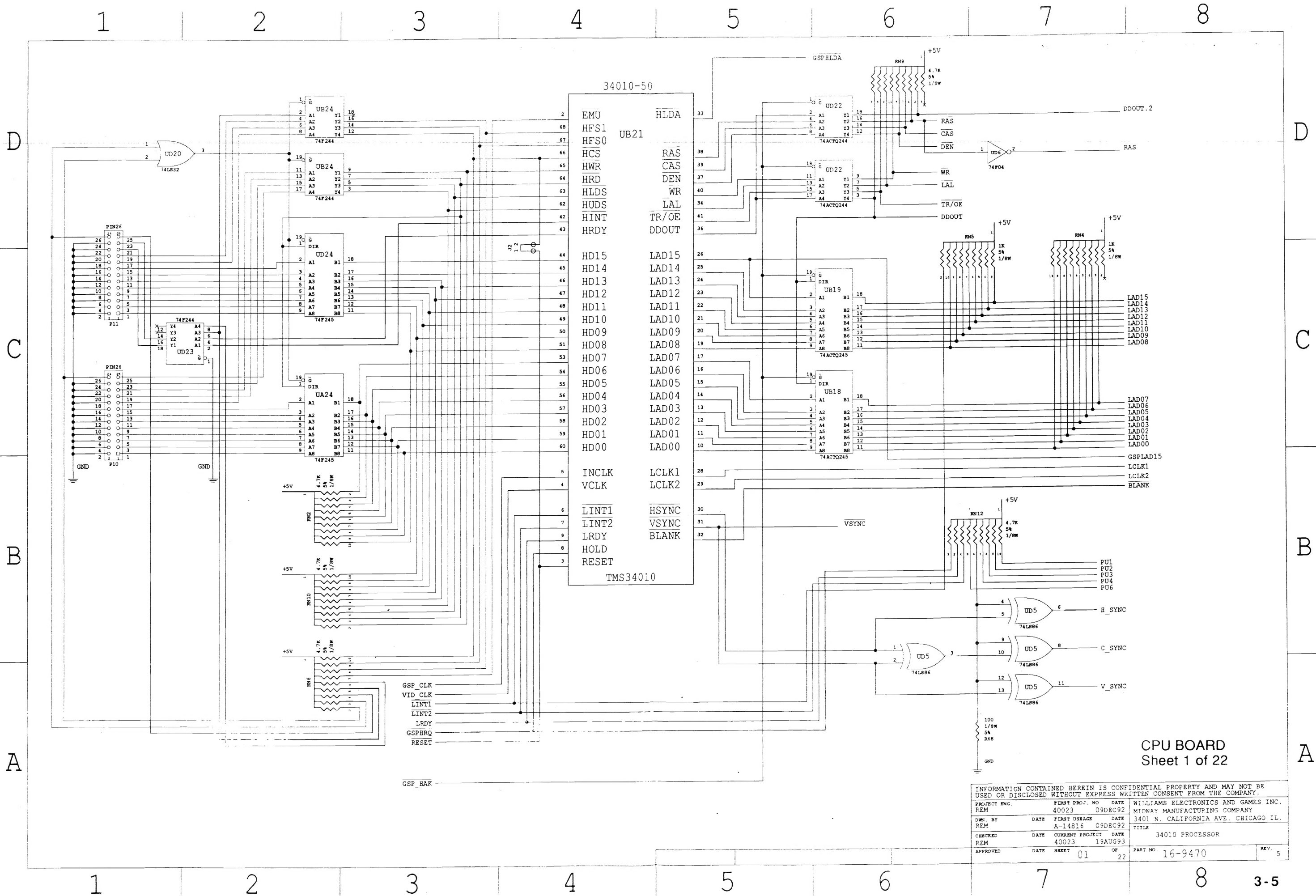
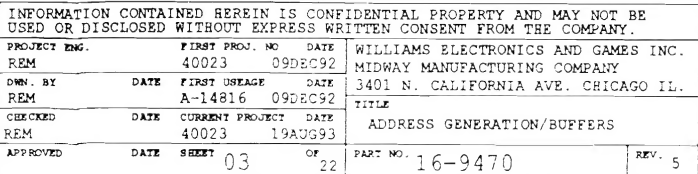
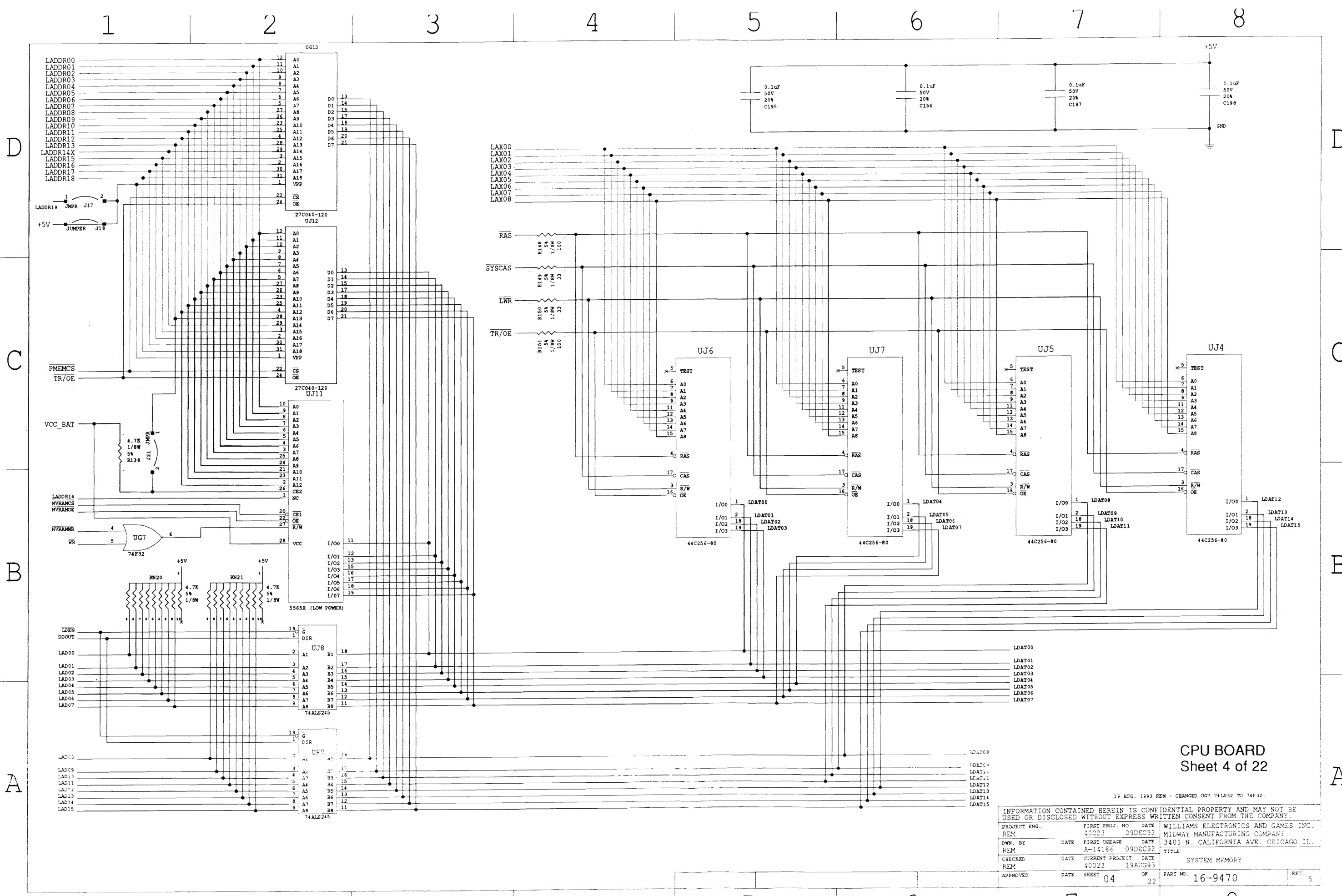


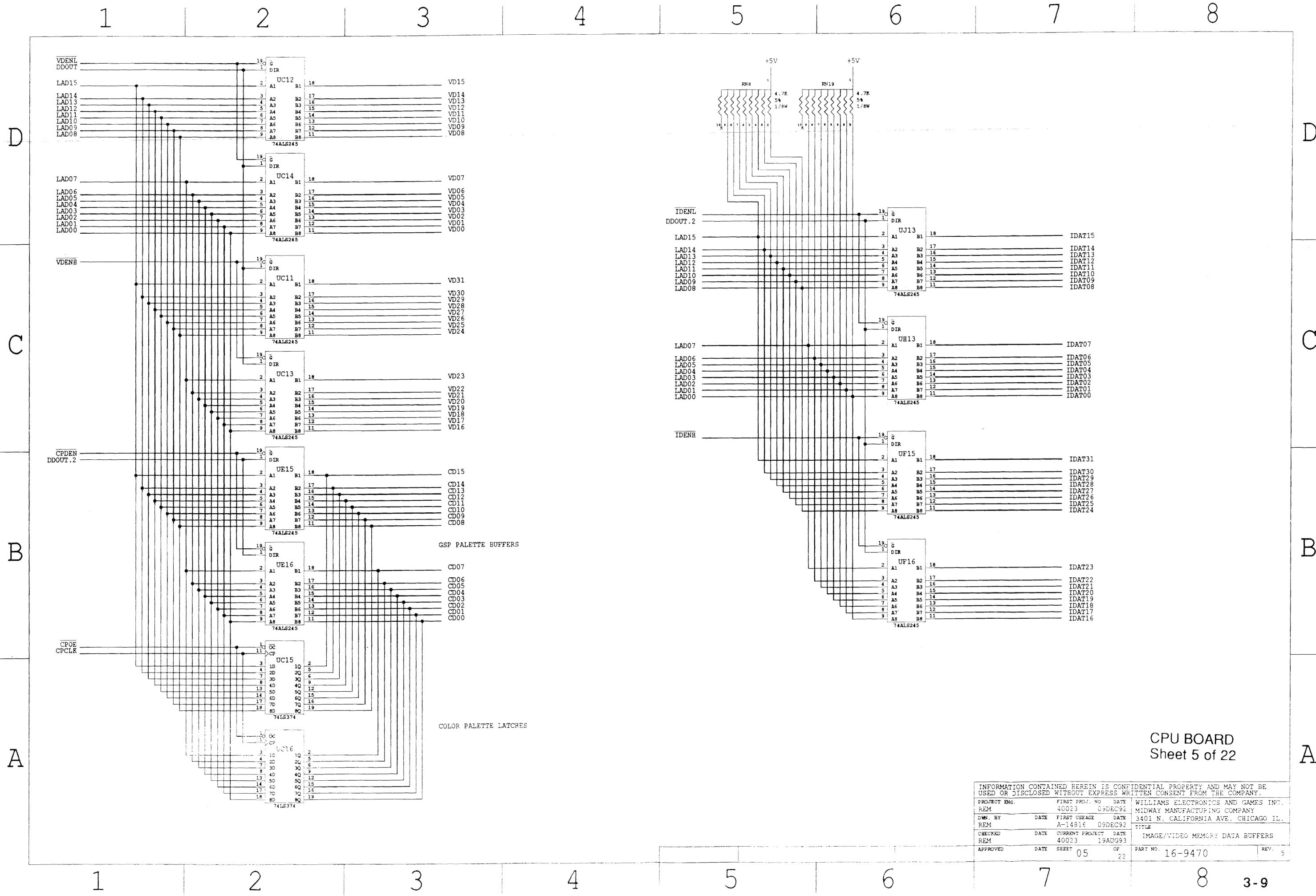






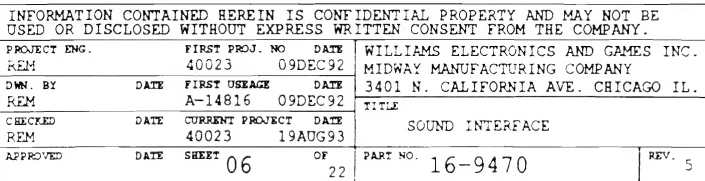
CPU BOARD
Sheet 4 of 22

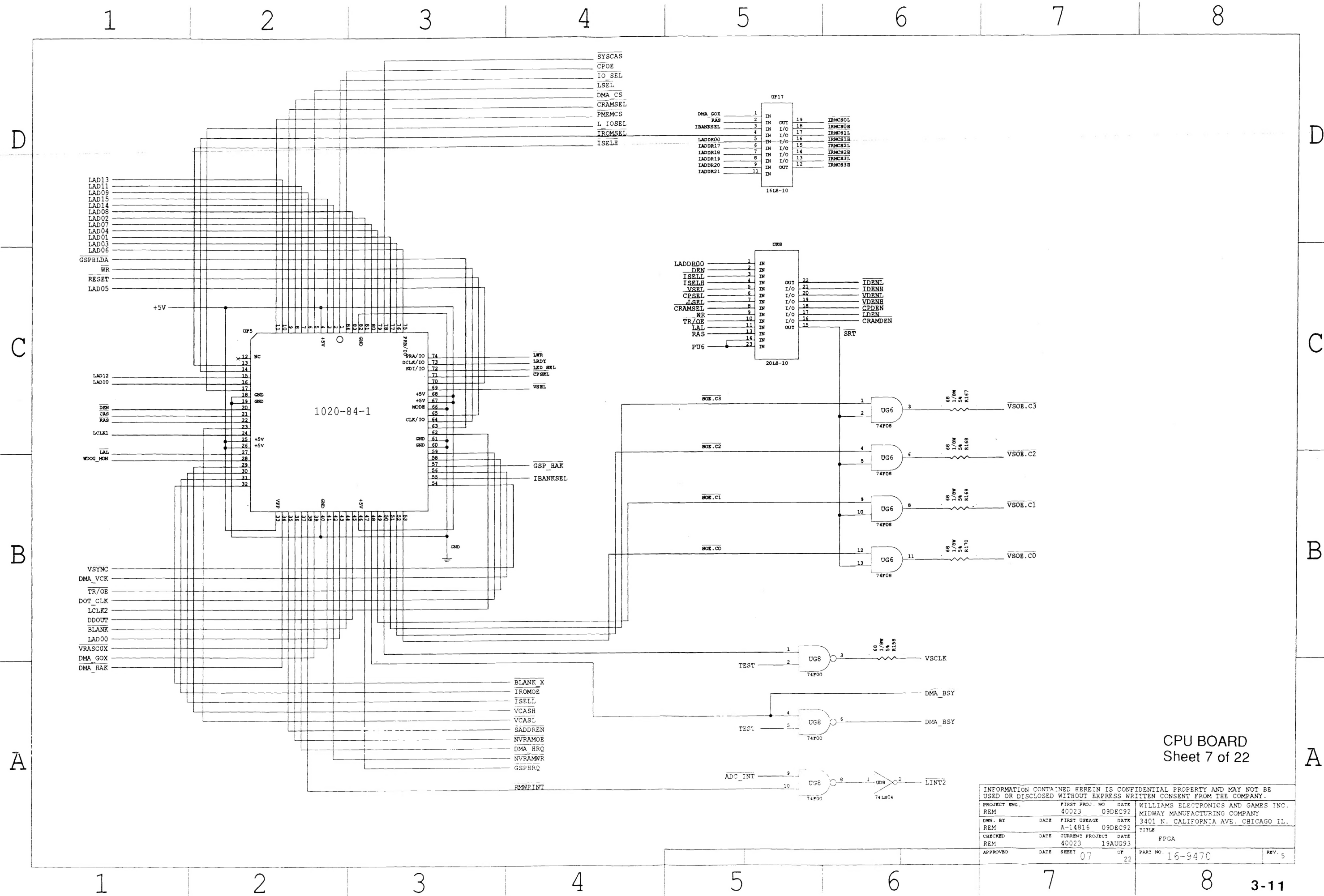
19 AUG. 1993 REM - CHANGED 007 74LS32 TO 74F32.			
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.			
PROJECT ENG.	FIRST PROJ. NO.	DATE	WILLIAMS ELECTRONICS AND GAMES INC.
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY
DWN. BY	DATE	FIRST USAGE	DATE
REM	A-14186	09DEC92	3401 N. CALIFORNIA AVE. CHICAGO IL.
CHECKED	DATE	CURRENT PROJECT	DATE
REM	40023	19AUG93	TITLE
APPROVED	DATE	SHEET	04 OF 22
PART NO. 16-9470			REV. 5



CPU BOARD
Sheet 5 of 22

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG.	FIRST PROJ. NO.	DATE	WILLIAMS ELECTRONICS AND GAMES INC.		
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY		
DWN. BY	DATE	FIRST USAGE	DATE	3401 N. CALIFORNIA AVE. CHICAGO IL.	
REM	A-14816	09DEC92		TITLE	
CHECKED	DATE	CURRENT PROJECT	DATE	IMAGE/VIDEO MEMORY DATA BUFFERS	
REM	40023	19AUG93			
APPROVED	DATE	SHEET	05	OF	22
PART NO. 16-9470				REV.	5





CPU BOARD
Sheet 7 of 22

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.			
PROJECT ENG.	FIRST PROJ. NO.	DATE	WILLIAMS ELECTRONICS AND GAMES INC.
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY
DWN. BY	DATE	FIRST USAGE	DATE
REM	A-14816	09DEC92	3401 N. CALIFORNIA AVE. CHICAGO IL.
CHECKED	DATE	CURRENT PROJECT	DATE
REM	40023	19AUG93	
APPROVED	DATE	SHEET	OF
		07	22
PART NO.		16-9470	REV. 5

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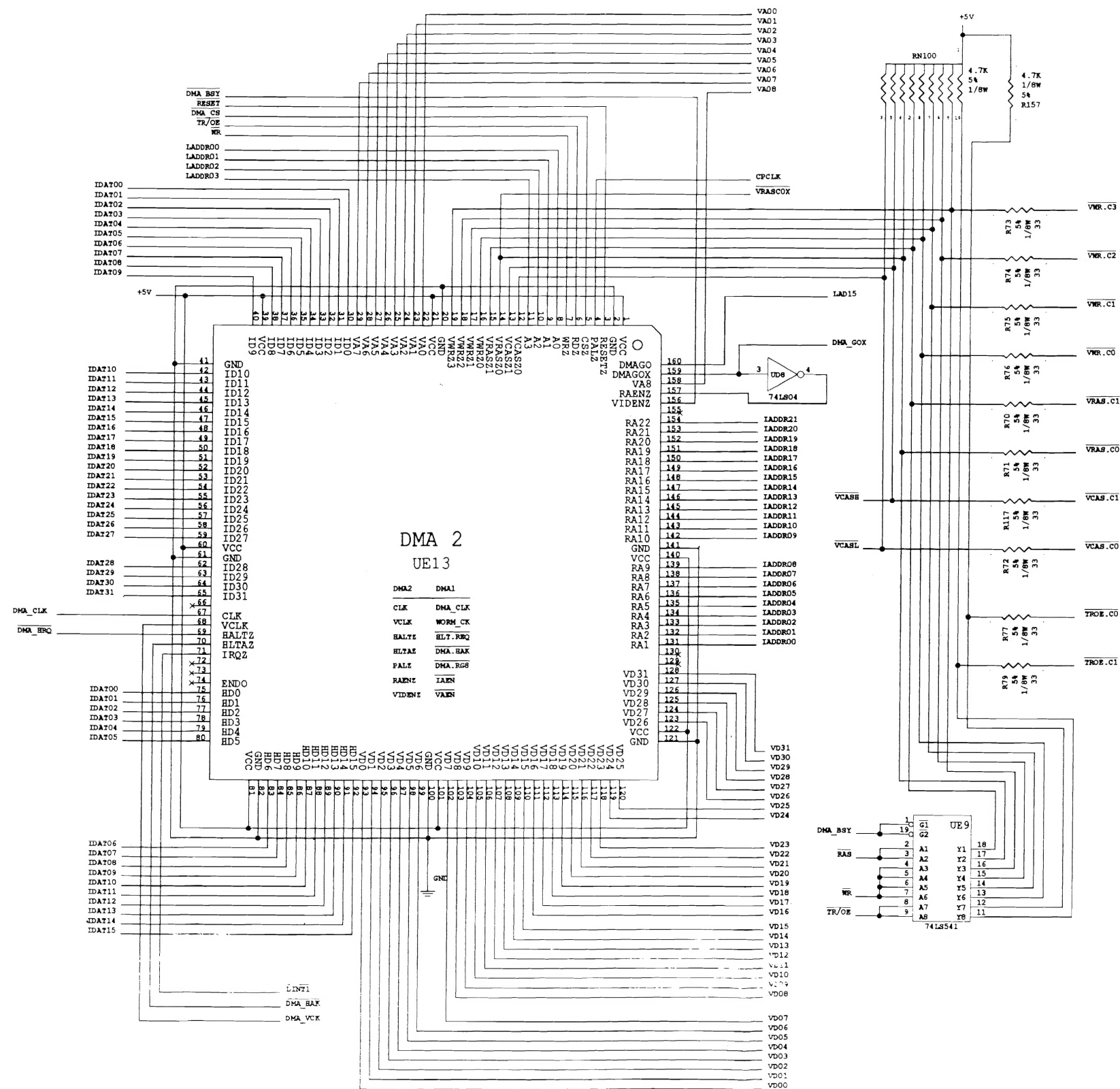
C

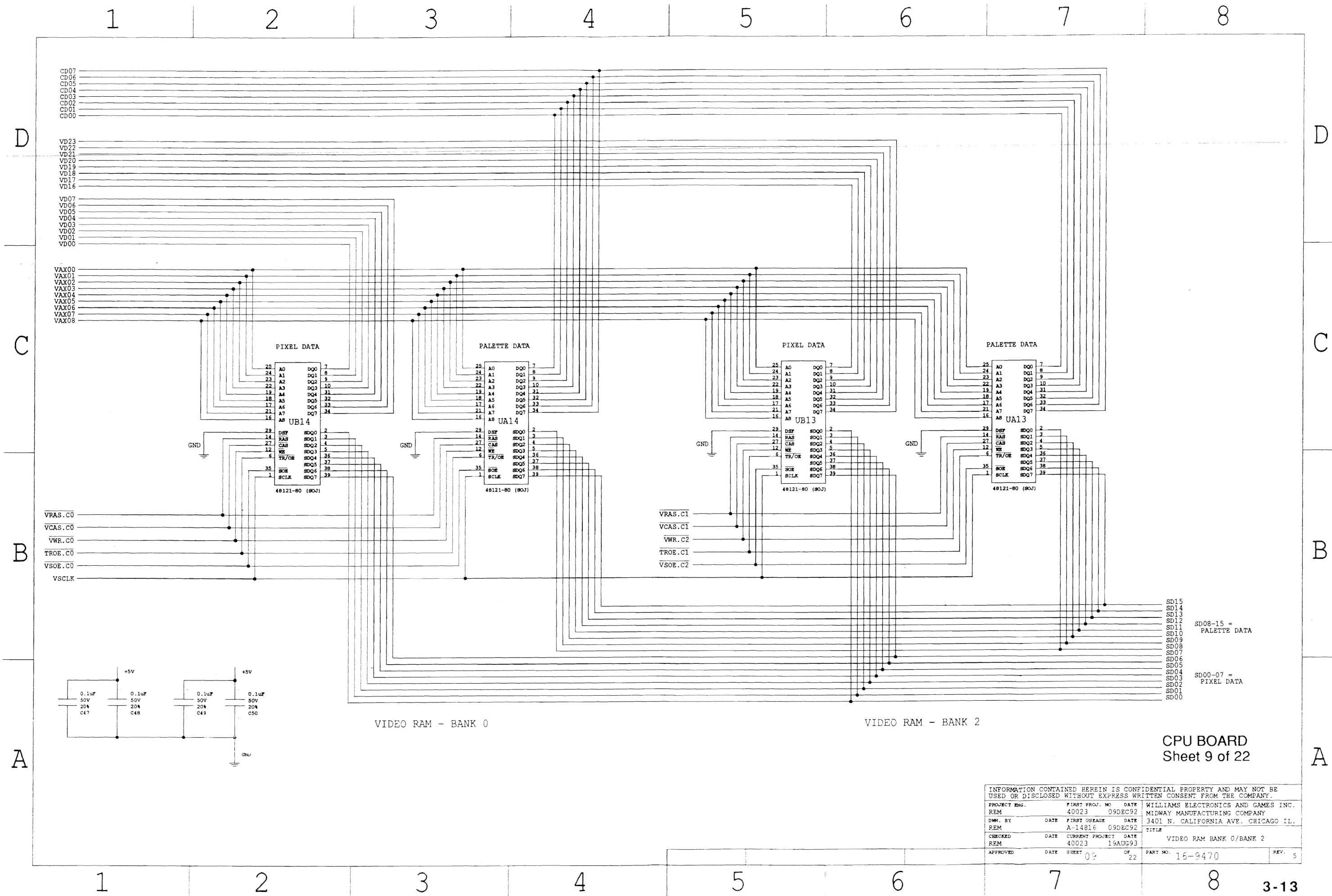
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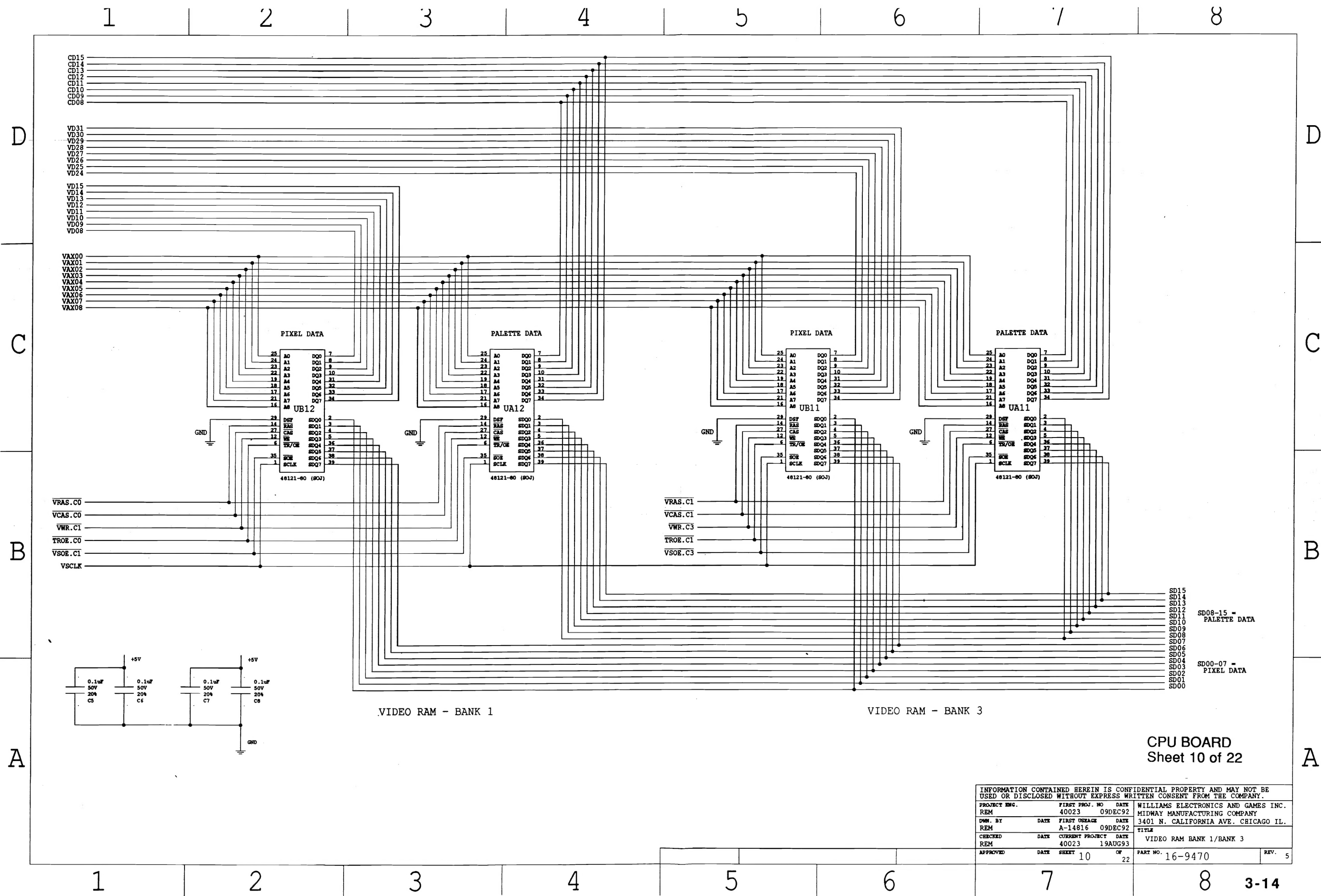
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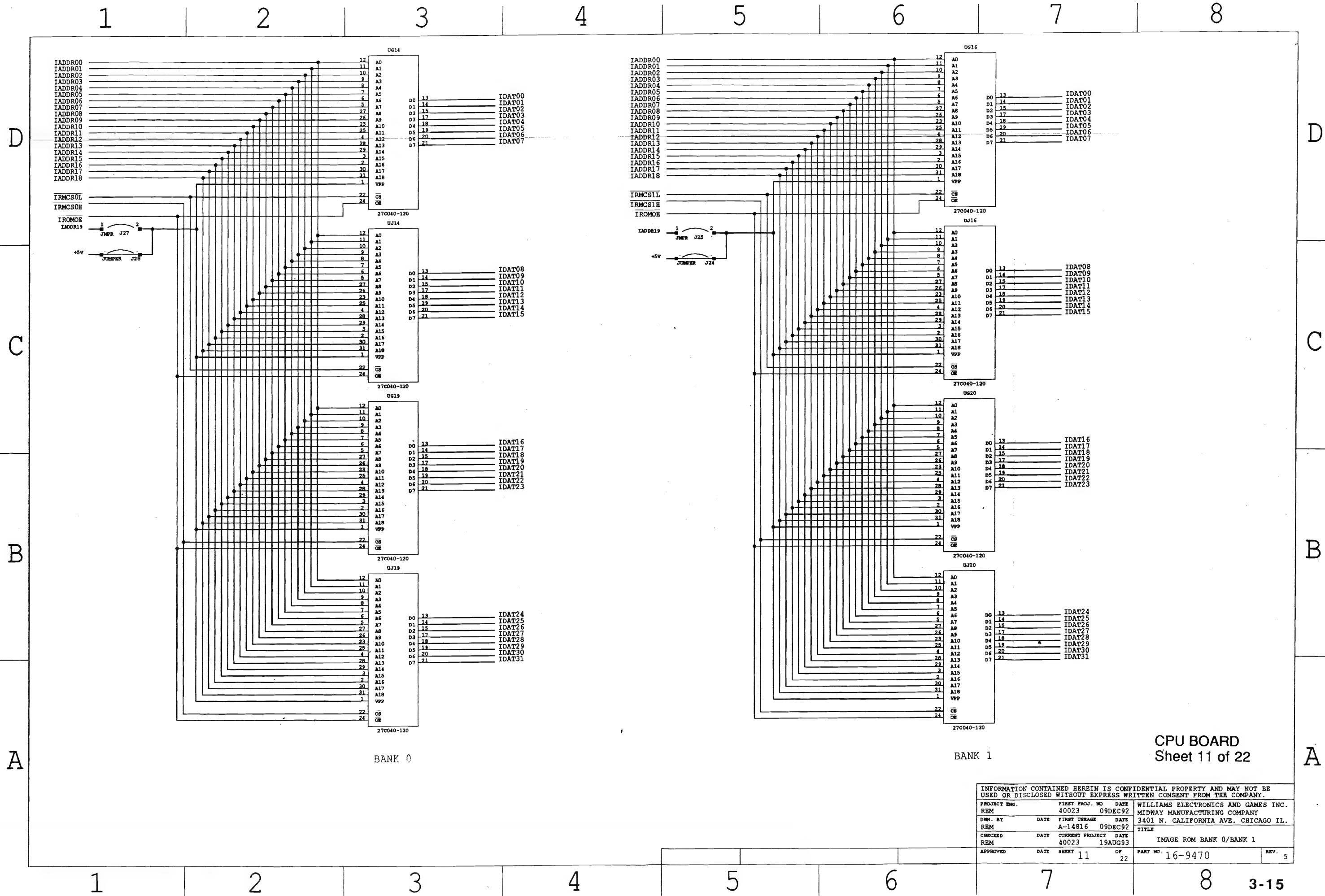


CPU BOARD
Sheet 9 of 22

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					WILLIAMS ELECTRONICS AND GAMES INC.	
PROJECT ENG.	FIRST PROJ. NO.	DATE	40023	09DEC92	MIDWAY MANUFACTURING COMPANY	
REM	DATE	FIRST USEAGE	DATE	A-14816	3401 N. CALIFORNIA AVE. CHICAGO IL.	
DNW. BY	DATE	CURRENT PROJECT	DATE	40023	19AUG93	
CHECKED	DATE	DATE	DATE	DATE	VIDEO RAM BANK 0/BANK 2	
APPROVED	DATE	SHEET	09	OF	22	PART NO. 16-9470
					REV.	5

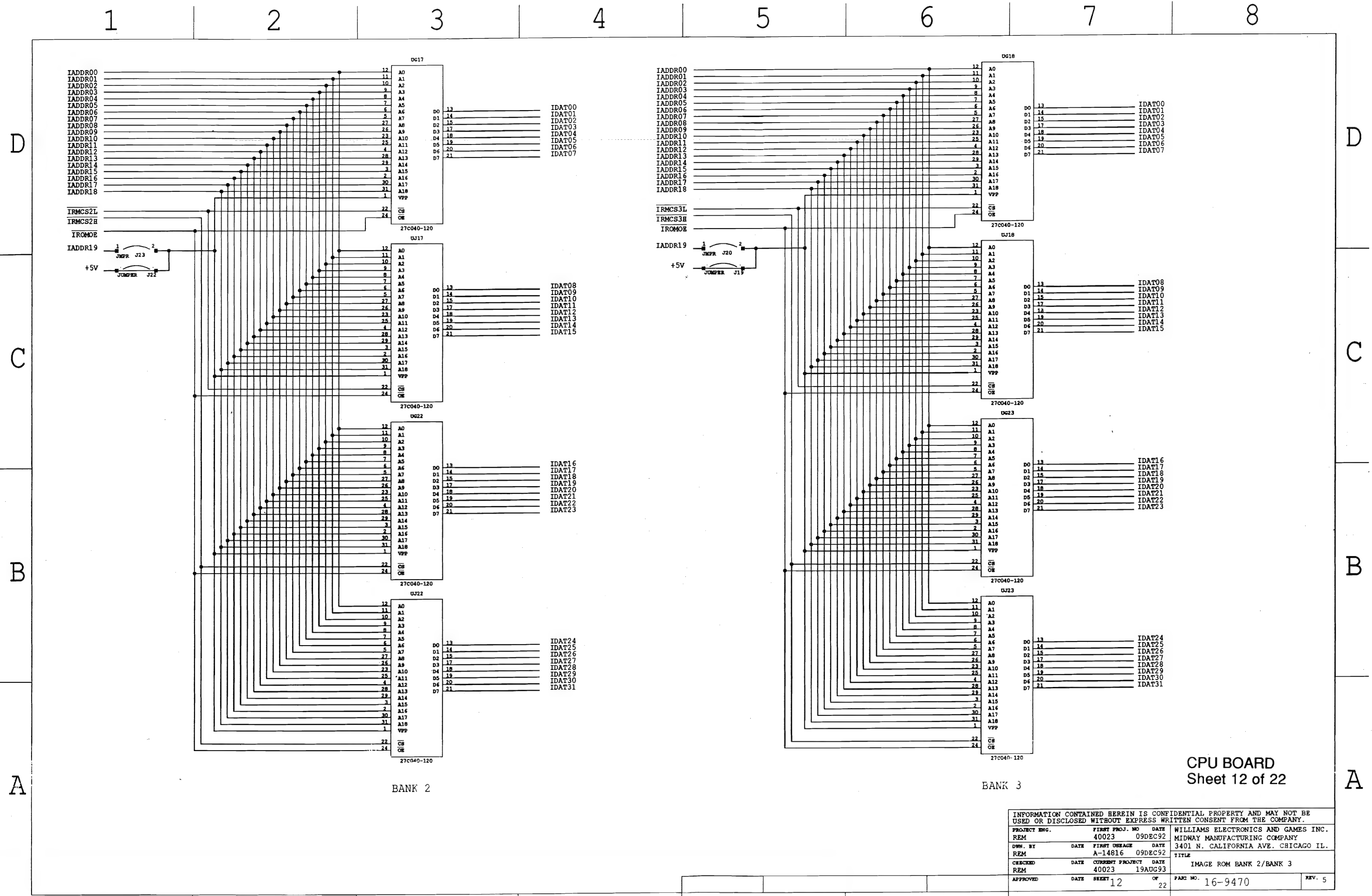


INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG.	FIRST PROJ. NO.	DATE	40023	09DEC92	WILLIAMS ELECTRONICS AND GAMES INC.
REM	DATE	FIRST USAGE	DATE	DATE	MIDWAY MANUFACTURING COMPANY
DNW. BY	DATE	FIRST USAGE	DATE	DATE	3401 N. CALIFORNIA AVE. CHICAGO IL.
REM	DATE	FIRST USAGE	DATE	DATE	TITLE
CHECKED	DATE	CURRENT PROJECT	DATE	DATE	VIDEO RAM BANK 1/BANK 3
REM	DATE	CURRENT PROJECT	DATE	DATE	
APPROVED	DATE	SHEET	10	OF	PART NO. 16-9470
					REV. 5



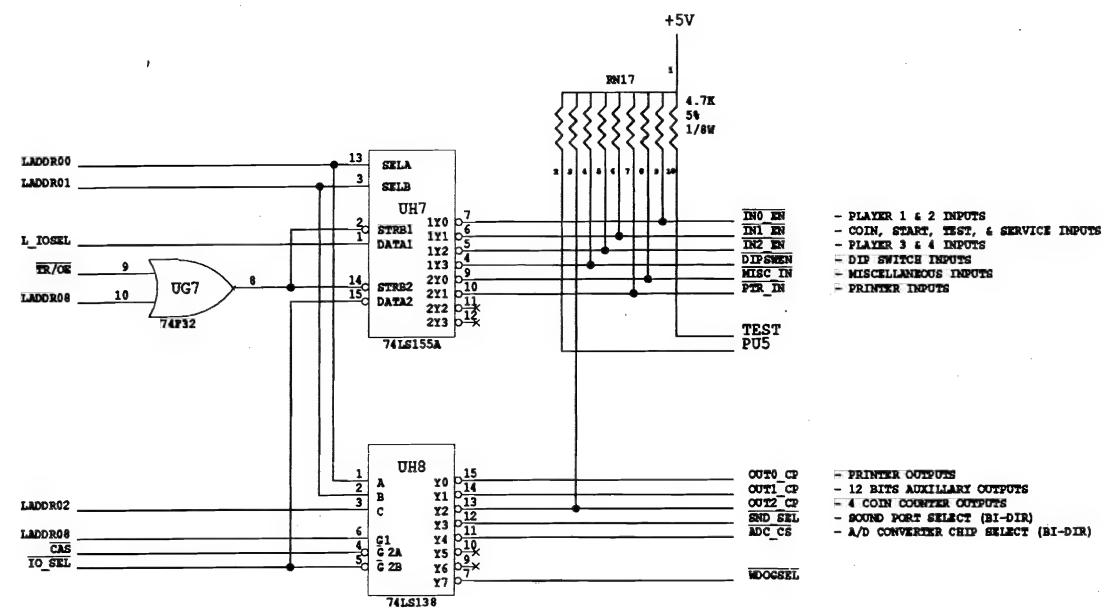
CPU BOARD
Sheet 11 of 22

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG.	FIRST PROJ. NO.	DATE	WILLIAMS ELECTRONICS AND GAMES INC.		
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY		
DWN. BY	DATE	FIRST USAGE	3401 N. CALIFORNIA AVE. CHICAGO IL.		
REM		A-14816	TITLE		
CHECKED	DATE	CURRENT PROJECT	IMAGE ROM BANK 0/BANK 1		
REM	40023	19AUG93			
APPROVED	DATE	SHEET	11	OF	22
PART NO. 16-9470				REV.	5



CPU BOARD
Sheet 12 of 22

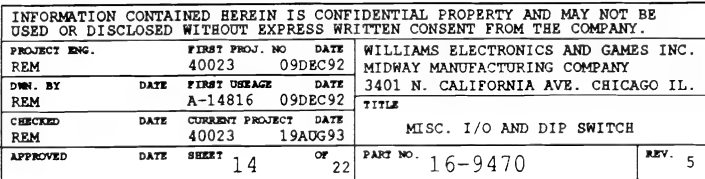
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.			
PROJECT ENG.	FIRST PROJ. NO.	DATE	WILLIAMS ELECTRONICS AND GAMES INC.
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY
DWN. BY	DATE	FIRST USAGE	DATE
REM	A-14816	09DEC92	3401 N. CALIFORNIA AVE. CHICAGO IL.
CHECKED	DATE	CURRENT PROJECT	DATE
REM	40023	19AUG93	IMAGE ROM BANK 2/BANK 3
APPROVED	DATE	SHEET	PART NO.
		12 OF 22	16-9470
			REV. 5

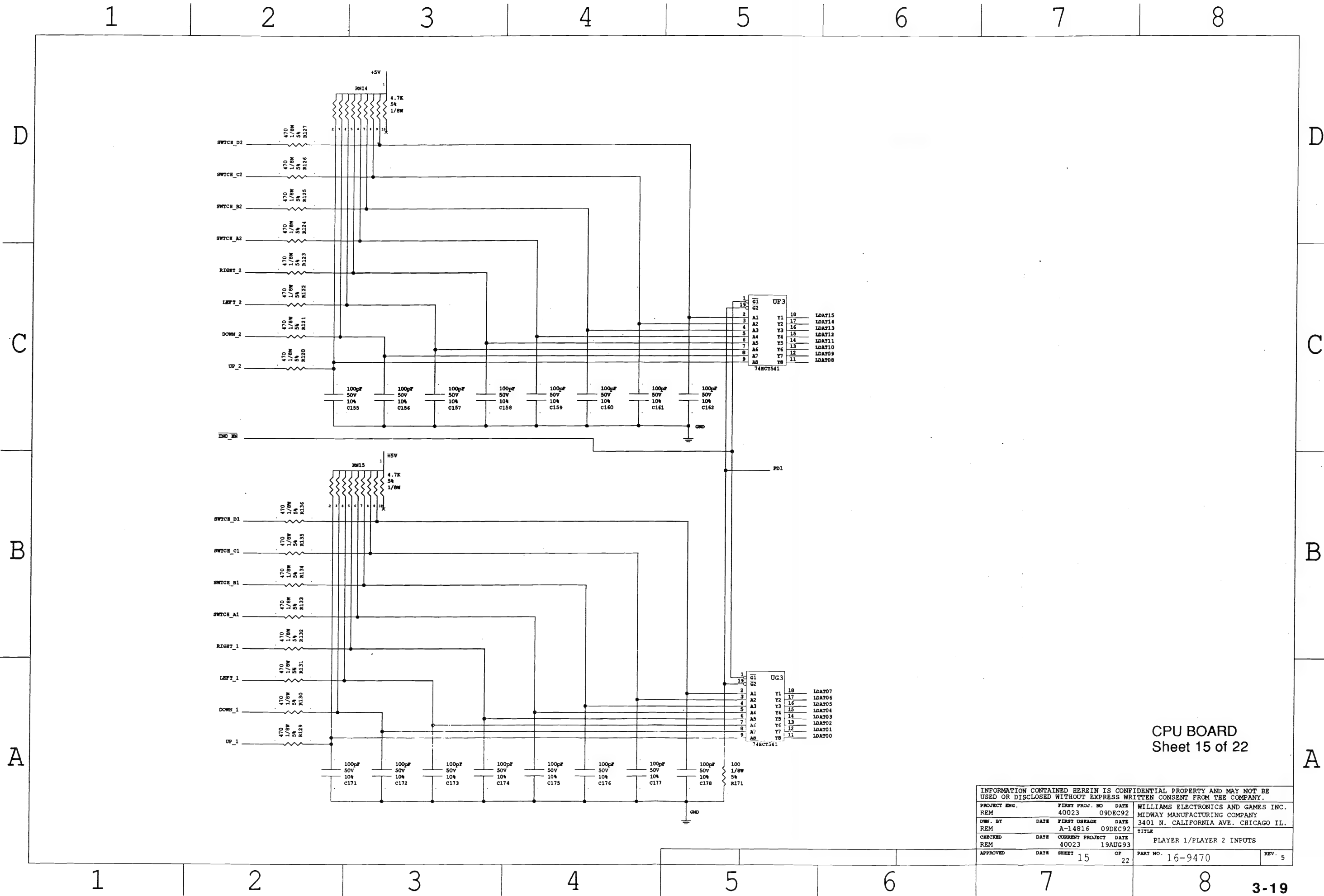


CPU BOARD
Sheet 13 of 22

19 AUG. 1993 REM - CHANGED UG7 74LS32 TO 74F32.

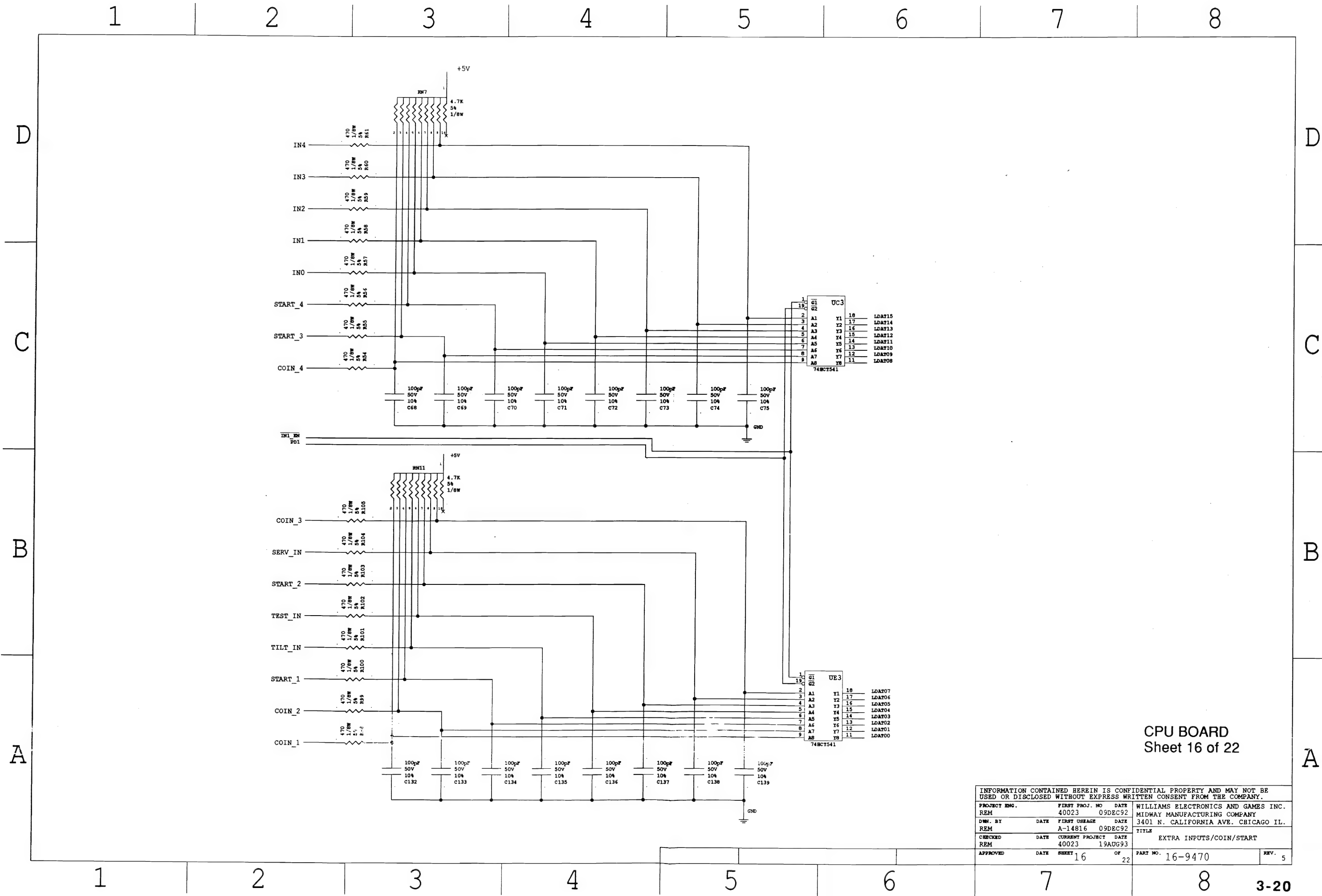
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.			
PROJECT ENG.	FIRST PROJ. NO	DATE	WILLIAMS ELECTRONICS AND GAMES INC.
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY
DWN. BY	DATE	FIRST USAGE	DATE
REM	A-14816	09DEC92	3401 N. CALIFORNIA AVE. CHICAGO IL.
CHECKED	DATE	CURRENT PROJECT	DATE
REM	40023	19AUG93	
APPROVED	DATE	SHEET	OF
		13	22
PART NO. 16-9470			REV. 5





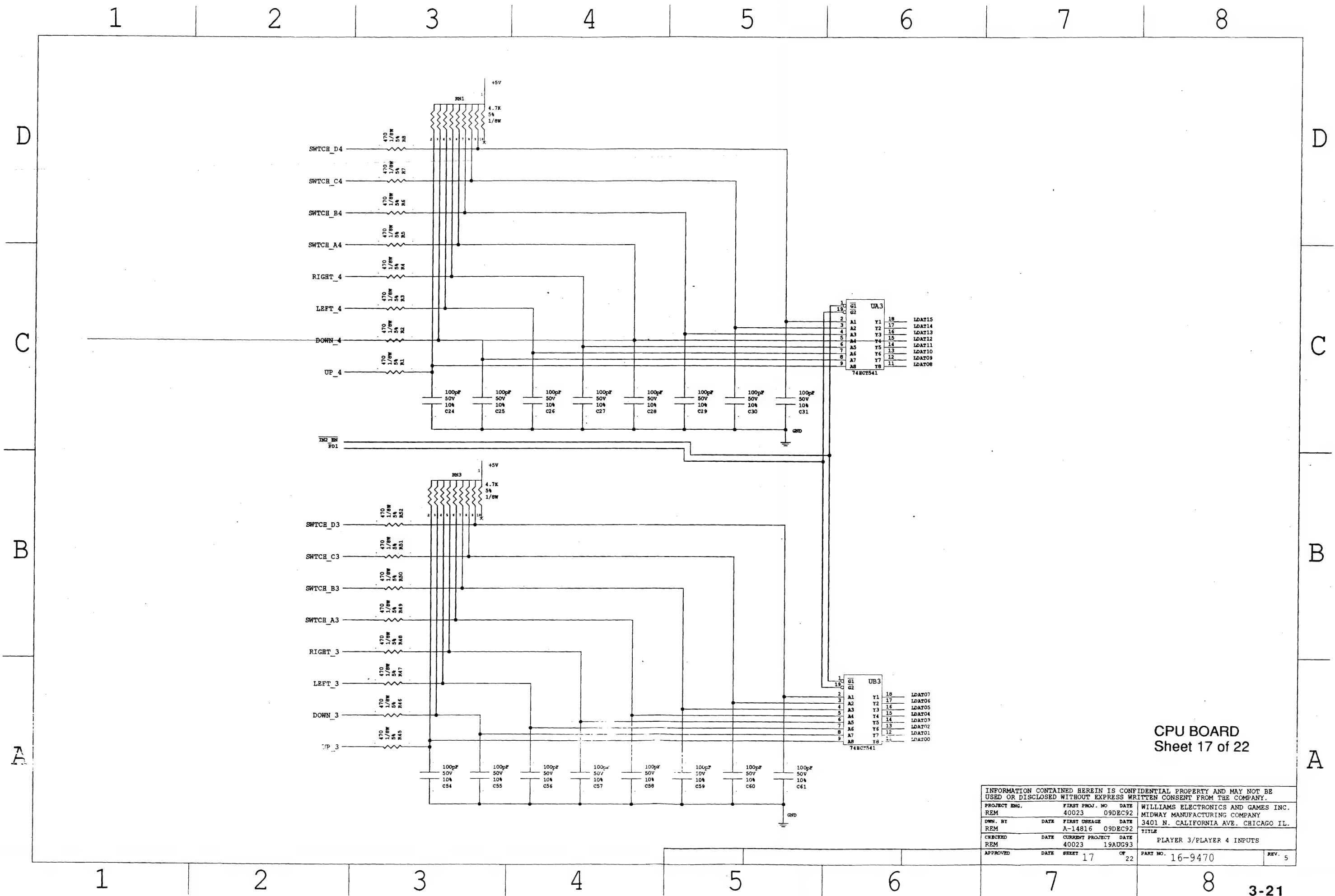
CPU BOARD
Sheet 15 of 22

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.			
PROJECT ENG.	FIRST PROJ. NO.	DATE	WILLIAMS ELECTRONICS AND GAMES INC.
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY
OWN. BY	DATE	FIRST USAGE	3401 N. CALIFORNIA AVE. CHICAGO IL.
REM	A-14816	09DEC92	TITLE
CHECKED	DATE	CURRENT PROJECT	DATE
REM	40023	19AUG93	PLAYER 1/PLAYER 2 INPUTS
APPROVED	DATE	SHEET	PART NO.
		15	16-9470
		OF	REV. 5
		22	



CPU BOARD
Sheet 16 of 22

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.			
PROJECT ENG.	FIRST PROJ. NO.	DATE	WILLIAMS ELECTRONICS AND GAMES INC.
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY
DWG. BY	DATE	FIRST USAGE	DATE
REM	A-14816	09DEC92	3401 N. CALIFORNIA AVE. CHICAGO IL.
CHECKED	DATE	CURRENT PROJECT	DATE
REM	40023	19AUG93	
APPROVED	DATE	SHEET	OF
		16	22
PART NO. 16-9470			REV. 5



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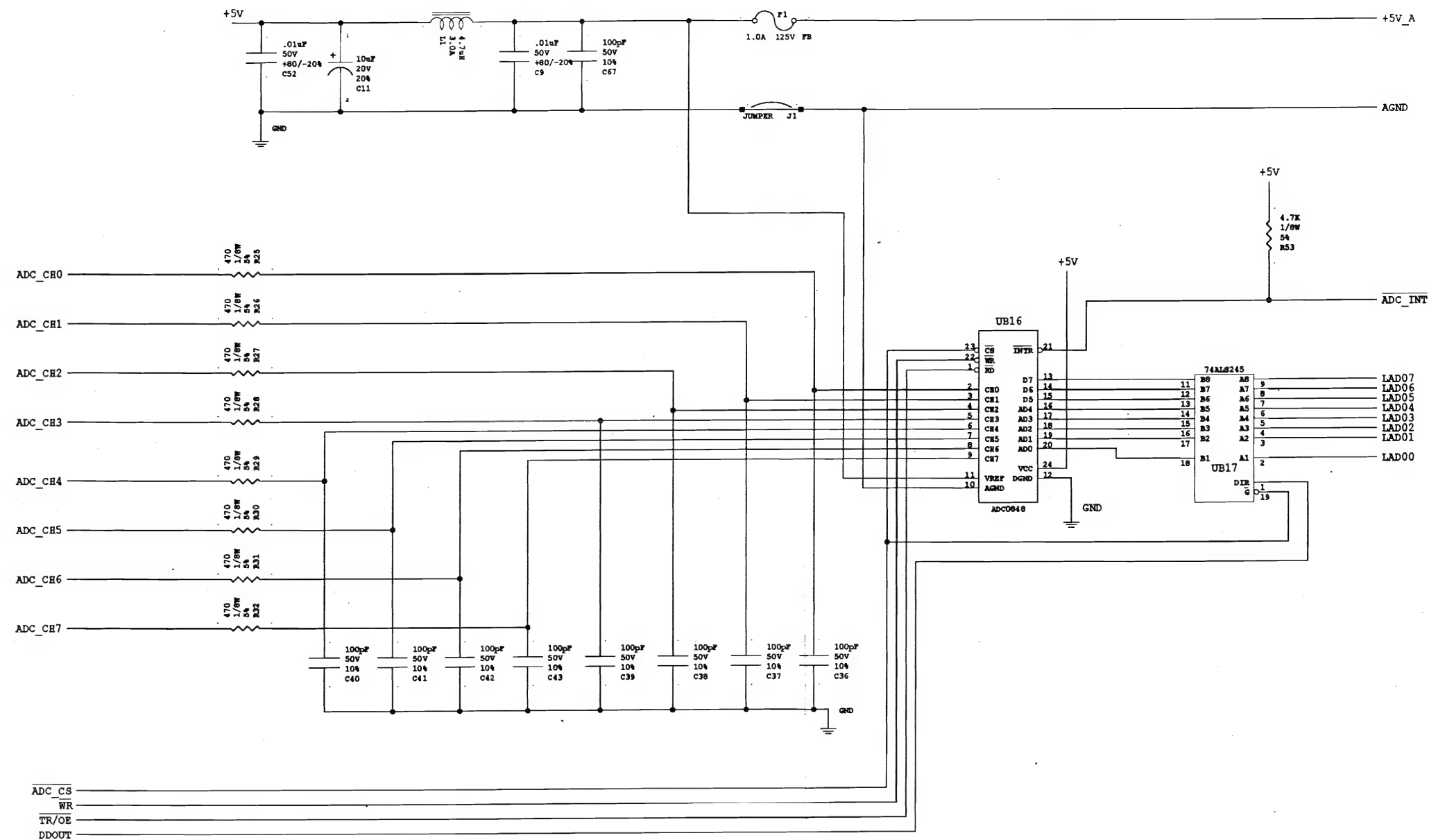
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CPU BOARD
Sheet 18 of 22

INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG.	FIRST PROJ. NO.	DATE	WILLIAMS ELECTRONICS AND GAMES INC.		
REM	40023	09DEC92	MIDWAY MANUFACTURING COMPANY		
DWN. BY	DATE	FIRST USAGE	DATE	3401 N. CALIFORNIA AVE. CHICAGO IL.	
REM		A-14816	09DEC92	TITLE	
CHECKED	DATE	CURRENT PROJECT	DATE	A/D	
REM		40023	19AUG93		
APPROVED	DATE	SHEET	18	PART NO.	16-9470
		OF	22	REV.	5

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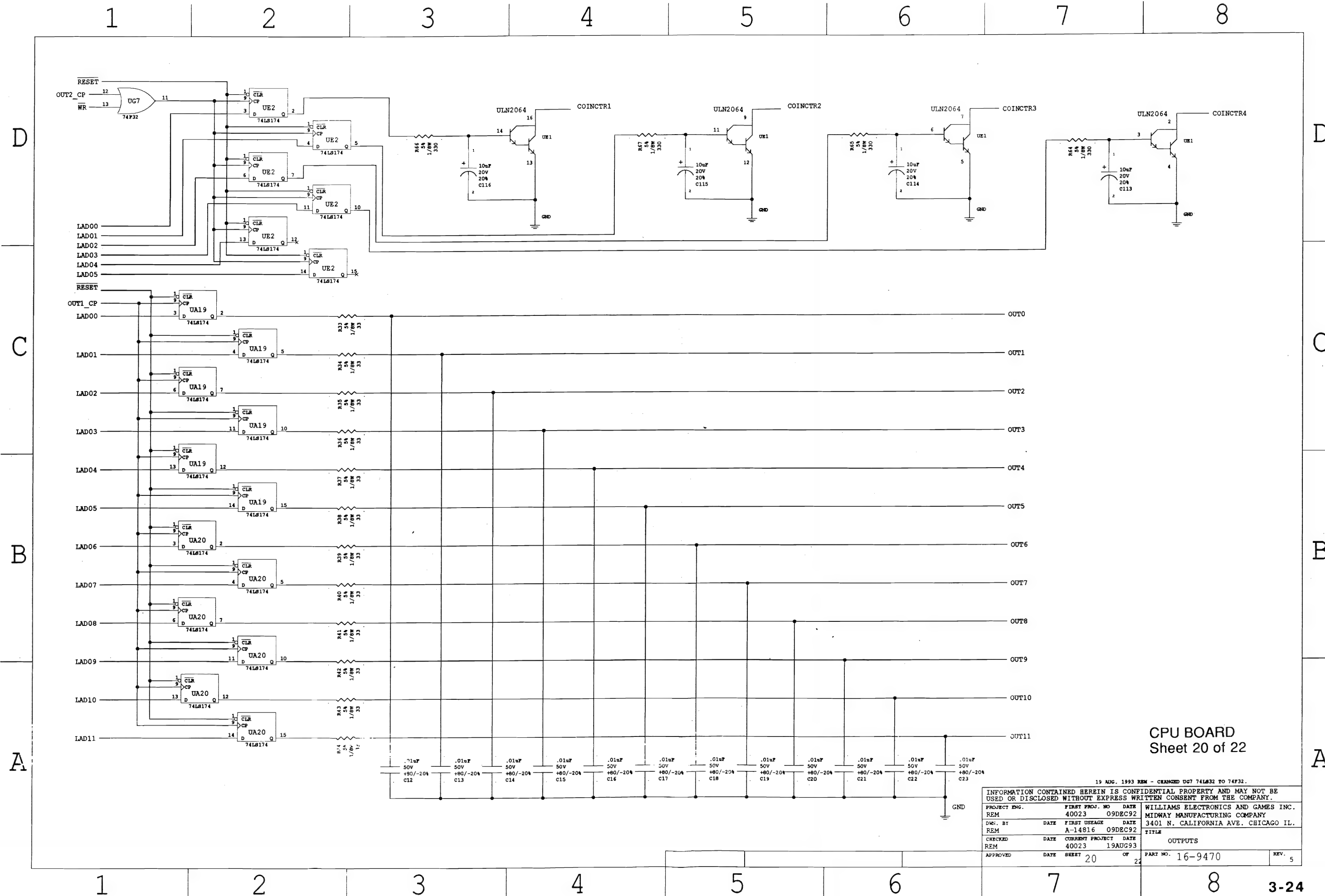
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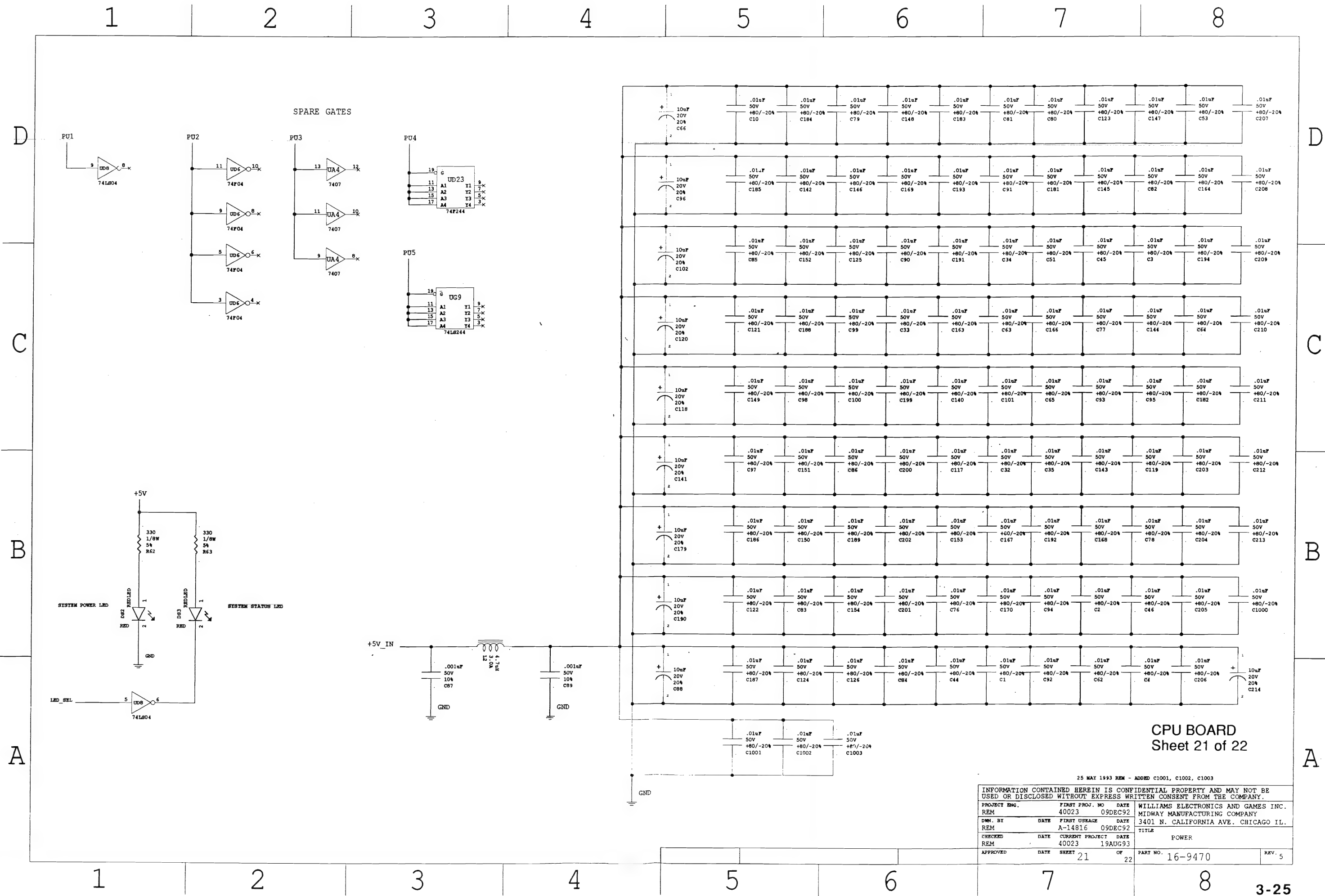
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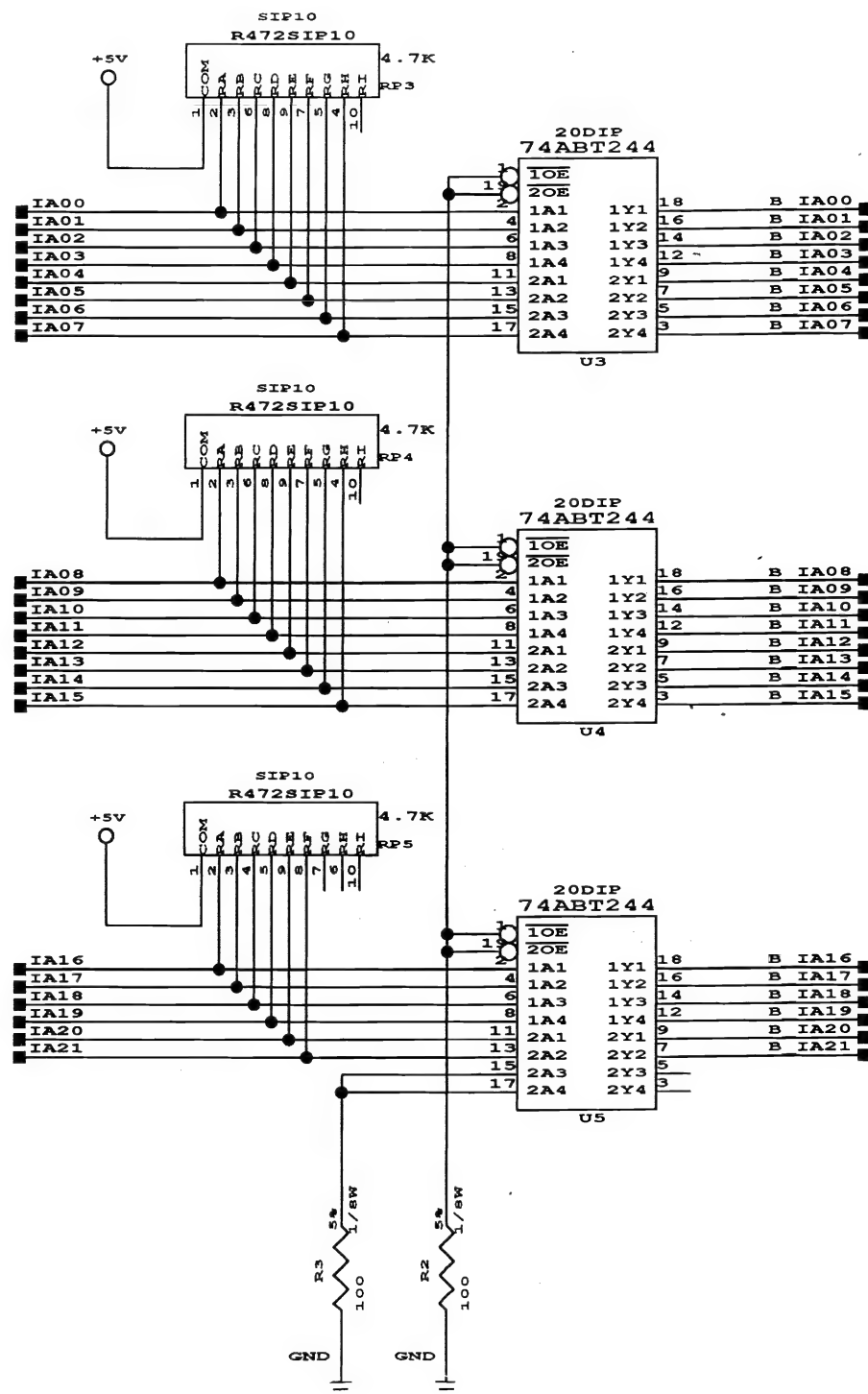
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3-22

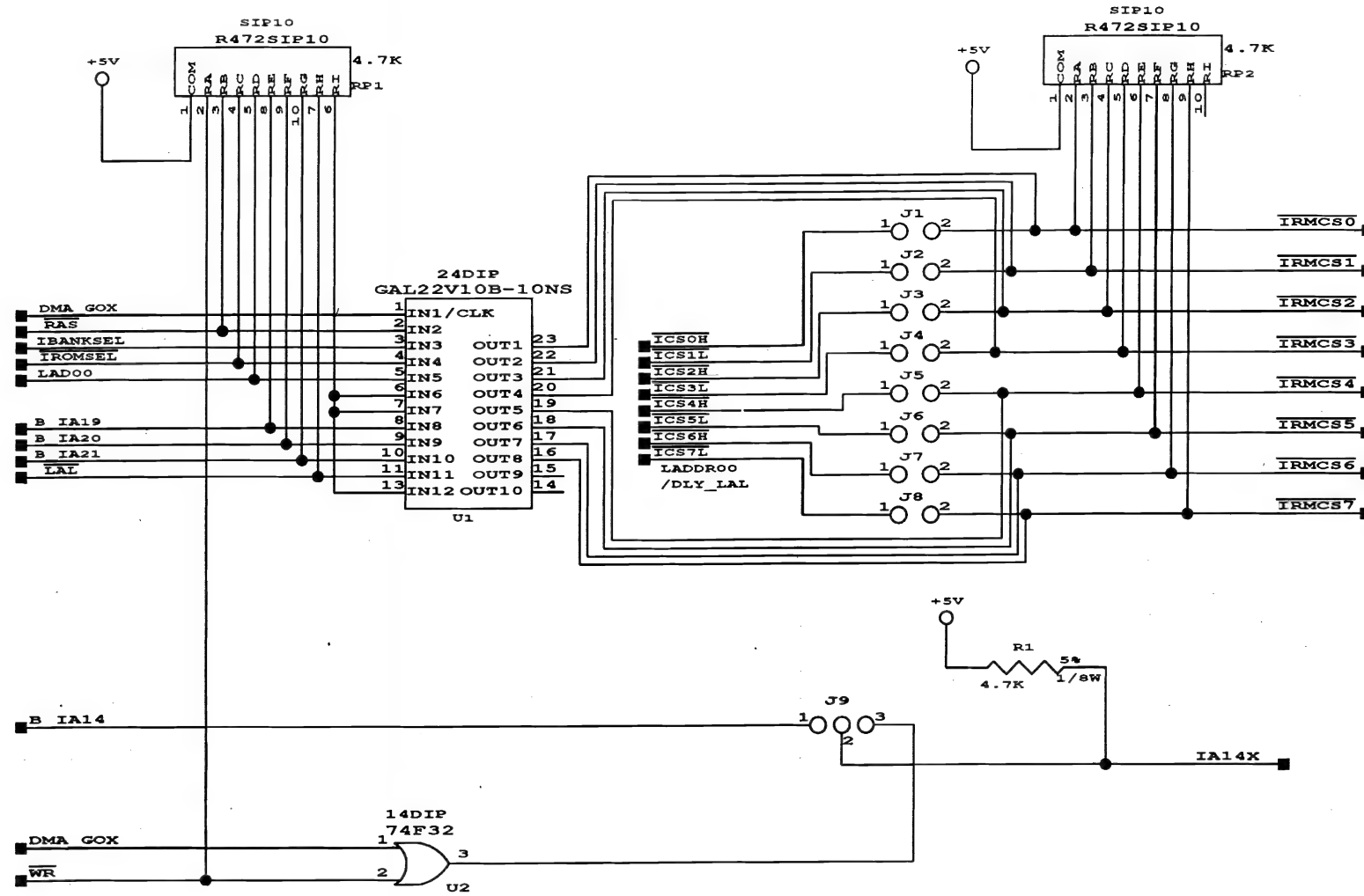




IROM ADDRESS BUFFERS

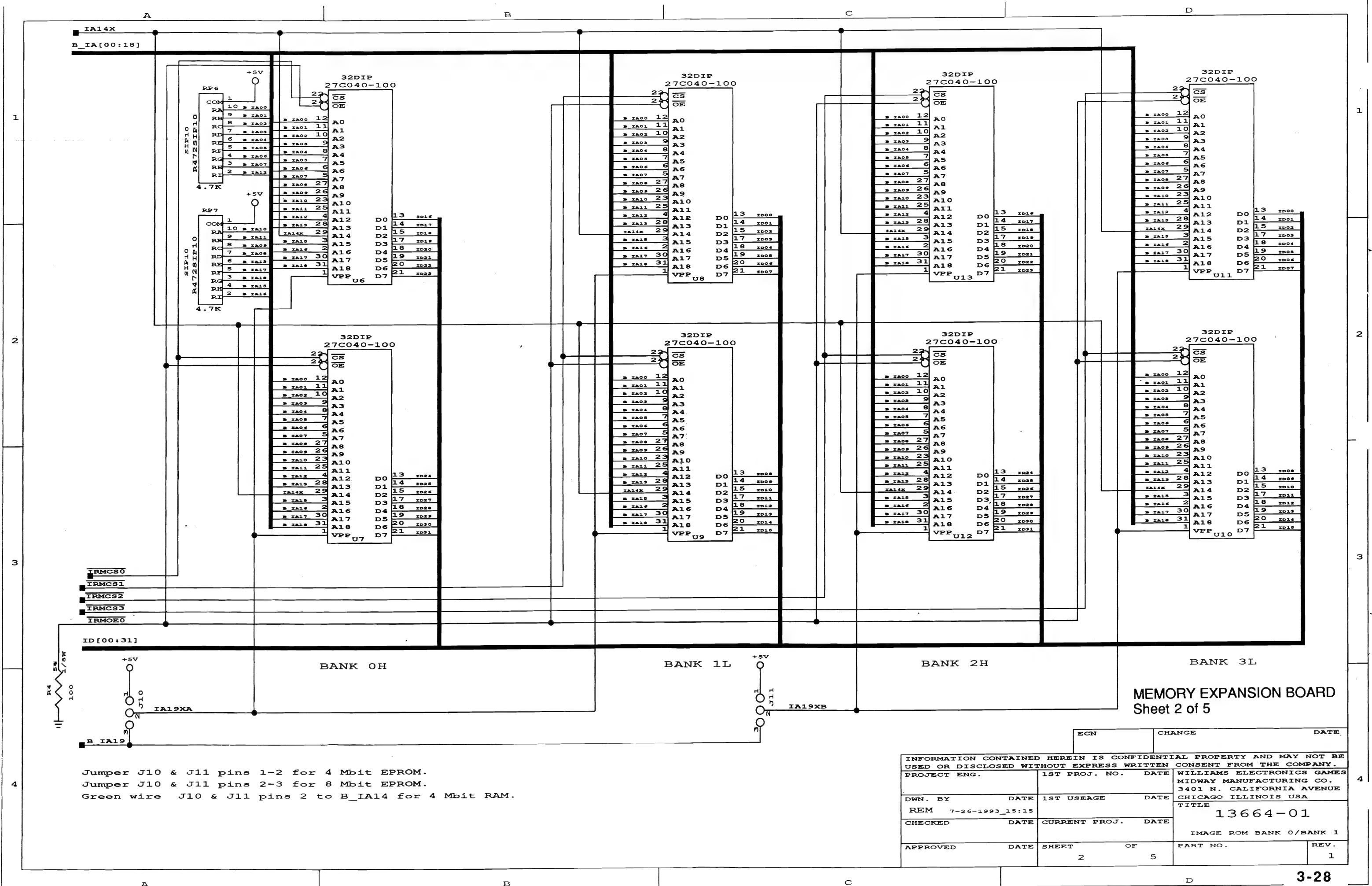


IROM CS GENERATOR



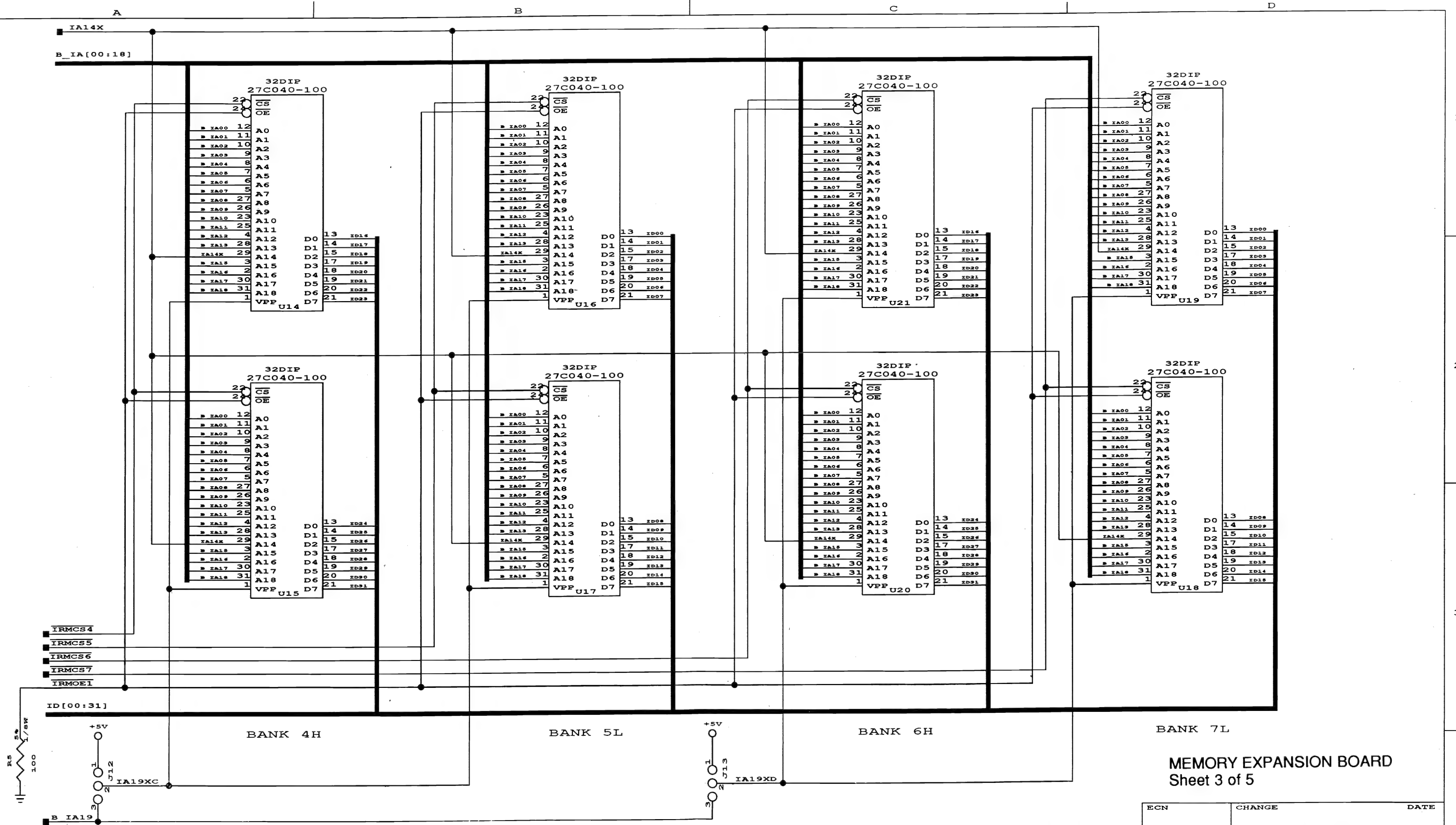
MEMORY EXPANSION BOARD Sheet 1 of 5

		ECN	CHANGE		DATE
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG.		1ST PROJ. NO.		DATE	WILLIAMS ELECTRONICS GAMES MIDWAY MANUFACTURING CO. 3401 N. CALIFORNIA AVENUE CHICAGO ILLINOIS USA
DWN. BY		DATE		1ST USAGE	DATE
REM 8-20-1993_6:34					
CHECKED		DATE		CURRENT PROJ.	DATE
APPROVED		DATE		SHEET	OF
				1	5
				PART NO.	REV.
					1



Jumper J10 & J11 pins 1-2 for 4 Mbit EPROM.
Jumper J10 & J11 pins 2-3 for 8 Mbit EPROM.
Green wire J10 & J11 pins 2 to B_IA14 for 4 Mbit RAM.

ECN		CHANGE		DATE	
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG.		1ST PROJ. NO.		DATE	
DWN. BY		1ST USAGE		DATE	
REM		7-26-1993_15:15		TITLE	
CHECKED		CURRENT PROJ.		DATE	
APPROVED		SHEET		OF	
		2		5	
WILLIAMS ELECTRONICS GAMES MIDWAY MANUFACTURING CO. 3401 N. CALIFORNIA AVENUE CHICAGO ILLINOIS USA				13664-01	
IMAGE ROM BANK 0/BANK 1				PART NO.	
				REV.	
				1	

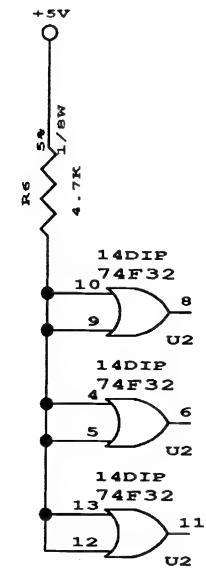


MEMORY EXPANSION BOARD
Sheet 3 of 5

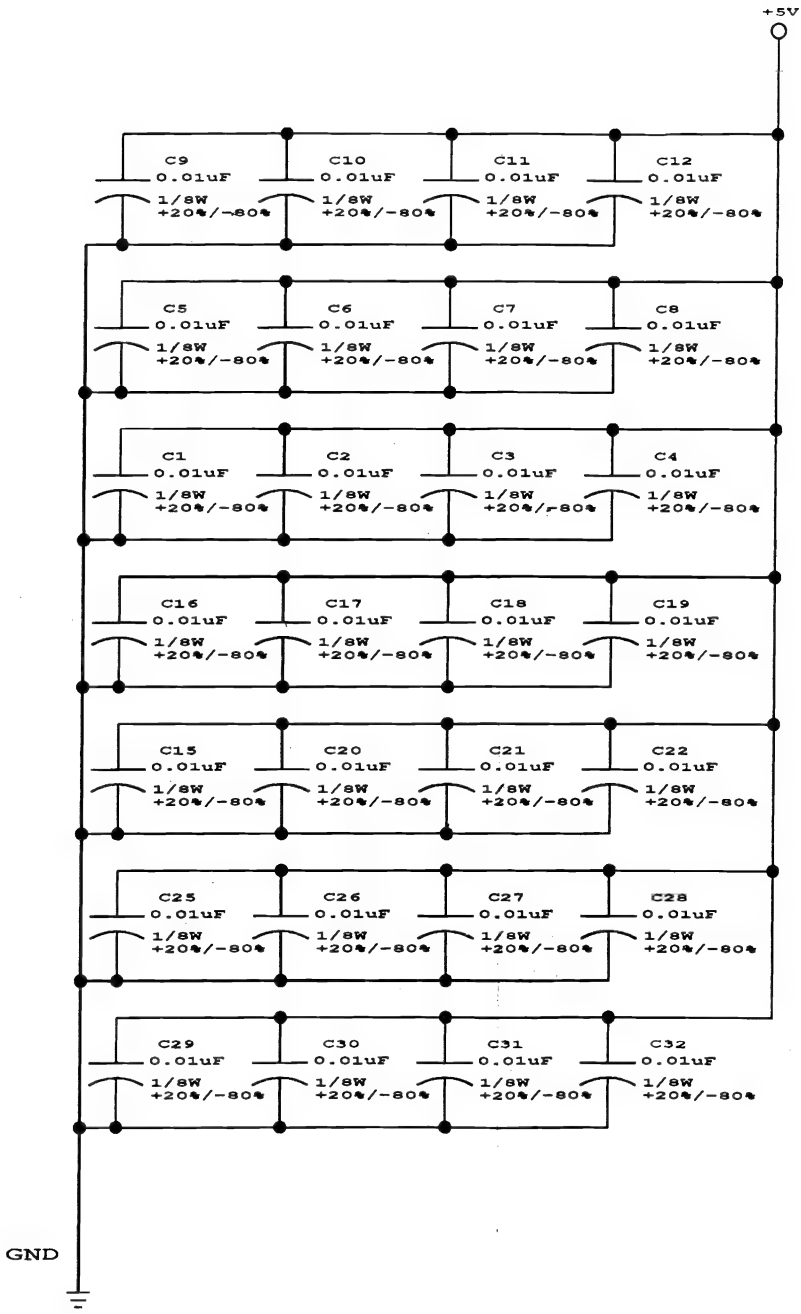
Jumper J12 & J13 pins 1-2 for 4 Mbit EPROM.
Jumper J12 & J13 pins 2-3 for 8 Mbit EPROM.
Green wire J12 & J13 pins 2 to B_IA14 for 4 Mbit RAM.

ECN		CHANGE		DATE	
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG.		1ST PROJ. NO.		DATE	
DWN. BY		DATE		1ST USEAGE	
REM		7-26-1993_15:15		DATE	
CHECKED		DATE		CURRENT PROJ.	
APPROVED		DATE		SHEET	
				OF	
		3		5	
WILLIAMS ELECTRONICS GAMES MIDWAY MANUFACTURING CO. 3401 N. CALIFORNIA AVENUE CHICAGO ILLINOIS USA				TITLE	
				13664-01	
				IMAGE ROM BANK 0/BANK 1	
PART NO.				REV.	
				1	

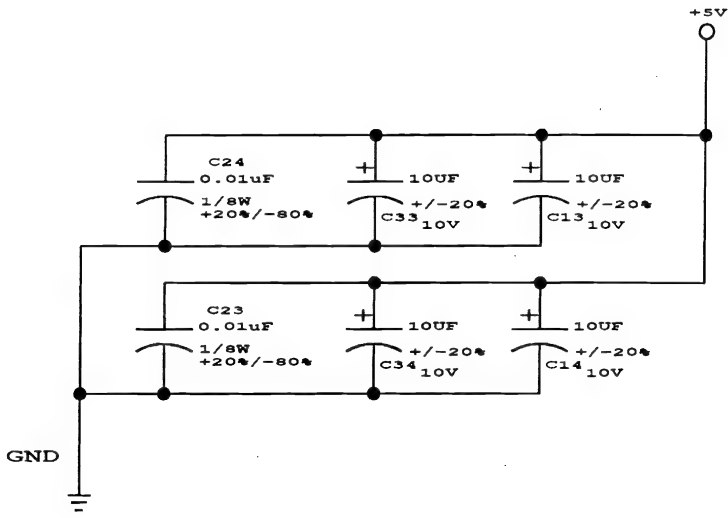
SPARE GATES



BYPASS CAPS



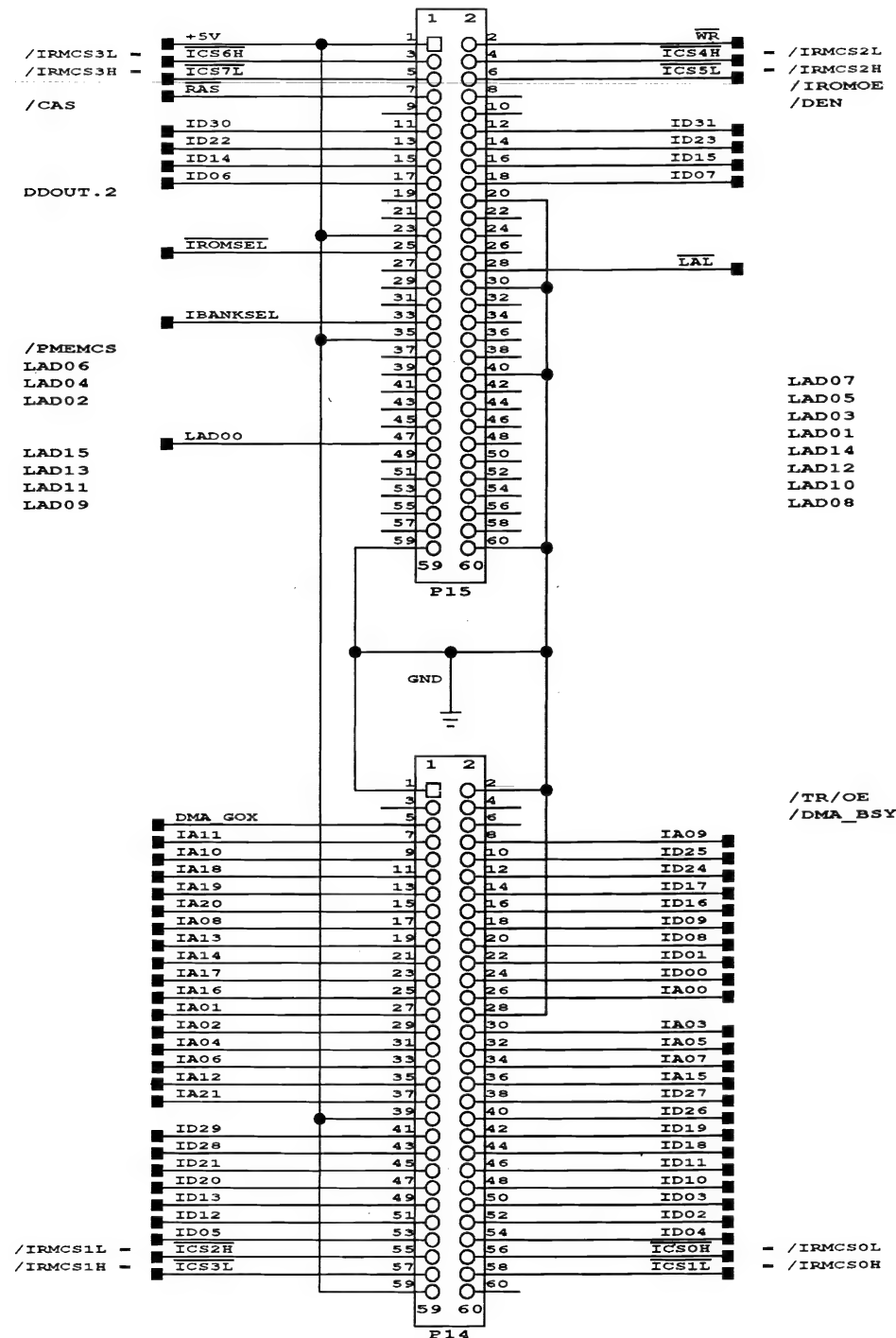
FILTER CAPS



MEMORY EXPANSION BOARD
Sheet 4 of 5

	ECN	CHANGE	DATE
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.			
PROJECT ENG.	1ST PROJ. NO.	DATE	WILLIAMS ELECTRONICS GAMES MIDWAY MANUFACTURING CO. 3401 N. CALIFORNIA AVENUE CHICAGO ILLINOIS USA
DWN. BY	DATE	1ST USAGE	DATE
REM 7-26-1993_15:15			
CHECKED	DATE	CURRENT PROJ.	DATE
APPROVED	DATE	SHEET	OF
		4	5
		PART NO.	REV.
			1

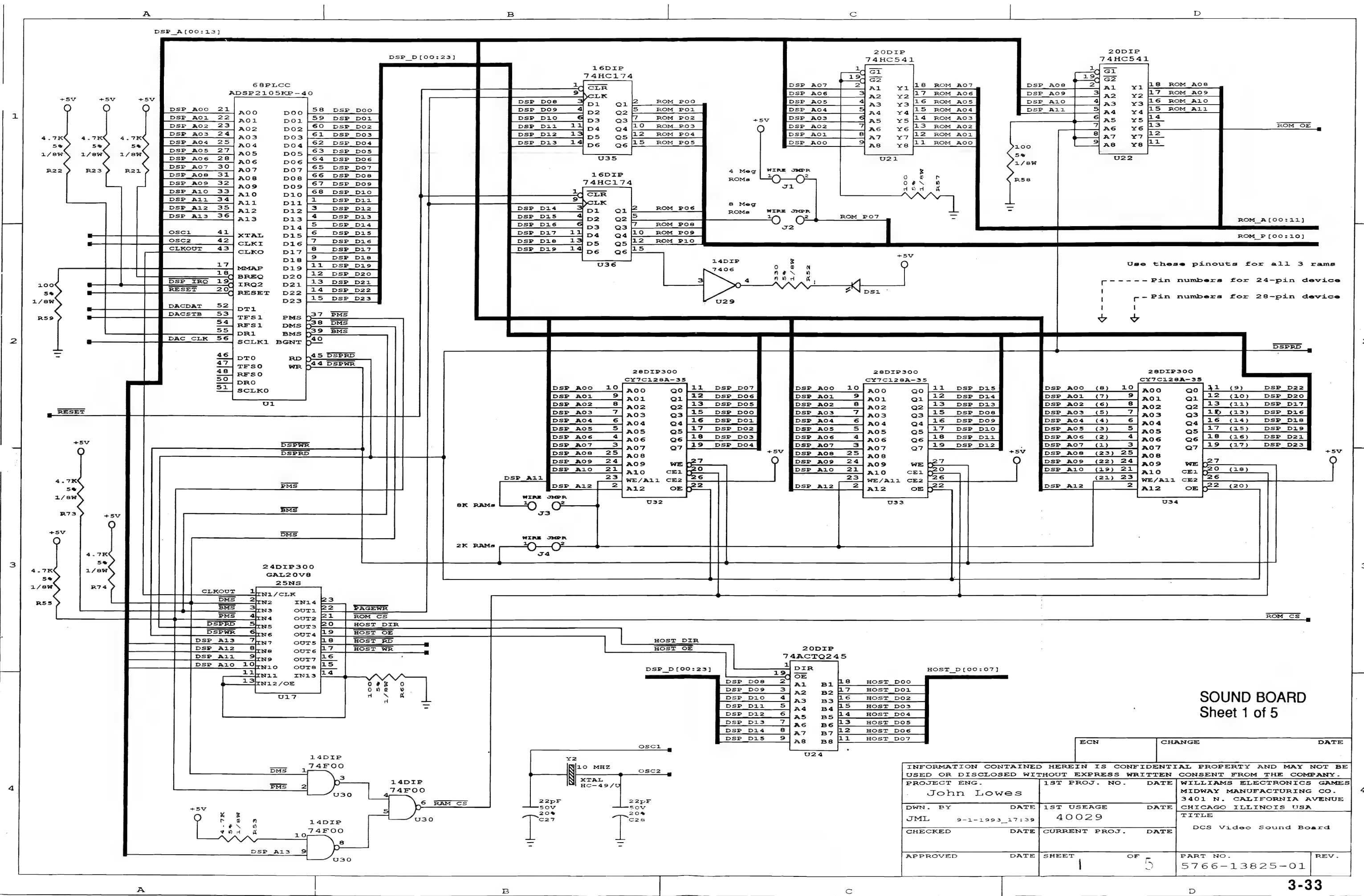
T-UNIT EXPANSION CONNECTORS



TUNIT CPU	EXPANSION
BOARD	CARD
/IRMCS0L	= /ICS0H - /IRMSC0
/IRMCS0H	= /ICS1L - /IRMSC1
/IRMCS1L	= /ICS2H - /IRMSC2
/IRMCS1H	= /ICS3L - /IRMSC3
/IRMCS2L	= /ICS4H - /IRMSC4
/IRMCS2H	= /ICS5L - /IRMSC5
/IRMCS3L	= /ICS6H - /IRMSC6
/IRMCS3H	= /ICS7L - /IRMSC7

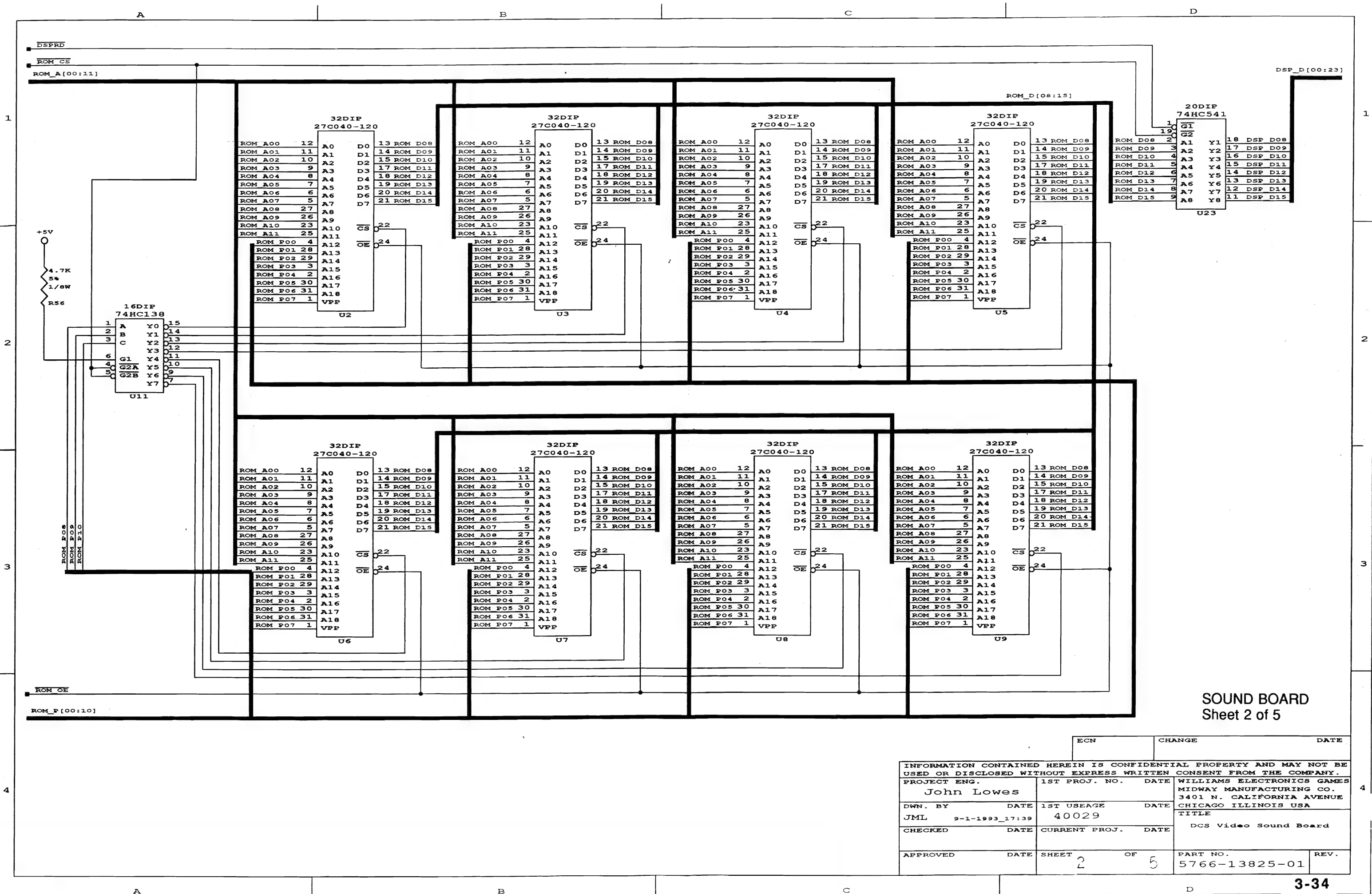
MEMORY EXPANSION BOARD Sheet 5 of 5

ECN		CHANGE		DATE
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.				
PROJECT ENG.	1ST PROJ. NO.	DATE	WILLIAMS ELECTRONICS GAMES MIDWAY MANUFACTURING CO. 3401 N. CALIFORNIA AVENUE CHICAGO ILLINOIS USA	
DWN. BY	DATE	1ST USAGE	DATE	TITLE
REM 7-26-1993_15:15		CURRENT PROJ.	DATE	13664-01
CHECKED	DATE	SHEET 5 OF 5		EXP. CONNECTORS
APPROVED	DATE	PART NO.	REV.	1



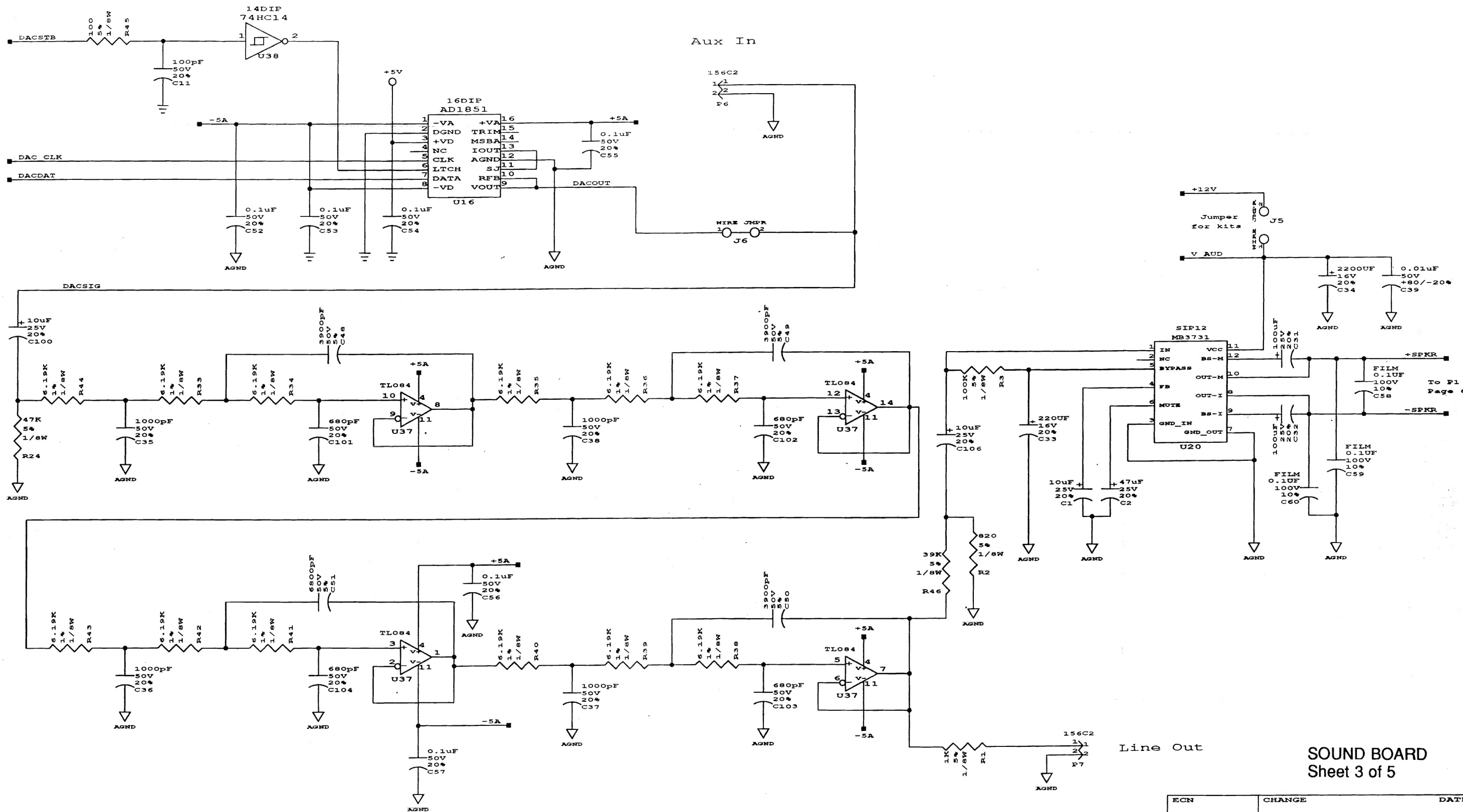
SOUND BOARD
Sheet 1 of 5

006		ECN		CHANGE		DATE	
007							
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.							
PROJECT ENG.		1ST PROJ. NO.		DATE		WILLIAMS ELECTRONICS GAMES MIDWAY MANUFACTURING CO. 3401 N. CALIFORNIA AVENUE CHICAGO ILLINOIS USA TITLE DCS Video Sound Board	
John Lowes							
DWN. BY		1ST USAGE		DATE			
JML		40029		9-1-1993_17:39			
CHECKED		CURRENT PROJ.		DATE			
APPROVED		SHEET		OF		PART NO.	
		1		5		5766-13825-01	
						REV.	



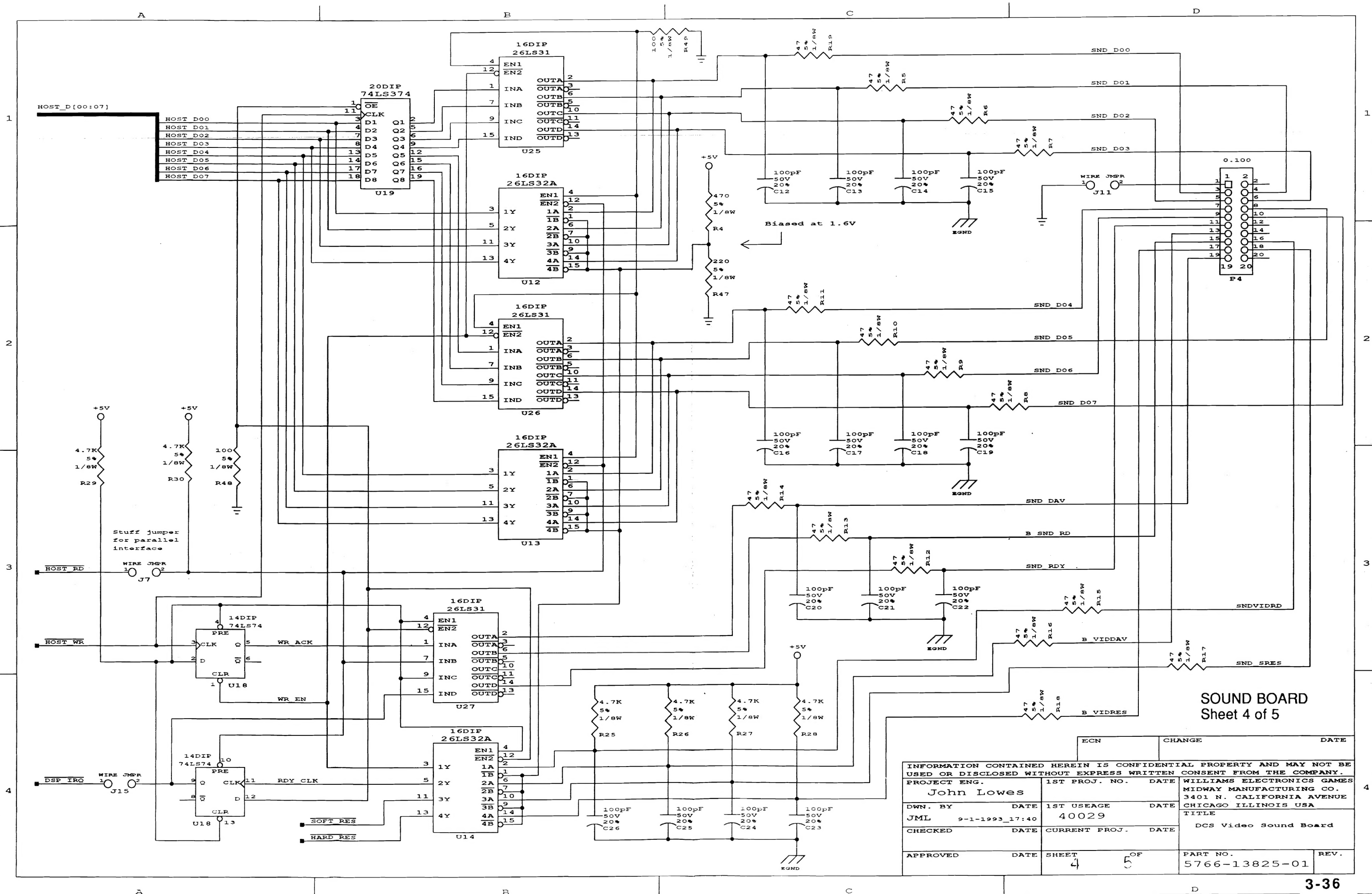
SOUND BOARD
Sheet 2 of 5

ECN		CHANGE		DATE	
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG. John Lowes		1ST PROJ. NO. 40029		DATE 9-1-1993_17:39	
DWN. BY JML		1ST USAGE 40029		DATE	
CHECKED		CURRENT PROJ.		DATE	
APPROVED		DATE		SHEET 2 OF 5	
PART NO. 5766-13825-01				REV.	



SOUND BOARD
Sheet 3 of 5

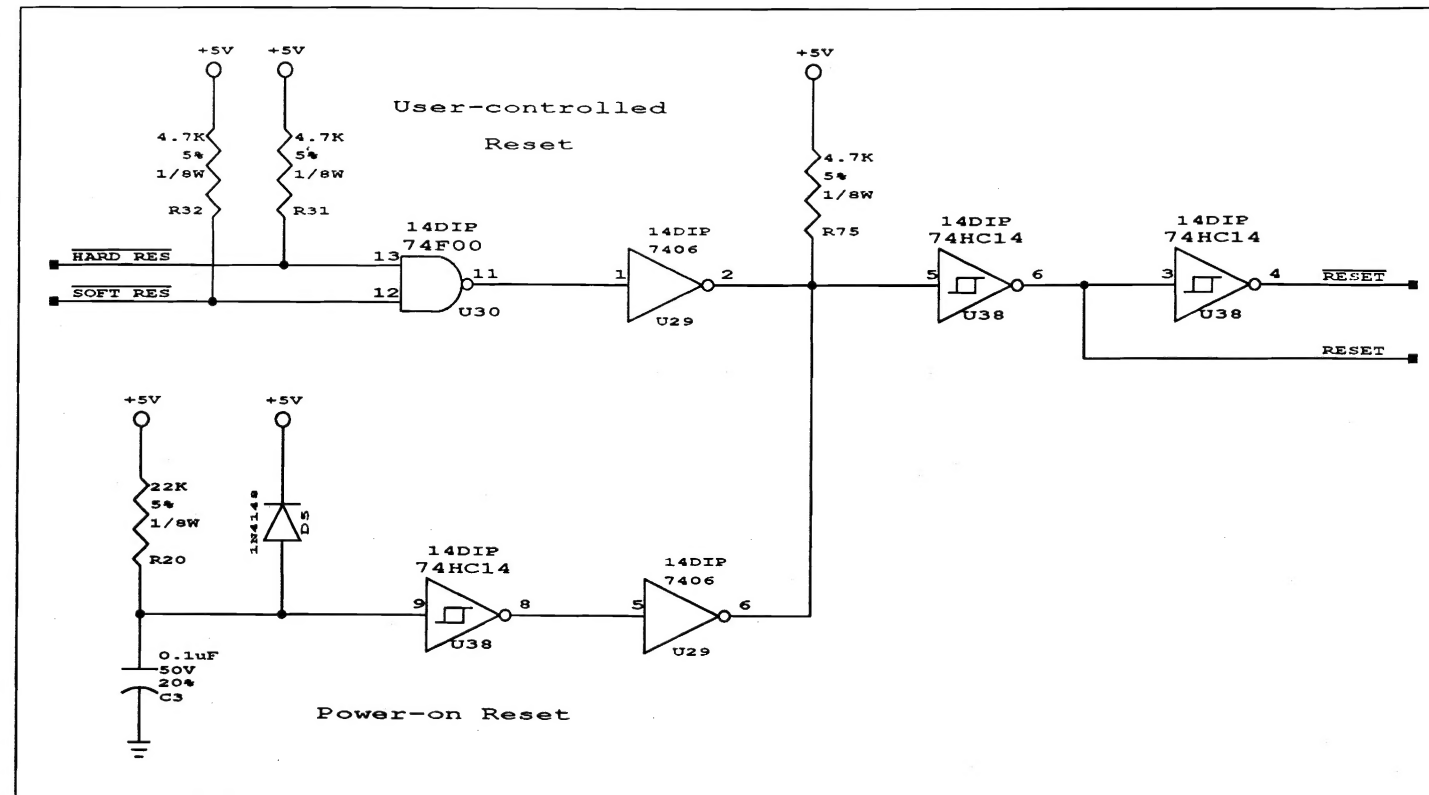
ECN		CHANGE		DATE	
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG. John Lowes		1ST PROJ. NO.		DATE	
DWN. BY JML		1ST USEAGE		DATE	
9-1-1993_17:39		40029		TITLE	
CHECKED		CURRENT PROJ.		DATE	
APPROVED		SHEET		OF	
				PART NO.	
				5766-13825-01	
				REV.	
				-	



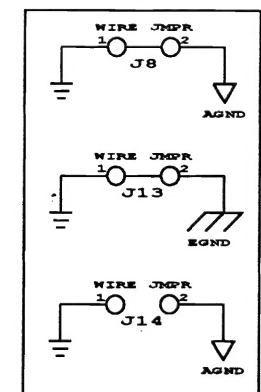
SOUND BOARD
Sheet 4 of 5

ECN		CHANGE		DATE	
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.					
PROJECT ENG.		1ST PROJ. NO.		DATE	
John Lowes				WILLIAMS ELECTRONICS GAMES MIDWAY MANUFACTURING CO. 3401 N. CALIFORNIA AVENUE CHICAGO ILLINOIS USA	
DWN. BY		1ST USAGE		DATE	
JML		40029		TITLE	
9-1-1993_17:40				DCS Video Sound Board	
CHECKED		CURRENT PROJ.		DATE	
APPROVED		SHEET		PART NO.	
		4		5766-13825-01	
		5		REV.	

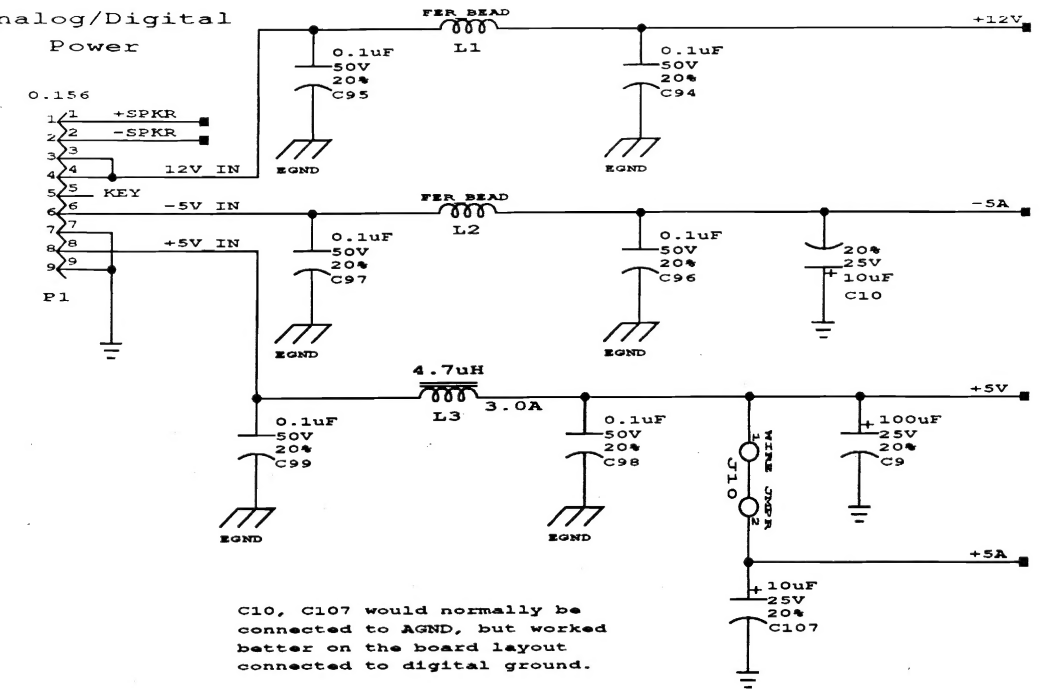
Reset Circuit



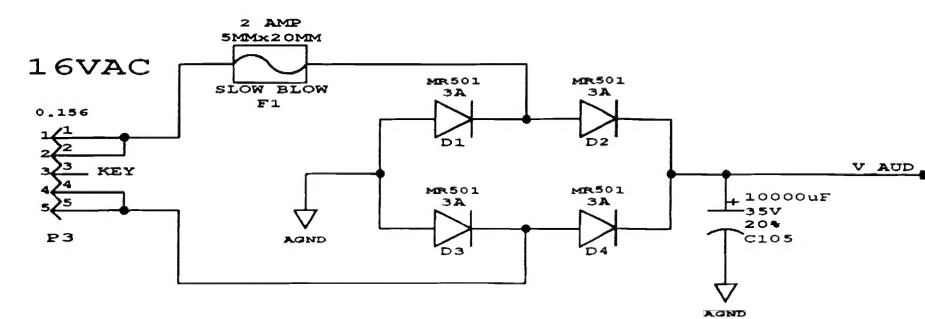
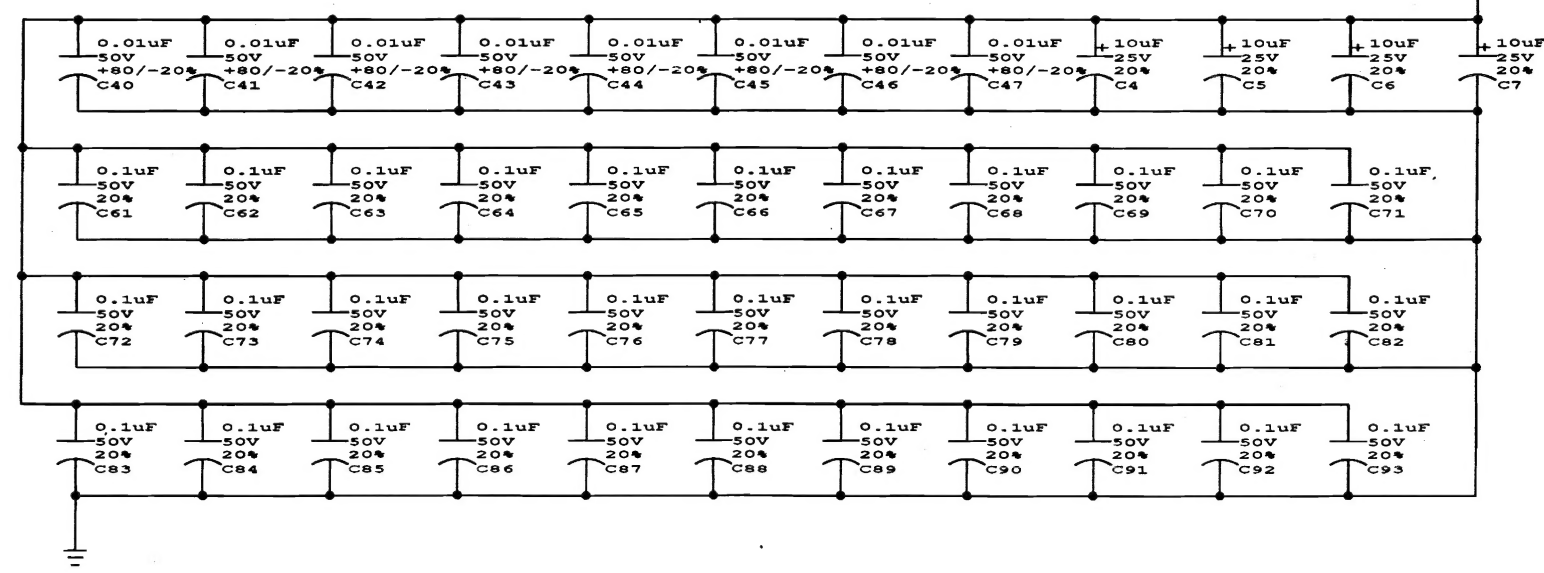
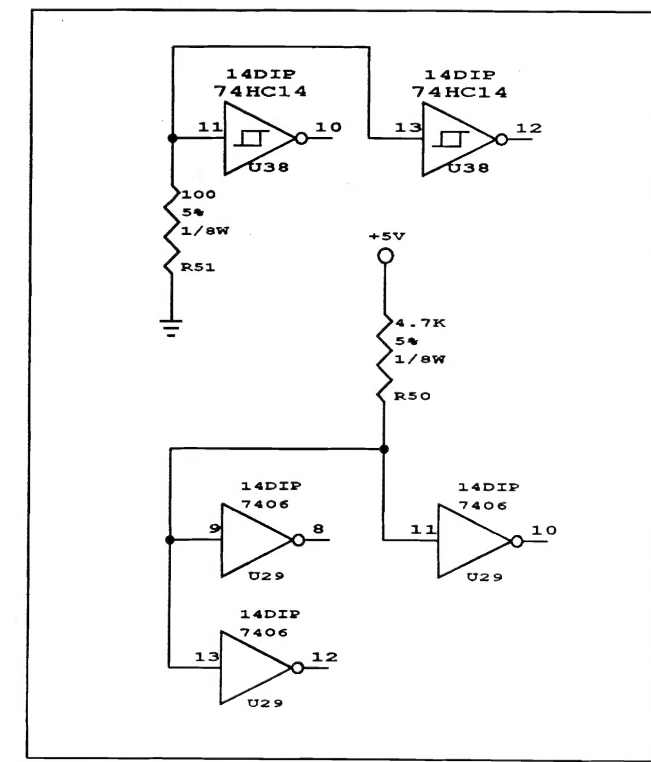
GROUND ISOLATION



Analog/Digital Power



Spare Gates



SOUND BOARD Sheet 5 of 5

ECN	CHANGE	DATE
INFORMATION CONTAINED HEREIN IS CONFIDENTIAL PROPERTY AND MAY NOT BE USED OR DISCLOSED WITHOUT EXPRESS WRITTEN CONSENT FROM THE COMPANY.		
PROJECT ENG.	1ST PROJ. NO.	DATE
John Lowes		
DWN. BY	DATE	1ST USAGE
JML	9-1-1993_17:41	40029
CHECKED	DATE	CURRENT PROJ.
APPROVED	DATE	SHEET
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PART NO.	REV.	
5766-13825-01		

