

# KARATE CHAMP™



## INSTALLATION INSTRUCTIONS



DATA EAST USA, INC.

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

# **WARNING**

This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instructions manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

## **CAUTION**

EMI Shield must be securely installed in order to protect against undesirable radio interference.

K A R A T E                    C H A M P <sup>tm</sup>

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## K A R A T E      C H A M P

\*

GAME SEQUENCE

1. Insert coin(s).
2. Push 1P (or 2P) button.
3. KARATE skill practice - follow arrow instructions at bottom of screen. Imitate these moves to score bonus points and to practice skills.
4. DOJO - White player - Red opponent. Use your best KARATE skills to beat the opponent within the time limit. Two (2) full points lead you to the next match.
5. HARD PRACTICE - Avoid or destroy flying objects to gain bonus points.
6. NATIONAL CHAMPIONSHIP - Point system is the same as DOJO. Win two matches and you progress to the next grade (level). After each match, a bonus stage will appear.

JOYSTICK MOVEMENTS

KARATE CHAMP is a two joystick game!

- \* Use left lever to control white player movement (forward, back, jump, duck).
- \* Use Right lever for different skills (punch, kick, sweep, etc.).
- \* Use combinations of left and right levers to your advantage for high score and exciting moves.
- \* Be sure to hold the levers until your point is scored.
- \* Distance to the opponent sometimes alters skill.

RIGHT LEVER	-Y-	C+	+O	O+	+
LEFT LEVER					
		BACK KICK	FRONT KICK MIDDLE REVERSE PUNCH	ROUND KICK	LOW KICK
	WITHDRAW	BACK KICK	BACK ROUND KICK	UPPER PUNCH	LOW KICK
	BLOCK	CHANGE DIRECTION	MIDDLE LUNGE PUNCH	UPPER LUNGE PUNCH	LOW KICK
	FORWARD	BACK KICK	FRONT KICK	ROUND KICK	
	JUMP	JUMPING BACK KICK	JUMPING SIDE KICK	BACKWARD SOMERSAULT	FORWARD SOMERSAULT
	SQUAT	BACK FOOT SWEEP	FRONT FOOT SWEEP	SQUATTING REVERSE LUNGE PUNCH	FRONT FOOT SWEEP

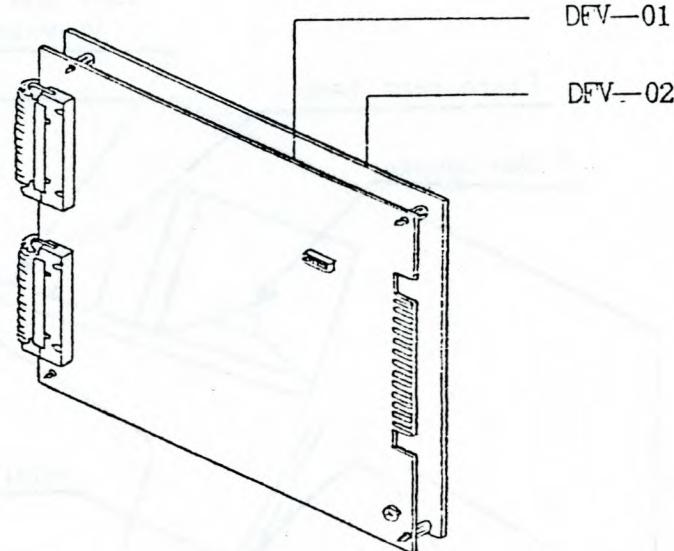
## K A R A T E      C H A M P

## OPTION SWITCH SETTINGS

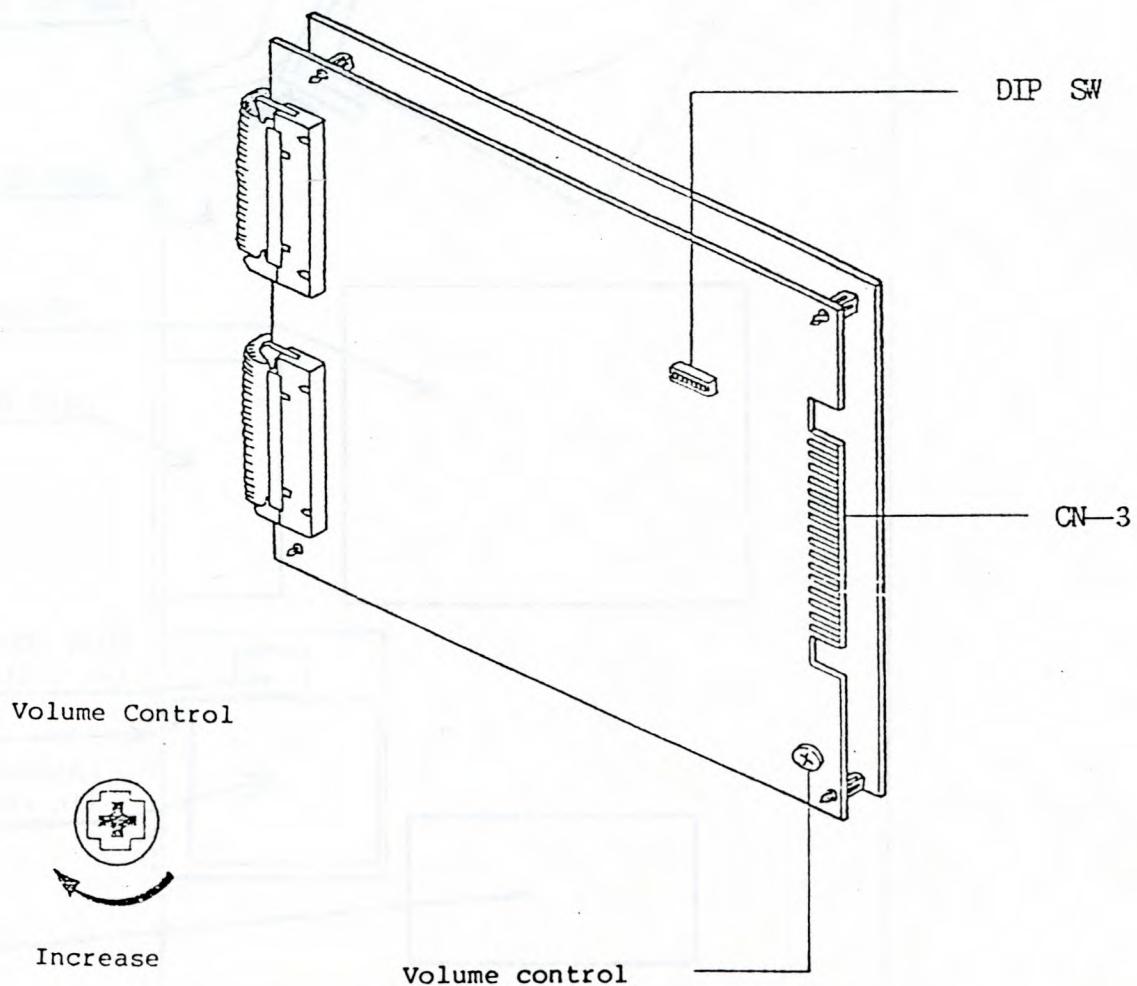
\*

No.	SETTING			REMARKS	
1	OFF TABLE	ON UPRIGHT		TYPE OF MACHINE	
2	OFF NO	ON YES		SOUND DURING ATTRACT MODE	
3	OFF NO	ON YES		FREE PLAY	
4	OFF EASY	ON DIFFICULT		CLASS	
5	OFF	OFF	ON	ON	LEFT Coin Acceptor
6	OFF	ON	OFF	ON	
	1 Coin 1 Play	1 Coin 2 Play	2 Coin 1Play	3 Coin 1 Play	
7	OFF	OFF	ON	ON	RIGHT Coin Acceptor
8	OFF	ON	OFF	ON	
	1 Coin 1 Play	1 Coin 2 Play	2 Coin 1 Play	3 Coin 1 Play	

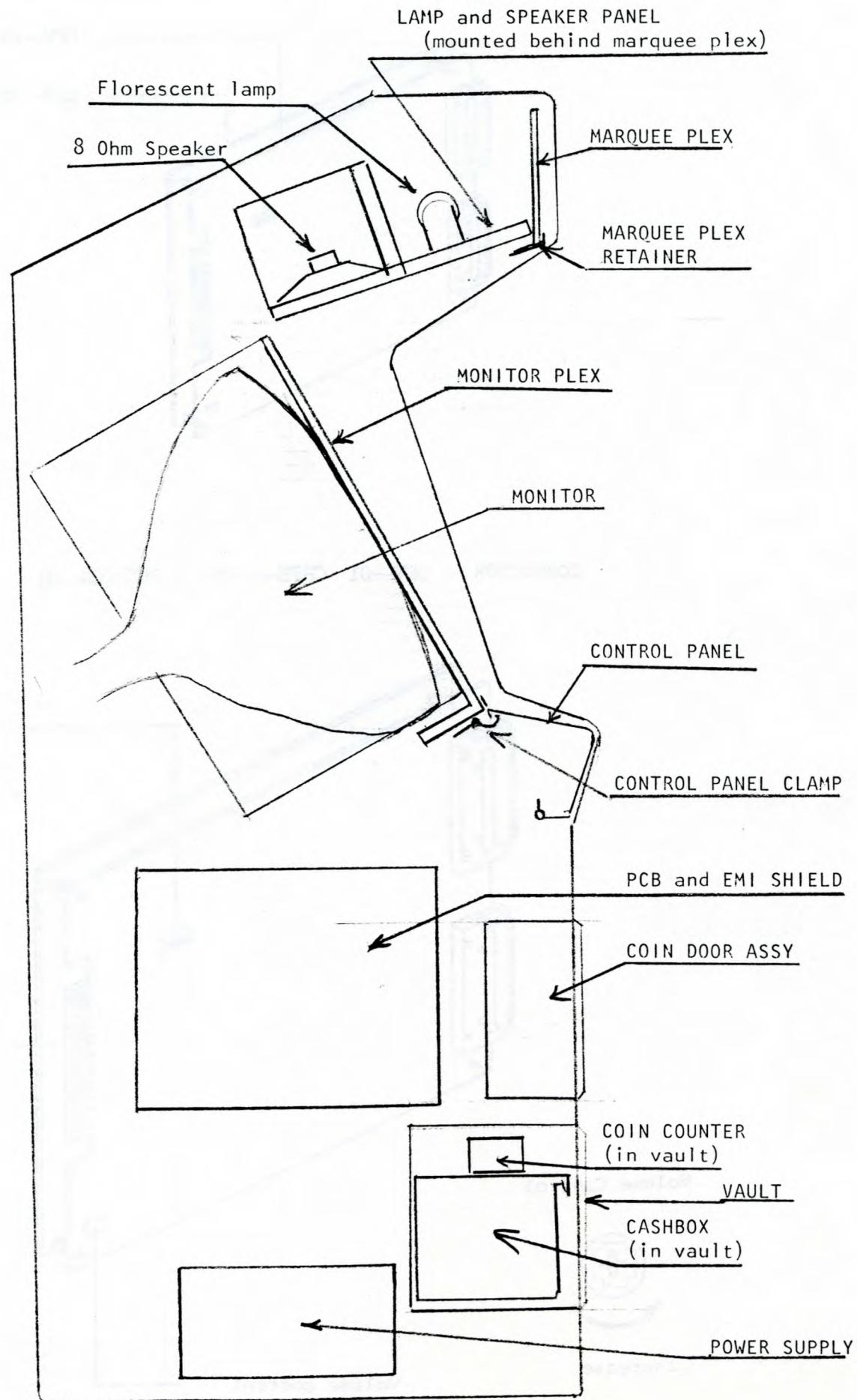
VOLUME CONTROL AND DIP SWITCH LOCATIONS



CONNECTOR DFV-01 CR7E-44DE-3.96E (CN-3)



MAJOR CABINET COMPONENT LOCATIONS



## POWER SUPPLY REQUIREMENTS

+5V	$\pm 2\%$	5A
+12V	$\pm 2\%$	1A
-5V	$\pm 2\%$	0.1A

## OPERATING ENVIRONMENT

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

## RASTER SCAN MONITOR SIGNALS

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

Black            0 - +2V

Image Signal    +2.5V - +4V

### (2) Syncronize Signal      Composite

0            0 - 0.5V

1            +3V - +5V

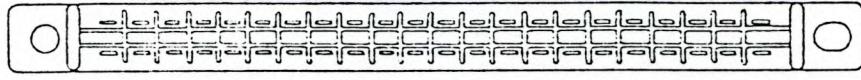
### (3) Screen Image Size

Image can be shrunk both horizontally and vertically by 10%.  
Adjust monitor to widen the screen image.

MAIN WIRING HARNESS PCB TERMINATIONS

1) Terminal Numbering      CR7E-44DA-3.96E(HIROSE) 3.96mm Pitch

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22



A B C D E F H J K L M N P R S T U V W X Y Z

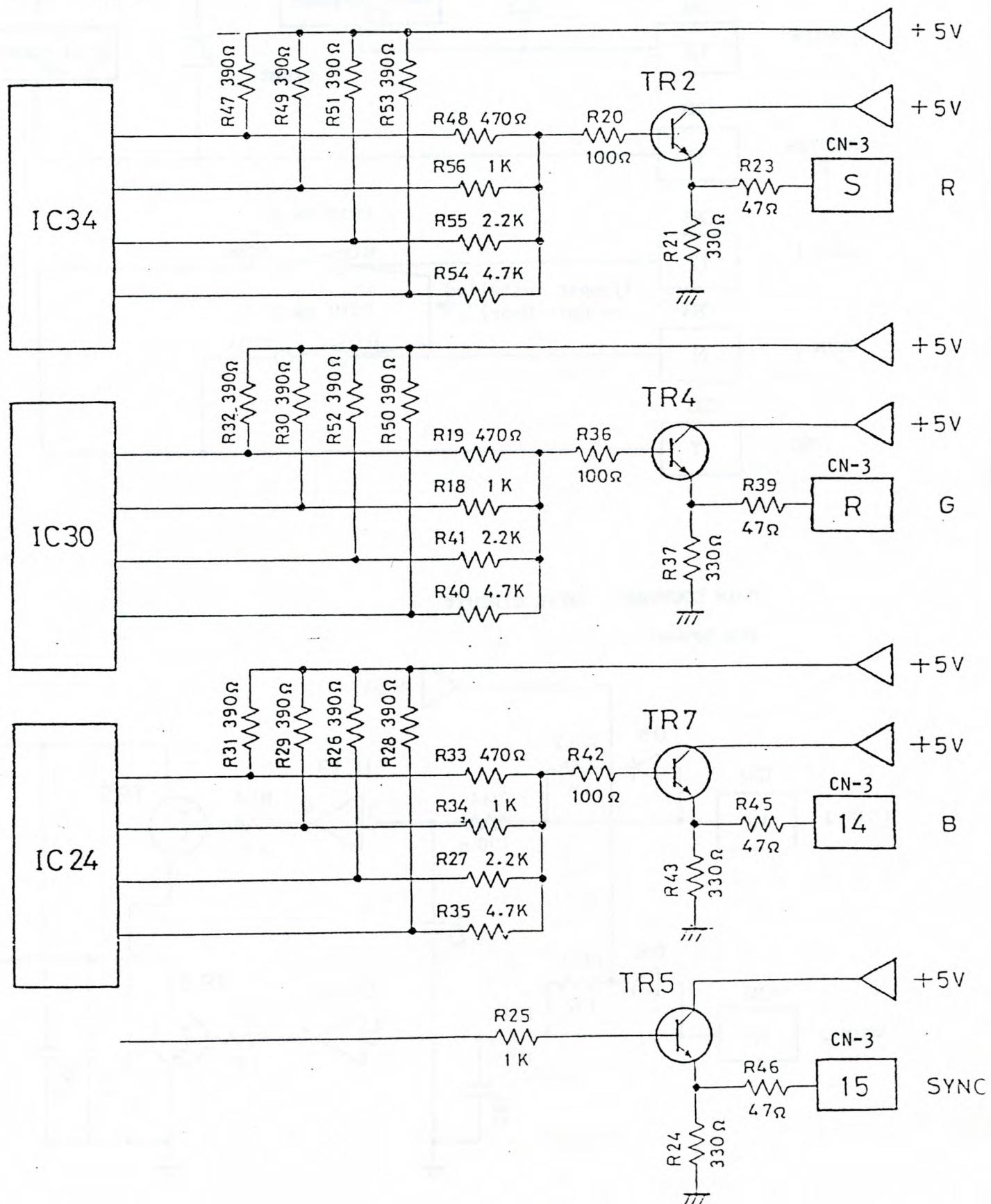
2) Signals to Terminal

Connector CN3 CR7E-44DA-3.96E

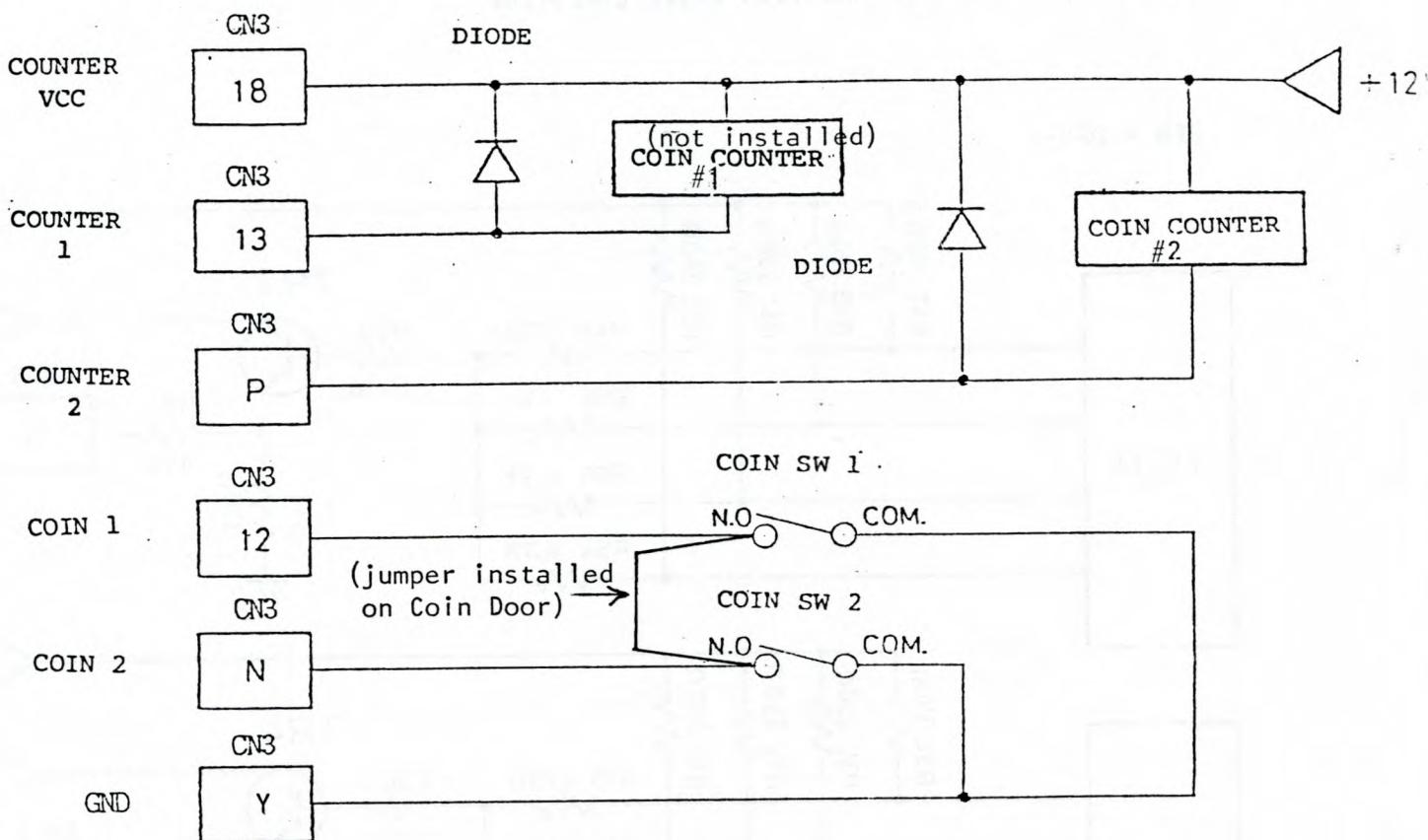
Pin No.	Signal	Pin No.	Signal
1	RIGHT DOWN	A	
2	RIGHT UP	B	
3	RIGHT LEFT	C	
4	RIGHT RIGHT	D	
5	LEFT DOWN	E	
6	LEFT UP	F	
7	LEFT LEFT	H	
8	LEFT RIGHT	J	
9		K	
10		L	
11	1P SELECT	M	2P SELECT
12	COIN 1	N	COIN 2
13	COIN COUNTER 1	P	COIN COUNTER 2
14	TV. B	R	TV. G
15	SYNC	S	TV. R
16		T	
17	SOUND +	U	SOUND -
18	+12V	V	-5V
19	+5V	W	+5V
20	+5V	X	+5V
21	GND	Y	GND
22	GND	Z	GND

# MONITOR DRIVE CIRCUITRY

PCB - DFV-1

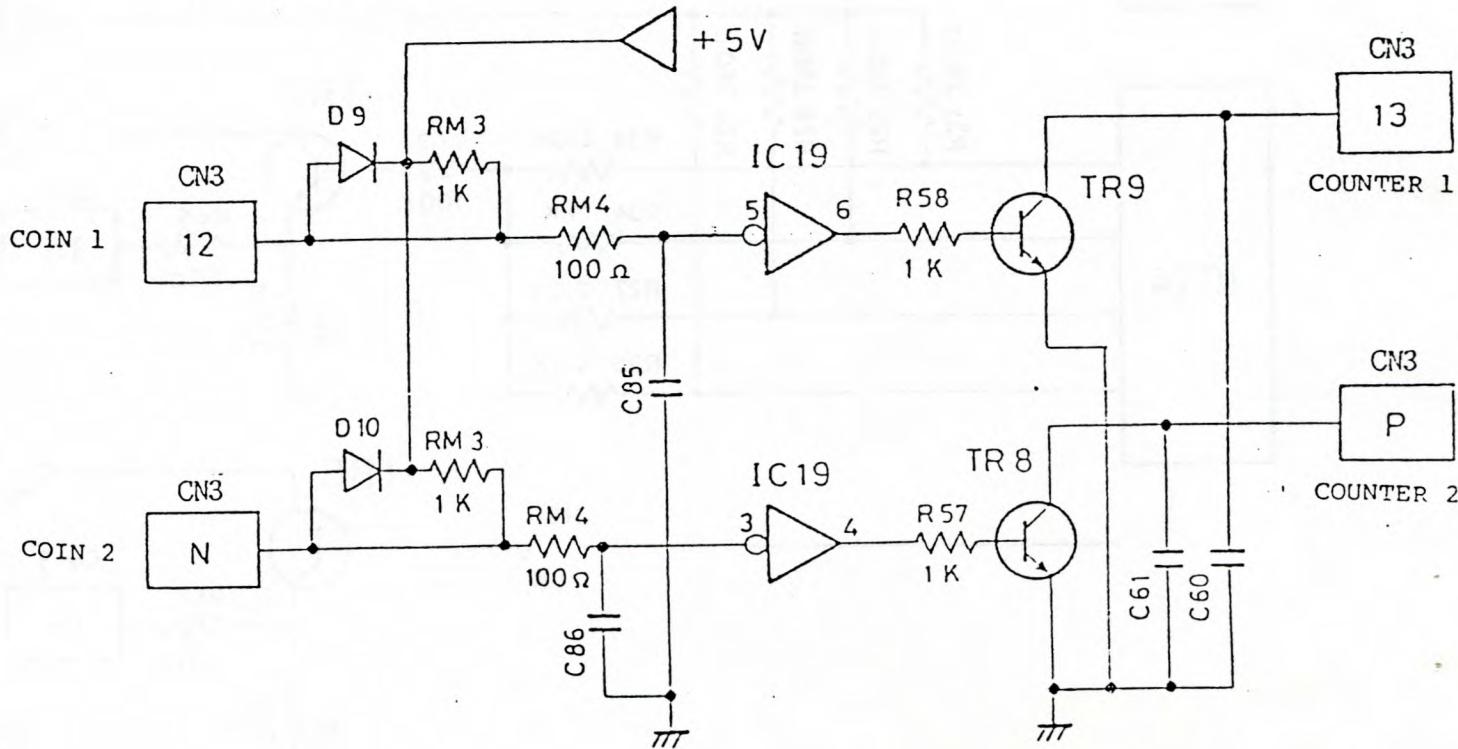


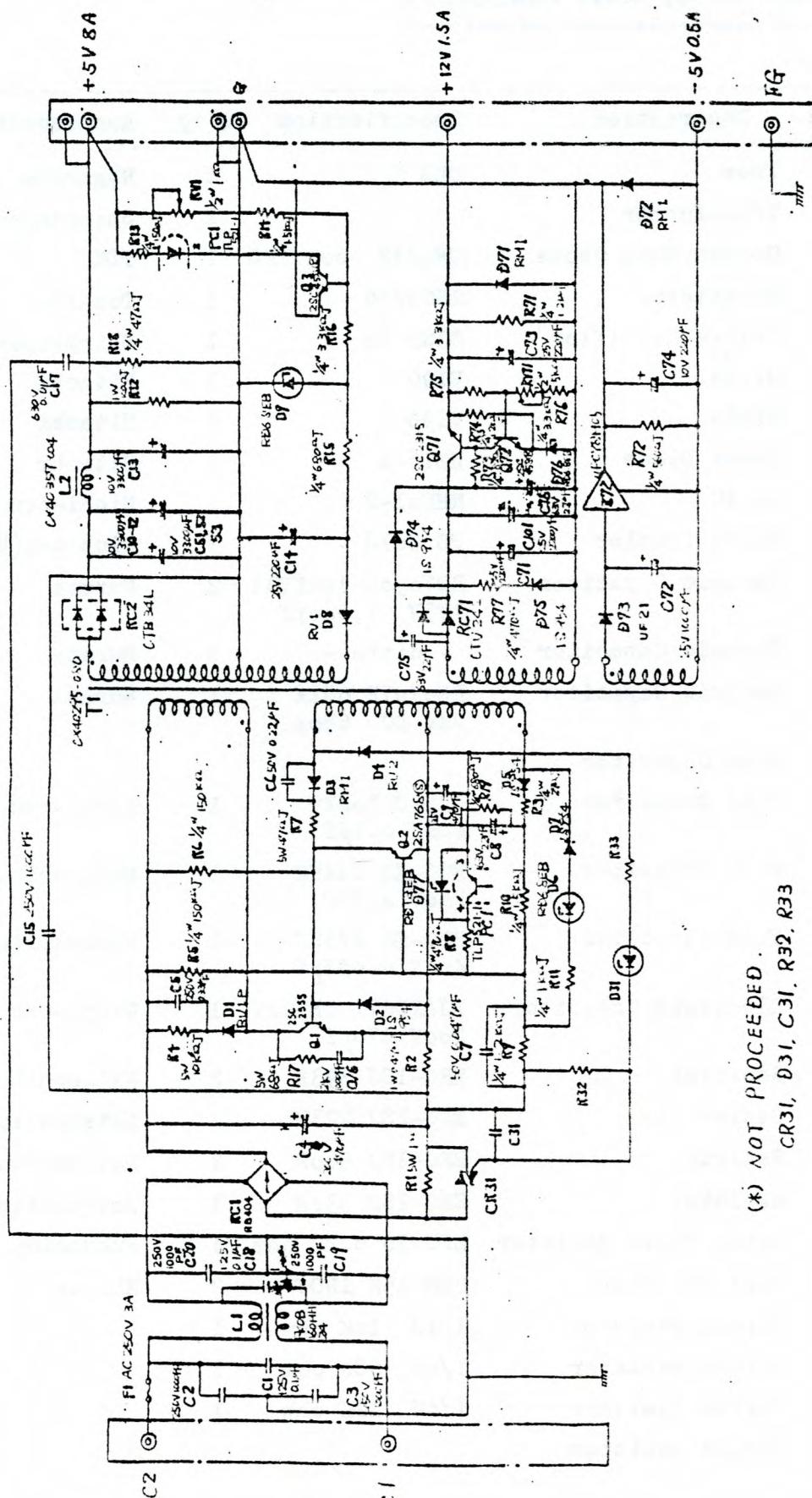
NOTE: Only Coin Counter #2 is installed at factory.



## COIN COUNTER - DRIVE CIRCUIT

PCB DFV-01





(\*) NOT PROCEEDED.

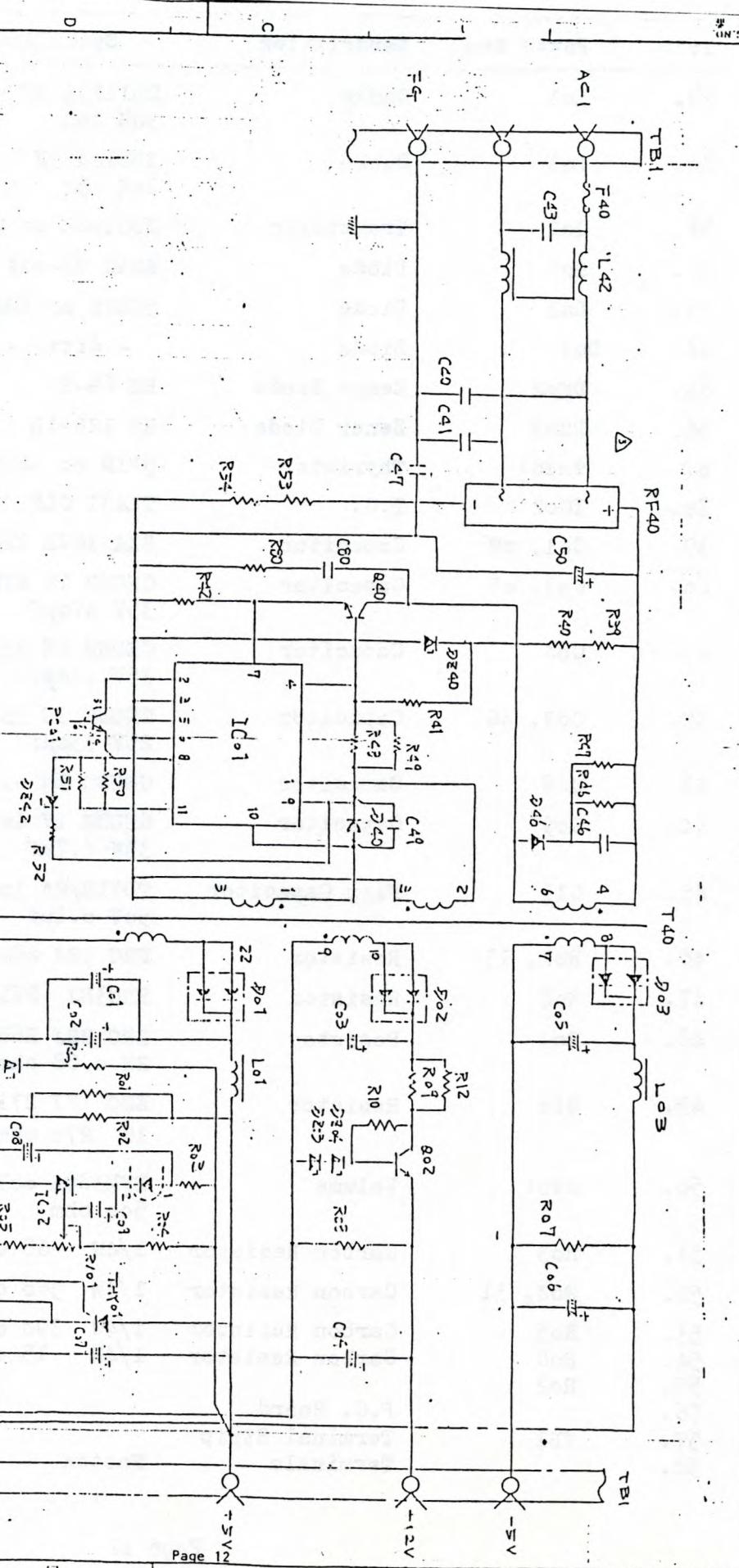
CR31, D31, C31, R32, R33

材質		處理		公差		名稱		SANKEI SWS-60B	
規格	備註	規格	備註	規格	備註	規格	備註	規格	備註
				/		K - 10505	/	1	1

## POWER SUPPLY Model KGD23SMK-II

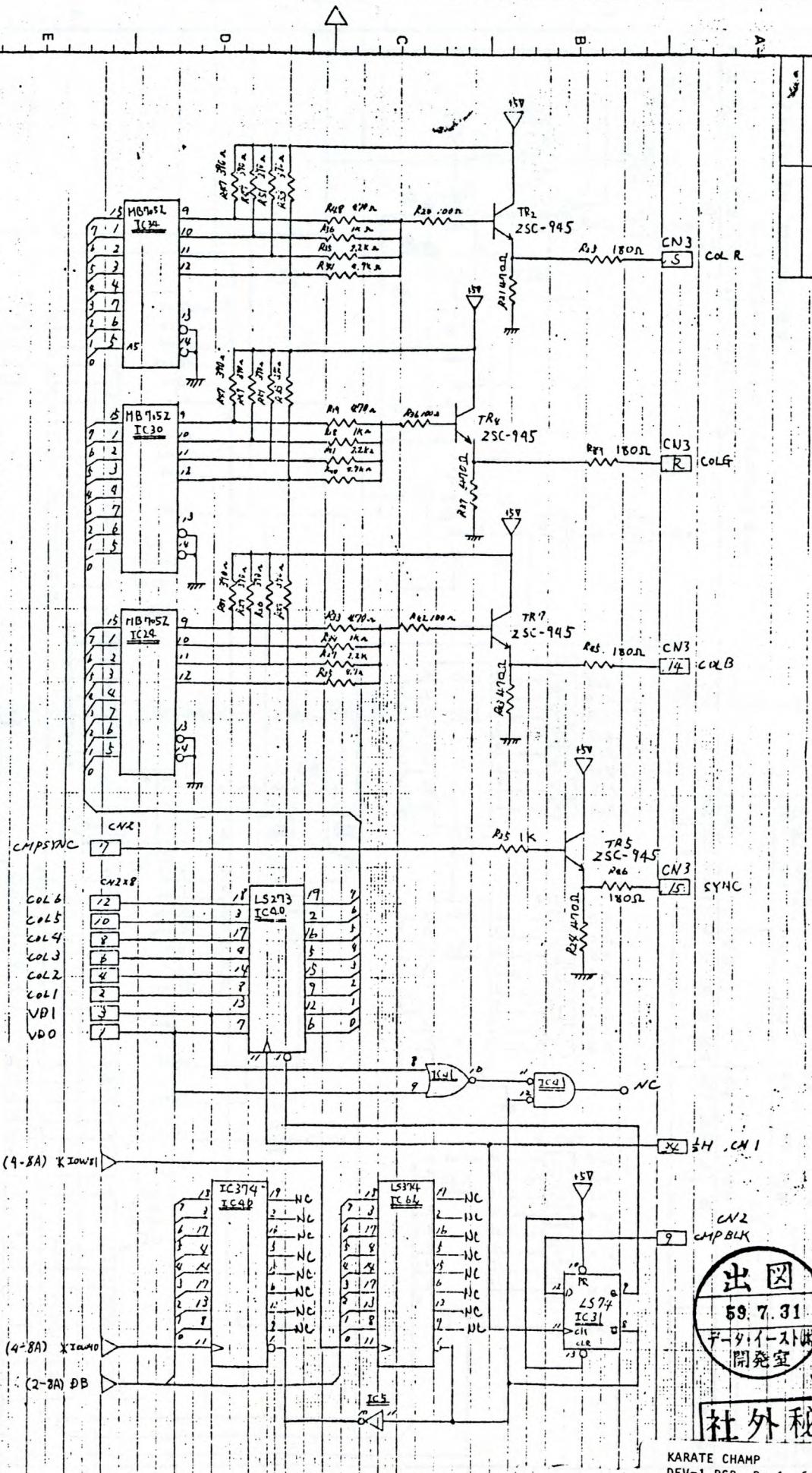
Item	Parts Nos	Description	Specification	Q'ty	Manufacturer
1.	F4o	Fuse	GHS 5	1	Nagasawa
2.	T4o	Transformer		1	Shindengen
3.	L42	Common Mode Choke	UF327S 602YIRO	1	TDK
4.	Q4o	Transistor	2SC3306	1	Toshiba
5.	RF4o	Bridge Rectifier	S3WB 4o	1	Shindengen
6.	D4o	Diode	V19C	1	Hitachi
7.	D46	Diode	V19G	1	Hitachi
8.	DZ4o	Zener Diode	HZ16-1	1	Hitachi
9.	IC01	HB IC	RHD01-2	1	Nichi-con
10.	PC01	Photo Coupler	PS 2018	1	Nichiden(NEC)
11.	C4o, 41	Seramic Capacitor	DE709oB 1o2KVA1 125V 1,000pf	2	Murata
12.	C47	Seramic Capacitor	- ditto -	1	Murata
13.	C8o	Seramic Capacitor	DE0707B 681K 2KV DC 68op	1	Murata
14.	C42	Film Capacitor			
15.	C43	Film Capacitor	QXM2G 1o4KT 400V 0.1μf	1	Nichi-con
16.	C46	Film Capacitor	ECQ-E2 1o4KS 200V 0.1μf	1	Matsushita
17.	C48	Film Capacitor	ECQ-E6 473KZ 400V 0.047μf	1	Matsushita
18.	C5o	Electrode Capacitor	LJA2D471 THSCBV 200V 470μf	1	Nichi-con
19.	R37, 4o	Resistor	ERG-1SJ 393H	2	Matsushita
20.	R47, 46	Resistor	ERG-2SJ 223H	2	Matsushita
21.	R48, 49	Resistor	ERG-3SJ 560H	2	Matsushita
22.	R8o	Resistor	ERG-2SJ 330H	1	Matsushita
23.	R42	Metal Plate Resistor	MPC 7o 0.22 ohm	1	Fukushima Futaba
24.	R53, 54	Coil Resistor	MNS 05N 1R0J	2	Micron
25.	R41	Carbon Resistor	1/4W 1oK ohm	1	
26.	R5o	Carbon Resistor	1/4W 68o ohm	1	
27.	R51	Carbon Resistor	1/4W 12K ohm	1	
28.	R52	Carbon Resistor			

Item	Parts Nos	Description	Specification	Q'ty	Manufacturer
29.	L01	Choke	RD1113A 3J 3uH 10A	1	Hokkoh
30.	L03	Choke	RD810A 3F 3uH 5A	1	Hokkoh
31.	Q02	Transistor	2SD1022 or 2SD1308	1	Shindengen
32.	D01	Diode	ESAC 83-004	1	Fuji Denki
33.	D02	Diode	5CH2M or ESAC25-020	1	Fuji Denki or NEC
34.	D03	Diode	- ditto -	1	Fuji Denki
35.	DZ02	Zener Diode	HZ 6B-2	1	Hitachi
36.	DZ03	Zener Diode	HZ 12B-1L	1	Hitachi
37.	THY01	Thyristor	5PIM or SF5B41	1	NEC or Toshiba
38.	IC02	I.C.	TL431 CLP	1	T.I.
39.	C01, 02	Capacitor	SXA 16VB 2200	2	Nichi-Chemi
40.	C03, 05	Capacitor	CEUSM 1V 47 $\mu$ f 35V 47 $\mu$ pf	2	Nichi-con
41.	C04	Capacitor	CEUSM 1E 331 25V 330 $\mu$ pf	1	Nichi-con
42.	C07, 06	Capacitor	CEUSM 1E 331 25V 330 $\mu$ pf	2	Nichi-con
43.	C08	Capacitor	CEUSM 1H 100	1	Nichi-con 50V 1 $\mu$ f
44.	C09	Capacitor	CEUSM 1V 4R7 35V 4.7 $\mu$ f	1	Nichi-con
45.	C11	Film Capacitor	TDY1H/2A 104K 50V 0.1 $\mu$ f	1	Nichi-con
46.	R01, 13	Resistor	ERG 3SJ 680H	2	Matsushita 3W 68 $\Omega$
47.	R08	Resistor	ERG3SJ 271H	1	Matsushita 3W 270 $\Omega$
48.	R09	Resistor	ERG 2SJ R68 2W 0.68 ohm	1	Matsushita
49.	R10	Resistor	ERG 1SJ 271 1W 270 ohm	1	Matsushita
50.	RV01	Volume	EVM38GA 00B52 500 ohm	1	Matsushita
51.	R03	Carbon Resistor	1/4W 68 ohm	1	
52.	R04, 11	Carbon Resistor	1/4W 560 ohm	2	
53.	R05	Carbon Resistor	1/4W 390 ohm	1	
54.	R06	Carbon Resistor	1/4W 15 ohm	1	
55.	R02				
56.		P.C. Board		1	
57.	TB1	Terminal Strip		1	
58.		Terminals	Faston	7	



回路	電流	(1)	(2)
+5V	1A ~ 7A	7A	6A
+12V	0.2A ~ 1.5A	1.0A	1.5A
-5V	0.2A ~ 0.5A	0.5A	0.5A

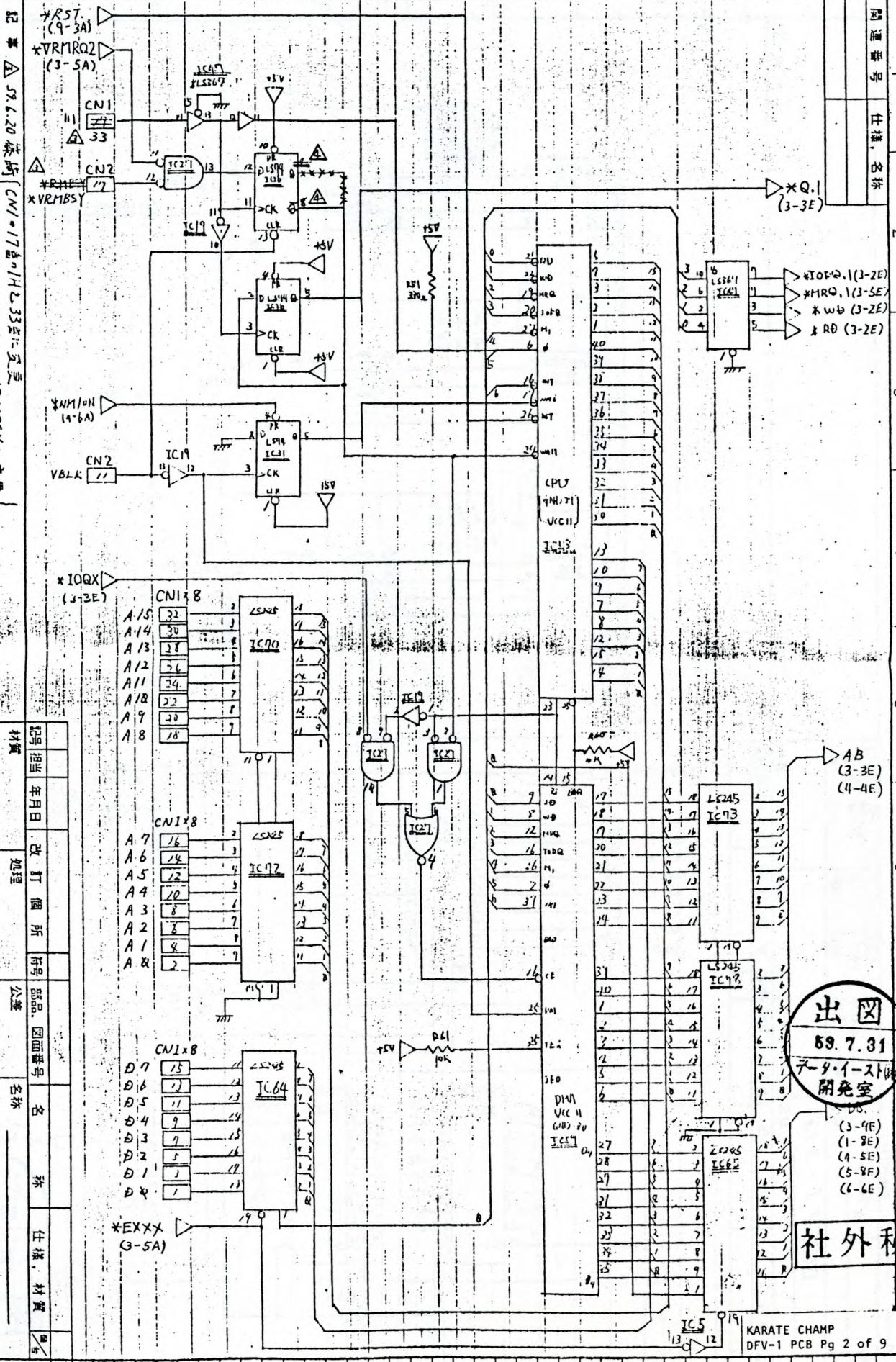
總出力容量 Total Power

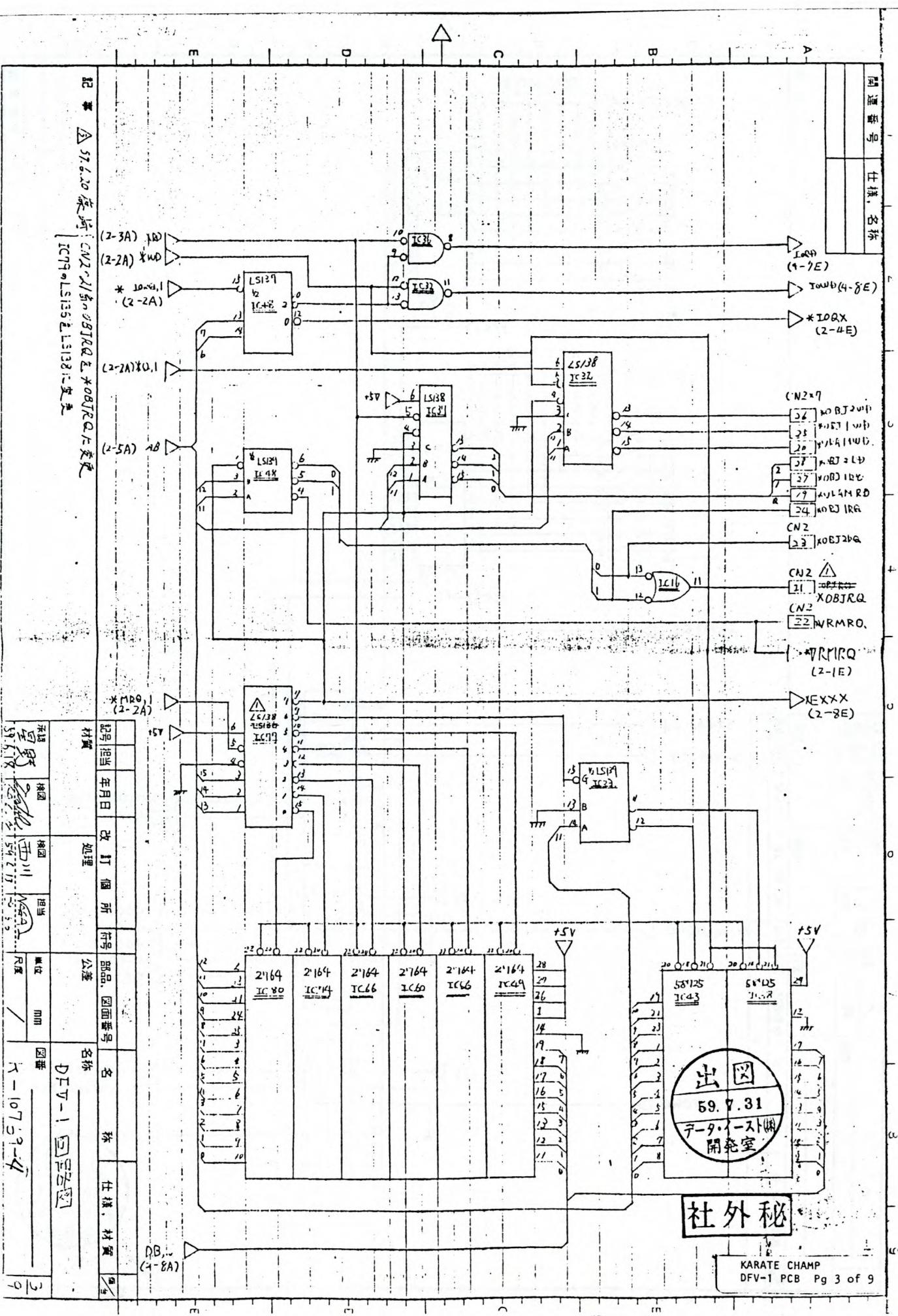


記号	相当	年月日	改訂個所	符号	部品、圖面番号	名稱	種類	仕様、材質
材質	處理			公差	名稱	DFD-1 回路図		

記号	担当	年月日	改訂	個所	符号	部品、回路番号	名稱	仕様	材質	規格
記 事 △ 59.6.20 修 正 (CN1-17番・VRMBSY & VRMBSYに変更)	星 野 英 樹 6.18	横 田 一 17	横 田 一 17	横 田 一 17						

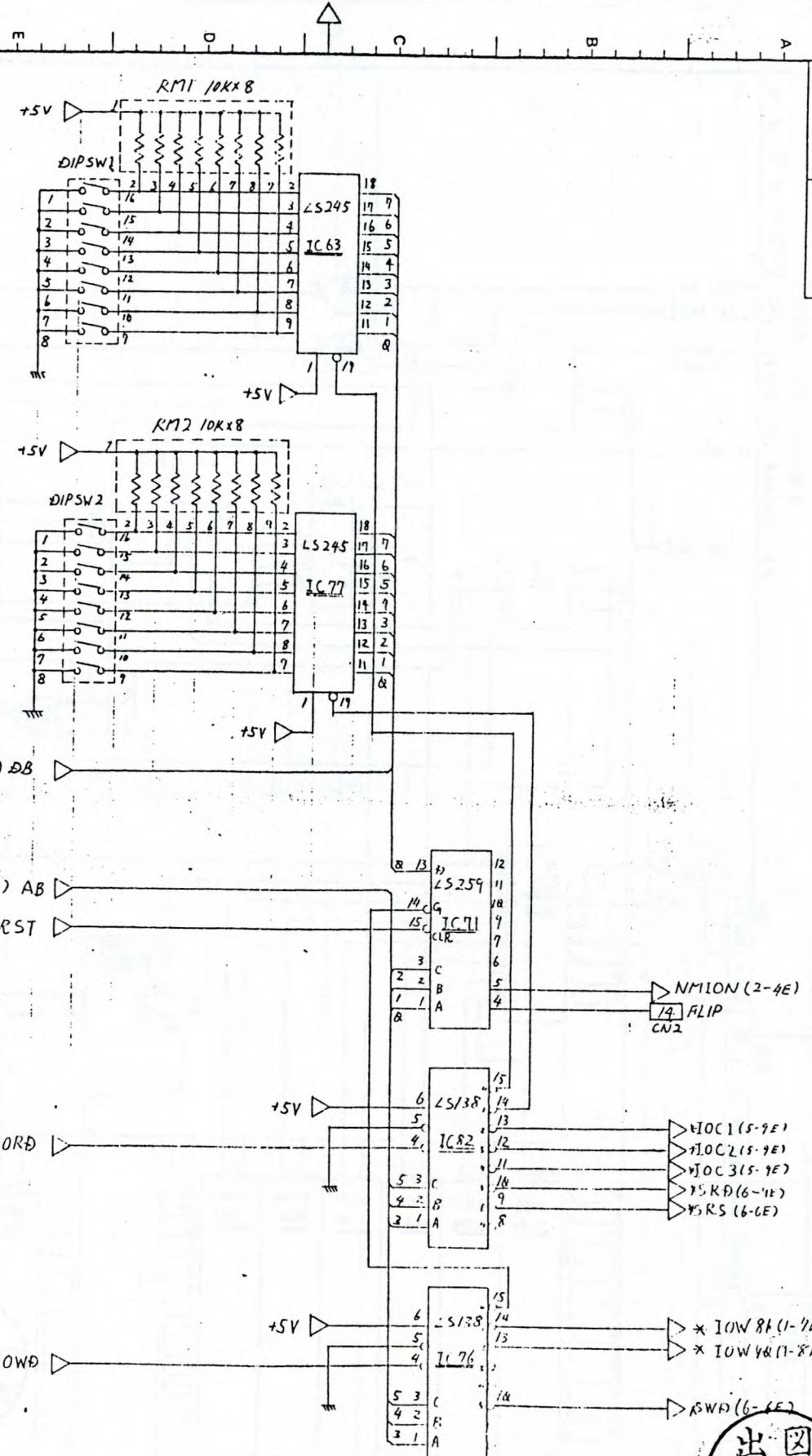
△ 59.7.31 電力回路回路修正





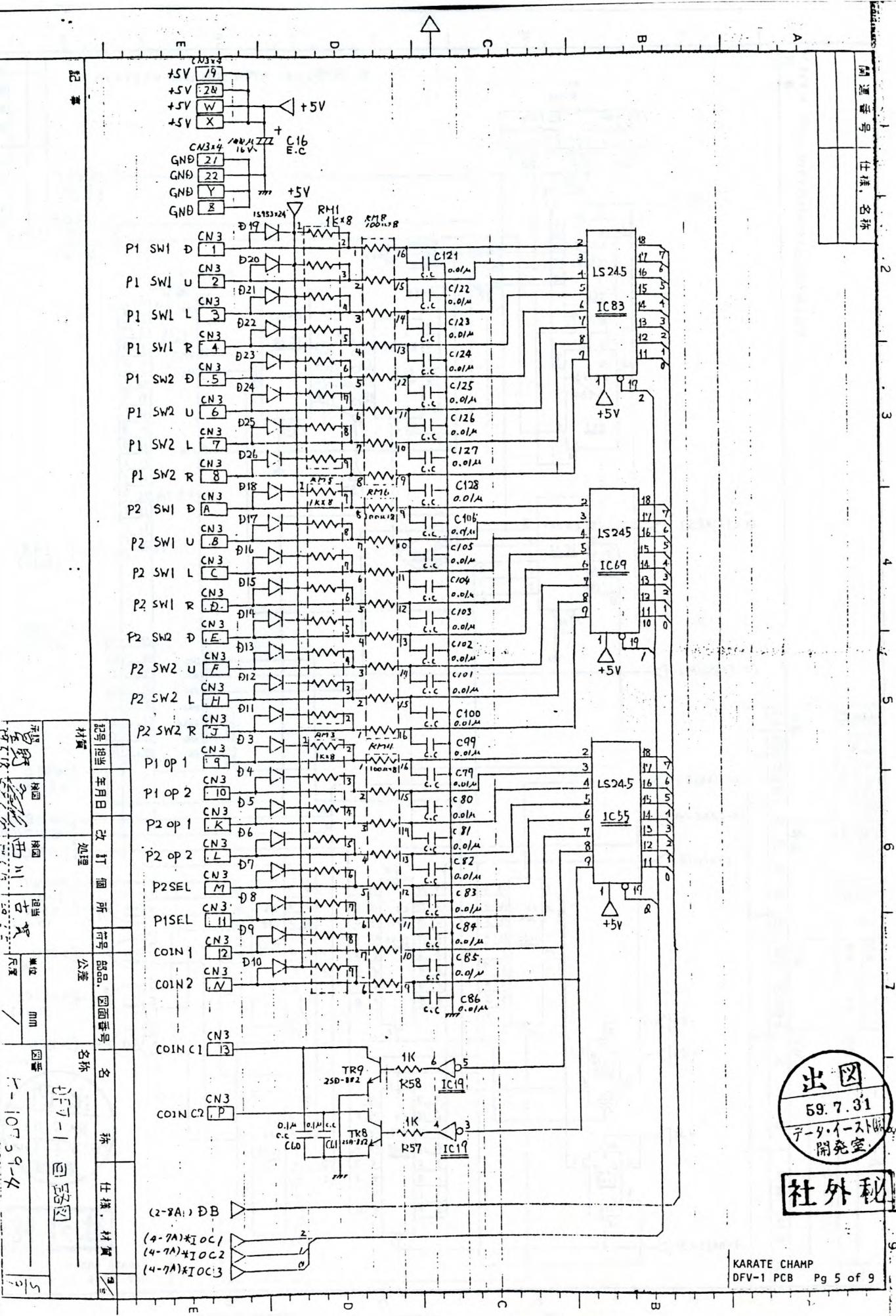
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KARATE CHAMP  
DFV-1 PCB Pg 3 of 9



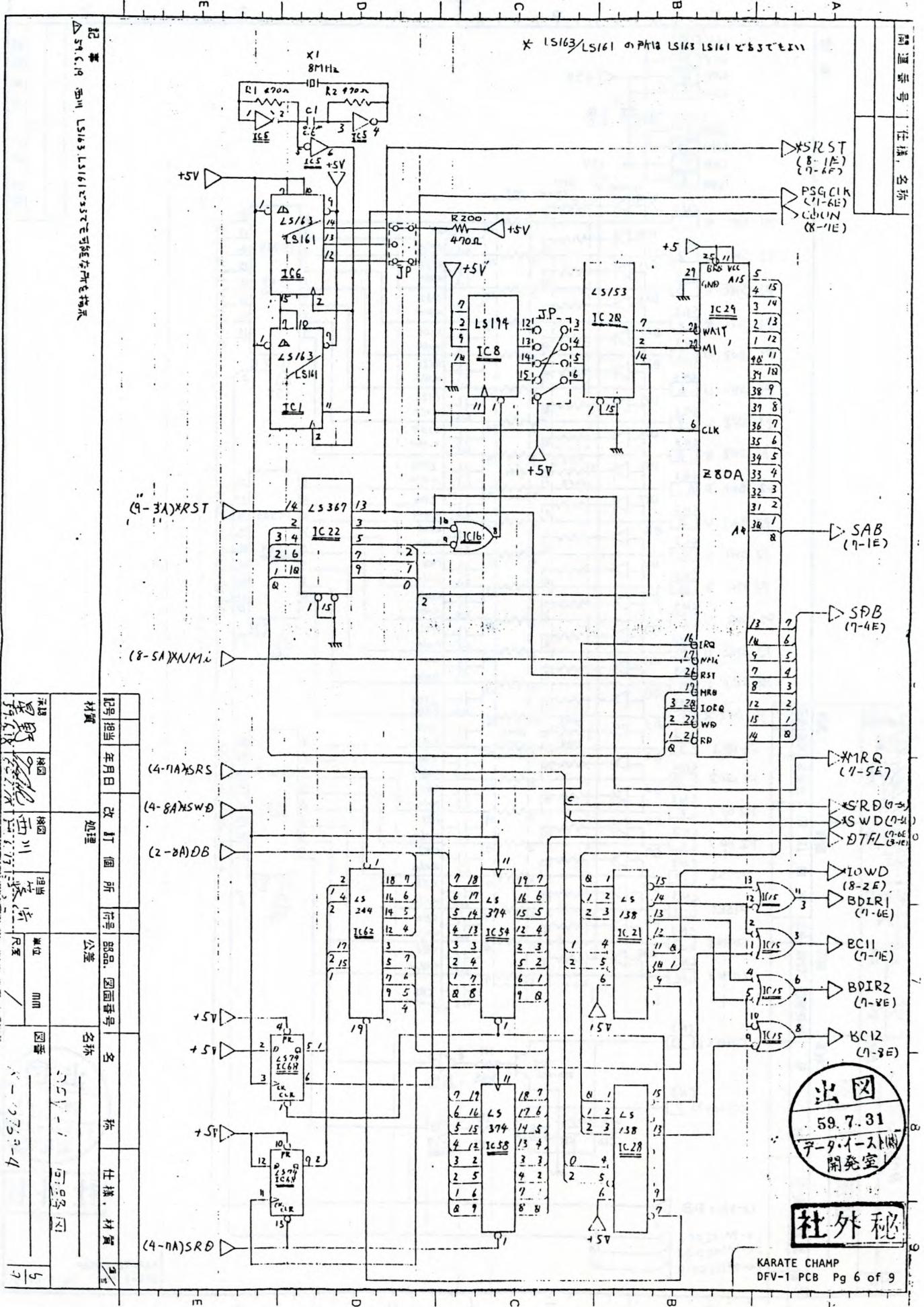
記号	担当	年月日	改	打	個	所	符号	部品、図面番号	名	称	仕様、材質	備考
材質							公差		名稱			
黒鋼 39.5-38	機圖 39.5-38						相当	mm	図番	5-1-32-1		
							寸法	/		X-1575-4		

KARATE CHAMP  
DFV-1 PCB Pg 4 of 9

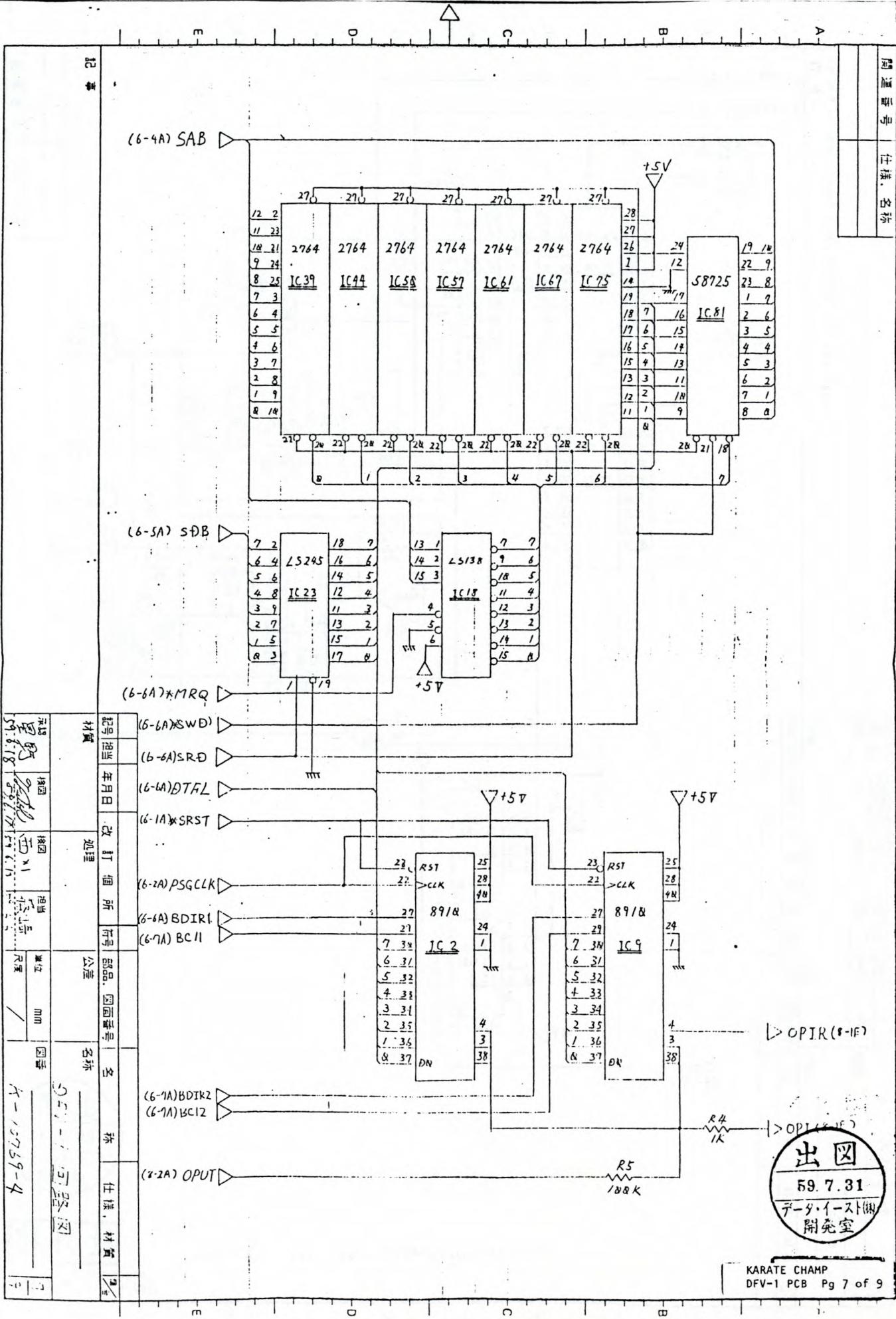


出図  
59.7.31  
-タ・イースト  
開発室

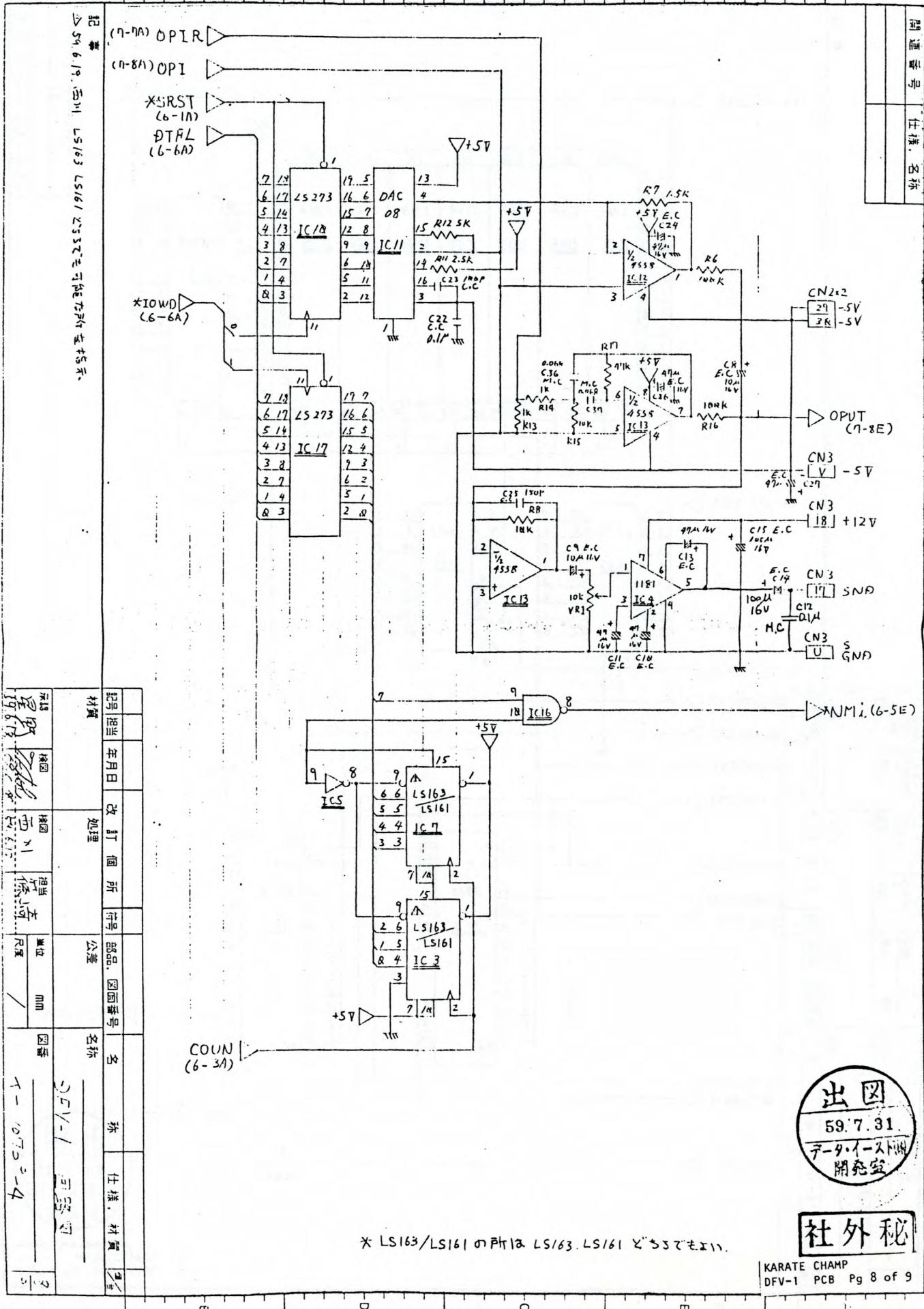
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KARATE CHAMP  
DFV-1 PCB Pg 6 of 9



KARATE CHAMP  
DFV-1 PCB Pg 7 of 9



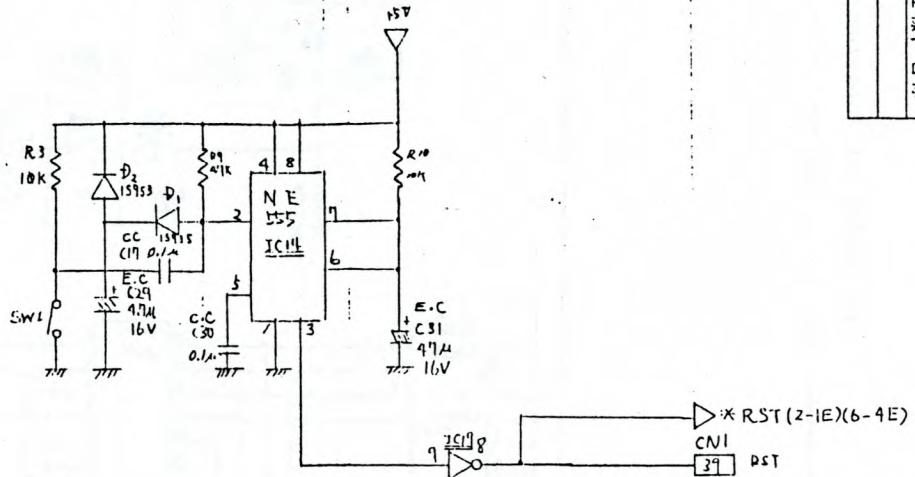
\* LS163/LS161 の間に LS163, LS161 と並んである。



社外秘

回路番号	仕様、名前

△59.6.20 水冷ユニット用  
△59.6.21 水冷ユニット用  
△59.6.22 水冷ユニット用



CN1x13

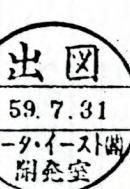
44	GND
43	GND
42	GND
41	GND
40	GND
39	GND
38	GND
37	GND
36	GND
35	GND
34	GND
33	GND
32	GND
31	GND

CN2x18

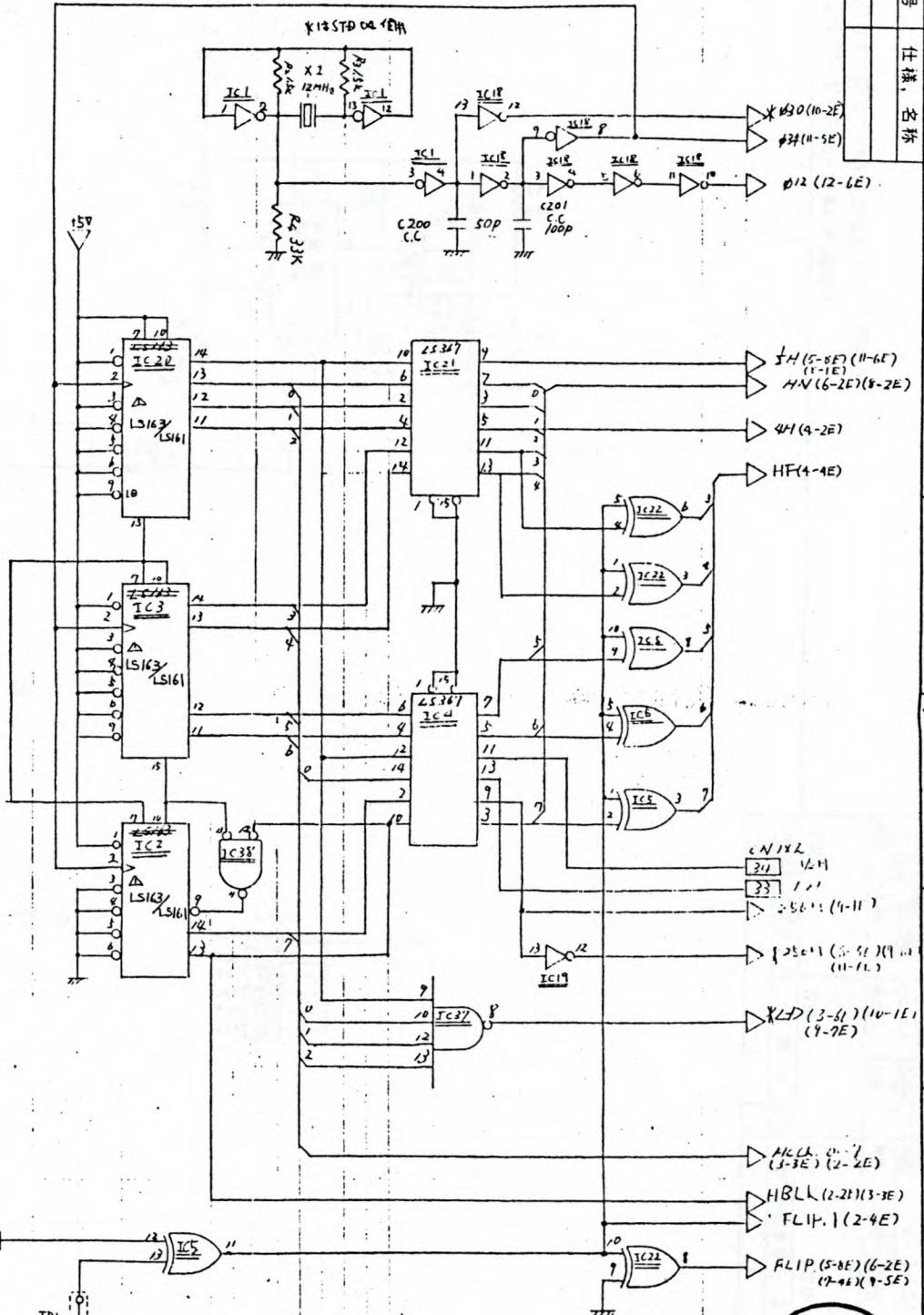
31	+5V
32	+5V
33	+5V
34	+5V
35	+5V
36	+5V
37	+5V
38	+5V
39	+5V
40	+5V
41	+5V
42	+5V
43	+5V
44	+5V

CN2x18

35	GND
36	GND
37	GND
38	GND
39	GND
40	GND
41	GND
42	GND
43	GND
44	GND



記号	相当	年月日	改訂	個所	部品番号	名稱	仕様、材質	規格	
								基準	寸法
59.6.20	水冷ユニット用	59.6.20		水冷ユニット用		DC-1	仕様書	基準	寸法
59.6.21	水冷ユニット用	59.6.21		水冷ユニット用		DC-1	仕様書	基準	寸法
59.6.22	水冷ユニット用	59.6.22		水冷ユニット用		DC-1	仕様書	基準	寸法



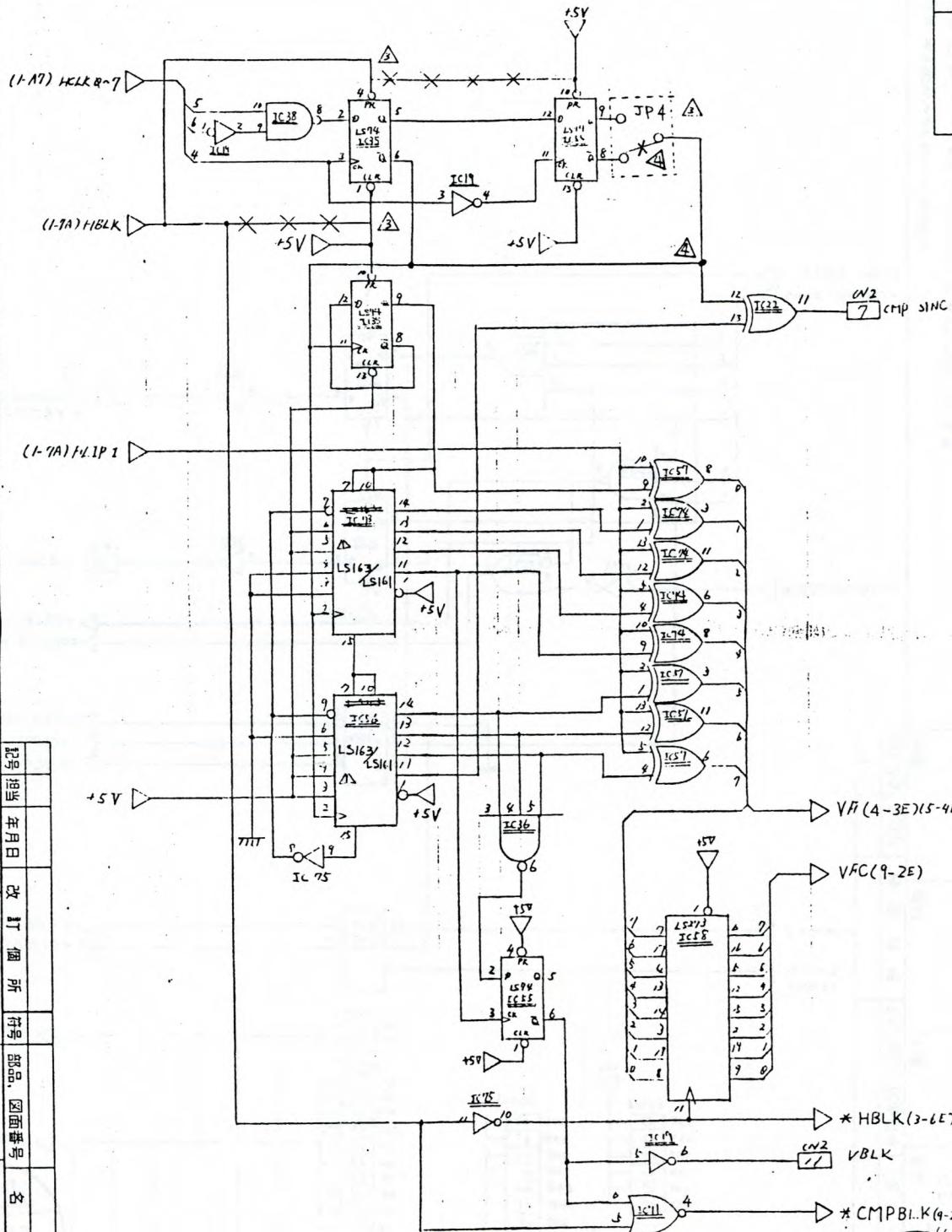
△ 59.6.19. 西川 191537-2357-363159 元

記号	相当	年月日	改訂	個所	符号	部品、図面番号	名稱	仕様、材質	備考
材質				處理		公差	名称		
未記 等級 未記	機器	機器	未記	相当	単位 mm	図番 K-10772-4	PTV-2 回路図		
				尺寸	/				1/2

\* LS163/LS161 の戸内は LS163, LS161 とちぎてモード



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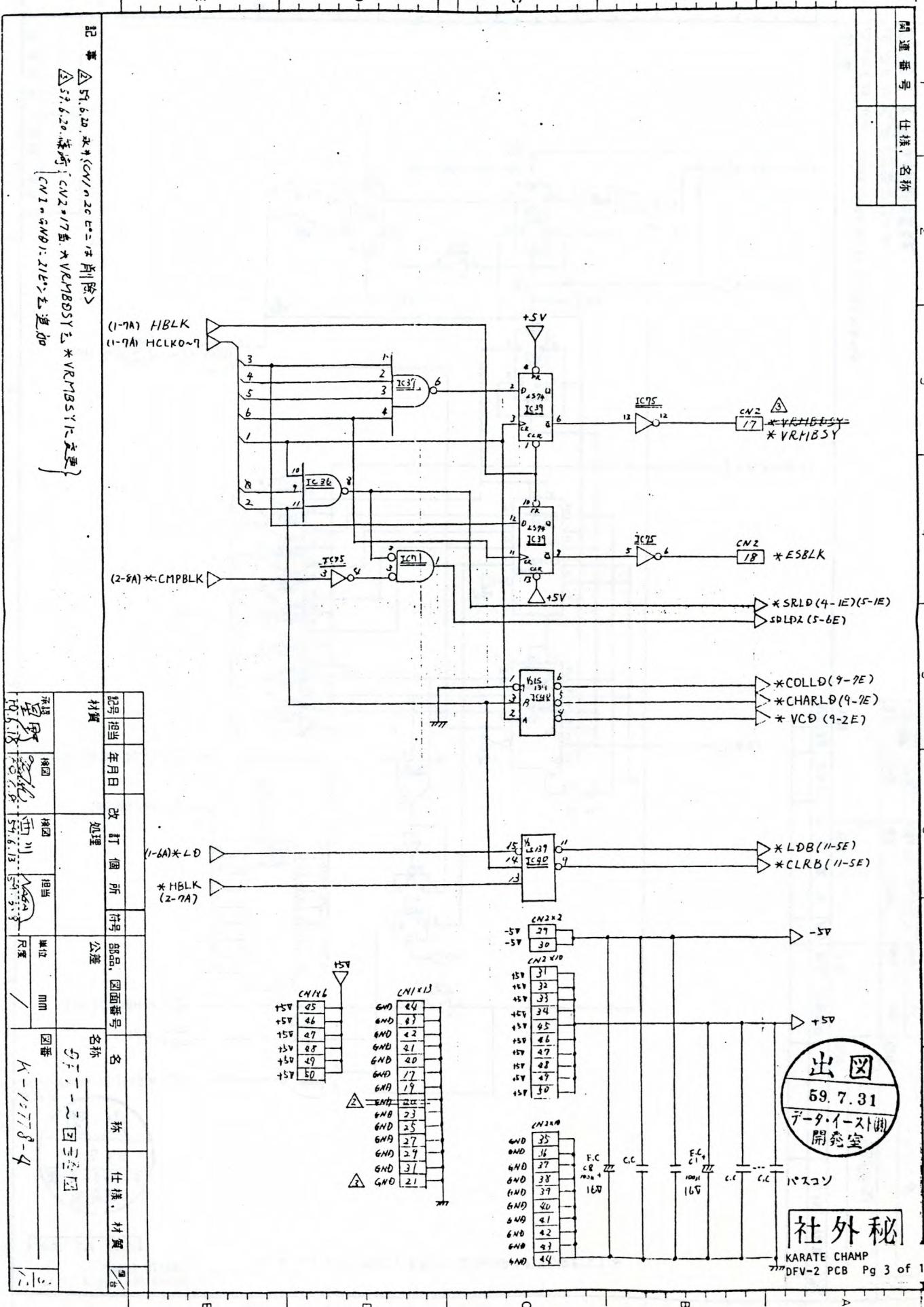
\* LS163/LS161 の所は LS163.LS161 とするも可。

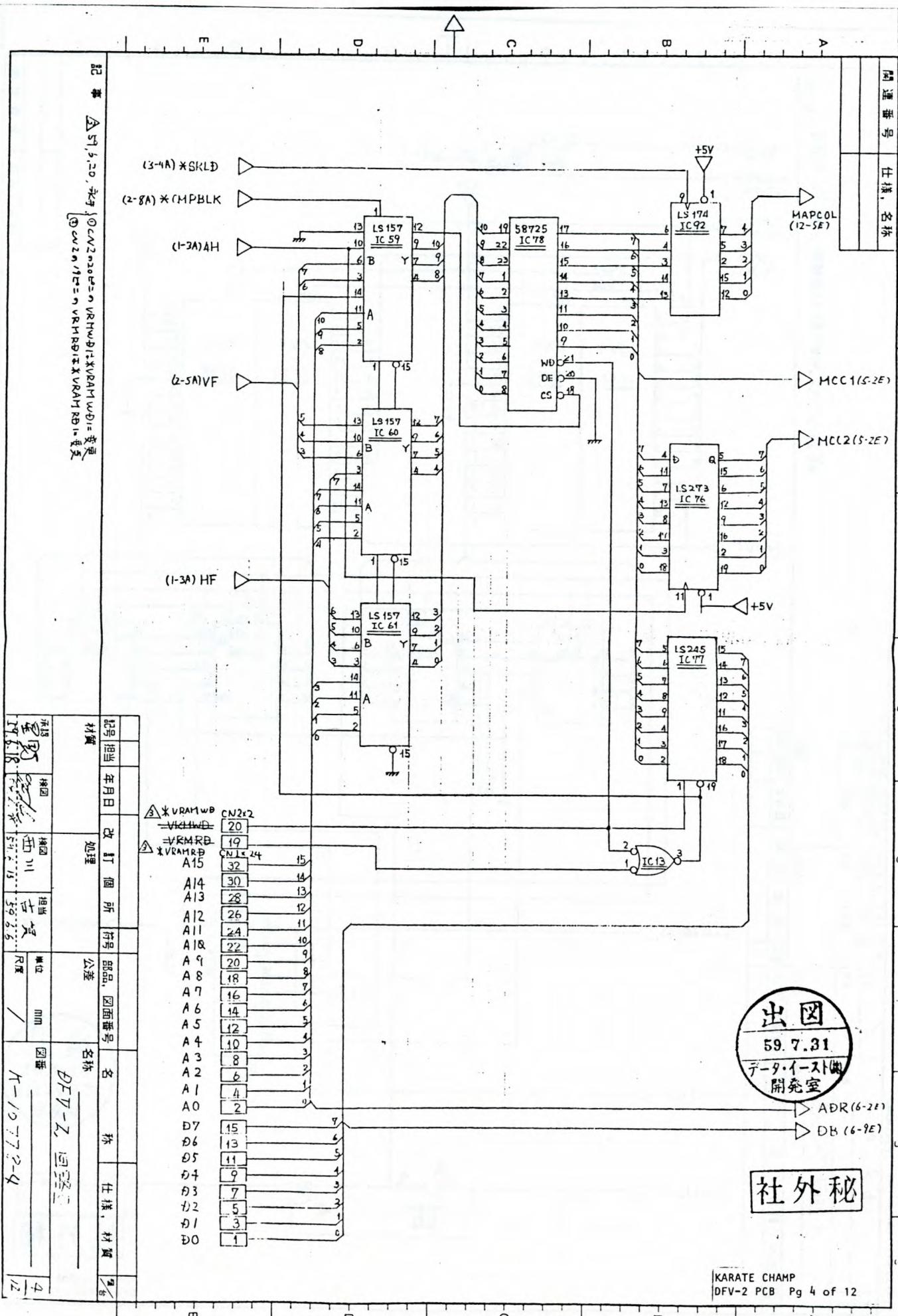
記号	担当	年月日	改訂	個所	符号	部品、圖面番号	名稱	基準	仕様、材質	備考
△ 59.6.18 西川 LS161 LS161 ピン止め可能か検査指摘	西川	西川					△ J-1-2 固定金具			
△ 59.6.30 復元 <回路図: 括弧>	西川	西川					J-1-2-4	2		
△ 59.7.31 星野 水平同期位置変更	星野	星野						2		



59. 7. 31

データ・イースト(株)  
開発室





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KARATE CHAMP  
DFV-2 PCB Pg 4 of 12

関連番号	仕様、名稱

1 2 3

4 5 6

7 8 9

C

出図

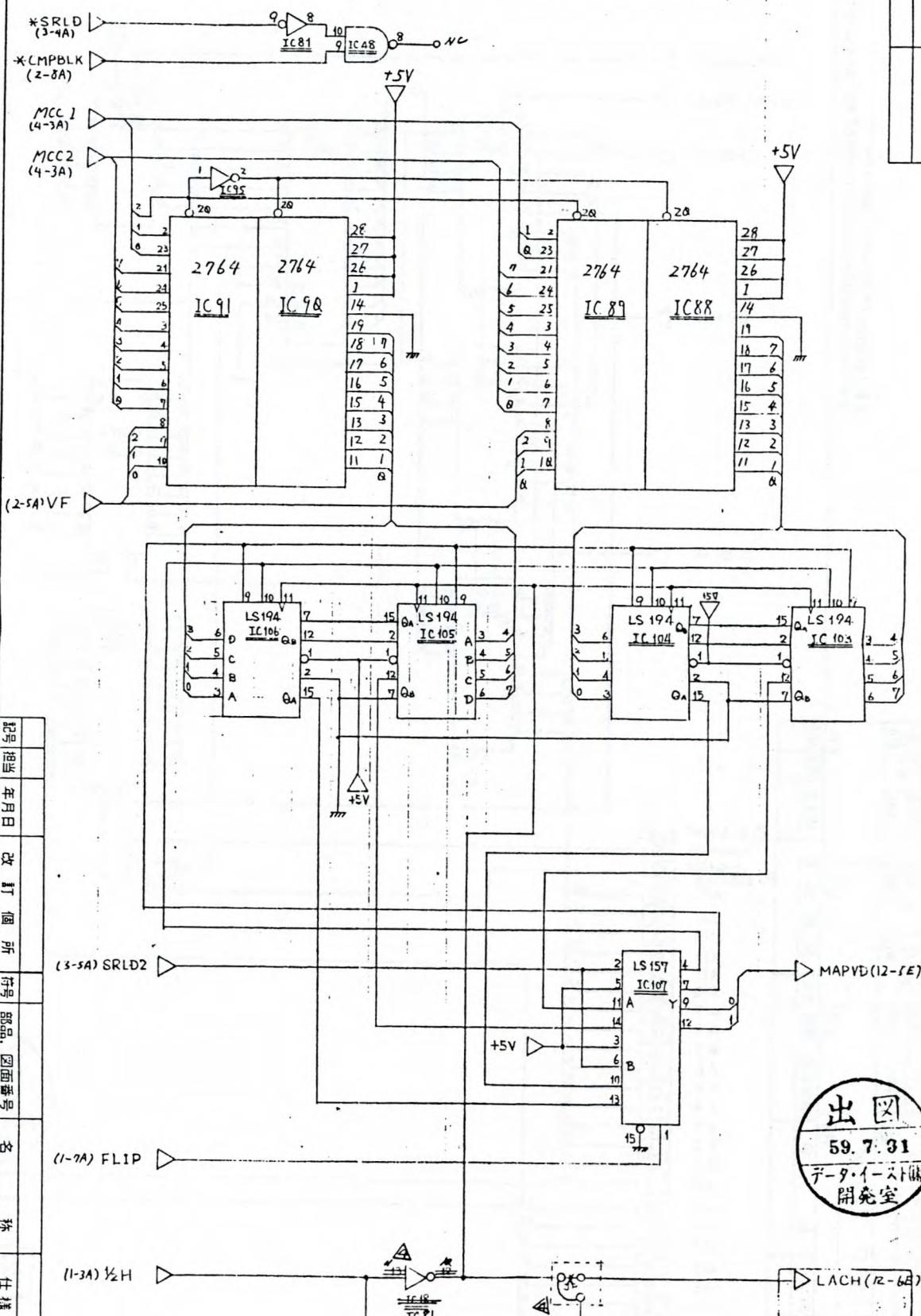
59.7.31

チ-9・イ-スト油  
開発室

社外秘

KARATE CHAMP  
DFV-2 PCB Pg 5 of 12

記事 金星の 59.7.31 回路図(修正版) "2"→"10" - 線変更



記号	担当	年月日	改訂	印	所	部品番号	名	称	仕様、材質	記号
示説 基板 基板 基板	機圖 機圖 機圖	59.6.13	1/1	担当 一覧	単位 mm	公差 ±	図番 _____	名 称 _____	仕様、材質 _____	記号 _____

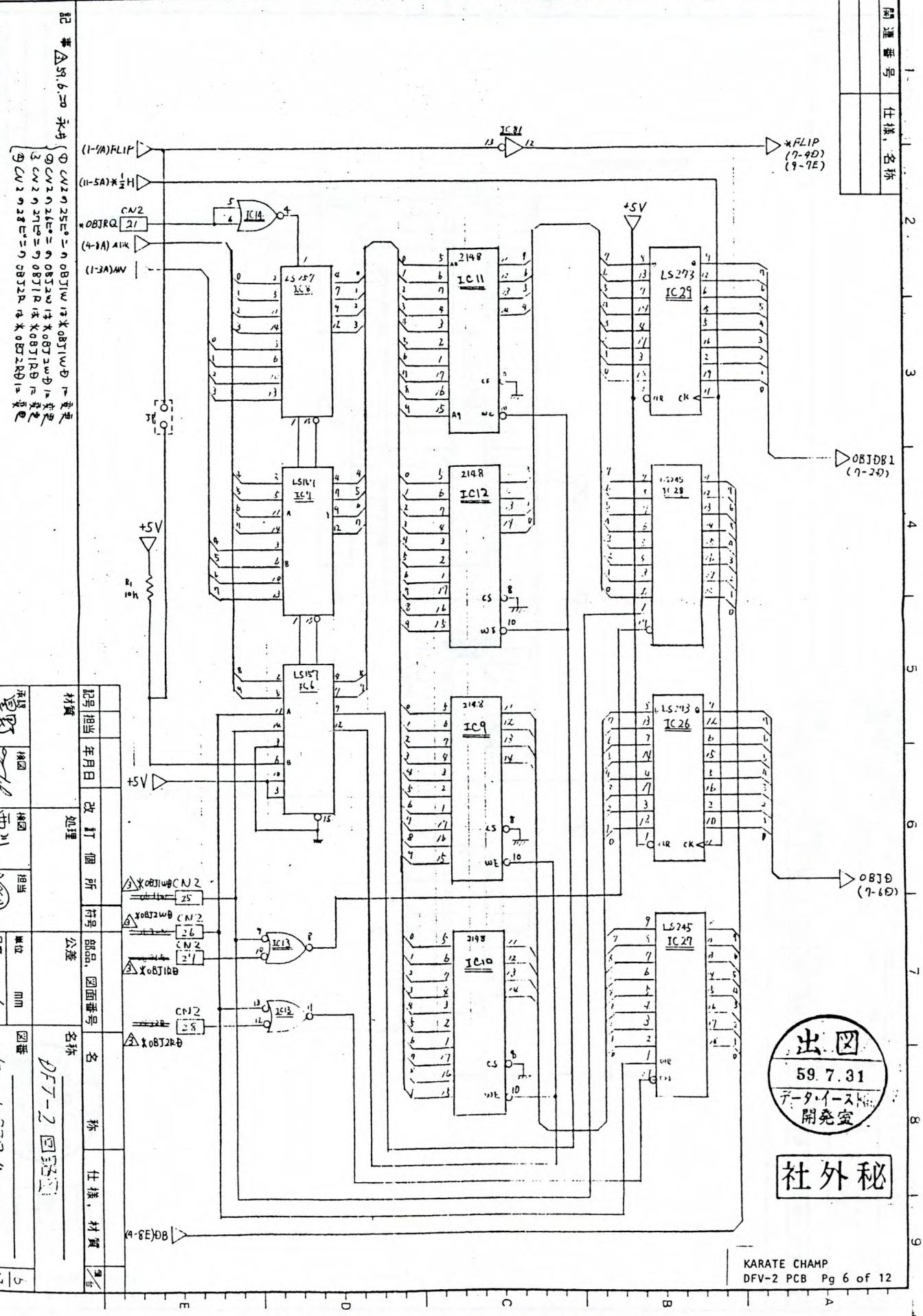
E

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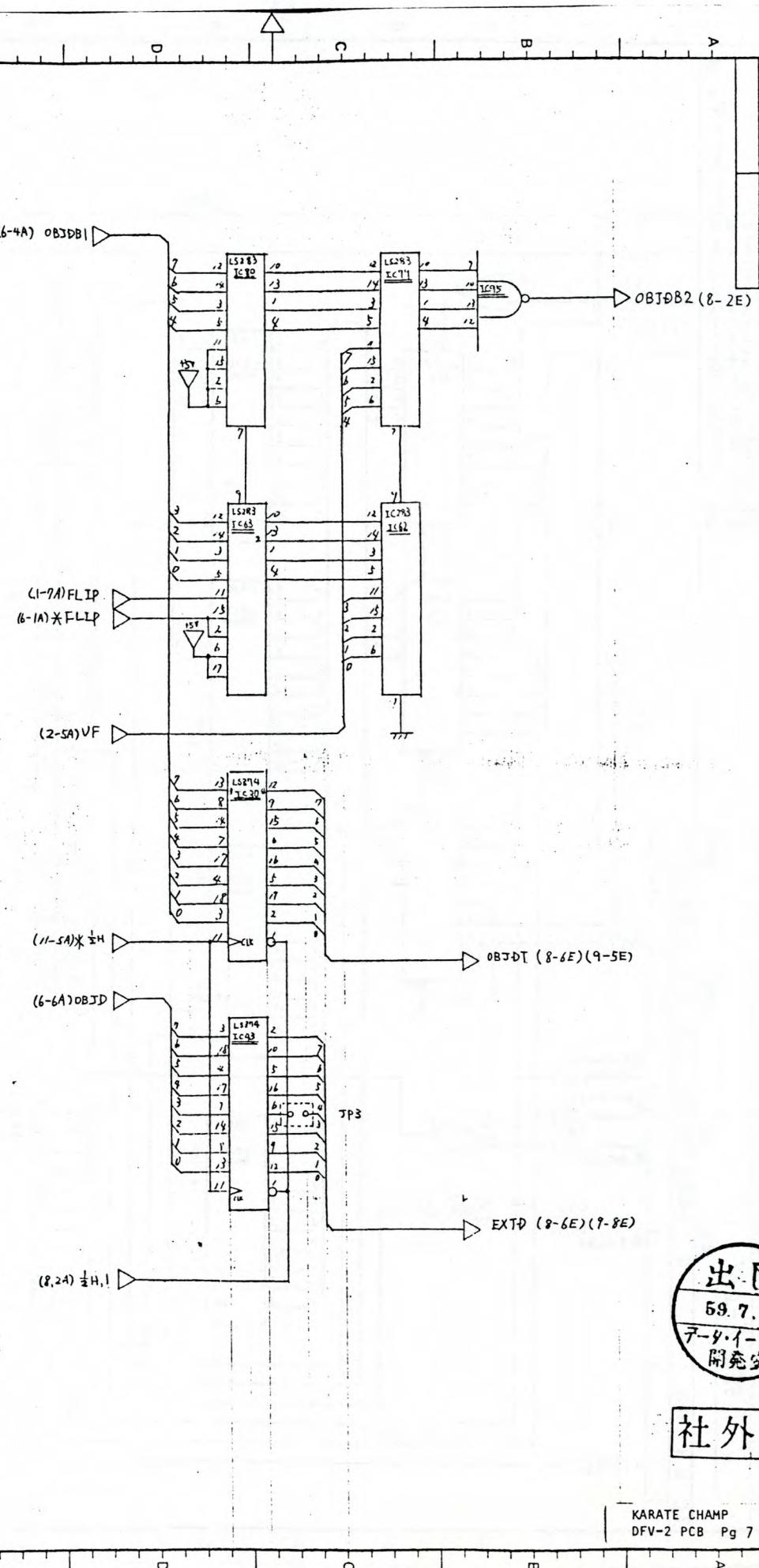
C

B

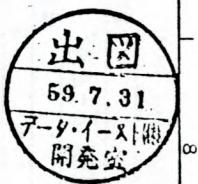
A



KARATE CHAMP  
DFV-2 PCB Pg 6 of 12



記号	相当	年月日	改訂	個所	符号	部品、圖面番号	名 称	仕様、材質	備考
材質			處理		公差		名称		
承認 室 印 印	機圖 11 11 11	機圖 11 11 11	相当	単位 mm	圖番 4-1077-4		DFT-2 回路圈		
				尺度 1/2					



社外秘

関連番号 仕様、名称

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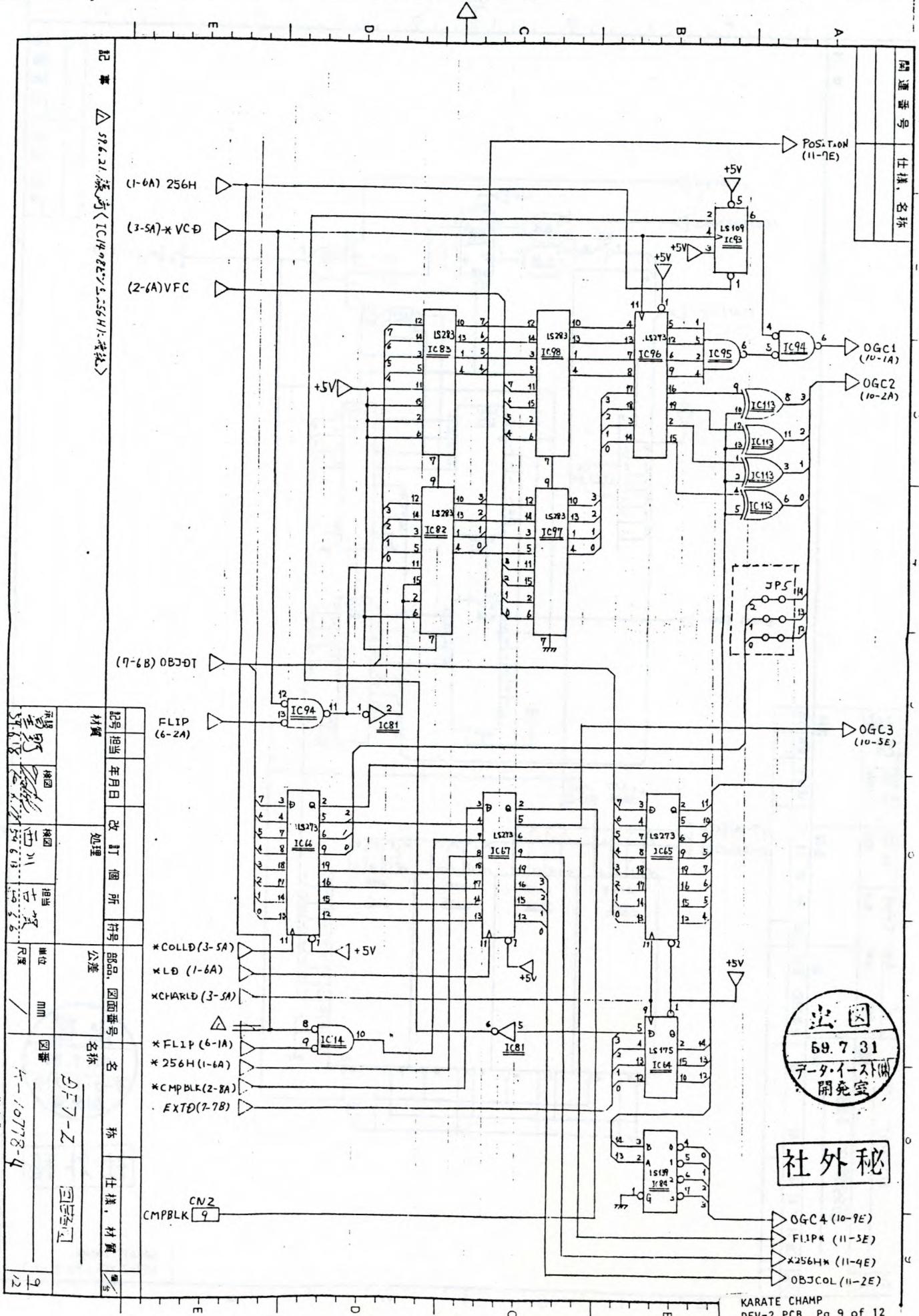
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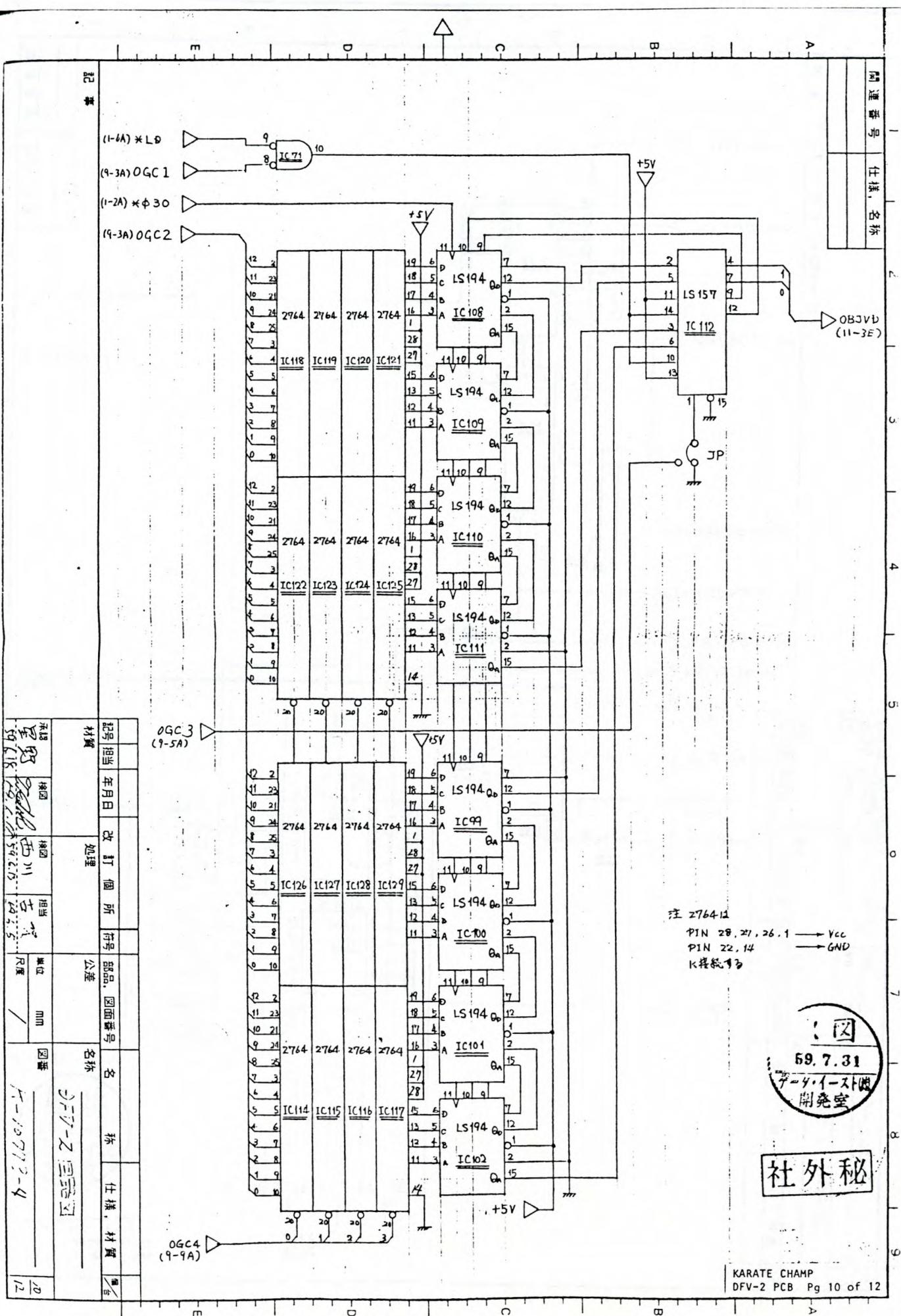
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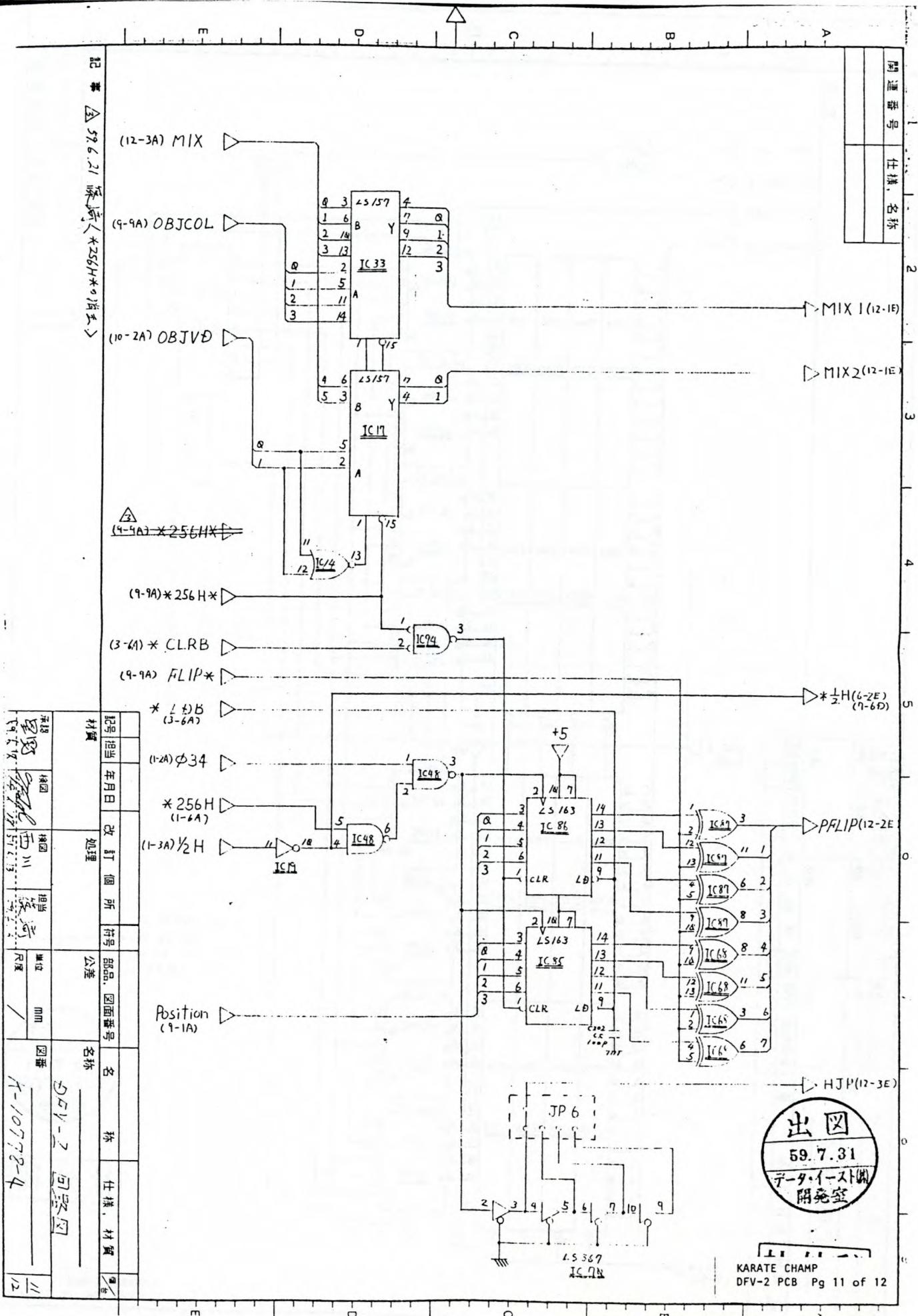




E 276412  
PIN 28, 27, 26, 1 → Vcc  
PIN 22, 14 → GND  
K接続図

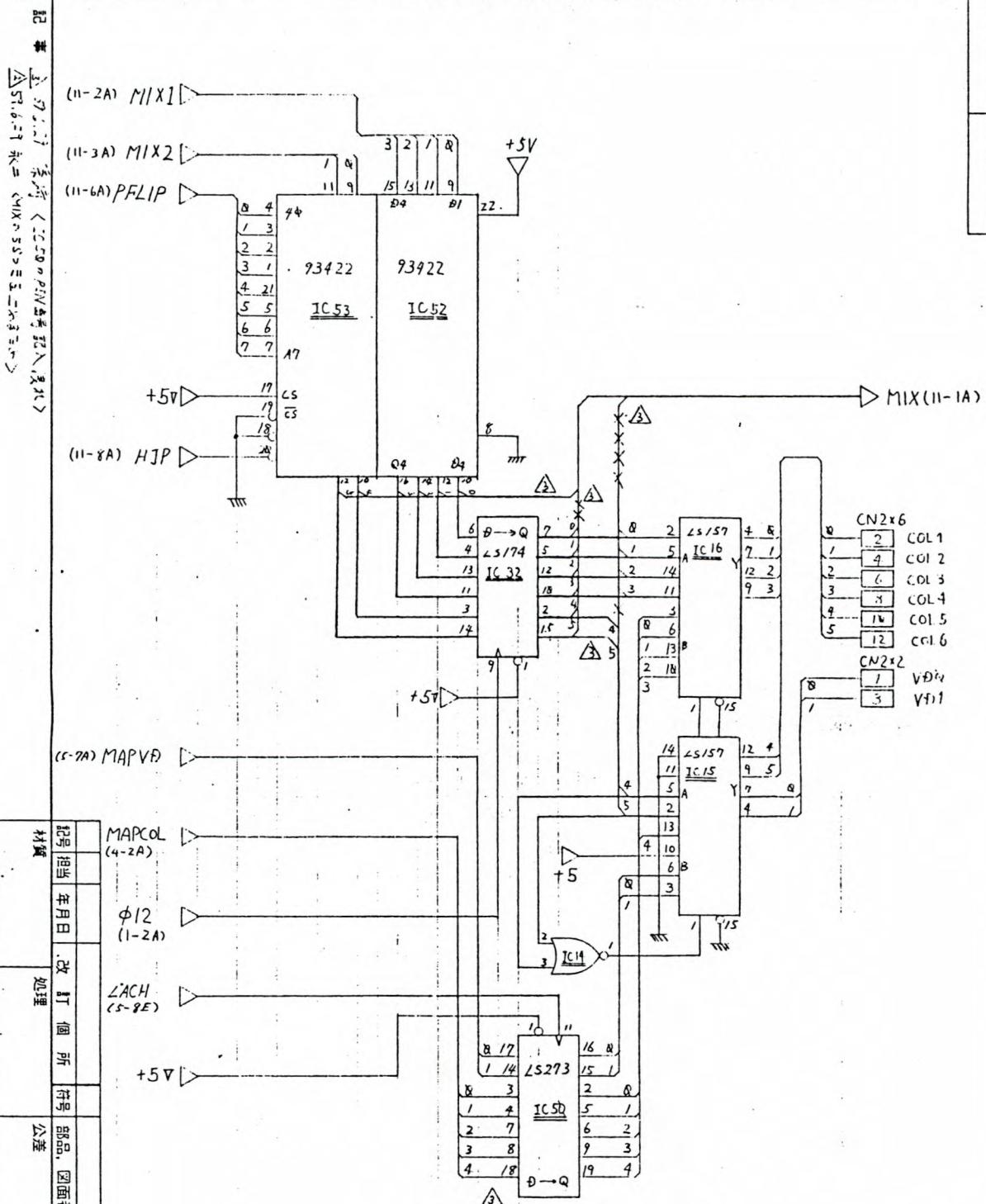
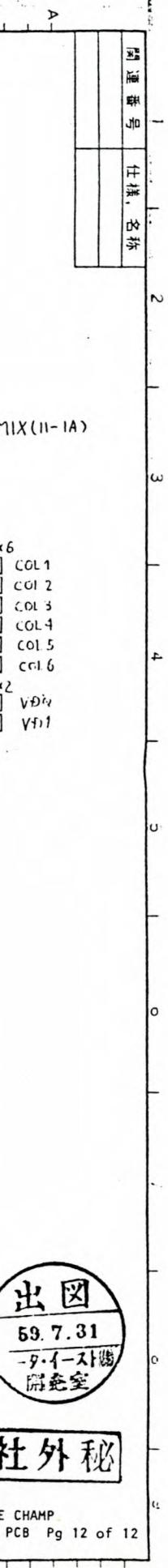
59.7.31  
アーヴ・イースト  
開発室

秘外社



開通番号	仕様、名稱

1 2 3 4 5

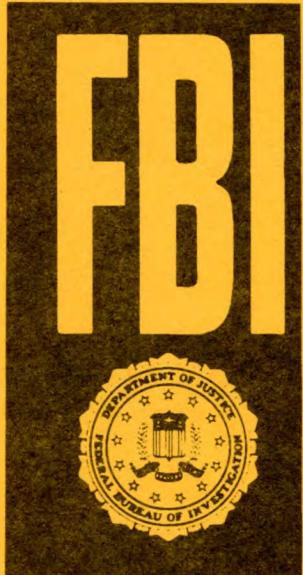


記号	相当	年月日	.改	打	個	所	處理	部品番号	公差	名	称	仕様、材質
電気	機器	機器	西川	相当	新規	新規	新規	新規	新規	新規	新規	新規

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社外秘

KARATE CHAMP  
DFV-2 PCB Pg 12 of 12



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