NEO·GEO ™

SERVICE
MANUAL

MV−1FZ
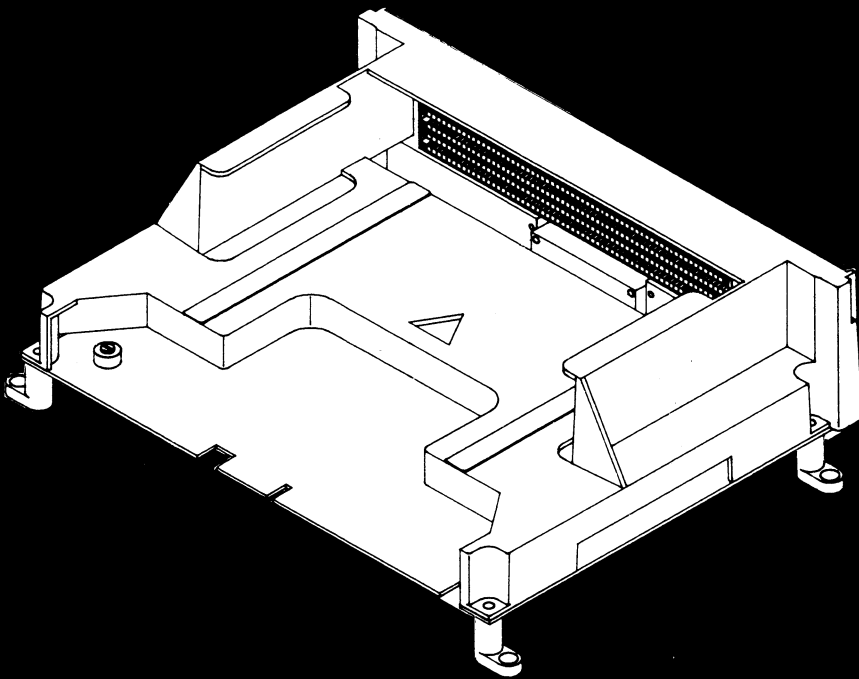
SNK

NOTES

INTRODUCTION

Welcome to the NEO-GEO MULTI VIDEO SYSTEM. This unique system by
SNK enables you to save space and maximize your income with PCBs
of high quality and of easy maintenance.
The newly developed MV-1FZ has been more compactly designed than
any former PCBs for carrying one NEO-GEO game, and the PCB can
be directly connected to the JAMMA standardized cabinet.
Income data keeping and other featured functions of all NEO-GEO
systems are of course available with MV-1FZ, too.
Please read this service manual carefully before starting to use
the MVS and keep it at your side for further reference.

☆JAMMA･･･Japan Amusement Machinery Manufacturers Association

CAUTION

◊To set up the MVS, avoid the following places:
*Where leaks or dew from moisuture may be caused
*Humid places like indoor swimming pools and showers
*Where direct heat strikes or in the hot air
*Near ignitable or volatile chemicals and other dangerous
 articles
*Near emergency exits or fire extinguishers
*Inclined places or near vibrating places
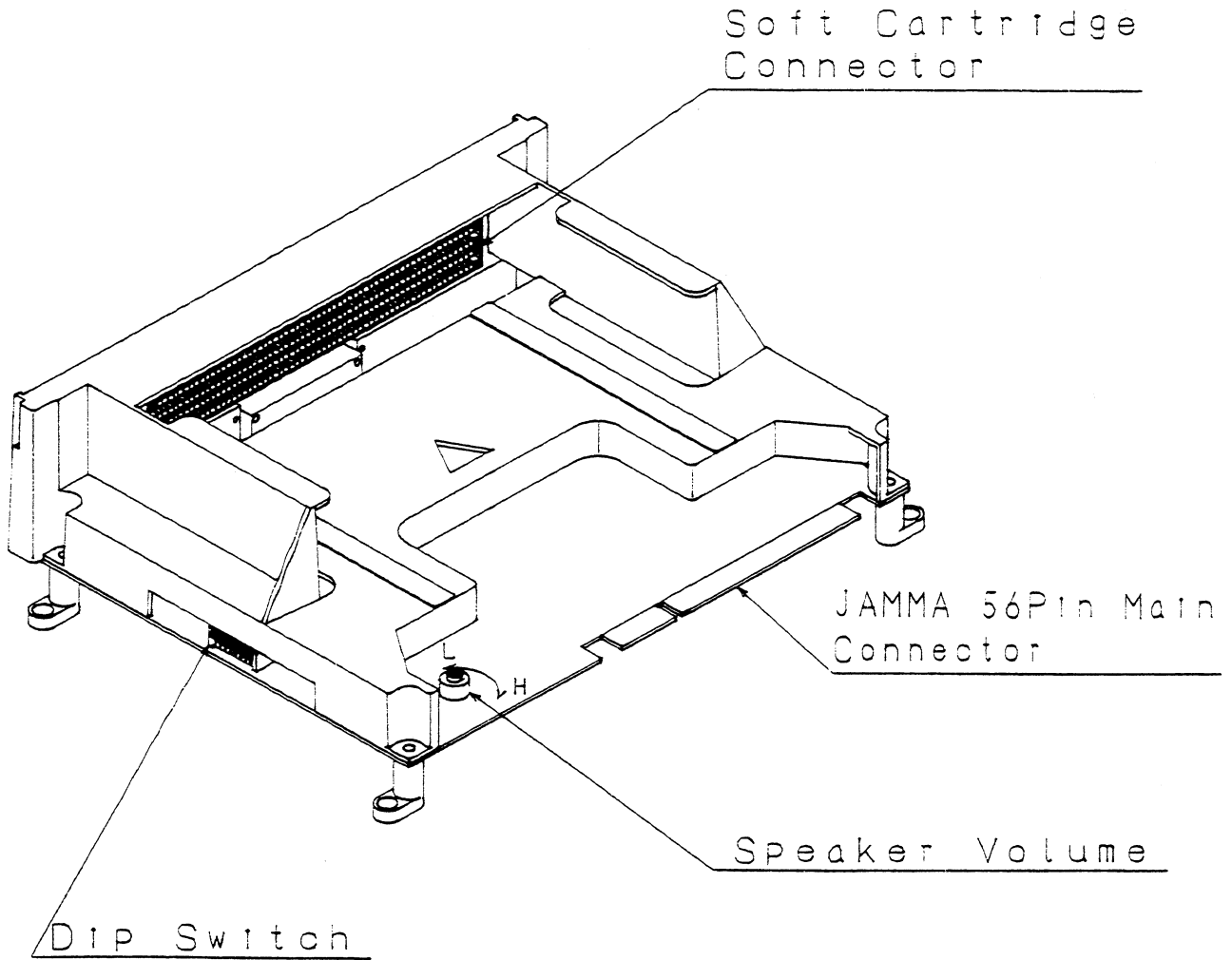*Dusty places
◊Keep the temperature between 5℃ and 40℃ .
◊Do not put heavy objects on top of the PCBs.
◊Use the power supply at DC5V±1%.

CONTENTS

PCB PARTS

Soft Cartridge
Connector

JAMMA 56Pin Main
Connector

Speaker Volume

Dip Switch

1. SETTING THE SOFT CARTRIDGES

1-1 BEFORE SETTING

MAKE SURE THAT POWER IS OFF WHEN YOU INSERT OR REMOVE THE CARTRIDGES. If power is not off, technical problems may occur.

1-2 SETTING CARTRIDGES

Make sure that the game cartridge is installed with the markings (▼) matching the main board.
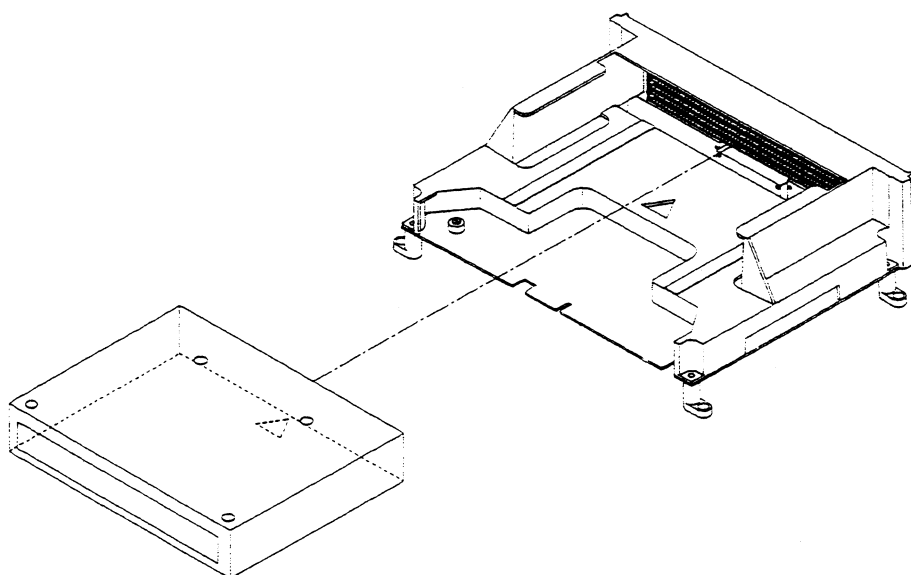
1-3 POWER ON

Turn the power on after the cartridge is inserted firmly into the slot.

If any abnormal sounds or graphics on the screen appear, turn off the power immediately and try the procedure again.

CAUTION: ☆Keep the slot from collecting dust and conductive things.

☆Do not insert anything other than the NEO-GEO MVS cartridge. NEO-GEO HOME USE CARTRIDGES cannot work on MV-1FZ.

2. MODE SETTING

The MVS enables dip settings on the monitor screen instead of the Hard dipswitch settings on the PCBs of other systems. Income data keeping is also possible on the screen.

Read further for each operation.

2-1 STARTING

Press the test switch inside the cabinet, or, set the Hard dipswitch "1" on the PCB "ON" and turn the power on.

2-2 MAIN MENU

Use the joystick to move the cursor on the screen and press the "A" button to confirm mode.

▶HARDWARE TEST ──────────── cabinet switches, monitor adjustment
 SETTING UP THE HARD DIP ──── displays main PCB dipswitch
 SETTING UP THE SOFT DIP ──── setting credit and difficulty
 BOOK KEEPING ──────────── displays income data
 SETTING UP THE CODE NUMBER── setting memory card and code number
 SETTING UP THE CALENDAR ──── setting time and date
 EXIT ──────────────── return to the game screen
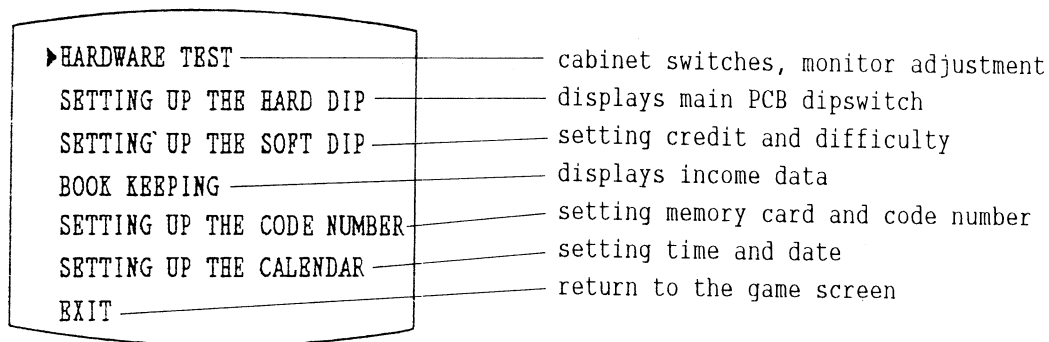
2-3 HARDWARE TEST

Press the 1P start button to go to the next screen.

2-3-1 Crosshatch
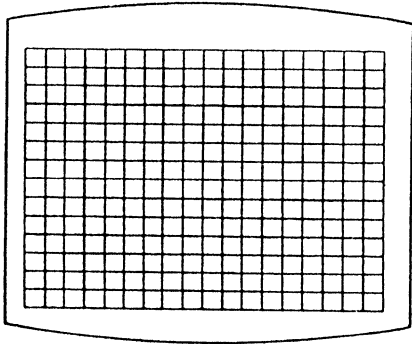
Adjust position and size of the game screen here.

2-3-2 Color Adjustment
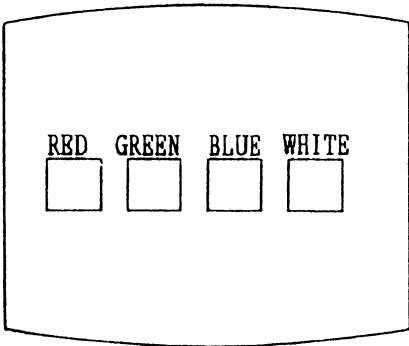
Adjust color on the screen.

RED   GREEN   BLUE   WHITE

2-3-3 1/0 Check

```
        I/O CHECK
        P1 P2   12345678
UP       0  0   00000000
DOWN     0  0
LEFT     0  0   TEST     0
RIGHT    0  0   COIN1    0
PUSH1    0  0   COIN2    0
PUSH2    0  0   SERVICE  0
PUSH3    0  0
PUSH4    0  0   EL LED1 LED2
START    0  0    0  00   00
SELECT   0  0
```

"1" stands for "on" and "0" for "off" of the dipswitch.
☆SELECT, EL, LED1 & LED2 are not used with MV-1FZ.

2-3-4 Sound Test

```
SOUND TEST
        SOUND OFF
        RIGHT
        LEFT
        CENTER
```
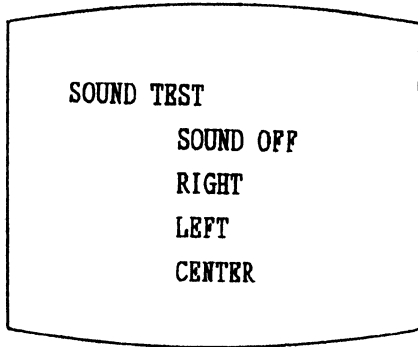
MV-1FZ IS FOR MONAURAL OUTPUT ONLY. Sound at LEFT, RIGHT and CENTER are put to the same speaker.

2-3-5 Memory Card Test

```
MEMORY CARD TEST

※ INSERT MEMORY CARD
```
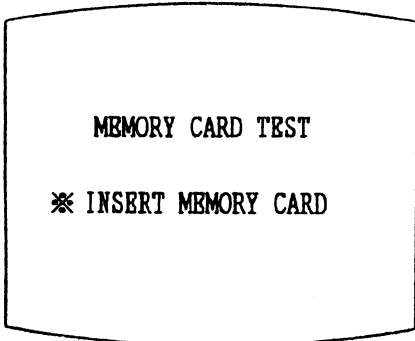
☆MV-1FZ doesn't have memory card function. Go to the next.

2-3-6 Backup Clear

```
BACKUP CLEAR


OK=PUSH A, B, C BUTTON
```
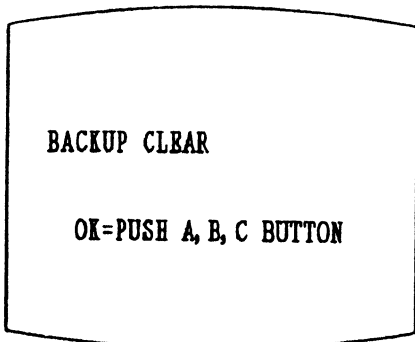
You can clear all previous data (income data, etc.) by pressing A, B & C buttons at the same time.

2-3-7 Calender

```
┌─────────────────────────────────┐
│    SETTING UP THE CALENDAR      │
│       CURRENT TIME              │
│     17/ 2/90   SAT              │
│     19:30:41                    │
│      THE TIME TO BE SET UP      │
│  A BUTTON, JOYSTICK=SELECT      │
│         17/ 2/90 19:30:41       │
└─────────────────────────────────┘
```

The time and date have already been set
from the factory.
If needed, you can change the numbers
indicated in red color. ("A" button to
increase, "B" to decrease.)
Press "D" button to confirm setting.

After the HARDWARE TEST setting, turn the power off once.
To return to the game screen, turn the power on again.

2-4 SETTING HARD DIP

Present status of the dipswitch is displayed. Press "C" button to return to the Main Menu.

```
        SETTING UP THE HARD DIP
                12345678
SETTING MODE    1.......    ON ———————— Test Mode / Game Mode
COMMUNICATION   ...000..   OFF ———————— Set "0" (Normal Controller).
FREE PLAY       ......0.   OFF ———————— communication plays
COIN SWITCH     ..0.....    2 ———————— Game starts without inserting coins.
STOP MODE       .......0  OFF ———————— function to pause game
                0=OFF  1=ON
```
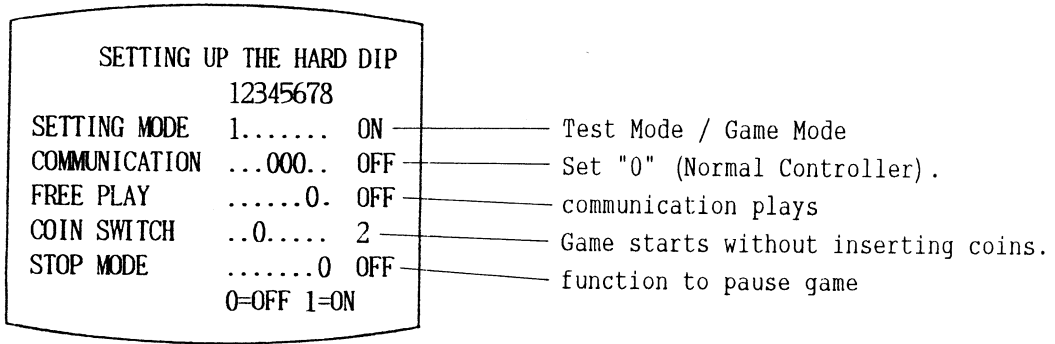
2-5 SOFT DIP SETTING

2-5-1 Soft Dip Menu

Use the joystick to select and press "A" button to confirm mode.

```
▶SETTING UP THE CABINET ———————— setting Credit for 1 coin
 SLOT1 NAM-1975 ————————————————— setting difficulty
 SLOT2 BASEBALL STARS —————
 SLOT3 MAHJONG ———————————
 SLOT4 TOP PLAYERS GOLF ———
 SLOT5 MAGICIAN LORD ——————
```

2-5-2 Cabinet Setting

```
        SETTING UP THE CABINET
▶COIN RATE  1COIN=1CREDIT
  GAME SELECT ONLY WHEN CREDITED (↔ANYTIME)
  GAME START COMPULSION  30 sec (↔WITHOUT)
  DEMO SOUND  SET UP IN EACH GAME (↔WITHOUT)
```
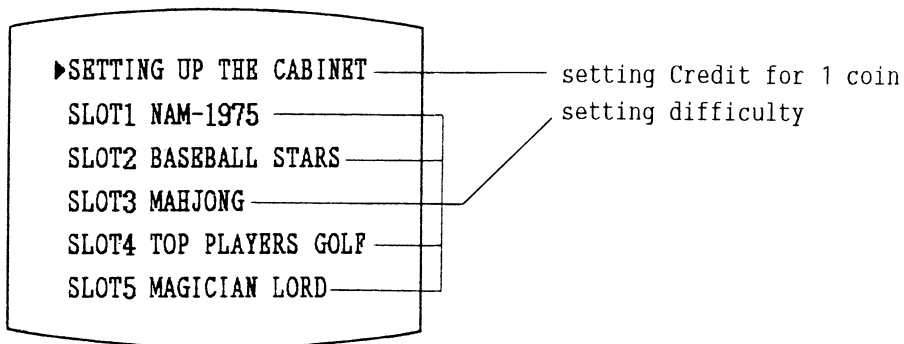
☞ Use the joystick to move the cursor for each setting. Change mode with "A" and "B" button.

— ineffect at MV-1FZ

— Setting the time limit to start game

— "WITHOUT" is selected, no sound even if "WITH" is set at CARTRIDGE SOFT DIP SETTING.

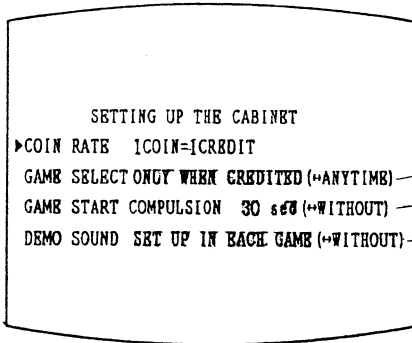Press "C" button to go to the SOFT DIP SETTING Menu.

2-5-3 Soft Dip Setting

```
CONTINUE      3time (↔WITHOUT↔FREE)
DEMO SOUND    YES (↔NO)
HOW TO PLAY   YES (↔NO)
DIFFICULTY    LEVEL 4
BONUS RATE    SECOND BONUS (↔EVERY↔NO)
BONUS         100000/200000
HERO          3
```
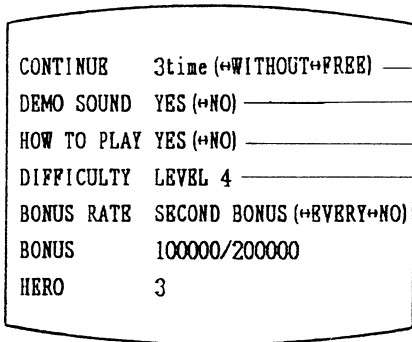
☞ Setting menu differs by each game

— setting the number of CONTINUE PLAYS

— with or without demo sound

— with or without "HOW TO PLAY" screen

— setting difficulty of the game

Press "C" button to confirm the setting and the SOFT DIP SETTING menu will appear again. Press "C" button once more to get to the Main menu.

2-6 INCOME DATA KEEPING SYSTEM
2-6-1 Data Keeping

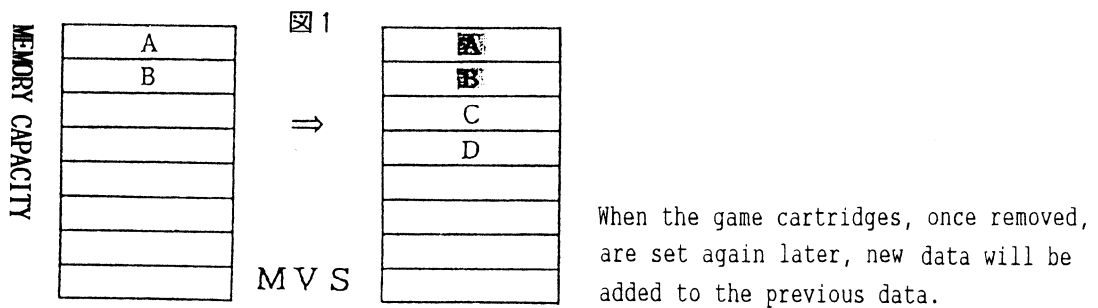The MVS contains RAM for back-up and IC for calender in the
system. Income and other data of the games being used are kept
in the memory even when the power is off.

☆Data of a maximum 8 games can be kept at the MVS, even the game
cartridges are removed from the PCB.

For example: 2 games, A & B are being used on the MVS. If new
game titles C & D are used to replace A & B, the previous data
for A & B will remain.

図1

MEMORY CAPACITY	A	⇒	A	
	B		B	
			C	
			D	
	MVS			

When the game cartridges, once removed,
are set again later, new data will be
added to the previous data.

When more than 8 games are used, the oldest game's data will be
deleted from the memory to input data for the newest game.

図2

A
B
C
D
E
F
G
H
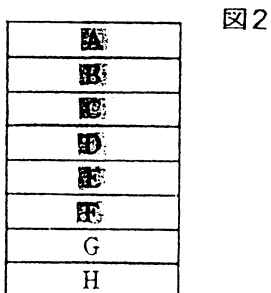
To go to the Income Data Keeping System, press the "TEST" button
in the cabinet and select "BOOKKEEPING" mode on the screen.

2-6-2 Bookkeeping

Move the cursor to "BOOKKEEPING" and press "A" button.

▶CABINET/COIN
 CABINET/PLAY
 SLOT1 NAM1975
 SLOT2 BASEBALL STARS
 SLOT3 TOP PLAYERS GOLF
 SLOT4 MAHJONG
 SLOT5 MAGICIAN LORD

total income of the cabinet
total plays, continue plays of the cabinet
total plays, continue plays for each title.

2-6-3 Cabinet / Coin

Move the cursor to "CABINET/COIN" and press "A" button.

Weekly income chart
→ Disregard the P2 column.

CABINET/COIN			
	P1	P2	SERVICE
FEB/17	02244	0	25
FEB/16	04422	0	36
FEB/15	06633	0	47
FEB/14	08844	0	48
FEB/13	02399	0	29
FEB/12	05699	0	94

Income for the first 6 months of the year

CABINET/COIN			
	P1	P2	SERVICE
JAN	42244	0	25
FEB	44422	0	36
MAR	56633	0	47
APR	68844	0	48
MAY	72399	0	129
JUN	55699	9	294

CABINET/COIN			
	P1	P2	SERVICE
JUL	42244	0	25
AUG	44422	0	36
SEP	56633	0	47
OCT	68844	0	48
NOV	72399	0	129
DEC	55699	0	294

Income for the second 6 months of the year

2-6-4 Cabinet / Play

CABINET/PLAY			
	PLAY	CONT.	AV. TIME
FEB/17	22	33	5:20
FEB/16	44	55	6:20
FEB/15	66	77	7:20
FEB/14	88	99	8:20
FEB/13	23	32	9:20
FEB/12	56	55	4:20
FEB/11	11	88	5:20

Move the cursor to "CABINET/PLAY" and press "A" button.

Weekly income chart

CABINET/PLAY			
	PLAY	CONT.	AV. TIME
JAN	42244	33363	5:20
FEB	44422	35543	6:20
MAR	56633	37773	7:20
APR	68844	39983	8:20
MAY	72399	33232	9:20
JUN	55699	15519	4:20

Income for the first 6 months of the year

CABINET/PLAY	PLAY	CONT.	AV. TIME
JUL	42244	33363	5:20
AUG	44422	35543	6:20
SEP	56633	37773	7:20
OCT	68844	39983	8:20
NOV	72399	33232	9:20
DEC	55699	15519	4:20

Income for the second 6 months of the year

☞ Income data of each game is shown in the same way as "CABINET/COIN" and "CABINET/PLAY".

2-7 SETTING THE CODE NUMBER

```
CODE NUMBER SETTING
2408
 D BUTTON:SET
CODE NUMBER WILL BE SET INTO
※MEMORY CARD WHEN INSERTED
 DURING  THIS MODE.
```

Not available on MV-1FZ

2-8 SETTING CALENDER

To set the calendar, refer to 2-3-7, HARDWARE TEST.

MV-1FZ MAIN HARNESS

SOLDER SIDE	PIN #		PART SIDE
G N D	A	1	G N D
G N D	B	2	G N D
+ 5 V	C	3	+ 5 V
+ 5 V	D	4	+ 5 V
	E	5	
+ 1 2 V	F	6	+ 1 2 V
KEY	H	7	KEY
C O I N C O U N T E R 2	J	8	C O I N C O U N T E R 1
C O I N L O C K O U T 2	K	9	C O I N L O C K O U T 1
S P E A K E R (-)	L	1 0	S P E A K E R (+)
A U D I O (G N D)	M	1 1	
V I D E O G R E E N	N	1 2	V I D E O R E D
V I D E O S Y N C	P	1 3	V I D E O B L U E
S E R V I C E S W	R	1 4	V I D E O G N D
	S	1 5	T E S T S W
C O I N S W 2	T	1 6	C O I N S W 1
S T A R T S W 2	U	1 7	S T A R T S W 1
2 P U P	V	1 8	1 P U P
2 P D O W N	W	1 9	1 P D O W N
2 P L E F T	X	2 0	1 P L E F T
2 P R I G H T	Y	2 1	1 P R I G H T
2 P P U S H 1	Z	2 2	1 P P U S H 1
2 P P U S H 2	a	2 3	1 P P U S H 2
2 P P U S H 3	b	2 4	1 P P U S H 3
2 P P U S H 4	c	2 5	1 P P U S H 4
	d	2 6	D A T A I N P U T S W
G N D	e	2 7	G N D
G N D	f	2 8	G N D

DATA INPUT SW is not used at normal use.

WIRING DIAGRAM
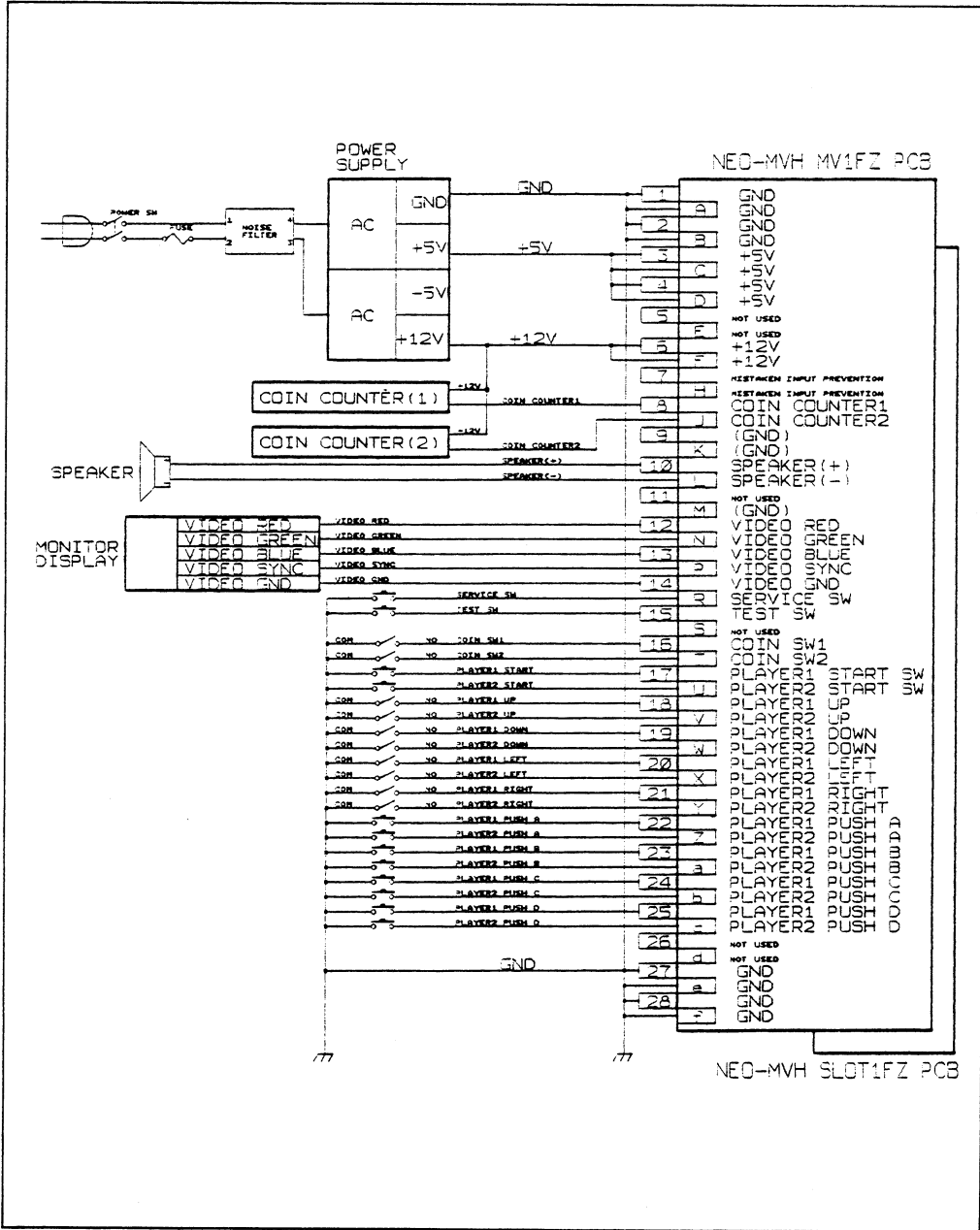
DIMENSION
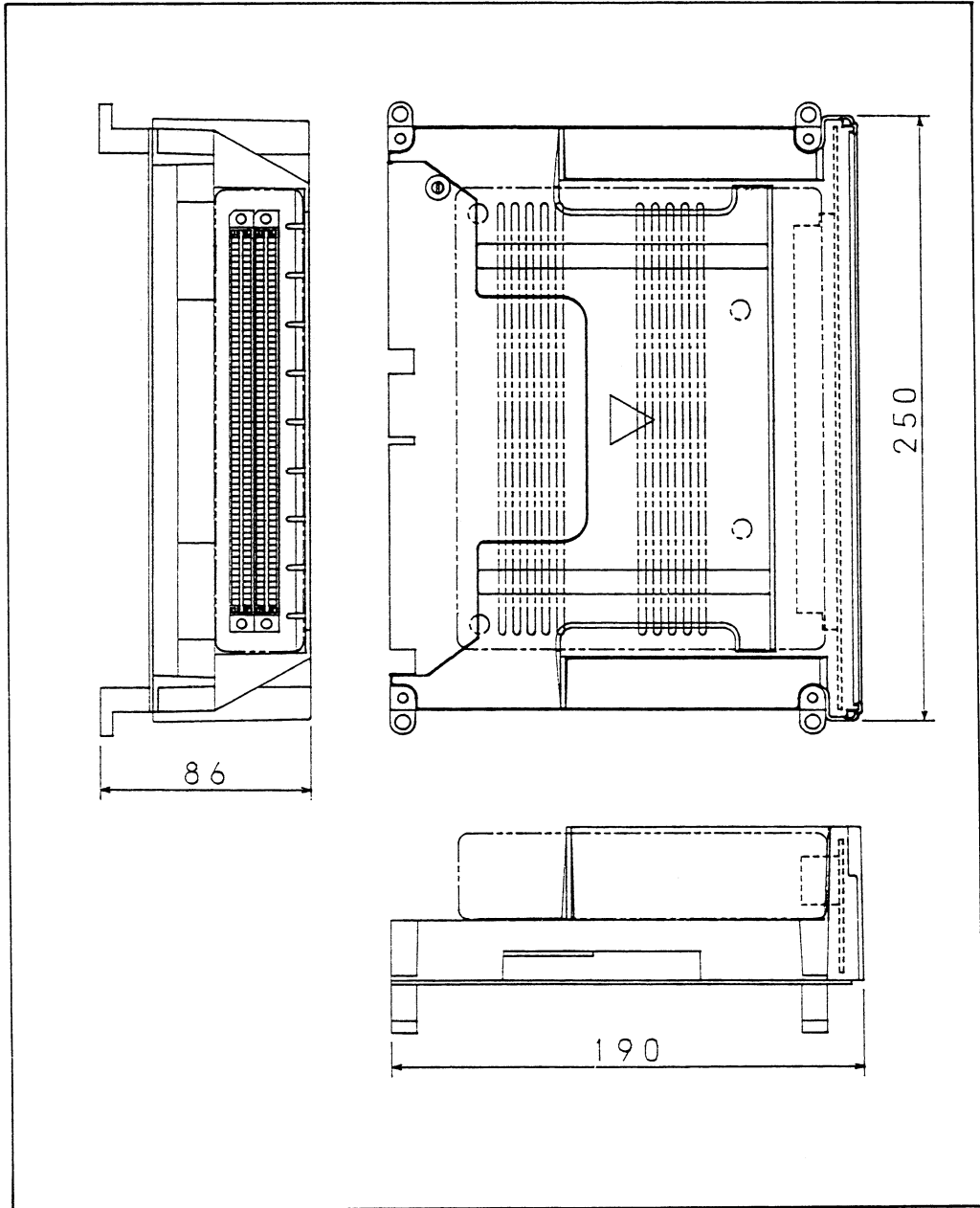
POWER SUPPLY	+ 5 V	7 A
	+ 1 2 V	1 A

NEO
ADVANCED ENTERTAINMENT SYSTEM
GEO

SNK