

MAGICOM MAIN LOGIC SCHEMATIC REVISIONS

- A. Original release.
- B. R3: Was 1K; became 300.  
D0 on U20 incorrectly shown as Pin 8. Changed to pin 18 on 6/23/83.
- C. Addition of capacitor C63, 220pf disc between U24, Pin 3 and ground. 6/27/83.
- D. C54: Was 0.001uf disc. Became 0.1uf disc on 6/29/83.  
C63: Was 220pf disc. Became 0.001uf disc on 6/29/83.  
74LS244 inserted between 4MHz signal and U1 (Z80), Pin 6.  
U17, Pins 13 and 7 used - these were formerly a spare gate. 6/29/83.
- E. C40, 0.01 disc tied between U22, Pin 2 and ground is deleted.  
74LS244 inserted between Q1 collector and U22, Pins 1 and 2.  
U17, Pins 11 and 9 used - these were formerly a spare gate.  
U1(Z80), Pin 25 cut from U7 (MC68705P5), Pin 9. U1(Z80), Pin 25 tied to R48 (new addition) 4.7K  $\frac{1}{4}$ W 5% resistor. Other side of R48 tied to +5V.  
U18(74LS245), Pin 19 cut from U7(68705, Pin 14. U18, Pin 19 tied to +5V.  
U17(74LS244), Pin 17 cut from U7, Pin 19. U17, Pin 17 tied to +5V.  
U23(74LS244), Pin 1 cut from U22(74LS00), Pin 11. U23, Pin 1 tied to ground.  
All of "E" above were effective on 7/8/83.
- F. Deletion of the following effective 7/8/83:
- |     |         |
|-----|---------|
| U5  | 74LS244 |
| U6  | 74LS393 |
| U12 | 74LS244 |
| U13 | 74LS393 |
| U17 | 74LS244 |
| U18 | 74LS245 |
- Substitute U23 for U17 (74LS244) for clock signal into Z80 (U1, Pin 6 from U23, Pin 7) and reset signal into U22, Pins 1 and 2 from U23, Pin 9 effective 7/8/83.
- G. C63: Was 0.001uf disc. Became 470pf effective 9/5/83.
- H. Reset signal sent from U23, Pin 9 to U16, Pin 1 to cure false coin count on power up.
- I. Reference letter not used.

J. Correct pin out for inputs on U20(74LS244) effective 9/16/83.

K. C63: Was 470pf disc; became 330pf disc.

C17: Was 330pf mica; became 330pf disc.

Addition of U31(74LS74) to divide clock.

Y1: Was 4.000MHz; became 16.000MHz.

U24: Was 74LS04; became 74S04.

Addition of R29 between U29, Pin 4 and C24.

Addition of R50 between U30, Pin 4 and C50.

These two additions allow option for U29 and 30 with the following components:

	<u>LM383</u>	<u>CA2002</u>
R49, R50	= 0 ohm jumper	2.2 ohm, $\frac{1}{4}$ W 5%
C24, C50	= 0.2 Disc	0.1 disc

Addition of Jumper W1, when installed, allows board to be used with Pioneer 7820 disc player with proper software.

Deleted: U7 MC68705

Addition (reinstallation) U6, 74LS393

U13, 74LS393

U6, Pins 2 and 12, and U13, Pins 2 and 12 all grounds.

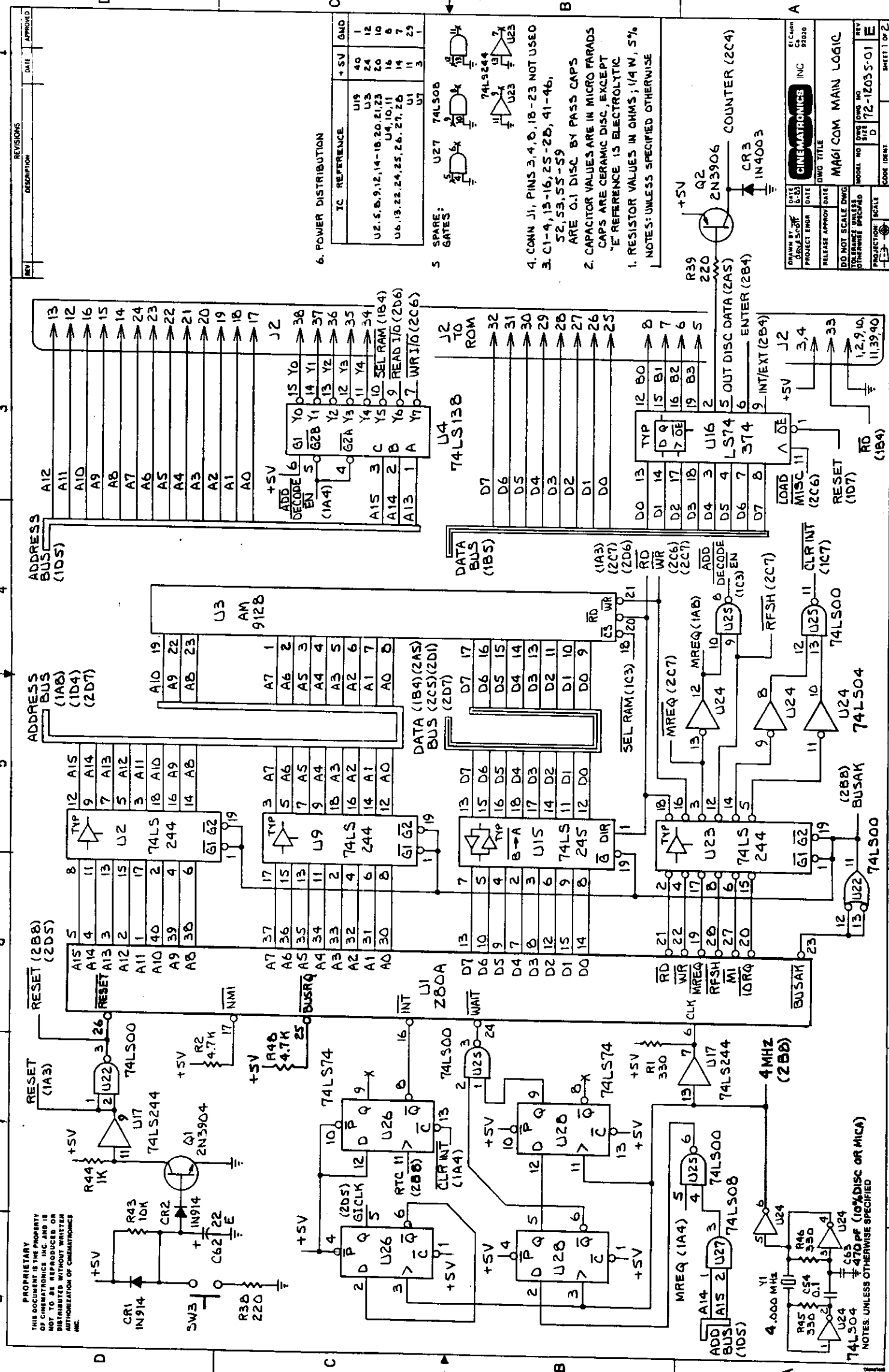
U6, Pin 6 tied to U26, Pin 11 (RTC).

U13, Pin 13 tied to U26, Pin 5 (GI CLK)

All of "K" above effective 10/10/83.

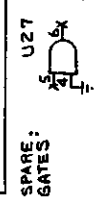
"K" revision schematic is for "C" revision printed circuit board used with LDV-1000 laser disc player.

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6. POWER DISTRIBUTION

IC REFERENCE	+5V	GND
U19	40	1
U2	24	10
U3	20	16
U4, 10, 11	16	6
U5, 13, 22, 24, 25, 26, 27, 28	14	7
U1	11	3
U7	11	3

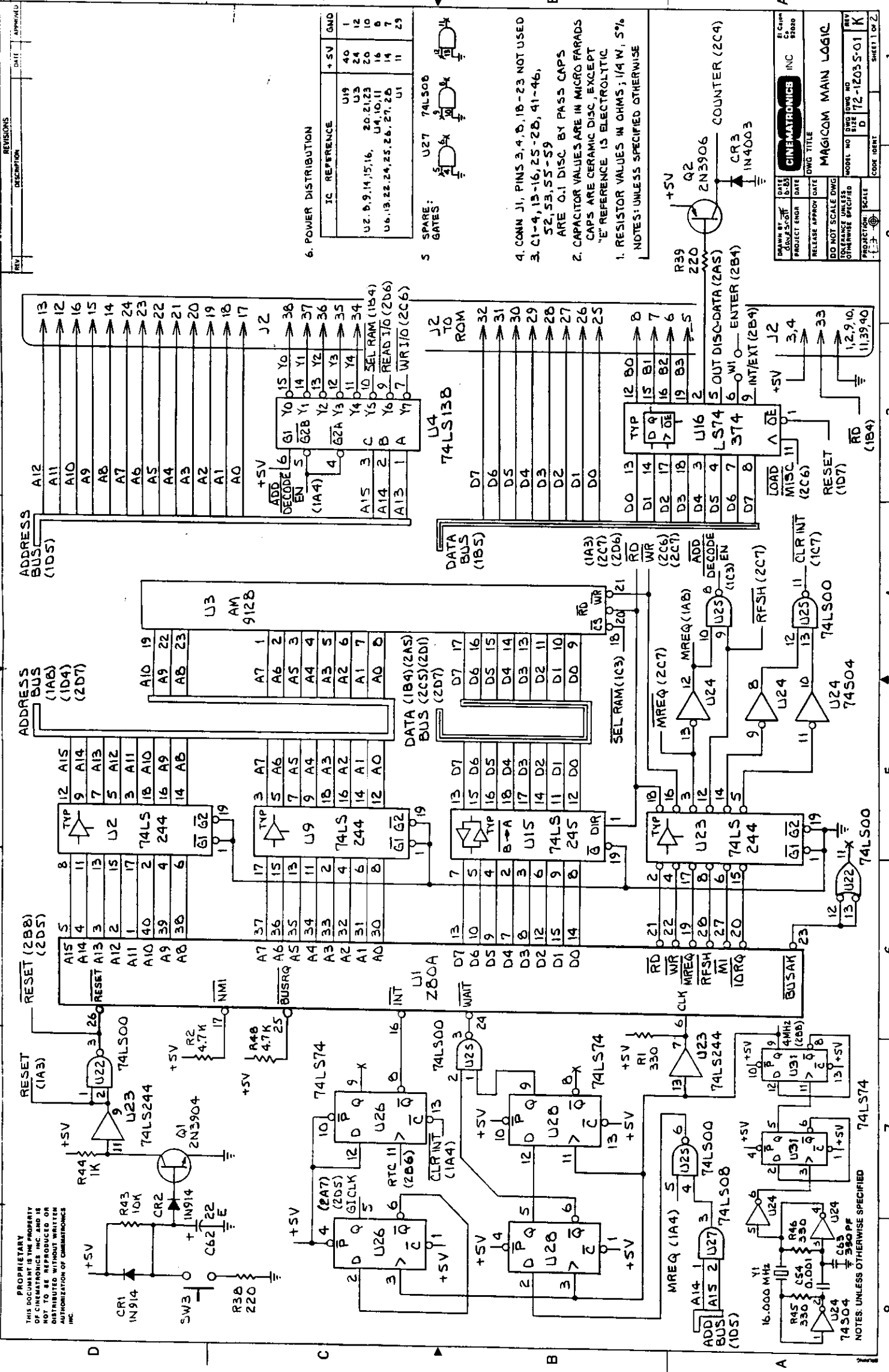


4. CONN J1, PINS 3, 4, 8, 18-23 NOT USED  
 3. C1-4, 13-16, 25-28, 41-46, 52, 53, 55-59  
 ARE 0.1 DISC BY PASS CAPS  
 2. CAPACITOR VALUES ARE IN MICRO FARADS  
 CAPS ARE CERAMIC DISC, EXCEPT  
 \*E REFERENCE IS ELECTROLYTIC  
 1. RESISTOR VALUES IN OHMS; 1/4 W, 5%  
 NOTES: UNLESS SPECIFIED OTHERWISE

DATE	DATE	DATE	DATE
DESIGNED	DESIGNED	DESIGNED	DESIGNED
PROJECT	PROJECT	PROJECT	PROJECT
RELEASE	RELEASE	RELEASE	RELEASE
APPROVED	APPROVED	APPROVED	APPROVED
CINEMATRONICS INC			
MA61 COM MAIN LOGIC			
MODEL NO	DWG NO	DWG NO	REV
D	72-1203	S-01	E
PROJECTION	SCALE	CODE	ISSUE
1:1			1







REV	DESCRIPTION	DATE	APPROVED

6. POWER DISTRIBUTION

IC REFERENCE	+5V	GND
U19	40	1
U2, 9, 14, 15, 16, 20, 21, 23	24	10
U4, 10, 11	14	6
U6, 13, 22, 24, 25, 26, 27, 28	14	7
U1	11	23



4. CONN J1, PINS 3, 4, 8, 18-23 NOT USED  
 3. C1-4, 15-16, 25-28, 41-46, 52, 53, 55-59 ARE 0.1 DISC BY PASS CAPS  
 2. CAPACITOR VALUES ARE IN MICRO FARADS  
 CAPS ARE CERAMIC DISC, EXCEPT "E" REFERENCE IS ELECTROLYTIC  
 1. RESISTOR VALUES IN OHMS; 1/4 W, 5%  
 NOTES: UNLESS SPECIFIED OTHERWISE

DESIGNED BY	DATE	REV	BY
CHECKED BY	DATE		
PROJECT ENDR	DATE		
RELEASE APPROV	DATE		
CINEMATRONICS INC			
MAGICOM MAIN LOGIC			
DO NOT SCALE DWG			
TOLERANCE UNLESS OTHERWISE SPECIFIED			
PROJECTION	SCALE	CODE IDENT	SHEET 1 OF 2

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NOTES: UNLESS OTHERWISE SPECIFIED

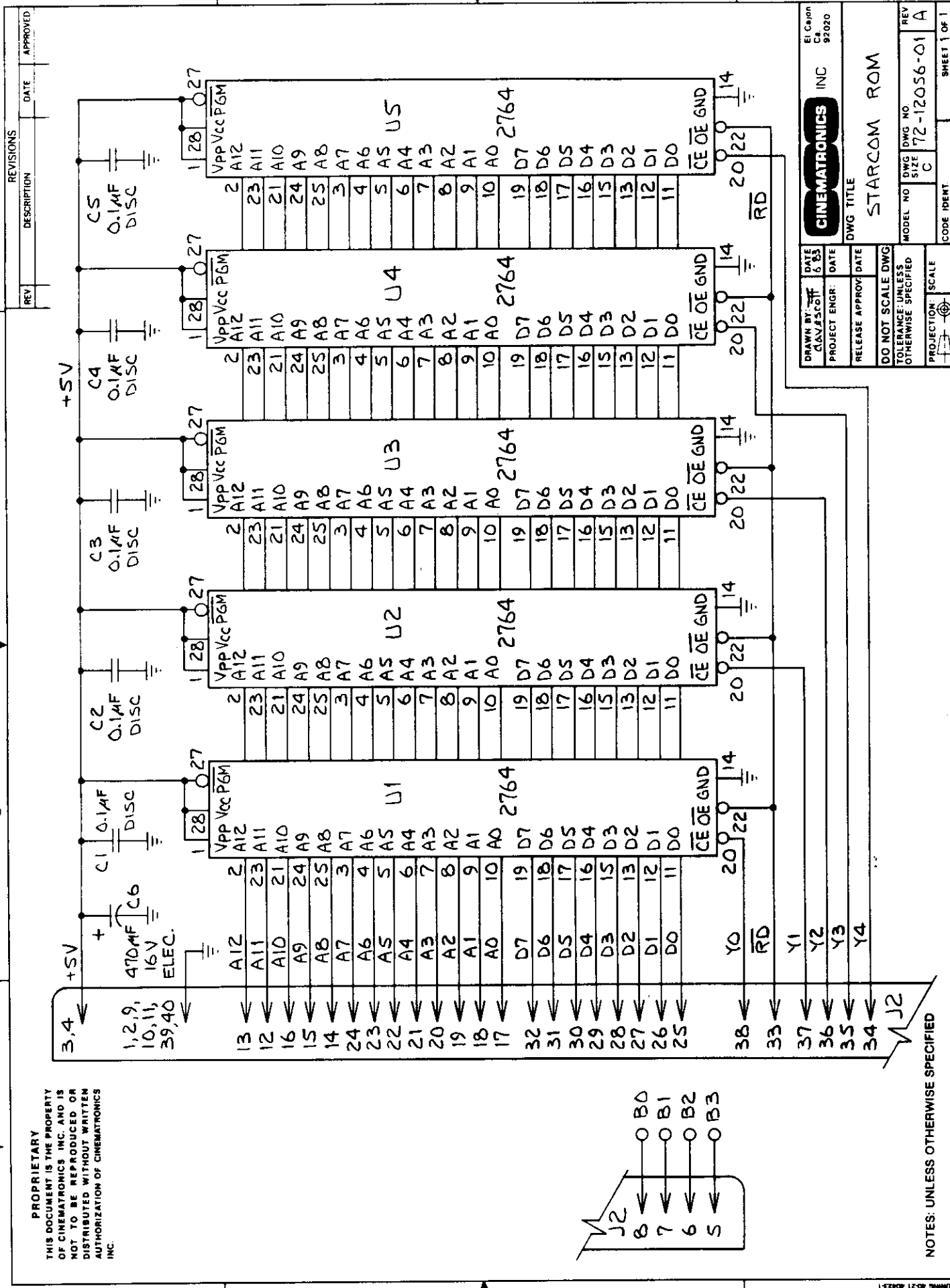






62

A B C D



REV	DESCRIPTION	DATE	APPROVED
1			

REV	DESCRIPTION	DATE	APPROVED
1			

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**CINEMATRONICS INC**  
 Ei Cajon  
 Ca.  
 92020

DATE: 6/83  
 PROJECT ENGR: DATE: DATE: DATE:  
 RELEASE APPROV: DATE: DATE: DATE: DATE:

DO NOT SCALE DWG  
 TOLERANCE UNLESS  
 OTHERWISE SPECIFIED

PROJECTION SCALE

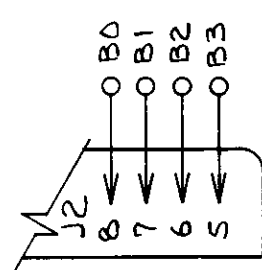
DWG TITLE: STARCOM ROM

MODEL NO: 72-12056-01  
 DWG NO: C  
 SIZE: C

REV: A

CODE IDENT: SHEET 1 OF 1

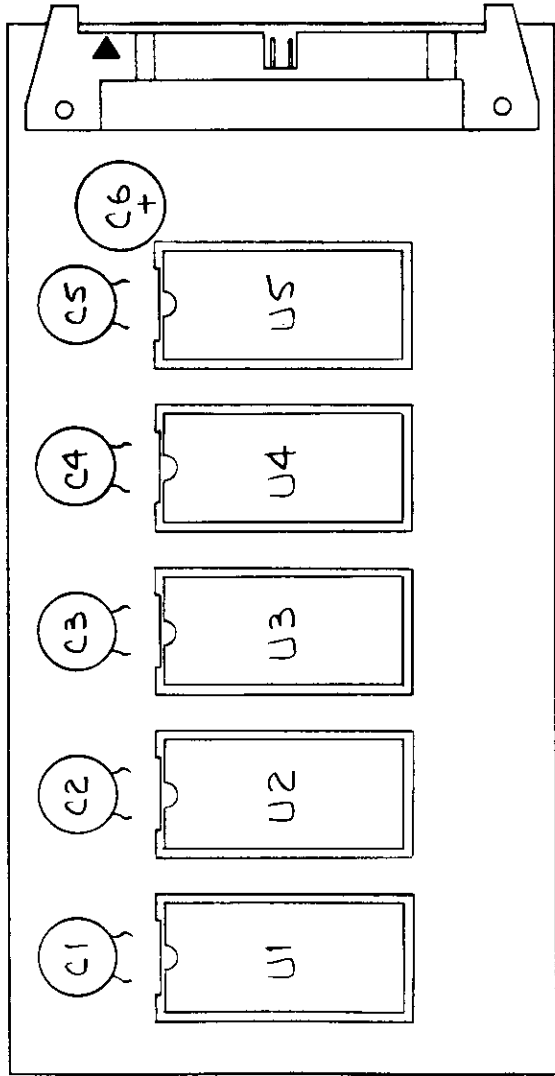
NOTES: UNLESS OTHERWISE SPECIFIED



FORMING 821 402E3

1 2 3 4

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J2  
 SYMBEX 32351-1-90

- 3. DRAGON'S LAIR (81-12056-01): U1-U5, 2764 WITH SOCKET
  - 2. C6; 470  $\mu$ F, 16 V MINIMUM, ELECTROLYTIC
  - 1. C1-C5; 0.1  $\mu$ F, 50V, DISC
- NOTES: UNLESS OTHERWISE SPECIFIED

REV	DESCRIPTION	DATE	APPROVED

DRAWN BY: <b>DAVID SCOTT</b>		DATE: <b>6-83</b>	E1 Caption C4 92020
PROJECT ENGR:	DATE:		
RELEASE APPROV:	DATE:		CINEMATRONICS INC
DO NOT SCALE DWG TOLERANCE: UNLESS OTHERWISE SPECIFIED			
MATERIAL:		PROJECTION: <b>2:1</b>	DWG TITLE <b>STARCOM ROM</b>
FINISH:			
		MODEL NO: <b>81-12056-XX</b>	REV: <b>A</b>
		SIZE: <b>C</b>	CODE IDENT: <b>SHEET 1 OF 1</b>

1

2

3

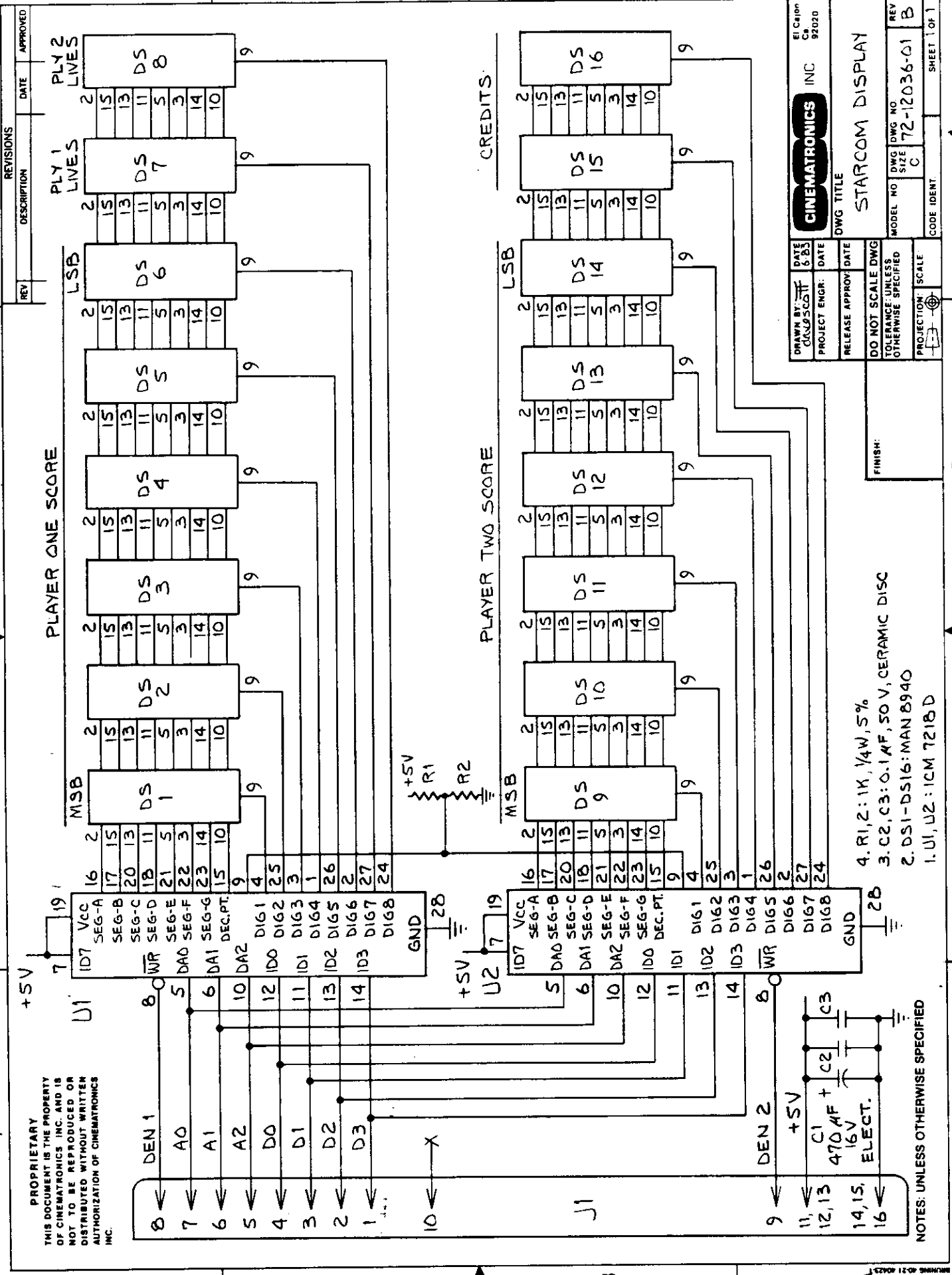
4

1

2

3

4



REV	DESCRIPTION	DATE	APPROVED
1			

DATE	DATE
6/83	

RELEASE APPROV	DATE

DO NOT SCALE DWG	SCALE
TOLERANCE UNLESS OTHERWISE SPECIFIED	

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FINISH:

4. R1, 2: 1K, 1/4W, 5%  
3. C2, C3: 0.1uF, 50V, CERAMIC DISC  
2. DS1-DS16: MAN B940  
1. U1, U2: 1CM 7218D

NOTES: UNLESS OTHERWISE SPECIFIED

STARCOM DISPLAY

CINEMATRONICS INC  
EL CAJON  
CA  
92020

MODEL NO	DWG DWG NO	REV
C	72-12036-01	B

PROJECTION	SCALE	CODE IDENT	SHEET	OF 1
			1	1

1 2 3 4

A B C D

1 2 3 4

9

5

1 2 3 4

A

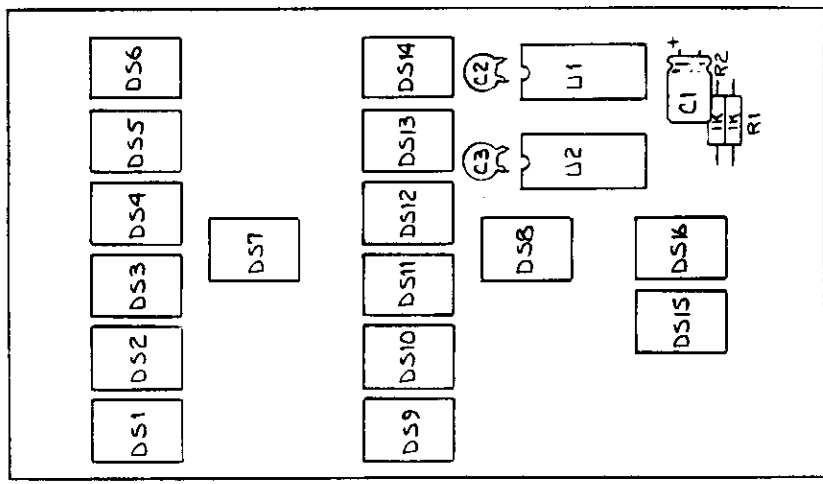
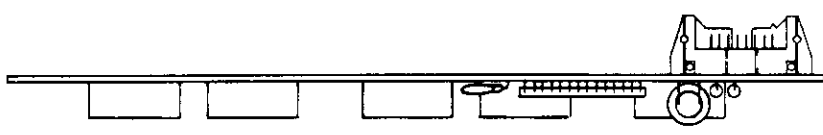
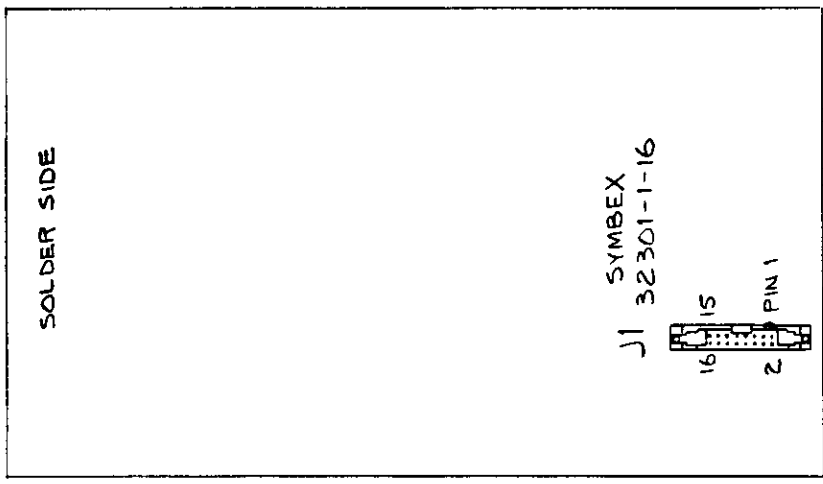
B

C

D

REVISIONS		
REV	DESCRIPTION	DATE
B	ADD R1, R2	9.29.83

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- CONNECTOR INSTALLED ON SOLDER SIDE OF P.C.B.
  - ALL CAPACITORS TO BE LAYED DOWN
  - C2, C3 : 0.1 MF 50 V DISC 20%
  - C1 : 470 MF ELECTROLYTIC 16 V MINIMUM
  - U1, U2 : ICM 7218 D
  - DS1 - DS16 : L.E.D. MAN 8940
- NOTES: UNLESS OTHERWISE SPECIFIED

31 MAY 1983

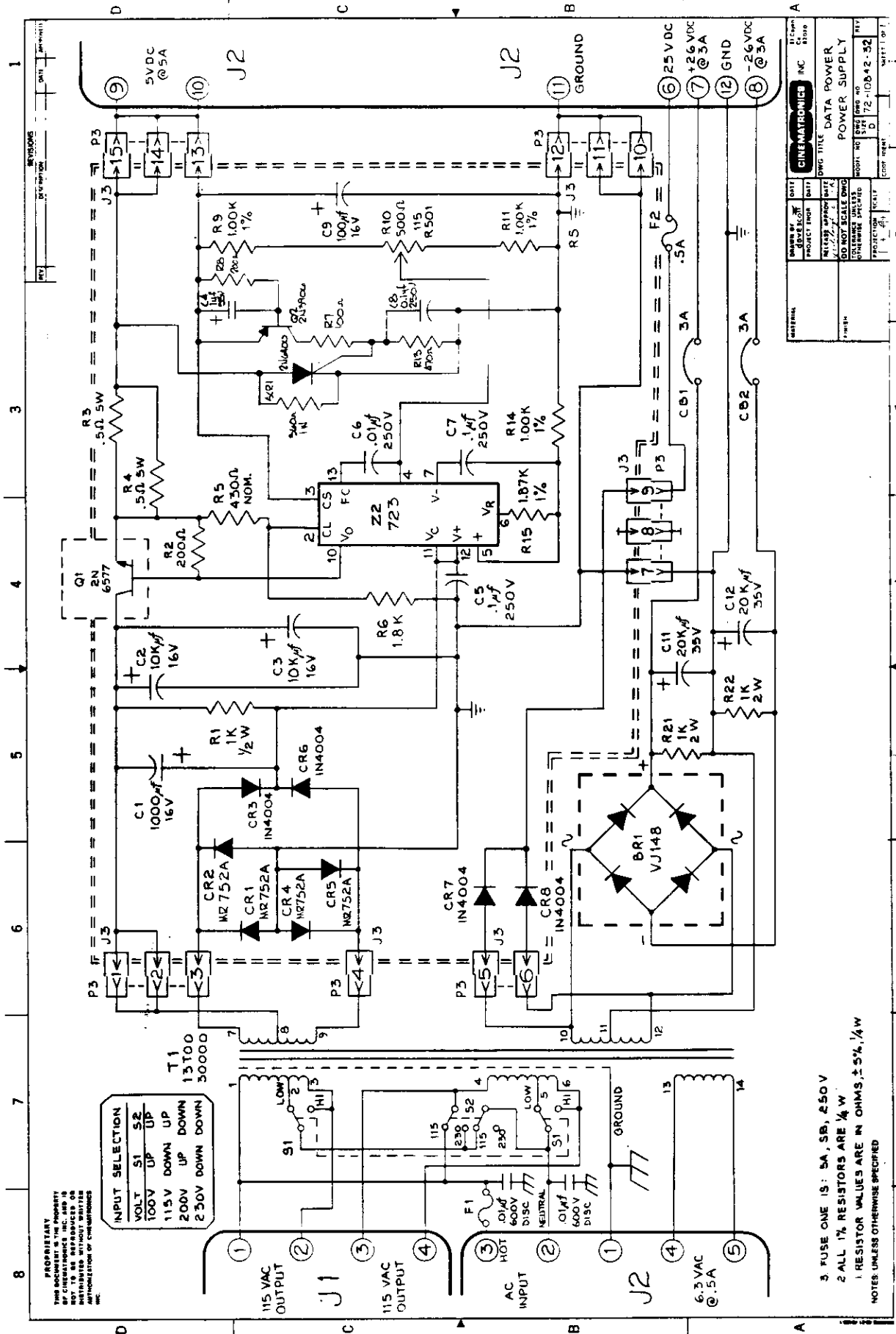
DRAWN BY C. W. SCOTT	DATE	PROJECT ENGR.	DATE	RELEASE APPROV.	DATE	DO NOT SCALE DWG TOLERANCE UNLESS OTHERWISE SPECIFIED	PROJECTION SCALE FULL	MATERIAL:
CINEMATRONICS INC								EI Corp CA 92020
STARCOM DISPLAY								REV. B
MODEL NO DWG NO C 81-12036-01							REV. B	CODE IDENT
								SHEET 1 OF 1

1 2 3 4

SHRINK 4021 0423

DATA POWER

10042-52  
DATA POWER P.S.



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INPUT SELECTION	
VOLT	S1 S2
100V UP	UP
115V DOWN	UP
200V UP	DOWN
250V DOWN	DOWN

DATE	BY	DESCRIPTION	REV.

DATE	BY	DESCRIPTION	REV.

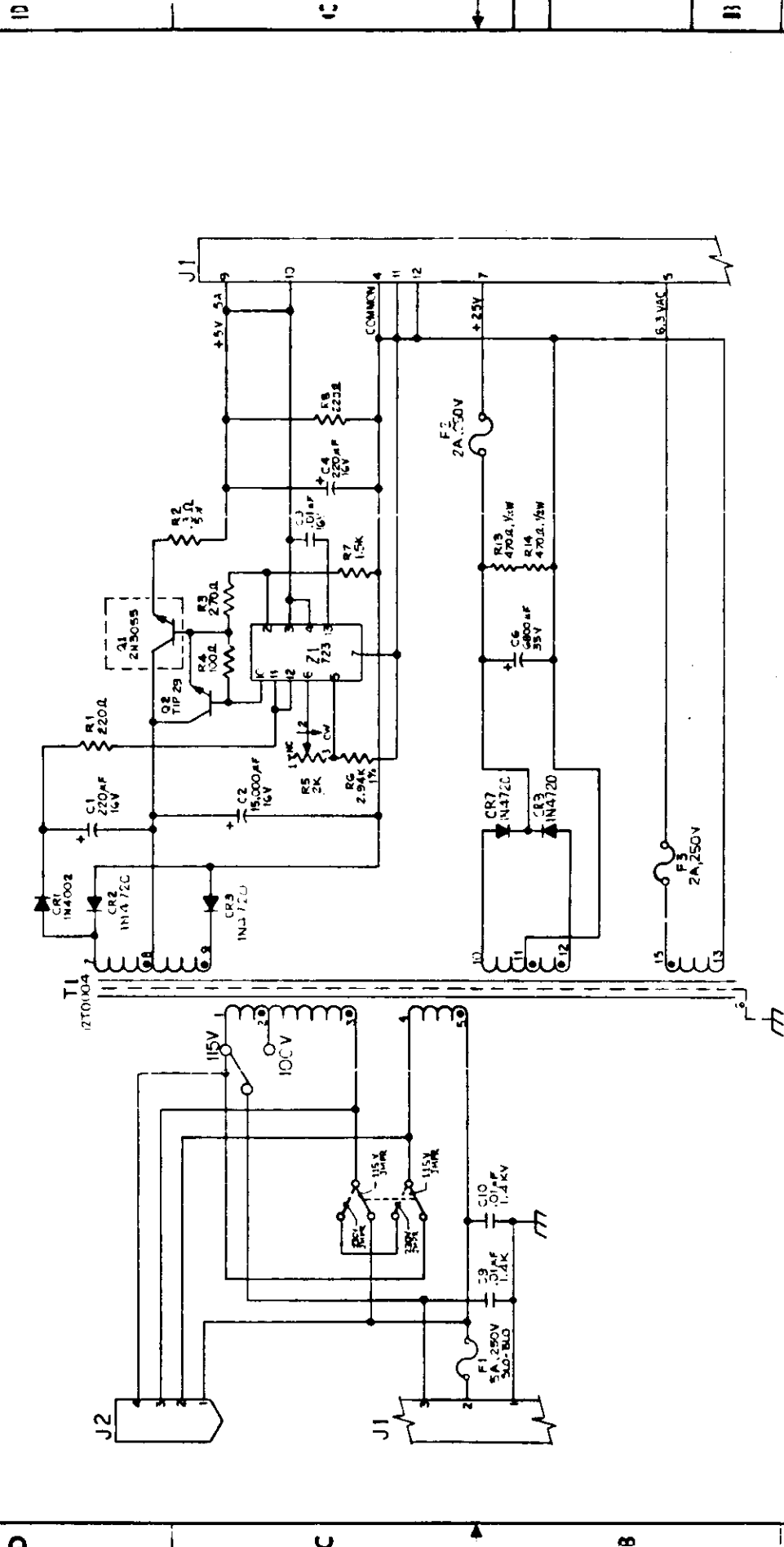
  

DESIGNED BY	DATE	12/28/72
PROJECT ENGINEER	DATE	
RELEASE APPROVAL	DATE	
DD FORM SCALE 0-100	NO. 1	72-108-42-52
GPO: 1972 O - 72-108-42-52		
FOR OFFICIAL USE ONLY		
FORM 101-1		

- 5 FUSE ONE (S: 5A, SB, 250V
  - 2 ALL 1% RESISTORS ARE 1/4 W
  - 1 RESISTOR VALUES ARE IN OHMS, ±5%, 1/4 W
- NOTES UNLESS OTHERWISE SPECIFIED

20

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	PRODUCTION RELEASE, EC-337	7/5/53	DM
B	11 P.A. PER ECO 0420, UNG F1	9/13/53	DM



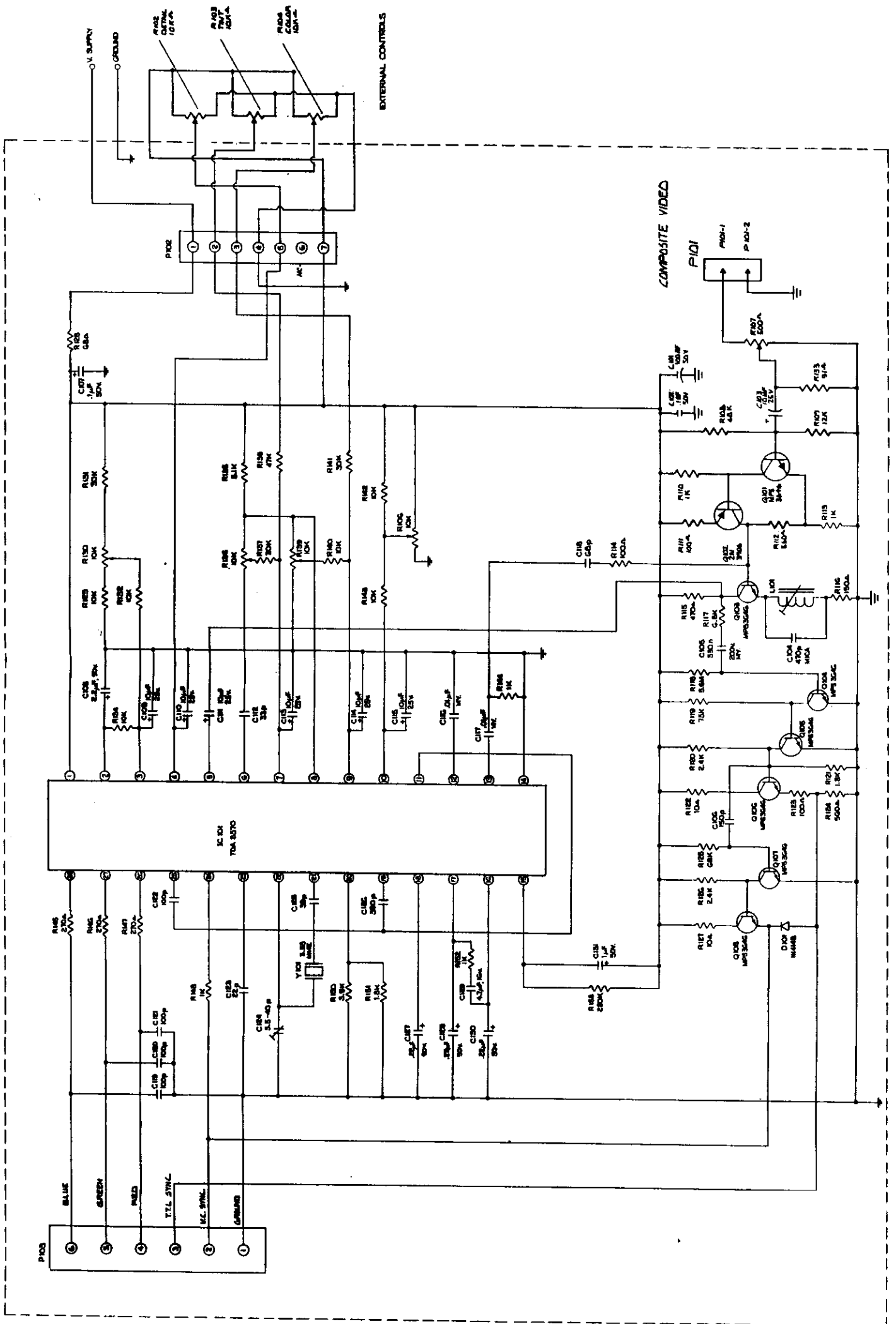
QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NAME, MANUFACTURE OR DESCRIPTION
PARTS LIST			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE		CONTRACT NO.	APPROVALS
FRACTIONS	DECIMALS	ANGLES	DATE
3/8	0.001	°	9/13/53
1/16	0.0005		
MATERIAL		FINISH	
3-2A007-00		C11.0	
NEXT ASSY		USED ON	
APPLICATION		DO NOT SCALE DRAWING	
SCALE		SCALE	
SIZE		DRAWING NO	
C		12A0100-C0	
REV		REV	
B		B	
SHEET 1 OF 1		SHEET 1 OF 1	

1D 1C 1B 1A 1 2 3 4





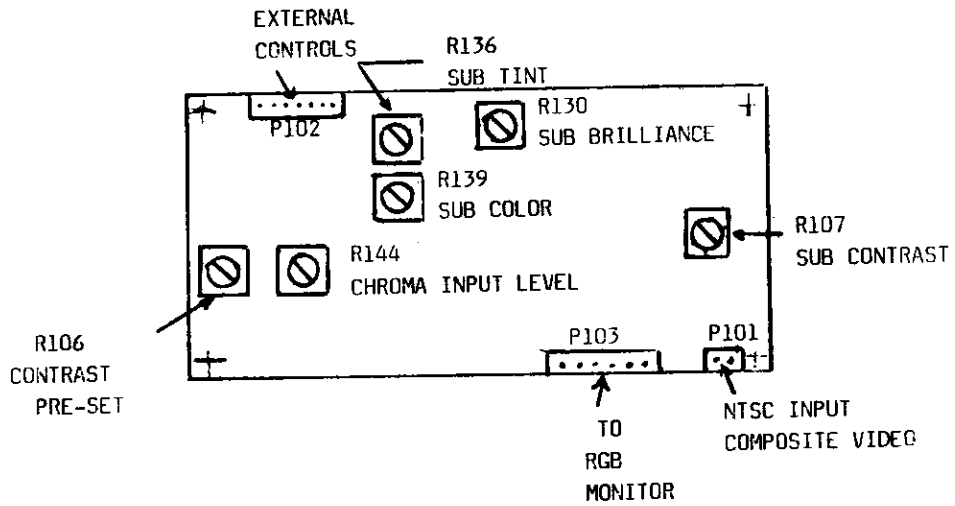




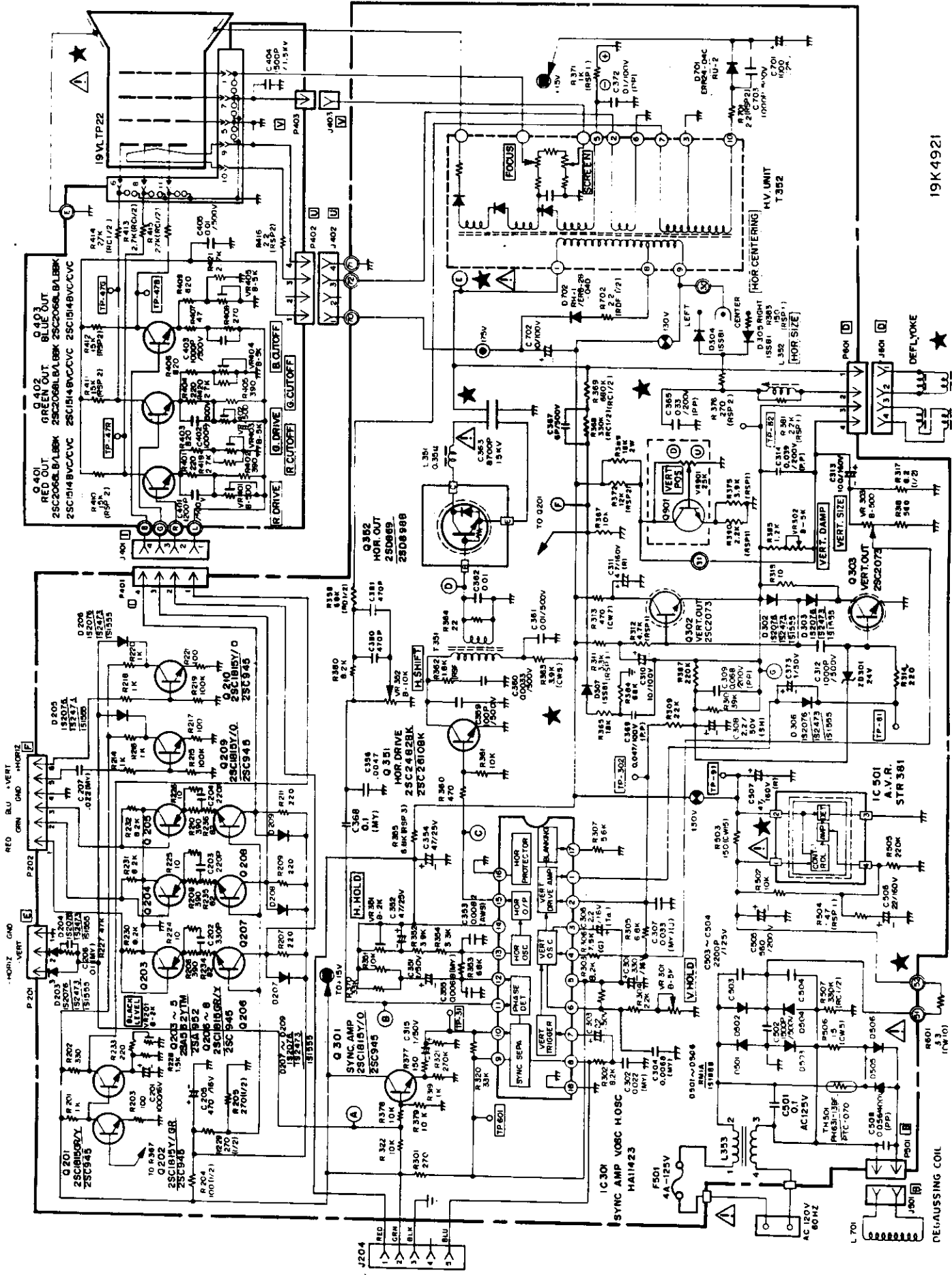
### NTSC DECODER SPECIFICATIONS

#### Pin Outs

- P101-1 75 ohm Input
- P101-2 Ground
- P102-1 Vs Supply (16V)
- P102-2 External Tint Wiper
- P102-3 External Color Wiper
- P102-4 Ground to Control
- P102-5 External Detail Wiper
- P102-6 Not Used
- P102-7 Vcc to Control (12V)
- P103-1 Ground
- P103-2 Blanking Output
- P103-3 Positive Composite Sync.
- P103-4 Red Output
- P103-5 Green Output
- P103-6 Blue Output



# 19" COLOR GAME MONITOR SCHEMATIC DIAGRAM





1.9.84

MAGICOM WIRING HARNESS

FROM	PIN	TO	PIN	SIGNAL
LF	HOT	SW	COMMON	AC LINE HOT
SW	N/OPEN	PS1	3	AC LINE HOT
SW	N/OPEN	VDP	HOT	AC LINE HOT
LF	NEUTRAL	PS1	2	AC LINE NEUTRAL
LF	NEUTRAL	VDP	NEUTRAL	AC LINE NEUTRAL
PS2	1	ISO	PRI	115V AC #1 HOT
PS2	3	LAMP	HOT	115V AC #2 HOT
PS2	3	FAN	HOT	115V AC #2 HOT
PS2	2	ISO	PRI	115V AC #1 NEUTRAL
PS2	4	LAMP	NEUTRAL	115V AC #2 NEUTRAL
PS2	4	FAN	NEUTRAL	115V AC #2 NEUTRAL
MON	FRAME	LAMP	FRAME	FRAME GROUND
PS1	1	MON	FRAME	FRAME GROUND
LF	FRAME	PS1	1	FRAME GROUND
LF	FRAME	CPU	FRAME	FRAME GROUND
CPU	FRAME	COIN	3	FRAME GROUND
COIN	3	OCP	9	FRAME GROUND
OCP	9	CP	7	FRAME GROUND
PS1	9	CPU	3	+5V
PS1	10	CPU	4	+5V
PS1	11	CPU	7	+5V RETURN
PS1	7	CPU	30	+25V
PS1	12	CPU	8	+25V RETURN
PS1	5	COIN	8	6.3V AC LAMPS
PS1	4	COIN	9	6.3V AC LAMPS RETURN
COIN	1	CPU	10	COIN SLOT 0
COIN	2	CPU	14	COIN SLOT 1
COIN	7	CPU	11	COIN RETURN
CP	2	CPU	6	2 PLAYER START
CP	3	CPU	2	1 PLAYER START
CP	4	CPU	1	JOYSTICK RIGHT
CP	5	CPU	29	SWORD/ACTION
CP	6	CPU	5	JOYSTICK LEFT
CP	8	CPU	9	JOYSTICK DOWN
CP	9	CPU	13	JOYSTICK UP
CP	1	CPU	12	CONTROL PANEL RETURN
OCP	4	CPU	33	COIN COUNTER
OCP	8	CPU	32	COIN COUNTER RETURN
OCP	3	VDP	CENTER	DISC AUDIO (LEFT)
OCP	1	VDP	SHIELD	DISC AUDIO RETURN (LEFT)
OCP	5	VDP	CENTER	DISC AUDIO (RIGHT)

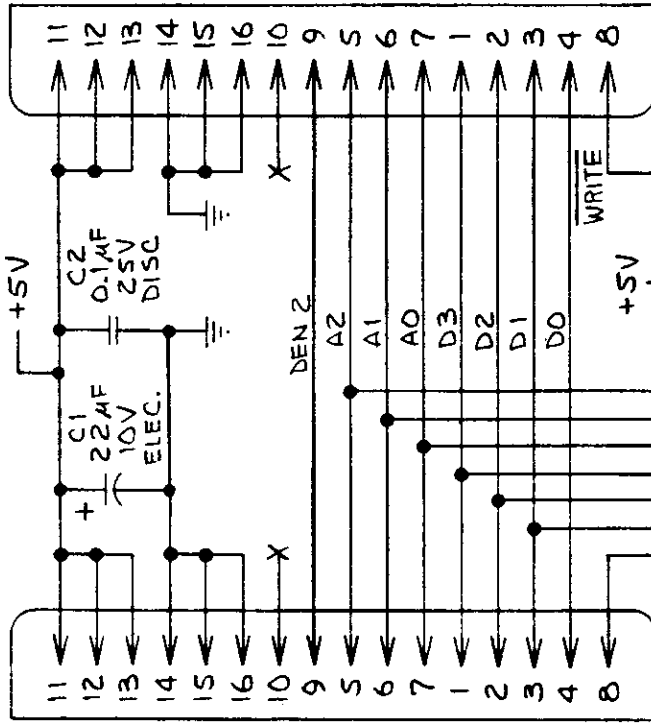
OCP	7	VDP	SHIELD	DISC AUDIO RETURN (RIGHT)
OCP	2	CPU	24	VOLUME OUT (LEFT)
OCP	1	CPU	23	VOLUME OUT RETURN (LEFT)
OCP	6	CPU	16	VOLUME OUT (RIGHT)
OCP	7	CPU	15	VOLUME OUT RETURN (RIGHT)
CPU	28	SPKR	L+	SPEAKER (LEFT)
CPU	27	SPKR	L-	SPEAKER RETURN (LEFT)
CPU	20	SPKR	R+	SPEAKER (RIGHT)
CPU	19	SPKR	R-	SPEAKER RETURN (RIGHT)

- PS1 = POWER SUPPLY 12 PIN CONNECTOR
- PS2 = POWER SUPPLY 4 PIN CONNECTOR
- FAN = COOLING FAN
- SW = POWER SWITCH
- CPU = LOGIC BOARD
- LAMP = FLORESCENT LAMP
- CP = CONTROL PANEL
- SPKR = SPEAKERS
- COIN = COIN DOOR
- MON = MONITOR
- VDP = VIDEODISC PLAYER
- LF = AC LINE FILTER
- OCP = OPERATOR CONVENIENCE PANEL
- ISO = MONITOR ISOLATION TRANSFORMER

NOTE: GAMES EQUIPPED WITH PR7820 DISC PLAYERS HAVE DISC PLAYER FRAME GROUND TIED TO LINE FILTER FRAME GROUND.

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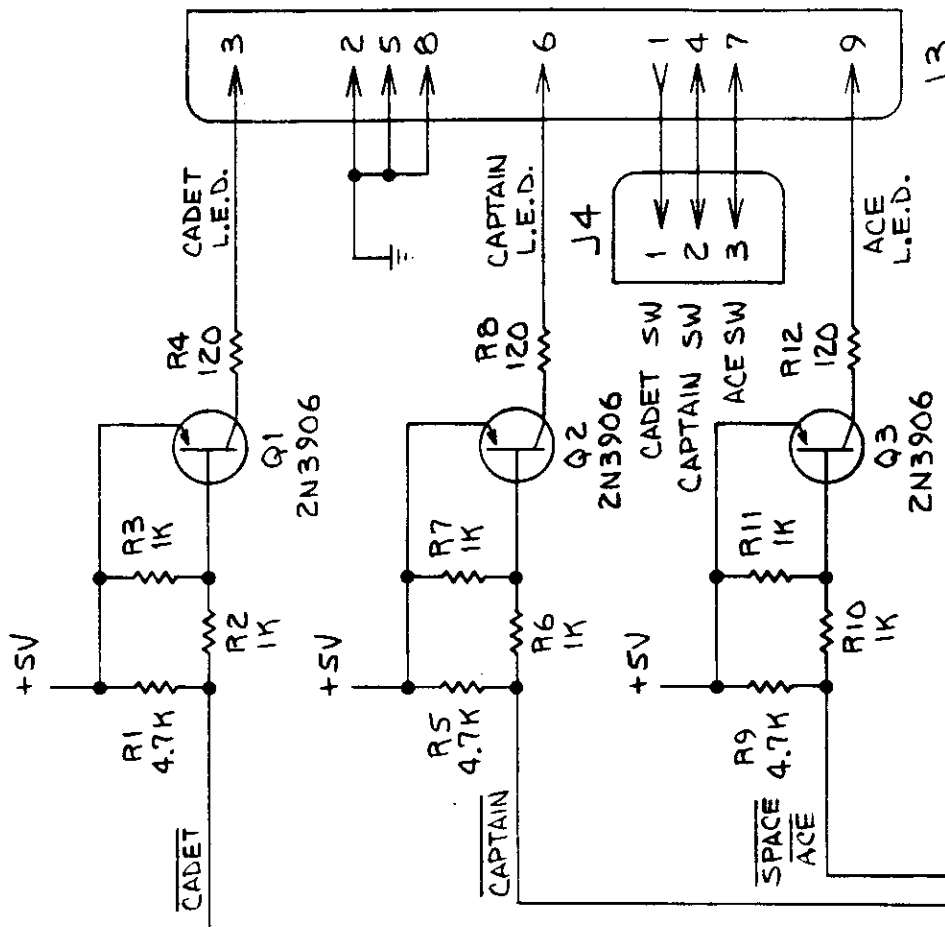
J2  
 TO  
 DISPLAY



J1  
 TO  
 MAIN  
 LOGIC

2. RESISTORS ARE 1/4W. 5% C  
 1. RESISTOR VALUES IN OHMS  
 \*NOTES: UNLESS OTHERWISE SPECIFIED

REV	DESCRIPTION	DATE	APPROVED
1			



17 JANUARY 1984

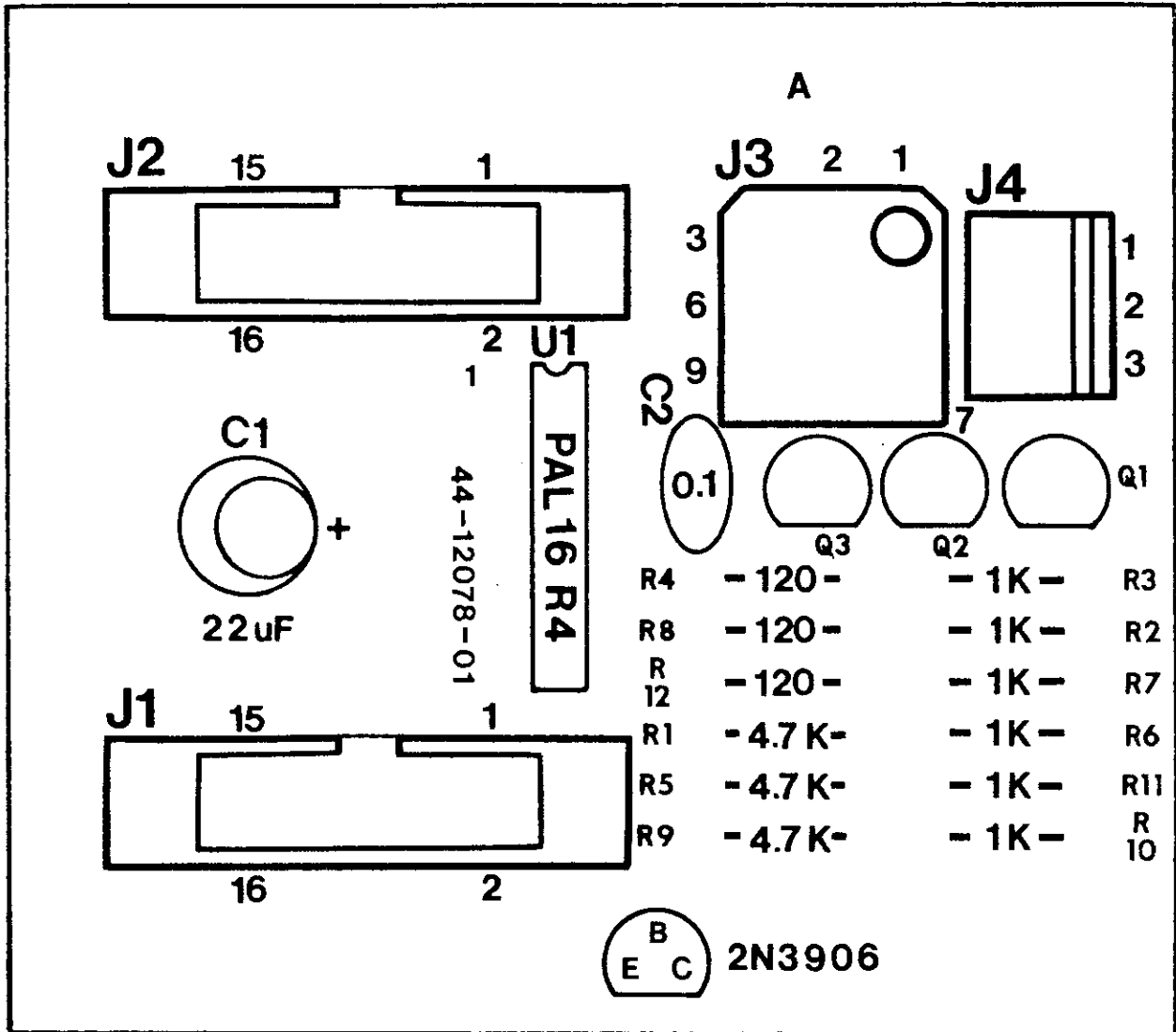
DRAWN BY C. G. S. C. J.		DATE	DATE	DATE
PROJECT ENGR.		RELEASE	APPROV.	DATE
MATERIAL		DO NOT SCALE DWG TOLERANCE UNLESS OTHERWISE SPECIFIED		
FINISH:		PROJECTION	SCALE	
CINEMATRONICS INC		DWG TITLE PANEL ANNUNCIATOR CONVERSION		
E1 C8000 C8 92020		MODEL NO	DWG NO	REV
		SIC	72-12079-01	A
		CODE IDENT		SHEET 1 OF 1

U1  
 PAL 16 R 4  
 44-12087-01

1 2 3 4

1 2 3 4

APPLICATION			REVISIONS			
NEXT ASSY	USED ON	APPROVED	DATE	DESCRIPTION	REV	



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:  
 FRAC. DEC. ANGL.  
 + .XX± +  
 - .XXX± -

MATERIAL

FINISH

DO NOT SCALE DWG

APPROVALS	DATE
BY <i>davescoff</i>	1.28.84
CHK	
APPD	
APPD	
APPD	

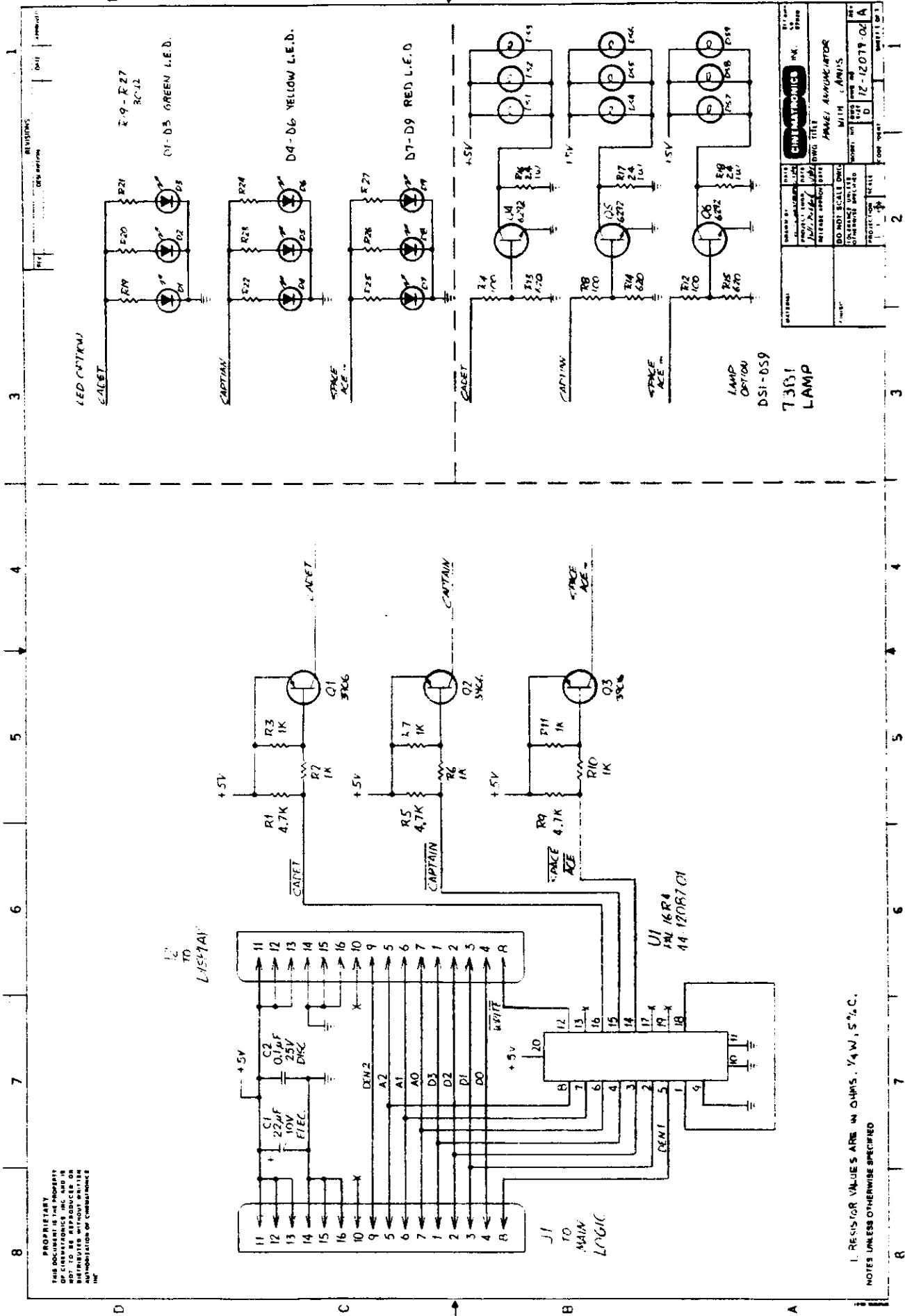
**CINEMATRONICS** INC. El Cajon Ca. 92020

PANEL ANNUNCIATOR BOARD CONVERSION

SIZE **A** DRAWING NUMBER **81-12079-01**  
 REV A

SCALE 2:1 SHEET 1 OF 1





REVISIONS

REV.	DESCRIPTION	DATE	APPROVED

DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A
DESIGNED BY	1974	INSTRUMENTS	INC.	12-12079-01A

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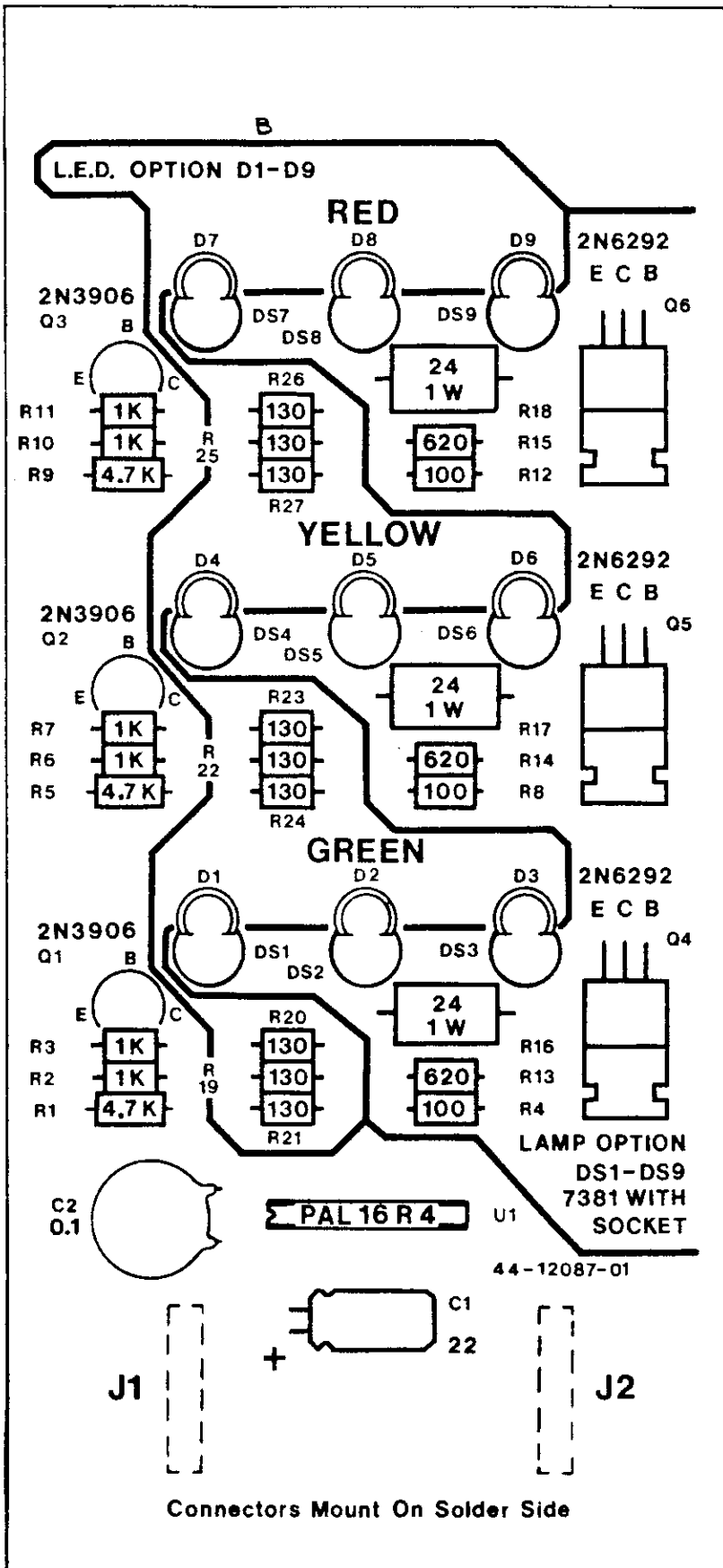
1. RESISTOR VALUES ARE IN OHMS, 1/4 W, 5% C.  
 NOTES UNLESS OTHERWISE SPECIFIED

8 7 6 5 4 3 2 1

D C B A

1 FEBRUARY 1984

Ei Cajon Ca. 92020		<b>CINEMATRONICS INC.</b>		DWG TITLE	
DRAWN BY: <i>DAVE SCOTT</i>		DATE:	DATE:	RELEASE APPROV. DATE:	DWG NO.
PROJECT ENGR.:		DO NOT SCALE DWG		TOLERANCE UNLESS OTHERWISE SPECIFIED	MODEL NO.
MATERIAL:		FINISH: BREAK ALL SHARP EDGES AND DEBURR ALL HOLES.		PROJECTION:	SCALE: 2:1
ANNUNCIATOR WITH LAMPS		REV B	SIZE B	DWG NO. 81-12079-02	REV B
CODE IDENT.				SHEET 1 OF 1	



**PROPRIETARY**

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