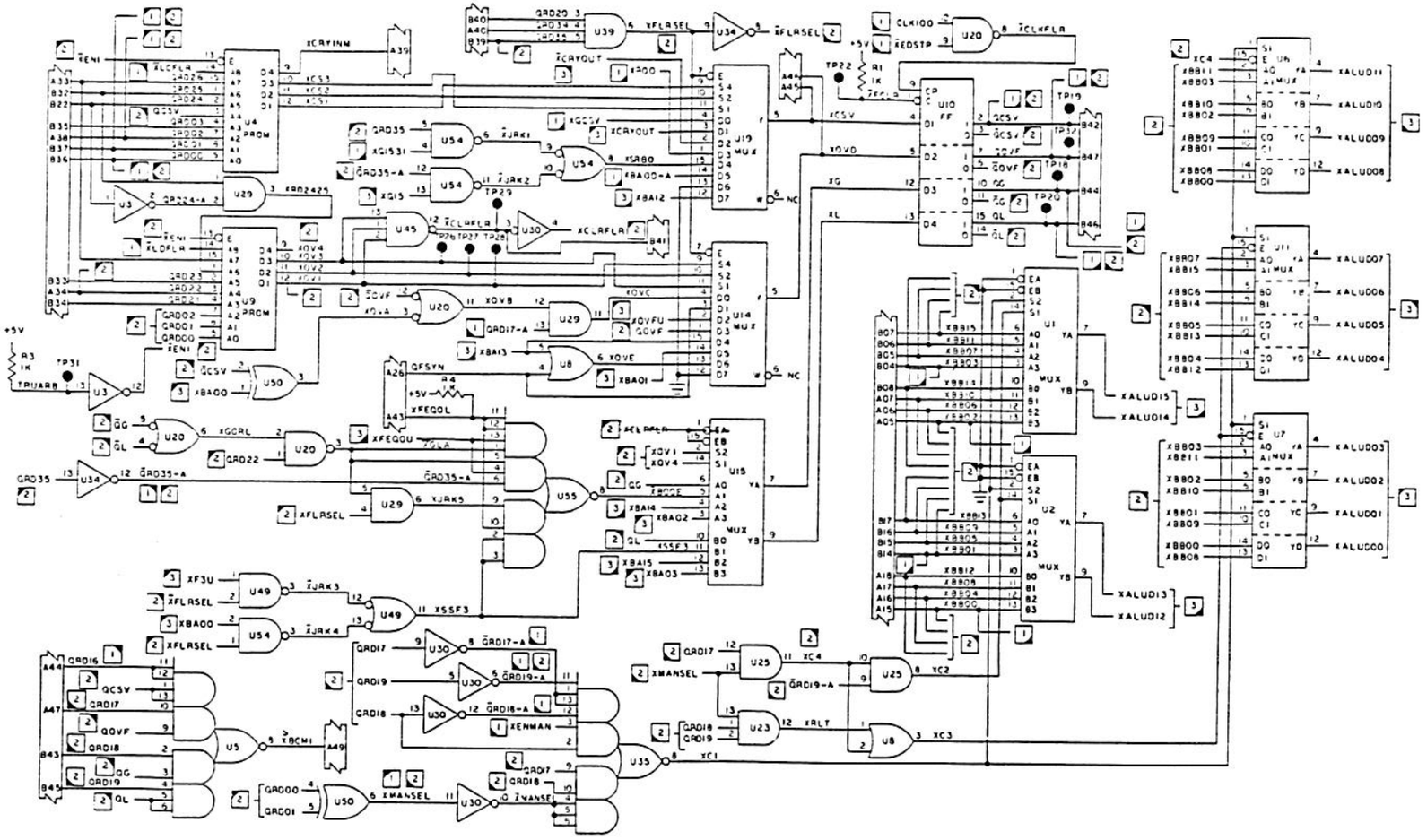
MODULE IDENTIFICATION

MODULE NO.	TYPE	+5V PIN	GND PIN
U1, U2, U15	5153	16	8
U3, U30, U34, U53	504	14	7
U4	512 X 4 PROM	16	8
U5, U13, U35, U55	564	14	7
U6, U7, U11, U24, U28	5157	16	8
U8	532	14	7
U9	512 X 4 PROM	16	8
U10	5175	16	8
U14, U19	5251	16	8
U16, U26, U36, U46	2901 (MOD)	10	30
U18, U40	520	14	7
U20, U49, U54	500	14	7
U23, U29	511	14	7
U25, U39, U52	508	14	7
U33	5257	16	8
U38	367 (MOD)	16	8
U43, U44	551	14	7
U45	510	14	7
U48	5253	16	8
U50	546	14	7
U51	5182	16	8

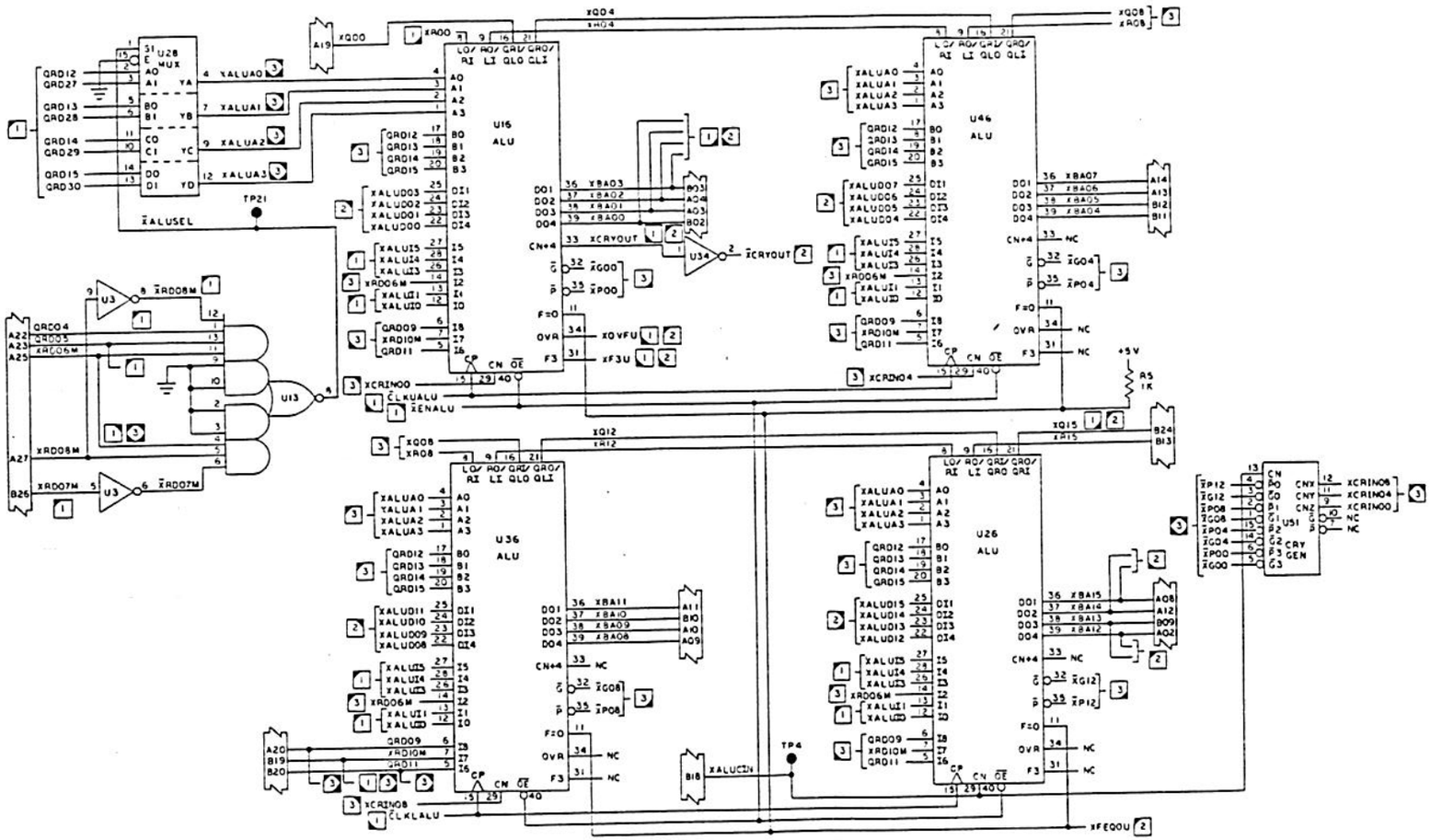
REFERENCE DES

HIGHEST NO. USED	NO. NOT USED
U55	U12, U17, U21, U22, U27, U31, U32, U37, U41, U42, U47
R6	
C55	C1, C6, C11, C16, C17, C18, C21, C22, C23, C27, C28, C31, C32, C33, C37, C38, C41, C42, C43, C47, C48, C51

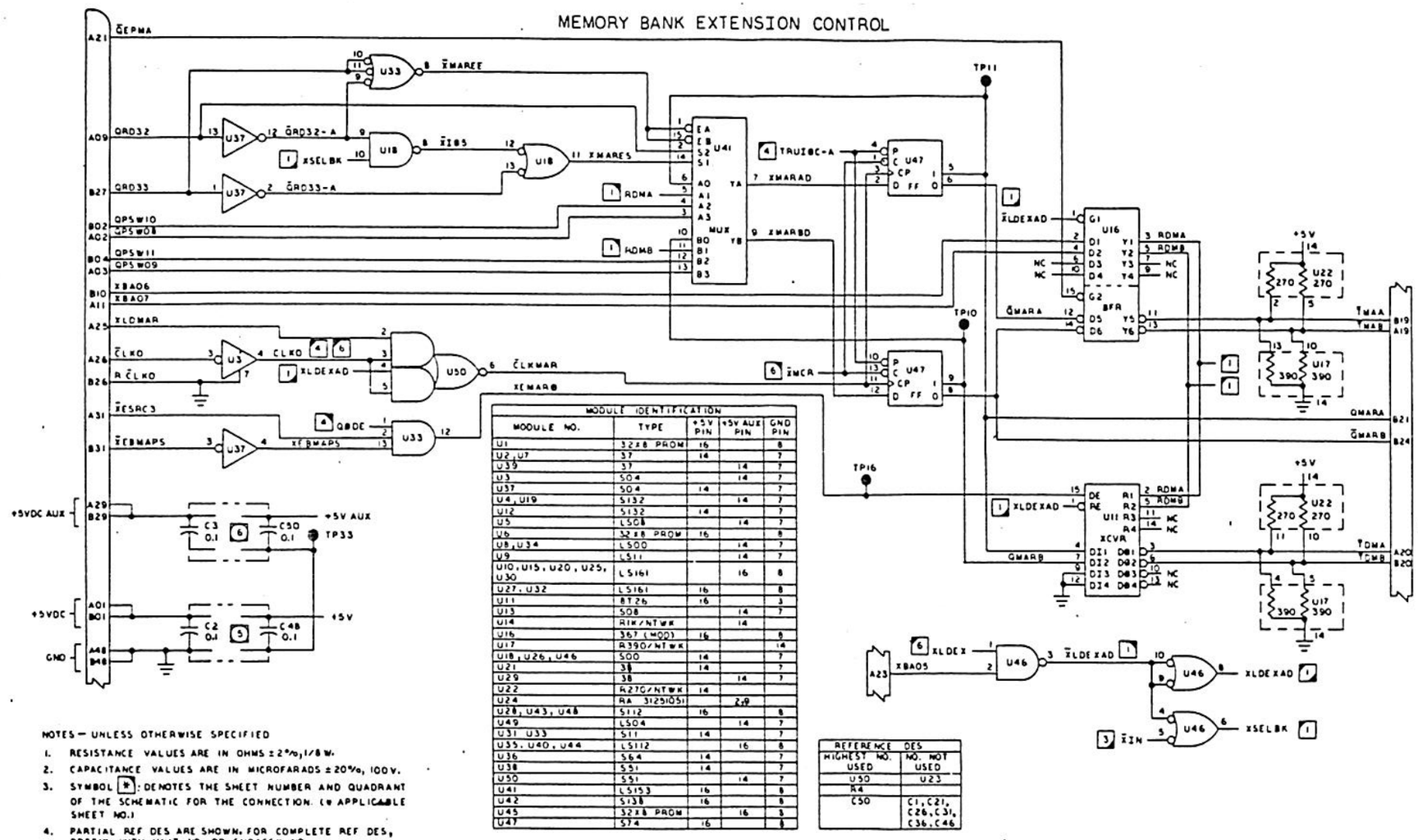
1634431-100. Arithmetic Register (ARB) Card Schematic Diagram (Sheet 1 of 3)



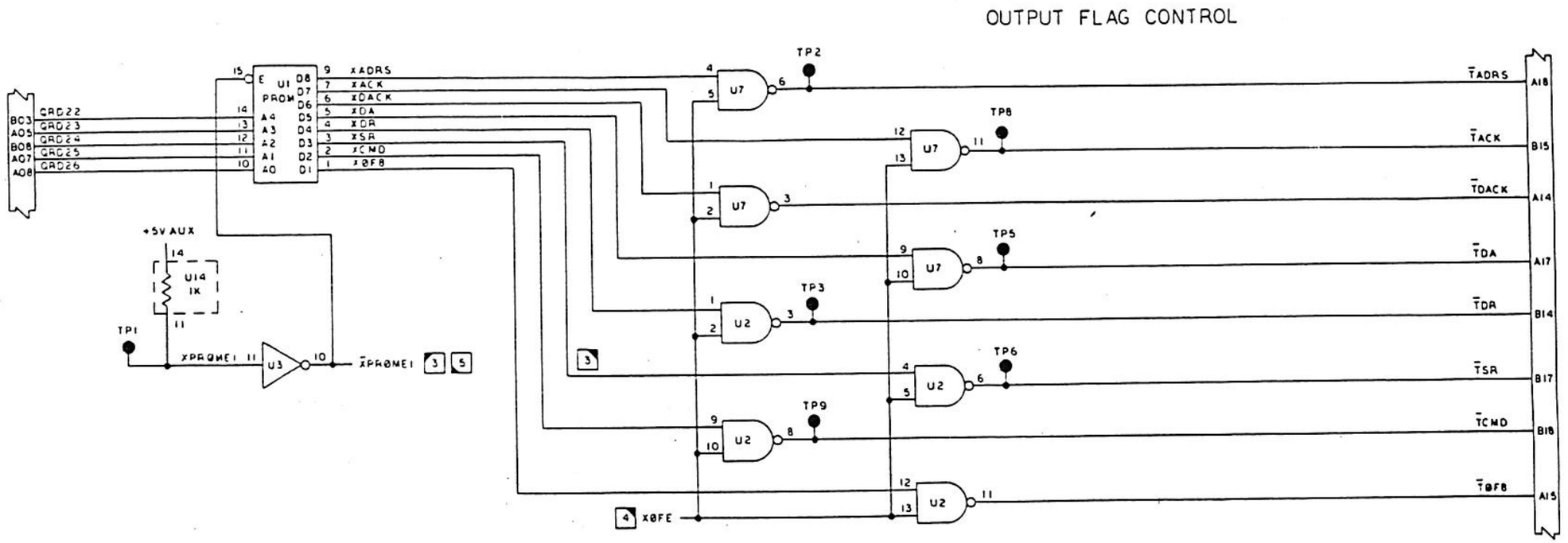
1634431-100. Arithmetic Register (ARB) Card Schematic Diagram (Sheet 2 of 3)



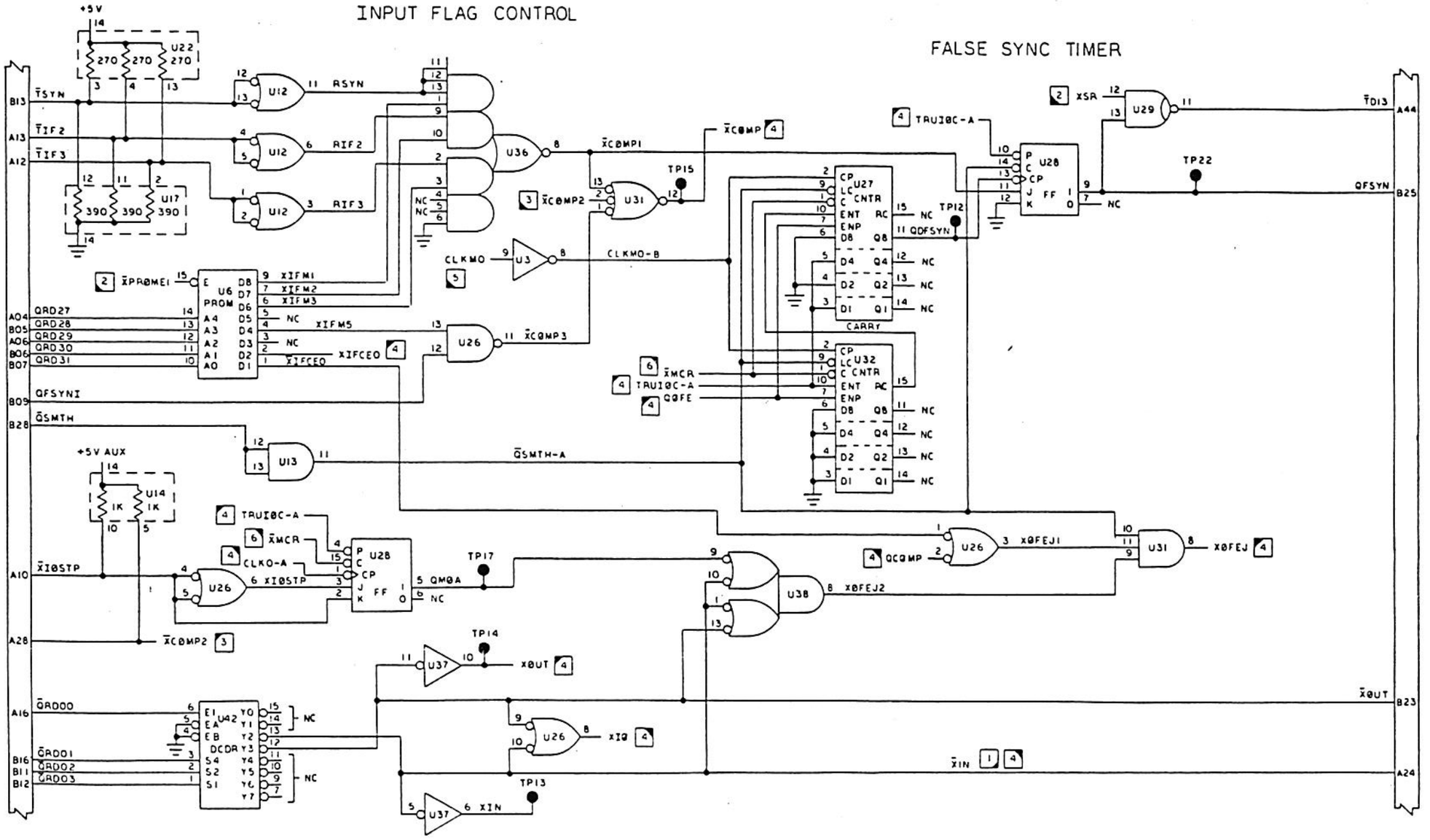
1634431-100. Arithmetic Register (ARB) Card Schematic Diagram (Sheet 3 of 3)



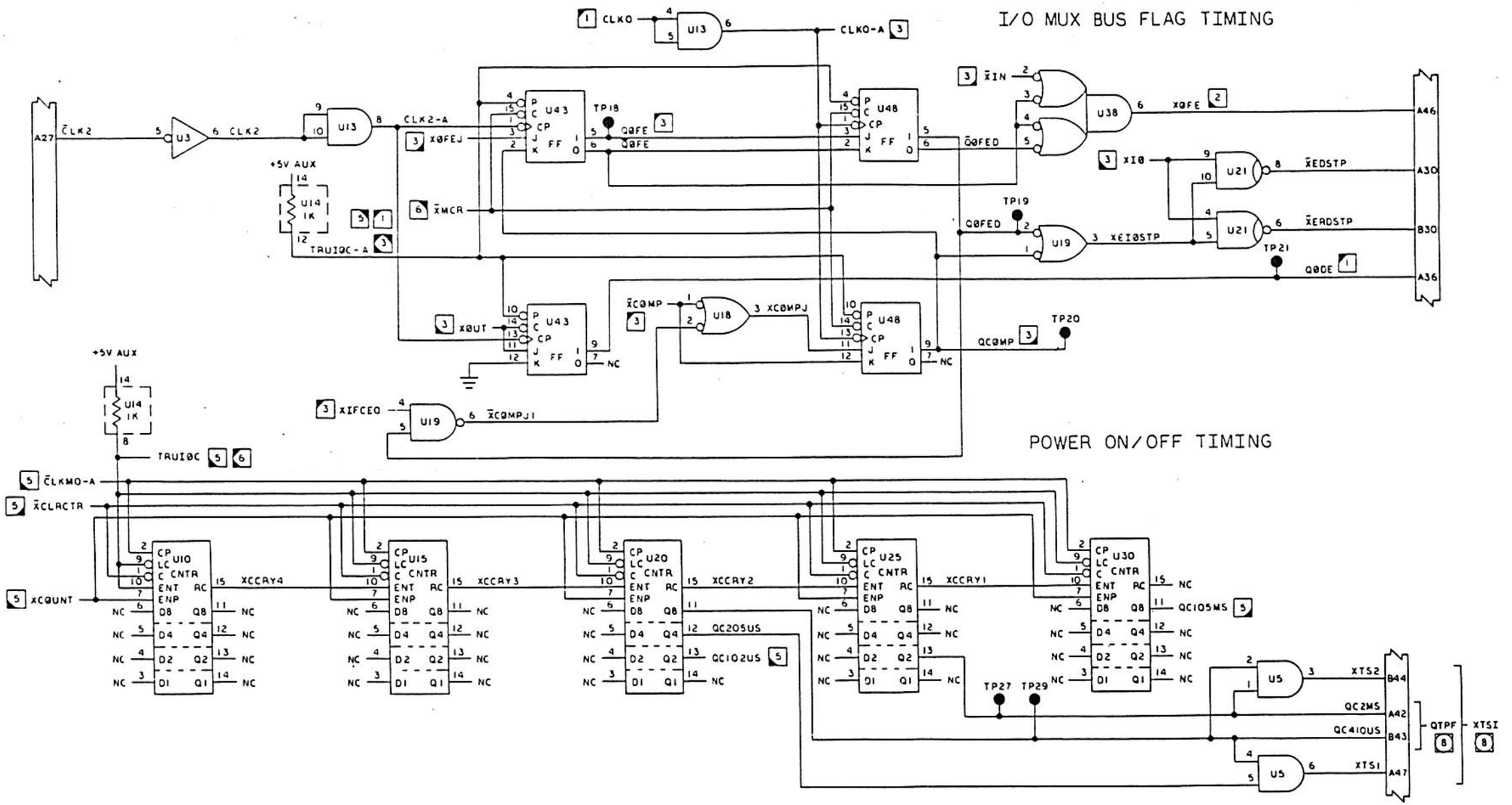
1634434-100. Input/Output Control (IOC) Card Schematic Diagram (Sheet 1 of 6)



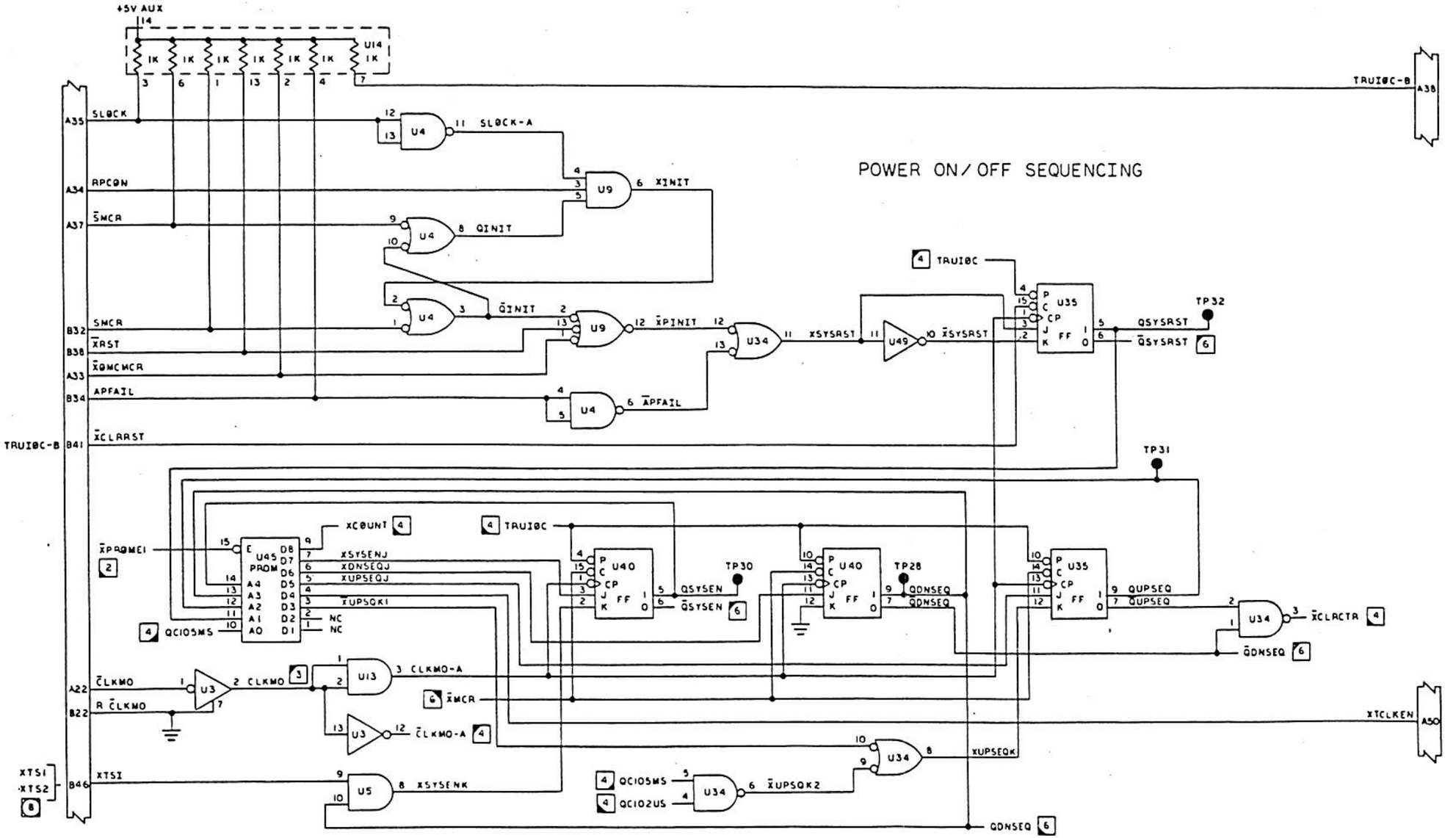
1634434-100. Input/Output Control (IOC) Card Schematic Diagram (Sheet 2 of 6)



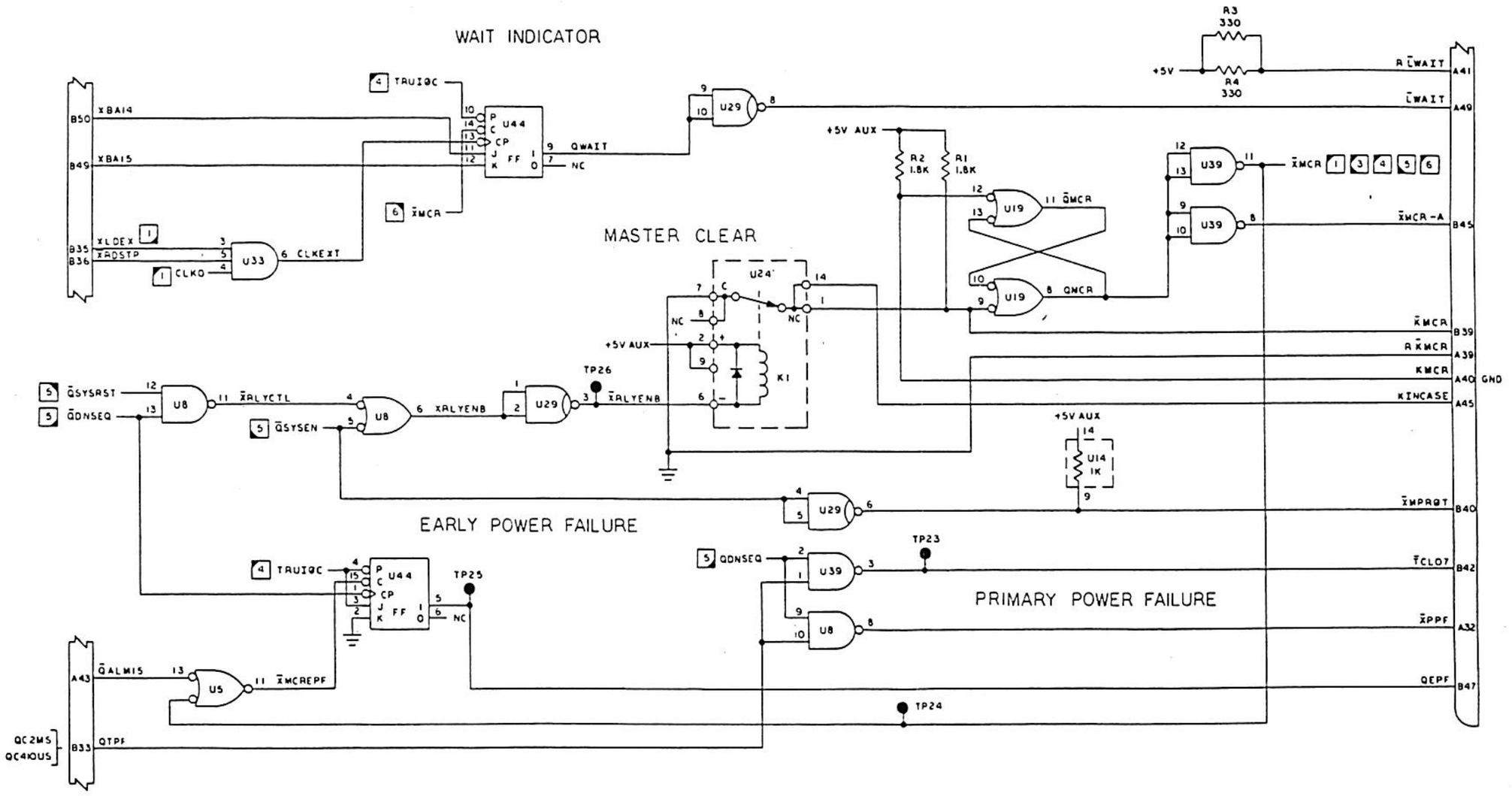
1634434-100. Input/Output Control (IOC) Card Schematic Diagram (Sheet 3 of 6)



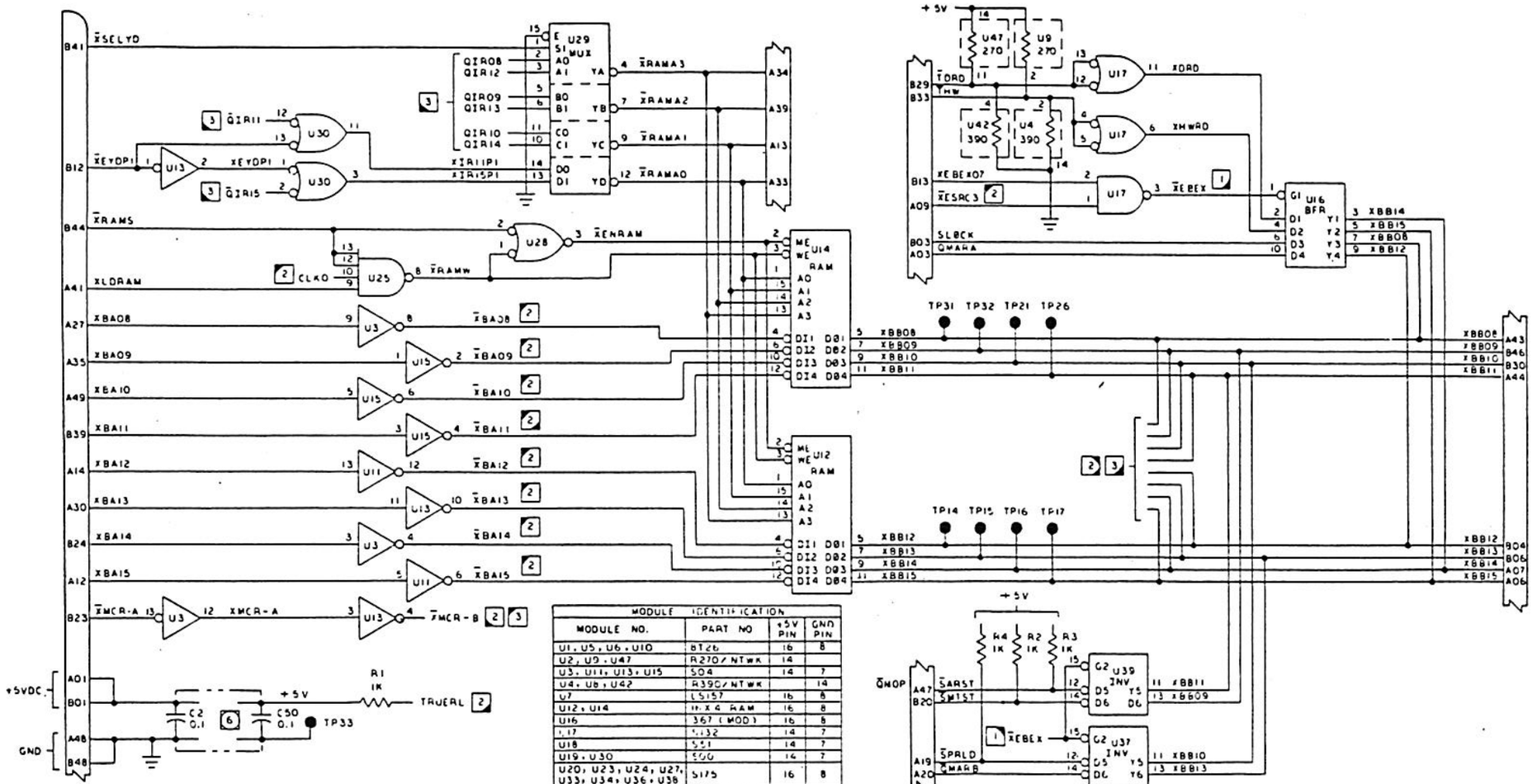
1634434-100. Input/Output Control (IOC) Card Schematic Diagram (Sheet 4 of 6)



1634434-100. Input/Output Control (IOC) Card Schematic Diagram (Sheet 5 of 6)



1634434 100. Input/Output Control (IOC) Card Schematic Diagram (Sheet 6 of 6)



MODULE IDENTIFICATION			
MODULE NO.	PART NO	+5V PIN	GND PIN
U1, U5, U6, U10	8T26	16	8
U2, U9, U47	R270/NTWK	14	
U3, U11, U13, U15	S04	14	7
U4, U8, U42	R390/NTWK		14
U7	LS157	16	8
U12, U14	1K X 4 RAM	16	8
U16	367 (MOD)	16	8
U17	S132	14	7
U18	S51	14	7
U19, U30	S00	14	7
U20, U23, U24, U27, U33, U34, U36, U38	S175	16	8
U21, U32	S157	16	8
U22, U35, U40, U41	S257	16	8
U25	S20	14	7
U26	S280	14	7
U28	S08	14	7
U29	S158	16	8
U37, U39	3E8 (MOD)	16	8
U43, U45	LS193	16	8
U44	S138	16	8

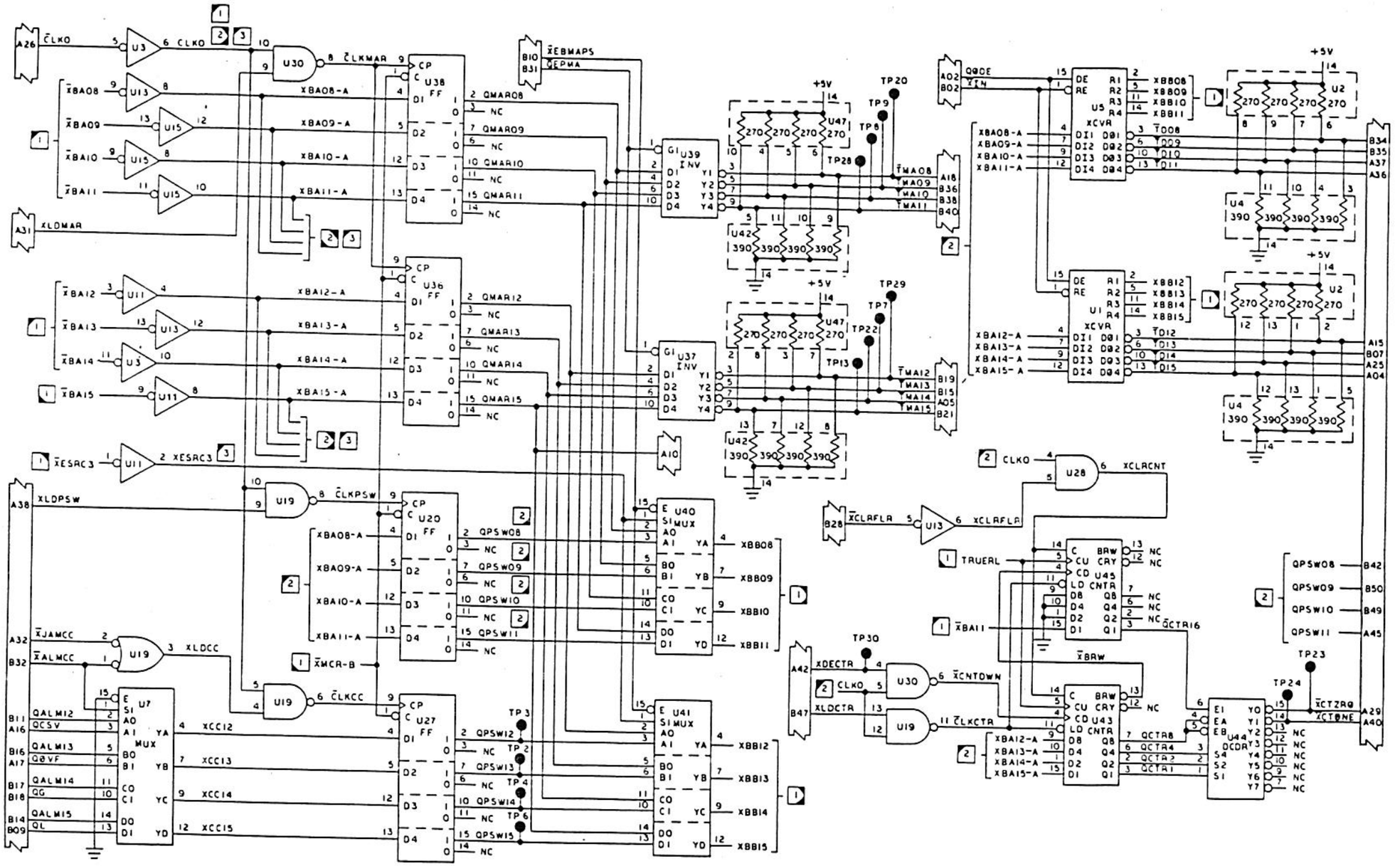
REFERENCE DES	
HIGHEST NO USED	NO. NOT USED
U47	U31, U46
R4	
C50	C1, C11, C26, C46

NOTES – UNLESS OTHERWISE SPECIFIED

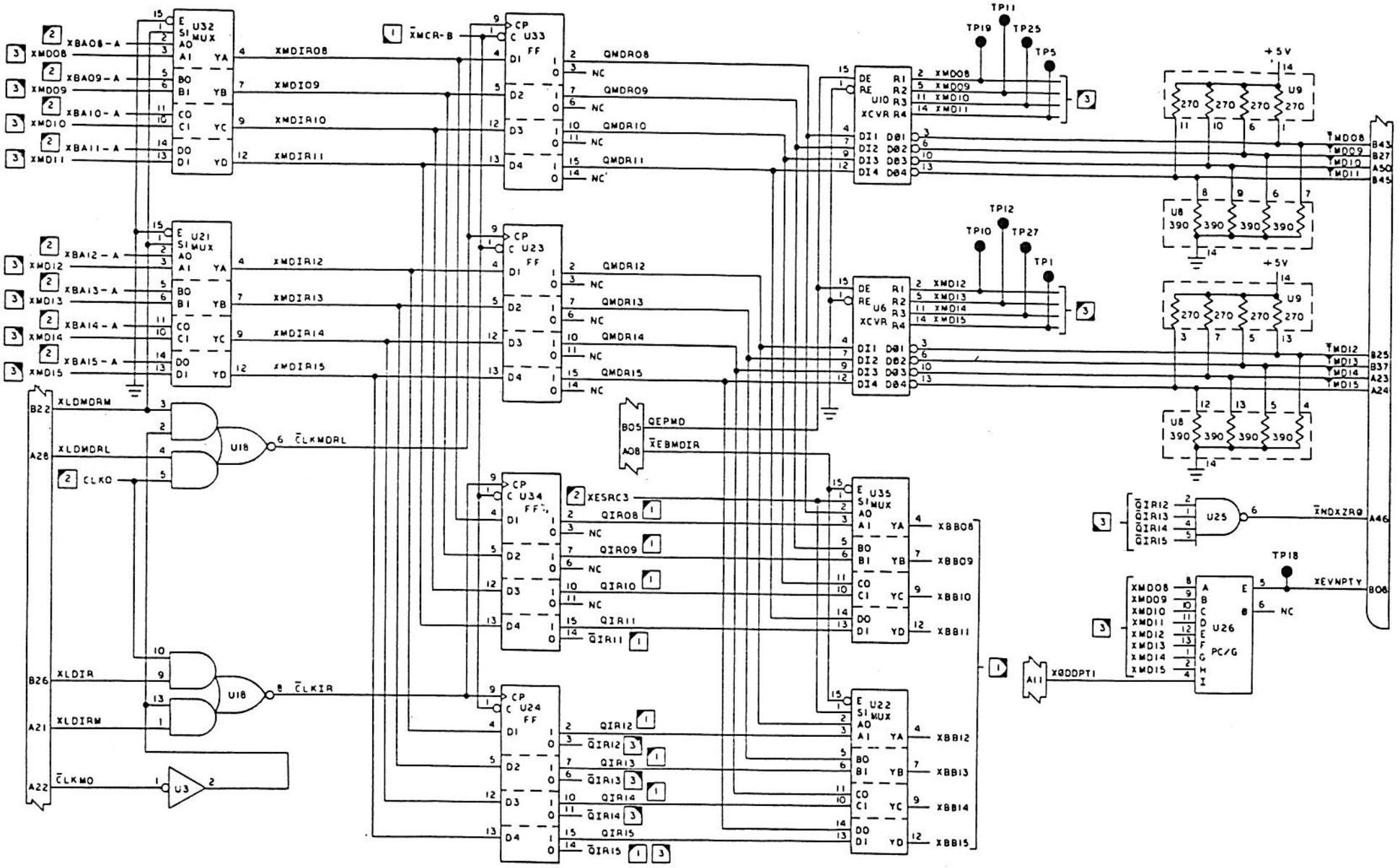
1. RESISTANCE VALUES ARE IN OHMS ±2%, 1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS ±20%, 100V.
3. SYMBOL [*]: DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION. (* APPLICABLE SHEET NO.).
4. PARTIAL REF DES ARE SHOWN. FOR COMPLETE REF DES PREFIX WITH UNIT NO. OR SUBASSY DES.
5. SYMBOL ◯ MEANS: SEE NOTE NUMBER INDICATED.
6. C2 THRU C10, C12 THRU C25, C27 THRU C45 AND C47 THRU C50 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
7. U1, U5, U6, U10, U12, U14, U16, U22, U35, U37, U39 THRU U41 ARE TRI-STATE DEVICES.
8. RESISTANCE VALUES ARE IN OHMS ±2%, .15W EACH FOR U2, U4, U6, U9, U42 AND U47.

1634436-200 NC-2

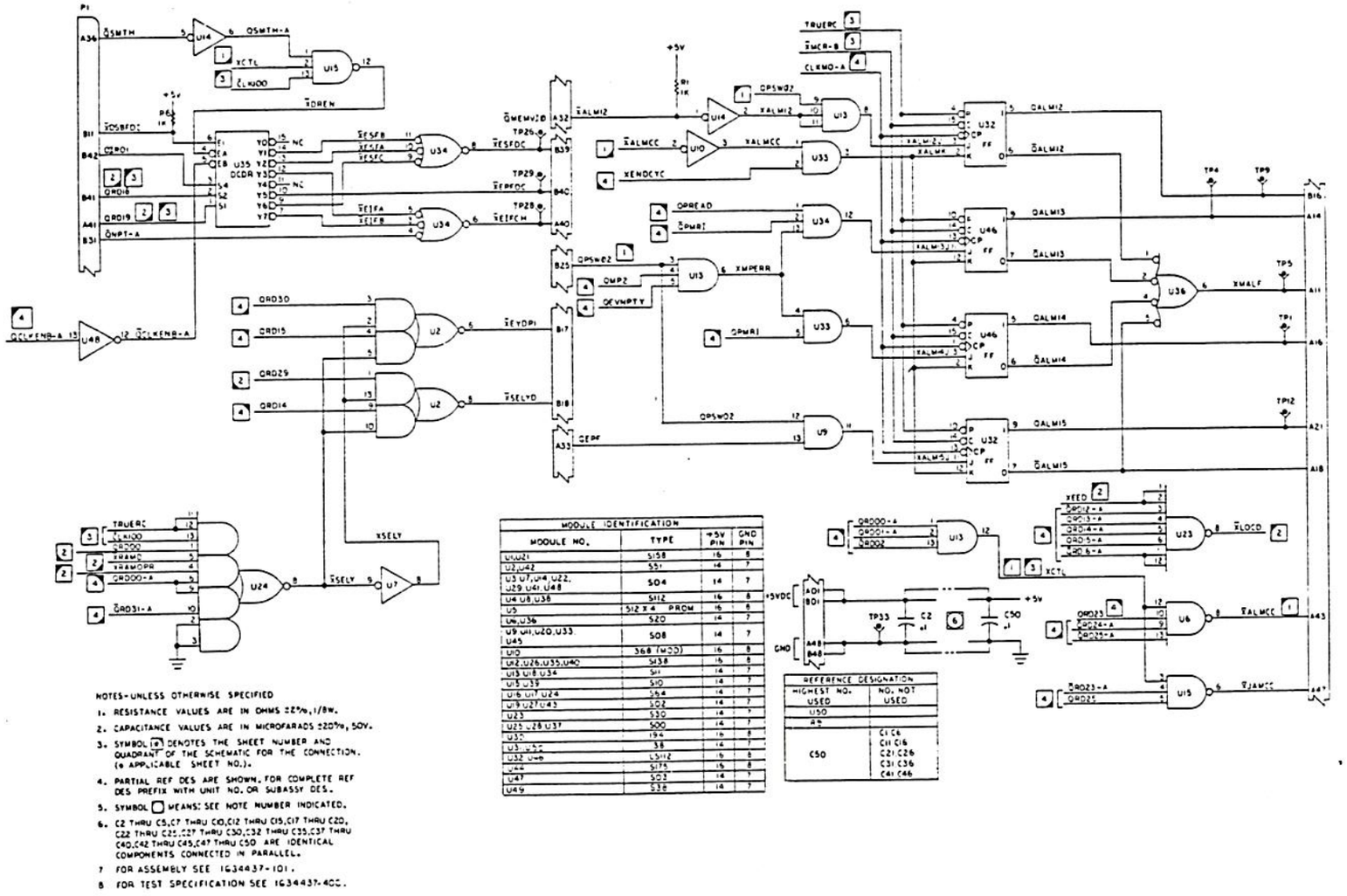
1634436-100. External LSB Register (ERL) Card Schematic Diagram (Sheet 1 of 3)



1634436-100. External LSB Register (ERL) Card Schematic Diagram (Sheet 2 of 3)



1634436-100. External LSB Register (ERL) Card Schematic Diagram (Sheet 3 of 3)



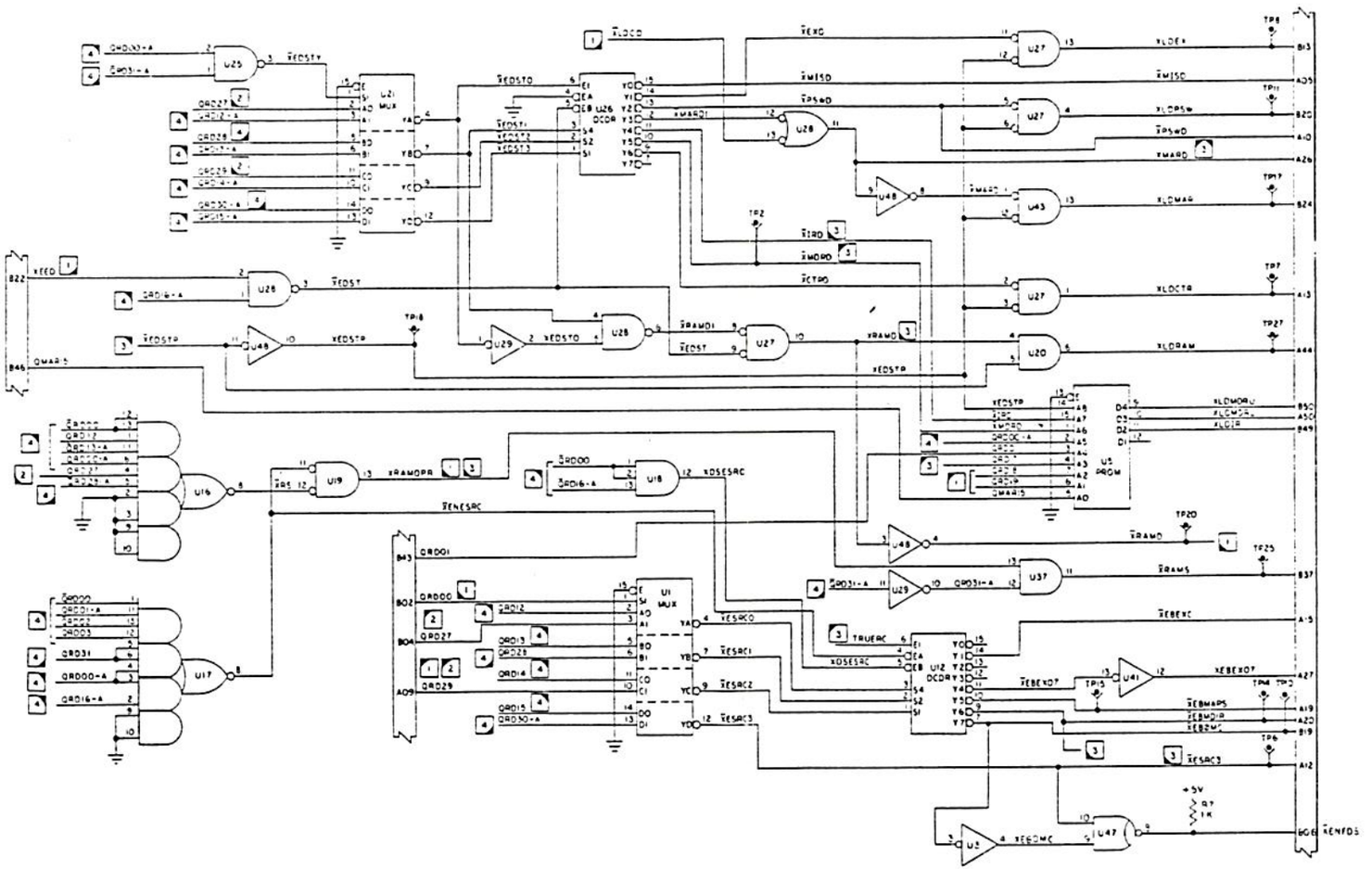
MODULE IDENTIFICATION			
MODULE NO.	TYPE	+5V PIN	GND PIN
U1,U21	5158	16	8
U2,U42	551	14	7
U3 U7,U14 U22, U29 U41, U48	S04	14	7
U4 U8,U38	5112	16	8
U5	512 X 4 PROM	16	8
U6,U36	520	14	7
U9 U11,U20,U33, U45	S08	14	7
U10	368 (MOD)	16	8
U12,U26,U35,U40	5138	16	8
U13 U18 U34	S11	14	7
U15 U39	S10	14	7
U16 U17 U24	S64	14	7
U19 U27 U43	S02	14	7
U23	S30	14	7
U25 ,U28 U37	S00	14	7
U32	194	16	8
U33 ,U36	38	14	7
U32 U46	LS112	16	8
U44	S175	16	8
U47	S03	14	7
U49	S38	14	7

REFERENCE DESIGNATION	
HIGHEST NO. USED	NO. NOT USED
U50	
C50	C1 C6 C11 C16 C21 C26 C31 C36 C41 C46

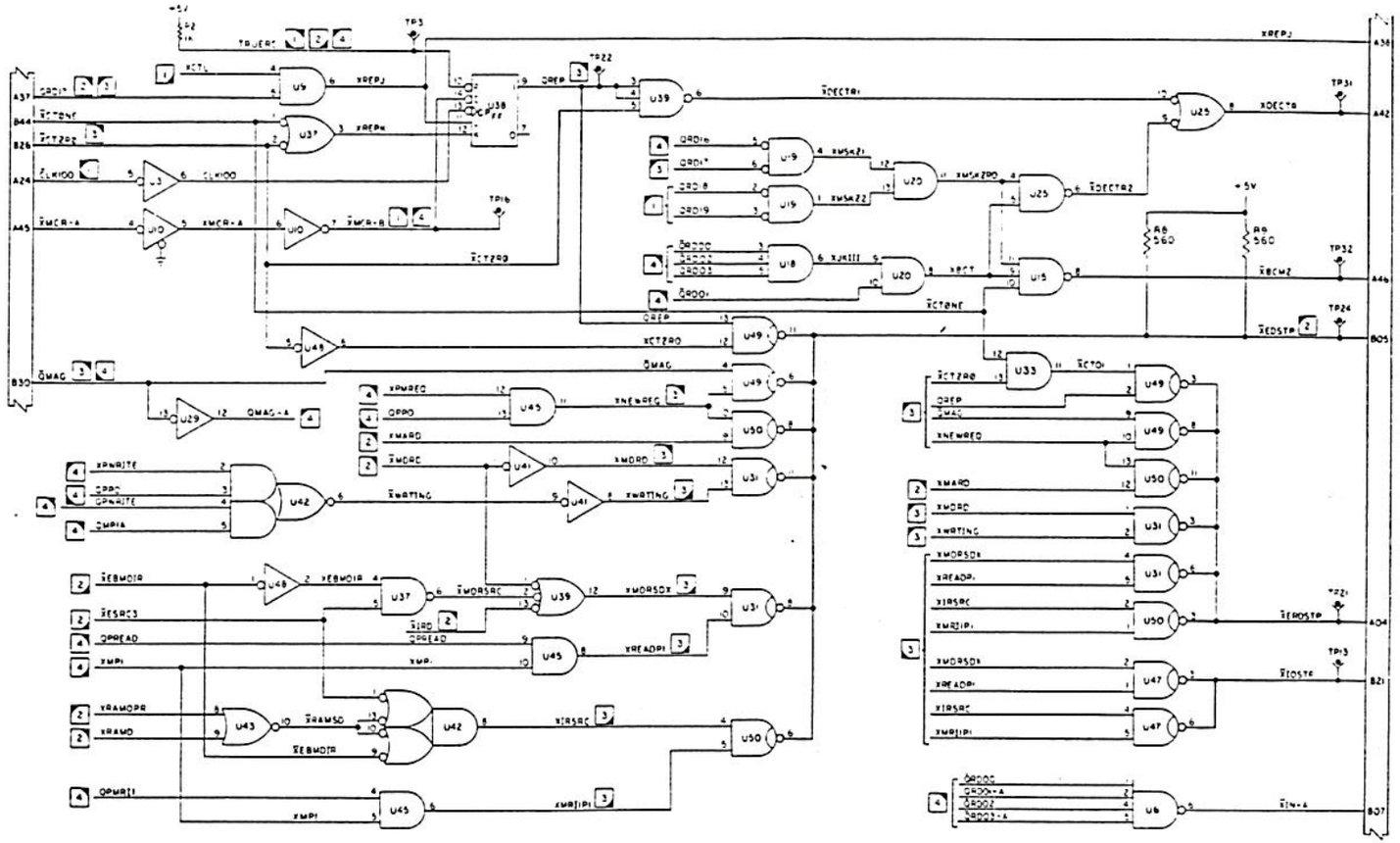
NOTES-UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS ±2%,1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS ±20%, 50V.
3. SYMBOL ⊕ DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION. (⊕ APPLICABLE SHEET NO.).
4. PARTIAL REF DES ARE SHOWN. FOR COMPLETE REF DES PREFIX WITH UNIT NO. OR SUBASSY DES.
5. SYMBOL ☐ MEANS: SEE NOTE NUMBER INDICATED.
6. C2 THRU C5,C7 THRU C10,C12 THRU C15,C17 THRU C20, C22 THRU C25,C27 THRU C30,C32 THRU C35,C37 THRU C40,C42 THRU C45,C47 THRU C50 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
7. FOR ASSEMBLY SEE 1634437-101.
8. FOR TEST SPECIFICATION SEE 1634437-400.

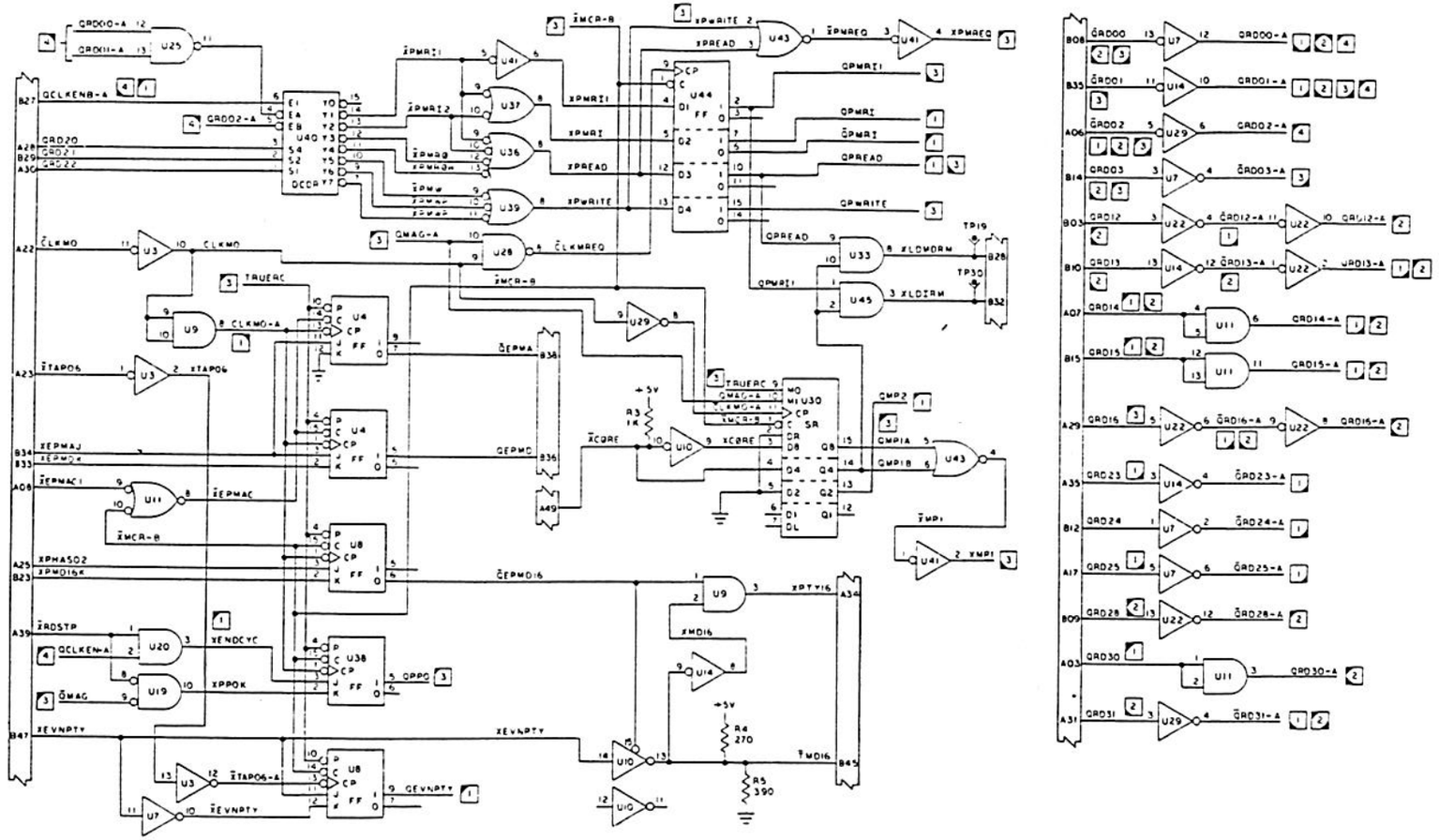
1634437-101. External Register Control (ERC) Card Schematic Diagram (Sheet 1 of 4)



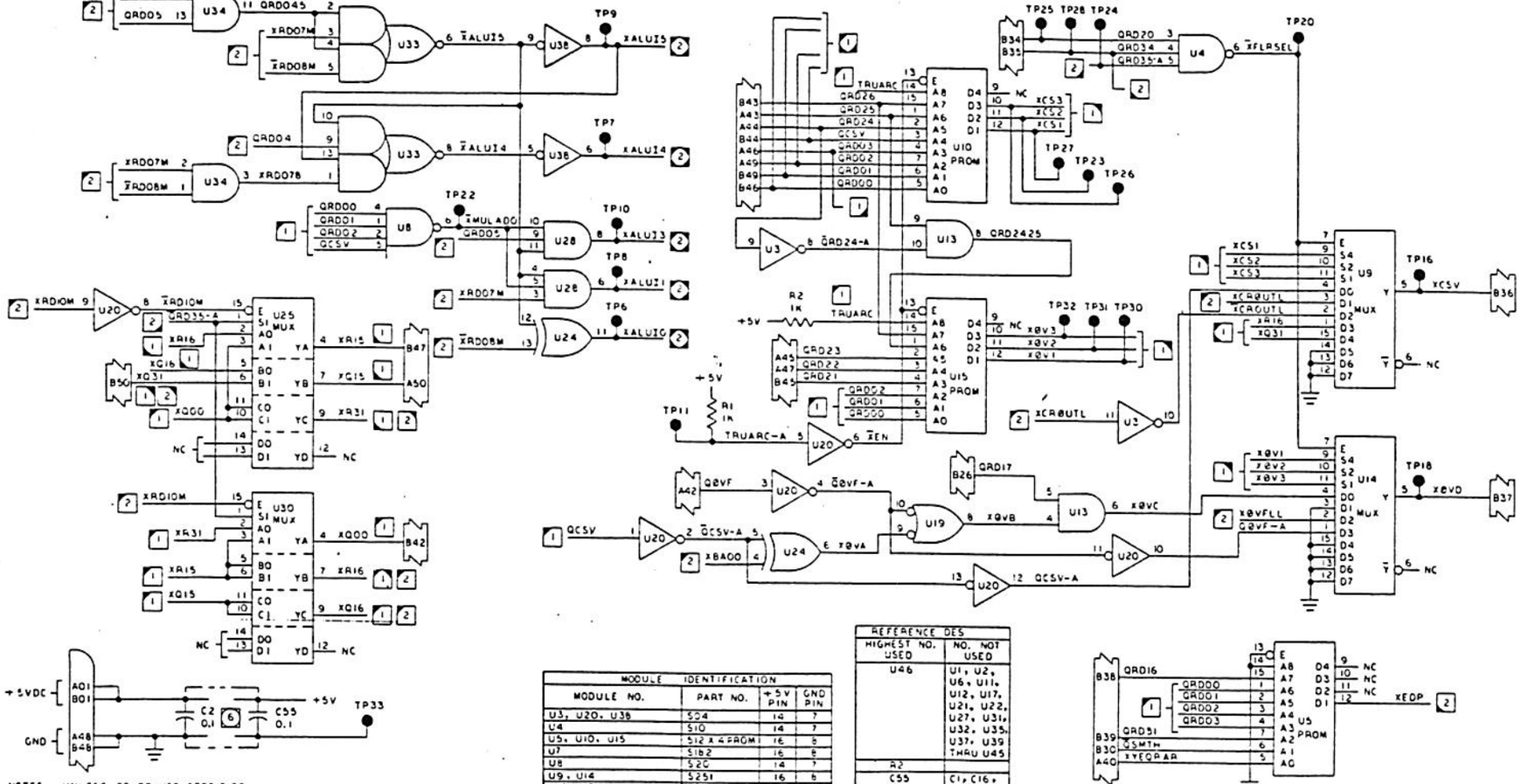
1634437 101. External Register Control (ERC) Card Schematic Diagram (Sheet 2 of 4)



1634437-101. External Register Control (ERC) Card Schematic Diagram (Sheet 3 of 4)



1634437-101. External Register Control (ERC) Card Schematic Diagram (Sheet 4 of 4)



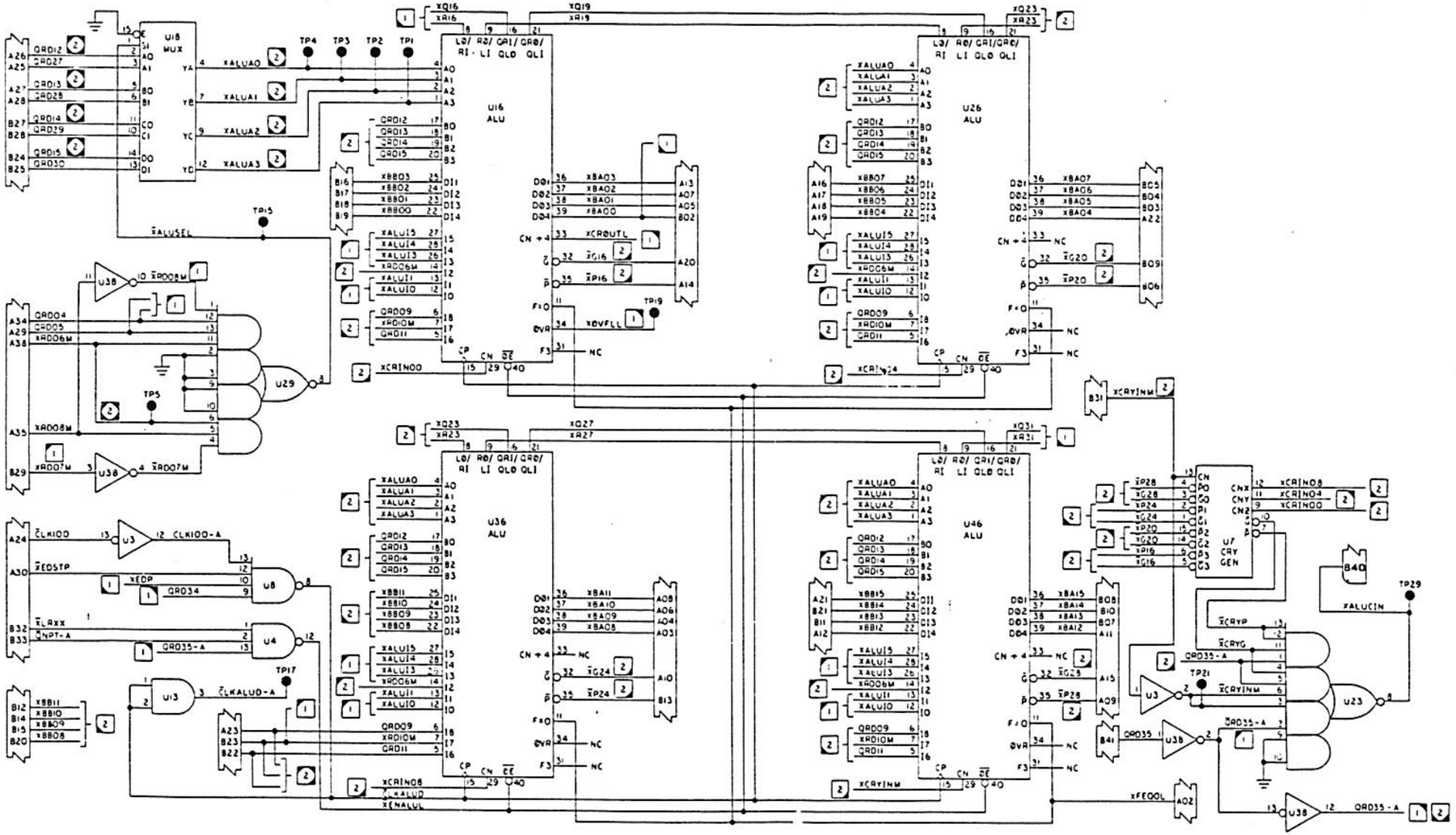
MODULE	IDENTIFICATION		
MODULE NO.	PART NO.	+5V PIN	GND PIN
U3, U20, U38	S04	14	7
U4	S10	14	7
U5, U10, U15	512 x 4 PROM	16	8
U7	S182	16	8
U8	S20	14	7
U9, U14	S251	16	8
U13, U34	S08	14	7
U16, U26, U36, U46	2901 (MSI)	10	36
U18	S157	16	8
U19	S02	14	7
U23, U29	S64	14	7
U24	S86	14	7
U25, U30	S257	16	5
U28	S11	14	7
U33	S51	14	7

REFERENCE DES	
HIGHEST NO. USED	NO. NOT USED
U46	U1, U2, U6, U11, U12, U17, U21, U22, U27, U31, U32, U35, U37, U39 THRU U45
A2	
C55	C1, C16, C17, C18, C21, C22, C23, C27, C28, C31, C32, C33, C37, C38, C41, C42, C43, C47, C48, C51

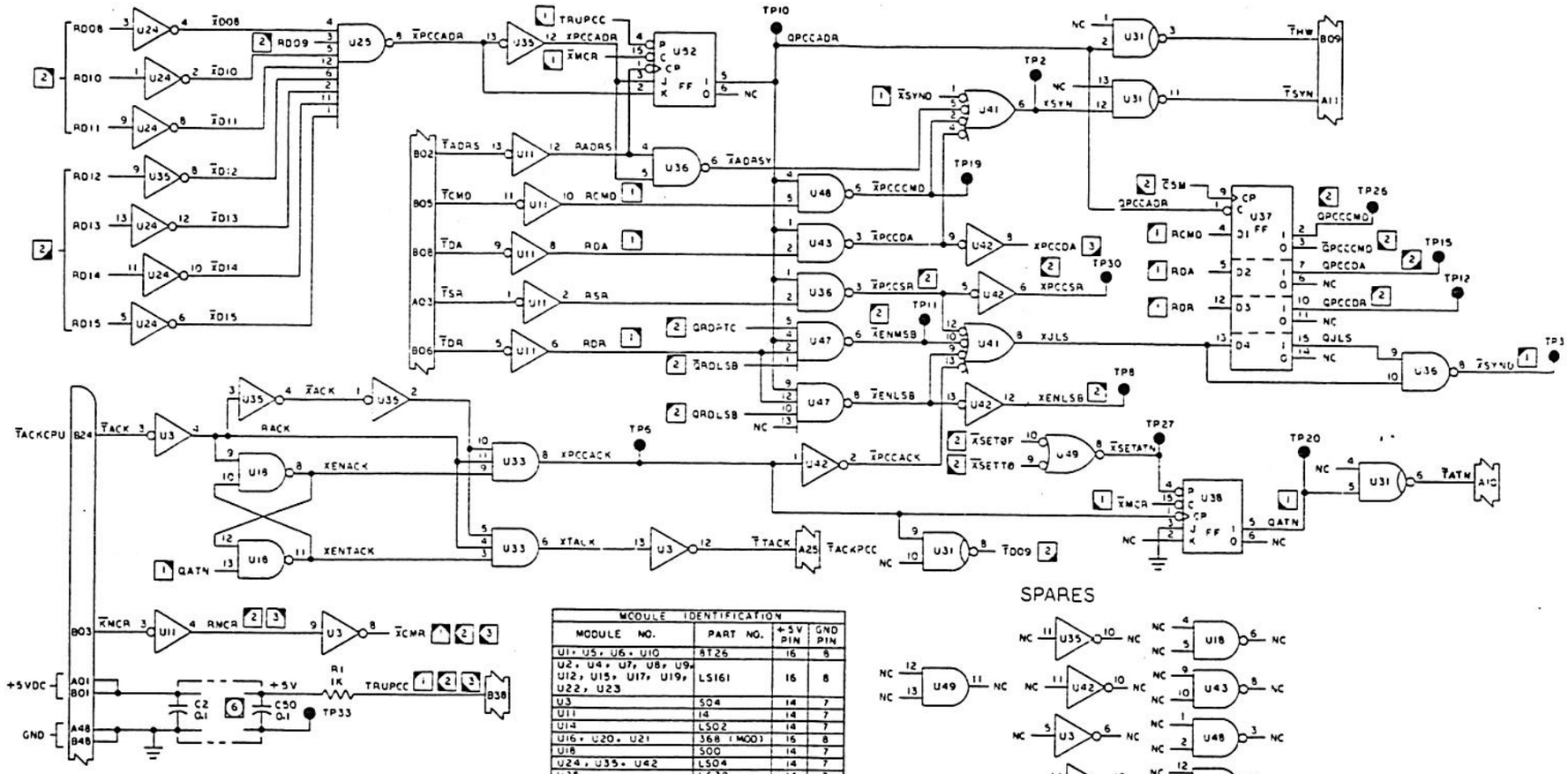
NOTES — UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS ±2%, 1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS ±20%, 100V.
3. SYMBOL [x] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION. (IF APPLICABLE SHEET NO.).
4. PARTIAL REF DES ARE SHOWN. FOR COMPLETE REF DES PREFIX WITH UNIT NO. OR SUBASSY NO.
5. SYMBOL [ ] MEANS: SEE NOTE NUMBER INDICATED.
6. C2 THRU C15, C19, C20, C24, C25, C26, C29, C30, C34, C35, C36, C39, C40, C44, C45, C46, C49, C50, C52 THRU C55 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
7. U5, U9, U10, U14, U15, U16, U25, U26, U30, U36 AND U46 ARE TRI-STATE DEVICES

1634438-100. Extended Arithmetic Register (ARC) Card Schematic Diagram (Sheet 1 of 2)



1634438-100. Extended Arithmetic Register (ARC) Card Schematic Diagram (Sheet 2 of 2)



MODULE IDENTIFICATION			
MODULE NO.	PART NO.	+5V PIN	GND PIN
U1, U5, U6, U10	8T26	16	8
U2, U4, U7, U8, U9, U12, U15, U17, U19, U22, U23	LS161	16	8
U3	S04	14	7
U11	14	14	7
U14	LS02	14	7
U16, U20, U21	368 (MOD)	16	8
U18	S00	14	7
U24, U35, U42	LS04	14	7
U25	LS30	14	7
U26, U27, U29, U30	LS193	16	8
U28, U41, U47	LS20	14	7
U31	38	14	7
U32, U34, U38, U40, U46, U50	LS112	16	8
U33	S11	14	7
U37	LS175	16	8
U36, U39, U43, U48	LS00	14	7
U44, U45	LS194 A	16	8
U49	LS08	14	7

SPARES

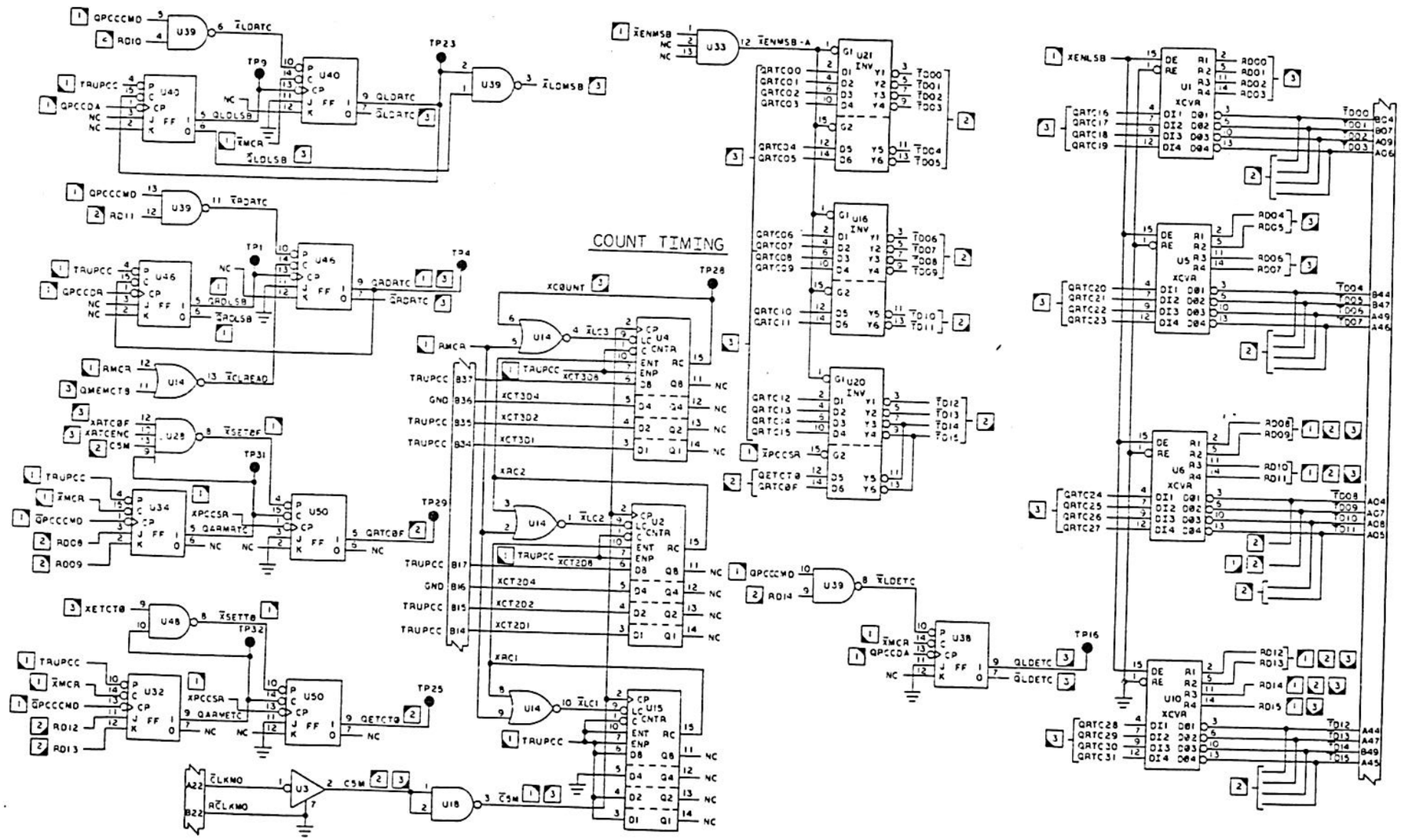
REFERENCE DES	
HIGHEST NO. USED	NO. NOT USED
U50	U13
R1	
C50	C1, C11, C13, C31, C36, C41, C46

NOTES – UNLESS OTHERWISE SPECIFIED

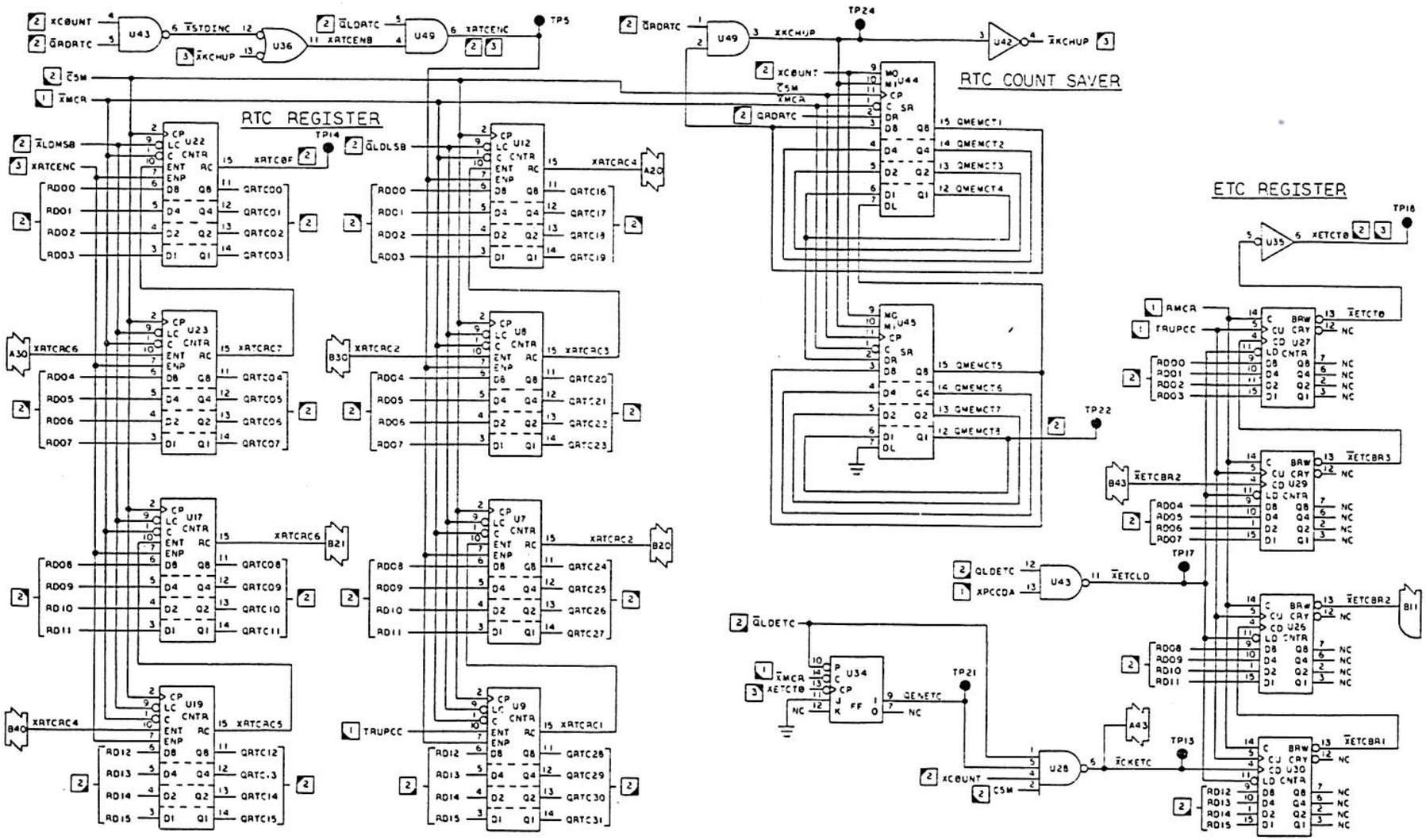
1. RESISTANCE VALUES ARE IN OHMS ±2%, 1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS ±20%, 100 V.
3. SYMBOL [ ] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION. (* APPLICABLE SHEET NO.)
4. PARTIAL REF DES ARE SHOWN. FOR COMPLETE REF DES PREFIX WITH UNIT NO. OR SUBASSY NO.
5. SYMBOL ◯ MEANS: SEE NOTE NUMBER INDICATED.
6. C2 THRU C10, C12, C14 THRU C30, C32 THRU C35, C37 THRU C40, C42 THRU C45, C47 THRU C50 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
7. U1, U5, U6, U10, U16, U20, U21 ARE TRI-STATE DEVICES.

1634440-200 NC

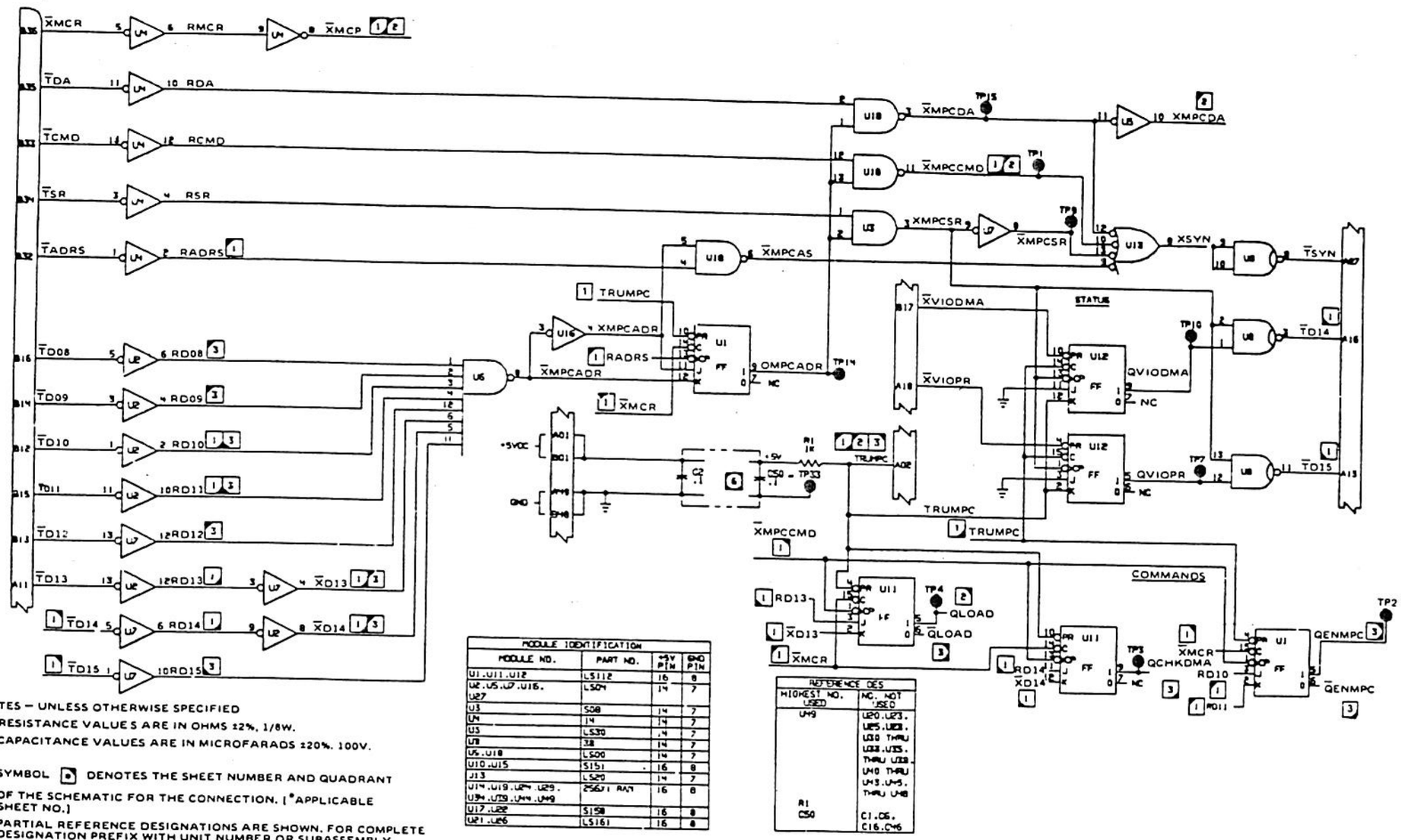
1634440-101. Program Controlled Clock (PCC) Card Schematic Diagram (Sheet 1 of 3)



1634440-101. Program Controlled Clock (PCC) Card Schematic Diagram (Sheet 2 of 3)



1634440 101. Program Controlled Clock (PCC) Card Schematic Diagram (Sheet 3 of 3)



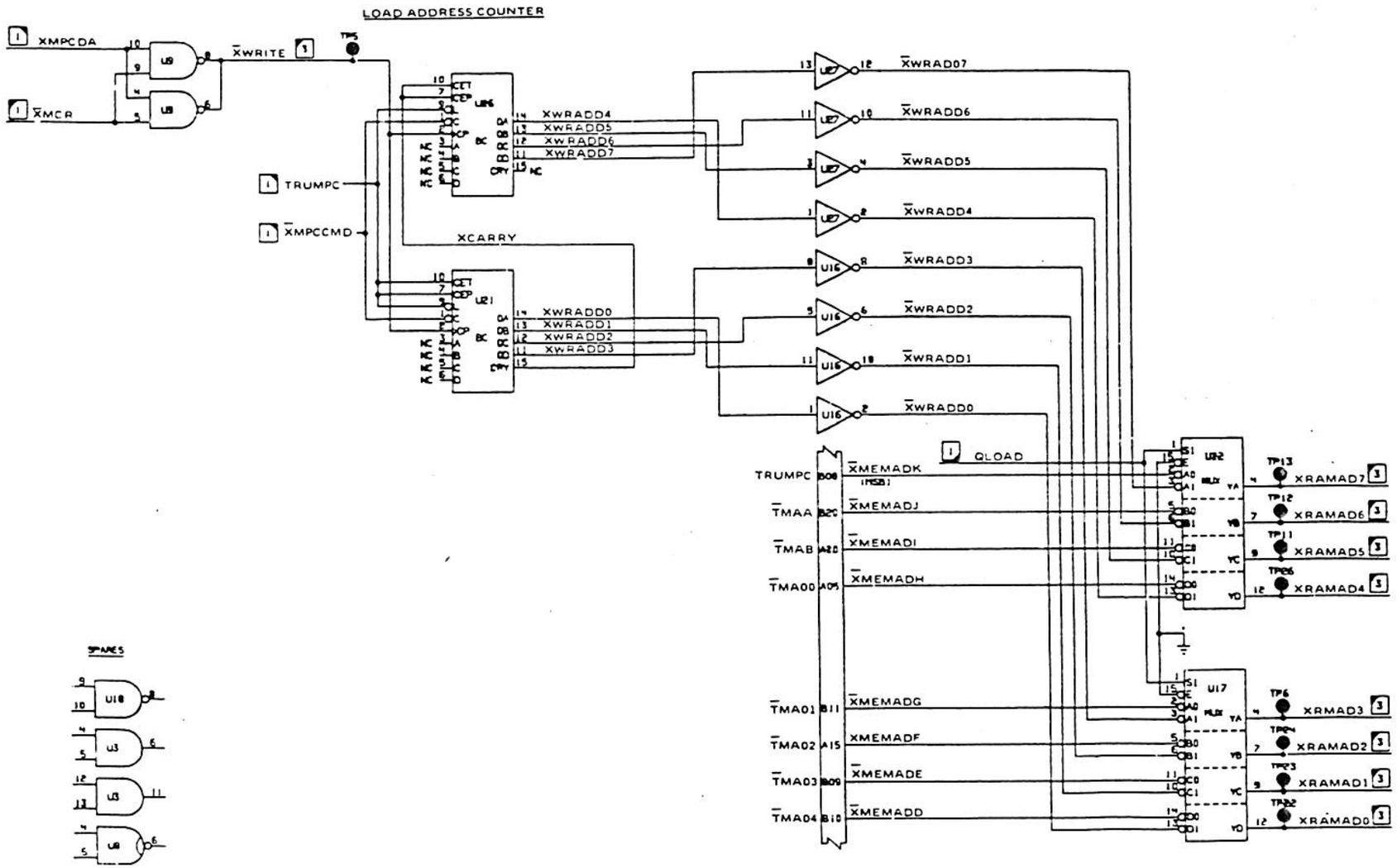
MODULE IDENTIFICATION			
MODULE NO.	PART NO.	+5V PIN	GND PIN
U1.U11.U12	LS112	16	8
U2.U5.U7.U16. U27	LS04	14	7
U3	S08	14	7
U4	14	14	7
U6	LS30	14	7
U8	38	14	7
U9.U18	LS00	14	7
U10.U15	S151	16	8
U13	LS20	14	7
U14.U19.U24.U29. U34.U39.U44.UM9	256J1 RAM	16	8
U17.U22	S158	16	8
U21.U26	LS161	16	8

REFERENCE DES	
HIGHEST NO. USED	NO. NOT USED
UM9	U20.U23. U25.U28. U30 THRU U33.U35. THRU U38. U40 THRU U43.UM5. THRU UM8
R1	
C50	C1.C5. C16.C46

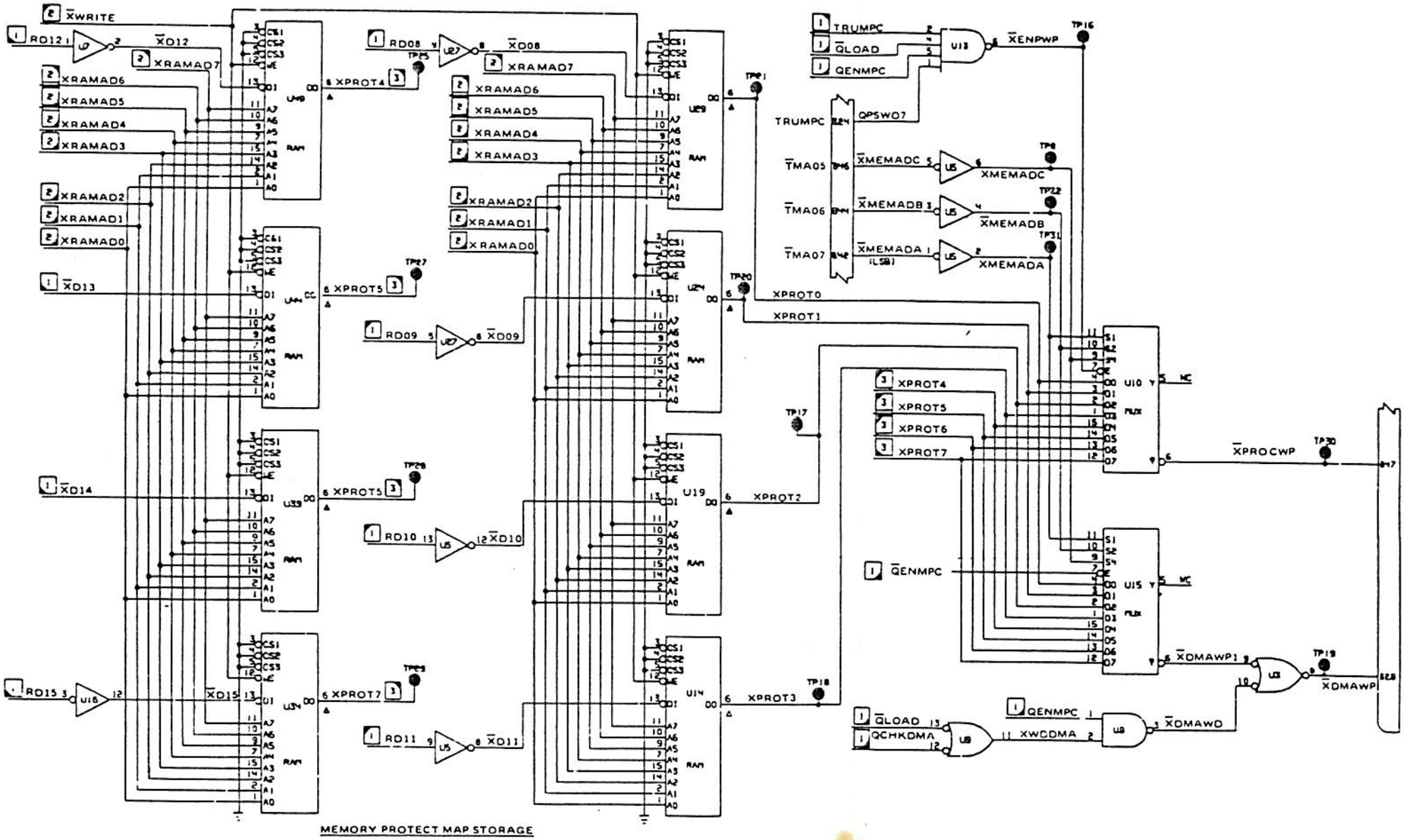
NOTES – UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS ±2%, 1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS ±20%. 100V.
3. SYMBOL ◉ DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION. [*APPLICABLE SHEET NO.]
4. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION.
5. A CIRCLE WITHIN A SQUARE MEANS: SEE NOTE NUMBER INDICATED.
6. C2 THRU C5, C7 THRU C15, C17 THRU C45, AND C47 THRU C50 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
7. U14, U19, U24, U29, U34, U39, U44 AND UM9 ARE TRI-STATE DEVICES.

1634441-100. Memory Protect Controller (MPC) Card Schematic Diagram (Sheet 1 of 3)

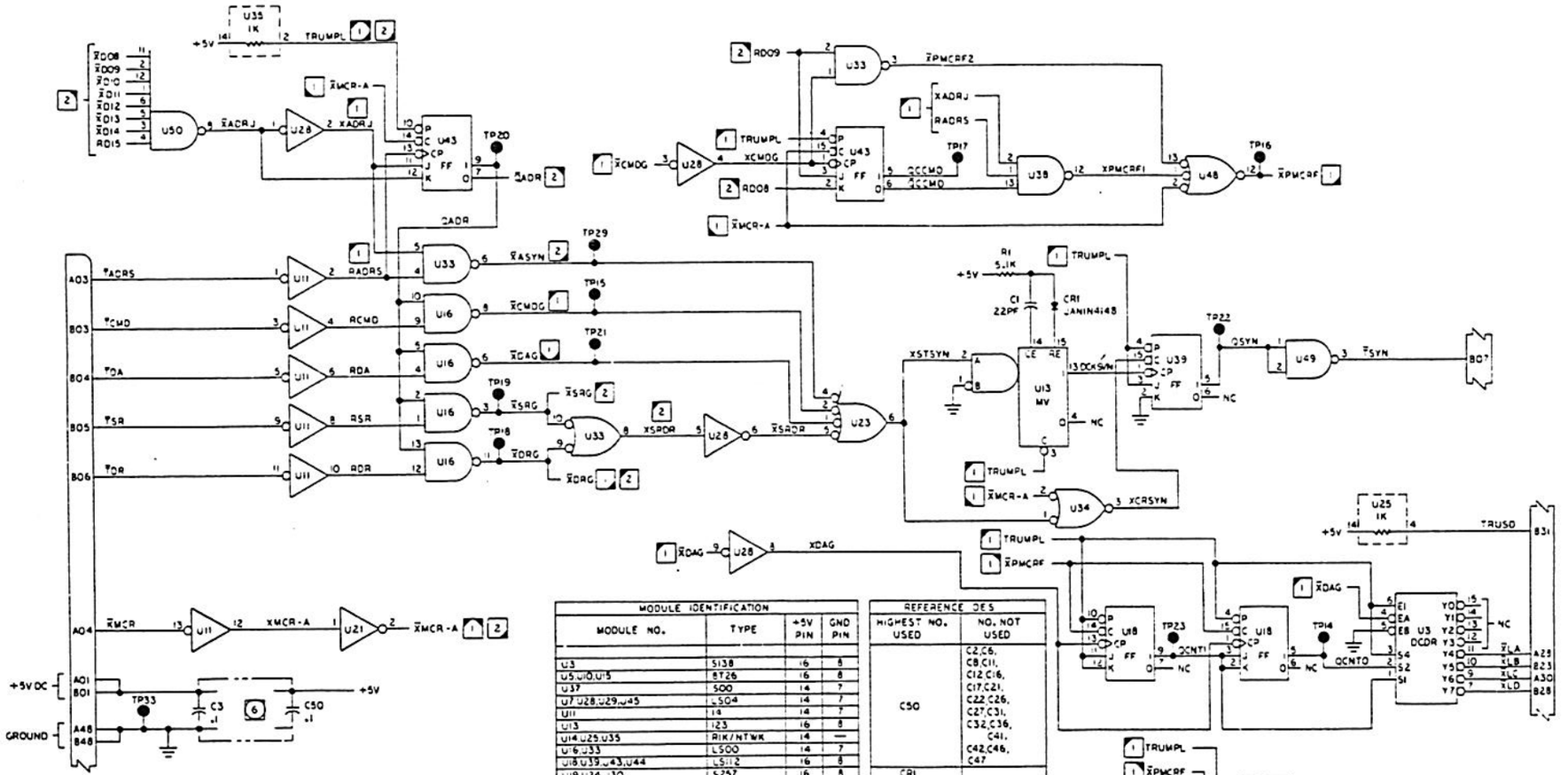


1634441-100. Memory Protect Controller (MPC) Card Schematic Diagram (Sheet 2 of 3)



MEMORY PROTECT MAP STORAGE

1634441-100. Memory Protect Controller (MPC) Card Schematic Diagram (Sheet 3 of 3)



MODULE IDENTIFICATION			
MODULE NO.	TYPE	+5V PIN	GND PIN
U3	S138	16	8
U5,U10,U15	8T26	16	8
U37	S00	14	7
U7,U28,U29,U45	LS04	14	7
U11	14	14	7
U13	123	16	8
U14,U25,U35	RIK/NTWK	14	—
U16,U33	LS00	14	7
U18,U39,U43,U44	LS112	16	8
U19,U24,U30	S257	16	8
U20	512 x 4 ROM	16	8
U21	S04	14	7
U23	LS20	14	7
U34	LS08	14	7
U38	LS10	14	7
U40	S132	14	7
U48	LS11	14	7
U49	38	14	7
U50	LS30	14	7

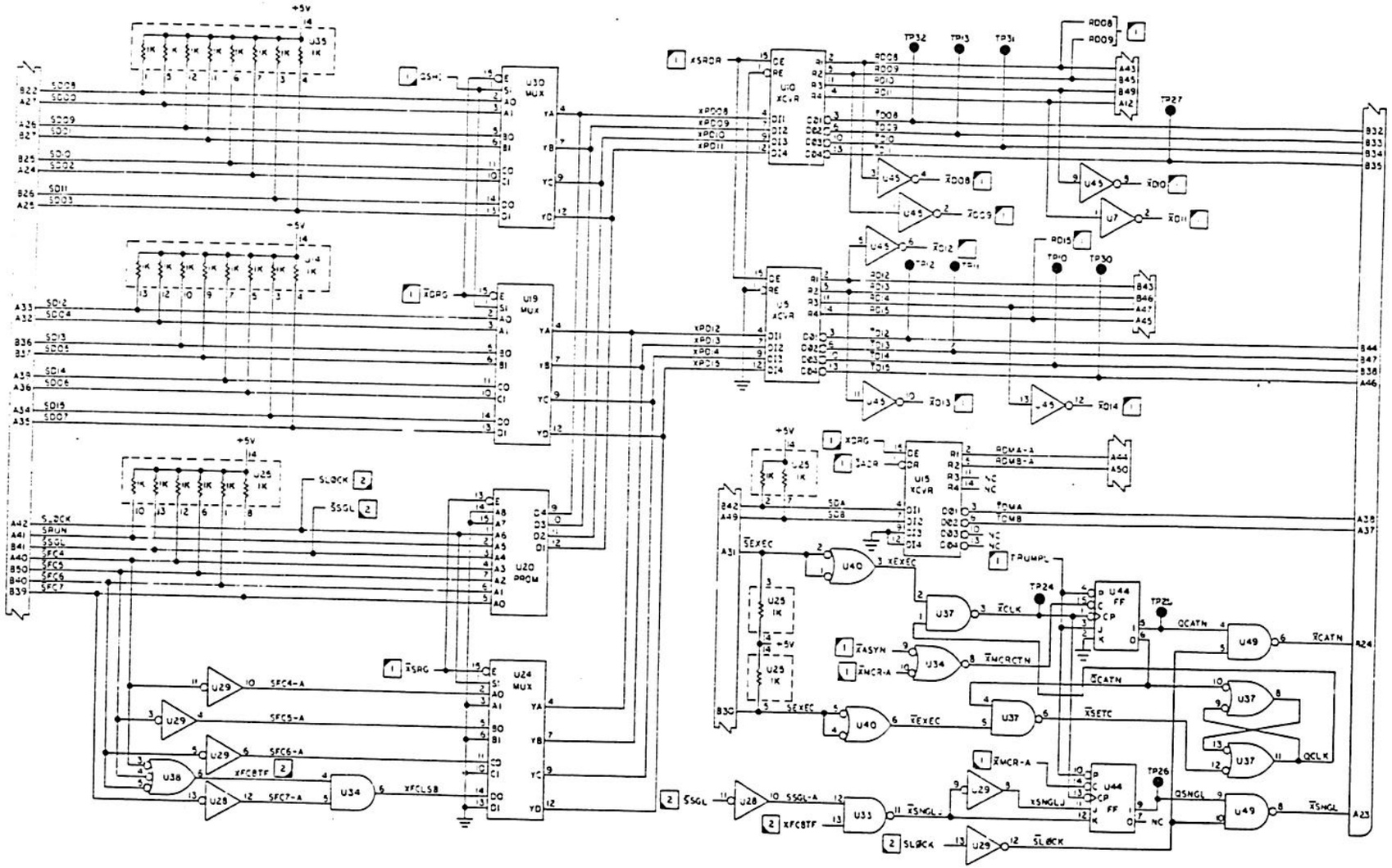
REFERENCE DES	
HIGHEST NO. USED	NO. NOT USED
C50	C2,C6, C8,C11, C12,C16, C17,C21, C22,C26, C27,C31, C32,C36, C41, C42,C46, C47
CR1	
R1	
U50	U1,U2,U4,U6, U8,U9,U12,U17, U22,U26, U27,U31, U32,U36, U41, U42,U46, U47

NOTES-UNLESS OTHERWISE SPECIFIED

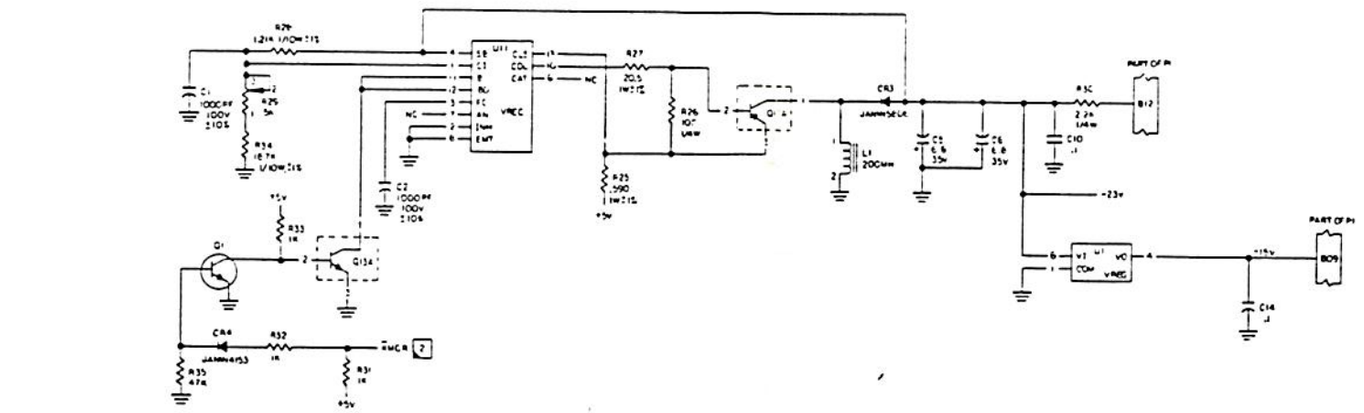
1. RESISTANCE VALUES ARE IN OHMS ±2%,1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS ±20%,100V.
3. SYMBOL ⊡ DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION (⊡ APPLICABLE SHEET NO.).
4. PARTIAL REF DES ARE SHOWN. FOR COMPLETE DES, PREFIX WITH UNIT NO. OR SUBASSY DES.
5. SYMBOL ☐ MEANS: SEE NOTE NUMBER INDICATED.
6. C3,C4,C5,C7,C9,C10,C13,C14,C15,C18,C19,C20,C23,C24,C25,C28,C29,C30,C33, C34,C35,C37,C38,C39,C40,C43,C44,C45,C48,C49,C50 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.

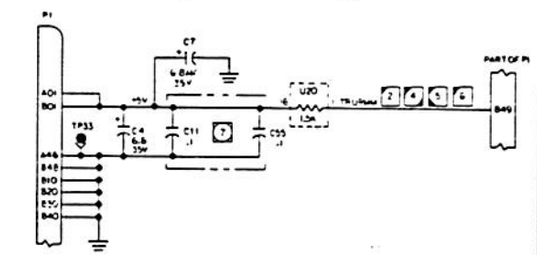
1634447-200 A

1634447-100. Maintenance Panel Interface Logic (MPL) Card Schematic Diagram (Sheet 1 of 2)



1634447-100. Maintenance Panel Interface Logic (MPL) Card Schematic Diagram (Sheet 2 of 2)





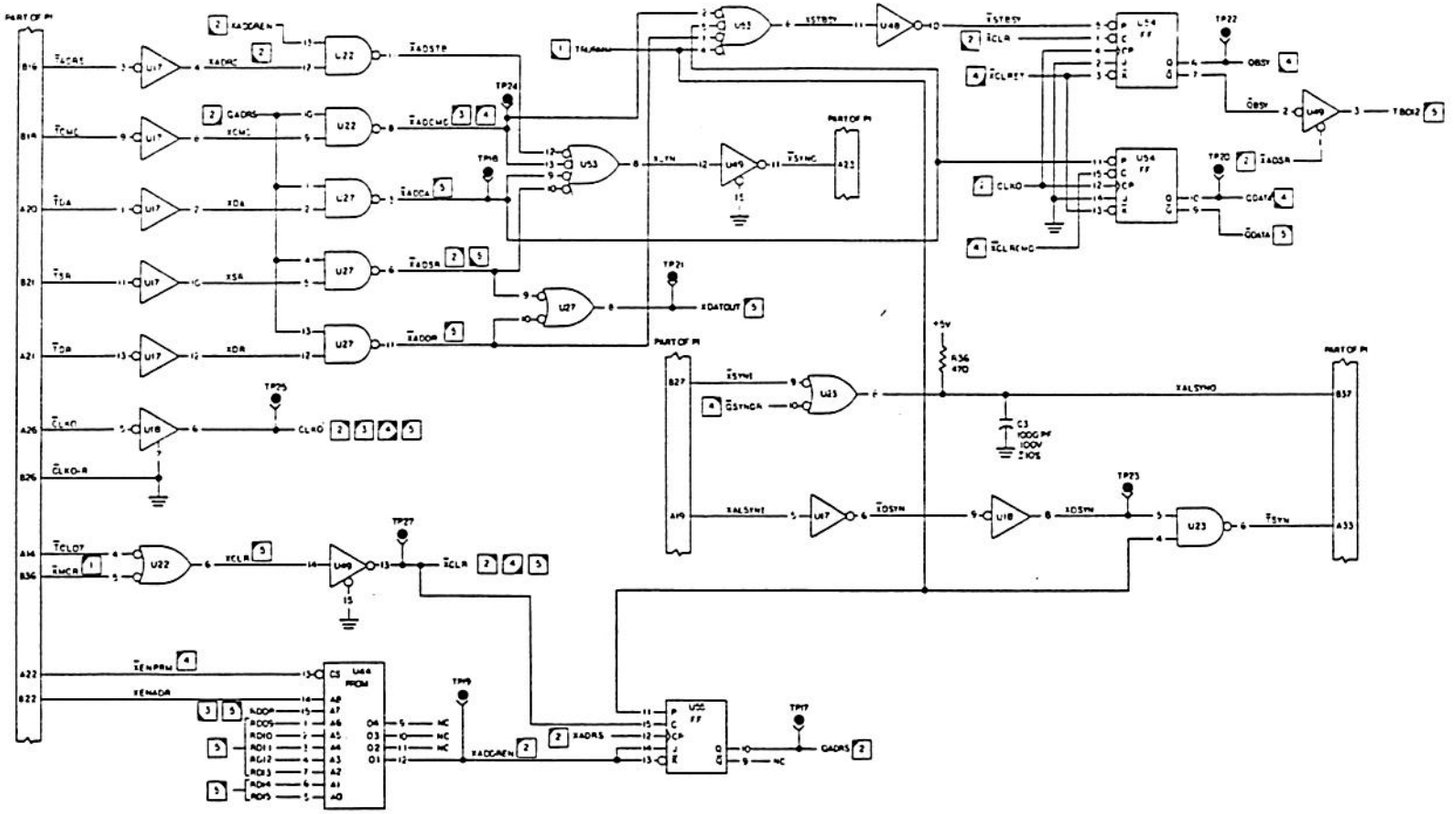
NOTES: UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS 1/8W ±2%.
2. CAPACITANCE VALUES ARE IN MICROFARADS 50V ±20%.
3. SYMBOL [6] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION (APPLICABLE SHEET NO.).
4. FOR ASSEMBLY SET IE 1634449-100.
5. SYMBOL [ ] MEANS SEE NOTE NUMBER INDICATED.
6. PARTIAL REF DES ARE SHOWN FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER OR SUBASSY DES.
7. C11 THRU C13, C16 THRU C19, C21 THRU C50, AND C52 THRU C55 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.

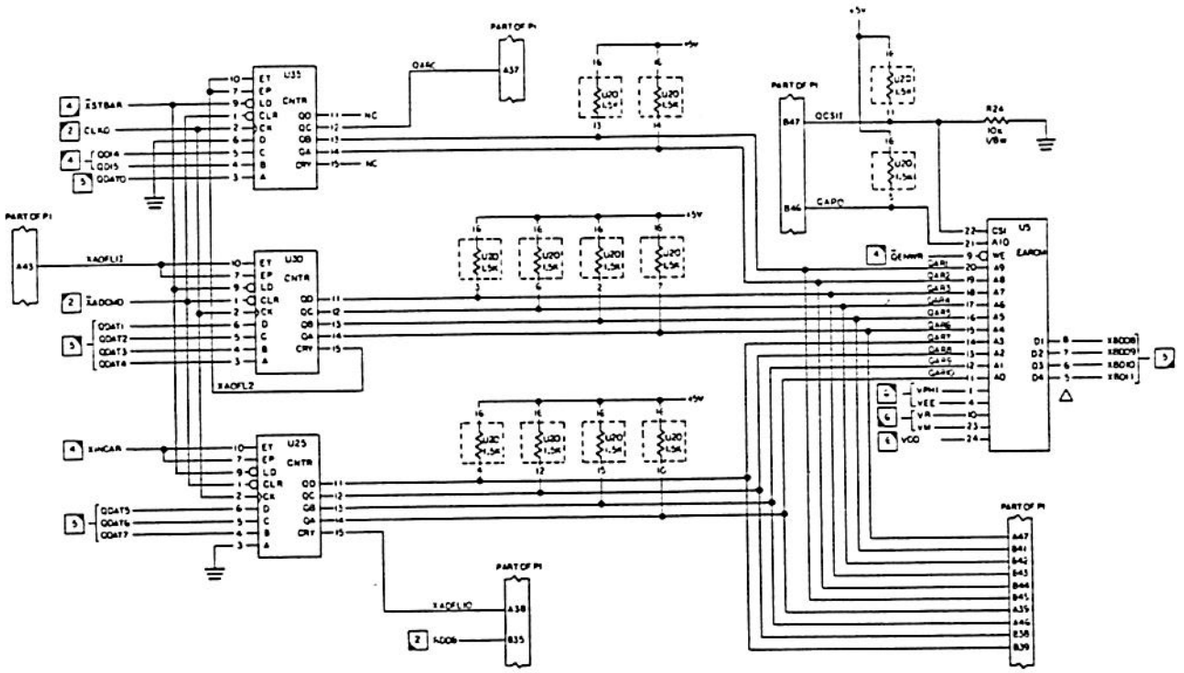
MODULE IDENTIFICATION			
REF. DES.	TYPE	+5V PIN	GND PIN
U1	74H15/J6738	—	—
U2	2716	24	—
U11	75497A	16	5
U16 U45 U50	54LS175	16	8
U17	5414	14	7
U18	54S04	14	7
U19	D1284	18	8
U20	8 WAY	18	—
U21 U25 U26 U30 U35	54LS241	15	8
U22 U27	54S00	14	7
U23	5438	14	7
U24	DM0034	14	7
U28 U29	8T26	16	8
U31 U36 U41 U44 U46	93446	16	8
U32 U37 U42 U43 U47 U51 U52	54LS163	16	8
U33	54S03	14	7
U34	54175	16	8
U38	54S151	16	8
U39	54LS138	16	8
U40	54LS257	16	8
U48	54LS04	14	7
U49	5436	14	8
U53	54LS20	14	7
U54 U55	54LS09	16	8

REFERENCE DESIGNATIONS	
HIGHEST NO. USED	NUMBER NOT USED
U55	U2, U3, U4, U6, U7, U8, U9, U10, U12, U13, U14, U15
C12	C2 THRU C11
R36	—
C56	C15, C20, C51
CR4	—
L1	—

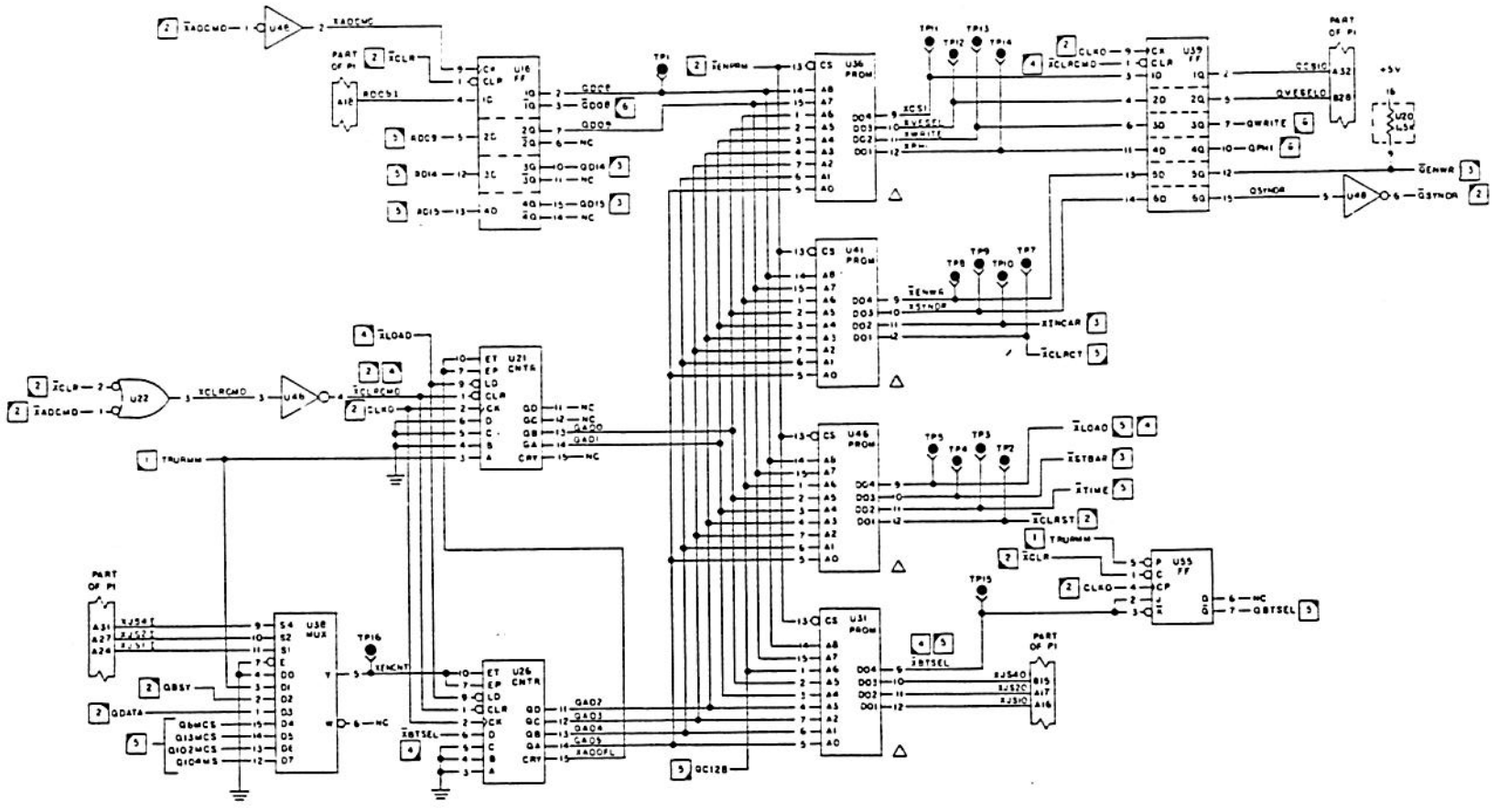
1634449-100. Read Mostly Memory (RMM) Card Schematic Diagram (Sheet 1 of 6)



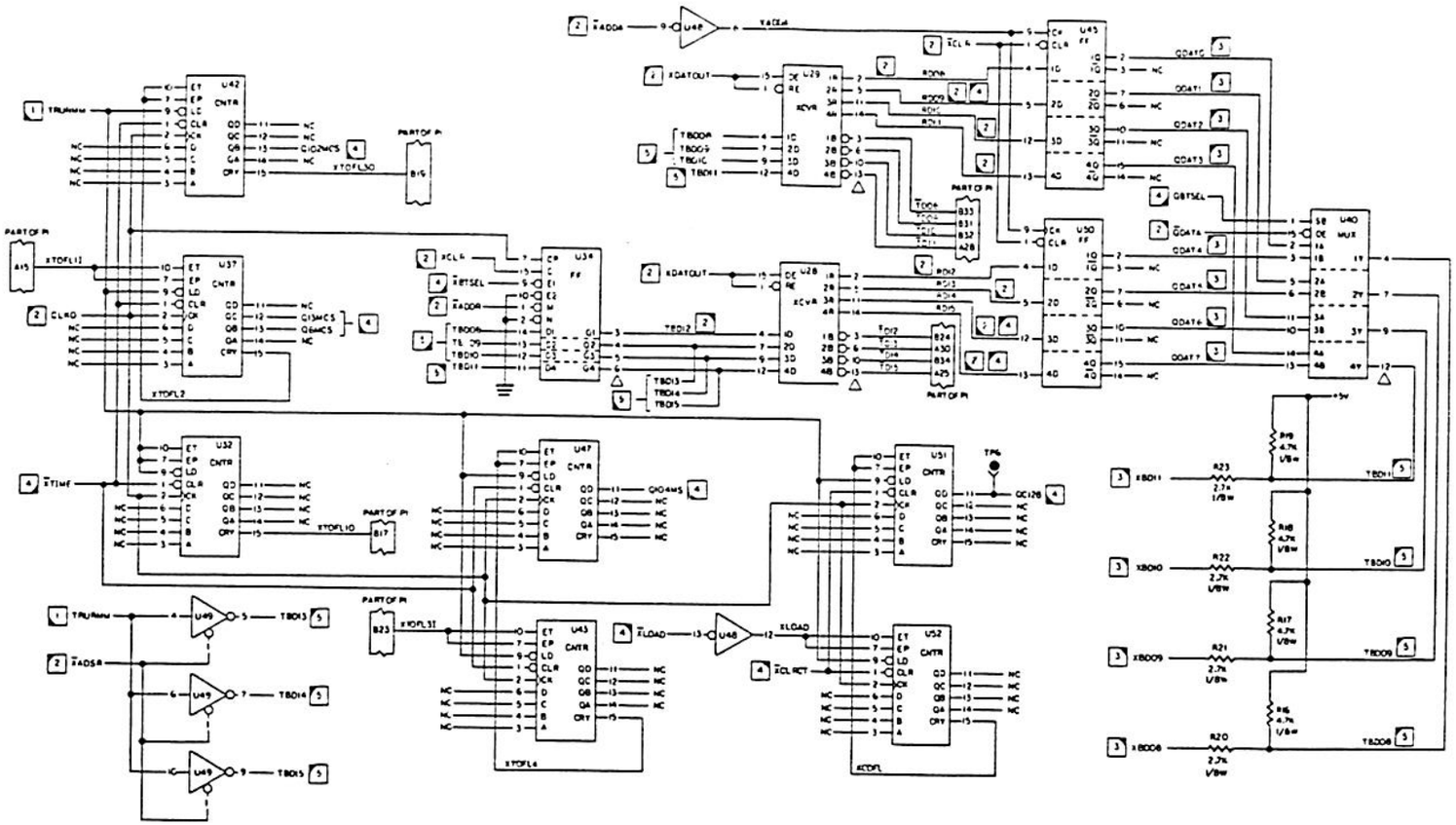
1634449-100. Read Mostly Memory (RMM) Card Schematic Diagram (Sheet 2 of 6)



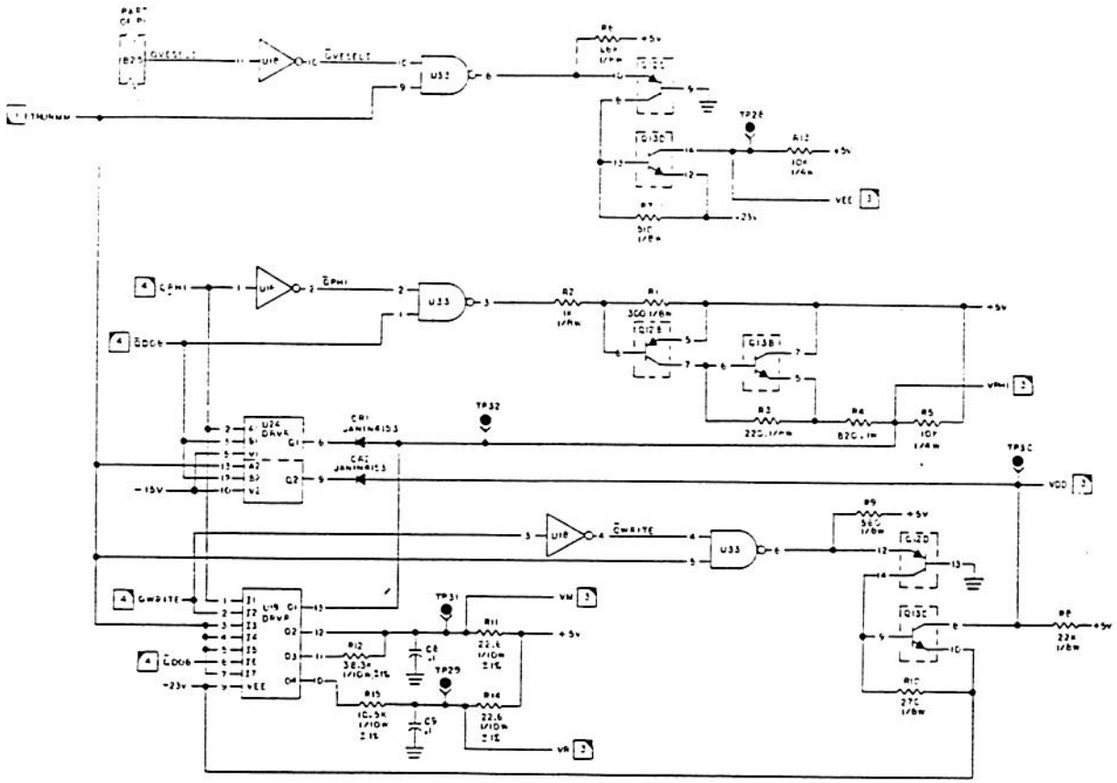
1634449-100. Read Mostly Memory (RMM) Card Schematic Diagram (Sheet 3 of 6)



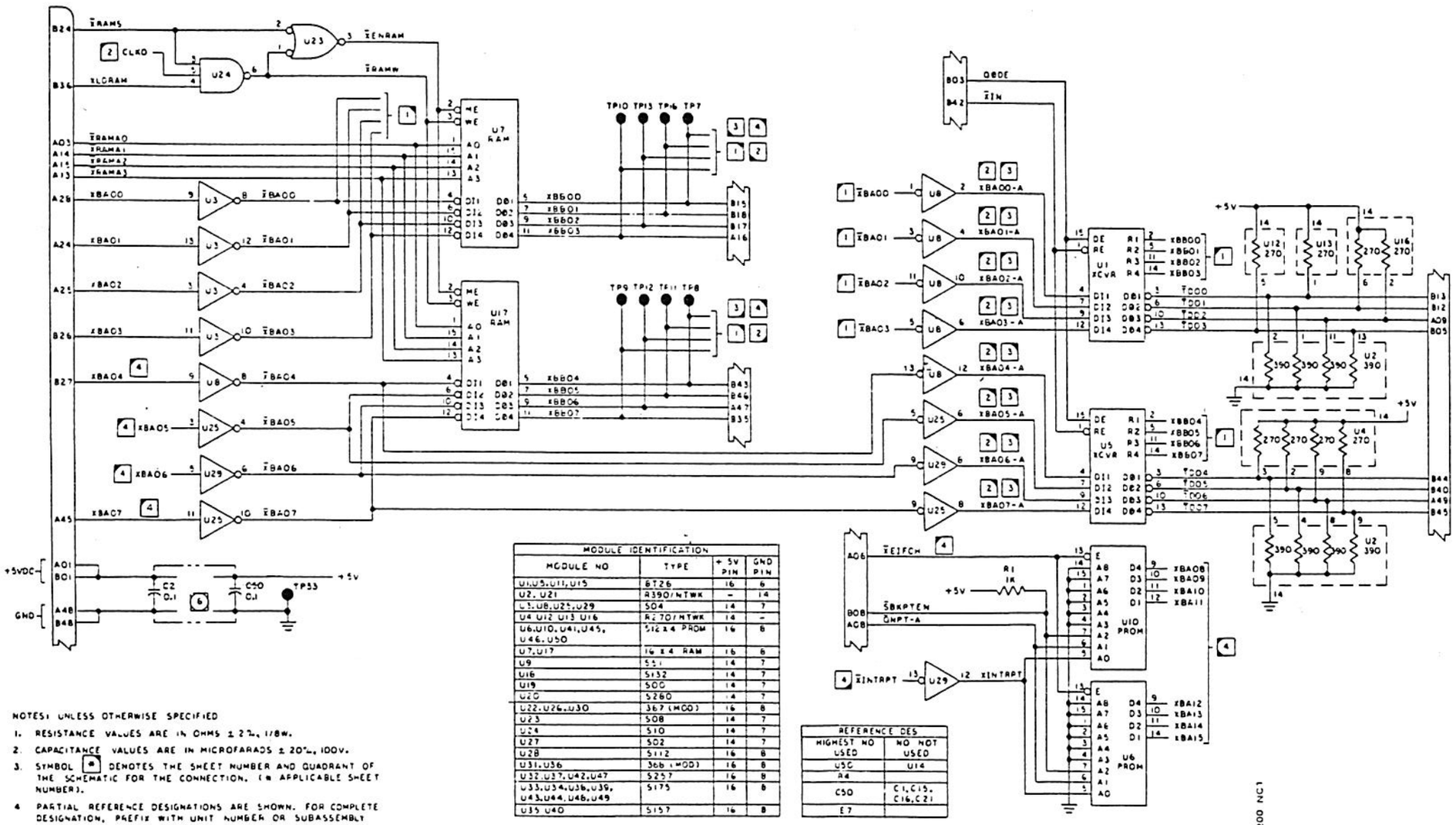
1634449-100. Read Mostly Memory (RMM) Card Schematic Diagram (Sheet 4 of 6)



1634449-100. Read Mostly Memory (RMM) Card Schematic Diagram (Sheet 5 of 6)



1634449-100. Read Mostly Memory (RMM) Card Schematic Diagram (Sheet 6 of 6)



MODULE IDENTIFICATION			
MODULE NO	TYPE	+5V PIN	GND PIN
U1,U5,U11,U15	8T26	16	8
U2, U21	R390/NTWK	–	14
U3,U8,U25,U29	S04	14	7
U4 U12 U13 U16	R270/NTWK	14	–
U6,U10, U41,U45, U46, U50	512 X 4 PROM	16	8
U7,U17	16 X 4 RAM	16	8
U9	S51	14	7
U18	S132	14	7
U19	S00	14	7
U20	S260	14	7
U22,U26,U30	367 (MOD)	16	8
U23	S08	14	7
U24	S10	14	7
U27	S02	14	7
U28	S112	16	8
U31,U36	366 (MOD)	16	8
U32,U37,U42,U47	S257	16	8
U33,U34,U35,U39, U43,U44,U48,U49	S175	16	8
U35 U40	S157	16	8

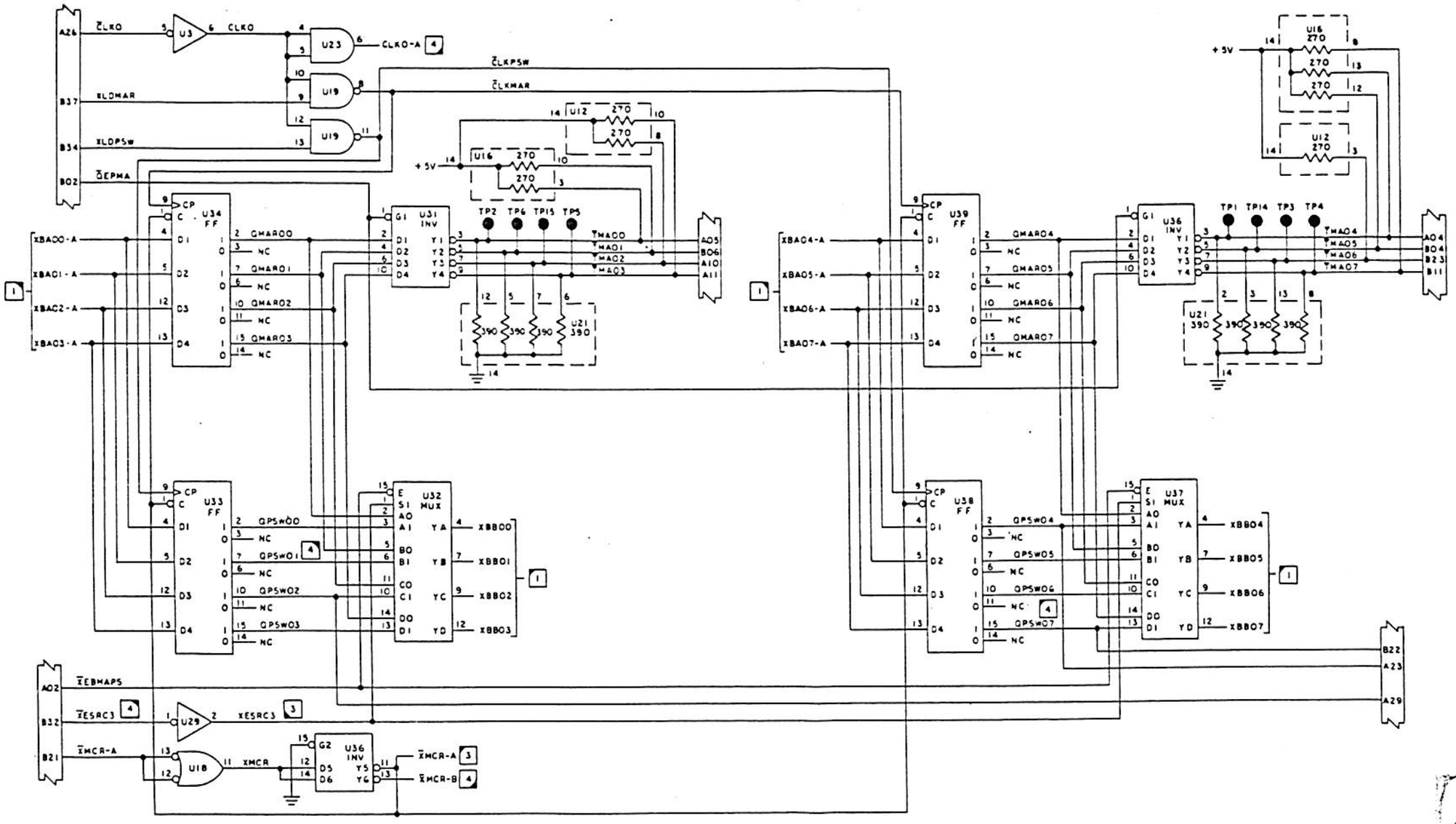
REFERENCE DES	
HIGHEST NO USED	NO NOT USED
U50	U14
A4	
C50	C1,C15, C16,C21
E7	

NOTES: UNLESS OTHERWISE SPECIFIED

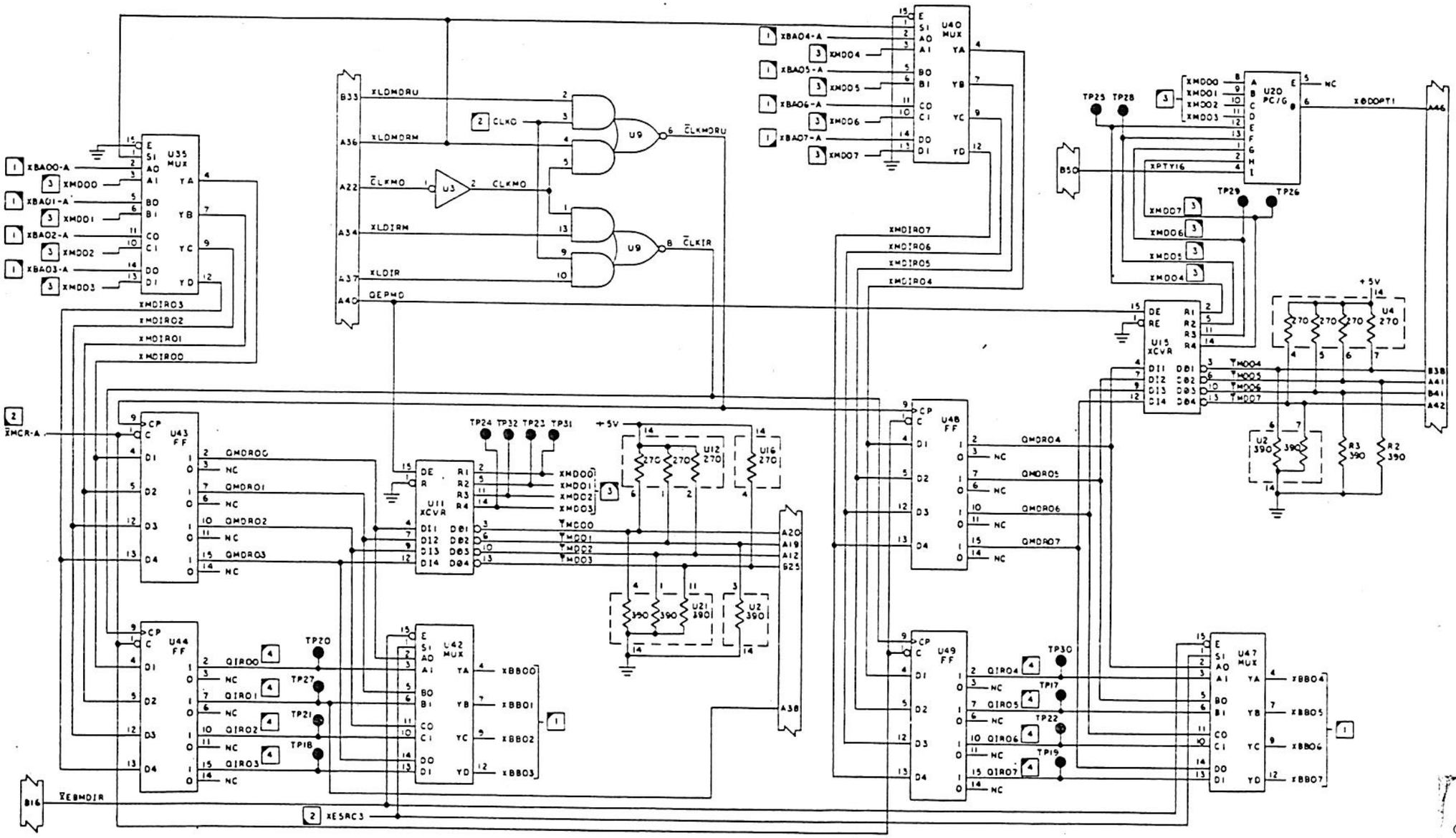
1. RESISTANCE VALUES ARE IN OHMS ± 2%, 1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS ± 20%, 100V.
3. SYMBOL [*] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION. (* APPLICABLE SHEET NUMBER).
4. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION.
5. SYMBOL [ ] MEANS SEE NOTE NUMBER INDICATED.
6. C2 THRU C14, C17 THRU C20 AND C22 THRU C50 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
7. U1,U5,U6,U7, U10,U11,U15,U17, U22,U26,U30,U31,U32,U36,U37,U41, U42,U45,U46,U47 AND U50 ARE TRI STATE DEVICES.

1641653 200 NC1

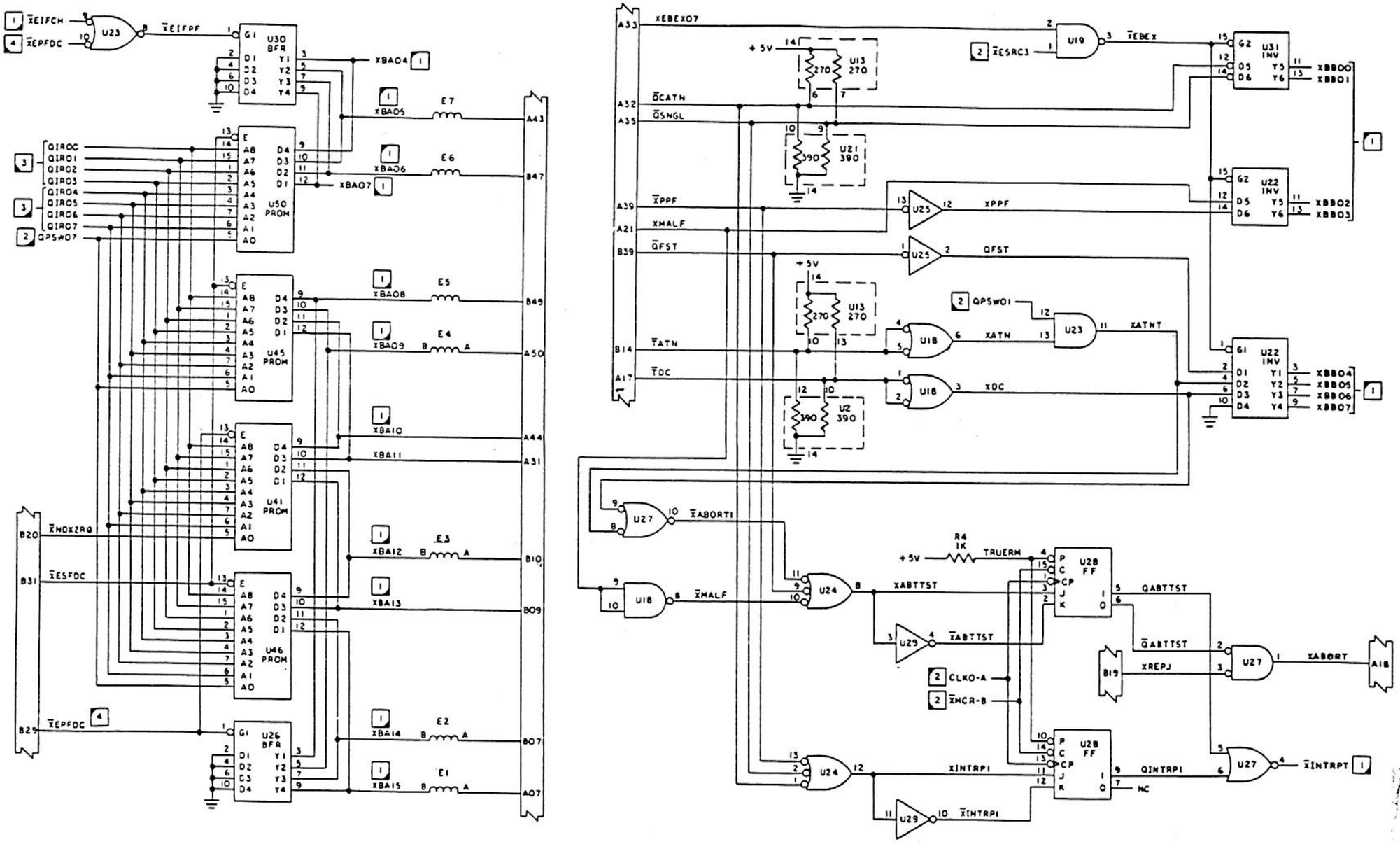
1641653-100. External MSB Register (ERB) Card Schematic Diagram (Sheet 1 of 4)



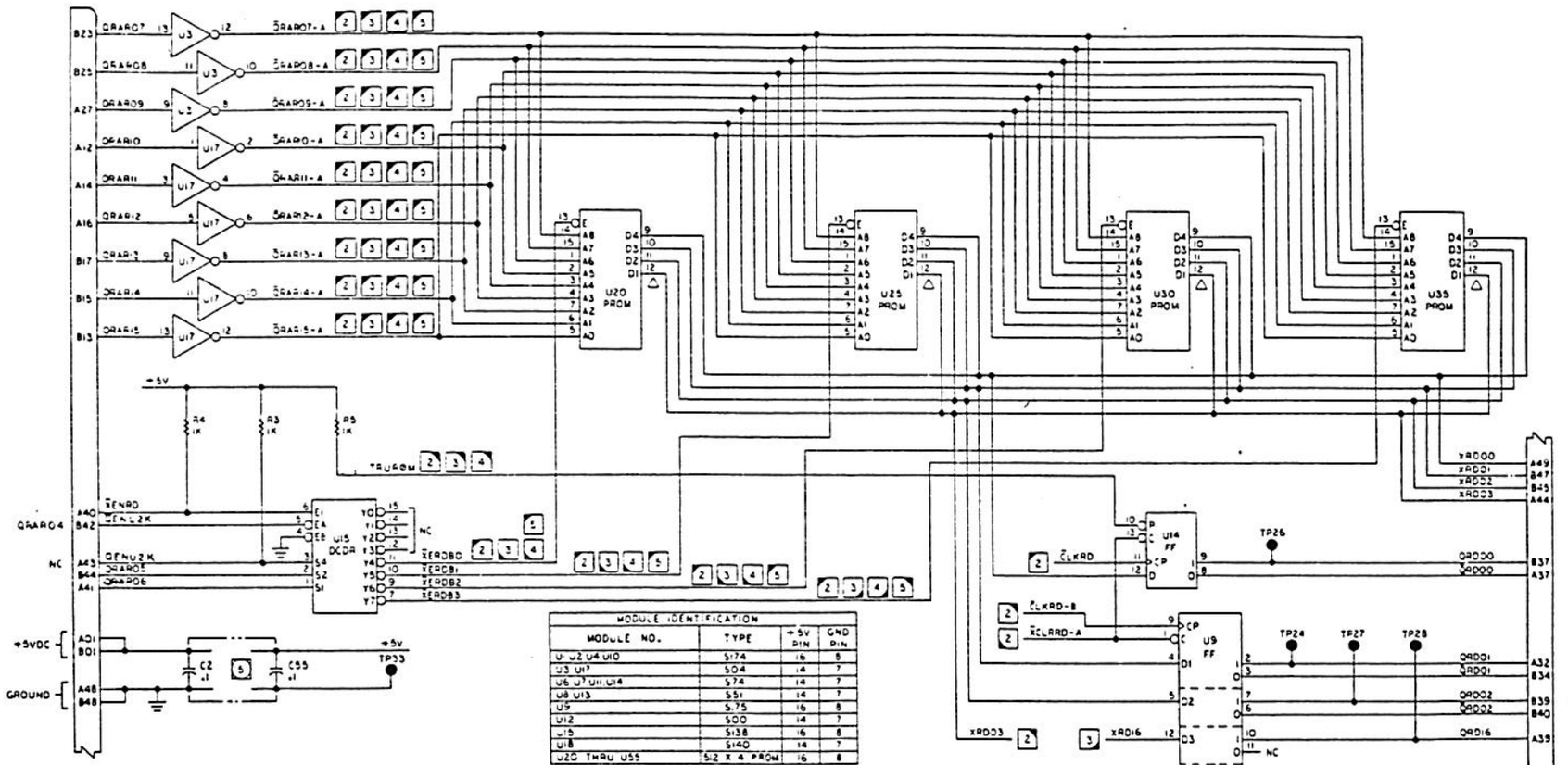
1641653-100. External MSB Register (ERB) Card Schematic Diagram (Sheet 2 of 4)



1641653-100. External MSB Register (ERB) Card Schematic Diagram (Sheet 3 of 4)



1641653-100. External MSB Register (ERB) Card Schematic Diagram (Sheet 4 of 4)



MODULE IDENTIFICATION			
MODULE NO.	TYPE	+5V PIN	GND PIN
U1,U2,U4,U10	S174	16	8
U3,U17	S04	14	7
U6,U7,U11,U16	S74	14	7
U8,U13	S51	14	7
U9	S,75	16	8
U12	S00	14	7
U15	S138	16	8
U18	S140	14	7
U20 THRU U55	512 X 4 PROM	16	8

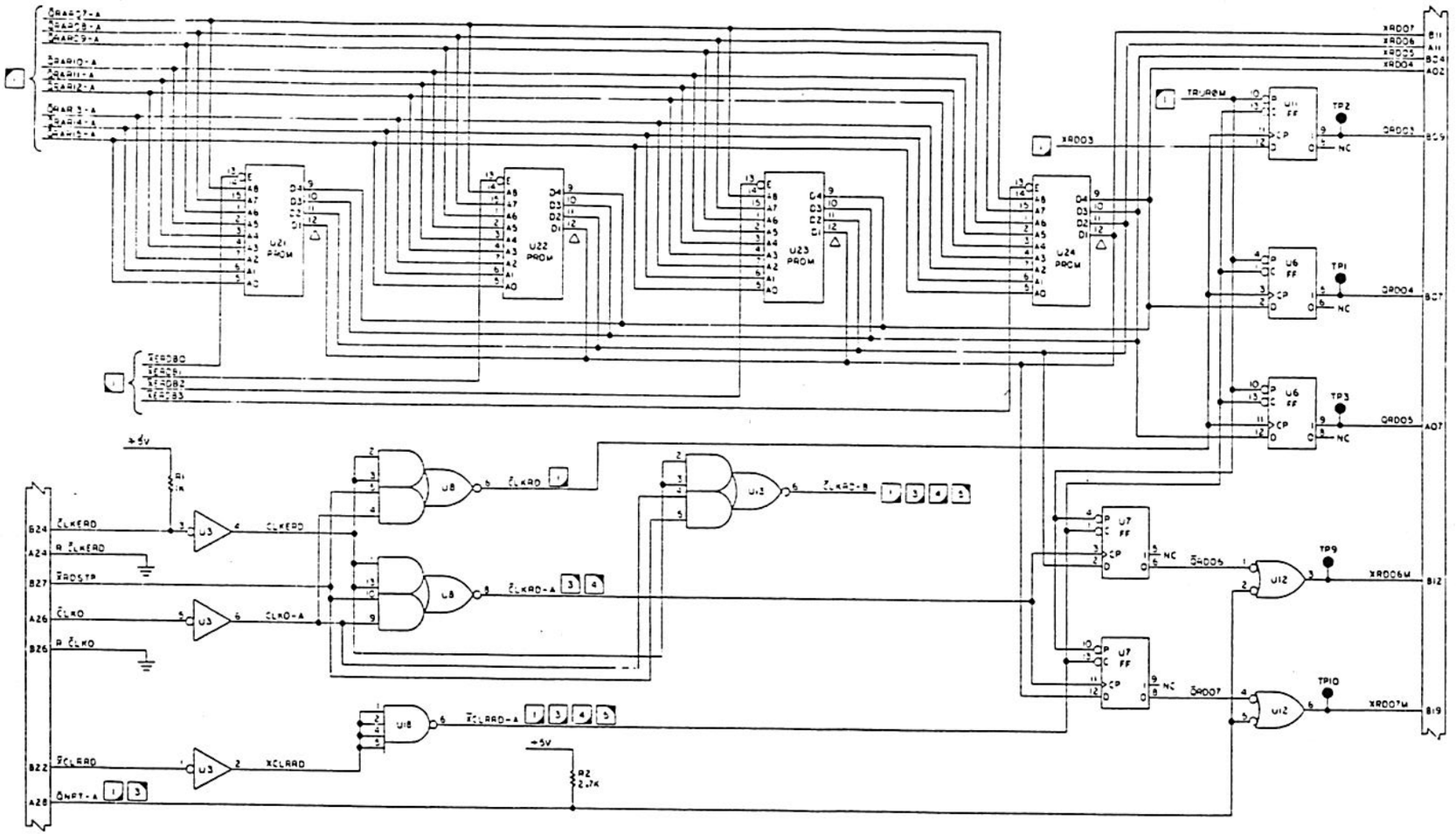
REFERENCE DES	
HIGHEST NO. USED	NO. NOT USED
U55	U5,U16, U19
R5	
C55	C1,C6, C11,C51

NOTES-UNLESS OTHERWISE SPECIFIED

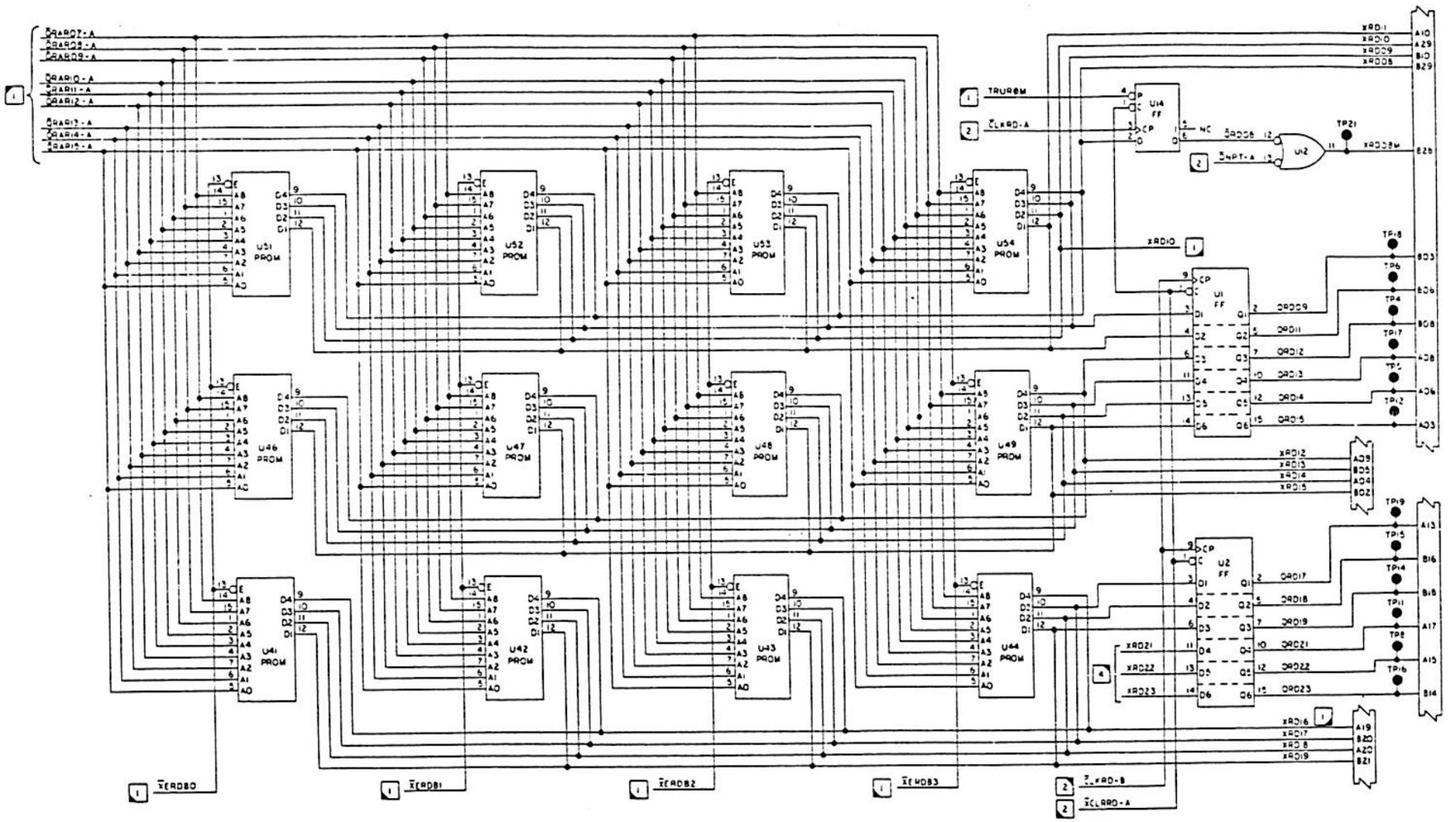
1. CAPACITANCE VALUES ARE IN MICROFARADS ±20%,100V.
2. RESISTANCE VALUES ARE IN OHMS ±2%,1/8W.
3. SYMBOL [x] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION (x APPLICABLE SHEET NO.).
4. PARTIAL REF DES ARE SHOWN. FOR COMPLETE DES PREFIX WITH UNIT NO. OR SUBASSY DES.
5. C2 THRU C5,C7 THRU C10,C12 THRU C50 AND C52 THRU C55 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
6. A CIRCLE WITHIN A SQUARE MEANS: SEE NOTE NUMBER INDICATED.
7. U20 THRU U25,U30 AND U35 ARE TRI-STATE DEVICES.

1641611-200

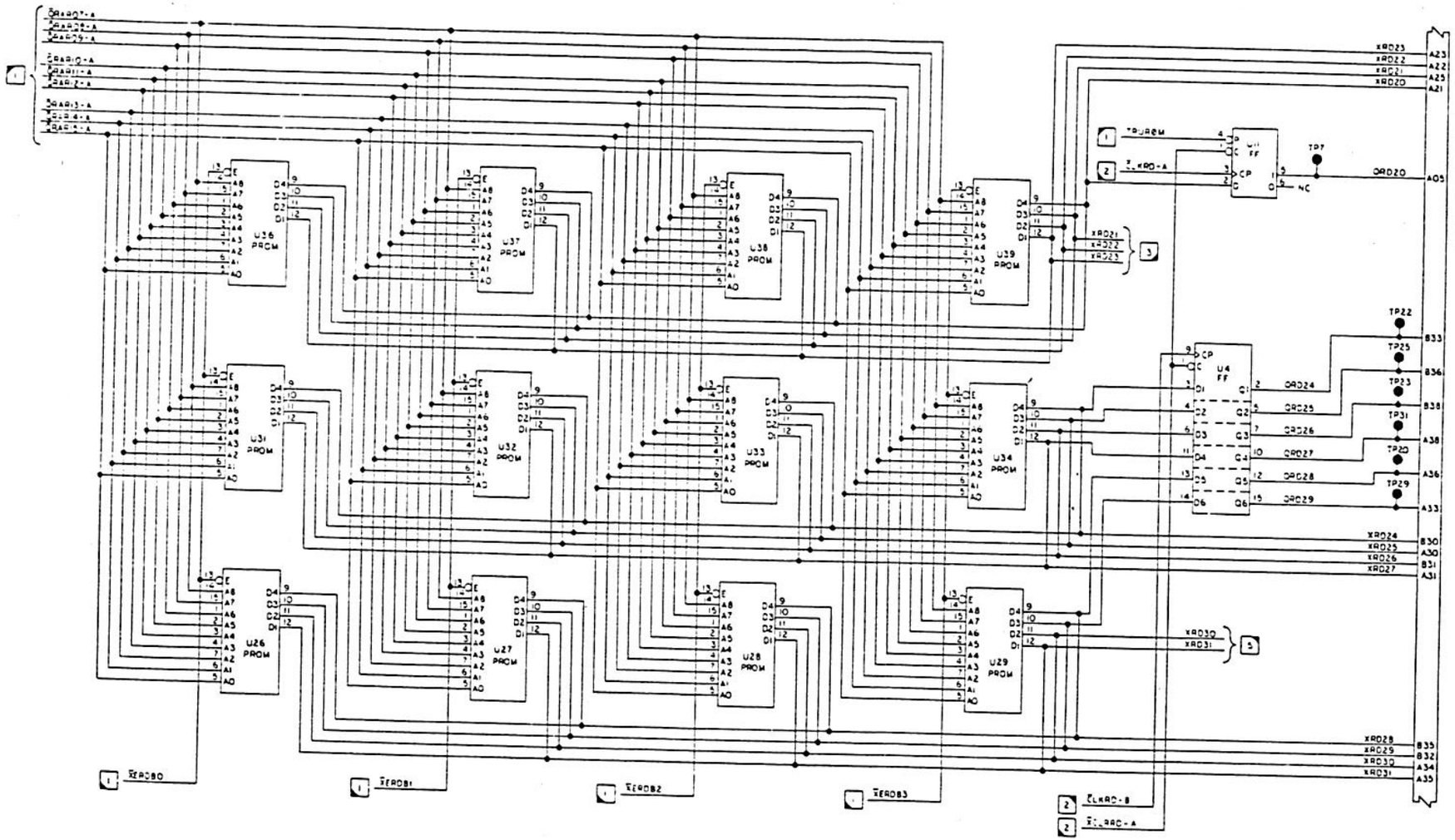
1641611-100. Read Only Memory (ROM) Card Schematic Diagram (Sheet 1 of 5)



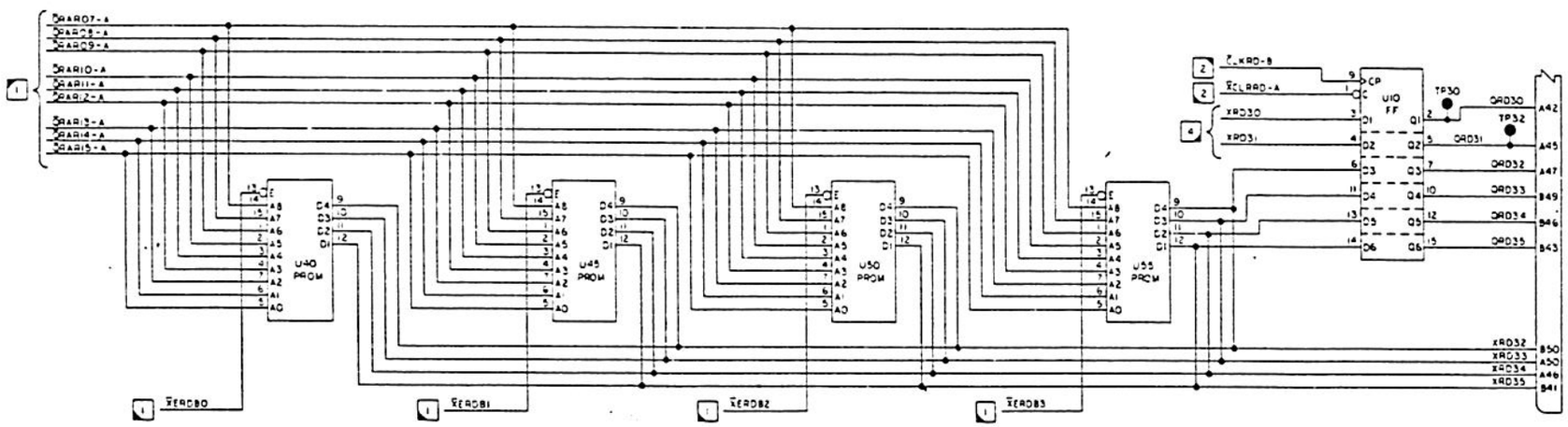
1641611-100. Read Only Memory (ROM) Card Schematic Diagram (Sheet 2 of 5)



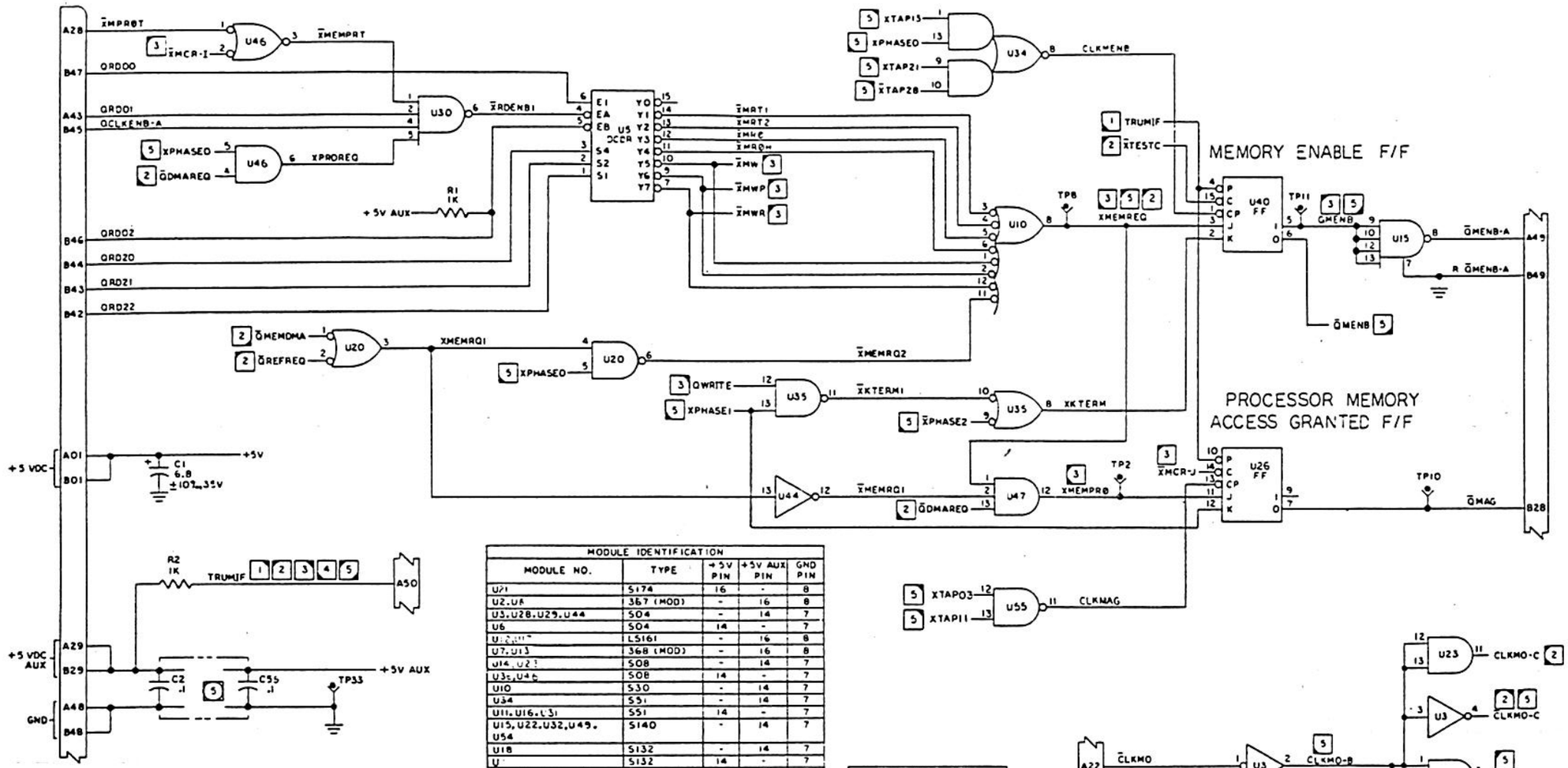
1641611-100. Read Only Memory (ROM) Card Schematic Diagram (Sheet 3 of 5)



1641611-100. Read Only Memory (ROM) Card Schematic Diagram (Sheet 4 of 5)



1641611-100. Read Only Memory (ROM) Card Schematic Diagram (Sheet 5 of 5)



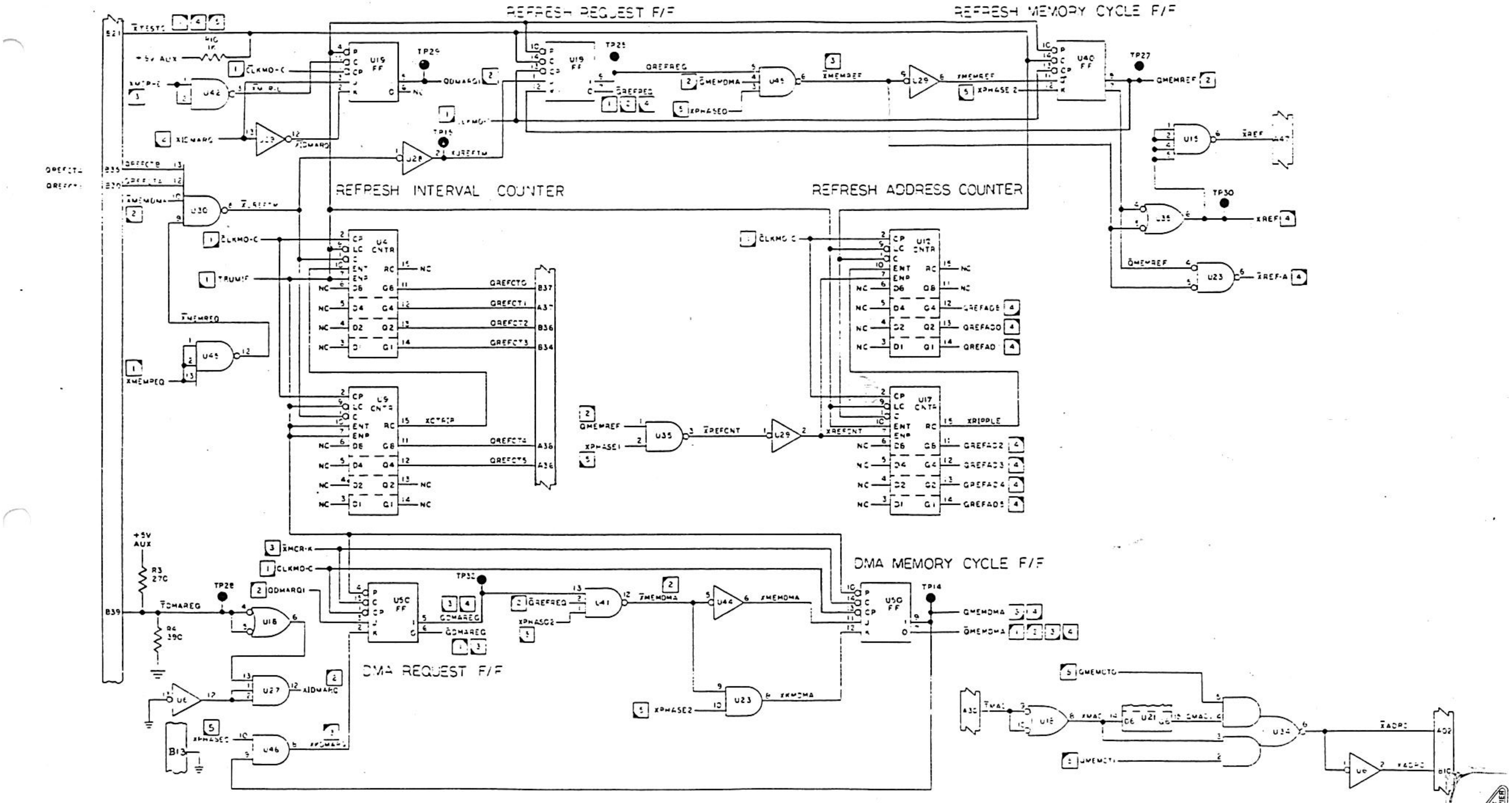
MODULE IDENTIFICATION				
MODULE NO.	TYPE	+5V PIN	+5V AUX PIN	GND PIN
U21	S174	16	-	8
U2.U8	367 (MOD)	-	16	8
U3.U28.U29.U44	S04	-	14	7
U6	S04	14	-	7
U[illegible]	LS161	-	16	8
U7.U13	368 (MOD)	-	16	8
U14.U23	S08	-	14	7
U35,U46	S08	14	-	7
U10	S30	-	14	7
U34	S51	-	14	7
U11.U16.U31	S51	14	-	7
U15,U22,U32,U49. U54	S140	-	14	7
U18	S132	-	14	7
U[illegible]	S132	14	-	7
U19,U24,U25,U40. U48,U50,U53	S112	-	16	8
U[illegible]	S112	16	-	8
U20,U35,U42,U52. U55	S00	-	14	7
U5	S138	-	16	8
U30	S20	-	14	7
U33,U38,U43	DELAY LINE	-	[illegible]	7
U37,U45	S1C	-	14	7
U41,U51	S10	14	-	7
U47,U27	S11	-	14	7
U4 U9	LS163	-	16	[illegible]

REFERENCE DES	
HIGHEST NO. USED	NO. NOT USED
U55	U39
R10	
C57	C6, C11, C16, C31, C36, C41, C46, C51, C56.

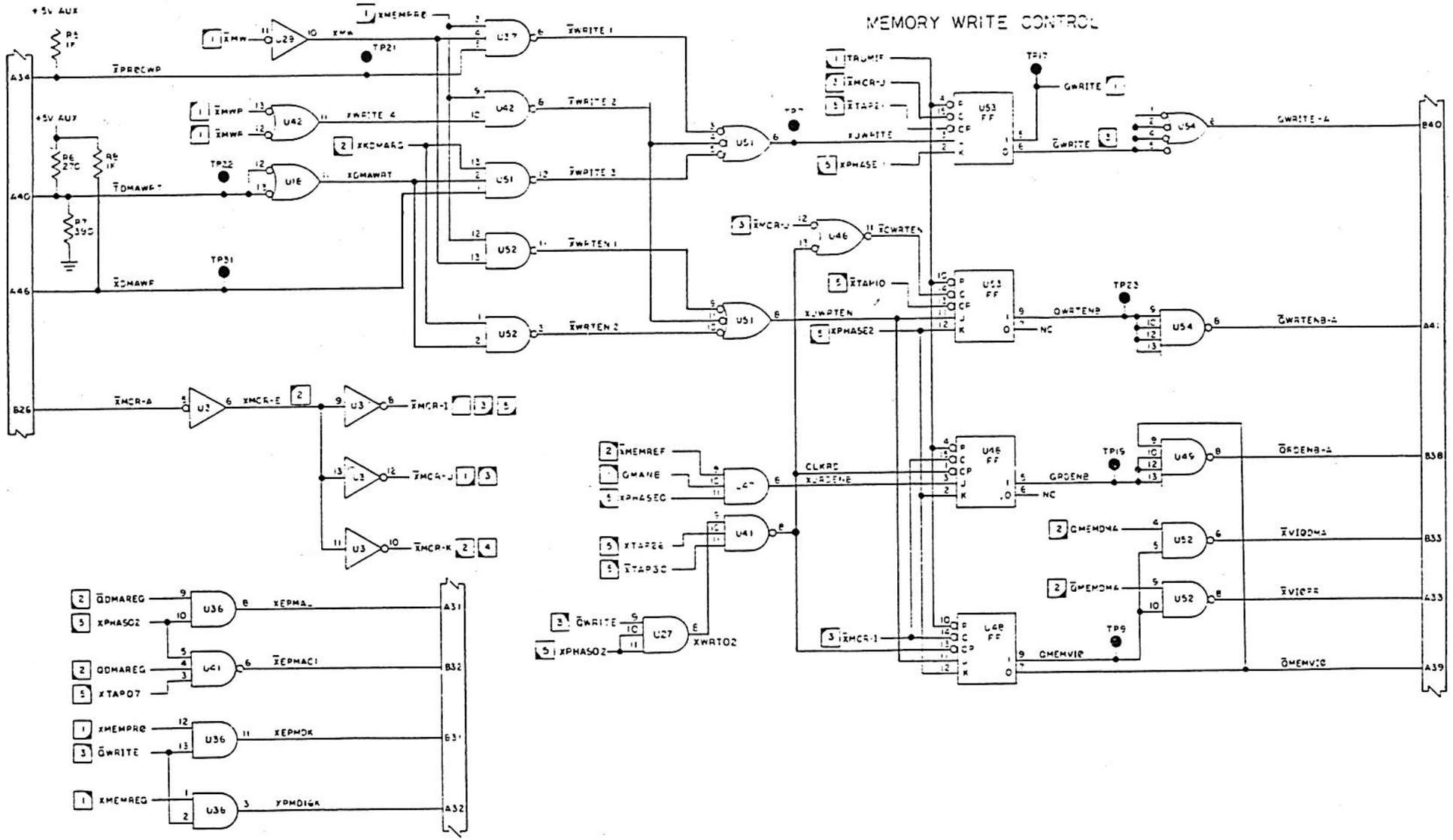
NOTES - UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS ± 2%, 1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS ± 20% , 50V.
3. SYMBOL [*] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION. (* APPLICABLE SHEET NO.).
4. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER OR SUBASSEMBLY DESIGNATION.
5. C2 THRU C5, C7 THRU C10, C12 THRU C15, C17 THRU C30, C32 THRU C35, C37 THRU C40, C42 THRU C45, C47 THRU C50, C52 THRU C55 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
6. SYMBOL ◯ MEANS: SEE NOTE NUMBER INDICATED.
7. U2, U7, U12 AND U17 ARE TRI-STATE DEVICES.
8. FOR ASSY SEE 1641774-101 AND 1641547-101.
9. FOR TEST SPECIFICATION SEE 1634430-400

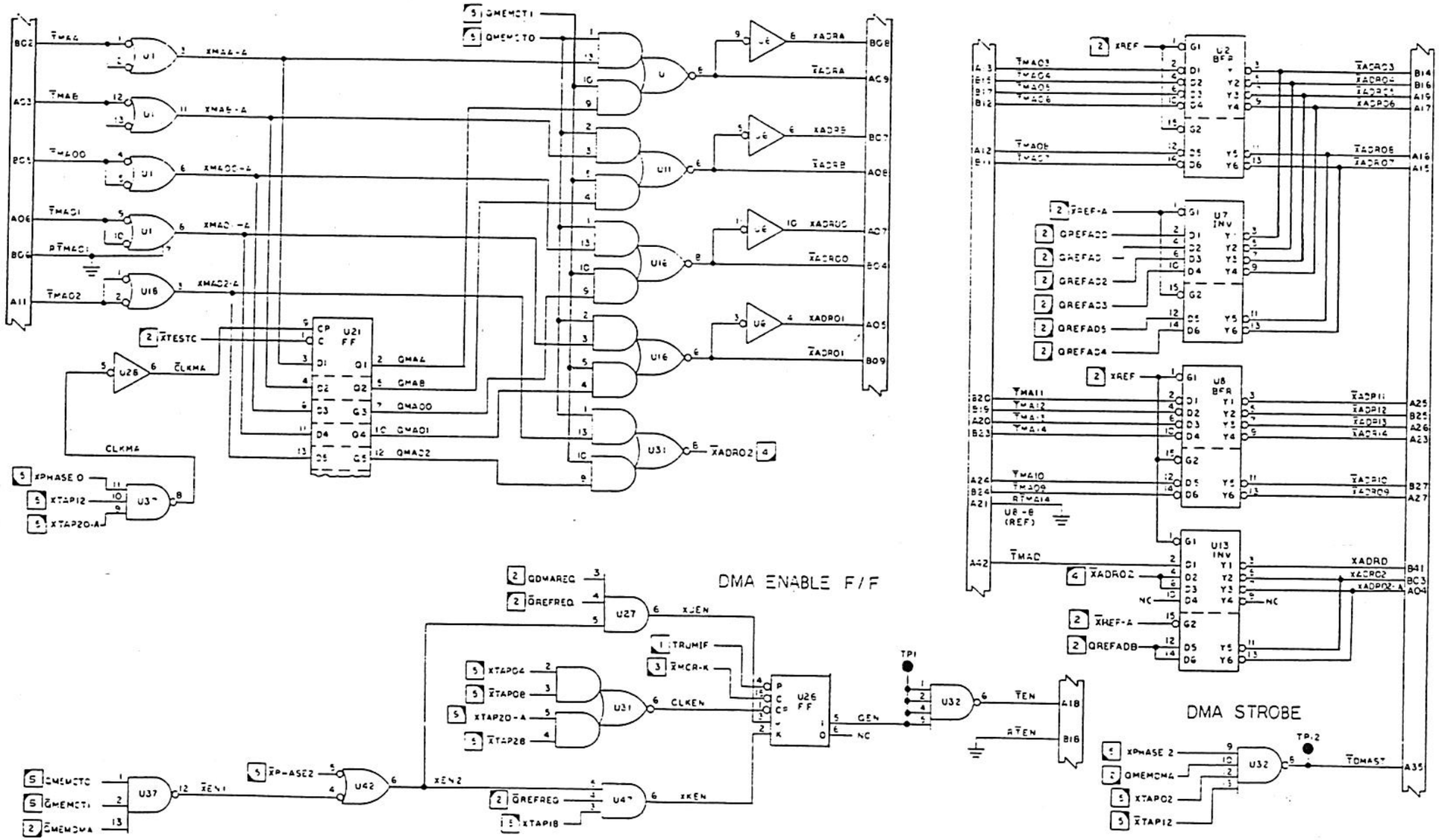
MIF 1 OF 5

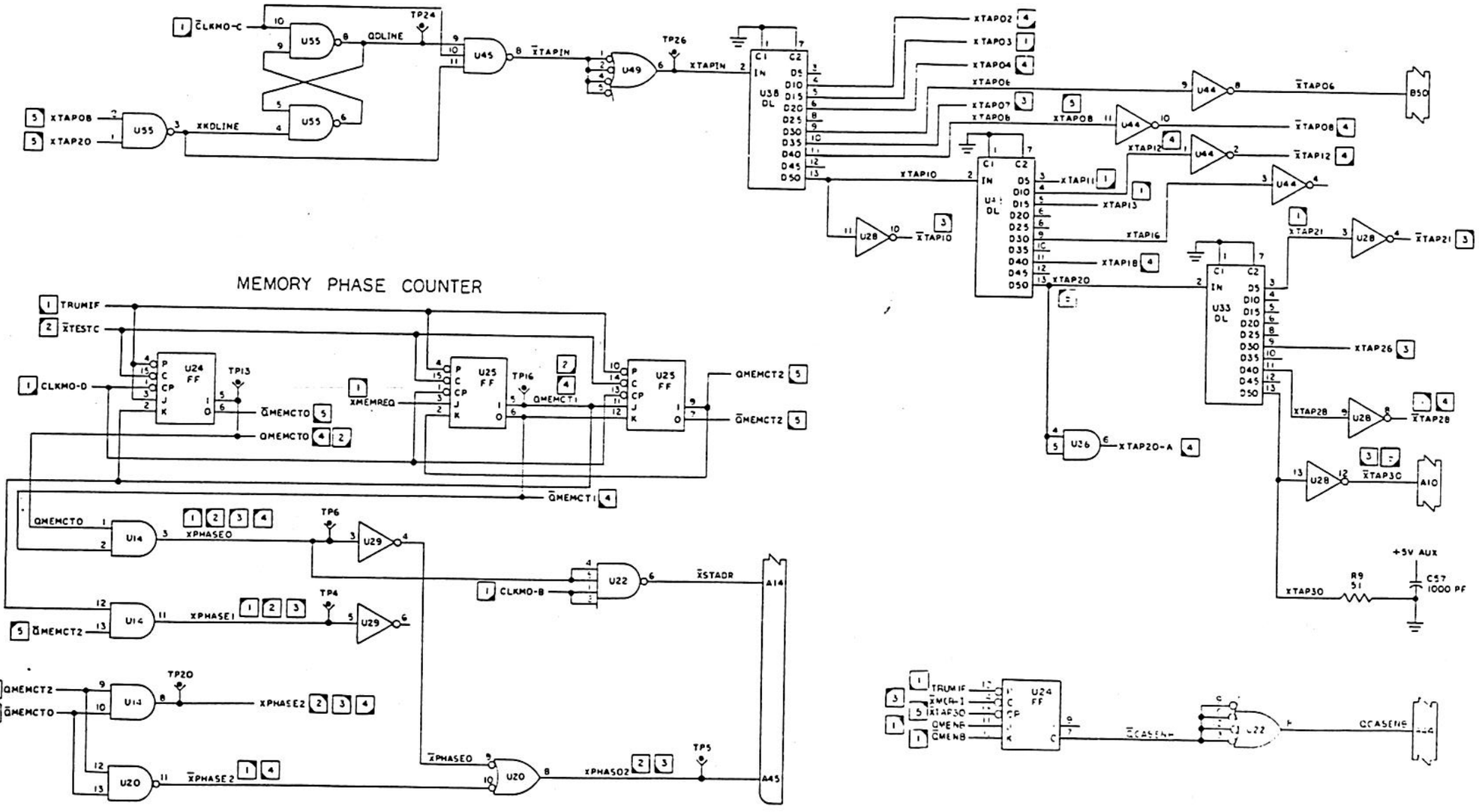

REFRESH REQUEST F/F
REFRESH MEMORY CYCLE F/F
REFRESH INTERVAL COUNTER
REFRESH ADDRESS COUNTER
DMA MEMORY CYCLE F/F
DMA REQUEST F/F
U15 FF
U19 FF
U40 FF
U4 CNTR
U5 CNTR
U12 CNTR
U17 CNTR
U50 FF
U59 FF
TP29
TP25
TP27
TP15
TP30
TP28
TP32
TP14
QREFREQ
QMEMDMA
XMEMREF
QMEMREF
XREF
XREF-A
XPHASE2
XPHASE1
CLKMO-C
QREFCT0
QREFCT1
QREFCT2
QREFCT3
QREFCT4
QREFCT5
XRIPPLE
XREFCNT
QDMAREQ
XMCR-K
XIDMARQ
XMEMDMA
+5V AUX
R3 270
R4 390
B39
B13
XADRC

MIF 2 of 5

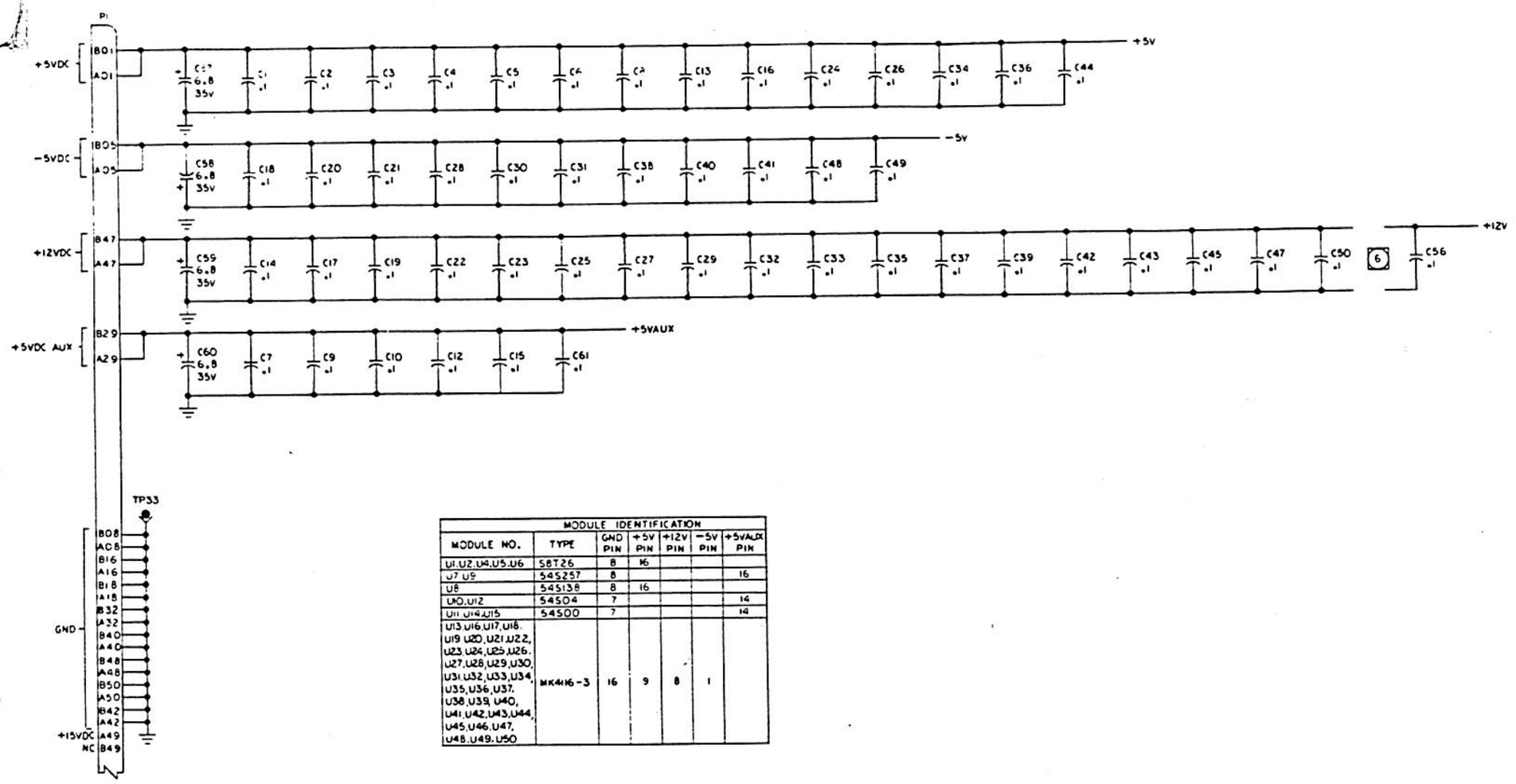


MIF 3 OF 5


DMA ENABLE F/F
DMA STROBE


MEMORY PHASE COUNTER
TRUMIF
XTESTC
CLKMO-D
U24 FF
U25 FF
U25 FF
TP13
TP16
XMEMREQ
QMEMCT2
QMEMCT1
QMEMCTO
XPHASEO
XPHASE1
XPHASE2
XPHASO2
TP6
TP4
TP20
TP5
U14
U29
U22
U13
U20
CLKMO-B
XSTADR
A14
A45
CLKMO-C
QDLINE
XKDLINE
XTAPIN
TP24
TP26
U55
U45
U49
U38 DL
XTAPO2
XTAPO3
XTAPO4
XTAPO6
XTAPO7
XTAPO8
XTAPIO
XTAPI1
XTAPI2
XTAPI3
XTAPI6
XTAPI8
XTAP20
U41 DL
U44
U28
B50
XTAP21
XTAP26
XTAP28
XTAP30
A10
U33 DL
U26
XTAP20-A
+5V AUX
R9
51
C57
1000 PF

MIF 5 of 5



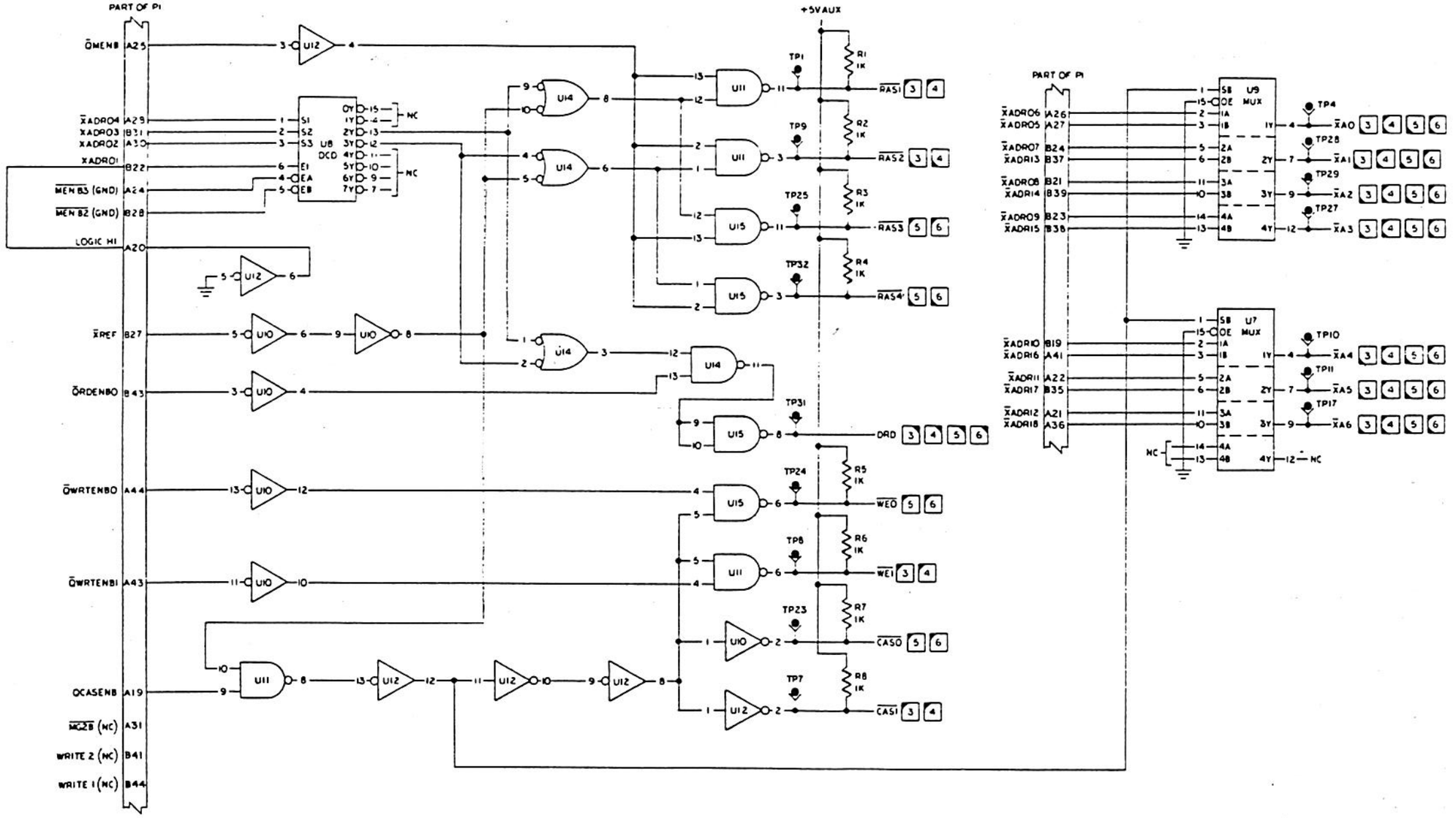
MODULE IDENTIFICATION						
MODULE NO.	TYPE	GND PIN	+5V PIN	+12V PIN	-5V PIN	+5VAUX PIN
U1,U2,U4,U5,U6	58T26	8	16			
U7,U9	545257	8				16
U8	545138	8	16			
U10,U12	54504	7				14
U11,U14,U15	54500	7				14
U13,U16,U17,U18, U19,U20,U21,U22, U23,U24,U25,U26, U27,U28,U29,U30, U31,U32,U33,U34, U35,U36,U37, U38,U39,U40, U41,U42,U43,U44, U45,U46,U47, U48,U49,U50	MK4116-3	16	9	8	1	

NOTES: UNLESS OTHERWISE SPECIFIED

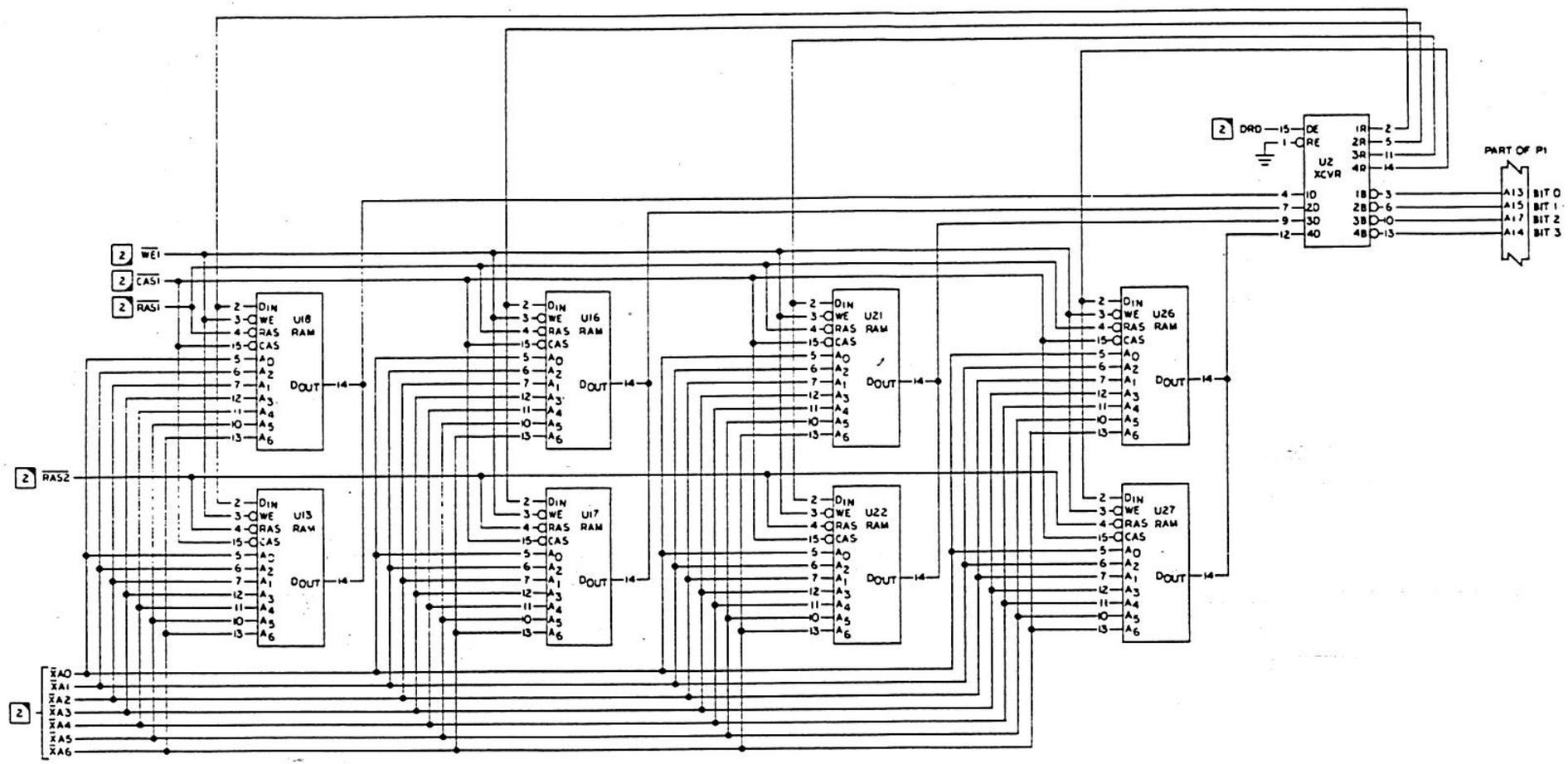
1. RESISTANCE VALUES ARE IN OHMS ±2%,1/8W.
2. CAPACITANCE VALUES ARE IN MICROFARADS GMV,50V.
3. SYMBOL [*] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION.(*APPLICABLE SHEET NUMBER).
4. PARTIAL REF DES ARE SHOWN FOR COMPLETE DES PREFIX WITH UNIT NO. OR SUBASSY DES.
5. A CIRCLE WITHIN A SQUARE MEANS SEE NOTE NO. INDICATED.
6. C50 THRU C56 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL.
7. THIS SCHEMATIC HAS MULTI-USAGE ASSEMBLIES.
8. 700000 SERIES NUMBERS ARE VENDOR ITEMS- SEE SPEC OR SOURCE CONT DWG.
9. FOR TEST SPECIFICATION SEE 1642193-400.

REF DES	
HIGHEST NO. USED	NO. NOT USED
C61	C11,C46
R8	
U50	U3

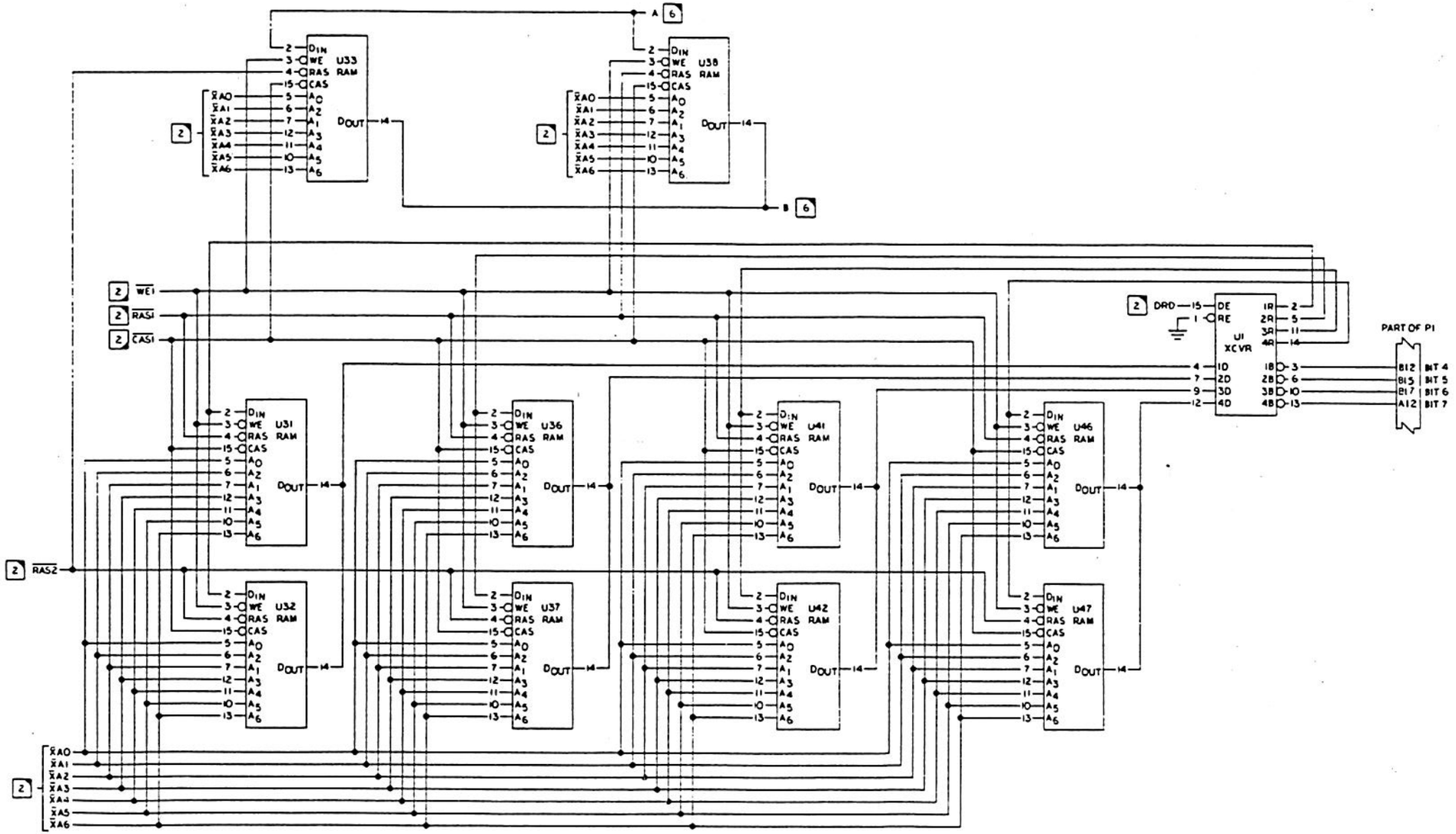
MEX 1 of 6


PART OF P1
+5VAUX
ŌMENB A25
XADR04 A29
XADR03 B31
XADR02 A30
XADR01 B22
MEMB3 (GND) A24
MEMB2 (GND) B28
LOGIC HI A20
XREF B27
ŌRDENBO B43
ŌWRTENBO A44
ŌWRTENBI A43
OCASENB A19
MC28 (NC) A31
WRITE 2 (NC) B41
WRITE 1 (NC) B44
U8 DCD
U12
U10
U11
U14
U15
RAS1
RAS2
RAS3
RAS4
DRD
WE0
WE1
CAS0
CAS1
R1 1K
R2 1K
R3 1K
R4 1K
R5 1K
R6 1K
R7 1K
R8 1K
TP1
TP9
TP25
TP32
TP31
TP24
TP8
TP23
TP7
PART OF P1
XADR06 A26
XADR05 A27
XADR07 B24
XADR13 B37
XADR08 B21
XADR14 B39
XADR09 B23
XADR15 B38
U9 MUX
TP4
TP28
TP29
TP27
XA0
XA1
XA2
XA3
XADR10 B19
XADR16 A41
XADR11 A22
XADR17 B35
XADR12 A21
XADR18 A36
U7 MUX
TP10
TP11
TP17
XA4
XA5
XA6
NC

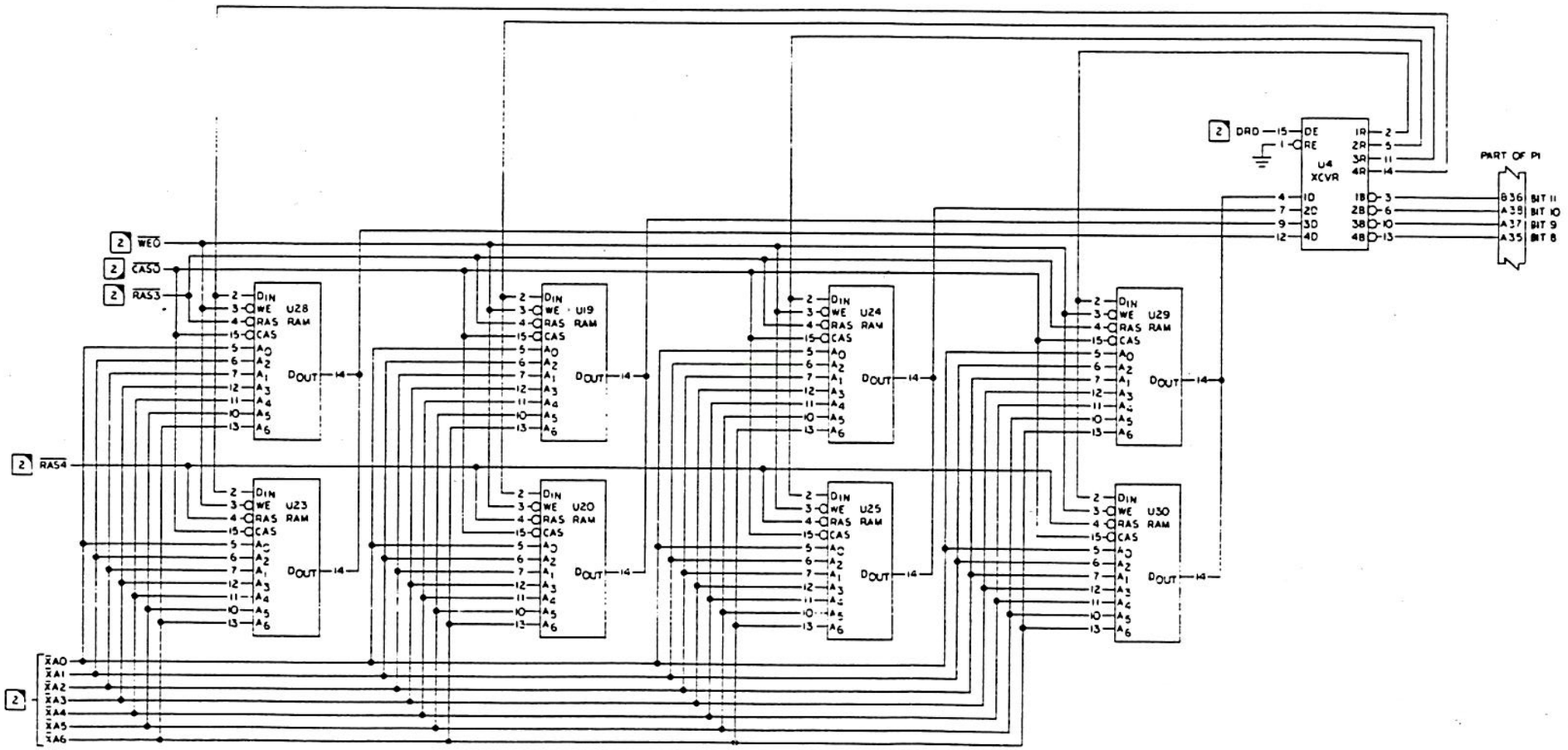
MEX 7 OF 6



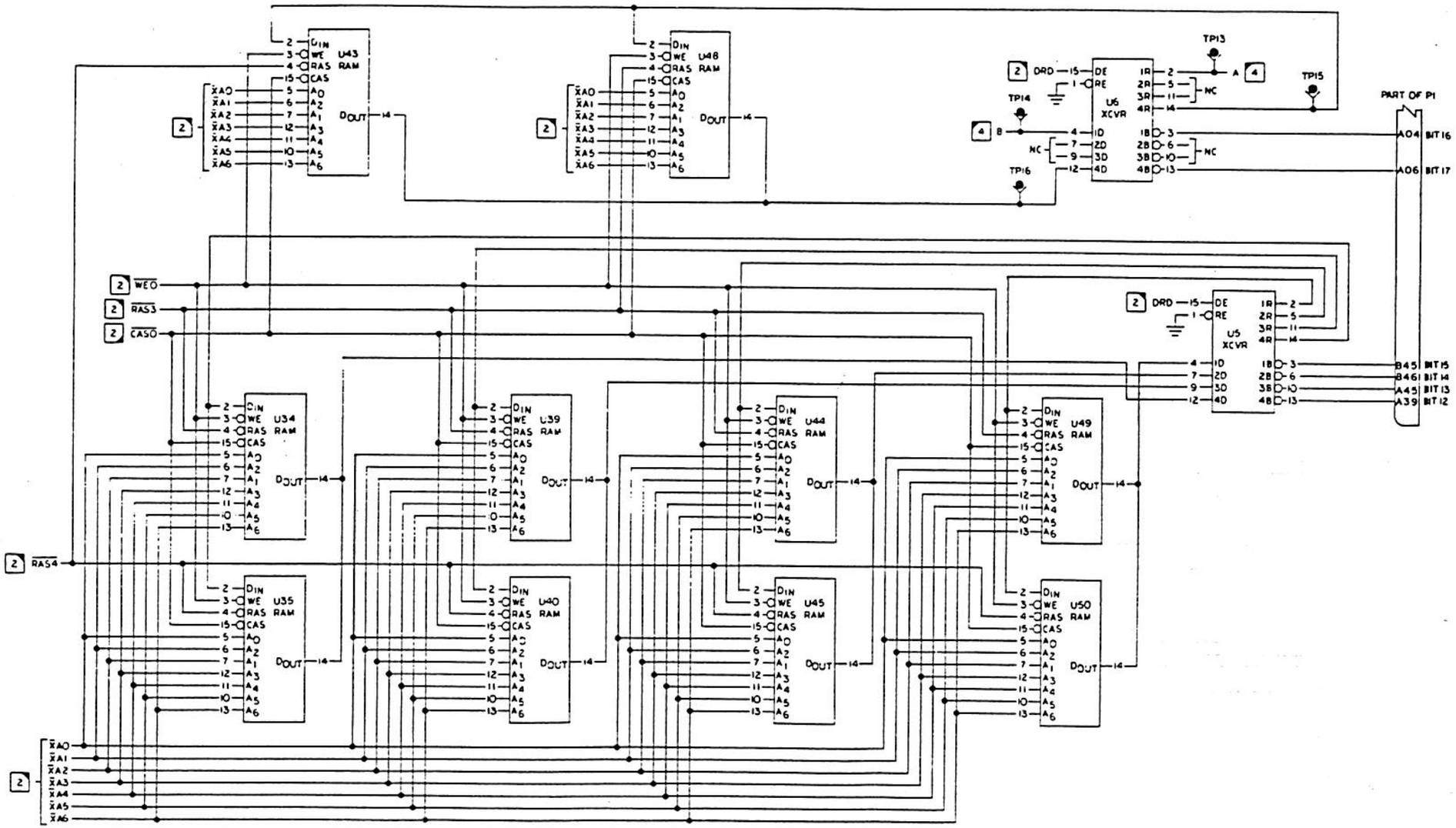
MEX 3 OF 6


A 6
B 6
U33 RAM
U38 RAM
U31 RAM
U36 RAM
U41 RAM
U46 RAM
U32 RAM
U37 RAM
U42 RAM
U47 RAM
DIN
WE
RAS
CAS
DOUT
A0
A1
A2
A3
A4
A5
A6
14
2 WE1
2 RAS1
2 CAS1
2 RAS2
2 XA0
XA1
XA2
XA3
XA4
XA5
XA6
2 DRD
DE
RE
1R
2R
3R
4R
1D
2D
3D
4D
U1
XCVR
PART OF P1
B12 BIT 4
B15 BIT 5
B17 BIT 6
A12 BIT 7

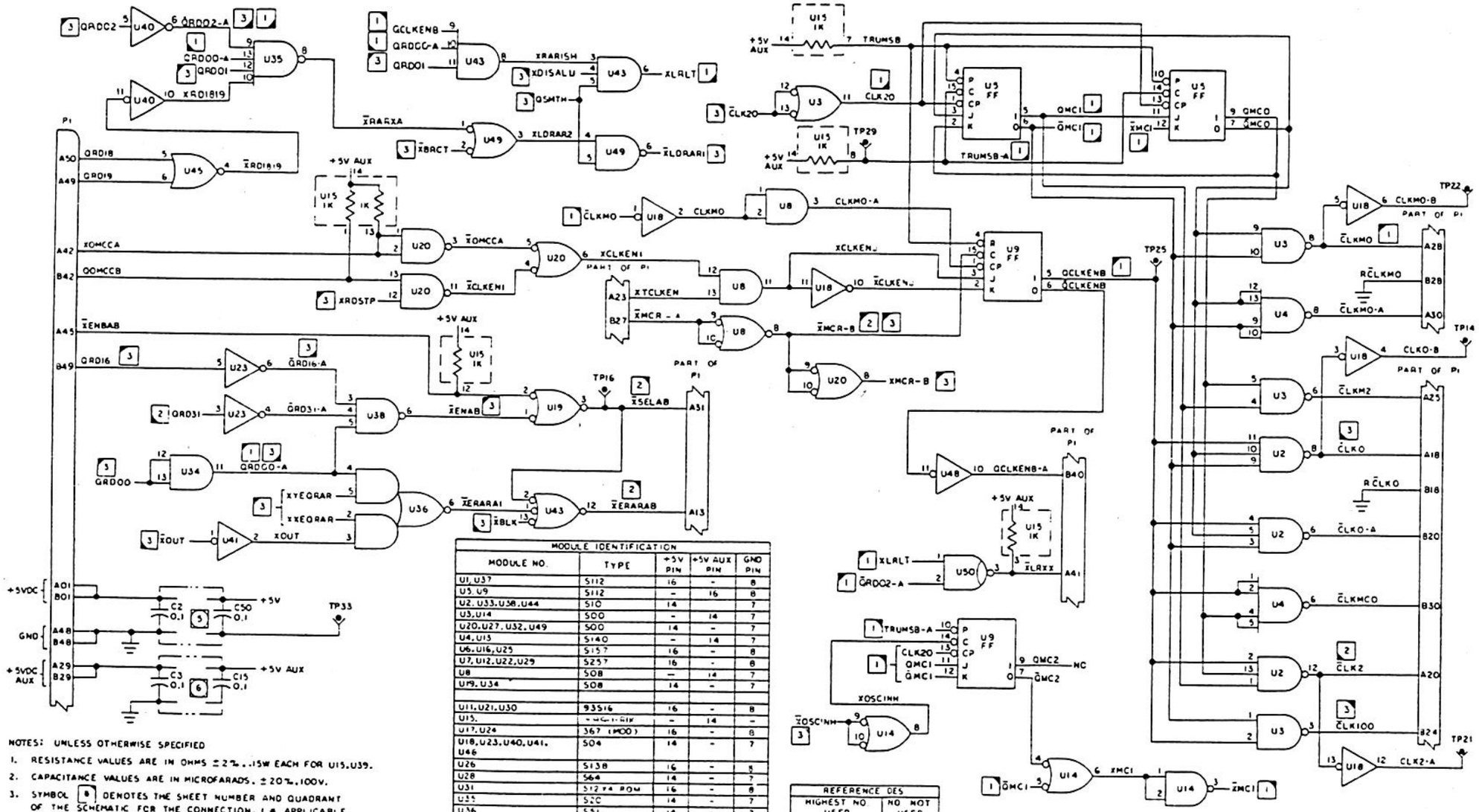
MEX 4 OF 6


2 WE0
2 CAS0
2 RAS3
2 RAS4
2 XA0 XA1 XA2 XA3 XA4 XA5 XA6
U28 RAM
U19 RAM
U24 RAM
U29 RAM
U23 RAM
U20 RAM
U25 RAM
U30 RAM
DIN WE RAS CAS A0 A2 A1 A3 A4 A5 A6 DOUT 14
2 DRD
U4 XCVR
DE RE 1A 2A 3A 4A 1B 2B 3B 4B
PART OF P1
B36 BIT 11
B38 BIT 10
B37 BIT 9
B35 BIT 8

MEX 5 of 6


U43 RAM
U48 RAM
U34 RAM
U39 RAM
U44 RAM
U49 RAM
U35 RAM
U40 RAM
U45 RAM
U50 RAM
U6 XCVR
U5 XCVR
TP13
TP14
TP15
TP16
PART OF P1
A04 BIT 16
A06 BIT 17
B45 BIT 15
B46 BIT 14
A45 BIT 13
A39 BIT 12
WE0
RAS3
CAS0
RAS4
DRD
NC

MEX 6 OF 6



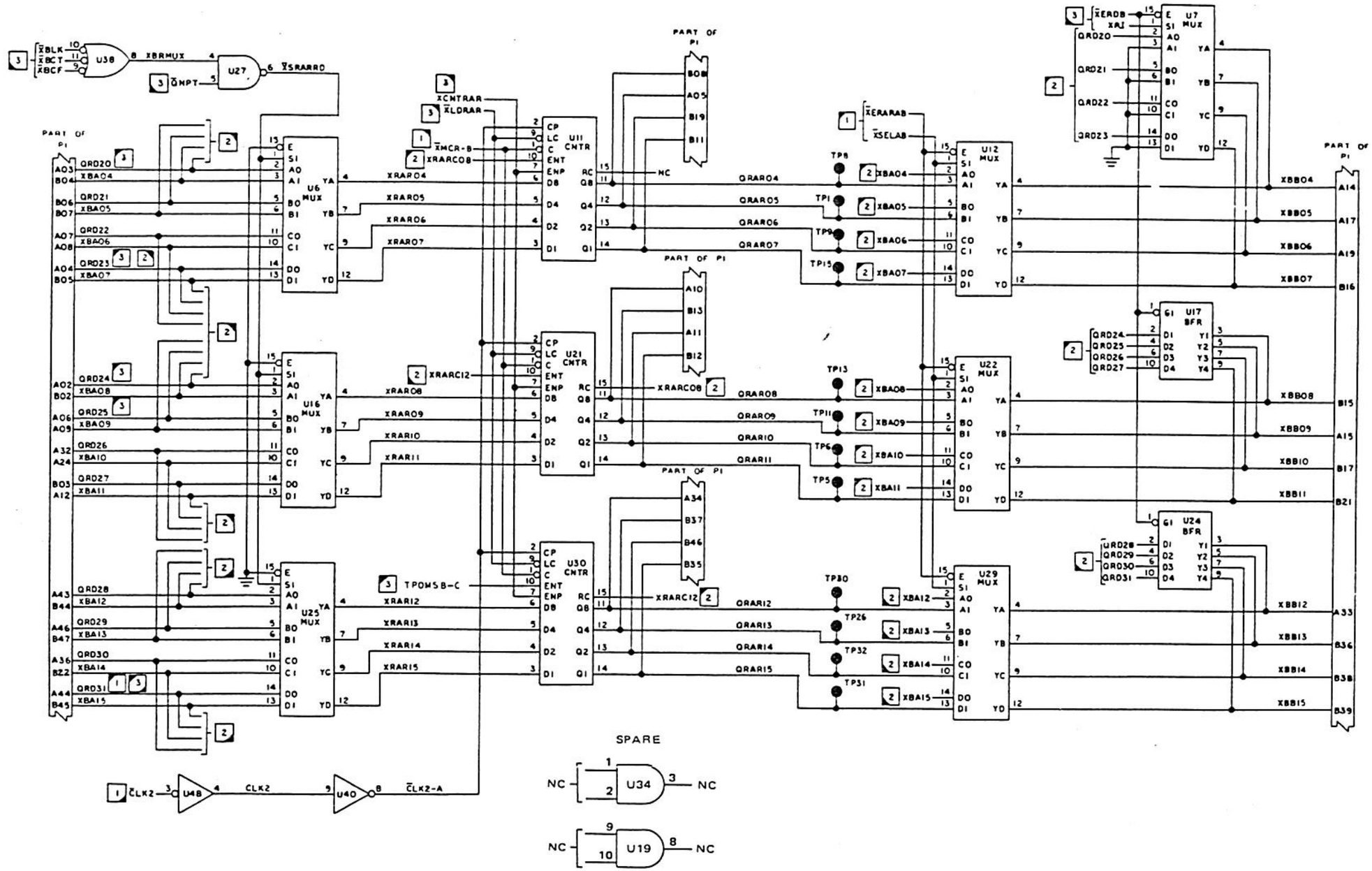
MODULE IDENTIFICATION				
MODULE NO.	TYPE	+5V PIN	+5V AUX PIN	GND PIN
U1, U37	S112	16	-	8
U5, U9	S112	-	16	8
U2, U33, U38, U44	S10	14		7
U3, U14	S00	-	14	7
U20, U27, U32, U49	S00	14	-	7
U4, U13	S140	-	14	7
U6, U16, U25	S157	16	-	8
U7, U12, U22, U29	S257	16	-	8
U8	S08	-	14	7
U19, U34	S08	14	-	7
U11, U21, U30	93516	16	-	8
U15,	[illegible]	-	14	-
U17, U24	367 (MOD)	16	-	8
U18, U23, U40, U41, U46	S04	14	-	7
U26	S138	16	-	8
U28	S64	14	-	7
U31	S124 ROM	16	-	8
U35	S20	14	-	7
U36	S51	14	-	7
U42	S153	16	-	8
U47	S86	14	-	7
U50	S32	14	-	7
U39	P446-4-HIP	14	-	-
U45	S02	14	-	7
U43	S11	14	-	7
Y10	MCM401	-	14	7

REFERENCE DES	
HIGHEST NO USED	NO NOT USED
U50	
C50	C1, C36, C41, C46
Y10	Y1 THRU Y4

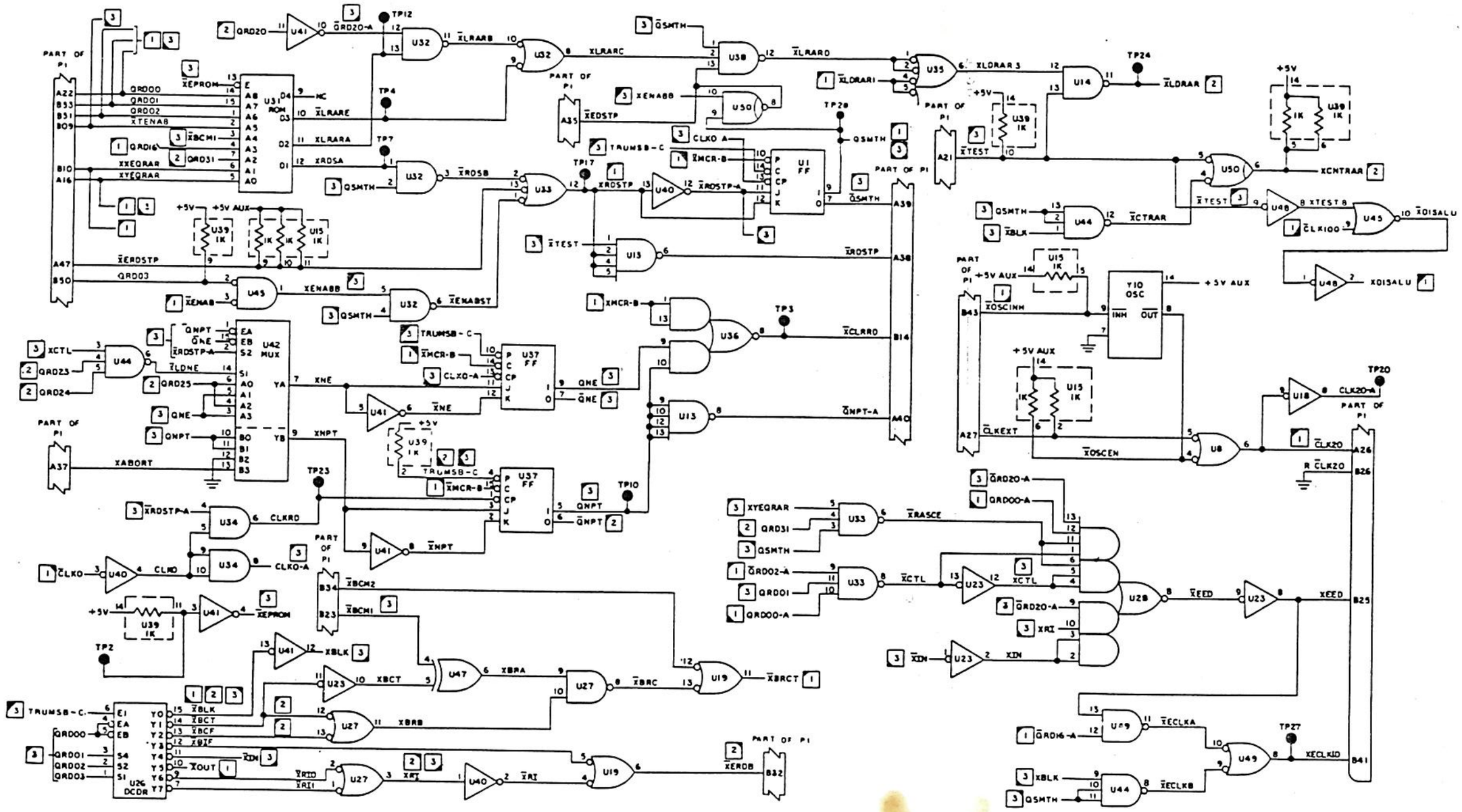
NOTES: UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS ±2%, .15W EACH FOR U15, U39.
2. CAPACITANCE VALUES ARE IN MICROFARADS, ±20%, 100V.
3. SYMBOL [9] DENOTES THE SHEET NUMBER AND QUADRANT OF THE SCHEMATIC FOR THE CONNECTION. (IF APPLICABLE SHEET NO.)
4. PARTIAL REF DES ARE SHOWN. FOR COMPLETE REF DES, PREFIX WITH UNIT NO. OR SUBASSY DES.
5. C2, C6, C7, C11, C12, C16 THRU C35, C37 THRU C40, C42 THRU C45 AND C47 THRU C50 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL TO +5V.
6. C3 THRU C5, C8 THRU C10 AND C13 THRU C15 ARE IDENTICAL COMPONENTS CONNECTED IN PARALLEL TO +5V AUX.
7. U7, U12, U17, U22, U24, U29 ARE TRI-STATE DEVICES.
8. SYMBOL [ ] MEANS: SEE NOTE NUMBER INDICATED
9. FOR ASSEMBLY SEE 164784-1C
10. FOR TEST SPECIFICATION SEE 164432-401

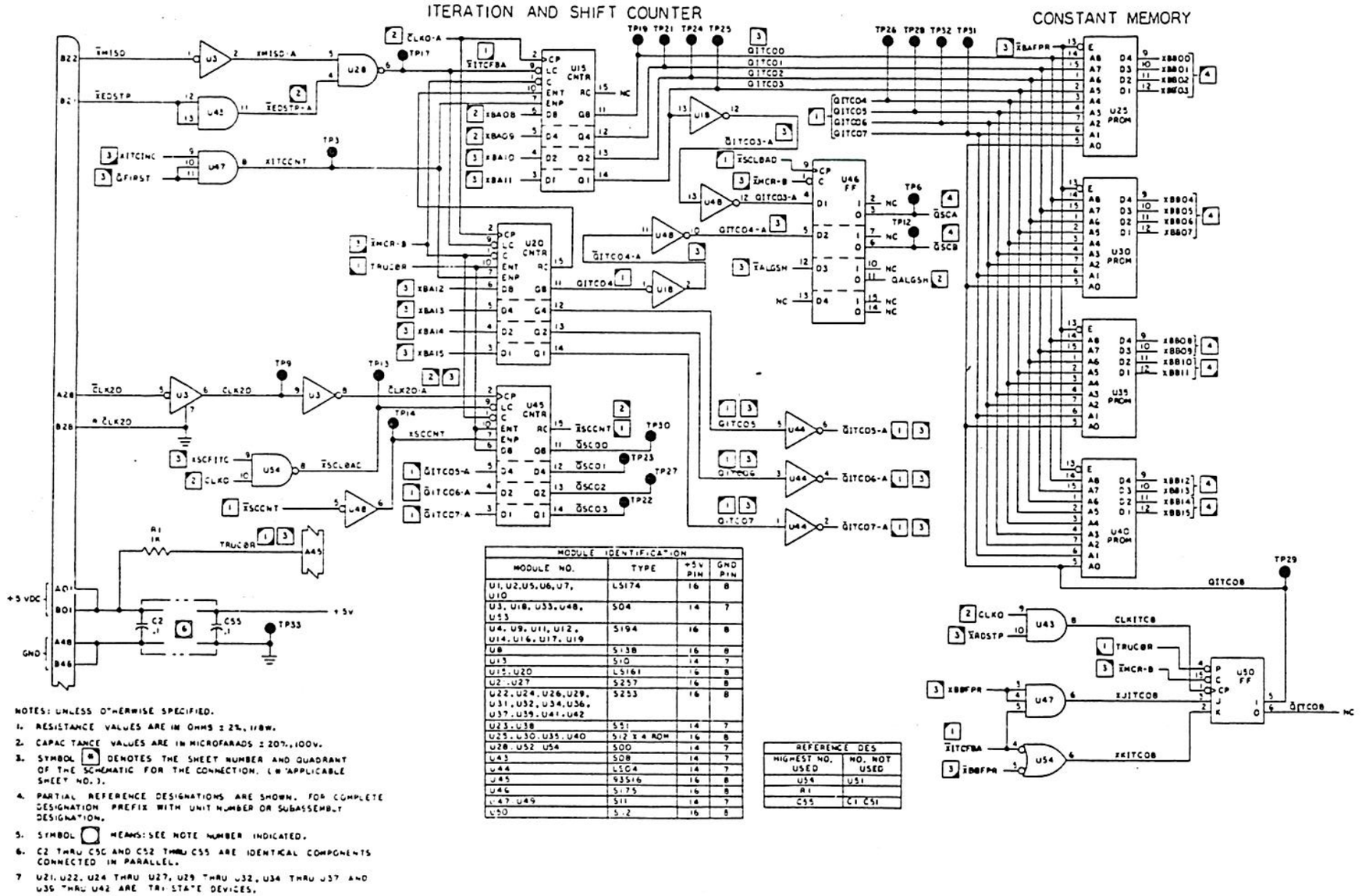
MSB 1 OF 3


U38
XBRMUX
U27
XSRARRD
XCNTRAR
XLDRAR
XMCR-B
XRARC08
U11 CNTR
U6 MUX
U21 CNTR
U16 MUX
U30 CNTR
U25 MUX
TPDMSB-C
XRARC12
XERARAB
XSELAB
U12 MUX
U22 MUX
U29 MUX
XERDB
XRJ
U7 MUX
U17 BFR
U24 BFR
PART OF P1
QRD20
QRD21
QRD22
QRD23
QRD24
QRD25
QRD26
QRD27
QRD28
QRD29
QRD30
QRD31
XBA04
XBA05
XBA06
XBA07
XBA08
XBA09
XBA10
XBA11
XBA12
XBA13
XBA14
XBA15
XRAR04
XRAR05
XRAR06
XRAR07
XRAR08
XRAR09
XRAR10
XRAR11
XRAR12
XRAR13
XRAR14
XRAR15
QRAR04
QRAR05
QRAR06
QRAR07
QRAR08
QRAR09
QRAR10
QRAR11
QRAR12
QRAR13
QRAR14
QRAR15
XBB04
XBB05
XBB06
XBB07
XBB08
XBB09
XBB10
XBB11
XBB12
XBB13
XBB14
XBB15
TP8
TP1
TP9
TP15
TP13
TP11
TP6
TP5
TP30
TP26
TP32
TP31
CLK2
U48
U40
CLK2-A
SPARE
U34
U19
NC

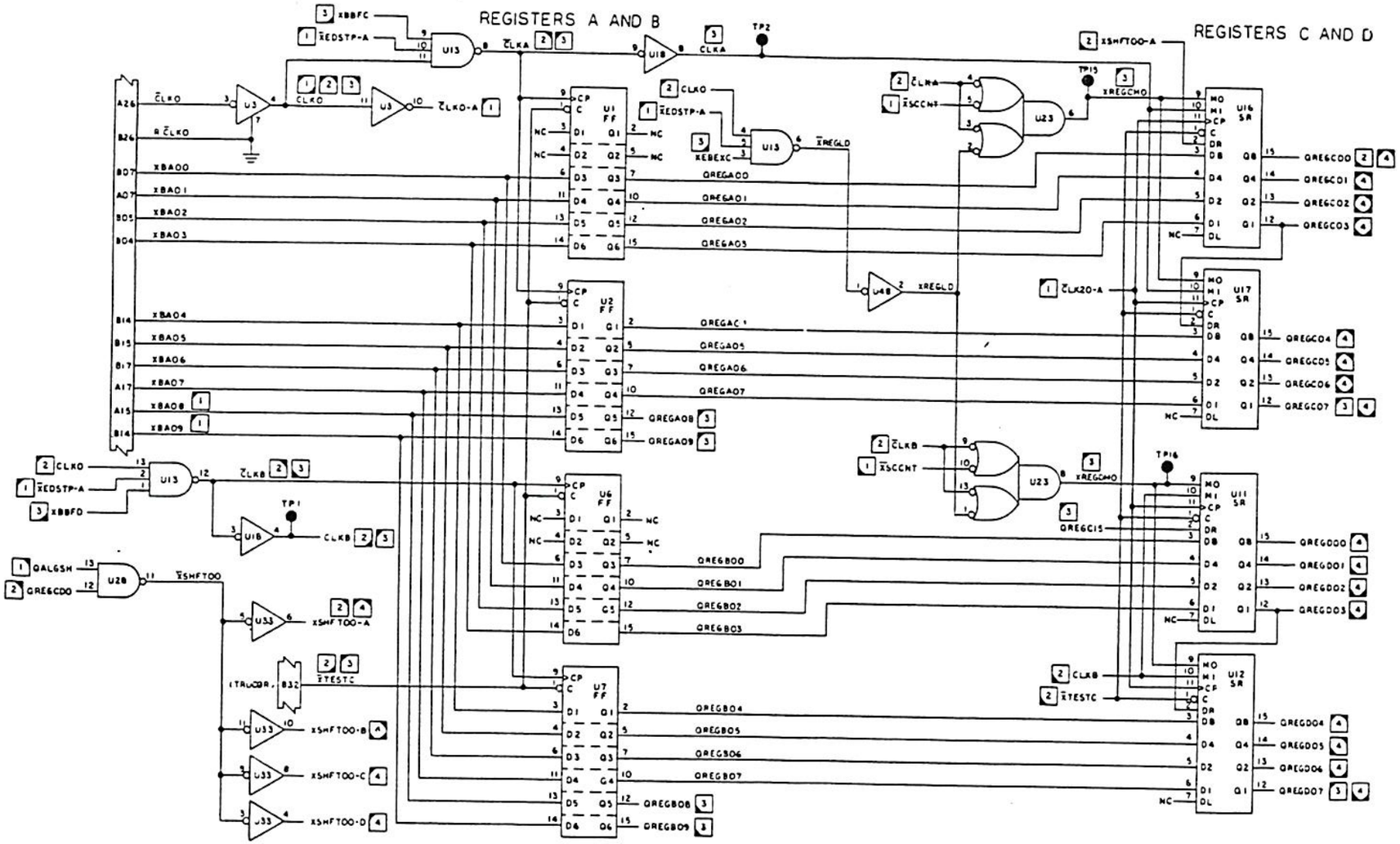
MSB 2 OF 3


PART OF P1
U41
QRD20
QRD20-A
TP12
U32
XLRARB
U32
XLRARC
U38
XLRARD
U35
XLDRAR 3
U14
TP24
XLDRAR
XEPROM
U31 PROM
QRD00
QRD01
QRD02
XTENAB
QRD16
XBCMI
QRD31
XXEQRAR
XYEQRAR
NC
XLRARE
XLRARA
XRDSA
TP4
TP7
U32
XRDSB
QSMTH
U33
XRDSTP
U40
XRDSTP-A
TP17
U1 FF
CLKO A
XMCR-B
TRUMSB-C
XENABB
U50
TP28
XEDSTP
XTEST
U13
XRDSTP
XERDSTP
QRD03
U45
XENAB
XENABST
U32
U39 1K
U15 1K
+5V
+5V AUX
A39
A38
A40
B14
XCLRRO
QNPT-A
U36
U13
TP3
U37 FF
TRUMSB-C
XMCR-B
CLKO-A
QNE
QNPT
U42 MUX
XCTL
QRD23
QRD24
QRD25
XRDSTP-A
XLDNE
XNE
XNPT
XABORT
A37
U44
U41
U40
CLKO
CLKRO
U34
TP23
TP10
XNPT
U41
XBCM2
XBCM1
XEPROM
TP2
XBLK
XBCT
XBCF
XBIF
XOUT
XIN
XRID
XRI
U26 DCDR
U23
XBRA
XBRB
XBRC
U27
U19
XBRCT
XERDB
B32
A35
B34
B23
XYEQRAR
QRD31
QSMTH
QRD02-A
QRD01
QRD00-A
XRASCE
XCTL
U33
U23
U28
XEED
XRI
XIN
QRD20-A
QRD00-A
Y10 OSC
INH
OUT
+5V AUX
XOSCINH
XCLKEXT
XOSCEN
U8
U18
CLK20-A
TP20
PART OF P1
CLK20
R CLK20
A26
B26
B25
B41
A27
B43
U15 1K
U39 1K
U50
XCNTRAR
XTEST
U48
8 XTEST 8
U45
XDISALU
CLK100
U44
XCTRAR
XBLK
QSMTH
U49
XECLKA
XECLKB
XECLKID
TP27
QRD16-A
XBLK
QSMTH

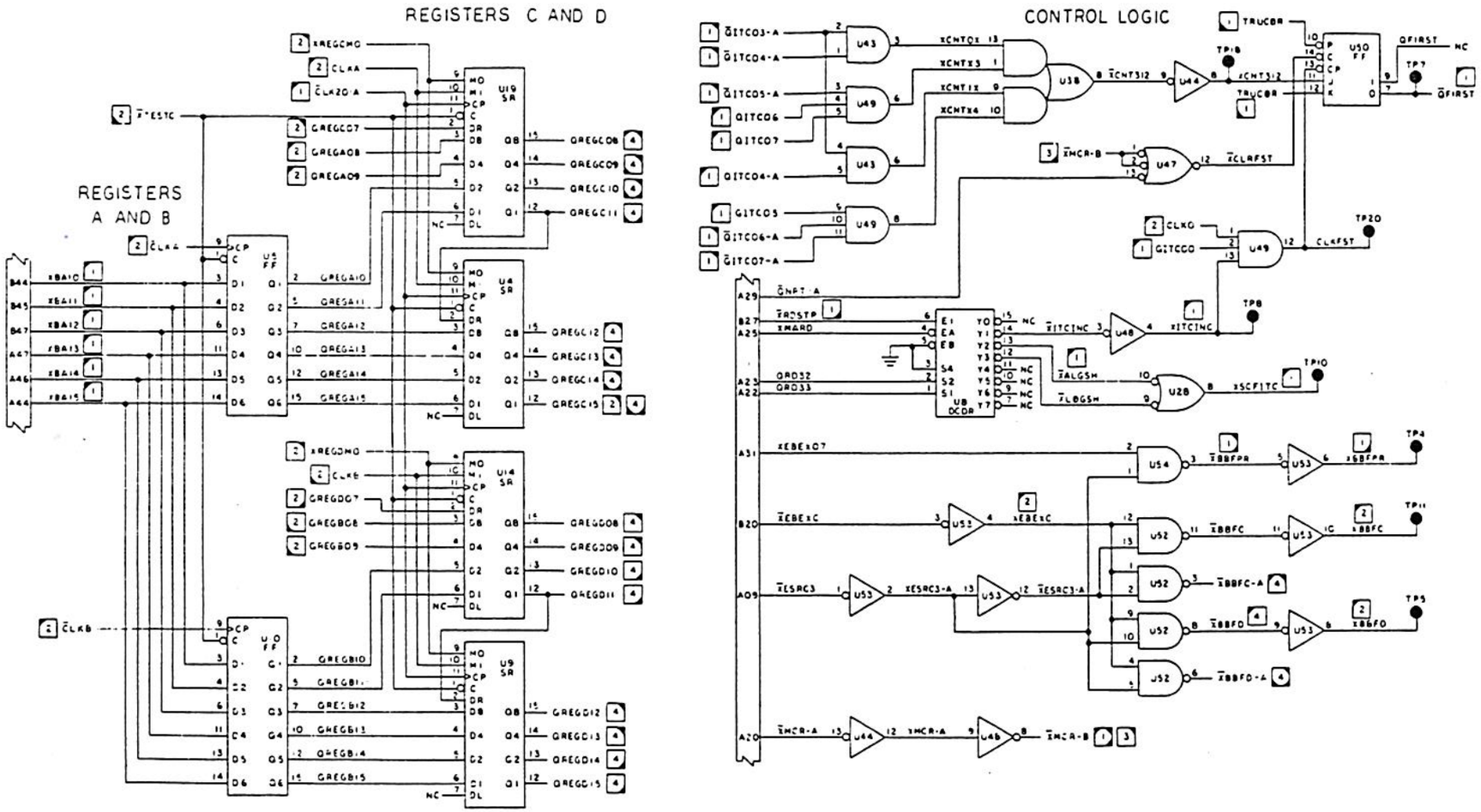
MSB 3 OF 3



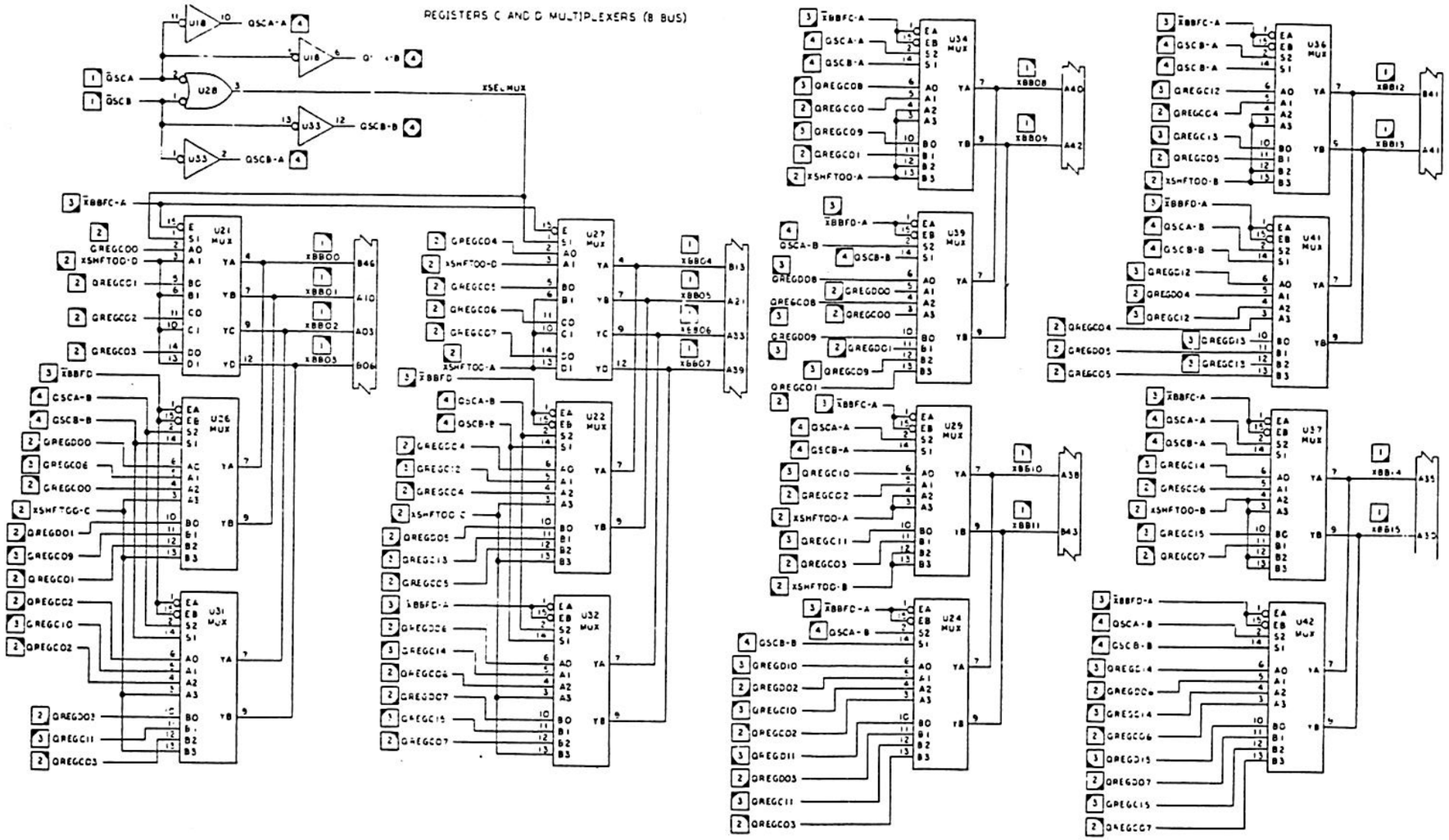
1634439-100. Trigonometric Function Control (COR) Card Schematic Diagram (Sheet 1 of 4)



1634439-100. Trigonometric Function Control (COR) Card Schematic Diagram (Sheet 2 of 4)



1634439-100. Trigonometric Function Control (COR) Card Schematic Diagram (Sheet 3 of 4)



1634439-100. Trigonometric Function Control (COR) Card Schematic Diagram (Sheet 4 of 4)