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**SEGA™**

**DIE HARD  
ARCADE**

**Game Service Manual**

**SEGA ENTERPRISES, INC. (USA)**

MANUAL NO. STVV-00609



## **INTRODUCTION OF THE OWNERS MANUAL**

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SEGA ENTERPRISES, LTD. , supported by its high electronic technology of LSIs, microprocessors, etc. and a wealth of experience, has for more than 30 years been supplying various innovative and popular game machines to the world market. This Service Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards ST-V, the SEGA Titan Video Games System.

This manual is intended for those who have knowledge of electricity and technical expertise especially in ICs, CRTs, microprocessors, etc. Carefully read this manual to acquire sufficient knowledge before working on the machine. Should there be a malfunction, nontechnical personnel should under no circumstances touch the interior system. Should such a case arise, contact our Main Office or the closest branch office as follows:

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The specifications note herein are subject to change without notice.

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## **PLACING & REMOVING THE CARTRIDGE**

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**CAUTION** The following procedures should be done by service personnel only.

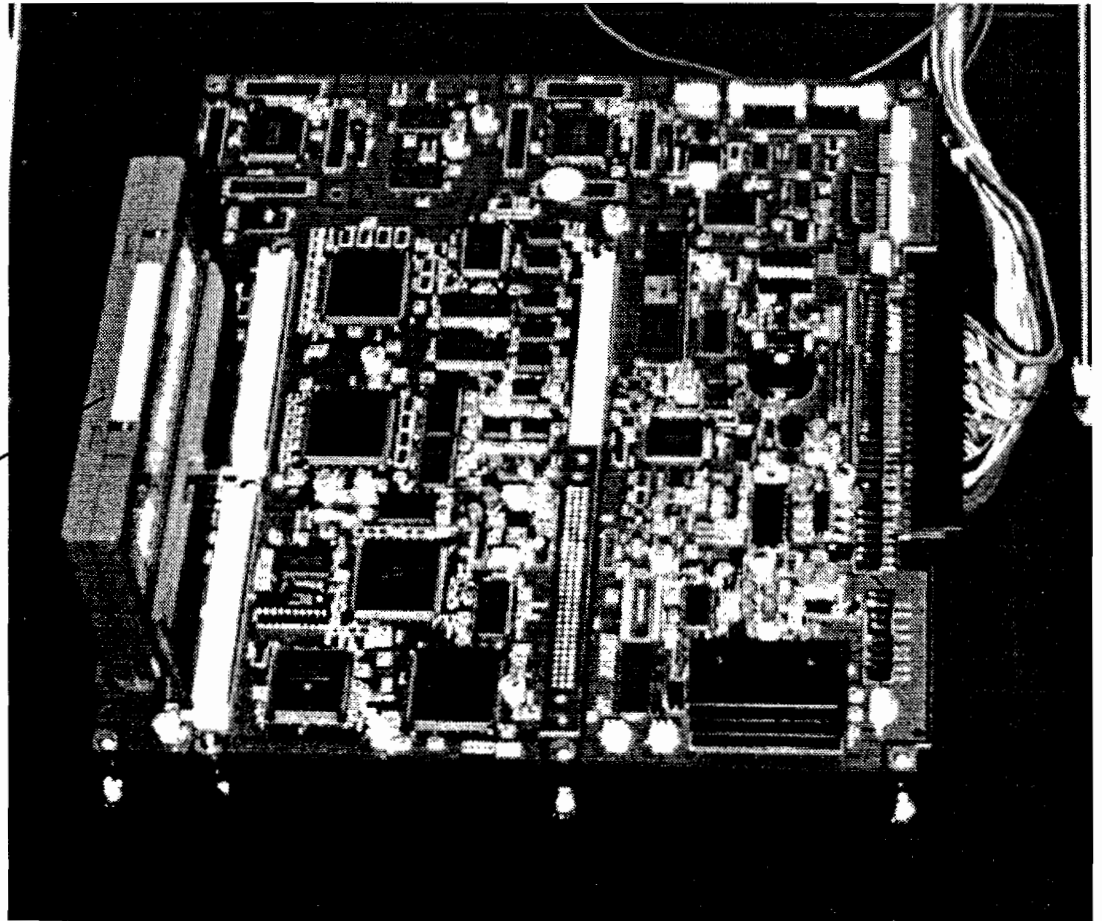
Die Hard Arcade software is a modular game cartridge for the ST-V Titan Cabinet. You simply insert the cartridge onto the Game Board located behind the rear service door of the Titan Cabinet. Open the rear service door by removing the two shipping screws and using the key. For shipping purposes, the Cartridge is inside the cash box.

**When installing /removing a Cartridge:** ensure that the Cabinet's main power is OFF.

Completely insert the Game Cartridge vertically, with the back side facing away from the Board.

When removing the Cartridge, do not try to pull it up with the Holder still remaining in a secured status. Slightly incline the Holder, and bend the catch toward the outside. Applying excessive force to the Board may cause damage such as soldering defects, etc.

*DIE HARD arcade  
Game Cartridge*



# TEST MODE

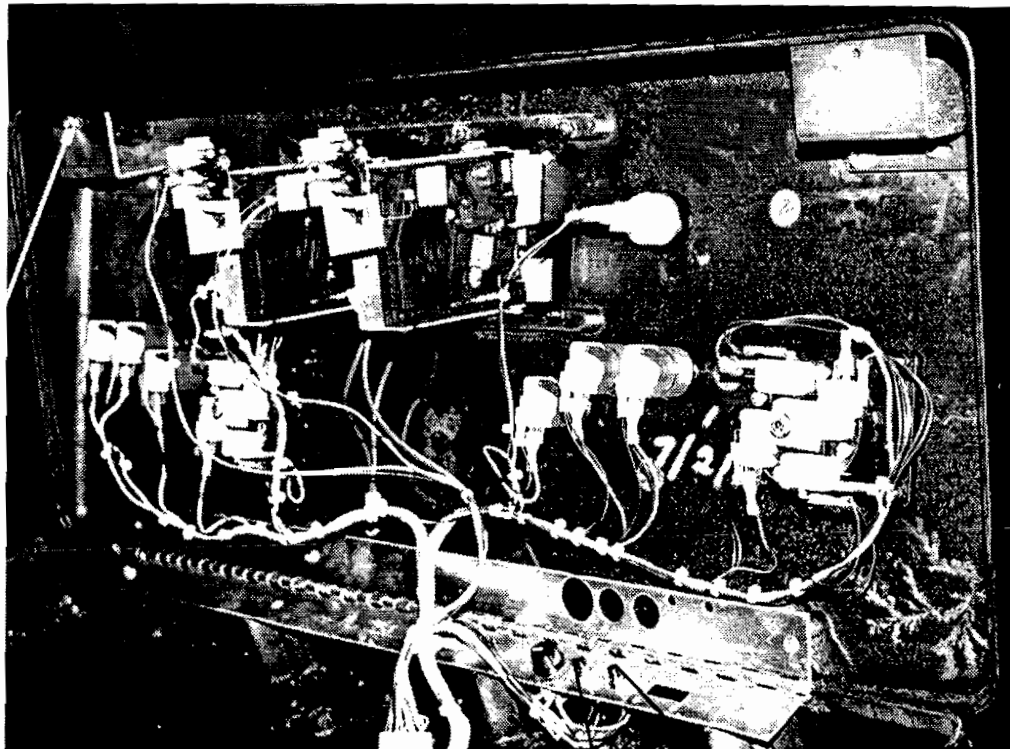
You can adjust the **Coin Assignments**, **Systems Bookkeeping**, and game play options (**Each Game Test**) by using the Service and Test buttons. Open the Control Panel by unlocking the two locks located underneath it. Swing open the Control Panel and note the Service and Test buttons on the hinge of the Control Panel. Push the **Test** button to have the **ST-V Test Menu** appear. Use the **Service** button to select a setting and **Test** button to enter the selection. Select **Exit** to finish.

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
  - [ DIE HARD ARCADE ]
  - [ ]
  - [ ]

---> EXIT

SELECT WITH SERVICE BUTTON  
AND PRESS TEST BUTTON



Test Button      Service Button

| COIN ASSIGNMENTS                                    |                 |
|---|-----------------|
| COIN CHUTE TYPE                                     | COMMON          |
| CREDIT TO START                                     | 1 CREDIT        |
| COIN/CREDIT SETTING                                 | #1              |
| COIN CHUTE #1                                       | 1 COIN 1 CREDIT |
| COIN CHUTE #2                                       | 1 COIN 1 CREDIT |
| MANUAL SETTING                                      |                 |
| --> EXIT  |                 |
| SELECT WITH SERVICE BUTTON<br>AND PRESS TEST BUTTON |                 |

*Common*

| COIN ASSIGNMENTS                                    |                 |
|---|-----------------|
| COIN CHUTE TYPE                                     | INDIVIDUAL      |
| CREDIT TO START                                     | 1 CREDIT        |
| COIN/CREDIT SETTING                                 | #1              |
| COIN CHUTE #1                                       | 1 COIN 1 CREDIT |
| MANUAL SETTING                                      |                 |
| --> EXIT  |                 |
| SELECT WITH SERVICE BUTTON<br>AND PRESS TEST BUTTON |                 |

*Individual*

## 1. COIN ASSIGNMENTS

In this mode, the setting of credit increments, etc. as against coin insertions 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 the Cabinet Coin Chute Specifications.

#### COMMON

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

#### INDIVIDUAL

Used for the type of the cabinet which has a coin acceptance chute for each player. For the COIN SW port, refer to **Control Panel** on page 13.

### (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 00 credits as against 00 COINS inserted. #26 refers to FREE PLAY. For details, refer to Table 1 (COMMON) and Table 2 (INDIVIDUAL) on the next page.

**(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 on the next page). Also, note that when this MANUAL setting is performed, the COIN/CREDIT setting becomes ineffective.

**(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.

**MANUFACTURER'S RECOMMENDED SETTINGS FOR COIN ASSIGNMENTS AND NUMBER OF COINS**

2 COINS, 1 CREDIT (Setting #12)

| COIN ASSIGNMENTS                                    |                         |
|---|-------------------------|
| MANUAL SETTING                                      |                         |
| COIN TO CREDIT                                      | 1 COIN 1 CREDIT         |
| BONUS ADDER   | NO BONUS ADDER          |
| COIN CHUTE #1                                       | MULTIPLIER              |
| COIN  | 1 COIN COUNTS AS 1 COIN |
| 1 2 3 4 5 6 7 8 9                                   |                         |
| 1 2 3 4 5 6 7 8 9                                   |                         |
| CREDIT  |                         |
| COIN CHUTE #2                                       | MULTIPLIER              |
| COIN  | 1 COIN COUNTS AS 1 COIN |
| 1 2 3 4 5 6 7 8 9                                   |                         |
| 1 2 3 4 5 6 7 8 9                                   |                         |
| CREDIT  |                         |
| --> EXIT  |                         |
| SELECT WITH SERVICE BUTTON<br>AND PRESS TEST BUTTON |                         |

Manual Setting Screen- Common

| COIN ASSIGNMENTS                                    |                         |
|---|-------------------------|
| MANUAL SETTING                                      |                         |
| COIN TO CREDIT                                      | 1 COIN 1 CREDIT         |
| BONUS ADDER   | NO BONUS ADDER          |
| COIN CHUTE #1                                       | MULTIPLIER              |
| COIN  | 1 COIN COUNTS AS 1 COIN |
| 1 2 3 4 5 6 7 8 9                                   |                         |
| 1 2 3 4 5 6 7 8 9                                   |                         |
| CREDIT  |                         |
| --> EXIT  |                         |
| SELECT WITH SERVICE BUTTON<br>AND PRESS TEST BUTTON |                         |

Manual Setting Screen - Individual

\* MANUFACTURER'S  
RECOMMENDED SETTING

| NAME OF SETTING | COIN CHUTE 1      | COIN CHUTE 2      |
|-----------------|-------------------|-------------------|
| SETTING #1      | 1 COIN 1 CREDIT   | 1 COIN 1 CREDIT   |
| SETTING #2      | 1 COIN 1 CREDIT   | 1 COIN 2 CREDITS  |
| SETTING #3      | 1 COIN 1 CREDIT   | 1 COIN 3 CREDITS  |
| SETTING #4      | 1 COIN 1 CREDIT   | 1 COIN 4 CREDITS  |
| SETTING #5      | 1 COIN 1 CREDIT   | 1 COIN 5 CREDITS  |
| SETTING #6      | 1 COIN 2 CREDITS  | 1 COIN 2 CREDITS  |
| SETTING #7      | 1 COIN 2 CREDITS  | 1 COIN 5 CREDITS  |
| SETTING #8      | 1 COIN 3 CREDITS  | 1 COIN 3 CREDITS  |
| SETTING #9      | 1 COIN 4 CREDITS  | 1 COIN 4 CREDITS  |
| SETTING #10     | 1 COIN 5 CREDITS  | 1 COIN 5 CREDITS  |
| SETTING #11     | 1 COIN 6 CREDITS  | 1 COIN 6 CREDITS  |
| SETTING #12*    | 2 COINS 1 CREDIT  | 2 COINS 1 CREDIT  |
| SETTING #13     | 2 COINS 1 CREDIT  | 1 COIN 1 CREDIT   |
| SETTING #14     | 2 COINS 1 CREDIT  | 1 COIN 2 CREDITS  |
| SETTING #15     | 1 COIN 1 CREDIT   | 1 COIN 1 CREDIT   |
|                 | 2 COINS 3 CREDITS | 2 COINS 3 CREDITS |
| SETTING #16     | 1 COIN 1 CREDIT   | 1 COIN 3 CREDITS  |
|                 | 2 COINS 3 CREDITS |                   |
| SETTING #17     | 3 COINS 1 CREDIT  | 3 COINS 1 CREDIT  |
| SETTING #18     | 4 COINS 1 CREDIT  | 4 COINS 1 CREDIT  |
| SETTING #19     | 1 COIN 1 CREDIT   | 1 COIN 1 CREDIT   |
|                 | 2 COINS 2 CREDITS | 2 COINS 2 CREDITS |
|                 | 3 COINS 3 CREDITS | 3 COINS 3 CREDITS |
|                 | 4 COINS 5 CREDITS | 4 COINS 5 CREDITS |
| SETTING #20     | 1 COIN 1 CREDIT   | 1 COIN 5 CREDITS  |
|                 | 2 COINS 2 CREDITS |                   |
|                 | 3 COINS 3 CREDITS |                   |
|                 | 4 COINS 5 CREDITS |                   |
| SETTING #21     | 3 COINS 1 CREDIT  | 1 COIN 2 CREDITS  |
|                 | 5 COINS 2 CREDITS |                   |
| SETTING #22     | 2 COINS 1 CREDIT  | 2 COINS 1 CREDIT  |
|                 | 4 COINS 2 CREDITS | 4 COINS 2 CREDITS |
|                 | 5 COINS 3 CREDITS | 5 COINS 3 CREDITS |
| SETTING #23     | 2 COINS 1 CREDIT  | 1 COIN 3 CREDITS  |
|                 | 4 COINS 2 CREDITS |                   |
|                 | 5 COINS 3 CREDITS |                   |
| SETTING #24     | 1 COIN 1 CREDIT   | 1 COIN 1 CREDIT   |
|                 | 2 COINS 2 CREDITS | 2 COINS 2 CREDITS |
|                 | 3 COINS 3 CREDITS | 3 COINS 3 CREDITS |
|                 | 4 COINS 4 CREDITS | 4 COINS 4 CREDITS |
|                 | 5 COINS 6 CREDITS | 5 COINS 6 CREDITS |
| SETTING #25     | 1 COIN 1 CREDIT   | 1 COIN 6 CREDITS  |
|                 | 2 COINS 2 CREDITS |                   |
|                 | 3 COINS 3 CREDITS |                   |
|                 | 4 COINS 4 CREDITS |                   |
|                 | 5 COINS 6 CREDITS |                   |
| SETTING #26     | FREE PLAY         | FREE PLAY         |

TABLE 1: Coin/Credit Setting (Coin Chute Common Type)



| NAME OF SETTING | EACH STATION'S COIN CHUTE  |
|-----------------|--|
| SETTING #1      | 1 COIN 1 CREDIT  |
| SETTING #6      | 1 COIN 2 CREDITS   |
| SETTING #8      | 1 COIN 3 CREDITS   |
| SETTING #9      | 1 COIN 4 CREDITS   |
| SETTING #10     | 1 COIN 5 CREDITS   |
| SETTING #11     | 1 COIN 6 CREDITS   |
| SETTING #12     | 2 COINS 1 CREDIT   |
| SETTING #15     | 1 COIN 1 CREDIT<br>2 COIN 3 CREDITS  |
| SETTING #17     | 3 COINS 1 CREDIT   |
| SETTING #18     | 4 COINS 1 CREDIT   |
| SETTING #19     | 1 COIN 1 CREDIT<br>2 COINS 2 CREDITS<br>3 COIN 3 CREDITS<br>4 COIN 5 CREDITS                       |
| SETTING #21     | 3 COINS 1 CREDIT<br>5 COINS 2 CREDITS  |
| SETTING #22     | 2 COINS 1 CREDIT<br>4 COINS 2 CREDITS<br>5 COINS 3 CREDITS   |
| SETTING #24     | 1 COIN 1 CREDIT<br>2 COIN 2 CREDITS<br>3 COINS 3 CREDITS<br>4 COINS 4 CREDITS<br>5 COINS 5 CREDITS |
| SETTING #26     | FREE PLAY  |

TABLE 2: Coin/Credit Setting (Coin Chute Individual Type)

| COIN TO CREDIT |          |
|----------------|----------|
| 1 COIN         | 1 CREDIT |
| 2 COINS        | 1 CREDIT |
| 3 COINS        | 1 CREDIT |
| 4 COINS        | 1 CREDIT |
| 5 COINS        | 1 CREDIT |
| 6 COINS        | 1 CREDIT |
| 7 COINS        | 1 CREDIT |
| 8 COINS        | 1 CREDIT |
| 9 COINS        | 1 CREDIT |

| ADDITIONAL BONUS | NO ADDITIONAL BONUS       |
|------------------|---------------------------|
|                  | 2 COINS GIVE 1 EXTRA COIN |
|                  | 3 COINS GIVE 1 EXTRA COIN |
|                  | 4 COINS GIVE 1 EXTRA COIN |
|                  | 5 COINS GIVE 1 EXTRA COIN |
|                  | 6 COINS GIVE 1 EXTRA COIN |
|                  | 7 COINS GIVE 1 EXTRA COIN |
|                  | 8 COINS GIVE 1 EXTRA COIN |
|                  | 9 COINS GIVE 1 EXTRA COIN |

| COIN CHUTE #1/#2 MULTIPLIER |                   |
|-----------------------------|-------------------|
| 1 COIN                      | COUNTS AS 1 COIN  |
| 1 COIN                      | COUNTS AS 2 COINS |
| 1 COIN                      | COUNTS AS 3 COINS |
| 1 COIN                      | COUNTS AS 4 COINS |
| 1 COIN                      | COUNTS AS 5 COINS |
| 1 COIN                      | COUNTS AS 6 COINS |
| 1 COIN                      | COUNTS AS 7 COINS |
| 1 COIN                      | COUNTS AS 8 COINS |
| 1 COIN                      | COUNTS AS 9 COINS |

TABLE 3: Manual Setting

| SYSTEM BOOKKEEPING           |             | PAGE 1/2 |
|------------------------------|-------------|----------|
| COIN CHUTE #1                |             | 0        |
| COIN CHUTE #2                |             | 0        |
| COIN CHUTE #3                |             | 0        |
| COIN CHUTE #4                |             | 0        |
| TOTAL COINS                  |             | 0        |
| COIN CREDITS                 |             | 0        |
| SERVICE CREDITS              |             | 0        |
| TOTAL CREDITS                |             | 0        |
| NUMBER OF GAMES              |             | 0        |
| TOTAL TIME                   | 0D00H00M00S |          |
| GAME PLAY TIME               | 0D00H00M00S |          |
| SERVICE BUTTON TO OTHER PAGE |             |          |
| TEST BUTTON TO RETURN        |             |          |

| SYSTEM BOOKKEEPING           |         |         |         |         | PAGE 2/2 |
|------------------------------|---------|---------|---------|---------|----------|
| CART #1                      | [       |         |         | -]      |          |
| CART #2                      | [       |         |         | -]      |          |
| CART #3                      | [       |         |         | -]      |          |
| CART #4                      | [       |         |         | -]      |          |
|                              | CART #1 | CART #2 | CART #3 | CART #4 |          |
| NUMBER OF GAMES              |         |         |         |         |          |
| NEW GAME                     | 0       | 0       | 0       | 0       | 0        |
| CONT GAME                    | 0       | 0       | 0       | 0       | 0        |
| TOTAL GAME                   | 0       | 0       | 0       | 0       | 0        |
| GAME TIME                    |         |         |         |         |          |
| AVERAGE                      | 0M00S   | 0M00S   | 0M00S   | 0M00S   |          |
| LONGEST                      | 0M00S   | 0M00S   | 0M00S   | 0M00S   |          |
| SHORTEST                     | 0M00S   | 0M00S   | 0M00S   | 0M00S   |          |
| SERVICE BUTTON TO OTHER PAGE |         |         |         |         |          |
| TEST BUTTON TO RETURN        |         |         |         |         |          |

Multi-Cartridge Mode

## 2. SYSTEM BOOKKEEPING

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

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 the have the MENU mode return to the screen.

| SYSTEM BOOKKEEPING           |  | PAGE 2/2 |
|------------------------------|--|----------|
| NUMBER OF GAMES              |  | 0        |
| NEW GAME                     |  | 0        |
| CONT GAME                    |  | 0        |
| TOTAL GAME                   |  | 0        |
| GAME TIME                    |  | 0M00S    |
| AVERAGE                      |  | 0M00S    |
| LONGEST                      |  | 0M00S    |
| SHORTEST                     |  | 0M00S    |
| SERVICE BUTTON TO OTHER PAGE |  |          |
| TEST BUTTON TO RETURN        |  |          |

Stand Alone Mode

### 3. BACKUP DATA CLEAR

Clears the contents of BOOKKEEPING.

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.

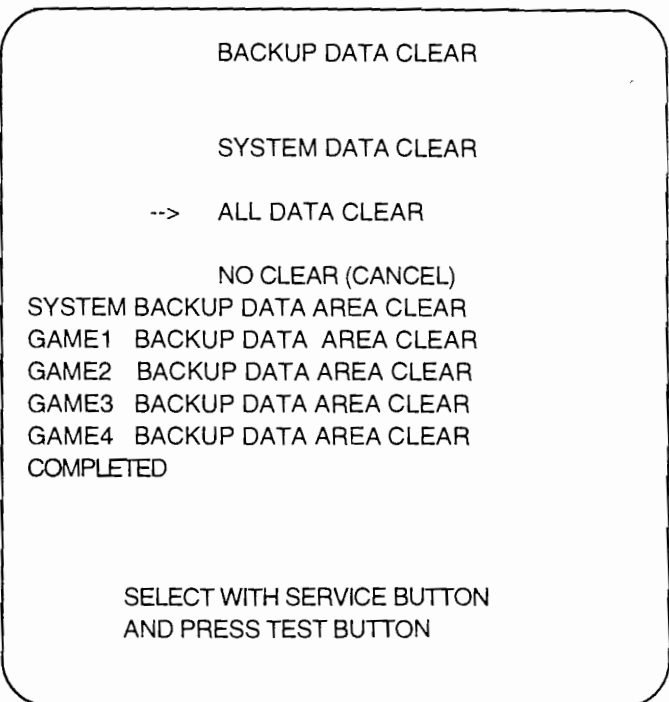
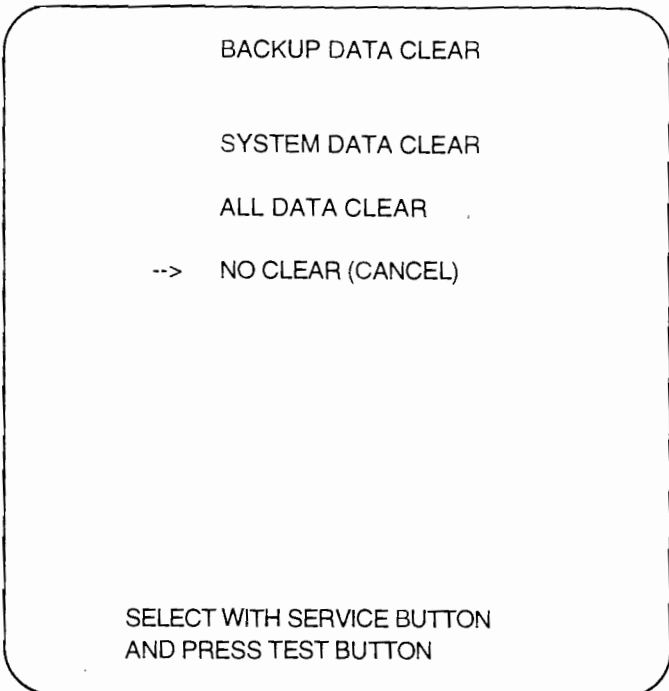
Each time a new game cartridge is installed in your Sega Titan cabinet, the back up data clear must be performed.

#### (C) No Clear (CANCEL)

This does not execute clearing and causes the MENU mode to return to the screen.

#### 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 **System Assignments** (on page 18 in the Titan Cabinet Service Manual).



*All Data Clear*

TEST MODE

INPUT TEST  
SOUND TEST  
GAME ASSIGNMENTS  
BOOKKEEPING  
BACKUP DATA CLEAR  
OUTPUT TEST  
EXIT

SELECT WITH SERVICE BUTTON  
AND PRESS TEST BUTTON

#### 4. EACH GAME TEST

##### **Input Test**

This test displays the state of each switch on the control panel.

##### **Sound Test**

This allows sound in the game to be tested.

##### **Game Assignments**

In this mode, game difficulty, levels, etc. can be changed (refer to screen below).

##### **Bookkeeping**

This allows for checking the selected frequency of each team as well as the frequencies of 1P play and Player vs. Player games.

##### **Backup Data Clear**

Clears the contents of BOOKKEEPING.

##### **Output Test**

In this mode the lamps and 7-SEG display, which are incorporated into the marquee of the Titan Video Cabinet, are tested.

## 5. GAME ASSIGNMENTS

### 1. GAME DIFFICULTY

Range: 1-8 (hardest)

### 2. INITIAL VITALITY

Range:

64, 85, 93, 102, 114, 128, 146, 171

Determines the vitality (health) of the player's character at game start.

### 3. INITIAL PLAYERS

Range: 1-4

Number of players to start game.

### 4. PAUSE BUTTON

Range: USE- NO\_USE

Must be set at NO\_USE. This feature is not available on this game.

### 5. VIOLENCE MODE

Range: ON-OFF

Controls depiction of graphic violence during game play.

#### GAME ASSIGNMENTS

SELECT WITH SERVICE BUTTON  
AND PRESS TEST BUTTON

|   |                    |          |
|---|--------------------|----------|
| 1 | GAME DIFFICULTY    | (4)      |
| 2 | INITIAL VITATILITY | (114)    |
| 3 | INITIAL PLAYERS    | (1)      |
| 4 | PAUSE BUTTON       | (NO_USE) |
| 5 | VIOLENCE MODE      | (ON)     |

## GAME FEATURES

Characters have over 1000 moves.

Over 30 characters.

Multiple weapons, including: Hand Gun, Machine Gun, Missile Launcher, Anti-Tank rifle, Knife, Fire Axe, Broken bottle, Club, Iron Pipe, Pepper Spray, Hair Spray w/ lighter (Flamethrower)

Players operate characters to advance while attacking enemies with the punch and kick features and weapons.

Defeat all enemies in a stage to advance to the next stage.

It is possible to take weapons from the enemy and use them.

Game is over when life gauge reaches zero.

Players may join the game at any time during play.

Building map is displayed between stages.

# PIN ASSIGNMENTS

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

| COMPONENT SIDE     |      | SOLDER SIDE        |
|--------------------|------|--------------------|
| GND                | 1 A  | GND                |
| GND                | 2 B  | GND                |
| +5V                | 3 C  | +5V                |
| +5V                | 4 D  | +5V                |
| ( NOT USED )       | 5 E  | ( NOT USED )       |
| +12V               | 6 F  | +12V               |
| ( NOT USED )       | 7 H  | ( NOT USED )       |
| COIN METER 1       | 8 J  | COIN METER 2       |
| ( COIN LOCKOUT 1 ) | 9 K  | ( COIN LOCKOUT 2 ) |
| SPEAKER (+)        | 10 L | SPEAKER (-)        |
| ( NOT USED )       | 11 M | ( NOT USED )       |
| RED                | 12 N | GREEN              |
| BLUE               | 13 P | SYNC.              |
| GND (SYNC.)        | 14 R | SERVICE            |
| TEST               | 15 S | ( NOT USED )       |
| <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             |
| ( NOT USED )       | 25 c | ( NOT USED )       |
| ( GAME SELECT )    | 26 d | ( PAUSE )          |
| GND                | 27 e | GND                |
| GND                | 28 f | GND                |

56P P=3.96mm

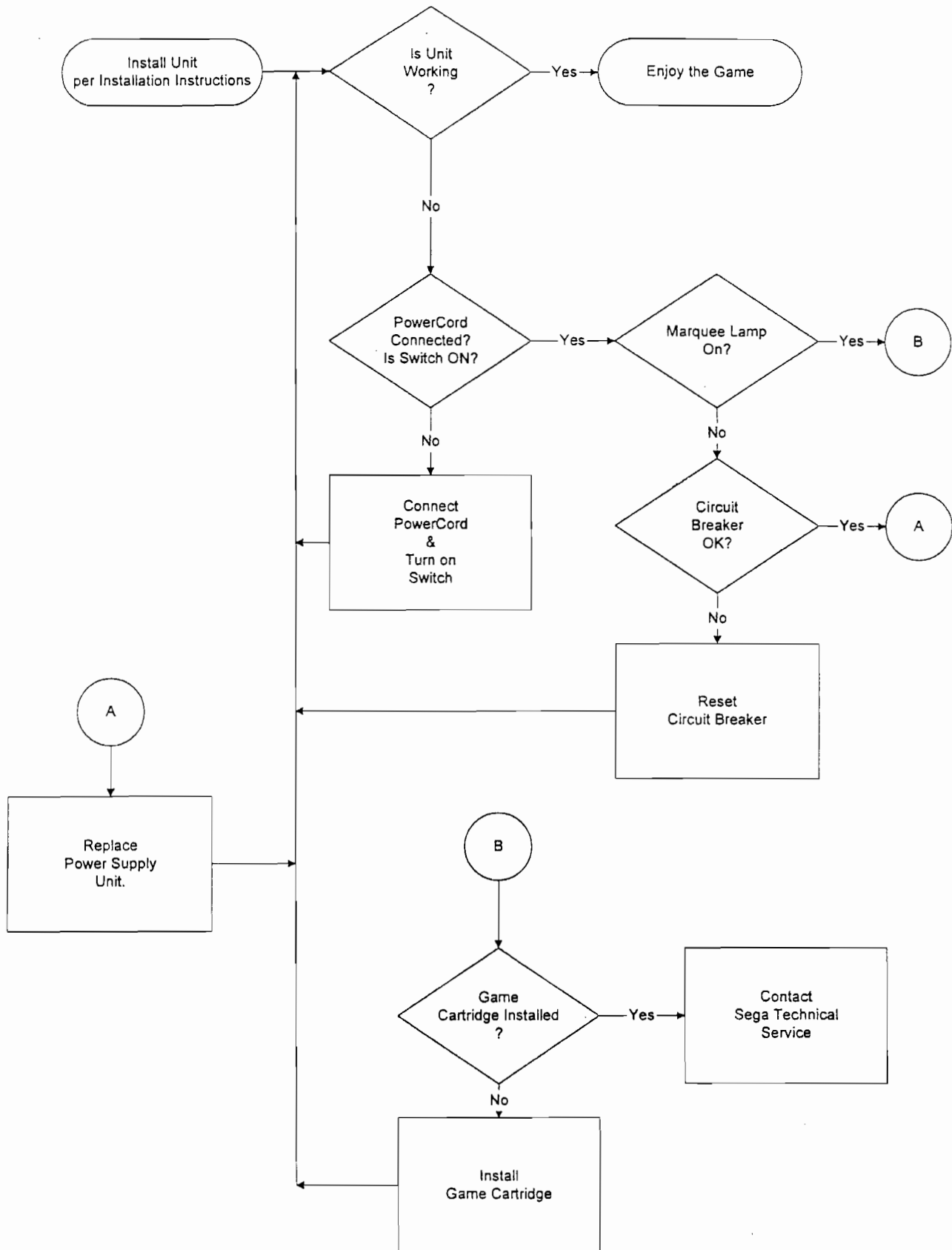
SW1: Swing/Pitch  
SW2: Steal  
SW3: Bunt/Time out

## Extension I/O Port (2L12B)

| CN 21<br>JST 11P |                   |
|------------------|-------------------|
| 1                | GND               |
| 2                | GND               |
| 3                | 1P SW4            |
| 4                | 1P SW5            |
| 5                | 1P SW6            |
| 6                | (1P SW7) NOT USED |
| 7                | 2P SW4            |
| 8                | 2P SW5            |
| 9                | 2P SW6            |
| 10               | (2P SW7) NOT USED |
| 11               | GND               |

| CN 32<br>JST 8P |          |
|-----------------|----------|
| 1               | 3P SW1   |
| 2               | 3P SW2   |
| 3               | 3P SW3   |
| 4               | 3P START |
| 5               | 3P DOWN  |
| 6               | 3P UP    |
| 7               | 3P RIGHT |
| 8               | 3P LEFT  |
| 9               | GND      |

| CN 21<br>JST 11P |          |
|------------------|----------|
| 1                | GND      |
| 2                | GND      |
| 3                | 4P SW1   |
| 4                | 4P SW2   |
| 5                | 4P SW3   |
| 6                | 4P START |
| 7                | 4P DOWN  |
| 8                | 4P UP    |
| 9                | 4P RIGHT |
| 10               | 4P LEFT  |
| 11               | GND      |



**TROUBLESHOOTING CHART**

# GRAPHICS IDENTIFICATION





## HARDWARE and FASTENERS

| ITEM NO. | DESCRIPTION                          | LOCATION   |
|----------|--------------------------------------|--|
| 80       | BOLT,CARRIAGE,#10-24X1,BLK,ZNC       | Joystick to Control Panel Top                        |
| 81       | NUT,KEP,#10-24,CLR,ZNC               | Joystick to Control Panel Top                        |
| 82       | BOLT,CARRIAGE,1/4-20X 1-1/2",CLR,ZNC | Bottom Control Panel to Cabinet                      |
| 83       | NUT,KEP,1/4-20,CLR,ZNC               | Bottom Control Panel to Cabinet                      |
| 84       | SCR,#6-19X3/8,PAN,PHIL,P/T,BLK,NIC   | Speaker Grill to Monitor Bezel                       |
| 85       | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC  | Control Panel Hinge to Control Panel Upper and Lower |
| 86       | SCR,1/4-10X3/4,PAN,PHIL,P/T,BLK,NIC  | Marquee Housing to Main Cabinet                      |
| 87       | SCR,1/4-10X3/4,PAN,PHIL,P/T,BLK,NIC  | Marquee Bracket to Main Cabinet                      |
| 88       | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC  | Coin Chute to Front Panel Main Cabinet               |
| 89       | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC  | Panel Support Lanyard to Main Cabinet                |
| 90       | SCR,#8X3/8, SHEETMETAL               | Rear Door Support Lanyard                            |
| 91       | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC  | Fluorescent Fixture to Marquee Box                   |
| 92       | SCR,1/4-10X3/4,PAN,PHIL,P/T,BLK,NIC  | Upper an Lower Monitor Brackets                      |
| 93       | SCR,1/4-10X3/4,PAN,PHIL,P/T,BLK,NIC  | Lower Front Cabinet to Main Cabinet                  |
| 94       | WSR,FLT,#6,CLR,ZNC                   | Lanyard to Rear Door                                 |
| 95       | SCR,1/4-10X3/4,PAN,PHIL,P/T,BLK,NIC  | Cabinet Kickplate                                    |
| 96       | SCR,#6-19X3/4,PAN,PHIL,P/T,BLK,NIC   | Marquee Glass to Bezel                               |
| 97       | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC  | Marquee Bezel to Marquee Box                         |
| 98       | SCR,#10-14X3/4,PAN,PHIL,P/T,BLK,NIC  | Monitor Bezel to Main Cabinet                        |
| 99       | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC  | Speaker to Monitor Bezel                             |
| 100      | SCR,#6-32X1/2, PAN,PHIL, BLK NIC     | Titan PCB to Rear Door                               |
| 101      | NUT,KEP,1/4-20,CLR,ZNC               | Secure Monitor to Monitor Brackets                   |
| 111      | WSR,1/4,FLT,CLR ZNC,750 OD           | Secure Monitor to Monitor Brackets                   |
| 112      | BOLT,CARRIAGE,1/2-13X2-1/2,CLR,ZNC   | Secure Base Plate to Main Cabinet                    |

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| 113 | WSR,FENDER,1/2",CLR,ZNC,USS         | Secure Base Plate to Main Cabinet         |
| 114 | WSR,LCK.1/2",CLR,ZNC                | Secure Base Plate to Main Cabinet         |
| 115 | NUT,1/2-13,CLR,ZNC                  | Diamond PlateBase to MainCabinet          |
| 116 | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC | Power Supply to Main Cabinet              |
| 117 | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC | Hinge to Upper Control Panel              |
| 118 | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC | Hinge to Lower Control Panel              |
| 119 | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC | Grnd Srtip to Main Cabinet                |
| 120 | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC | Lanyard to Control Upper and Lower        |
| 121 | SCR,#8X3/8, SHEETMETAL              | Monitor Remote PCB to Control Panel Lower |
| 122 | SCR,#8-16X1/2,PAN,PHIL,P/T,BLK,NIC  | Control Panel Lock Latch                  |
| 123 | SCR,#10-14X1/2,PAN,PHIL,P/T,BLK,NIC | Control Panel Lock Latch                  |
| 124 | BOLT,CARRIAGE,#10-24X1,BLK,ZNC      | Coin Mech to Control Panel Upper          |
| 125 | NUT,KEP,#10-24,CLR,ZNC              | Coin Mech to Control Panel Upper          |
| 126 | NUT,KEP,#8-32,CLR,ZNC               | Gnd Strip                                 |
| 127 | SCR,#4-40X3/8,PAN,PHIL,BLK,NIC      | Coin Meter to Hinge                       |
| 128 | WSR,FLT,#6,CLR,ZNC                  | Back Door Gnd to Titan PCB                |

# DIE HARD ARCADE COMMENTS

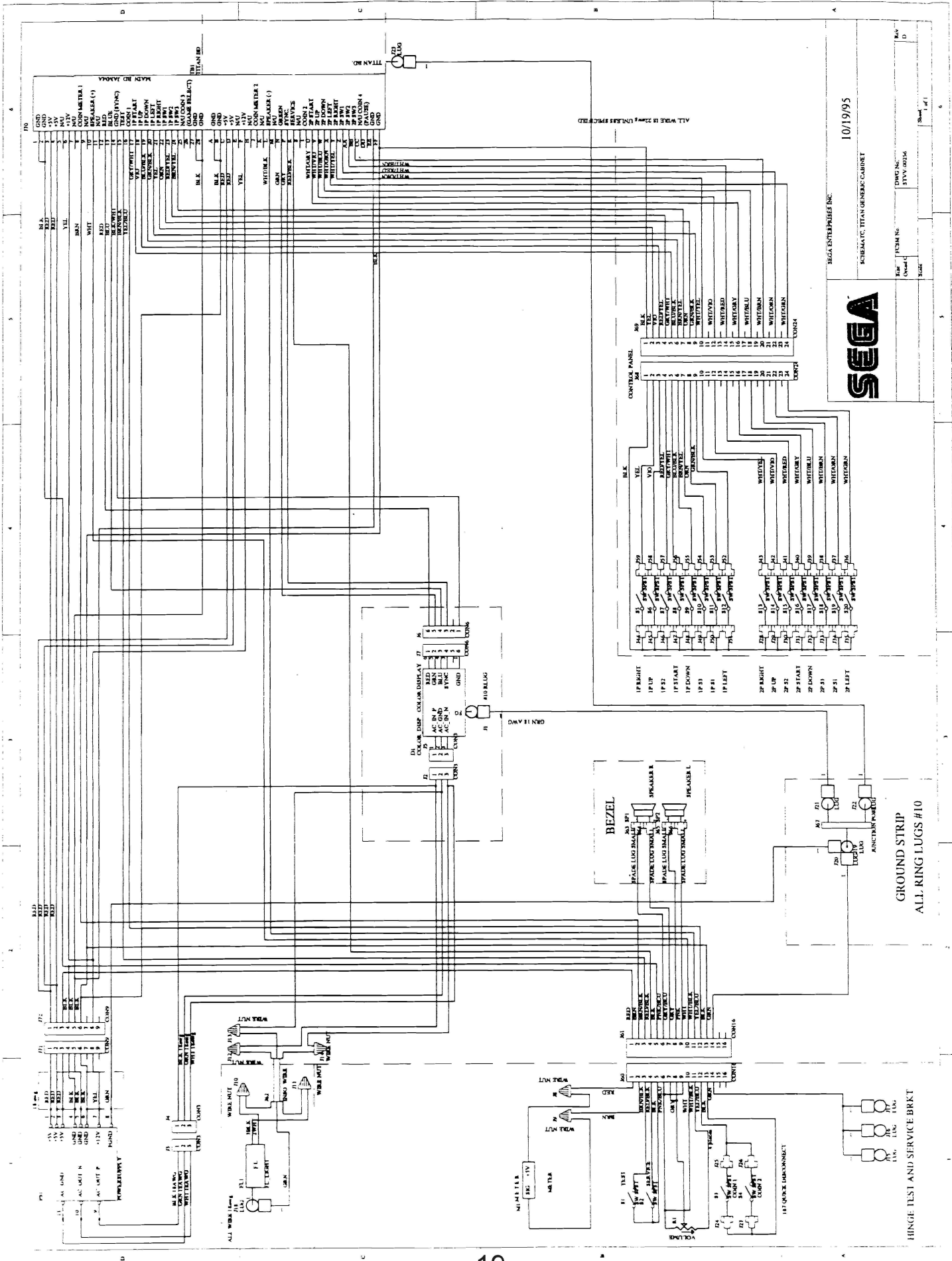
SEGA has made every effort to ensure that this manual is accurate. If you find any errors or omissions, or have other comments on the Super Major League manual, please write them below, detach, and deliver this page by FAX or mail to:

SEGA ENTERPRISES INC. (USA)  
ATTN: Engineering Dept.  
45133 Industrial Drive  
Fremont, CA 94538 USA  
FAX: (415) 802-1754

Comments: \_\_\_\_\_  
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Optional Identification Information:

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SEGA ENTERPRISES INC.  
SCHEMATIC: TITAN GENESIS CABINET



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GROUND STRIP  
ALL RING LUGS #10

HINGE TEST AND SERVICE BRKT  
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