1. HANDLING PRECAUTIONS

2. SPECIFICATIONS

   ① NAME & POSITION OF ON–BOARD CONNECTORS, SWITCHES, ETC.
   ② MONITOR DIRECTION, HORIZONTAL FREQUENCY
   ③ COIN ASSIGNMENTS AND COIN PORT
   ④ CONTROL PANEL AND BOARD I/O
      a) 56P CONNECTOR (JAMMA)
      b) EXTENSION I/O PORT (2L12B)
      c) EXTENSION I/O PORT (3L9B, 4L12B)
      d) OTHERS (V.R., Light Gun, and Control Panels(for Mah–jong, Hanafuda, Dial
          and Control Ball), etc.)

3. PLACING & REMOVING THE CARTRIDGE, AND INSTALLING THE BOARD

4. TEST MODE

   A) NORMAL TEST MODE
      ① MEMORY TEST
      ② C.R.T. TEST
      ③ INPUT TEST
      ④ CLOCK ADJUSTMENTS
      ⑤ SYSTEM ASSIGNMENTS
      ⑥ COIN ASSIGNMENTS
      ⑦ SYSTEM BOOKKEEPING
      ⑧ BACKUP DATA CLEAR
      ⑨ EACH GAME TEST

   B) FACTORY TEST MODE

5. WIRING FOR THE BOARD

   A) 2–PLAYER SIMULTANEOUS PLAY, 6–BUTTON SPECIFICATIONS (2L12B)

   B) 3–4 PLAYER SIMULTANEOUS PLAY, 3–BUTTON SPECIFICATIONS (3L9B, 4L12B)
1. HANDLING PRECAUTIONS

(1) When installing and removing the IC Board, make sure that the cabinet's main power is OFF.

(2) Foreign bodies, such as dust on the IC Board, may cause damage (short circuit, fire, etc. due to the Board's generation of heat). Therefore, ensure the IC Board surfaces are always kept clean.

(3) Completely connect up the IC Board's and other items' connectors. Insufficient connector insertion may damage the IC Board. Therefore, pay careful attention to this point. Also, for the IC Board circuit inspection, only the use of a logic tester is permitted. The use of a tester is not allowed, therefore, also be careful of this point.

(4) The applicable frequency for the monitor compatible with the ST·V Board is 15 kHz. The ST·V Board can not be used for a cabinet which employs a monitor or projection display which has 24 kHz frequency only.

(5) The contents of the product herein described are subject to change without notice.
2. SPECIFICATIONS

① NAME & POSITION OF ON-BOARD CONNECTORS, SWITCHES, ETC.

- In the case where the cabinet has neither the Test button nor Service button, utilize the Push SW which is on the Main Board. (SW1: Test button  SW2: Service button).
- For adjusting the sound volume, use the on-Board VR 1.

![Diagram of Connector Positions]

Does not function if CN5 is not connected with the Board (No. 839-0724). Also, make sure that this Board is not connected with other Connector.

© RV1

JAMMA (56P, P=3.96mm)  CN25 (JST NH 5P)  RESERVED OUTPUT 4bit.
CN22 (JST NH 3P)  MIDI OUT  CN19 (JST NH 12P)  A/D INPUT 8ch.
CN27 (JST NH 3P)  LIGHT GUN TRIGGER  CN32 (JST NH 9P)  EXTENSION I/O 8bit.
CN24 (JST NH 4P)  AUDIO LINE OUTPUT  CN18 (JST NH 6P)  SERIAL COMMUNICATION

CAUTION
Although a Connector similar to the one used for SEGA’s SYSTEM 32 is used for the ST-V BD CN24 audio output, the pin assignments are different. When using the ST-V Board for the MEGALO 50 DX, SD3, and SUPER MEGALO 2 Cabinets, make sure that the AUDIO OUT ON/OFF Switch is OFF. Also, do not connect the 4P Connectors from the Cabinet to CN24. Otherwise, ST-V or the cabinet may be damaged.
COIN ASSIGNMENTS AND COIN PORT

- Setting the Coin Chute Type (COMMON, INDIVIDUAL)

COMMON (Initialization):
Used for the type of cabinet whose coin acceptance is a common type for plural players. Coins inserted by each player are handled as common credits. In spite of Cabinet Type setting (or the number of players), COIN 1 and COIN 2 coin ports are used, which respectively correspond to NO. 16, 56P Connector and NO. T, 56P Connector.
COIN/CREDIT setting can be set for COIN 1 port and COIN 2 port separately.

INDIVIDUAL
Used for the type of cabinet which has a coin chute for each player, with each coin chute being able to accept coins. Coins inserted by each player are handled as that player’s credits. The relationship between the cabinet type setting and the coin port is shown in the following table:
Note that COIN/CREDIT setting applies in common to each coin port.

<table>
<thead>
<tr>
<th>CABINET TYPE</th>
<th>PLAYER</th>
<th>ST - V COIN PORT</th>
<th>SYSTEM 32 COIN PORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1P</td>
<td>1P</td>
<td>COIN 1 (56P, 16)</td>
<td>COIN 1</td>
</tr>
<tr>
<td>2P</td>
<td>1P</td>
<td>COIN 1 (56P, 16)</td>
<td>COIN 2</td>
</tr>
<tr>
<td></td>
<td>2P</td>
<td>COIN 2 (56P, T)</td>
<td>COIN 1</td>
</tr>
<tr>
<td>3P</td>
<td>1P</td>
<td>COIN 1 (56P, 16)</td>
<td>COIN 3</td>
</tr>
<tr>
<td></td>
<td>2P</td>
<td>COIN 2 (56P, T)</td>
<td>COIN 2</td>
</tr>
<tr>
<td></td>
<td>3P</td>
<td>COIN 3 (56P, 25)</td>
<td>COIN 1</td>
</tr>
<tr>
<td>4P</td>
<td>1P</td>
<td>COIN 1 (56P, 16)</td>
<td>COIN 4</td>
</tr>
<tr>
<td></td>
<td>2P</td>
<td>COIN 2 (56P, T)</td>
<td>COIN 3</td>
</tr>
<tr>
<td></td>
<td>3P</td>
<td>COIN 3 (56P, 25)</td>
<td>COIN 2</td>
</tr>
<tr>
<td></td>
<td>4P</td>
<td>COIN 4 (56P, c)</td>
<td>COIN 1</td>
</tr>
</tbody>
</table>

For example, neither COIN 3 port nor COIN 4 port can be used for the 2P cabinet type. The <3P COIN> and <4P COIN> of ST - V Board respectively corresponds to NO. 25 and NO. c of the 56P Connector. Connect them as applicable. Should any button on the Control Panel be wired, be sure to remove the wiring.

Cabinet Type and Coin Chute Type setting changes can be made in the TEST mode.
Refer to © SYSTEM ASSIGNMENTS and © COIN ASSIGNMENTS of Section 4 TEST MODE.
CONTROL PANEL AND BOARD I/O

a) 56P CONNECTOR (JAMMA)

The following < > refers to the Coin Setting set to "INDIVIDUAL."

<table>
<thead>
<tr>
<th>COMPONENT SIDE</th>
<th>SOLDIER SIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GND</td>
<td>1 A GND</td>
</tr>
<tr>
<td>GND</td>
<td>2 B GND</td>
</tr>
<tr>
<td>+5V</td>
<td>3 C +5V</td>
</tr>
<tr>
<td>+5V</td>
<td>4 D +5V</td>
</tr>
<tr>
<td>(NOT USED)</td>
<td>5 E (NOT USED)</td>
</tr>
<tr>
<td>+12V</td>
<td>6 F +12V</td>
</tr>
<tr>
<td>(NOT USED)</td>
<td>7 H (NOT USED)</td>
</tr>
<tr>
<td>COIN METER 1</td>
<td>8 J COIN METER 2</td>
</tr>
<tr>
<td>(NOT USED)</td>
<td>9 K (NOT USED)</td>
</tr>
<tr>
<td>SPEAKER (+)</td>
<td>10 L SPEAKER (-)</td>
</tr>
<tr>
<td>(NOT USED)</td>
<td>11 M (NOT USED)</td>
</tr>
<tr>
<td>RED</td>
<td>12 N GREEN</td>
</tr>
<tr>
<td>BLUE</td>
<td>13 P SYNC.</td>
</tr>
<tr>
<td>GND (SYNC.)</td>
<td>14 R SERVICE</td>
</tr>
<tr>
<td>TEST</td>
<td>15 S (NOT USED)</td>
</tr>
</tbody>
</table>

<1P COIN> | COIN 1 16 T COIN 2<2P COIN>
1P START   17 U 2P START
1P UP       18 V 2P UP
1P DOWN     19 W 2P DOWN
1P LEFT     20 X 2P LEFT
1P RIGHT    21 Y 2P RIGHT
1P SW1      22 Z 2P SW1
1P SW2      23 a 2P SW2
1P SW3      24 b 2P SW3

<3P COIN> (NOT USED) | 25 c (NOT USED)<4P COIN>
(GAME SELECT)       26 d (PAUSE)
GND                  27 e GND
GND                  28 f GND

56P P=3.96mm

2L6B CONTROL PANEL

- GAME SELECT (Pin N0.26, 56P Connector)
  Only the Multi-Cartridge mode is used.
  In the case where the cabinet has a button which allows the player to select the desired
  game, wire No. 26 Pin. When using the SELECT button, change the setting in the
  TEST mode accordingly.

- PAUSE (PIN N0. d, 56P Connector) used for photographing on-screen image

  connect up GND and Pin N0. d to have a PAUSE function. Normally, these should
  not be wired.
b) EXTENSION I/O PORT (2L12B)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>GND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>GND</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>IP SW4</td>
</tr>
<tr>
<td>CN21 JST 11P</td>
<td>4</td>
<td>IP SW5</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>IP SW6</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>(1P SW7) NOT USED</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>2P SW4</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>2P SW5</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>2P SW6</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>(2P SW7) NOT USED</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>GND</td>
</tr>
</tbody>
</table>

**2L12B CONTROL PANEL**

```
PLAYER 1

1P START
< O O O O O O O O
SW1 SW2 SW3 SW1 SW2 SW3

2P START
↓ ↓ O O O O O O O O
SW4 SW5 SW6 SW4 SW5 SW6

PLAYER 2
```

c) EXTENSION I/O PORT (3L9B, 4L12B)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>3P SW1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>3P SW2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3P SW3</td>
</tr>
<tr>
<td>CN32 JST 9P</td>
<td>4</td>
<td>3P START</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>3P DOWN</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>3P UP</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>3P RIGHT</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>3P LEFT</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>GND</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>4P SW1</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>GND</td>
</tr>
</tbody>
</table>

**4L12B CONTROL PANEL**

```
PLAYER 1

1P START
< O O O O O
SW2 SW3 SW1 SW2 SW3

2P START
↓ ↓ O O O O O
SW1 SW2 SW3 SW1

PLAYER 2

3P START
< O O O O O O O O
SW2 SW3 SW1 SW2 SW3

4P START
↓ ↓ O O O O O O O O
SW1 SW1
```

d) OTHERS (V. R., Light Gun, and Control Panels (for Mah-jong, Hanafuda, Dial and Control Ball), etc.

Refer to applicable Instruction Manual which comes with the software.
3. PLACING & REMOVING THE CARTRIDGE, AND INSTALLING THE BOARD

When installing and removing a Cartridge, or installing the ST-V Board, ensure that the Cabinet's main power is OFF.

CAUTION
When removing the Cartridge, do not try to force it, with the Holder still remaining in a secured status. Applying excessive force to the Board may cause damage such as soldering defects, etc.

When installing the Board in the Cabinet, secure all of the "L" LOCKs on the outer portions of the Board and the Board Brackets in the periphery of the Cartridge Holder to the wood base by using the wood screws which come with the Kit.

**GAME CARTRIDGE**
With the rear side facing outwards, completely insert it vertically.

**CARTRIDGE HOLDER**
When installing or removing the Cartridge, slightly incline and bend the catch towards outside.
4. TEST MODE

A) NORMAL TEST MODE

This mainly checks if the operation of the game board is accurate, makes monitor color adjustments, and allows for COIN ASSIGNMENTS / GAME ASSIGNMENTS setting adjustments.

SELECTION OF TEST ITEMS

1) After the power is turned ON, push the TEST button to have the following TEST TEM MENU appear on the screen.

```
ST-V TEST MENU

MEMORY TEST
C.R.T. TEST
INPUT TEST
CLOCK ADJUSTMENTS
SYSTEM ASSIGNMENTS
COIN ASSIGNMENTS
SYSTEM BOOKKEEPING
BACKUP DATA CLEAR
EACH GAME TEST
    [GOLDEN AXE DUEL ]
    [ ]
    [ ]

-> EXIT
SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON
```

2) By pushing the SERVICE button, bring the arrow mark " > " to the desired item and press the TEST button.

3) When the test has been completed, bring" > " to EXIT and press the TEST button to have the Game mode return to the screen.

* 1 : [ ] below EACH GAME TEST displays the name of each game which is connected to the Board. The example in the above menu indicates the case where GOLDEN AXE THE DUEL is in SLOT 1.

CAUTION
The contents which are set by the user in SYSTEM ASSIGNMENTS and COIN ASSIGNMENTS are registered when the test mode has been completed after EXIT in the menu mode. As such, if the power is turned OFF before registering the contents, the settings made are ineffective. Therefore, pay careful attention to this point.
MEMORY TEST

First, check if MEMORY IC functioning on the Main Board is accurate. If the IC is in good operating condition, "GOOD" will be indicated. If there exists any malfunctioning of the IC's, "BAD" will be indicated.

After the test has been completed, press the TEST button to cause the Cartridge MEMORY TEST to be performed.

EXAMPLE: The following shows the display when four "GOLDEN AXE THE DUEL" Cartridges are inserted in the Board.

Note that the display of the slot in which the Cartridge is not inserted will be omitted.

After the test has been completed, press the TEST button to return to the menu mode.
A) RGB COLOR ADJUSTMENT SCREEN

This page allows for checking the monitor color adjustment.

Each of the R (red), G (green) and B (blue) colors is darkest at the left-hand end and becomes brighter in 31 gradations towards the right-hand end. The monitor brightness is satisfactory if the white color bar is black at the left-hand end and white at the right-hand end.

B) MONITOR SIZE ADJUSTMENT SCREEN

This page allows for monitor size to be checked.

Make adjustments in a manner so that the checkered portions for checking do not go beyond the screen. Press the TEST button to proceed to the next page.

Each time the SERVICE button is pressed, the above color bar screen (1/2) and checkered screen (2/2) alternate. Press the TEST button to have MENU return to the screen.
INPUT TEST

This test displays the state of the START button, COIN SW, TEST button, SERVICE button, etc., which are used in common for each game. Depending on the contents of Cabinet setting, the screen display varies somewhat (refer to examples below). If the switch/button goes ON (from OFF) when activated, it is satisfactory.

EXAMPLE 1)

<table>
<thead>
<tr>
<th>CABINET TYPE</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAME SELECT</td>
<td>NO</td>
</tr>
<tr>
<td>COIN CHUTE TYPE</td>
<td>COMMON</td>
</tr>
</tbody>
</table>

INPUT TEST

<table>
<thead>
<tr>
<th>1P</th>
<th>2P</th>
</tr>
</thead>
<tbody>
<tr>
<td>START OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>COIN CHUTE #1 OFF #2 OFF</td>
<td></td>
</tr>
<tr>
<td>TEST OFF</td>
<td>SERVICE OFF</td>
</tr>
</tbody>
</table>

PRESS TEST BUTTON TO EXIT

EXAMPLE 2)

<table>
<thead>
<tr>
<th>CABINET TYPE</th>
<th>4P</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAME SELECT</td>
<td>YES</td>
</tr>
<tr>
<td>COIN CHUTE TYPE</td>
<td>INDIVIDUAL</td>
</tr>
</tbody>
</table>

INPUT TEST

<table>
<thead>
<tr>
<th>1P</th>
<th>2P</th>
<th>3P</th>
<th>4P</th>
</tr>
</thead>
<tbody>
<tr>
<td>START OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>COIN OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>TEST OFF</td>
<td>SERVICE OFF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PRESS TEST BUTTON TO EXIT

Note that the INPUT TEST except for START (Joystick, push button, etc.) should be performed in the EACH GAME TEST mode.

Press the TEST button to have the MENU return to the screen.
CLOCK ADJUSTMENT

This allows for setting the date (day/month/year) and time on the Main Board.

1) Each time the SERVICE button is pressed, the setting position moves sequentially in order of TIME set by the user (day/month/year/day of the week/hour/minute), SET and EXIT. Second is fixed at 00. Press the TEST button at the desired position to set the time.

2) Bring the arrow to SET and press the TEST button to apply the time set by the user to the On-BD present time.

3) After the time setting is finished, bring the arrow to EXIT and press the TEST button to have the MENU mode return to the screen.

28 / FEB / 1995 (TUE)
day month year (day of week)
10 : 00 : 00
H M S

Note that when setting the date, it is possible to set Feb. 30 or Feb. 31. In these cases, however, accurate functioning would not be maintained thereafter. Therefore, be very careful of this point.
\section*{System Assignments}

In this mode, various cabinet and board settings can be changed. Game settings such as difficulty levels, etc. are performed in EACH GAME TEST.

1) Press the SERVICE button to move the arrow "- >" and bring it to the desired item.

2) Press the TEST button to change the setting.

3) After the setting is finished, bring "- >" to EXIT and press the TEST button.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
\textbf{Cabinet Type} & \textbf{2P} \\
\textbf{Select Button} & \textbf{NO} \\
\hline
\end{tabular}
\caption{Multi-Cartridge mode}
\label{fig:multi-cartridge}
\end{table}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
\textbf{Cabinet Type} & \textbf{2P} \\
\textbf{Advertise Select} & \textbf{ON} \\
\textbf{Game Select Time} & \textbf{10 [SEC]} \\
\hline
\end{tabular}
\caption{Stand Alone mode}
\label{fig:stand-alone}
\end{table}

(A) CABINET TYPE (1P, 2P, 3P, 4P)
Set to the applicable one from the 4 types.

(B) SELECT BUTTON (NO, YES)
Set to YES or NO depending on whether the cabinet has the SELECT button.

YES •• Set to this if the cabinet has the SELECT button.
For wiring, refer to Section 2 SPECIFICATIONS \& CONTROL PANEL AND I/O

NO •• Set to this if the cabinet does not have the SELECT button.
Buttons on the CONTROL PANEL (except for the Start button) can be utilized in lieu of the SELECT button.

(C) ADVERTISE SELECT (ON, OFF)
Determines whether ADVERTISE (during advertise) can be skipped with the SELECT button.

ON •• Set to this when skipping ADVERTISE (during advertise) to proceed to a desired game.
OFF •• The game is selected when credits to start are available.

(D) GAME SELECT TIME (NO, 10 [SEC], 20 [SEC], NO LIMIT)
This determines the time to choose a game once credits to start are available.

NO •• When credits to start are available, the game advertised during ADVERTISE is automatically selected.

NO LIMIT •• When set to this, there will be NO SELECT TIME LIMIT.

(E) ST-V LOGO (ON, OFF)
This determines whether the ST-V LOGO is displayed or not during ADVERTISE in the Multi-Cartridge mode.
(F) ADVERTISE SOUND (ON, OFF)

Determines whether ADVERTISE SOUND is to be emitted or not.

(G) ALONE / MULTI (ALONE, MULTI)

This allows STAND ALONE (ALONE) mode or MULTI-CARTRIDGE (MULTI) mode to be set.
In the STAND ALONE mode, items regarding MULTI-CARTRIDGE mode are not displayed (refer to FIGs. 4-5A and 4-5B in the preceding page).

CAUTION 1:
Depending on the contents of SYSTEM ASSIGNMENTS settings, the game may not start up. Refer to the applicable game manual.
For example, in the GOLDEN AXE THE DUEL, when the cabinet is set to other than 2P, the game is not ready for play even if tests in the test mode are finished, with CAUTIONS being displayed. Be sure to reenter the TEST mode and correct the contents of the settings.

CAUTION 2:
Changing the contents of (A) CABINET TYPE or (G) ALONE/MULTI results in clearing the contents of SYSTEM BOOKKEEPING and the BOOKKEEPING of each game.
COIN ASSIGNMENTS

In this mode, the setting of credit increments, etc., as against coin insertion can be changed.

1) Press the SERVICE button to bring the "- >" to the desired item.
2) Press the TEST button to change the setting.
3) After the desired setting is finished, bring the "- >" to EXIT and press the TEST button.

CAUTION:
Changing the contents of COIN ASSIGNMENTS settings results in clearing the contents of SYSTEM BOOKKEEPING and the BOOKKEEPING of each game.

(A) COIN CHUTE TYPE (COMMON, INDIVIDUAL)

Set this in accordance with Cabinet Coin Chute Specifications.

COMMON
Used for the type of the cabinet whose coin acceptance is a common type for plural players. Regardless of the number of players, COIN 1 / COIN 2 ports are used.

INDIVIDUAL
Used for the type of the cabinet which has a coin acceptance chute for each player. For the COIN SW port, refer to Section 2 SPECIFICATIONS, 4 CONTROL PANEL AND BOARD I/O.

(B) CREDIT TO START (1 CREDIT, 2 CREDITS)

Sets the number of credits required when starting the game (1 CREDIT, 2 CREDITS).
(Note that in both settings, the number of credits required for CONTINUE is one).

(C) COIN / CREDIT SETTING (#1 ~ #26)

Sets the CREDIT increase increment per coin insertion. There are 26 settings from #1 to #26, expressed in OO credit as against OO COINS inserted. #26 refers to FREE PLAY. For details, refer to Table 1 (COMMON) and Table 2 INDIVIDUAL.
(D) MANUAL SETTING

The CREDIT's incremental increase settings as against a coin insertion are shown in further details than in (C) above (refer to Table 3). Also, note that when this MANUAL setting is performed, the COIN/CREDIT setting becomes ineffective.

MANUAL SETTING SCREEN

(E) COIN TO CREDIT

Determines COIN/CREDIT setting.

(F) BONUS ADDER

This sets how many COINS should be inserted to obtain one SERVICE COIN.

(G) COIN CHUTE #1 / #2 MULTIPLIER

This sets how many tokens one COIN represents.
<table>
<thead>
<tr>
<th>NAME OF SETTING</th>
<th>COIN CHUTE 1</th>
<th>COIN CHUTE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SETTING #1</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 1 CREDIT</td>
</tr>
<tr>
<td>SETTING #2</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 2 CREDITS</td>
</tr>
<tr>
<td>SETTING #3</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 3 CREDITS</td>
</tr>
<tr>
<td>SETTING #4</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 4 CREDITS</td>
</tr>
<tr>
<td>SETTING #5</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 5 CREDITS</td>
</tr>
<tr>
<td>SETTING #6</td>
<td>1 COIN 2 CREDITS</td>
<td>1 COIN 2 CREDITS</td>
</tr>
<tr>
<td>SETTING #7</td>
<td>1 COIN 2 CREDITS</td>
<td>1 COIN 5 CREDITS</td>
</tr>
<tr>
<td>SETTING #8</td>
<td>1 COIN 3 CREDITS</td>
<td>1 COIN 3 CREDITS</td>
</tr>
<tr>
<td>SETTING #9</td>
<td>1 COIN 4 CREDITS</td>
<td>1 COIN 4 CREDITS</td>
</tr>
<tr>
<td>SETTING #10</td>
<td>1 COIN 5 CREDITS</td>
<td>1 COIN 5 CREDITS</td>
</tr>
<tr>
<td>SETTING #11</td>
<td>1 COIN 6 CREDITS</td>
<td>1 COIN 6 CREDITS</td>
</tr>
<tr>
<td>SETTING #12</td>
<td>2 COINS 1 CREDIT</td>
<td>2 COINS 1 CREDIT</td>
</tr>
<tr>
<td>SETTING #13</td>
<td>2 COINS 1 CREDIT</td>
<td>1 COIN 1 CREDIT</td>
</tr>
<tr>
<td>SETTING #14</td>
<td>2 COINS 1 CREDIT</td>
<td>1 COIN 2 CREDITS</td>
</tr>
<tr>
<td>SETTING #15</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 1 CREDIT</td>
</tr>
<tr>
<td></td>
<td>2 COINS 3 CREDITS</td>
<td>2 COINS 3 CREDITS</td>
</tr>
<tr>
<td>SETTING #16</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 3 CREDITS</td>
</tr>
<tr>
<td></td>
<td>2 COINS 3 CREDITS</td>
<td>2 COINS 3 CREDITS</td>
</tr>
<tr>
<td>SETTING #17</td>
<td>3 COINS 1 CREDIT</td>
<td>3 COINS 1 CREDIT</td>
</tr>
<tr>
<td>SETTING #18</td>
<td>4 COINS 1 CREDIT</td>
<td>4 COINS 1 CREDIT</td>
</tr>
<tr>
<td>SETTING #19</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 1 CREDIT</td>
</tr>
<tr>
<td></td>
<td>2 COINS 2 CREDITS</td>
<td>2 COINS 2 CREDITS</td>
</tr>
<tr>
<td></td>
<td>3 COINS 3 CREDITS</td>
<td>3 COINS 3 CREDITS</td>
</tr>
<tr>
<td></td>
<td>4 COINS 5 CREDITS</td>
<td>4 COINS 5 CREDITS</td>
</tr>
<tr>
<td>SETTING #20</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 5 CREDITS</td>
</tr>
<tr>
<td></td>
<td>2 COINS 2 CREDITS</td>
<td>2 COINS 2 CREDITS</td>
</tr>
<tr>
<td></td>
<td>3 COINS 3 CREDITS</td>
<td>3 COINS 3 CREDITS</td>
</tr>
<tr>
<td></td>
<td>4 COINS 5 CREDITS</td>
<td>4 COINS 5 CREDITS</td>
</tr>
<tr>
<td>SETTING #21</td>
<td>3 COINS 1 CREDIT</td>
<td>1 COIN 2 CREDITS</td>
</tr>
<tr>
<td></td>
<td>5 COINS 2 CREDITS</td>
<td>5 COINS 2 CREDITS</td>
</tr>
<tr>
<td>SETTING #22</td>
<td>2 COINS 1 CREDIT</td>
<td>2 COINS 1 CREDIT</td>
</tr>
<tr>
<td></td>
<td>4 COINS 2 CREDITS</td>
<td>4 COINS 2 CREDITS</td>
</tr>
<tr>
<td></td>
<td>5 COINS 3 CREDITS</td>
<td>5 COINS 3 CREDITS</td>
</tr>
<tr>
<td>SETTING #23</td>
<td>2 COINS 1 CREDIT</td>
<td>1 COIN 3 CREDITS</td>
</tr>
<tr>
<td></td>
<td>4 COINS 2 CREDITS</td>
<td>4 COINS 2 CREDITS</td>
</tr>
<tr>
<td></td>
<td>5 COINS 3 CREDITS</td>
<td>5 COINS 3 CREDITS</td>
</tr>
<tr>
<td>SETTING #24</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 1 CREDIT</td>
</tr>
<tr>
<td></td>
<td>2 COINS 2 CREDITS</td>
<td>2 COINS 2 CREDITS</td>
</tr>
<tr>
<td></td>
<td>3 COINS 3 CREDITS</td>
<td>3 COINS 3 CREDITS</td>
</tr>
<tr>
<td></td>
<td>4 COINS 4 CREDITS</td>
<td>4 COINS 4 CREDITS</td>
</tr>
<tr>
<td></td>
<td>5 COINS 6 CREDITS</td>
<td>5 COINS 6 CREDITS</td>
</tr>
<tr>
<td>SETTING #25</td>
<td>1 COIN 1 CREDIT</td>
<td>1 COIN 6 CREDITS</td>
</tr>
<tr>
<td></td>
<td>2 COINS 2 CREDITS</td>
<td>2 COINS 2 CREDITS</td>
</tr>
<tr>
<td></td>
<td>3 COINS 3 CREDITS</td>
<td>3 COINS 3 CREDITS</td>
</tr>
<tr>
<td></td>
<td>4 COINS 4 CREDITS</td>
<td>4 COINS 4 CREDITS</td>
</tr>
<tr>
<td></td>
<td>5 COINS 6 CREDITS</td>
<td>5 COINS 6 CREDITS</td>
</tr>
<tr>
<td>SETTING #26</td>
<td>FREE PLAY</td>
<td>FREE PLAY</td>
</tr>
</tbody>
</table>
Table 2: COIN/CREDIT SETTING (COIN CHUTE INDIVIDUAL TYPE)

<table>
<thead>
<tr>
<th>NAME OF SETTING</th>
<th>EACH STATION'S COIN CHUTE</th>
<th>NAME OF SETTING</th>
<th>EACH STATION'S COIN CHUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SETTING #1</td>
<td>1 COIN 1 CREDIT</td>
<td>SETTING #21</td>
<td>3 COINS 1 CREDIT</td>
</tr>
<tr>
<td>SETTING #6</td>
<td>1 COIN 2 CREDITS</td>
<td>SETTING #22</td>
<td>2 COINS 2 CREDITS</td>
</tr>
<tr>
<td>SETTING #8</td>
<td>1 COIN 3 CREDITS</td>
<td></td>
<td>4 COINS 2 CREDITS</td>
</tr>
<tr>
<td>SETTING #9</td>
<td>1 COIN 4 CREDITS</td>
<td></td>
<td>5 COINS 3 CREDITS</td>
</tr>
<tr>
<td>SETTING #10</td>
<td>1 COIN 5 CREDITS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SETTING #11</td>
<td>1 COIN 6 CREDITS</td>
<td>SETTING #24</td>
<td>1 COIN 1 CREDIT</td>
</tr>
<tr>
<td>SETTING #12</td>
<td>2 COINS 1 CREDIT</td>
<td></td>
<td>2 COINS 2 CREDITS</td>
</tr>
<tr>
<td>SETTING #15</td>
<td>1 COIN 1 CREDIT</td>
<td></td>
<td>3 COINS 3 CREDITS</td>
</tr>
<tr>
<td></td>
<td>2 COINS 3 CREDITS</td>
<td></td>
<td>4 COINS 4 CREDITS</td>
</tr>
<tr>
<td>SETTING #17</td>
<td>3 COINS 1 CREDIT</td>
<td></td>
<td>5 COINS 6 CREDITS</td>
</tr>
<tr>
<td>SETTING #18</td>
<td>4 COINS 1 CREDIT</td>
<td>SETTING #26</td>
<td>FREE PLAY</td>
</tr>
<tr>
<td>SETTING #19</td>
<td>1 COIN 1 CREDIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 COINS 2 CREDITS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 COINS 3 CREDITS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 COINS 5 CREDITS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: MANUAL SETTING

**COIN TO CREDIT**

<table>
<thead>
<tr>
<th>COIN</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 COIN</td>
<td>1 CREDIT</td>
</tr>
<tr>
<td>2 COINS</td>
<td>1 CREDIT</td>
</tr>
<tr>
<td>3 COINS</td>
<td>1 CREDIT</td>
</tr>
<tr>
<td>4 COINS</td>
<td>1 CREDIT</td>
</tr>
<tr>
<td>5 COINS</td>
<td>1 CREDIT</td>
</tr>
<tr>
<td>6 COINS</td>
<td>1 CREDIT</td>
</tr>
<tr>
<td>7 COINS</td>
<td>1 CREDIT</td>
</tr>
<tr>
<td>8 COINS</td>
<td>1 CREDIT</td>
</tr>
<tr>
<td>9 COINS</td>
<td>1 CREDIT</td>
</tr>
</tbody>
</table>

**BONUS ADDER**

<table>
<thead>
<tr>
<th>COINS</th>
<th>EXTRA COIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 COINS</td>
<td>EXTRA COIN</td>
</tr>
<tr>
<td>3 COINS</td>
<td>EXTRA COIN</td>
</tr>
<tr>
<td>4 COINS</td>
<td>EXTRA COIN</td>
</tr>
<tr>
<td>5 COINS</td>
<td>EXTRA COIN</td>
</tr>
<tr>
<td>6 COINS</td>
<td>EXTRA COIN</td>
</tr>
<tr>
<td>7 COINS</td>
<td>EXTRA COIN</td>
</tr>
<tr>
<td>8 COINS</td>
<td>EXTRA COIN</td>
</tr>
<tr>
<td>9 COINS</td>
<td>EXTRA COIN</td>
</tr>
</tbody>
</table>

**COIN CHUTE #1/#2 MULTIPLIER**

<table>
<thead>
<tr>
<th>COIN</th>
<th>COIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 COIN</td>
<td>1 COIN</td>
</tr>
<tr>
<td>1 COIN</td>
<td>2 COINS</td>
</tr>
<tr>
<td>1 COIN</td>
<td>3 COINS</td>
</tr>
<tr>
<td>1 COIN</td>
<td>4 COINS</td>
</tr>
<tr>
<td>1 COIN</td>
<td>5 COINS</td>
</tr>
<tr>
<td>1 COIN</td>
<td>6 COINS</td>
</tr>
<tr>
<td>1 COIN</td>
<td>7 COINS</td>
</tr>
<tr>
<td>1 COIN</td>
<td>8 COINS</td>
</tr>
<tr>
<td>1 COIN</td>
<td>9 COINS</td>
</tr>
</tbody>
</table>
SYSTEM BOOKKEEPING

Allows for checking data such as number of coins inserted / number of credits / time / game frequency.

(* 1) COIN CHUTE #1, #2, (#3, #4)

Depending on Cabinet Type setting and Coin Chute setting, the number of display items and meanings are different.

When the Coin Chute Type is COMMON:
Regardless of the Cabinet Type setting, Items #1 / #2 are displayed.
Displays the number of coins inserted per COIN 1 and COIN 2 are displayed.

When the Coin Chute Type is INDIVIDUAL:
Depending on the Cabinet Type setting (1P ~ 4P), the number of items vary.
Each value for #1 ~ #4 represents the number of coins inserted by the corresponding 1P ~ 4P Players.

The display on page 2/2 varies depending on the cartridge mode.

Press the SERVICE button to alternate page 1/2 and 2/2.
Press the TEST button to have the MENU mode return to the screen.
⑧ BACKUP DATA CLEAR

Clears the contents of BOOKKEEPING.

```
BACKUP DATA CLEAR

SYSTEM DATA CLEAR
ALL DATA CLEAR
-> NO CLEAR (CANCEL)

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON
```

Press the SERVICE button to bring the "- >" to the desired item and press the TEST button to execute the desired item as follows:

(A) SYSTEM DATA CLEAR
   Clears the contents of SYSTEM BOOKKEEPING.

(B) ALL DATA CLEAR
   Clears each game's BOOKKEEPING in addition to clearing the SYSTEM BOOKKEEPING.

(C) NO CLEAR (CANCEL)
   This does not execute clearing and causes the MENU mode to return on the screen.

```
ALL DATA CLEAR
BACKUP DATA CLEAR

SYSTEM DATA CLEAR
-> ALL DATA CLEAR
NO CLEAR (CANCEL)

SYSTEM BACKUP DATA AREA CLEAR
GAME1 BACKUP DATA AREA CLEAR
GAME2 BACKUP DATA AREA CLEAR
GAME3 BACKUP DATA AREA CLEAR
GAME4 BACKUP DATA AREA CLEAR
COMPLETED

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON
```

CAUTION:
Apart from the above, the contents of BOOKKEEPING can be cleared as in (B) ALL DATA CLEAR above by changing the setting of CABINET TYPE or ALONE/MULTI of ⑤ SYSTEM ASSIGNMENTS, or the setting of ⑥ COIN ASSIGNMENTS.
EACH GAME TEST

This allows for entering the TEST mode of each game which is connected to a Cartridge Slot. The TEST MENU includes each game's INPUT TEST (Control Panel), GAME ASSIGNMENTS including Game Difficulty, BOOKKEEPING, etc. Depending on games, there are some increases/decreases as regards the necessary / unnecessary items, and also the contents vary. For details, refer to the specific Instruction Manual of each game.

EXAMPLE:  MENU SCREEN, GOLDEN AXE THE DUEL

TEST MENU
INPUT TEST
SOUND TEST
GAME ASSIGNMENTS
BOOKKEEPING
BACKUP DATA CLEAR
-> EXIT

SELECT BY SERVICE BUTTON
AND PRESS TEST BUTTON
B) FACTORY TEST MODE

This mode is intended for the development of games which employ the STV-Board, and for Factory Hardware-Check. Unless instructions are specifically given in an applicable Manual elsewhere, do not use this mode. When so required, however, enter the mode by turning the power on while keeping the TEST button pressed down. If the mode is used without specific instructions, normal operation can not be guaranteed. (During test, the COIN METER may suddenly function sometimes.)

SYSTEM CONFIGURATION

This allows for environmental setting at the development stage. For initialization, refer to the following:

```plaintext
SYSTEM CONFIGURATION

DEVELOP-MODE
SCSI-1D
SIMM-ALLOCATE
SCSI
SCSI-BOOT
HOST-TYPE
ST-V LOGO
ALONE/MULTI

-> EXIT
SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON
```
5. WIRING FOR THE BOARD

A) 2-PLAYER SIMULTANEOUS PLAY, 6-BUTTON SPECIFICATIONS (2L12B)

WIRE HARNESS used: WIRE HARN ST-V EXT8B (PART No. 600-6558-05)

The GND wire of this WIRE HARNESS is black, so be careful of this point. 
SW 1 ~ 3 correspond to JAMMA Connector. Wire SW4, SW5 and SW6. No wiring is 
required for yellow and gray wires which come from Pin Nos. 6 & 10.

```
2L12B
CONTROL PANEL

ST-V
CN21

600-6558-05

1  BLACK
2  BLACK
3  PINK  1P SW4
4  SKY BLUE  1P SW5
5  ORANGE  1P SW6
6  LIGHT GREEN
7  BROWN  2P SW4
8  PURPLE  2P SW5
9  BLUE  2P SW6
10  GRAY
11  BLACK  GND

JST 11P

PLAYER 1
1 1P START
2 2
3 3

PLAYER 2
1 2P START
3 3
4 4
5 5

---

-22-
```
B) 3–4 PLAYER SIMULTANEOUS PLAY, 3–BUTTON SPECIFICATIONS (3L9B,4L12B)

WIRE HARNESS used: 3 PLAYER; WIRE HARN ST-V EXT3P
(PART No. 600-6558-07)

4 PLAYER; WIRE HARN ST-V EXT 8B
(PART No. 600-6558-05)

The GND wire of this WIRE HARNESS is black, so be careful of this point.

1P and 2P correspond to JAMMA Connector. Wire for 3P and 4P

---

### 4L12B CONTROL PANEL

**PLAYER 1**

1. 1P START
2. 2P
3. 3P

**PLAYER 2**

1. 1P START
2. 2P
3. 3P

**PLAYER 3**

1. 1P START
2. 2P
3. 3P

**PLAYER 4**

1. 1P START
2. 2P
3. 3P

---

### ST-V CN32 WIRE HARNESS 600-6558-07

1. PINK/WHITE 3P SW1
2. SKY BLUE/WHITE 3P SW2
3. ORANGE/WHITE 3P SW3
4. LIGHT GREEN/WHITE 3P START
5. BROWN/WHITE 3P DOWN
6. PURPLE/WHITE 3P UP
7. BLUE/WHITE 3P RIGHT
8. GRAY/WHITE 3P LEFT
9. BLACK GND

---

### ST-V CN21 WIRE HARNESS 600-6558-05

1. BLACK
2. BLACK
3. PINK 4P SW1
4. SKY BLUE 4P SW2
5. ORANGE 4P SW3
6. LIGHT GREEN 4P START
7. BROWN 4P DOWN
8. PURPLE 4P UP
9. BLUE 4P RIGHT
10. GRAY 4P LEFT
11. BLACK GND

---

-23-