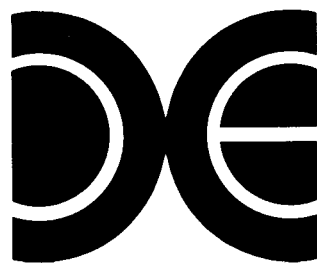


# BATTLE WINGS<sup>TM</sup>



## INSTALLATION INSTRUCTIONS

 **DATA EAST USA, INC.**  
470 Gianni Street, Santa Clara, CA 95050  
Telephone: (408) 727-4490  
Toll Free: (800) 538-5129  
Tellex: 172163 DATA EAST SNTA

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## DIP SWITCH SETTINGS

DIP SWITCH 1					
No.	SETTING				
1	OFF	ON	OFF	ON	RIGHT SELECTOR COIN CREDIT
	OFF	OFF	ON	ON	
2	1 COIN 1 CREDIT	1 COIN 2 CREDIT	1 COIN 3 CREDIT	2 COIN 1 CREDIT	
3	OFF	ON	OFF	ON	LEFT SELECTOR COIN CREDIT
4	OFF	OFF	ON	ON	
	1 COIN 1 CREDIT	1 COIN 2 CREDIT	1 COIN 3 CREDIT	2 COIN 1 CREDIT	
5	OFF		ON		GAME DIAG MODE
	GAME		DIAG		
6	OFF		ON		C T U R MODE
	TABLE		UPRIGHT		
7	OFF		ON		KEEP OFF
	GAME		TEST		
8	OFF		ON		KEEP OFF
	GAME		TEST		

DIPSWITCH 2					
No.	SETTING				
1	OFF		ON		NUMBER OF AIR CRAFTS
	3		5		
2	OFF	ON	OFF	ON	BONUS AIR CRAFT
3	OFF	OFF	ON	ON	
	20,000 EXTRA FIGHTER. OVER 20,000 EXTRA FIGHTER FOR EVERY 40,000	20,000 EXTRA FIGHTER. OVER 20,000 EXTRA FIGHTER FOR EVERY 60,000	40,000 EXTRA FIGHTER. OVER 40,000 EXTRA FIGHTER FOR EVERY 80,000	40,000 EXTRA FIGHTER	
4	OFF		ON		DIFFICULTY ENEMY CRAFTS
	EASY		DIFFICULT		
5	OFF		ON		DIFFICULTY MISSILES
	EASY		DIFFICULT		
6					NOT USED
7	OFF		ON		JAPAN/ UNITED STATES
	JAPAN		UNITED STATES		
8					NOT USED

## POWER SUPPLY

+5V	±2%	5A
+12V	±2%	1A
-5V	±2%	0.1A

## OPERATION ENVIRONMENTS

	Temperature	Humidity
Operation	5 ~ 35° C	20 ~ 80%
Storage	-15 ~ 65° C	10 ~ 90%

## CRT MONITOR

(1) Color Signals R.G.B. Separate

Black 0 - +2V

Image Signal +2.5 V +4V

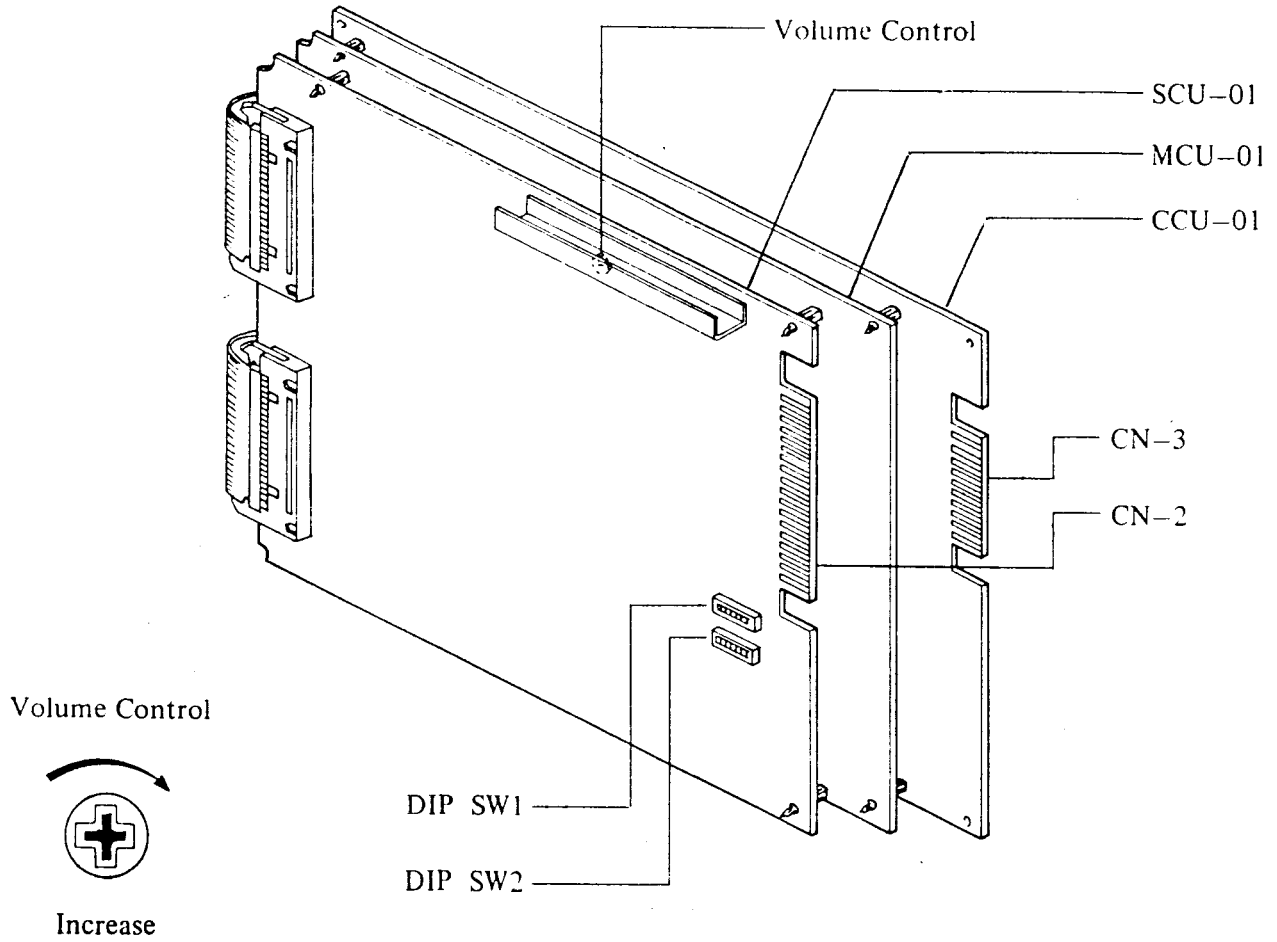
(2) Synchronize Signal Composite or Horiz/Vert separated.

0 0 - 0.5V

1 +3V - +5V

PCB IDENTIFICATION

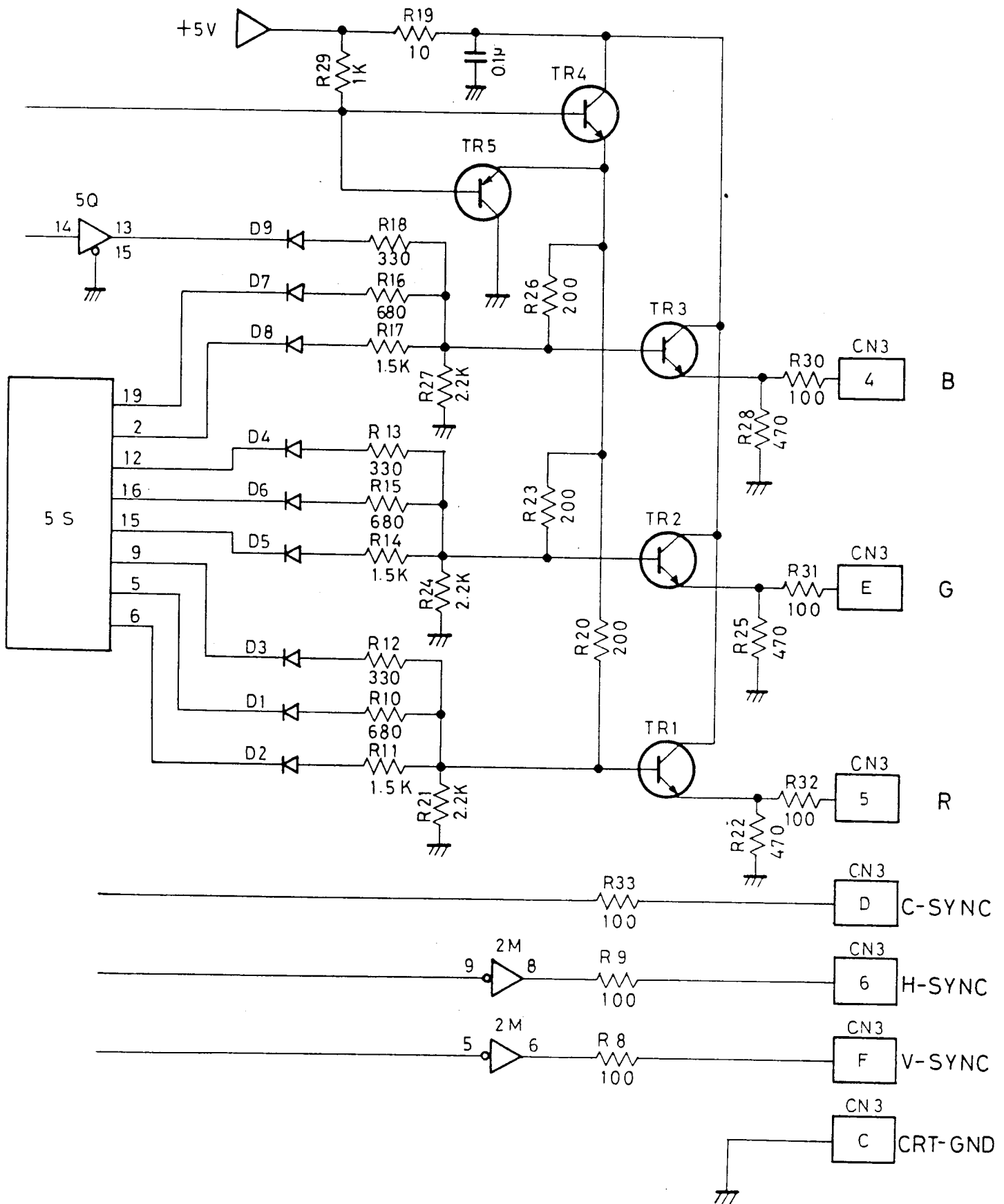
CONNECTOR SCU-01 CR7E-36DA-3.96E (CN-2)  
CCU-01 CR7E-20DA-3.96E (CN-3)



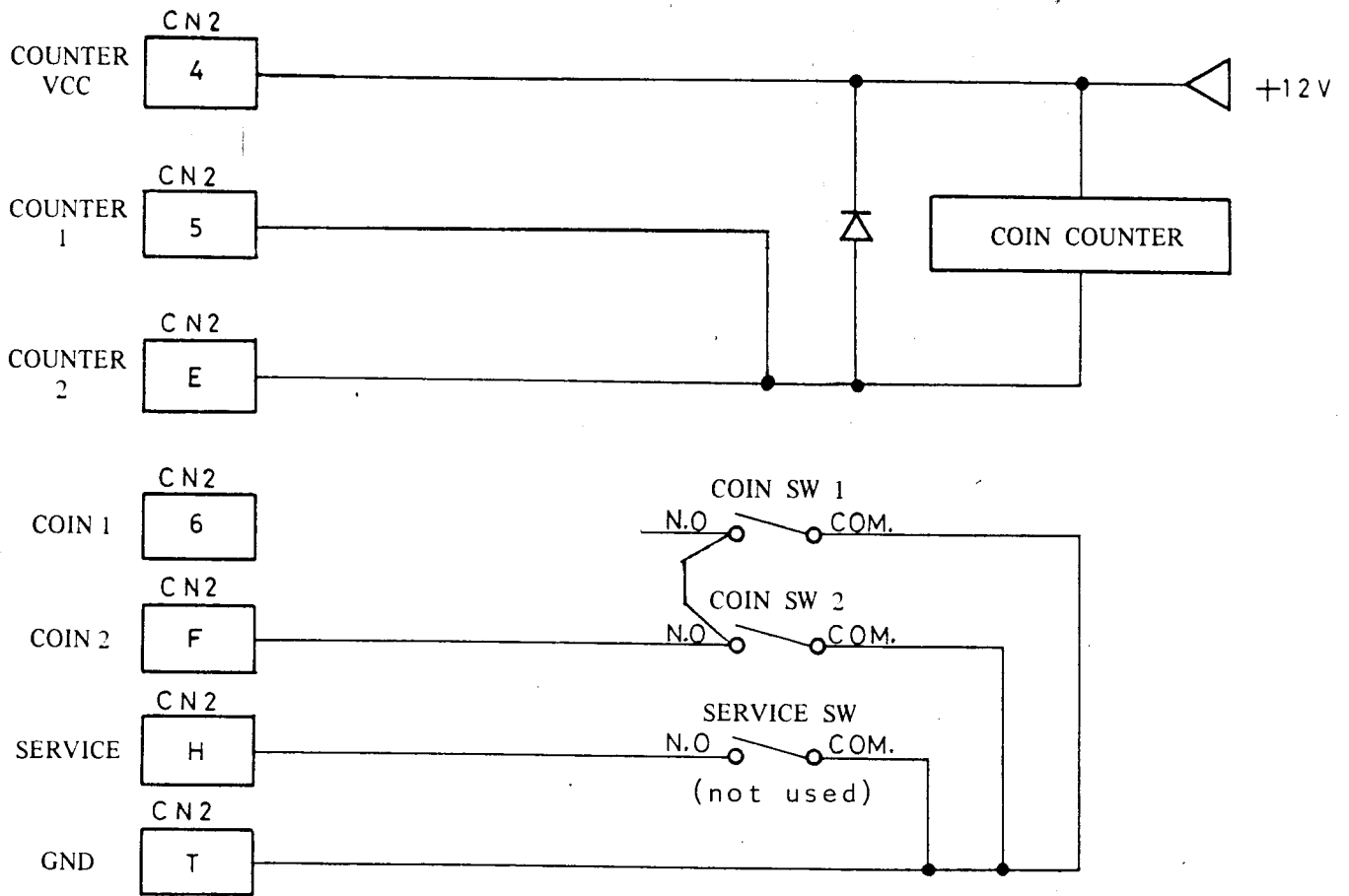
**MONITOR CONNECTION PCB CCU-01**

Monitor input composite signals – Horiz/Vert on +5V can be connected.

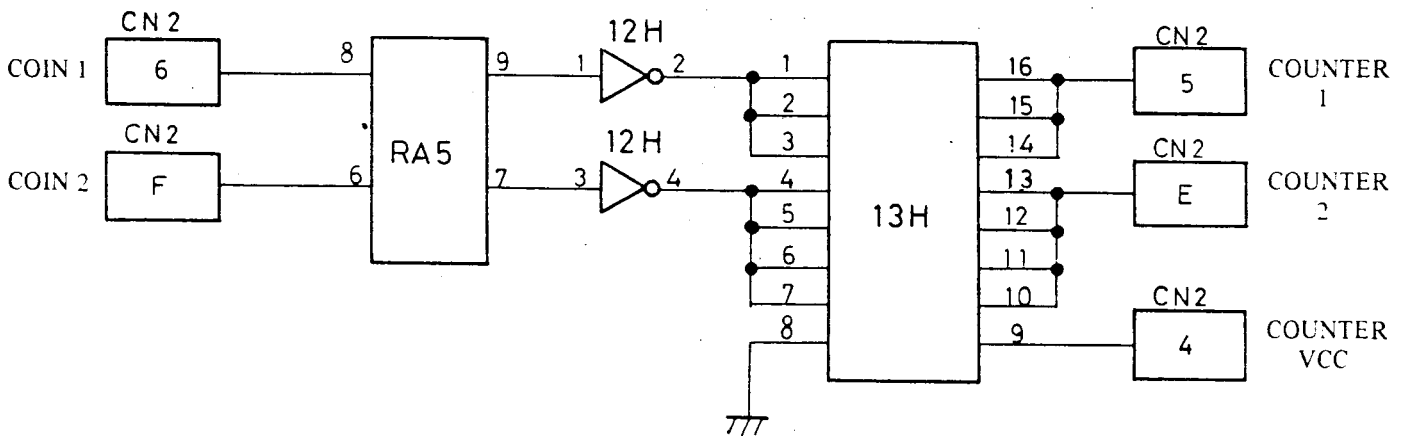
Circuit diagram of each signal shown below.

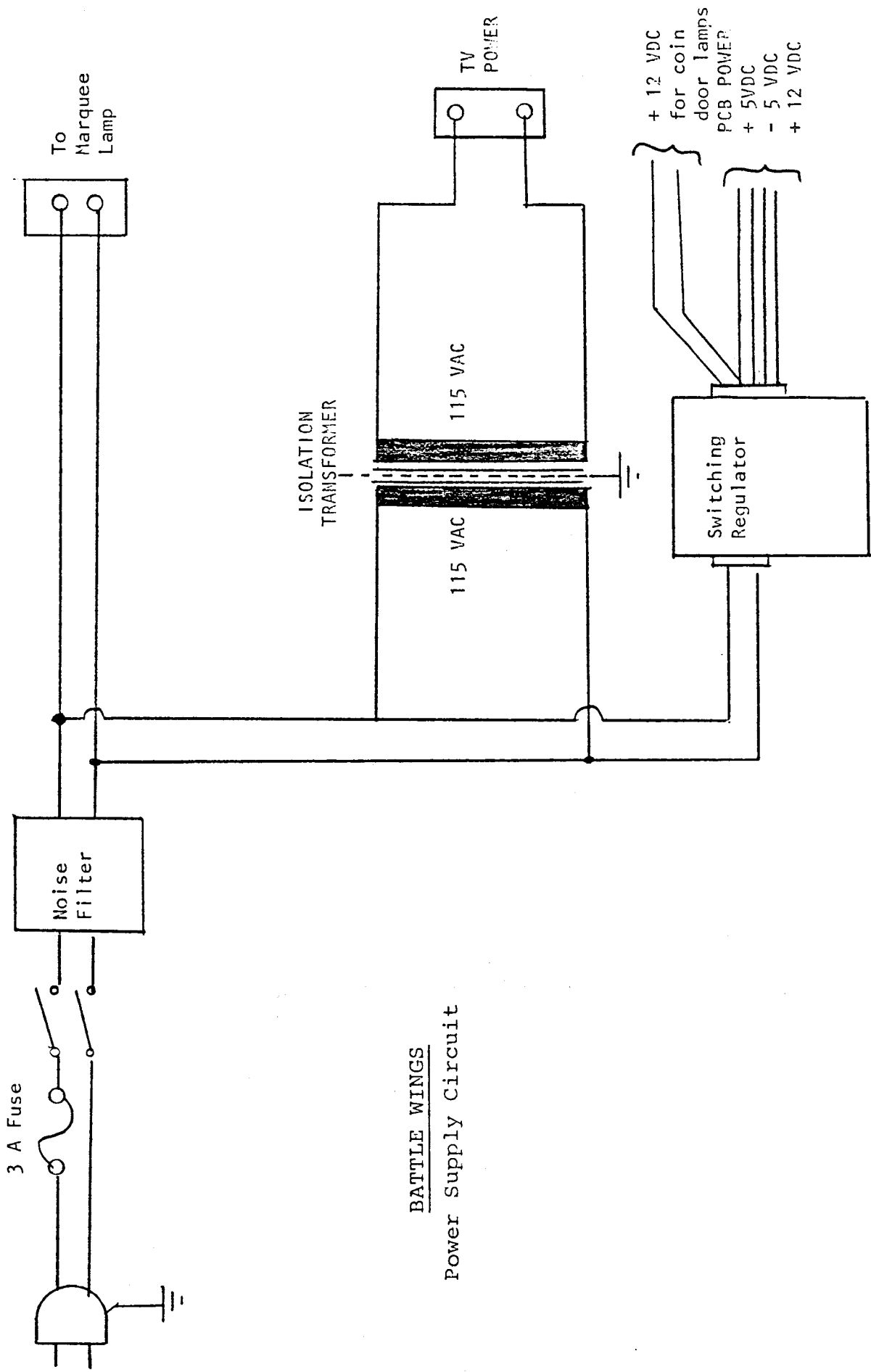


COIN COUNTER - CIRCUIT



COIN COUNTER - DRIVE CIRCUIT PCB SCU-01



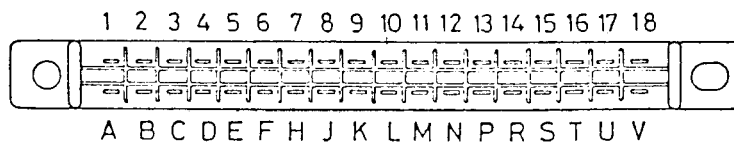


BATTLE WINGS  
Power Supply Circuit

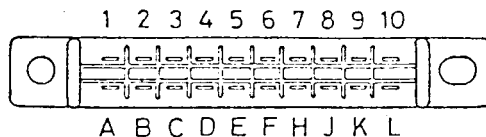


## HARNESS CONNECTION

### 1) Terminal Numbering CR7E-36DA-3.96E (HIROSE) 3.96mm Pitch



### CR7E-20DA-3.96E (HIROSE) 3.96mm Pitch



### 2) Signal to Terminal

#### CCU-01 Connector CN3-CR7E-20DA-3.96E

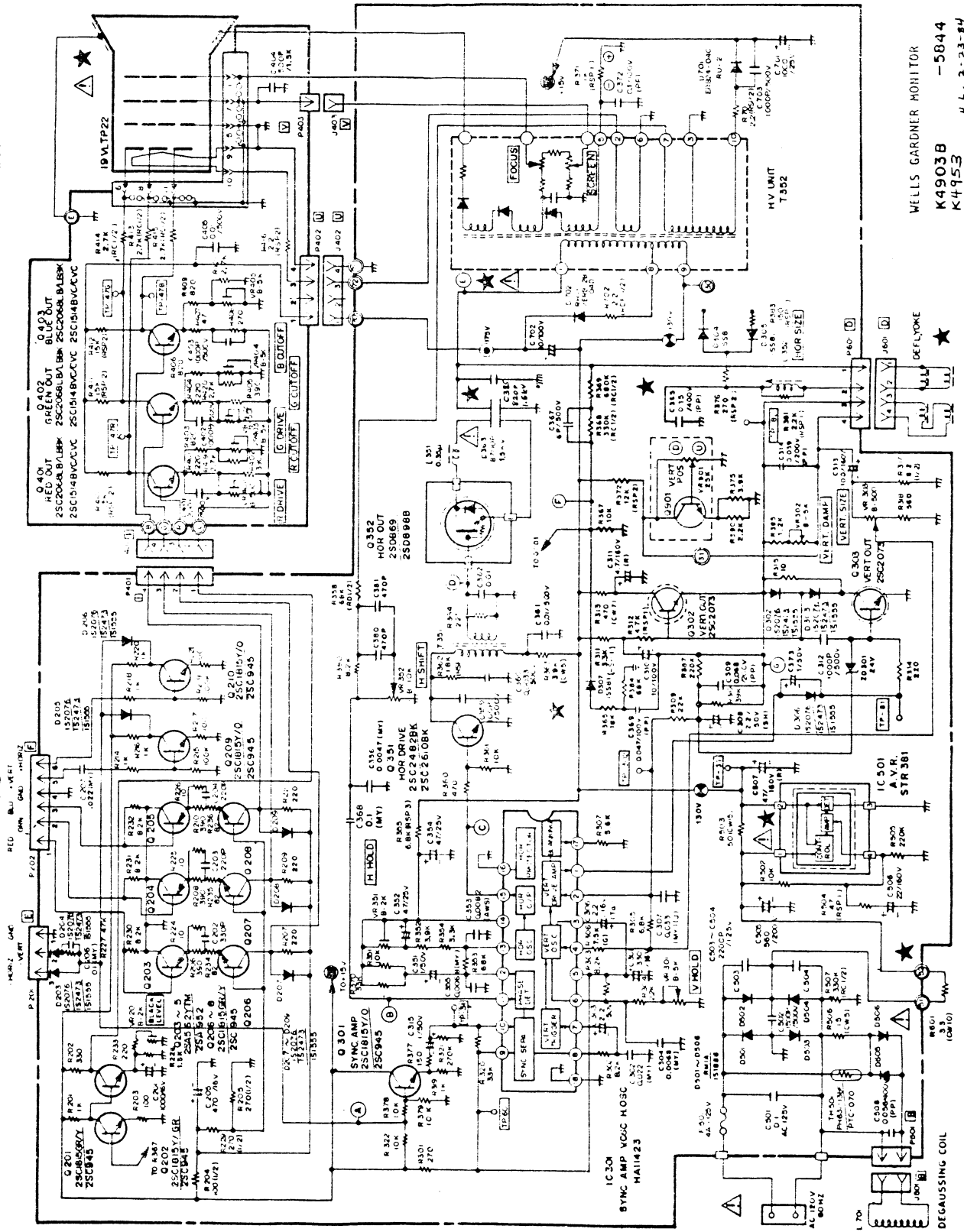
Pin	Signal	Pin	Signal
1	GND	A	GND
2	GND	B	GND
3	GND	C	TV. GND
4	TV. B	D	SYNC.
5	TV. R	E	TV. G
6	H-SYNC	F	V-SYNC
7		H	
8	+5V	J	+5V
9	+5V	K	+5V
10	+5V	L	+5V

#### SCU-01 Connector CN2-CR7E-36DA-3.96E

Pin	Signal	Pin	Signal
1	+12V	A	+12V
2	+5V	B	+5V
3	+5V	C	+5V
4	COUNTER Vcc	D	-5V
5	COUNTER 1	E	COUNTER 2
6	COIN 1	F	COIN 2
7	TILT SW.	H	SERVICE
8	1P	J	2P
9	1P SHOOT 2	K	2P SHOOT 2
10	1P SHOOT 1	L	2P SHOOT 1
11	1P DOWN	M	2P DOWN
12	1P UP	N	2P UP
13	1P LEFT	P	2P LEFT
14	1P RIGHT	R	2P RIGHT
15	SPEAKER +	S	SPEAKER -
16	GND	T	GND
17	GND	U	GND
18	GND	V	GND

COCKTAIL  
TABLE  
ONLY

# 19" COLOR GAME MONITOR SCHEMATIC DIAGRAM



WELLS GARDNER MONITOR  
 K4903B  
 K4953

-5844  
 H.L. 2-23-84

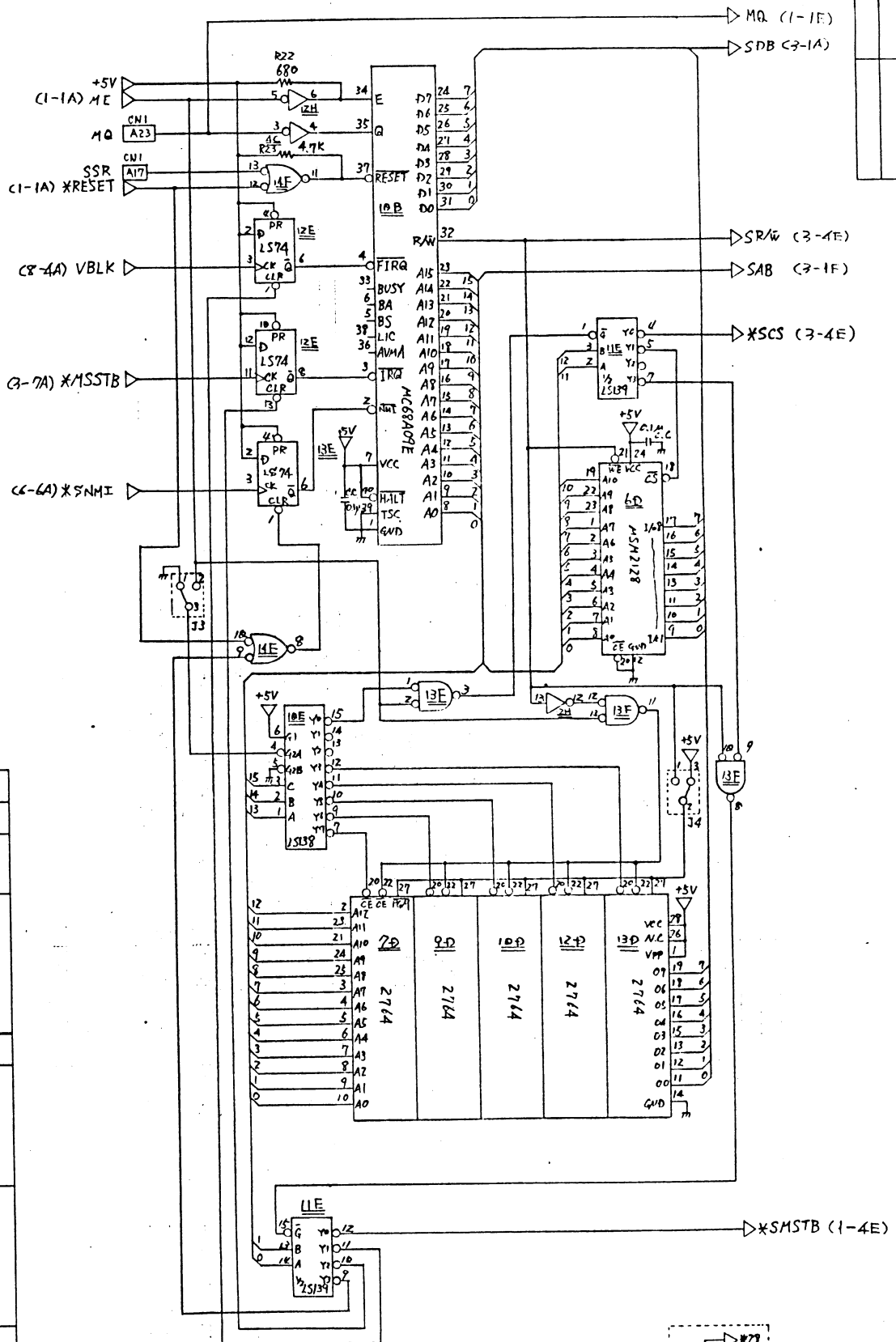








回路番号	仕様、名称
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※2764は実装のみ。

記号

第3角法

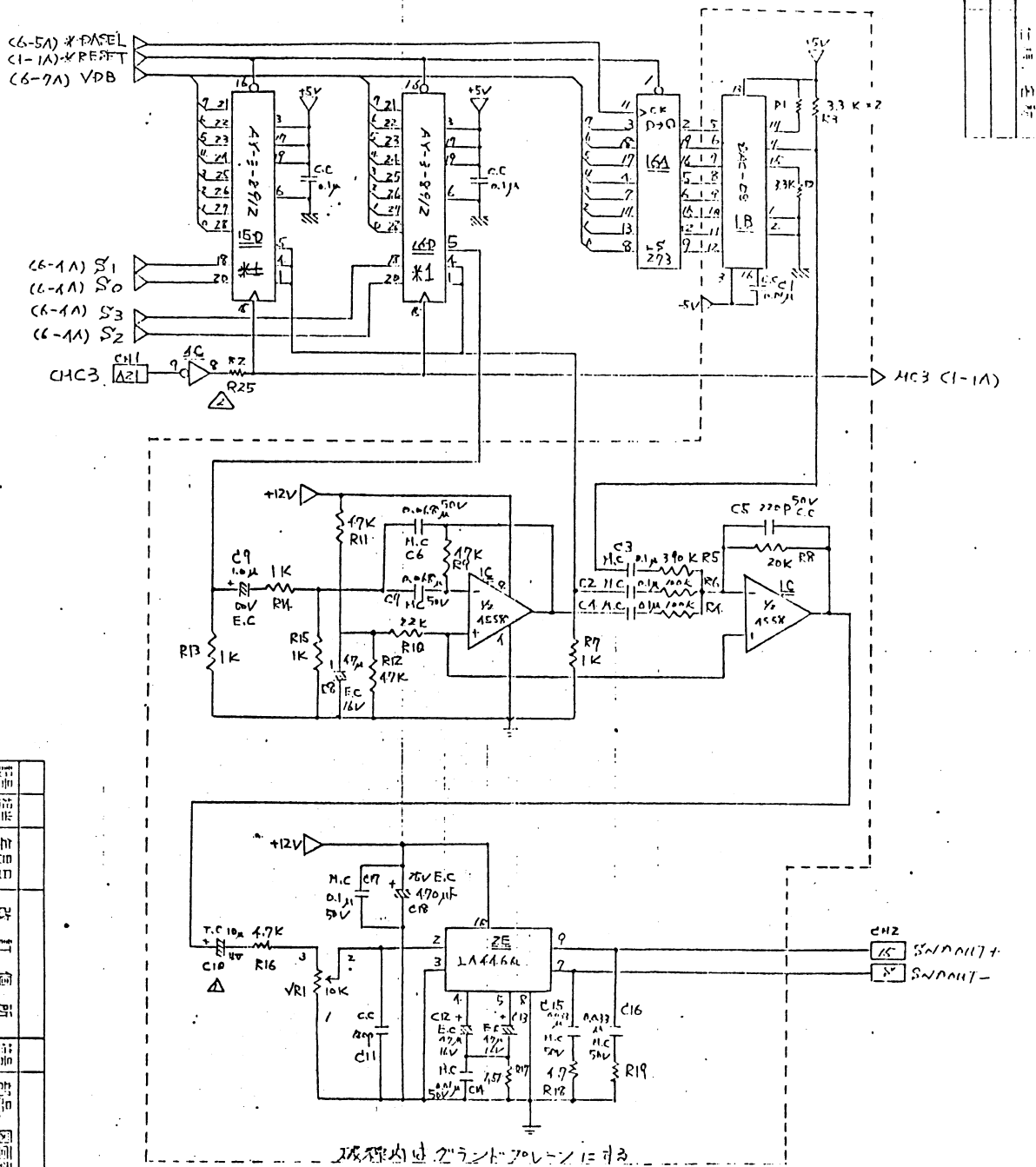
材料	記号	担当者	年月日	改訂	個所	符号	部品	図面番号	名称
基板	厚さ								SCU-01 回路図
部品	種類								
部品	種類								
担当者									
単位	mm								
図番									
K-10694-2									
5/8									

株式会社 三洋電機





記号  
 △ 5V 1.5V 山形 表示  
 入力  
 TL-07-70V 入力 接続端子  
 (6-5A) \*BASEL  
 (1-1A) \*REF  
 (6-7A) VDB



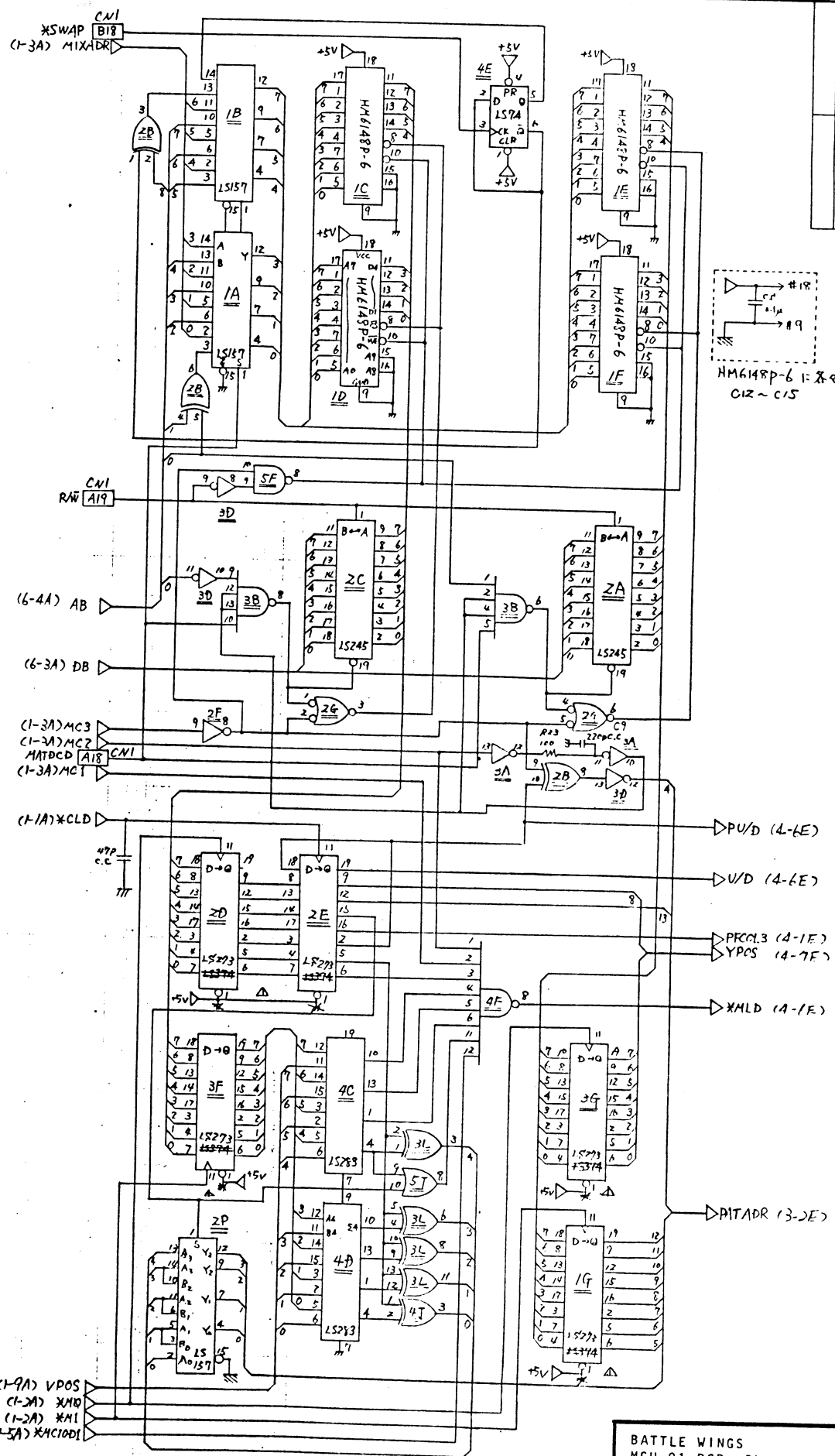
第3角法

材料	部号	部品名	数量	公差	名称
电阻	1K	R13	1		1K
电阻	1K	R15	1		1K
电阻	1K	R16	1		1K
电阻	10K	R17	1		10K
电阻	10K	R18	1		10K
电阻	10K	R19	1		10K
电阻	10K	R20	1		10K
电阻	10K	R21	1		10K
电阻	10K	R22	1		10K
电阻	10K	R23	1		10K
电阻	10K	R24	1		10K
电阻	10K	R25	1		10K
电阻	10K	R26	1		10K
电阻	10K	R27	1		10K
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电阻	10K	R36	1		10K
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电阻	10K	R43	1		10K
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电阻	10K	R103	1		10K
电阻	10K	R104	1		10K
电阻	10K	R105	1		10K
电阻	10K	R106	1		10K
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电阻	10K	R108	1		10K
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仕様、仕様



記事  
 △57.3.13 加泰使用TTL変更の為

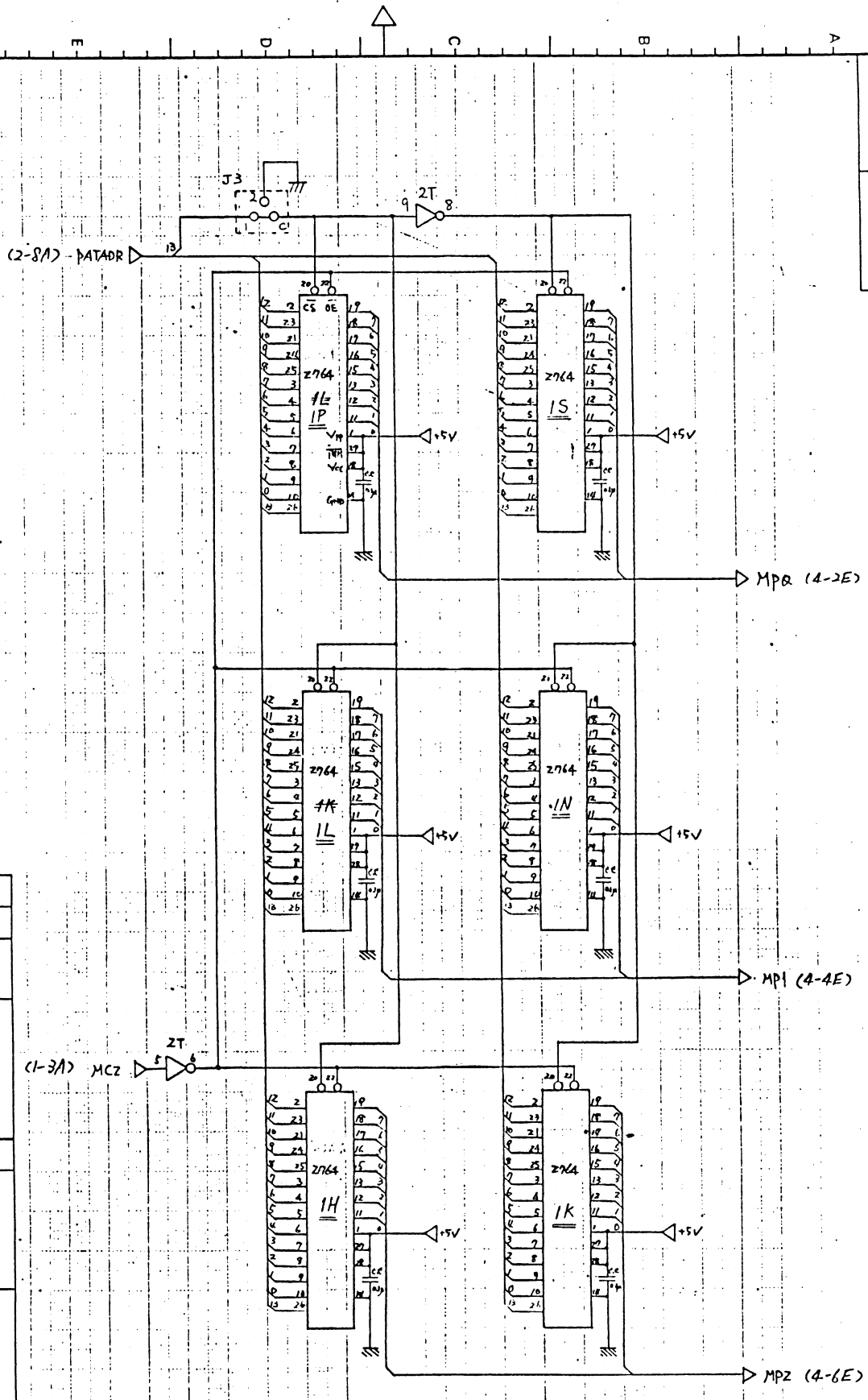
第3角法

記号	年月日	改訂箇所	部品の 品名、図面番号	名称
材料		処理	公差	仕様、材質
作成 1978.01.18 S.S.V.T. M. Takahashi			単位 mm	MCU-01 回路図
			単位 mm	K-10696-2
				2
				6

子タロト株式会社

BATTLE WINGS  
 MCU-01 PCB Sh. 2 of 6

問題番号	仕様名称
------	------



記事 経 ROM 2712C およ 2714 に変更 した 回路 差替 元

記号	担当	年月日	改訂	個所	符号	部品	図面番号	名称	名	称	仕様	材質	数量
10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	MCU-01 回路図					3
10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	K-10696-2					6

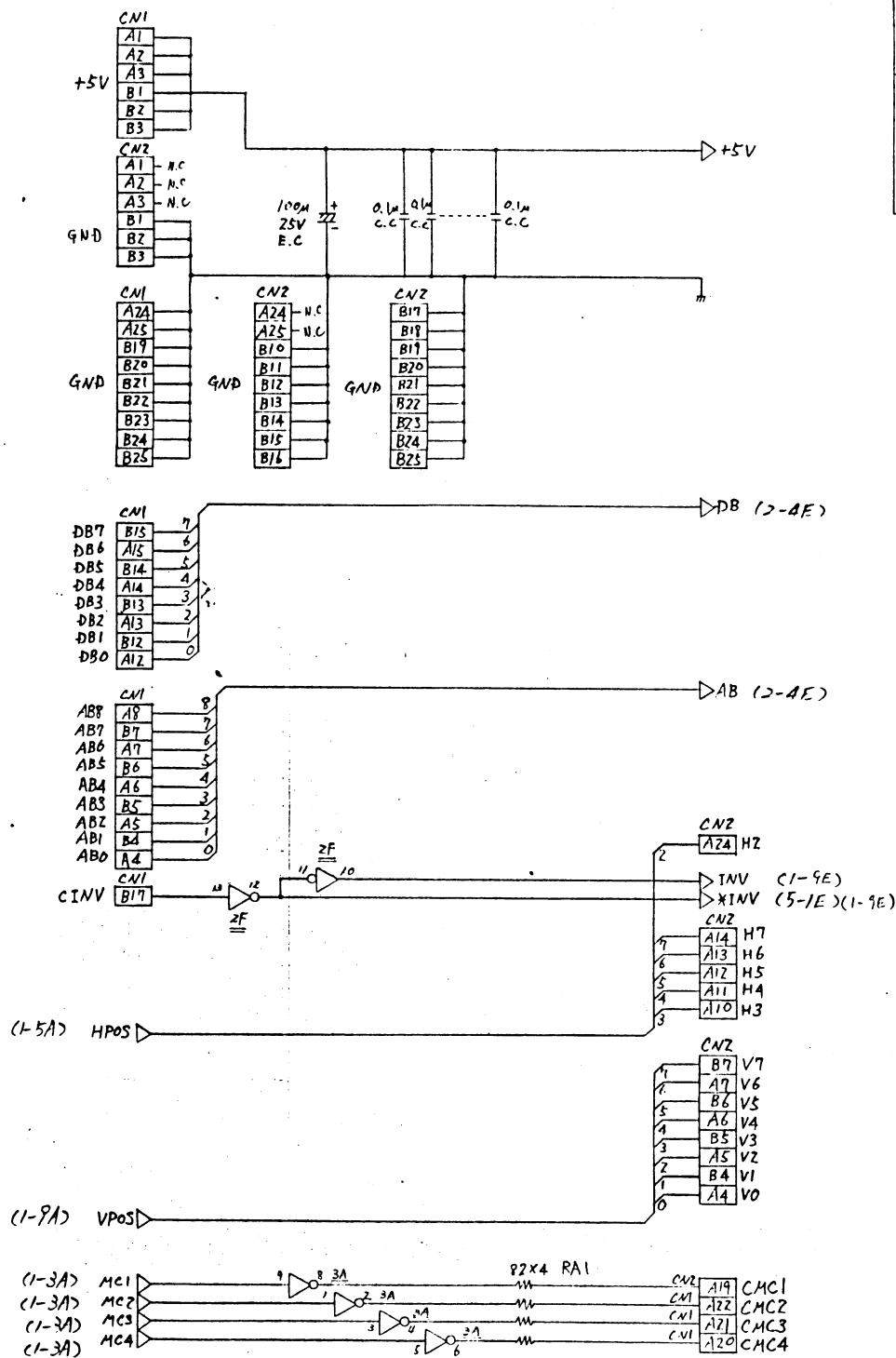
第 3 角法

株式会社 于子子一様式会社





関連番号	仕様・名称
------	-------



記事

記号	担当者	年月日	改訂	個所	符号	部品、図面番号	名称	仕様、材質
材料							MCU-01 回路図	

承認	検査	検査	検査	検査	検査	検査	検査	検査
承認	検査	検査	検査	検査	検査	検査	検査	検査

第3角法

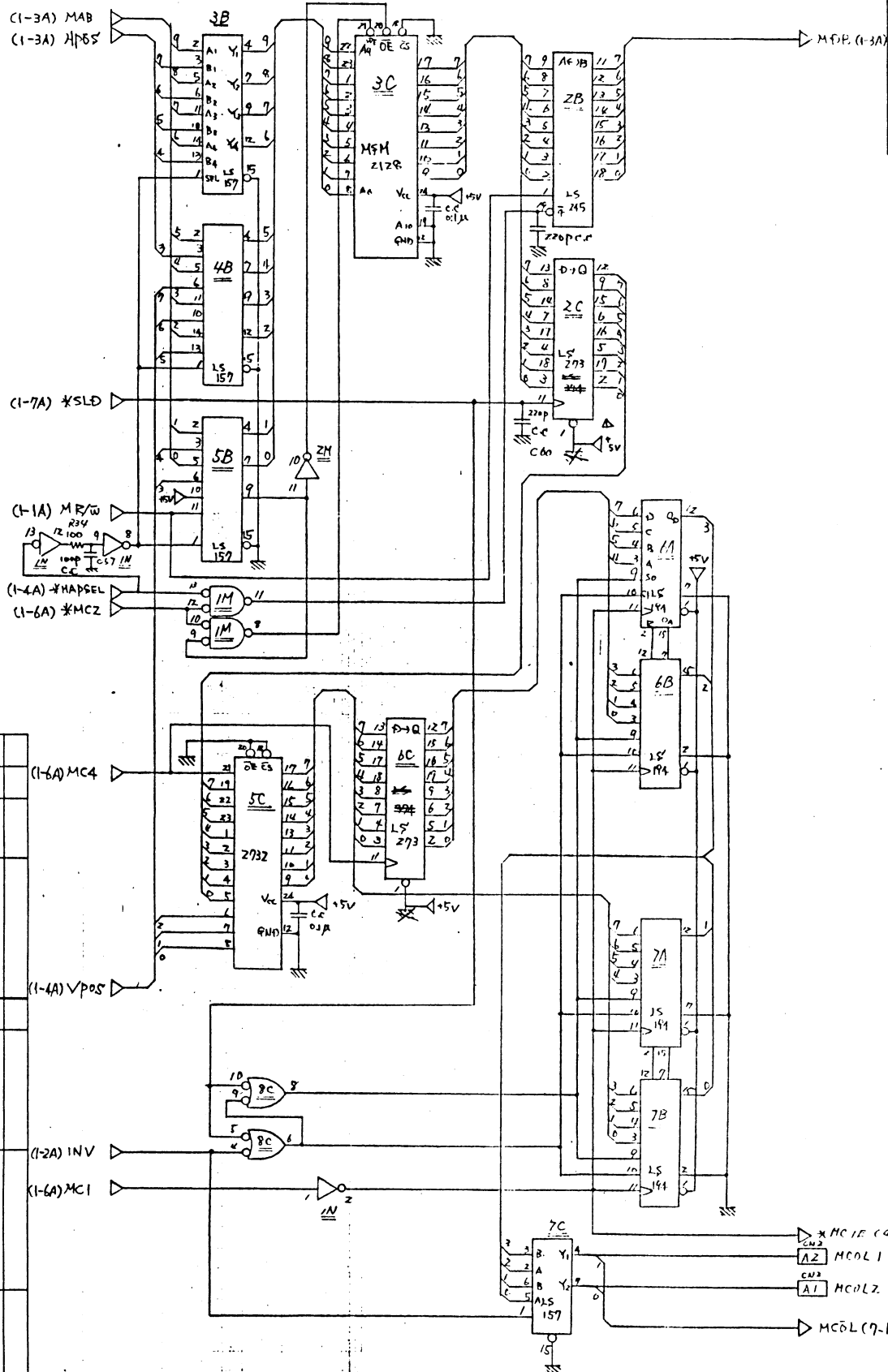
株式会社

K-10696-2





関連番号 仕様名称



記事  
 Δ 59. 3. 15 追加 使用 TTL 変更 為

第 3 角法

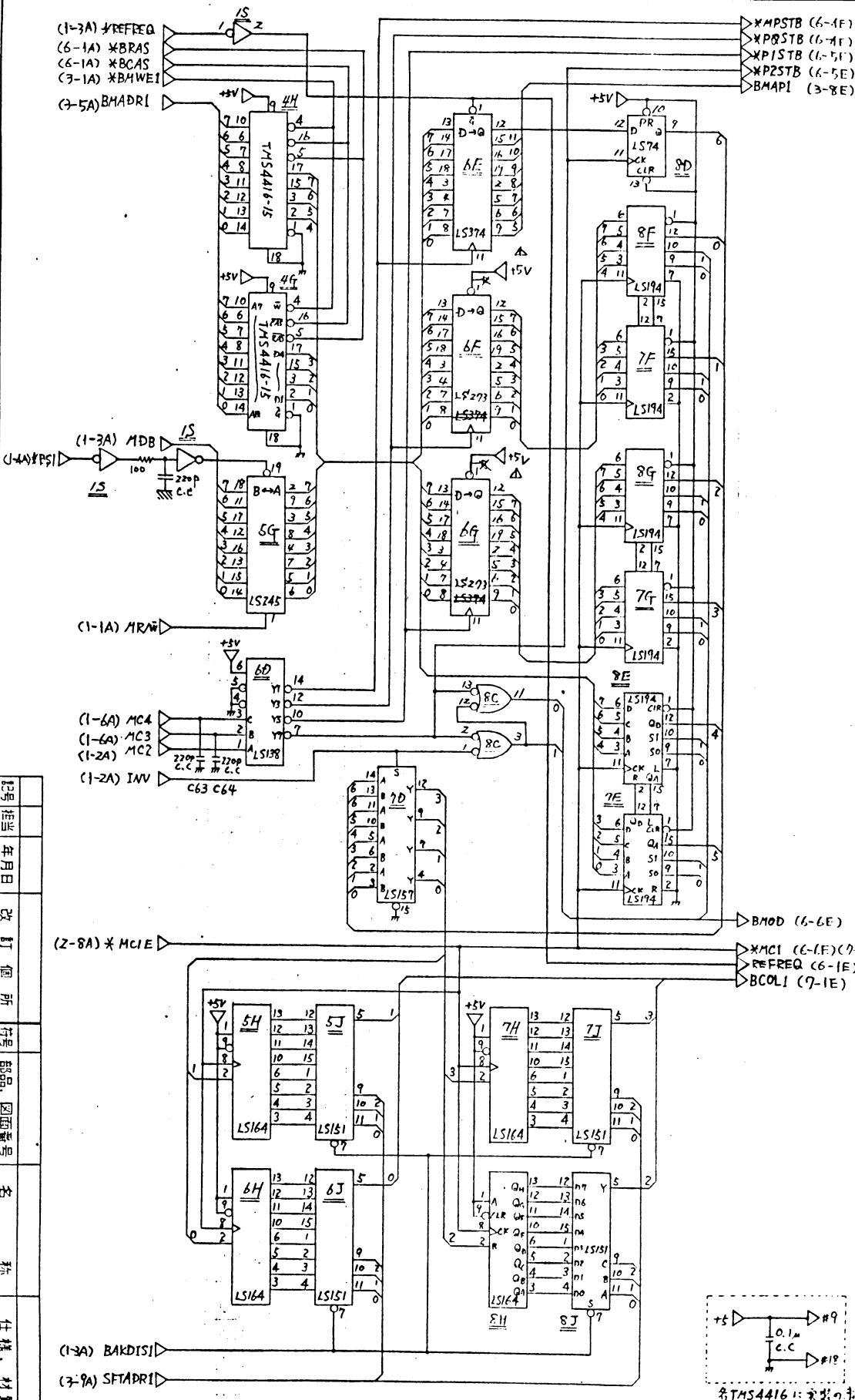
記号	年月日	改訂箇所	符号	部品、図面番号	名称	仕様、材質
材質		処理			名	称
公差					仕	様、材
単位					質	
mm						
図番						
K-18698-2						
CCU-01 回路図						
2						

株式会社 日立製作所



関連番号	仕様名称
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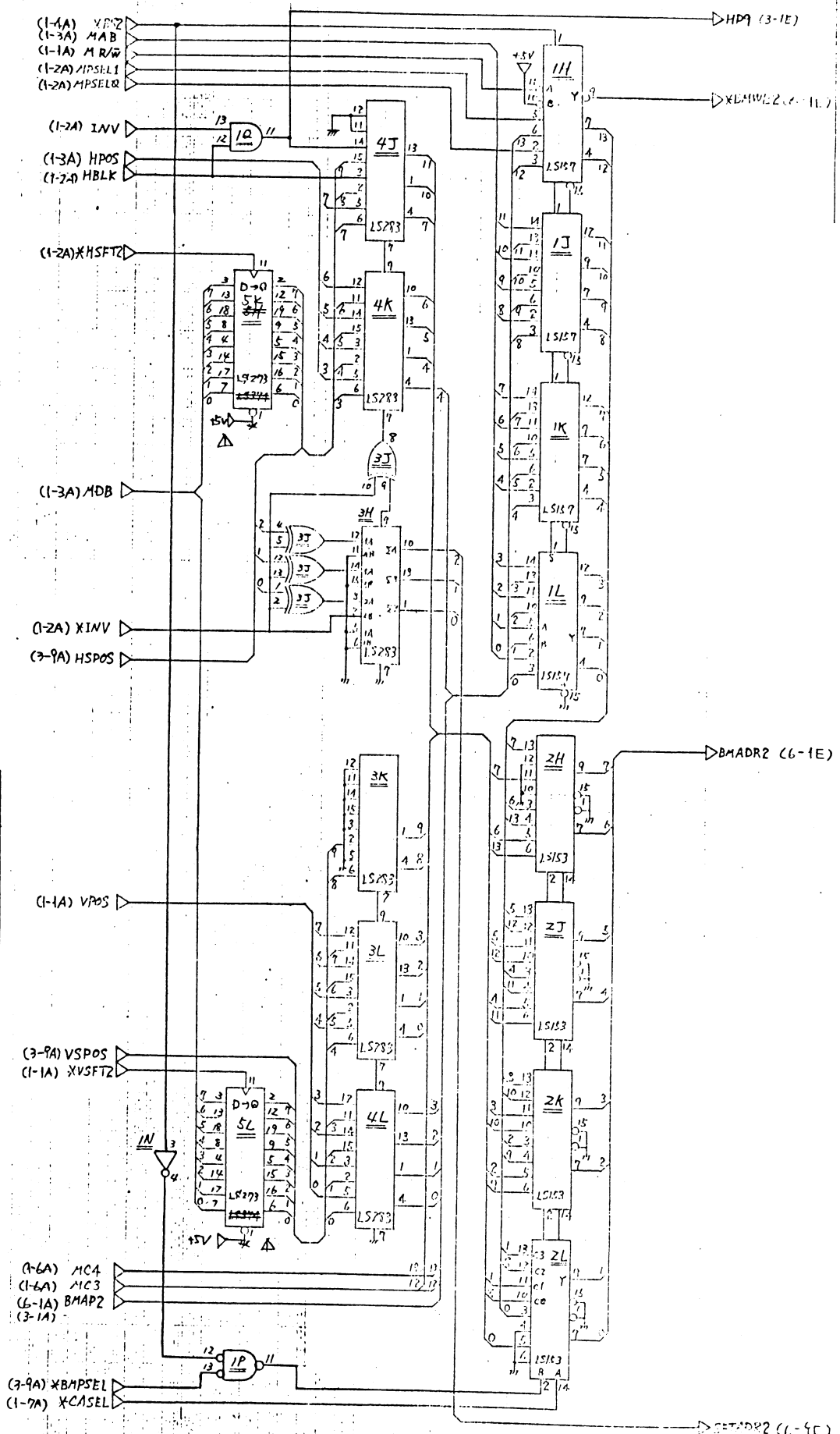
記事  
△ 59.3.15 追加 使用 TTL 変更あり



部名角注

材料	担当者	年月日	改訂箇所	行号	部品	図面番号	名称	仕様	材質
59.3.15	室野	59.3.15					CCU-01回路図		
59.3.15	室野	59.3.15					K-10695-2		

記号  
 1982/15 丸森 合同TTL 変更0為



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图号	CCU-01 回路图
图名	CCU-01 回路图
图例	
比例	
日期	
设计	
审核	
批准	
制图	
校对	
工艺	
材料	
数量	
备注	
其他	
图号	K-18695-2
图名	
图例	
比例	
日期	
设计	
审核	
批准	
制图	
校对	
工艺	
材料	
数量	
备注	
其他	

BATTLE WINGS  
 CCU-01 PCB Sh. 5 of 7



