NOTES

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† For questions and information regarding the contents in this service manual, contact your SNK NEO GEO agent.
† Minor changes may be put to the manual without advance notice.
† Any compensation against damages while using the MVS are out of our responsibility.
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-1A 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-1A, too.
Please read this service manual carefully before starting to use
the MVS and keep it at your side for further reference.

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CAUTION

◊To set up the MVS, avoid the following places:
*Where leaks or dew from moisture 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°C and 40°C.
◊Do not put heavy objects on top of the PCBs.
◊Use the power supply at DC5V±1%. 

- 2 -
NOTES
INTRODUCTION
CAUTION
CONTENTS
COMPONENTS
1 SETTING THE SOFT CARTRIDGES
  -1 BEFORE SETTING
  -2 SETTING CARTRIDGES
  -3 POWER ON
2 MODE SETTING
  -1 STARTING
  -2 MAIN MENU
  -3 HARDWARE TEST
  -4 SETTING THE HARDWARE DIP
  -5 SETTING THE SOFTWARE DIP
  -6 INCOME DATA KEEPING
  -7 SETTING THE CODE NUMBER
  -8 SETTING THE CALENDAR
MAIN HARNESS
WIRING DIAGRAM
DIMENSION
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-1A.
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

2-3-1 Crosshatch
Press the 1P start button to go to the next screen.

Adjust position and size of the game screen here.

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

2-3-3 I/O Check
"1" stands for "on" and "0" for "off" of the dip switch.
†SELECT, EL, LED1 & LED2 are not used with MV-1A.
2-3-4 Sound Test

- SOUND TEST
- SOUND OFF
- RIGHT
- LEFT
- CENTER

MV-1A 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-1A 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.
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.

<table>
<thead>
<tr>
<th>Setting Mode</th>
<th>Communication</th>
<th>Free Play</th>
<th>Coin Switch</th>
<th>Stop Mode</th>
<th>0-Off</th>
<th>1-On</th>
</tr>
</thead>
<tbody>
<tr>
<td>1...........</td>
<td>000...........</td>
<td>0.........</td>
<td>0.........</td>
<td>0.........</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>2</td>
<td>OFF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test Mode / Game Mode
Set "0" (Normal Controller).
Communication plays
Game starts without inserting coins.
Function to pause game

2-5 SOFT DIP SETTING

2-5-1 Soft Dip Menu

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

1. Setting Up The Cabinet
   - Setting Credit for 1 coin
   - Setting difficulty

   - Slot1: NAM-1975
   - Slot2: Baseball Stars
   - Slot3: Mahjong
   - Slot4: Top Players Golf
   - Slot5: Magician Lord
2-5-2 Cabinet Setting

Use the joystick to move the cursor for each setting. Change mode with "A" and "B" button.

ineffect at MV-1A

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

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.

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.

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 MARIJUNG
- 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.

Income for the first 6 months of the year
CABINET/COIN

<table>
<thead>
<tr>
<th></th>
<th>P1</th>
<th>P2</th>
<th>SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUL</td>
<td>42244</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>AUG</td>
<td>44422</td>
<td>0</td>
<td>36</td>
</tr>
<tr>
<td>SEP</td>
<td>56683</td>
<td>0</td>
<td>47</td>
</tr>
<tr>
<td>OCT</td>
<td>68844</td>
<td>0</td>
<td>48</td>
</tr>
<tr>
<td>NOV</td>
<td>72399</td>
<td>0</td>
<td>129</td>
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<tr>
<td>DEC</td>
<td>55689</td>
<td>0</td>
<td>294</td>
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</table>

Income for the second 6 months of the year

2-6-4 Cabinet / Play

CABINET/PLAY

<table>
<thead>
<tr>
<th></th>
<th>PLAY</th>
<th>CONT.</th>
<th>AV. TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEB/17</td>
<td>22</td>
<td>33</td>
<td>5:20</td>
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<tr>
<td>FEB/16</td>
<td>44</td>
<td>55</td>
<td>6:20</td>
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<tr>
<td>FEB/15</td>
<td>66</td>
<td>77</td>
<td>7:20</td>
</tr>
<tr>
<td>FEB/14</td>
<td>88</td>
<td>99</td>
<td>8:20</td>
</tr>
<tr>
<td>FEB/13</td>
<td>23</td>
<td>32</td>
<td>9:20</td>
</tr>
<tr>
<td>FEB/12</td>
<td>56</td>
<td>55</td>
<td>4:20</td>
</tr>
<tr>
<td>FEB/11</td>
<td>11</td>
<td>88</td>
<td>5:20</td>
</tr>
</tbody>
</table>

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

Weekly income chart

CABINET/PLAY

<table>
<thead>
<tr>
<th></th>
<th>PLAY</th>
<th>CONT.</th>
<th>AV. TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAN</td>
<td>42244</td>
<td>33363</td>
<td>5:20</td>
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<tr>
<td>FEB</td>
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<tr>
<td>MAR</td>
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<tr>
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<td>8:20</td>
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<tr>
<td>MAY</td>
<td>72399</td>
<td>33332</td>
<td>9:20</td>
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<tr>
<td>JUN</td>
<td>55689</td>
<td>15519</td>
<td>4:20</td>
</tr>
</tbody>
</table>

Income for the first 6 months of the year
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
2400
D BUTTON: SET
CODE NUMBER WILL BE SET INTO MEMORY CARD WHEN INSERTED during this mode.

Not available on MV-1A

2-8 SETTING CALENDAR

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

<table>
<thead>
<tr>
<th>SOLDER SIDE</th>
<th>PIN #</th>
<th>PART SIDE</th>
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<td>GND</td>
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<tr>
<td>GND</td>
<td>B 2</td>
<td>GND</td>
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<tr>
<td>+5V</td>
<td>C 3</td>
<td>+5V</td>
</tr>
<tr>
<td>+5V</td>
<td>D 4</td>
<td>+5V</td>
</tr>
<tr>
<td>E 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+12V</td>
<td>F 6</td>
<td>+12V</td>
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<tr>
<td>KEY</td>
<td>H 7</td>
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<td>COIN COUNTER2</td>
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<td>COIN COUNTER1</td>
</tr>
<tr>
<td>K 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPEAKER (-)</td>
<td>L 10</td>
<td>SPEAKER (+)</td>
</tr>
<tr>
<td>M 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIDEO GREEN</td>
<td>N 12</td>
<td>VIDEO RED</td>
</tr>
<tr>
<td>VIDEO SYNC</td>
<td>P 13</td>
<td>VIDEO BLUE</td>
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<tr>
<td>SERVICE SW</td>
<td>R 14</td>
<td>VIDEO GND</td>
</tr>
<tr>
<td>S 15</td>
<td></td>
<td>TEST SW</td>
</tr>
<tr>
<td>COIN SW2</td>
<td>T 16</td>
<td>COIN SW1</td>
</tr>
<tr>
<td>START SW2</td>
<td>U 17</td>
<td>START SW1</td>
</tr>
<tr>
<td>2P UP</td>
<td>V 18</td>
<td>1P UP</td>
</tr>
<tr>
<td>2P DOWN</td>
<td>W 19</td>
<td>1P DOWN</td>
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<tr>
<td>2P LEFT</td>
<td>X 20</td>
<td>1P LEFT</td>
</tr>
<tr>
<td>2P RIGHT</td>
<td>Y 21</td>
<td>1P RIGHT</td>
</tr>
<tr>
<td>2P PUSH1</td>
<td>Z 22</td>
<td>1P PUSH1</td>
</tr>
<tr>
<td>2P PUSH2</td>
<td>a 23</td>
<td>1P PUSH2</td>
</tr>
<tr>
<td>2P PUSH3</td>
<td>b 24</td>
<td>1P PUSH3</td>
</tr>
<tr>
<td>2P PUSH4</td>
<td>c 25</td>
<td>1P PUSH4</td>
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<tr>
<td>d 26</td>
<td></td>
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<tr>
<td>GND</td>
<td>e 27</td>
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<tr>
<td>GND</td>
<td>f 28</td>
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</tr>
</tbody>
</table>

DATA INPUT SW is not used at normal use.