

# MOON SHUTTLE

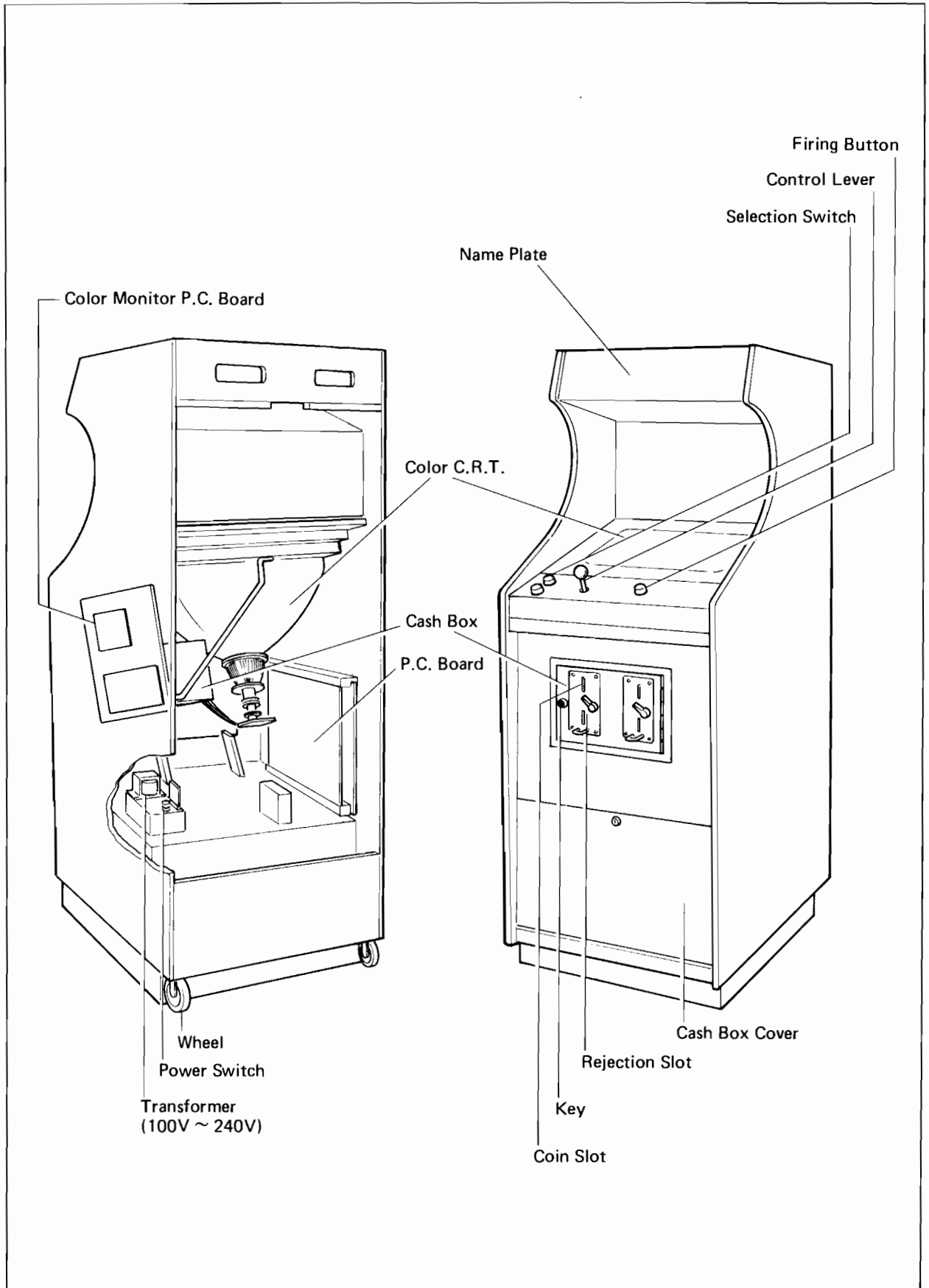
## SERVICE INSTRUCTION



**Nichibutsu**

## 1

## EACH PARTS NAME (UPRIGHT MODEL)



## 2 SPECIFICATIONS

<b>POWER SOURCE</b>	: 100 ~ 240V (Variable)
<b>WATT CONSUMPTION</b>	: 100W
<b>COINAGE</b>	: 1 coin per play, 2 coins per play, 3 coins per play, 4 coins per play * OPTION (Selector 2)
	: 1 coin per play, 1 coin per 2 plays, 1 coin per 3 plays
<b>PLAYER</b>	: 1 or 2 players
<b>GAME LIMIT</b>	: 3 Rockets ~ 6 Rockets
<b>KEYS</b>	: Coin Door key 1 set. Rear Door key 1 set. Cash box key 1 set
<b>FUSE RATINGS</b>	: 1 at 5A, 2 at 3A

		Width	Depth	Height	C.R.T
<b>UPRIGHT MODEL</b>	BODY	600 m/m	690 m/m	1,625 m/m	20 inch
	CASH BOX	395 m/m	300 m/m	285 m/m	
<b>TABLE MODEL</b>	BODY with LEGS	850 m/m	545 m/m	625 m/m ~ 765 m/m (5 position adjustable)	14 inch
	CASH BOX	155 m/m	285 m/m	125 m/m	

- These instructions and specifications may be changed without prior notification.
- If this machine is reconstructed without our permission, we can not take responsibility for the machine.

## 3 NOTES

- The MOON SHUTTLE has a T.V. monitor and care must be taken in moving this fragile machine.
- To prevent the cabinet over-heating do not place the MOON SHUTTLE directly in the sun or near heating.
- For a short time after connecting to power, the picture may be temporarily distorted.
- Do not check the solid state module with a TESTER even if you find out there is something wrong with it. The IC may be destroyed by the voltage of a TESTER.
- Disconnect the power supply before inserting or removing the P.C. board.

# MOON SHUTTLE

## 4

## HOW TO PLAY

THE INVASION OF STRONG ENEMY FORCES AND THE PRINCE OF DARKNESS.  
A DECISIVE CHALLENGE AGAINST THE COMING  
DICTATORSHIP OF THE UNIVERSE.

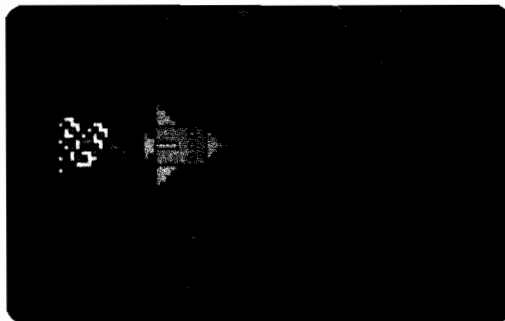
SURVIVE THE SUDDEN ATTACKS OF DARK FORCES AND FLYING  
METEORS UTILIZING THE SPEED CONTROL AND THE UNDULATION CANNON.  
A FEARFUL THREAT WAS CONSPIRING AGAINST THE DEFENSE ARMY.

**MISSION:**

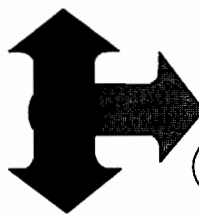
TO DEFEAT THE PRINCE OF DARKNESS, WHO BY SOME STRANGE WAY  
INCREASES HIS FORCE BY MULTIPLYING.  
THE MOON SHUTTLE IS LAUNCHED FROM STATION #47, THE MAIN MOON  
BASE OF THE DEFENSE ARMY GET READY FOR THE LAST BATTLE.

### PLAYING RULES

- Play with one or two players
- Insert coin, select 1 or 2 player button
- Move the rocket with the control lever, shoot down enemies
- Dodge + Shoot the converging Meteor, speed up to avoid the collision
- If you put coin additionally before game is over, you can play the game continuously



■ CONTROL LEVER



SPEED UP

(Works only Meteor pattern)

- Additional rocket is given when you successfully shoot the hidden rockets in Meteor

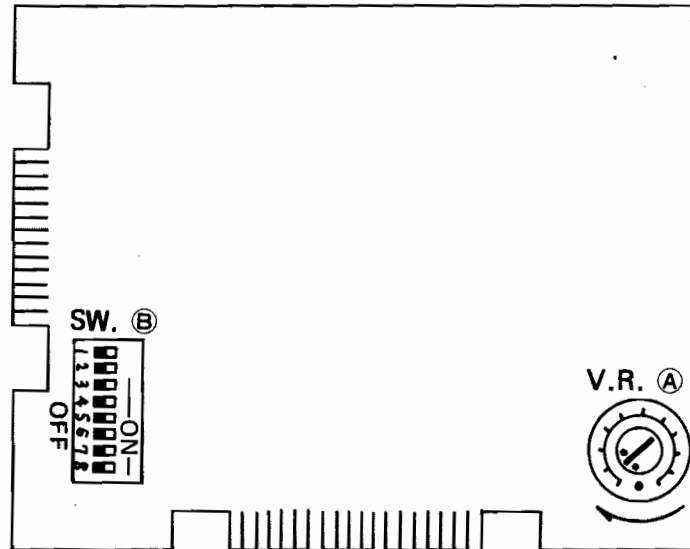
### SCORE

Meteor	Bomb Launcher	Expando	Man-O-War	Blob Man	Comrade
50pts · 30pts · 20pts	30pts	30pts	30pts	10pts · 20pts · 30pts	50pts
©	©	©	©	©	©

## 5 OPERATER ADJUSTMENTS

- V.R. (A)

V.R. for the adjustment of sound volume. It will become smaller in turning it to the arrowmark.



- SW (B)

	DIP SWITCH NUMBER								DESCRIPTION
	1	2	3	4	5	6	7	8	
NUMBER OF ROCKETS	OFF	OFF							3 ROCKETS
	ON	OFF							4 ROCKETS
	OFF	ON							5 ROCKETS
	ON	ON							6 ROCKETS
POINTS OF ADDITIONAL ROCKET			OFF						15,000 POINTS
			ON						30,000 POINTS
COIN SELECTOR 1 COINAGE				OFF	OFF				1 COIN - 1 CREDIT
				ON	OFF				2 COINS - 1 CREDIT
				OFF	ON				3 COINS - 1 CREDIT
				ON	ON				4 COINS - 1 CREDIT
COIN SELECTOR 2 COINAGE						OFF	OFF	OFF	1 COIN - 1 CREDIT
						ON	OFF	OFF	1 COIN - 2 CREDITS
						OFF	ON	OFF	1 COIN - 3 CREDITS
						ON	ON	OFF	1 COIN - 4 CREDITS
						OFF	OFF	ON	1 COIN - 5 CREDITS
						ON	OFF	ON	1 COIN - 6 CREDITS
						OFF	ON	ON	1 COIN - 7 CREDITS
FREE PLAY						ON	ON	ON	FREE PLAY

- Switch adjustment have to be done after disconnect the power supply.
- Switches are set as under-lined position when the machine is shipped.

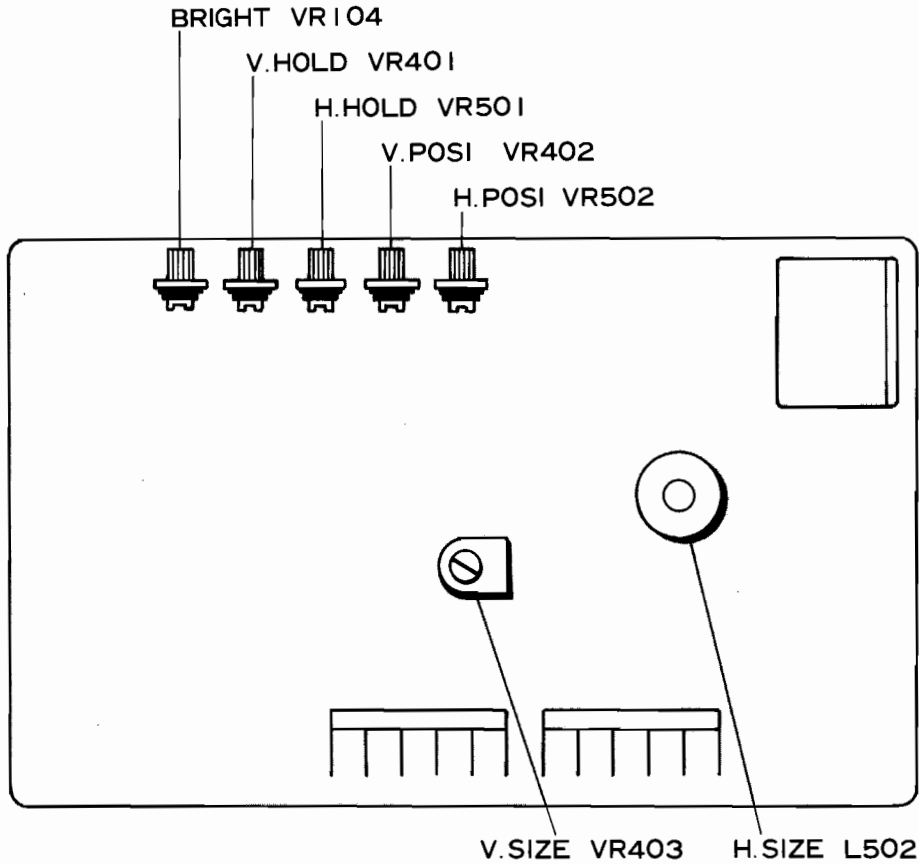
# MOON SHUTTLE

## 6

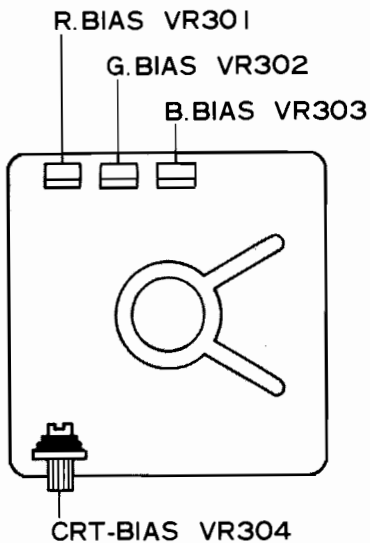
## MONITOR ADJUSTMENTS

### MITSUBISHI COLOR MONITOR

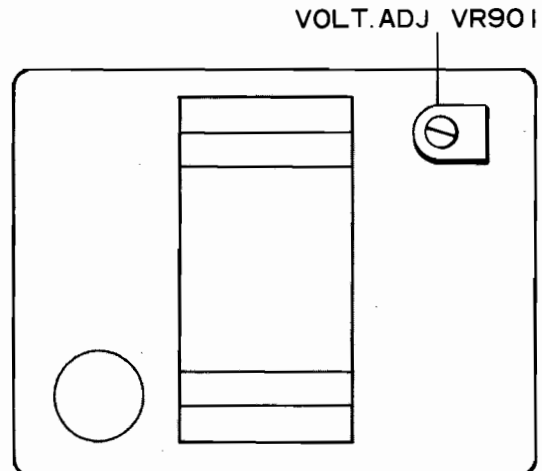
#### ● MAIN-PWB (Weight about 430g)

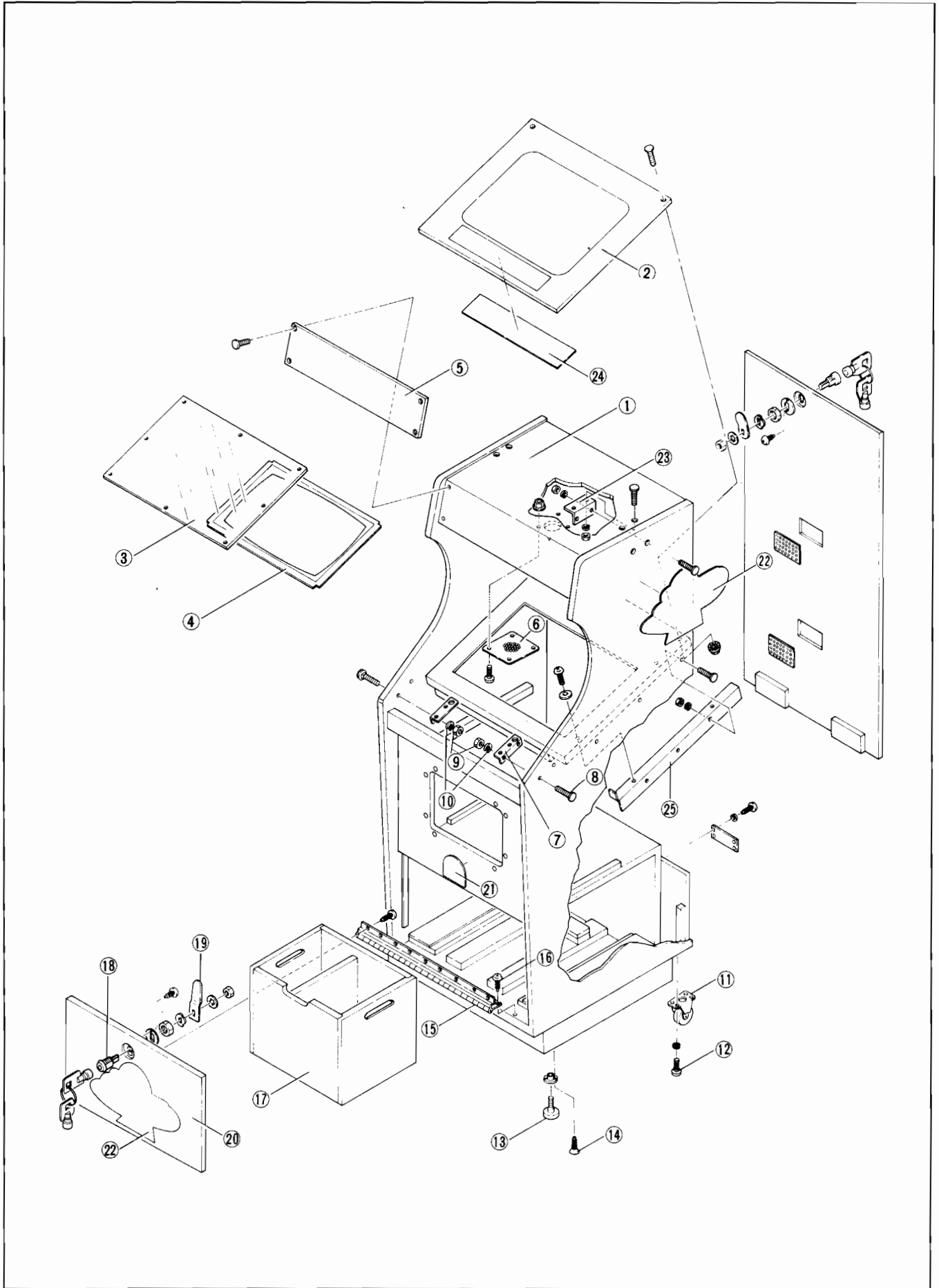


#### ● PWB-CRT (Weight about 120g)



#### ● POWER-PWB (Weight about 250g)





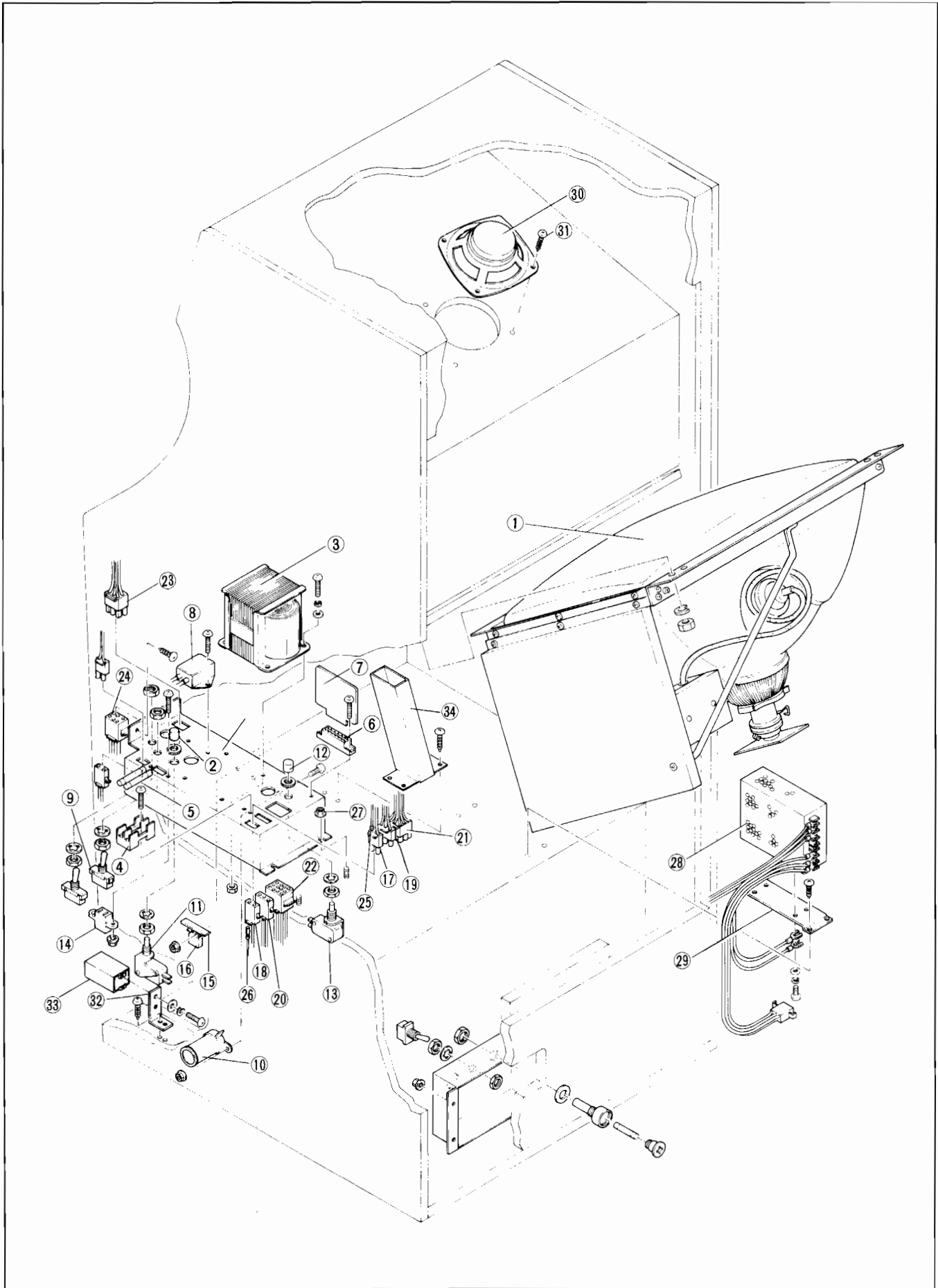
# MOON SHUTTLE

## 7

## EXTERIOR ASSEMBLY

NO.	PARTS NO.	DESCRIPTION
1	MSA8001	Cabinet Assy
2	MSA8002	Front Panel
3	CCA7003	Smoked Plate
4	CCA7004	TV. Mask
5	MSA8003	Name Panel
6	TA50023	Speaker Cover
7	CCA7006	Bracket A
8	CCA7007	Bolt
9	CCA7008	Nut
10	CCA7009	Spring Washer
11	CCA7010	Caster
12	CCA7011	Bolt
13	CCA7012	Adjuster
14	CCA7013	Screw Bolt
15	CCA7014	Cash Box Cover Hinge
16	CCA7015	Screw Bolt
17	CCA7016	Cash Box
18	CC70008	Key Set
19	CCA7017	Key Rock Plate
20	CCA7018	Cash Box Cover
21	MCA7019	Nichibutsu Sticker
22	MSA8004	Character Sticker
23	CCA8021	Bracket B
24	MSA8005	Playing Information Card
25	CCA7055	Bracket C.R.T. Support Bracket



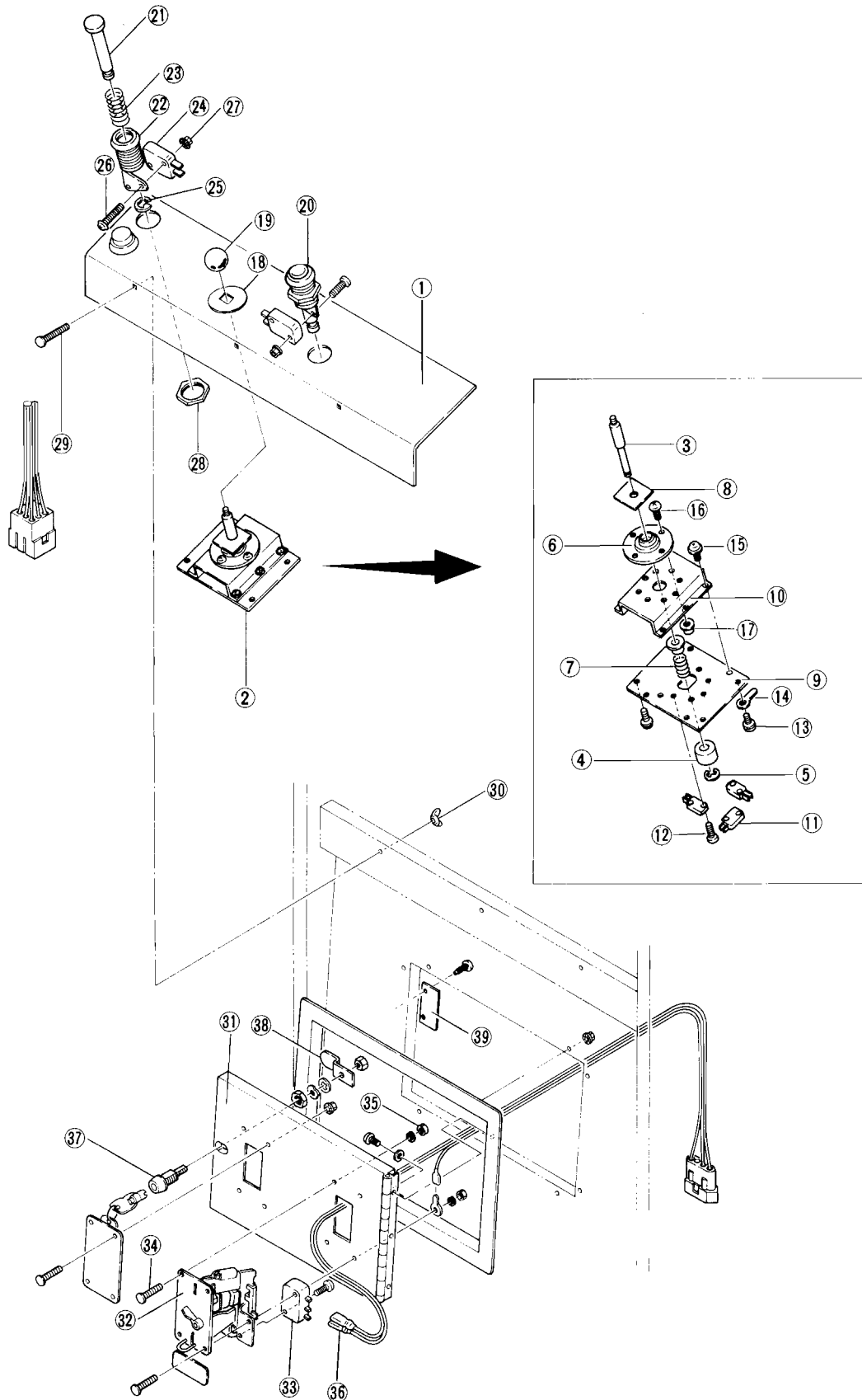


# MOON SHUTTLE

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## VIDEO ASSEMBLY

NO.	PARTS NO.	DESCRIPTION	
1	CCA8023	C.R.T. Monitor Assy	
2	MSA8006	Power Supply Bracket	
3	AL20026	Transformer	
4	TA50033	Fuse Holder	
5	PC50052	Fuse	
6	BP10042	Kel Connector (10P)	
7	CC70039	CCG-5 PC Board	
8	TA50036	Noise Filter	
9	BP10017	Power Source Change Switch	
10	MB20011	Electrolysis Capacitor (10,000 $\mu$ F)	
11	TA50026	Degauss Switch	
12	BP50028A	Deguss Switch Button	
13	TA50026	Service Switch	
14	BP10015	A. C. Service Socket	
15	MS80007	Rectifier Support Bracket	
16	MS80008	Rectifier	
17	MS80009	Socket Housing (3191-2P-1)	
18	MS80010	Socket Housing (3191-2R)	
19	MS80011	Socket Housing (3191-3P-1)	
20	MS80012	Socket Housing (3191-3R)	
21	MS80013	Socket Housing (3191-12P-1)	
22	MS80014	Socket Housing (3191-12R)	
23	MS80015	Socket Housing (3191-6P-1)	
24	MS80016	Socket Housing (3191-6R)	
25	TA50039	Pin	
26	TA50040	Pin	
27	MS80017	Nut	
28	MS80018	P. C. Pack	
29	MS80019	Bracket	
30	TA50020	Speaker	
31	CCA7013	Screw Bolt	
32	CC70041	Counter Bracket	
33	TA50035	Counter	
34	CCA7032	Coin Shoot Rail	

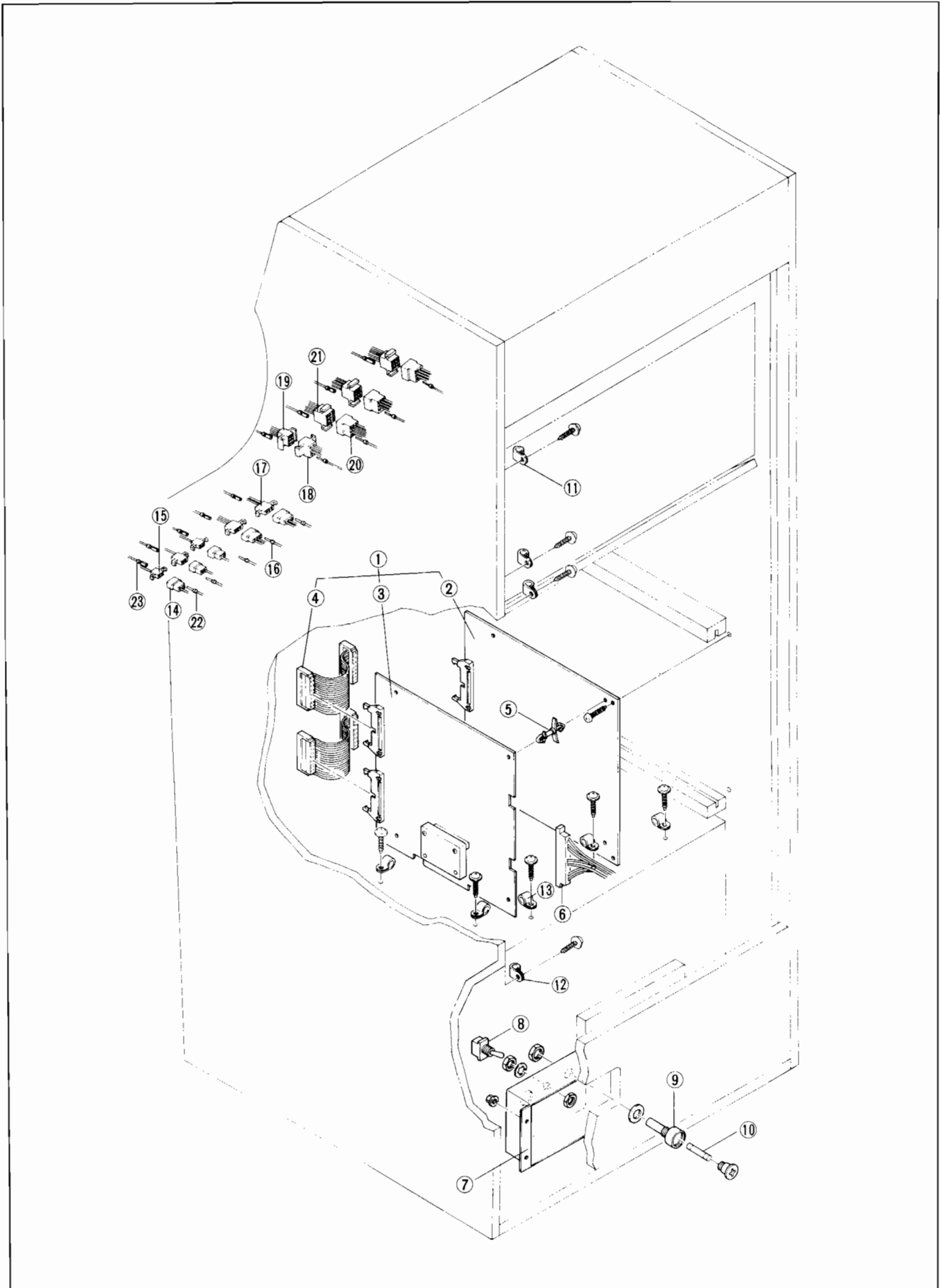


# MOON SHUTTLE

**9**

## CONTROL PLATE ASSEMBLY

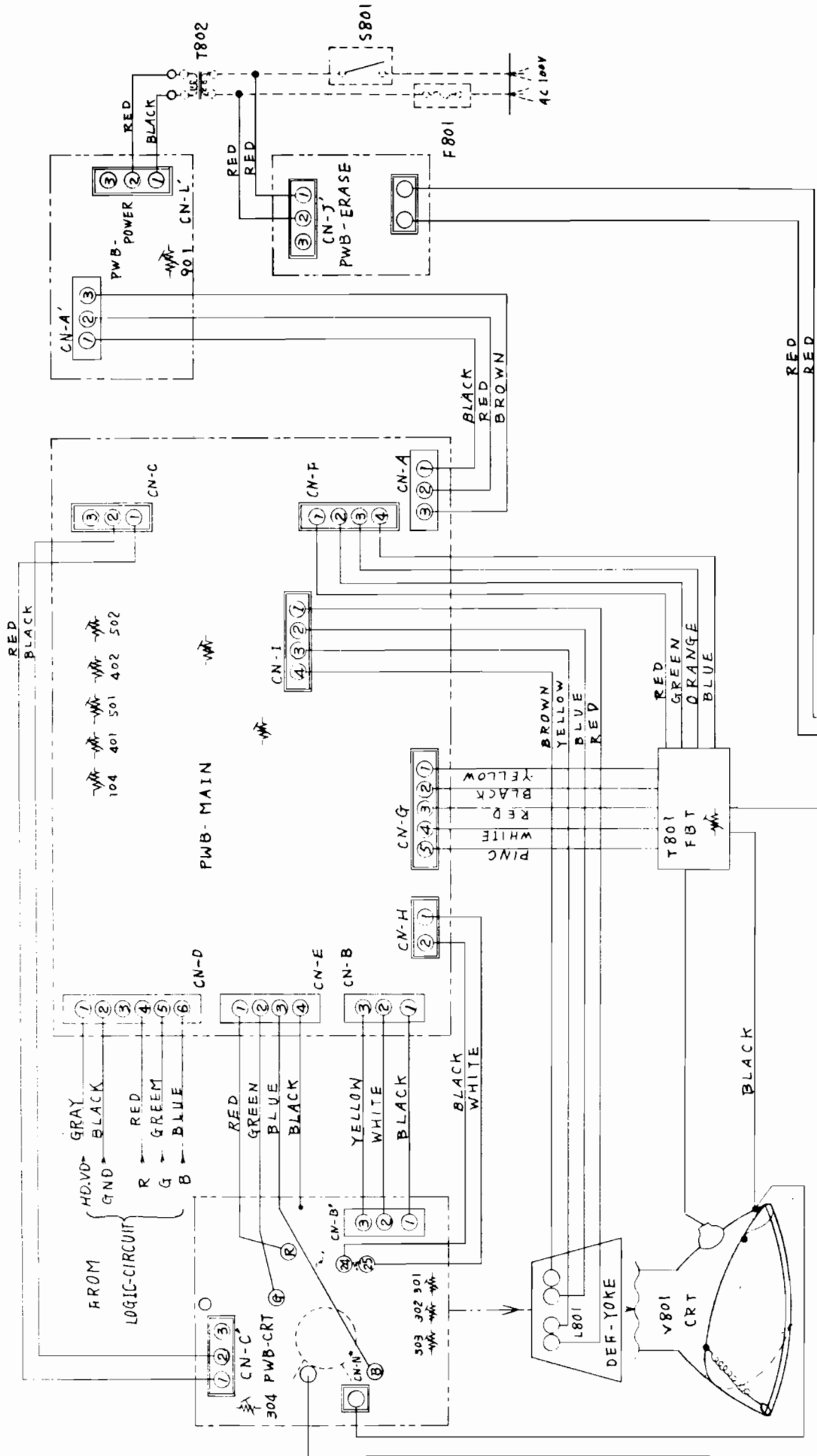
NO.	PARTS NO.	DESCRIPTION	
1	MSA8007	Control Plate	
2	MS80025	Control Lever Assy	
3	MSA8026	Control Lever	
4	MS80027	Control Lever Ring	
5	MS80028	E Ring	
6	MS80029	Control Base	
7	MS80030	Spring	
8	MS80031	Blind	
9	MS80032	Control Mounting Bracket	
10	MS80033	Control Base Bracket	
11	MB20025	Micro Switch	
12	CC70046	Bolt (3M x 20M)	
13	MS80034	Bolt (4M)	
14	MS80035	Earth Rag	
15	MS80036	Bolt (3M)	
16	MS80037	Bolt (4M)	
17	MS80038	Nut (4M)	
18	CC70050	Cover	
19	CCA7028	Control Knob	
20	CC70025	Selection or Firing SW. Assy	
21	CC70051	Selection or Firing Button	
22	CC70052	Selection or Firing Button Base	
23	CC70053	Spring	
24	CC70054	Selection Micro Switch	
25	CC70055	Washer	
26	CC70046	Bolt (3M x 20M)	
27	CC70056	Nut (3M)	
28	CC70057	Nut	
29	CC70058	Bolt	
30	CC70059	Nut	
31	CCA7029	Coin Door	
32	AL20019	Coin Selector	
33	TA50010	Micro SW.	
34	CC70060	Bolt	
35	CC70061	Nut (4M)	
36	CC70062	Fasten Terminal	
37	CC70008	Key Set	
38	CCA7030	Key Rock Plate	
39	CCA7031	Key Rock	



# MOON SHUTTLE

**10****PRINTED BOARD ASSEMBLY**

NO.	PARTS NO.	DESCRIPTION
1	MS80020	P. C. Board Assy
2	MS80021	MS-1 P. C. Board
3	MS80022	MS-2 P. C. Board
4	MB20032	Flat Cable (50P)
5	CC70063	Nylon Push
6	PC50035	Key Connector (44P)
7	CCA7032	Main Switch Box
8	BP10041	Power Switch
9	PC50051	Fuse Holder (FH-032)
10	PC50052	Fuse (5A)
11	PC50029	Nylon Clip (KD-2N)
12	PC50030	Nylon Clip (KD-4N)
13	PC50031	Nylon Clip (KD-7N)
14	TA50037	Socket Housing (2P)
15	TA50038	Socket Housing (2R)
16	PC50045	Socket Housing (3P)
17	PC50046	Socket Housing (3R)
18	PC50041	Socket Housing (6P)
19	PC50042	Socket Housing (6R)
20	MB20045	Socket Housing (9P)
21	MB20046	Socket Housing (9R)
22	TA50039	Pin
23	TA50040	Pin



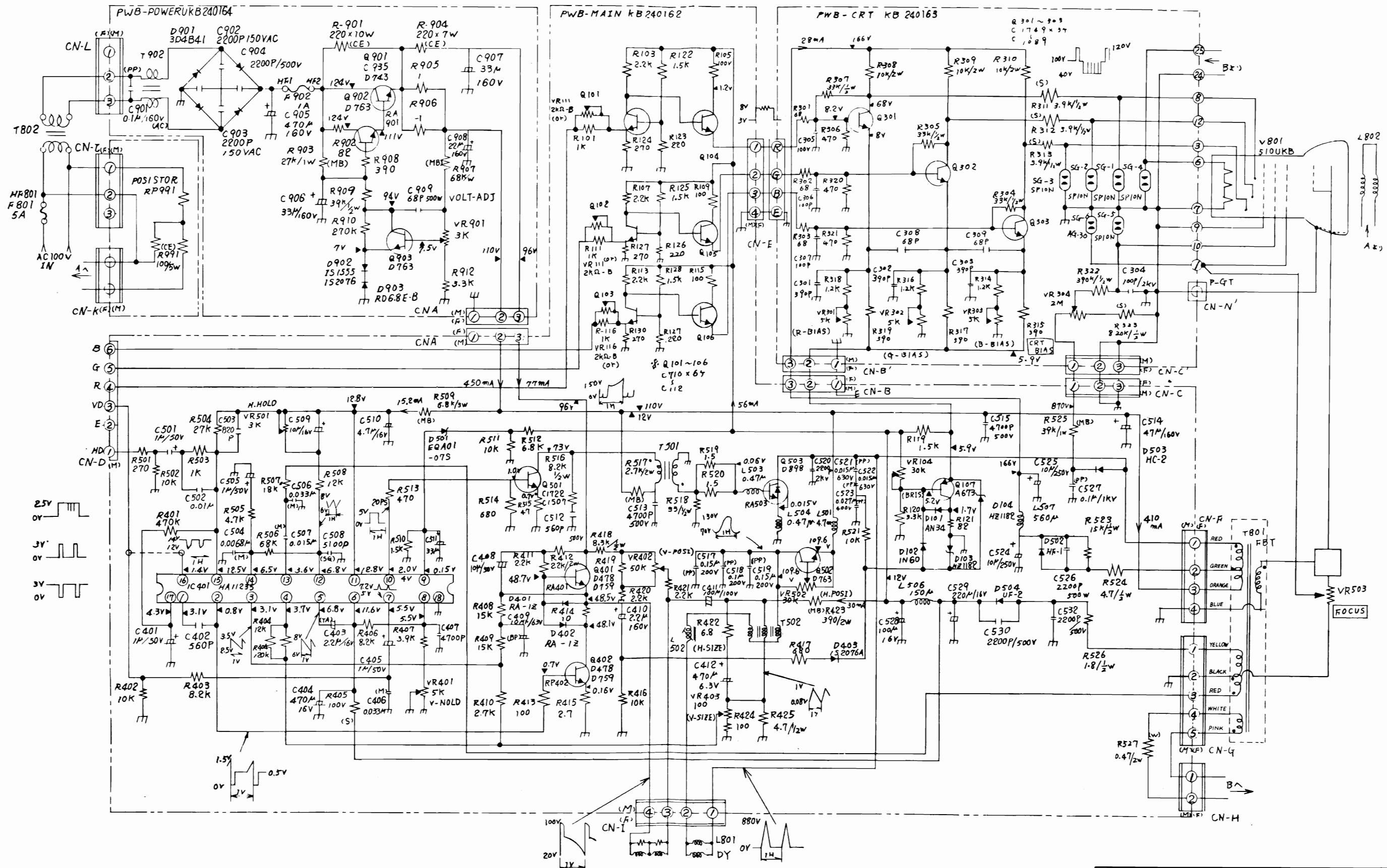
TOU ERRAMES, UNLESS OTHERWISE SPECIFIED FRACTIONS DEC. ANGLES

APPROVALS	DATE
DRAWN T TAKEDA	11/11/1980
CHECKED T TAKEDA	11/11/1980

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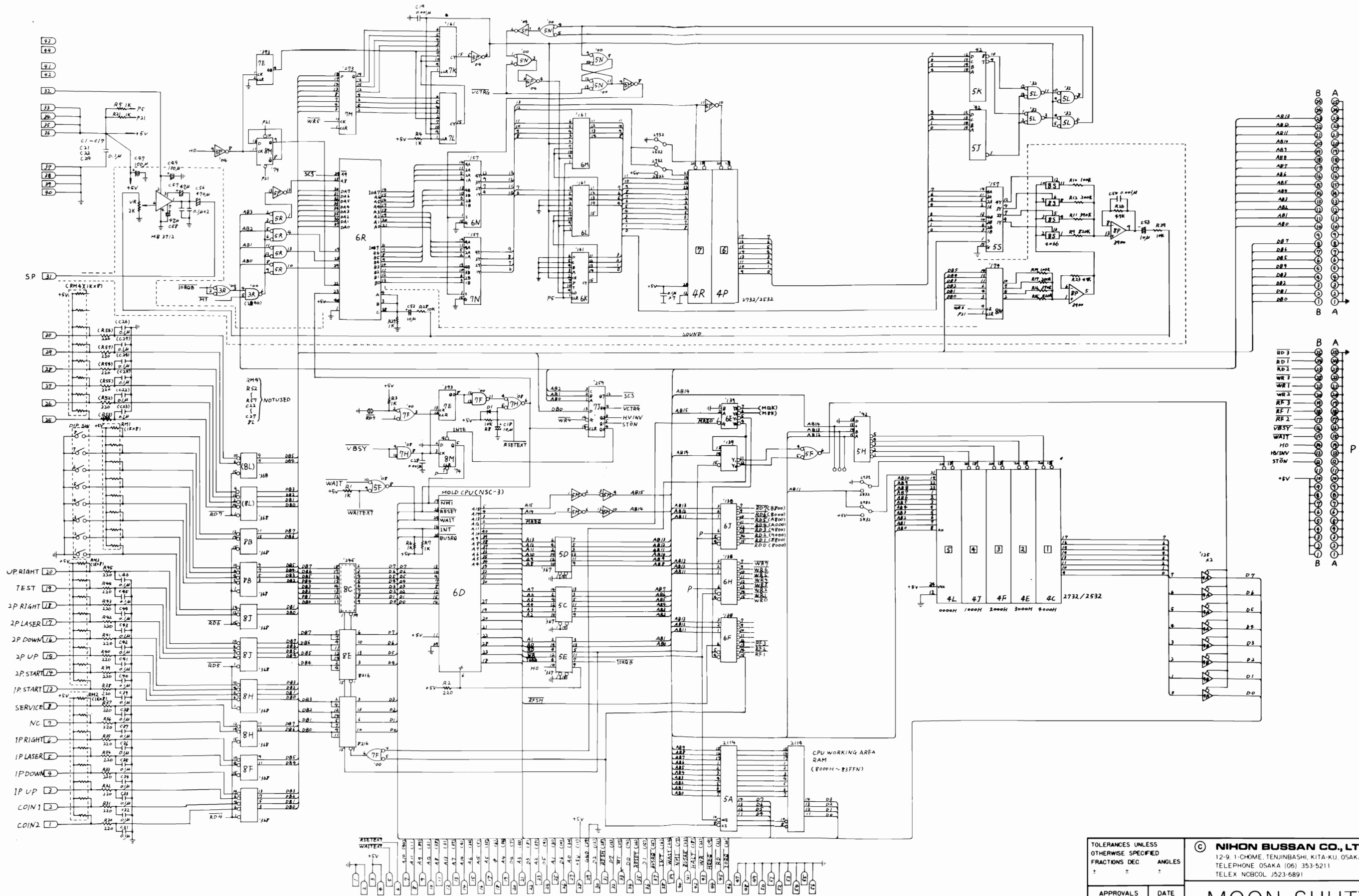
COLOUR MONITOR(MITSUBISHI)  
**BLOCK DIAGRAM**

SCALE	DRAWING NO.



TOLERANCES UNLESS OTHERWISE SPECIFIED		© NIPPON BUSSAN CO., LTD.	
FRACTIONS DEC.	ANGLES	12-9, 1-CHOME, TENJINBASHI, KITA-KU, OSAKA, JAPAN	
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		TELEX NCBOL J523-6891	
APPROVALS	DATE	COLOUR MONITOR(MITSUBISHI)	
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CHECKED	7/7/1980	SCALE	SIZE DRAWING NO.
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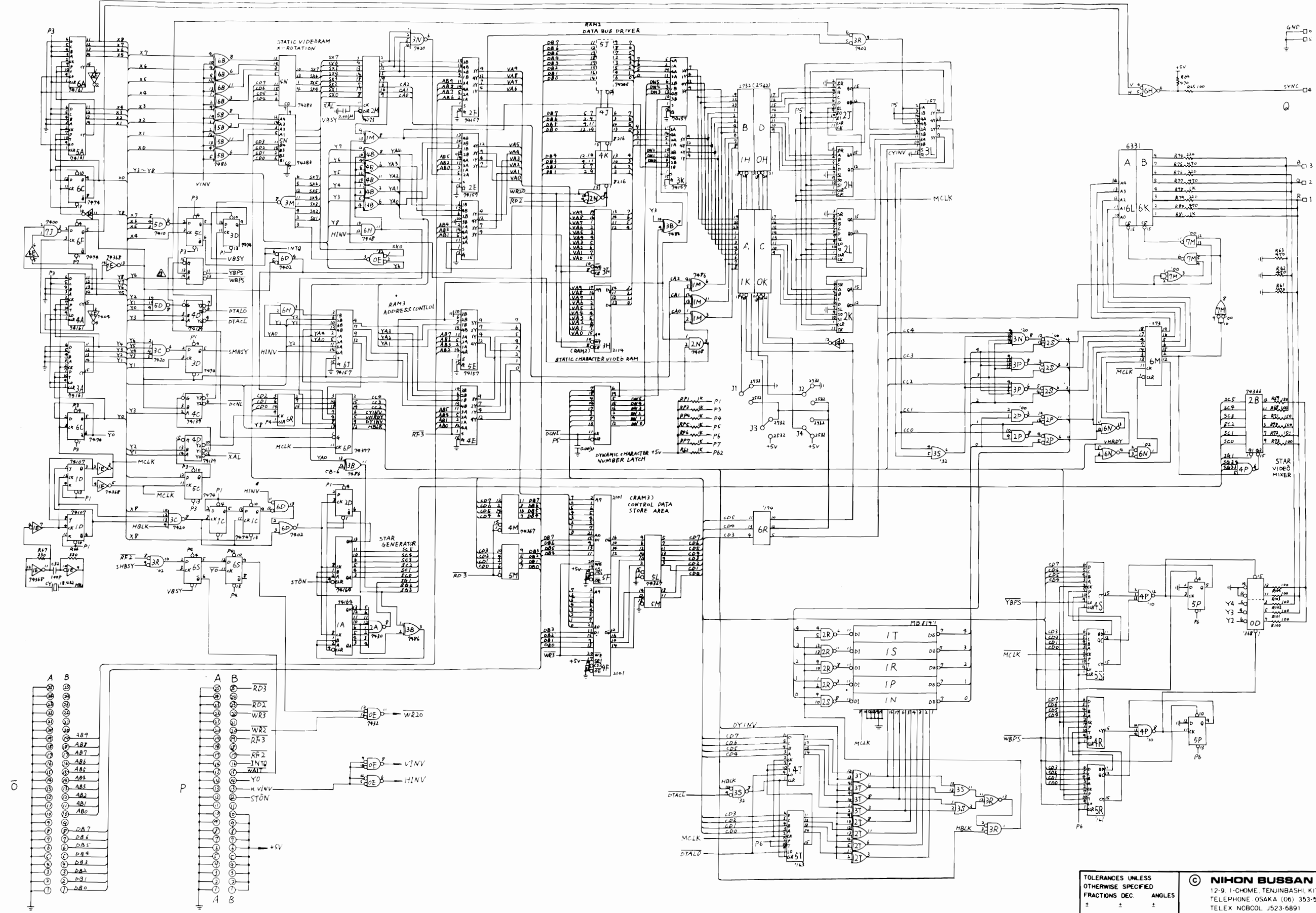




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				SHEET	

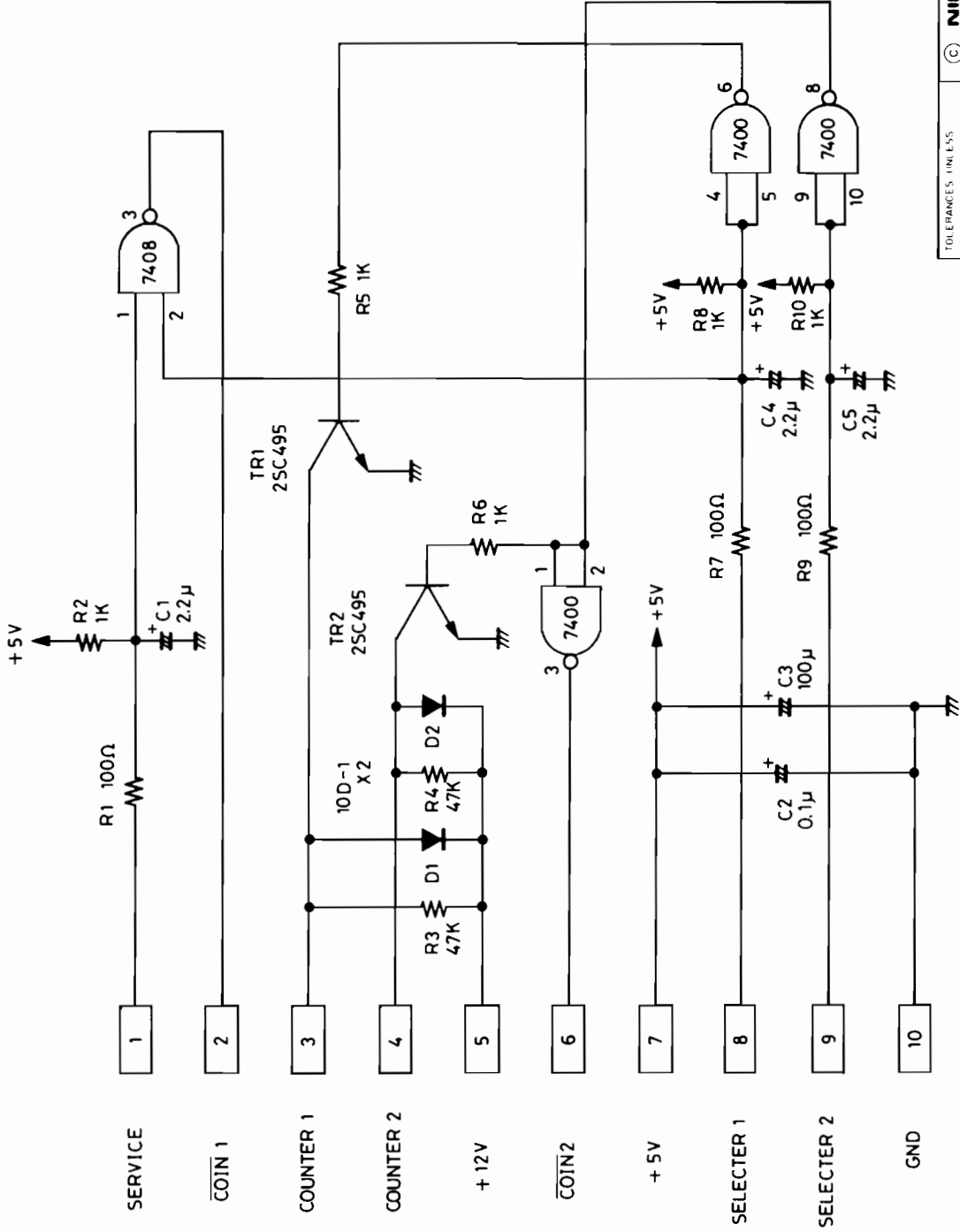
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SHEET			





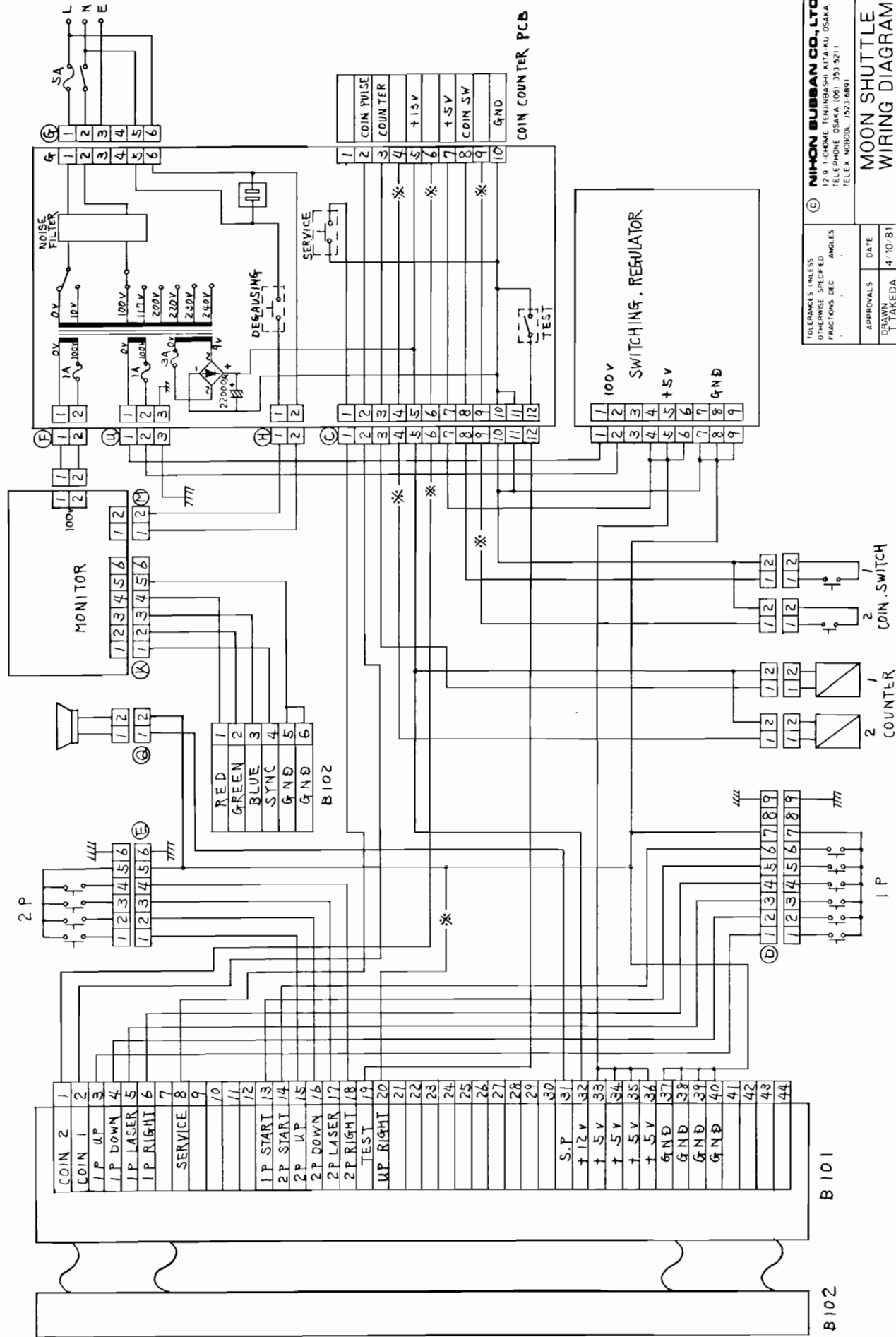
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		CHECKED H. KITABATA	26.11.80

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MOON SHUTTLE  
COIN COUNTER MS-5

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SCALE 4:11 81		DRAWING NO.	
SIZE		DRAWING NO.	

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### MOON SHUTTLE WIRING DIAGRAM





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**Nihon Bussan Co., Ltd.**

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