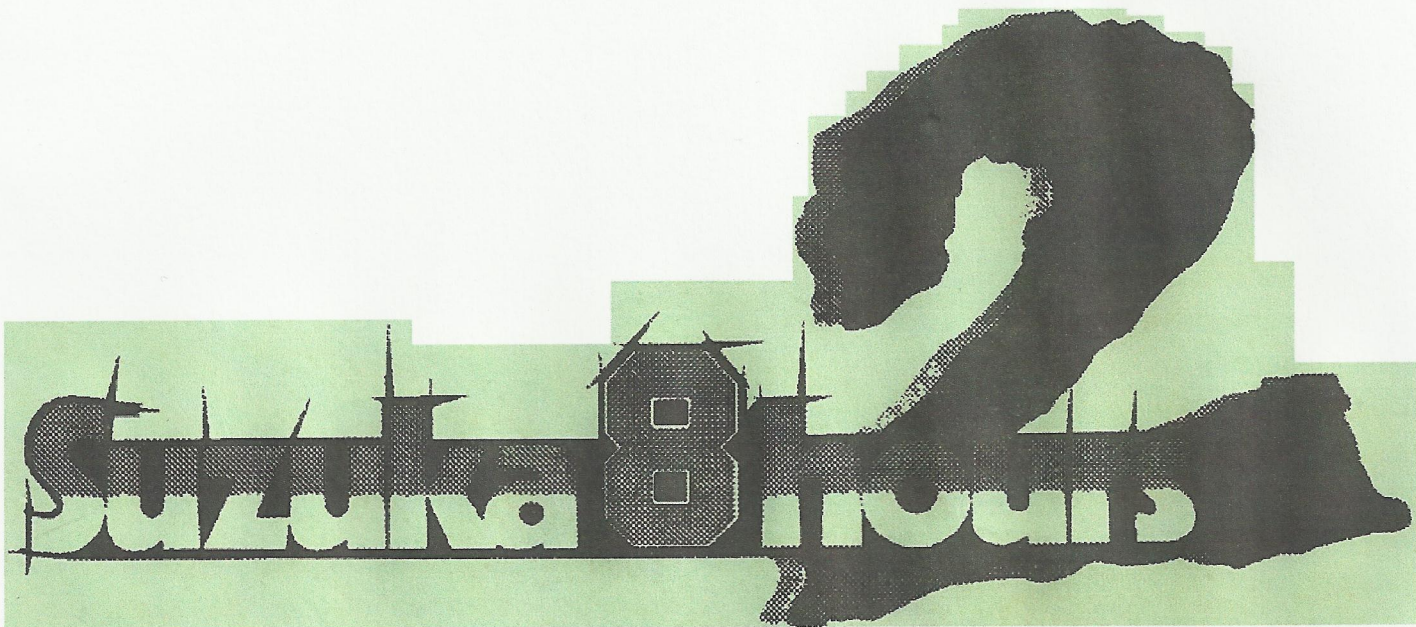


namco®



Operators Manual

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1. SPECIFICATIONS

POWER SUPPLY: PC XT Type Switching Power Supply

POWER CONSUMPTION:

Game Cabinet 150 Watts
 Tower (where applicable) 150 Watts

MONITORS:

Game Cabinet 2 standard 25" Color Monitors
 Tower (where applicable) 1 standard 27" Color Monitor
 (all with auto degause and remote adjustment boards)

INSTALLED DIMENSIONS:	Width	Depth	Height
Two-player Unit	79 1/2"	74"	75"
Four-player Unit	183"	87"	81 1/2"

CARTON DIMENSIONS:	Width	Depth	Height
Game Cabinet Carton	73"	32"	58"
Motorcycle Assy. Carton	56"	38"	39"
Marquee Panels	26"	34"	5 3/4"
Spectator Tower Base	61"	26"	26"
Spectator Tower Display	73"	26"	30"

SHIPPING WEIGHT:

Game Cabinet Carton 366 lbs.
 Marquee Panels Carton 48 lbs.
 Motorcycle Assy. Carton 183 lbs.
 Tower Base Carton 228 lbs.
 Tower Display Carton 285 lbs.

ACCESSORIES:

Keys: (Coin Box) 2
 (Coin Door) 2
 (Rear Door) 2
 Security Wrench 2
 Leg Levelers:
 (Game Cabinet) 4
 (Motorcycle Assy.) 2
 (Tower) 3
 Numeral Decal Set 1
 Link Cable 1
 Instruction Manual 1

Note: Specifications may change without prior notice. Modification and/or alteration of the Suzuka 8 hours™ game with kits or parts not supplied by NAMCO may void the warranty.

2. PRECAUTIONS

2-1 Caution when installing

This game is designed for indoor use only. The game should not be installed outdoors or under the following conditions:

- a. In areas directly exposed to sunlight, high humidity, direct water contact, dust, high heat or extreme cold.
- b. In locations that would present an obstacle in case of emergency, i.e. near fire equipment or emergency exits.
- c. On an unstable surface or floor subject to other vibration.

2-2 Caution when handling/transporting

- a. Do not subject game to physical shock when transporting or moving it.
- b. AC power sources should be via dedicated circuits.
- c. The cabinet should be grounded with a securely connected ground plug.
- d. Care should be taken at all times to avoid electrical shock whenever inspecting or adjusting the game, particularly around the video monitor.
- e. To unplug AC cords from electrical outlets, grasp the plug, never the cord.
- f. Power should always be turned off before replacing any parts or connecting/disconnecting any connectors.
- g. DO NOT attempt to repair the Printed Circuit Boards (PCBs) on site. They contain sensitive chips that could easily be damaged by even the small voltage of a multi-meter. Always return PCBs to your distributor for repairs. Failure to do so will void the warranty.
- h. Before moving any assembly, make sure that the leg levelers are in the highest position and the unit(s) rest only on the casters.
- i. When moving, separate the game into individual units (Game Cabinet, Motorcycle Assembly, Tower, etc.).

3. GAME COMPONENTS

3-1 Carton Contents

The Suzuka 8 Hours™ Game components are packaged in individual cartons, i.e:

1. Game Cabinet Carton – Game PCBs and two monitors preinstalled.
2. Motorcycle Assembly Carton – one motorcycle frame and body preattached to the bearing assembly and stand.
3. Two-player Marquee Panel Carton – one three-piece Marquee Panel for attachment to the cabinet top.
4. Tower Base Carton – one tower pylon, two cross beam support legs, and three filler panels.
5. Tower Display Carton – one display monitor, with LEDs and two back-lighted acrylic graphic panels preinstalled.

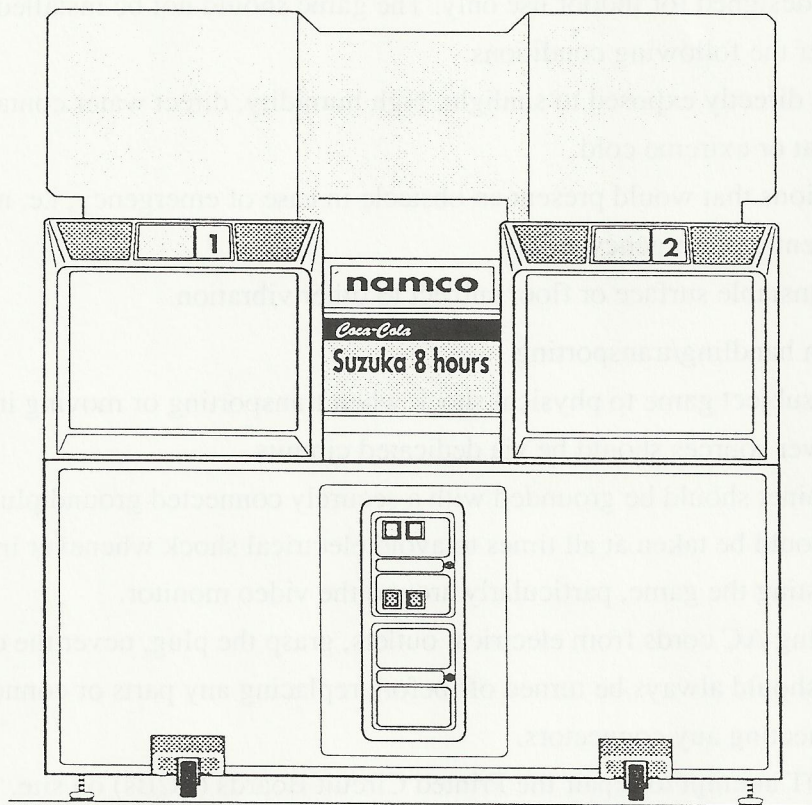


Illustration 3-1, GAME CABINET WITH TWO-PLAYER MARQUEE

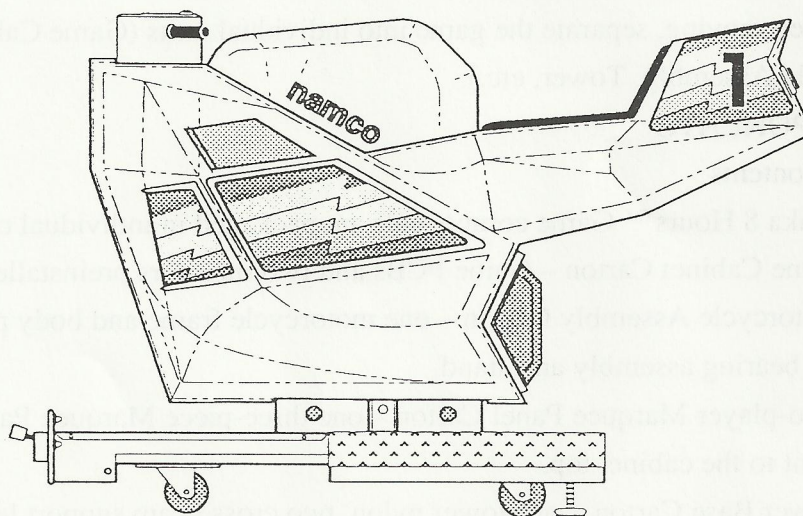


Illustration 3-2, MOTORCYCLE ASSEMBLY

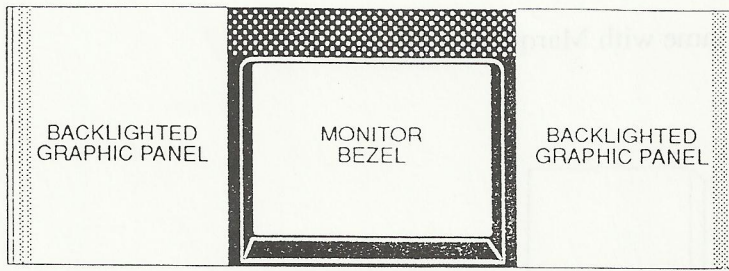


Illustration 3-3, TOWER MONITOR BEZEL AND GRAPHICS

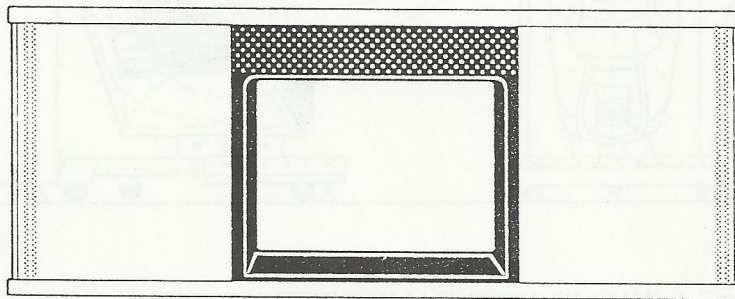


Illustration 3-4, TOWER MONITOR DISPLAY ASSEMBLY

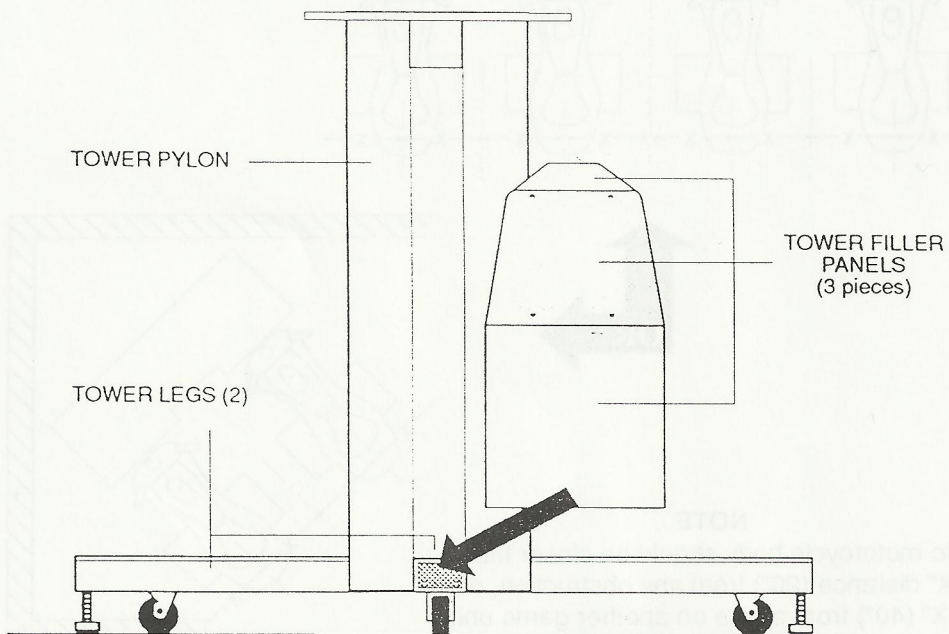


Illustration 3-5, TOWER PYLON, LEGS AND FILLER PANEL

3-2 Game Configuration

3-2-1 Two-player Game with Marquee

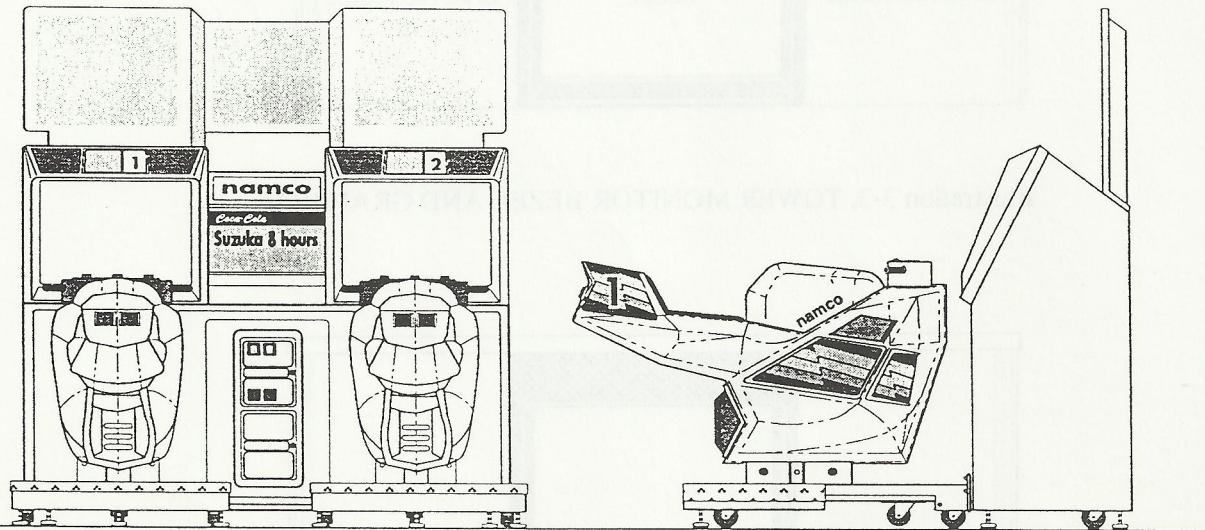


Illustration 3-6, TWO-PLAYER GAME CONFIGURATION

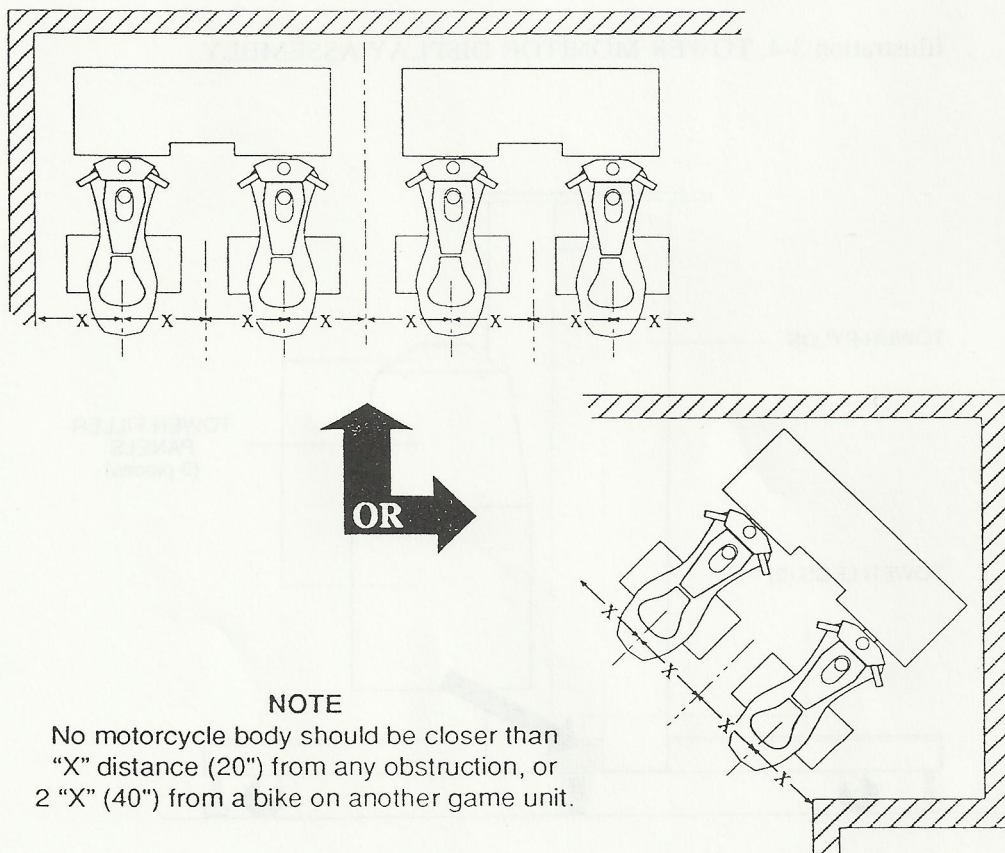


Illustration 3-7, TWO-PLAYER LAYOUT PLAN

3-2-2 Four player game with Tower

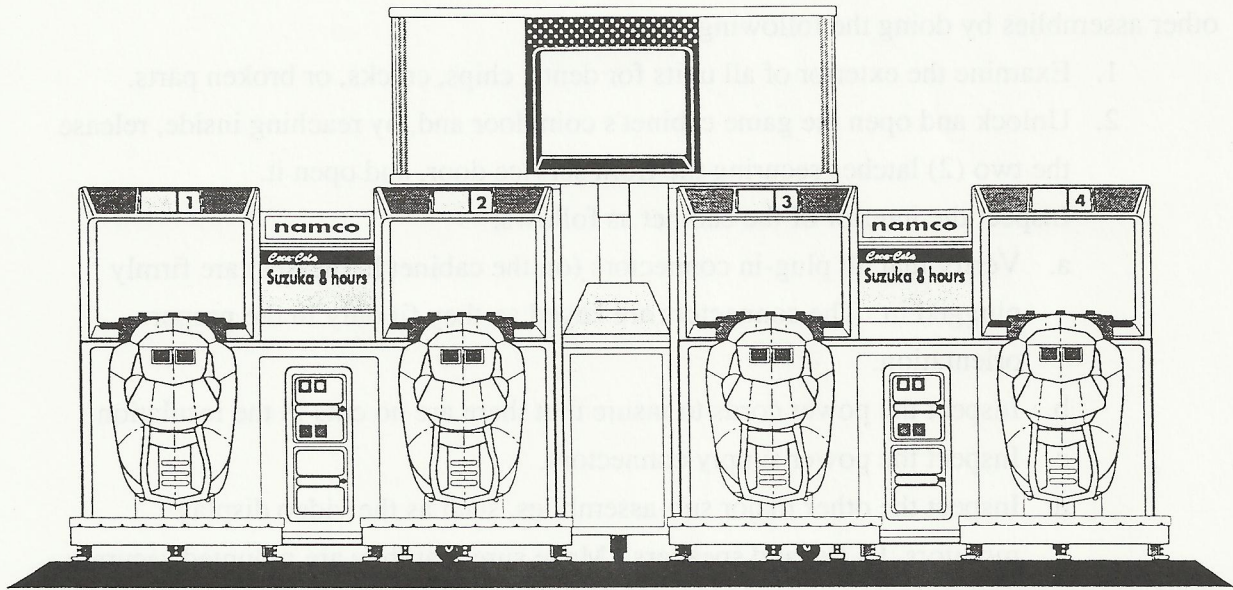
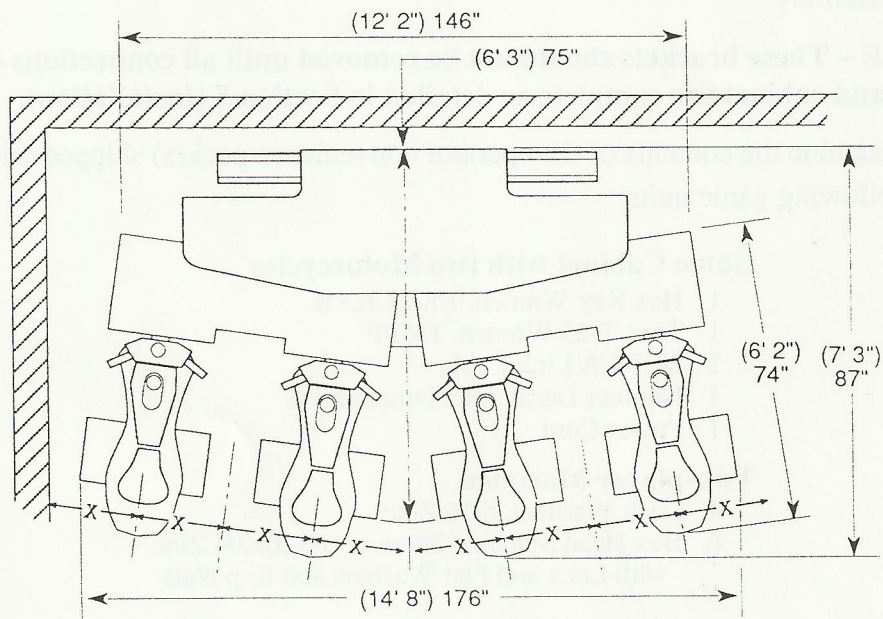


Illustration 3-8, FOUR-PLAYER GAME CONFIGURATION



NOTE

No motorcycle body should be closer than "X" distance (20") from any obstruction, or 2 "X" (40") from a bike on another game unit.

Illustration 3-9, FOUR-PLAYER LAYOUT PLAN

4. INSPECTION

The contents of all cartons should be carefully inspected upon receipt to insure that the game is complete and was delivered in good condition. Inspect the game cabinet and other assemblies by doing the following:

1. Examine the exterior of all units for dents, chips, cracks, or broken parts.
2. Unlock and open the game cabinet's coin door and, by reaching inside, release the two (2) latches securing the front service door, and open it.

Inspect the interior of the cabinet as follows:

- a. Verify that all plug-in connectors (on the cabinet harnesses) are firmly plugged in. The connectors are keyed so they fit only in the proper orientation.
 - b. Inspect the power cords to insure that there are no cuts in the insulation.
 - c. Inspect the power supply connectors.
 - d. Inspect the other major sub-assemblies, such as the video display monitors, PCBs, and speakers. Make sure that they are mounted securely and that all ground wires are firmly connected.
 - e. Remove the PCB shipping blocks (2 screws each).
3. Locate the metal shipping brackets on each side of the lower Motorcycle Assembly.

NOTE – These brackets should not be removed until all connections of the bike and cabinet are complete as detailed in Section 5 (Installation).

4. Examine the contents of the operator convenience pack(s) shipped with the following game units:

Game Cabinet with two Motorcycles

- 1 Hex Key Wrench, 1/8 CCRAB
- 1 Torx T-25 Wrench, TMPF
- 1 24' RCA Link Cable
- 1 Number Decal Set, Numerals 1-4
- 1 Power Cord

Two-player Marquee

- 4 Lock Washers, 6/16 Zinc
- 6 Hex Head Machine Screws, 1/4-20x3/4 Zinc
with Lock and Flat Washers and Kep Nuts

Spectator Tower Unit

- 12 Hex Head Machine Screws, 5/16-18x3/4 Zinc
with Lock and Flat Washers
- 11 Hex Head Machine Screws, 1/4-20x3/4 Zinc
with Lock and Flat Washers
- 4 Button Head Machine Screws, 10-24x3/4, Zinc
- 8 #10 Flat Washers
- 1 Hex Key Wrench, 1/8 CCRAB
- 1 6' RCA Link Cable

5. INSTALLATION

NOTE: If installing only individual (two-player) game units, skip the next section and proceed to Section 5-3 on page 10.

5-1 Four-Player Game Installation

You have received a 4-player Suzuka 8 hours game, shipped in 8 cartons. When set up, the game will consist of two 2-player game cabinets with two motorcycles each. The two cabinets will be connected by a set of 4-player center filler panels that will position the cabinets at the proper angle and distance. A seven foot high Spectator Tower with a 27 inch monitor and LED scoreboard will be located above and behind the center panels and the game cabinets. (Refer to page 6.)

1. Remove all assemblies and parts from the eight (8) shipping containers and prepare to assemble them in the intended area of operation.
2. Open the game cabinets, the tower base and the tower monitor cabinet to insure that no connectors or wires have come loose and that no damage has occurred during shipment.

5-2 Spectator Tower Assembly

5-2-1 Assembling Tower Base

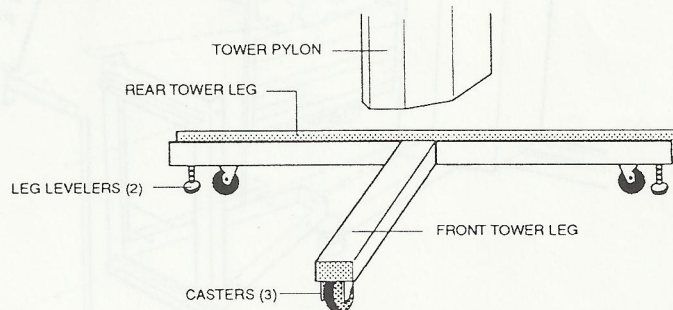


Illustration 5-1, ASSEMBLING TOWER BASE

- a. Install the Spectator Tower first by attaching the front (shorter) tower leg to the rear leg to form a "T" shape by using the two (2) hex head bolts provided in the monitor tower accessories kit.
- b. Place the Tower Pylon on it's back and attach the legs with the four (4) hex head bolts from the accessories kit.
- c. Lift the base upright and move it to where the game will be operated.
- d. Lower the leg levelers until the rear casters clear the floor.

5-2-2 Attaching the Tower Monitor

CAUTION – FOUR (4) PEOPLE ARE REQUIRED TO LIFT THE MONITOR CABINET.

- a. Move the spectator tower monitor cabinet (Ref. Illustration 3-4, page 4) near the tower pylon and insure that all five (5) connectors in the tower base are below the top, but are still accessible.

- b. WITH A MINIMUM OF FOUR (4) PEOPLE, lift the tower monitor cabinet and place it on top of the tower base. **DO NOT LEAVE THE MONITOR CABINET UNATTENDED AT THIS POINT!**
- c. Line up the bolt holes and secure the monitor with the four (4) bolts from the monitor tower accessory kit.
- d. Open the back door of the monitor cabinet and connect the five (5) connectors (paying close attention to any lables) from the tower base to the monitor cabinet.
- e. Secure the back door, raise the leg levelers, move the tower into its final operating position, and then lower both (2) leg levelers until the casters are clear of the floor.

5-2-3 Installing the 4-Player Center Filler Panels

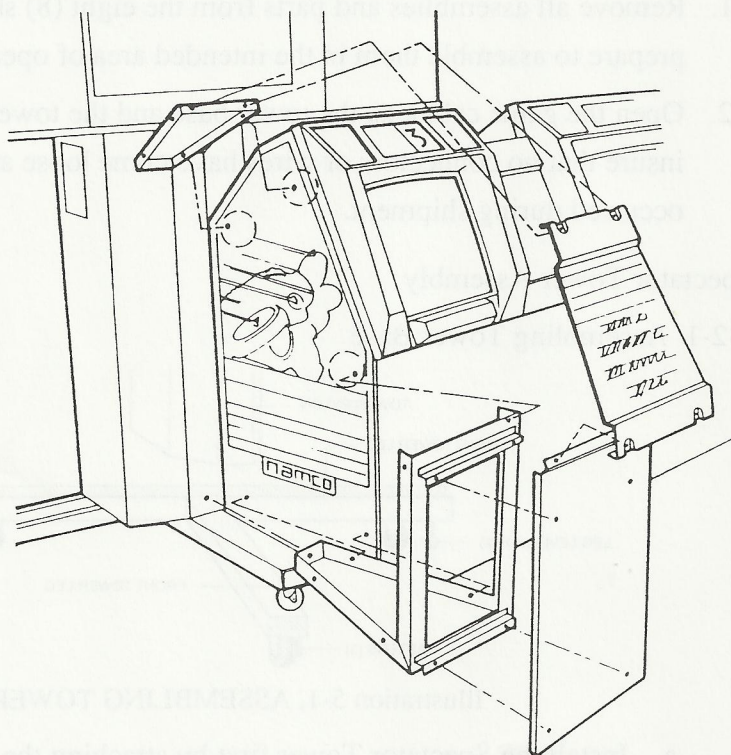


Illustration 5-2, TOWER FILLER PANELS

- a. Remove the two (2) hex head bolts, near the bottom, from the sides of the game cabinets to be placed together. These bolts will be used to secure the filler panel later.
- b. Locate the three (3) holes (two on the top and one near the front center) covered by the side decal, and cut the decal to expose the holes.
- c. Remove the front cover of the lower (L-shaped) filler panel by removing the four (4) screws securing it to the panel frame.
- d. Place the filler panel frame on the front leg of the tower assembly and insert one (1) of the hex head bolts (provided in the tower accessories kit) through the bottom back section of the frame into the tower base. **DO NOT TIGHTEN** the bolt until step (j).

- e. With the filler panel frame resting on the front leg of the tower assembly, move one of the game cabinets into position next to the frame.
- f. Use the game cabinet leg levelers to adjust the cabinet until it is parallel to the filler panel and the three (3) holes line up.
- g. Secure the panel frame to the game cabinet with one (1) of the hex head bolts and the two (2) bolts previously removed from the game cabinet in step (a).
- h. Secure the upper filler panel to the top, side wall of the same game cabinet, into the holes provided, with two (2) hex head bolts from the accessories kit.
- i. Move the second game cabinet into position and secure both the lower panel frame and upper panel to it with five (5) hex head bolts. The leg levelers should be used with the second game cabinet in the same manner as in step (f).
- j. Tighten the bottom back bolt in the lower filler panel frame to the tower base.
- k. Reattach and secure the lower front cover to the filler panel frame with the four (4) screws previously removed in step (c).
- l. Attach the graphic front panel to the upper and lower panels using the four (4) allen head screws, from the accessories kit, securing them into the weld nuts on the panels.

5-3 Attaching the Motorcycle Assembly to the Game Cabinet

- a. Roll a motorcycle assembly up to the front of the game cabinet.
- b. Remove the six (6) bolts from the bike base arm (refer to Illustration 5-4).
These bolts will be reinstalled to secure the bike assembly.

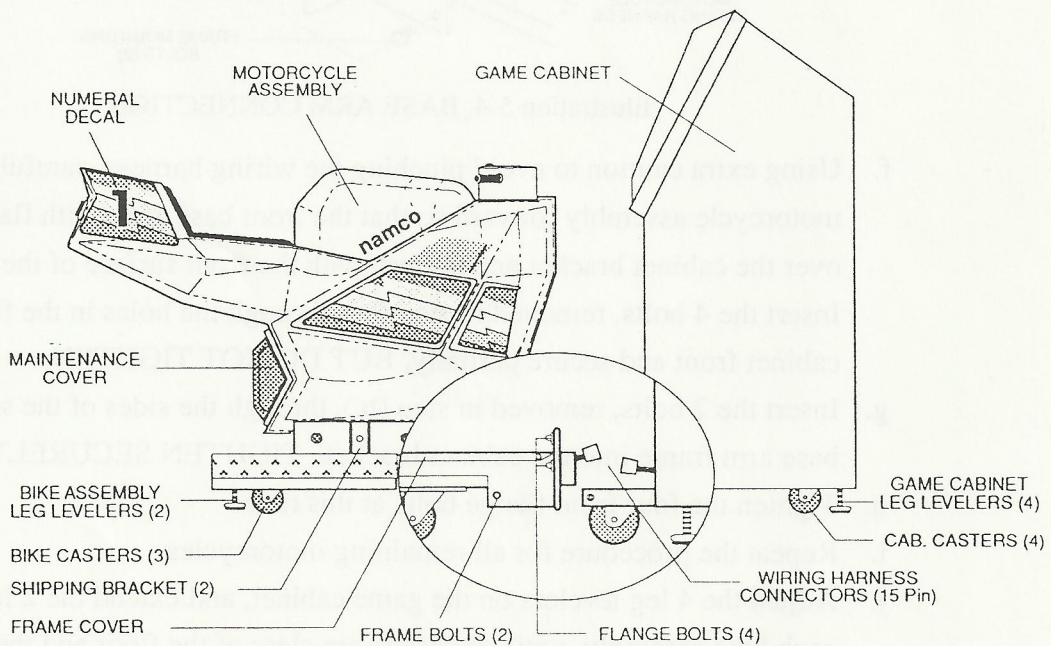


Illustration 5-3, BIKE AND CABINET READY FOR CONNECTION

- c. Each Motorcycle Assembly has a rectangular flange on the front of its base. (Refer to Illustration 5-4). A 15 pin connector attached to the motorcycle wiring harness should protrude through the center hole of this flange. If it does not, gently pull it out with some slack in the harness. If it is not visible, you may have to remove the frame cover over the base arm.
- d. Matching 15 pin connectors (one for each bike assembly) should protrude from the lower front openings of the game cabinet. If not reachable, open the cabinet service door and reach in to push the connector through the opening.
- e. Attach the two connectors firmly together.

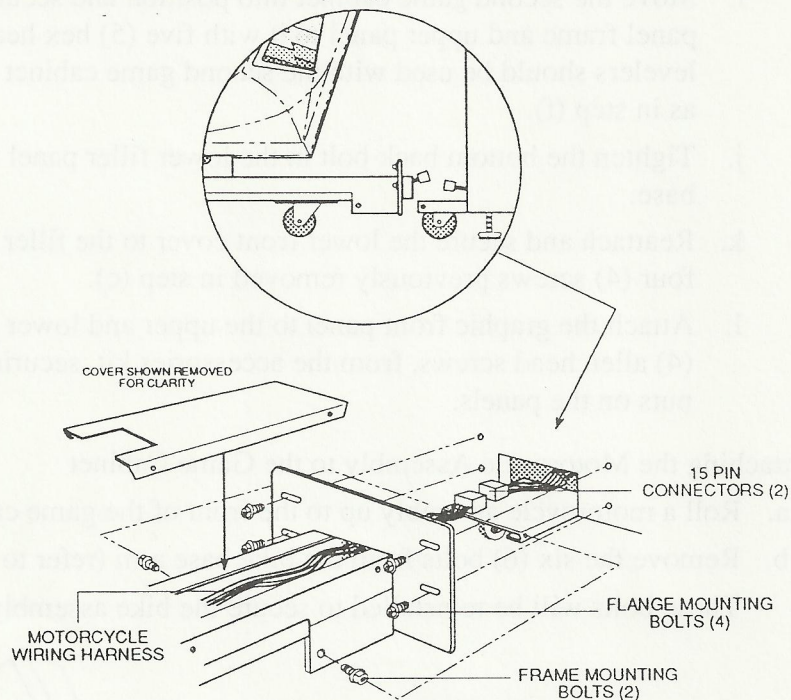


Illustration 5-4, BASE ARM CONNECTION

- f. Using extra caution to avoid pinching the wiring harness, carefully slide the motorcycle assembly forward so that the front base arm (with flange) slips over the cabinet bracket and is flush with the front surface of the cabinet. Insert the 4 bolts, removed in step (b.), through the holes in the flange, into the cabinet front and secure partially, **BUT DO NOT TIGHTEN**.
- g. Insert the 2 bolts, removed in step (b.), through the sides of the seat assembly base arm frame into the cabinet bracket. **TIGHTEN SECURELY**.
- h. Tighten the four front flange bolts at this time.
- i. Repeat the procedure for all remaining motorcycles.
- j. Adjust the 4 leg levelers on the game cabinet, and extend the 2 levelers on each bike assembly, until all casters are clear of the floor and the assembled unit is level and rests firmly in place.

5-4 Two-Player Game – Attaching Marquee (Two-player versions only)

When operating Suzuka 8 hours™ as a two-player game, a marquee is supplied (in a separate carton) for attachment to the game cabinet top to add graphic attraction.

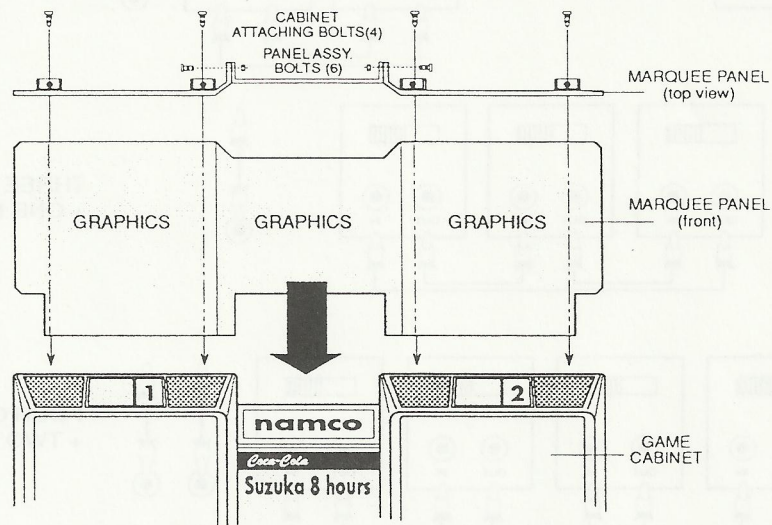


Illustration 5-5, ATTACHING THE TWO-PLAYER MARQUEE

To install the two-player marquee panels:

- Bolt the three marquee pieces together using 6 assembly bolts per the diagram.
- Locate the bolts on the top of the game cabinet and remove them.
- Set the marquee support brackets directly on top of, and aligned with, the holes.
- Reinsert and tighten the 4 cabinet attaching bolts.

5-5 Connecting Multiple Game Links

When installing more than one Suzuka 8 hours™ game, the units must be linked using standard audio cable.

- Insure that all leg levelers on the game cabinets, motorcycles and monitor tower (if applicable) have all been lowered, and that all casters are clear of the floor. Make sure that all power to the game is turned OFF.
- To link multiple cabinets (2–4 units), locate the LINK PCB Bracket Refer to Illustration 5-6 on the back of each Game Cabinet, and move all slide switches to the “External” (Right) position.

NOTE: A single cabinet (not linked) must have the slide switch set to the “INTERNAL” (Left) position. If not, the two players will not link.

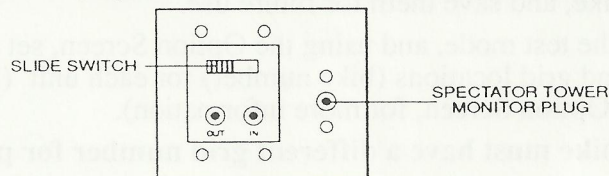


Illustration 5-6, LINK PCB BRACKET

- Using the appropriate diagram from Illustration 5-7, connect the link cables provided from “IN” to “OUT” between each of the game units to be linked.
- To connect the Spectator Monitor, plug the link cable from the monitor into just one (1) monitor connection plug. Only one connection is necessary.

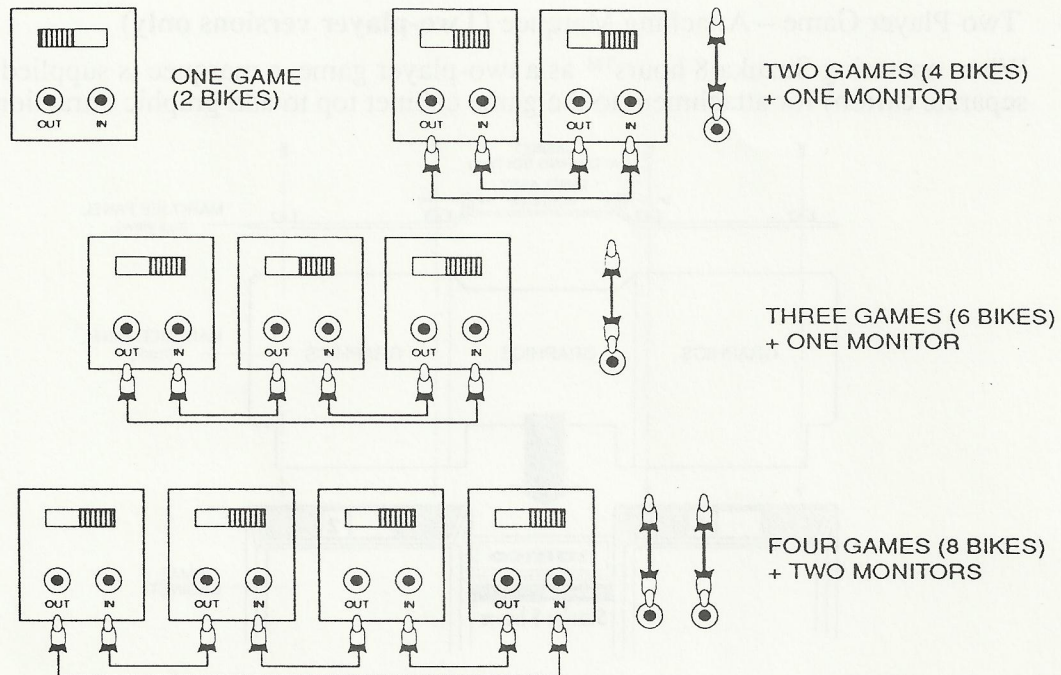


Illustration 5-7, MULTIPLE GAME LINKS

FOR BETTER OPERATION:

Link Cables transmit electronic data between games and are subject to electronic interference. Install the Link Cable as far from other room cables as possible.

5-6 Final Setup and Adjustments

- a. Remove the power cords from the accessories kits, and apply power to all the cabinets.
- b. Initialize each motorcycle assembly by releasing all controls, centering the bike, and holding the service switch in while toggling the test switch to "ON". Once you see "INITIALIZE COMPLETED" on the screen, turn the test switch off. Do this step for all bikes.
- c. Affix the large bike numeral decals from the accessories kit to the rear of each bike on top of the existing color decals, or on each side of the gas tank.
- d. The small numeral decals should be affixed in the blank area of the COCA-COLA decals located just above each monitor. These numbers should be placed in the same order as the motorcycle decals.
- e. Remove the two (2) shipping brackets (one on each side) from the base of each bike, and save them for future use.
- f. Enter the test mode, and using the Option Screen, set the rank, number of laps, and grid locations (bike number) for each unit (Ref. Section 6-3-2, Game Option Screen, for more information).

NOTE: Each bike must have a different grid number for proper operation.

- g. Using the service switch, advance to the switch test screen and insure that all controls and potentiometers are operating properly.
- h. If a spectator tower is installed, remove the tower side door, turn on the test mode and insure that the game settings match with those on the game units. If changes need to be made, refer to Section 6-3-3.
- i. Play the game to check for proper operation.

6. ADJUSTMENTS/TESTING

6-1 Power Switch

The on-off switch is mounted on the inside rear wall of the game cabinet and is accessible from both the inside and the outside of the game.

6-2 Adjustment Switches on the Service Panel

Open the coin door to locate the Service Panel. There are duplicate switches and control knobs for each player position – left and right – and they must be adjusted separately.

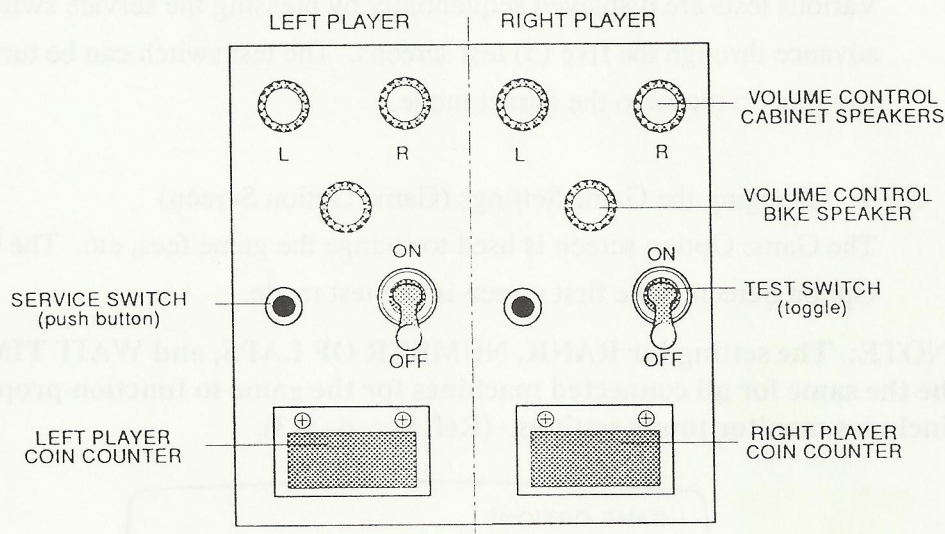


Illustration 6-1, SERVICE PANEL

a. Test Switch

Toggleing this switch "ON" enters the test mode for the appropriate player. This is where the self-tests are performed, and game variables (including pricing, level of difficulty, number of laps per game etc.) are set/changed. Turn the test switch to the "OFF" position at any time to return to the attract mode.

b. Sound Volume Control (Cabinet Speakers)

These volume controls are used to set the volume of the left and right speakers located above each monitor.

c. Sound Volume Control (Motorcycle)

This control is used to set the volume of the speaker located in the gas tank of each motorcycle. It is suggested that the volume of this speaker be set a bit louder than the volume of the cabinet speakers for best effect.

d. Service Switch

This switch is used to step through the various game option and test screens and for service credits. It will not advance the coin counter when it is pressed.

6-3 Test Mode

Suzuka 8 hours™ automatically conducts a self test during the first few seconds when the power is turned on. Additional tests can be performed manually.

6-3-1 Test Mode

Open the coin door and flip the Test Switch to the "ON" position. The Game Option Screen will be displayed on the appropriate monitor.

Various tests are displayed sequentially by pressing the service switch to advance through the five (5) test screens. The test switch can be turned off at any time to return to the attract mode.

6-3-2 Changing the Game Settings (Game Option Screen)

The Game Option screen is used to change the game fees, etc. The Game Option Screen is the first screen in the test mode.

NOTE: The setting for RANK, NUMBER OF LAPS, and WAIT TIME must be the same for all connected machines for the game to function properly. This includes monitor tower settings. (Ref. Sec. 6-3-3).

GAME OPTIONS	
COIN 1 MECH	1 COUNT 1 COIN (a)
COIN 2 MECH	1 COUNT 1 COIN (b)
GAME COST	2 COINS 1 CREDIT (c)
BONUS COIN	NONE (d)
FREE PLAY	NO (e)
RANK	B (f)
LAP	4 (g)
GRID NO.	1 (h)
CAR TYPE	BLACK/GREEN (i)
LINK	ON 2 (j)
(l) WAIT TIME	C SOUND TEST 1 (k)
HI SCORE	INITIALIZE? NO (m)

Illustration 6-2, GAME OPTION SCREEN

Make all changes referring to the Game Option Settings. (Illustration 6-3, Game Option Settings).

Turn the throttle of the appropriate motorcycle to **select** the item to be changed. **Squeeze the brake** to make the **change**.

When changes are completed, press the Service Switch to advance to the next screen, or turn off the Test Switch and the monitor will return to the attract mode.

TABLE OF GAME OPTION SETTINGS (< standard setting)

ITEM	CONTENT	
(a) COIN 1 MECH	Coin count per one coin	1-9 (original setting is 1<)
(b) COIN 2 MECH	Coin count per one coin	1-9 (original setting is 1<)
(c) GAME COST	Coin count required for one game (1 credit)	1-9 (2< 2 player version) (3< 4-8 player versions)
(d) BONUS COIN	Enter "X" number of coins to gain "X" bonus coin(s).	NONE < INSERT BONUS 2-9 COINS 1-3 Coins
(e) FREE PLAY	NO < YES	
(f) RANK (difficulty)	A (easy) to D (hard) (B< original setting)	
(g) LAP	3 to 6 (4< original setting)	
(h) GRID NO. (motorcycle number)	1—to—8 Match with the number of the connected motorcycle NO BIKES should have the same Grid #.	
(i) CAR TYPE	Changes the colors of the motorcycle.	
(j) LINK	Normal when ON. (The numeral is the number of bikes connected together).	
(k) SOUND TEST	Used to test sound effects.	
(l) WAIT TIME	A (short) to D (long) (C< original setting)	
(m) HI SCORE INITIALIZE?	NO < YES - Erases all high scores	

Illustration 6-3, GAME OPTION SETTINGS

6-3-3 Spectator Tower Options Screen

The Spectator Tower operates with an independent PCB located in the base of the tower assembly.

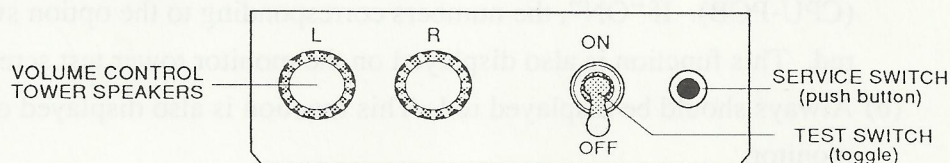


Illustration 6-4, TOWER SERVICE PANEL

Remove the side door and turn the test switch on to see the current settings. If changes need to be made, follow these steps:

- a. Insure that the power to the tower unit has been turned off.
- b. Open the PCB enclosure by removing the six (6) phillips head screws and slide the logic board toward you.
- c. Locate DIP switch 8 on the corner of the PCB next to the small edge connector and turn it "ON". This puts the logic board into the automatic test mode.
- d. Replace the PCB into the enclose and turn the tower unit on.
- e. Turn the test switch on the tower service panel to the "ON" position. The Game Options Screen should be displayed on the monitor.
- f. To select the item to change, quickly flip the test switch OFF and back ON.

- g. To change the selected item, press the service switch until the desired option is displayed.
- h. Turn the service panel test switch to "OFF" and remove power from the monitor tower.
- i. Return DIP switch 8 to its original "OFF" position.
- j. Power up the spectator tower and use the service panel test switch to check your settings. To advance to the next screen, press the service switch.

6-3-4 Switch Test Screen (2nd test)

This screen is used to test for proper operation of all switches and potentiometers.

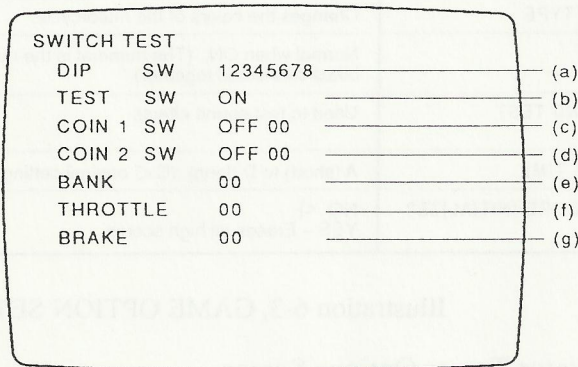


Illustration 6-5, SWITCH TEST SCREEN

- (a) Displays the status of the option switches located on the game PC board (CPU-PCB). If "ON", the numbers corresponding to the option switches are red. This function is also displayed on the monitor tower test screen.
- (b) Always should be displayed red. This function is also displayed on the tower monitor.
- (c) When the LEFT (Coin 1) switch is triggered, a red "ON" will be displayed and the number will increase.
- (d) When the RIGHT (Coin 2) switch is triggered, a red "ON" will be displayed and the number will increase.
- (e) The following is displayed when testing the motorcycle potentiometer:
 - When the motorcycle is in the upright position, "00 CENTER" is displayed.
 - When the motorcycle is tilted to the left, "LEFT" is displayed. The further it is leaned left, the more the number will increase and "OK" lights indicating maximum left lean.
 - When the motorcycle is tilted to the right, "RIGHT" is displayed. The further it is leaned right, the more the number will increase and "OK" lights indicating maximum right lean.

- (f) When the throttle grip is turned counterclockwise, the numerical value changes, and "OK" is displayed when the value reaches "80" or more.
- (g) When the brake lever is squeezed, the numerical value will change, and "OK" is displayed when the value reaches "20" or more.

6-4 Monitor Adjustments

DANGER HIGH VOLTAGE
 THE MONITOR CONTAINS LETHAL HIGH VOLTAGE. THE MONITOR IS
 TO BE SERVICED BY A QUALIFIED SERVICE TECHNICIAN ONLY.

The monitor remote adjustment controls (illustration 6-6) are located in the rear of the cabinet and, at operator option, can be mounted near the front service door. The Spectator Tower monitor controls can be accessed by removing the right side graphic panel.

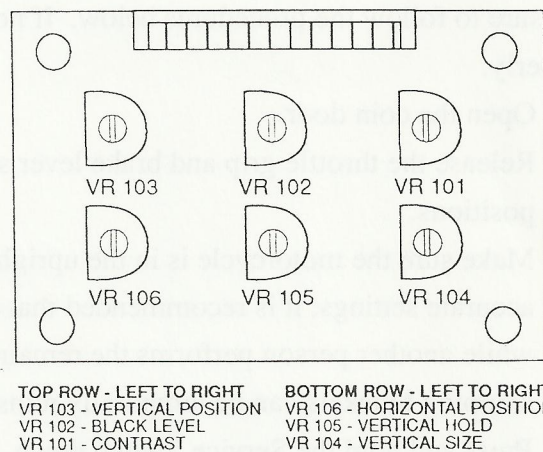


Illustration 6-6, MONITOR REMOTE ADJUSTMENT BOARD

There are three (3) monitor test screens:

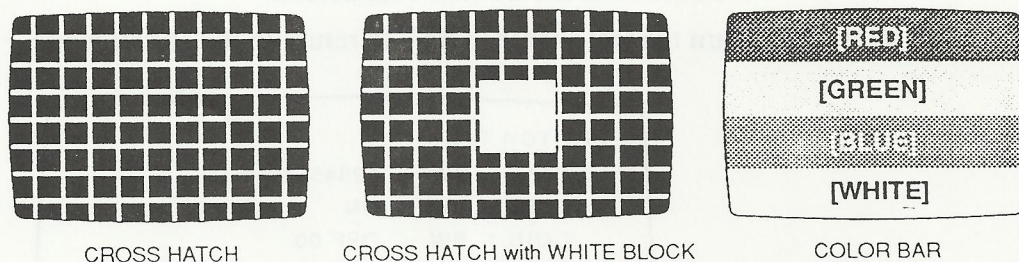


Illustration 6-7, MONITOR ADJUSTMENT SCREENS

6-4-1 Cross Hatch Pattern

To center cross hatch pattern:

- Use VR 103 (V-POS) to adjust cross hatch UP or DOWN.
- Use VR 106 (H-POS) to adjust cross hatch LEFT or RIGHT.

6-4-2 Cross Hatch Pattern with White Block Adjust

White block adjustment should not be necessary – just insure that block is centered in the cross hatch, and is white. If it is not, call a qualified Service Technician, or NAMCO Customer Service.

6-4-3 Color Bar Test

Color should not need adjusting, but if the white fade test (the bottom white bar) is tinted an off color, adjustment can be made with the appropriate color gun adjustment on the CRT neck board by a qualified Service Technician.

6-5 Adjustments When Replacing Parts (Initialization)

When replacing the game PCBs, the motorcycle bank, throttle, or brake potentiometers, be sure to follow the procedures below. If not done, the game may not function properly.

- a. Open the coin door.
- b. Release the throttle grip and brake lever so they are in their “netural” positions.
- c. Make sure the motorcycle is in the upright (centered) position. For accurate settings, it is recommended that one person hold the bike upright, while another person performs the remaining steps. If working alone, the shipping brackets can be temporally reinstalled to accomplish this.
- d. Press and hold the Service Switch down, while toggling the Test Switch to the “ON” position.
- e. Adjustment is completed when “INITIALIZE COMPLETED” appears on the bottom of the Switch Test Screen.
- f. Turn the test switch “OFF” to return to the attract mode.

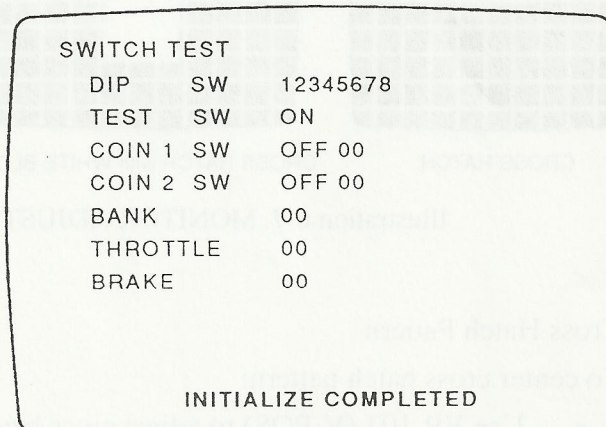


Illustration 6-8, SWITCH TEST SCREEN – INITIALIZED

7. HOW TO PLAY

- Suzuka 8 hours™ is a motorcycle racing game modeled on the famous Suzuka Circuit that allows players to compete against time and/or each other.
- Four sets of two-player games can be interconnected, so that up to eight (8) players can race simultaneously.
- Players manipulate their motorcycles independently by using the throttle grip, brake lever, and leaning left or right to steer (just like a real bike). The object of the game is to cross the finish line first within the time allowed, while avoiding a crash with opponents motorcycles and/or computer-controlled bikes.
- After a player inserts the proper coin(s), an entry prompt appears on the screens in front of any empty seats displaying a message urging others to enter. Additional players can enter the race by inserting the proper coin(s) within 20 seconds (operator adjustable). One person can always play if no others enter that particular race.
- Once all the players have entered the game, or if the entry time passes, the timer counts down “3-2-1”, and the race starts with a “GO” sign.
- A Spectator Tower, located between and above every other game unit, is incorporated into any game featuring 2 or more players. This allows bystanders to enjoy the thrills and excitement of the race, and be encouraged to participate in additional races. Each racer's position is shown on a map display.
- The race continues until the timer counts down to zero. Any player to successfully complete a lap before the timer hits “0” extends the game time for all players.
- After completing the preset number of laps (operator adjustable), players cross the finish line to the thrill of a checkered flag.
- When players reach the finish line or time runs out, racing statistics, including the player's ranking and lap times, are shown. When a player wins a race in which two or more persons are entered, a Championship Celebration is shown on their monitor.
- If a player finishes first, and is in the top 15 of the latest 500 winners, his/her initials can be entered by rotating the throttle grip to select a letter and squeezing the brake lever to enter it.
- All initials entered are saved on the individual players' screens, as well as on the spectator monitor, until erased by using the Game Option Screen. (Ref. Sec. 6-3-3)

8. MAINTENANCE

Be sure to turn the power off before conducting any maintenance procedures.

8-1 Game Cabinet Assembly

8-1-1 Replacing the Fluorescent Lamp/Starter

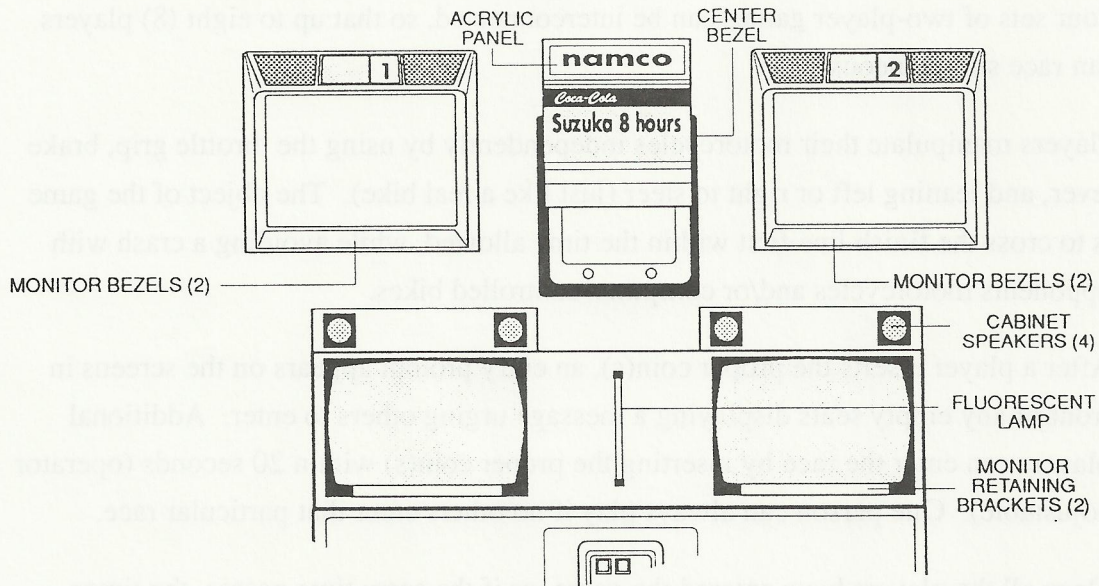


Illustration 8-1, FLUORESCENT LAMP REPLACEMENT

- Remove the four (4) bolts holding the center acrylic graphic panel in place. Remove it to expose the fluorescent lamp and starter.
- Remove and replace the bad fluorescent lamp or starter.

8-1-2 Opening the Maintenance Door

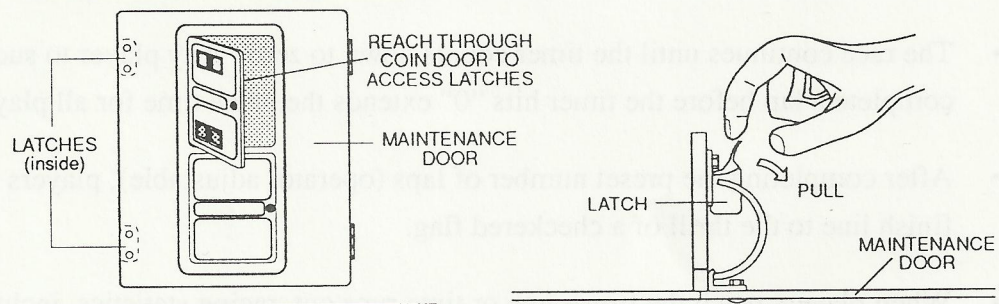


Illustration 8-2, MAINTENANCE DOOR LATCHES

- Open the coin door.
- Unlatch the two latches located inside the left back of the maintenance door.

8-1-3 Replacing the Fuse(s)

- Open the maintenance door(s).
- Replace the fuse on the power base. Make sure to use the specified fuse values; 3A for the game cabinet and 3A for the tower.

8-1-4 Removing the EMI Cage

- a. Open the maintenance door.
- b. Insure that the PCB shipping blocks have been removed.
- c. Remove the edge connectors (2 pieces) from the EMI board.
- d. To remove the ground terminal, remove one (1) phillips head screw from the EMI Board.
- e. Remove the one (1) finger nut from the top center of the PCB retaining bracket.
- f. Slide out and remove the EMI Cage.

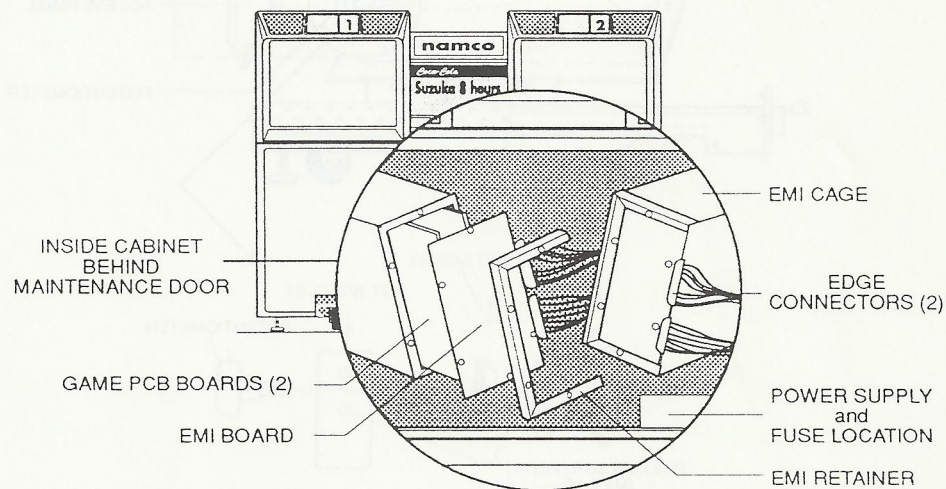


Illustration 8-3, GAME PCB REMOVAL

8-1-5 Removing the Game PC Board

- a. Open the maintenance door.
- b. Insure that the PCB shipping blocks have been removed.
- c. Remove the edge connectors (2 pieces) from the EMI Board.
- d. Remove the six phillips head screws (M4 x 10), and remove the EMI Board and the EMI retainer.
- e. Pull the game PCBs (2 pieces) and the EMI Board carefully toward you and remove them.

8-1-6 Removing the Monitor Assembly

DANGER HIGH VOLTAGE

THE MONITOR CONTAINS LETHAL HIGH VOLTAGE. THE MONITOR IS
TO BE SERVICED BY A QUALIFIED SERVICE TECHNICIAN ONLY.

- a. Open and remove the rear door of the Game Cabinet.
- b. Disconnect the two connectors from the Monitor Assembly.
- c. Remove six screws securing the monitor bezel and remove it.
- d. Remove the four bolts (1 each corner) securing the plywood base to which the monitor is bolted.
- e. Slide the monitor (with board attached) forward and out.

8-2 Motorcycle Assembly

8-2-1 Replacing the Bank Angle (steering) Potentiometer

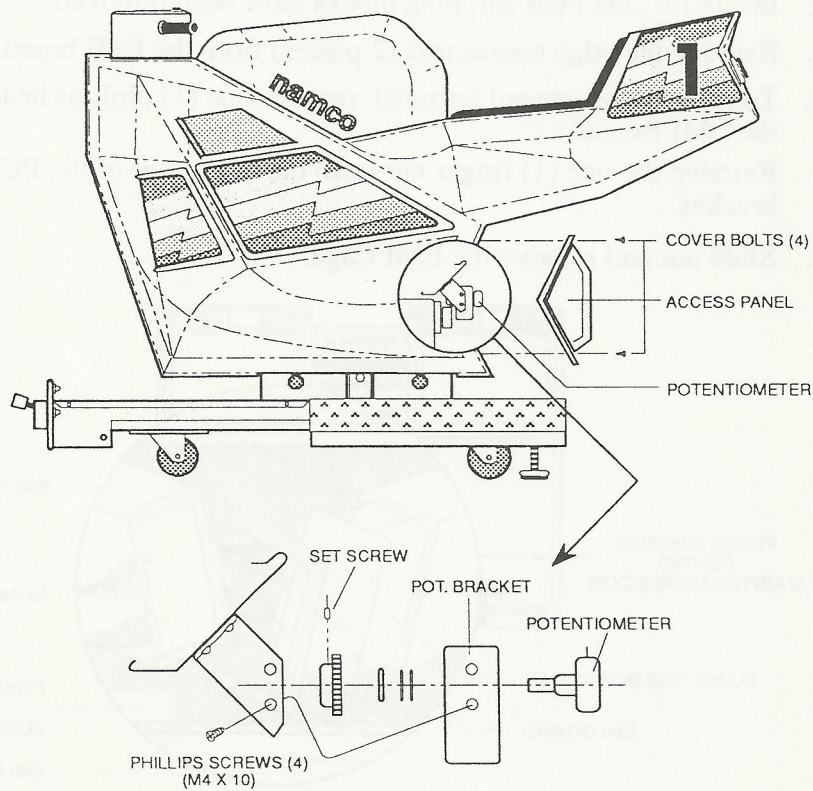


Illustration 8-4, REPLACING THE BANK ANGLE POTENTIOMETER

- Remove the four (4) bolts and remove the access cover on the lower rear of the Motorcycle Assemble.
- Write down the color order of the wires (i.e 1=yellow, 2=white/blue, 3=white etc.) and desolder the potentiometer harness.
- Remove the four (4) screws holding the potentiometer bracket, and remove it.
- Remove the potentiometer from the bracket and replace it with a new one.

NOTE: When remounting the potentiometer, position the gear so that its screw faces the same direction of the terminals of the potentiometer, when the motorcycle is in its neutral (upright) position.

8-3 Handlebar Assembly

8-3-1 Removing Handlebar Assembly Cover

The handlebar assembly cover is removed by unscrewing the four security bolts using the special driver in the accessories kit. This is required to access the throttle and brake potentiometers, as well as to remove the throttle assembly.

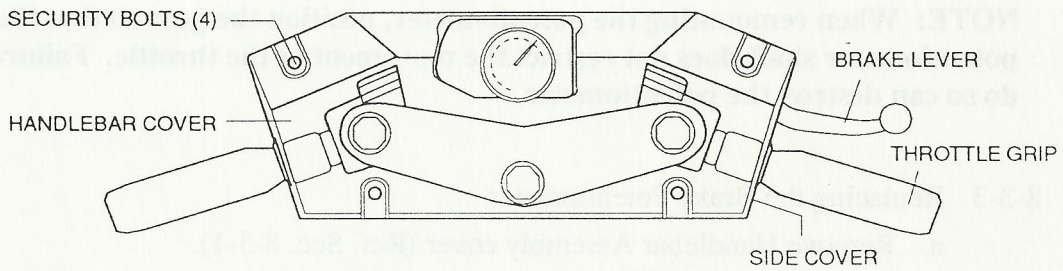


Illustration 8-5, HANDLEBAR ASSEMBLY

8-3-2 Replacing the Throttle Potentiometer

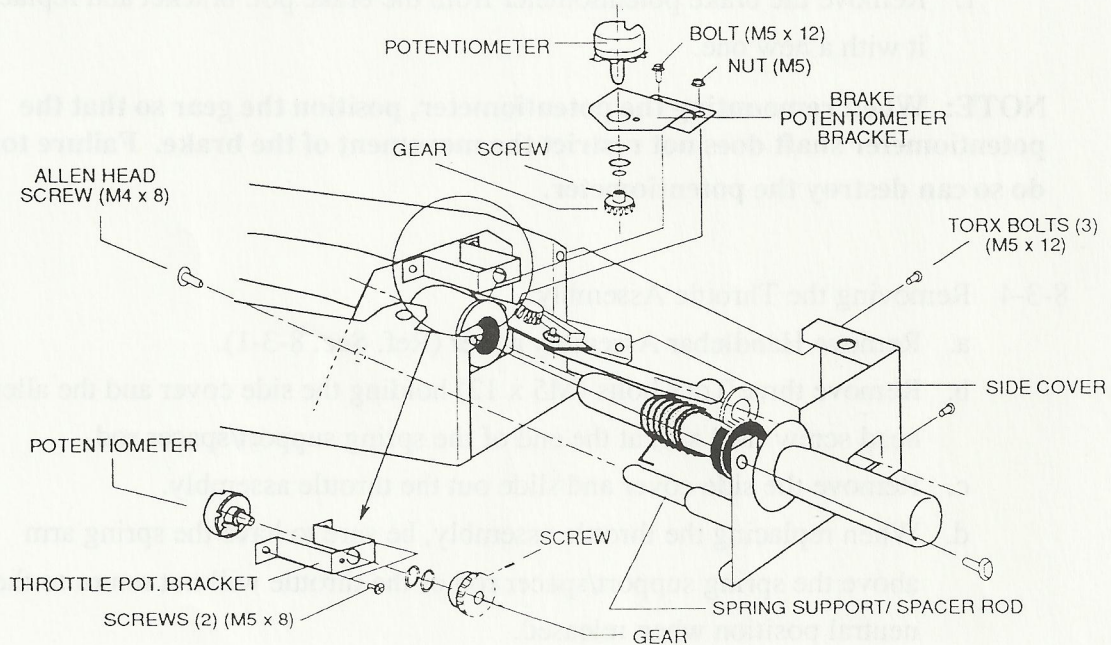


Illustration 8-6, THROTTLE ASSEMBLY

- a. Remove Handlebar Assembly Cover. (Ref. Sec. 8-3-1)
- b. Remove the two phillips head screws (M5 x 8) retaining the throttle potentiometer bracket just above the throttle shaft, and remove the bracket
- c. Write down the color order of the wires and desolder the potentiometer harness.
- d. Remove the potentiometer from the throttle pot. bracket and replace it with a new one.

NOTE: When remounting the potentiometer, position the gear so that the potentiometer shaft does not restrict the movement of the throttle. Failure to do so can destroy the potentiometer.

8-3-3 Replacing the Brake Potentiometer

- a. Remove Handlebar Assembly cover (Ref. Sec. 8-3-1).
- b. Remove three Torx bolts (M5 x 12) holding the side cover and the allen head screw (M4 x 8) through the end of the spring support rod.
- c. Remove the side cover and slide out the throttle assembly.
- d. Remove nut (M5) and bolt (M5 x 12) holding the brake potentiometer bracket, and remove it.
- e. Remove the potentiometer harness.
- f. Remove the brake potentiometer from the brake pot. bracket and replace it with a new one.

NOTE: When remounting the potentiometer, position the gear so that the potentiometer shaft does not restrict the movement of the brake. Failure to do so can destroy the potentiometer.

8-3-4 Removing the Throttle Assembly

- a. Remove Handlebar Assembly cover (Ref. Sec. 8-3-1).
- b. Remove three Torx bolts (M5 x 12) holding the side cover and the allen head screw (M4 x 8) at the end of the spring support/spacer rod.
- c. Remove the side cover and slide out the throttle assembly.
- d. When replacing the throttle assembly, be sure to have the spring arm above the spring support/spacer rod or the throttle will not return to the neutral position when released.
- e. Resecure the side cover and handlebar cover by reversing the steps described above.

8-4 Spectator Tower Assembly

8-4-1 Changing Tower Fluorescent Lamps and LEDs

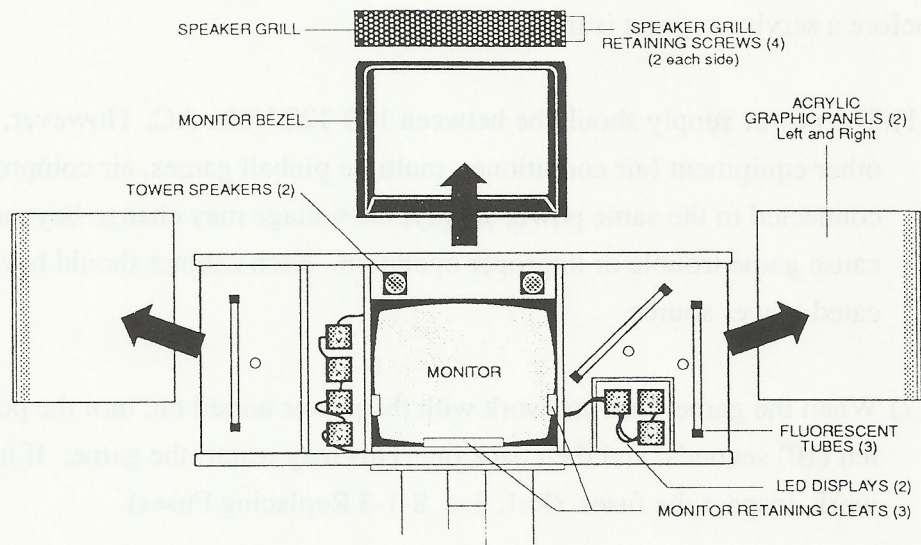


Illustration 8-7, SPECTATOR TOWER DISPLAY ASSEMBLY

- Remove the five (5) screws securing each backlighted acrylic end panel to the display cabinet and set aside.
- Remove and replace failed fluorescent tube(s) or starter(s).
- Remove and replace failed LED unit(s).

8-4-2 Replacing Spectator Tower Monitor

DANGER HIGH VOLTAGE

THE MONITOR CONTAINS LETHAL HIGH VOLTAGE. THE MONITOR IS TO BE SERVICED BY A QUALIFIED SERVICE TECHNICIAN ONLY.

- Remove the five (5) screws securing each backlighted acrylic end panel to the display cabinet and set aside.
- Remove the four (4) screws securing the tower monitor bezel and lift forward and down.
- Remove the three (3) wood cleats (2 screws each) that hold the monitor bezel in place.
- Open the rear door of the monitor cabinet, and loosen the two guide brackets.
- Disconnect the monitor chassis wiring harness connectors.
- Carefully slide the monitor assembly forward and out the front of the cabinet.

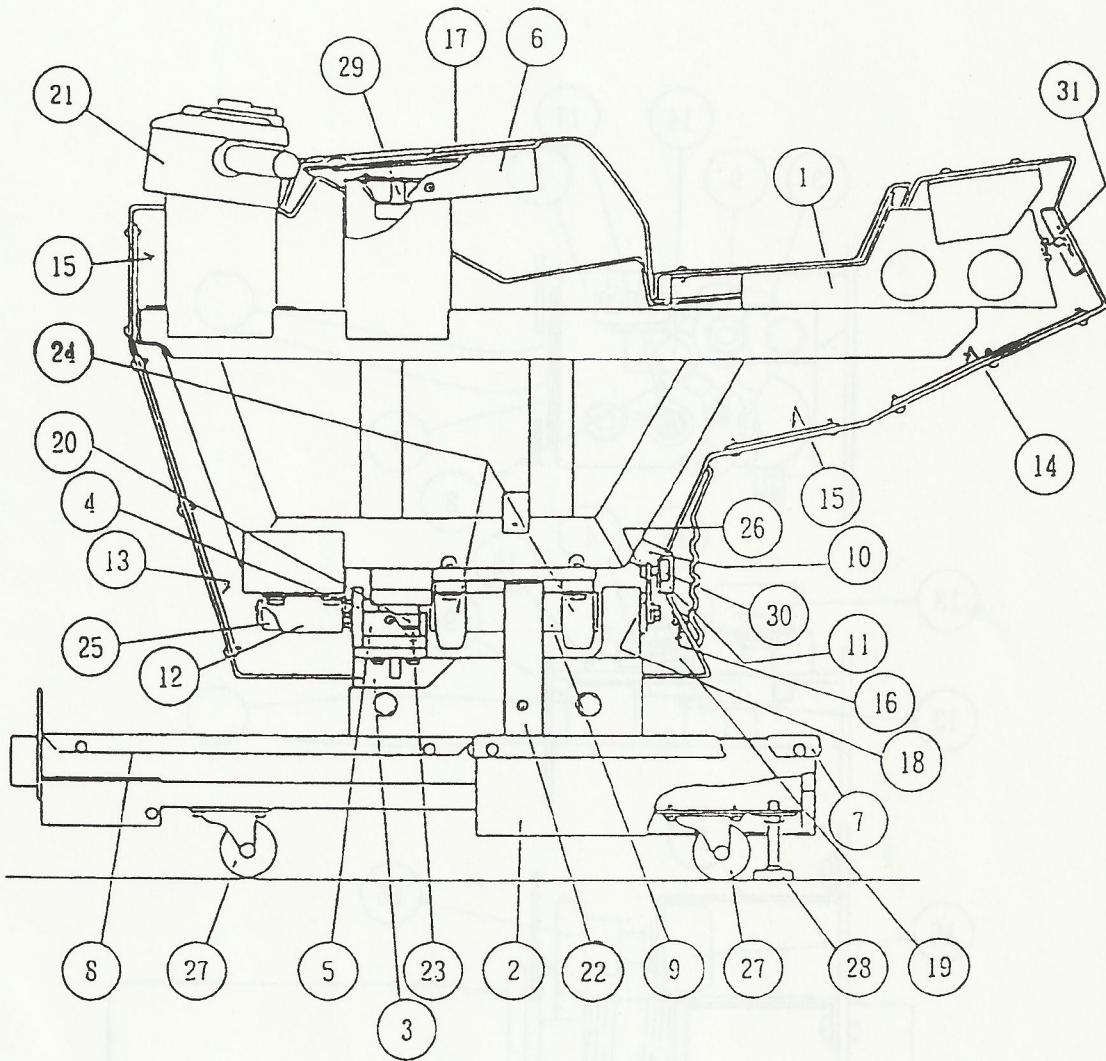
CAUTION: Because of the monitor's weight and elevation, this procedure should be performed by two or more persons.

9. TROUBLESHOOTING – GENERAL

If you suspect the game may be malfunctioning, the following steps should be taken before a service request is made.

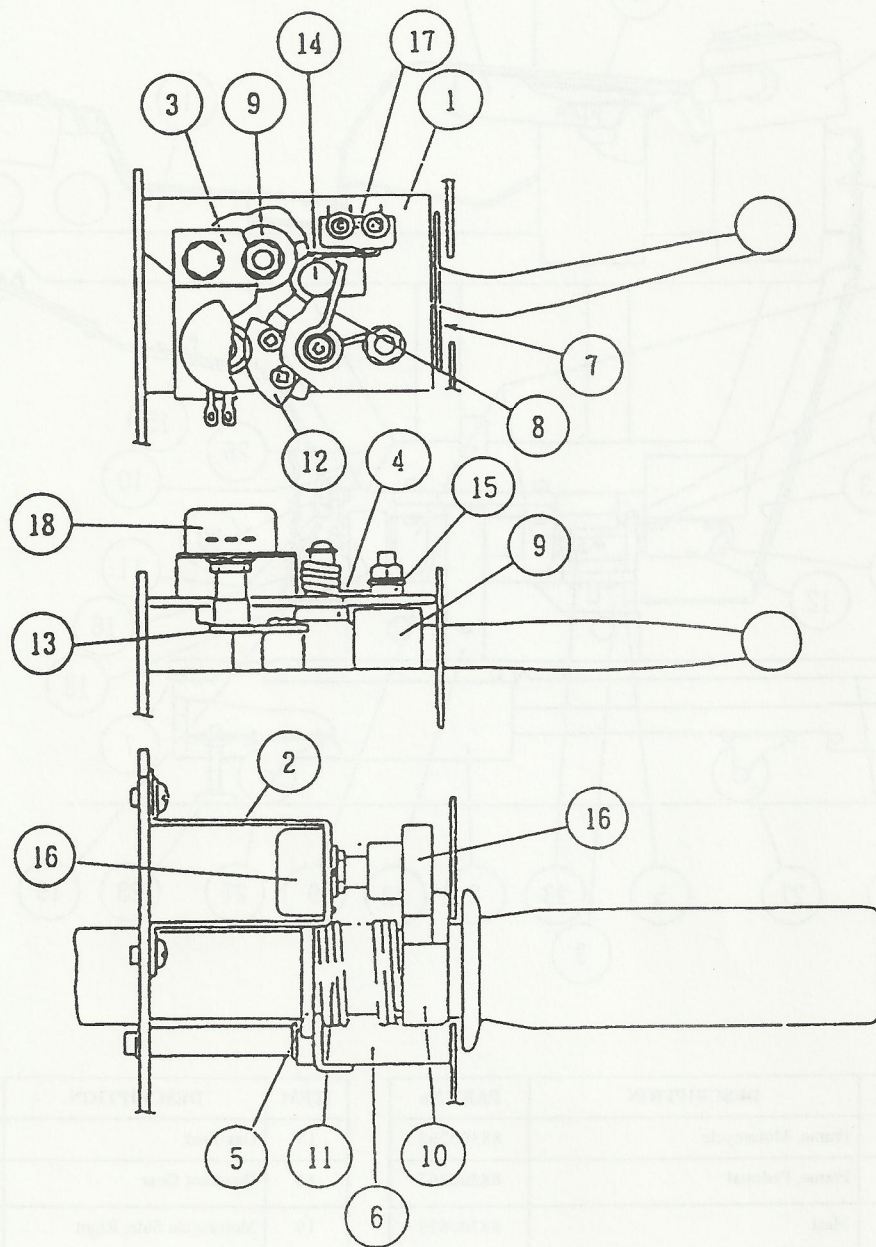
- (1) The power supply should be between 110-120 Volts AC. However, when some other equipment (air conditioner, multiple pinball games, air compressors, etc.) are connected to the same power supply, the voltage may change beyond this range and cause game trouble or improper operation. Each cabinet should have its own dedicated power source.
 - (2) When the game does not work with the power turned on, turn the power off for about ten (10) seconds, and then back on. This may restart the game. If it still does not work, inspect the fuses. (Ref. Sec. 8-1-3 Replacing Fuses)
 - (3) When the game PCB, the Motorcycle Bank Angle, Throttle, or Brake Potentiometers are replaced, it is necessary to initialize the CPU for normal operation. Make the appropriate adjustments by referring to Section 6-5, Adjustment when replacing the parts (Initialization).
 - (4) Check all wiring connections as malfunctions can be caused by loose connections.
 - (5) Foreign substances on the game PCB or on the monitor PCB, or dust may cause malfunctions or improper operation. Check that the PCB enclosures are clean.
 - (6) When you make electrical checks, use the wiring diagrams for reference.
- * **If the above suggestions are not applicable, or no improvement is observed, contact your distributor or the service office printed on the back cover of this manual.**
 - * **DO NOT ATTEMPT TO REPAIR THE GAME PCB YOURSELF. Instead, please return the board to your distributor for any repairs. This PCB contains sensitive chips that could be destroyed even by the internal voltage of a multi-meter.**
 - * **When sending parts to be repaired, make sure to pack them firmly with a complete explanation of the problem. When sending PCBs, package them in anti-static foam or bubble wrap, and pack them in cardboard boxes to protect against impact damage during shipment. To ship monitors, pack them in wooden frames so that CRTs and PCBs are protected against excess load.**

Parts List



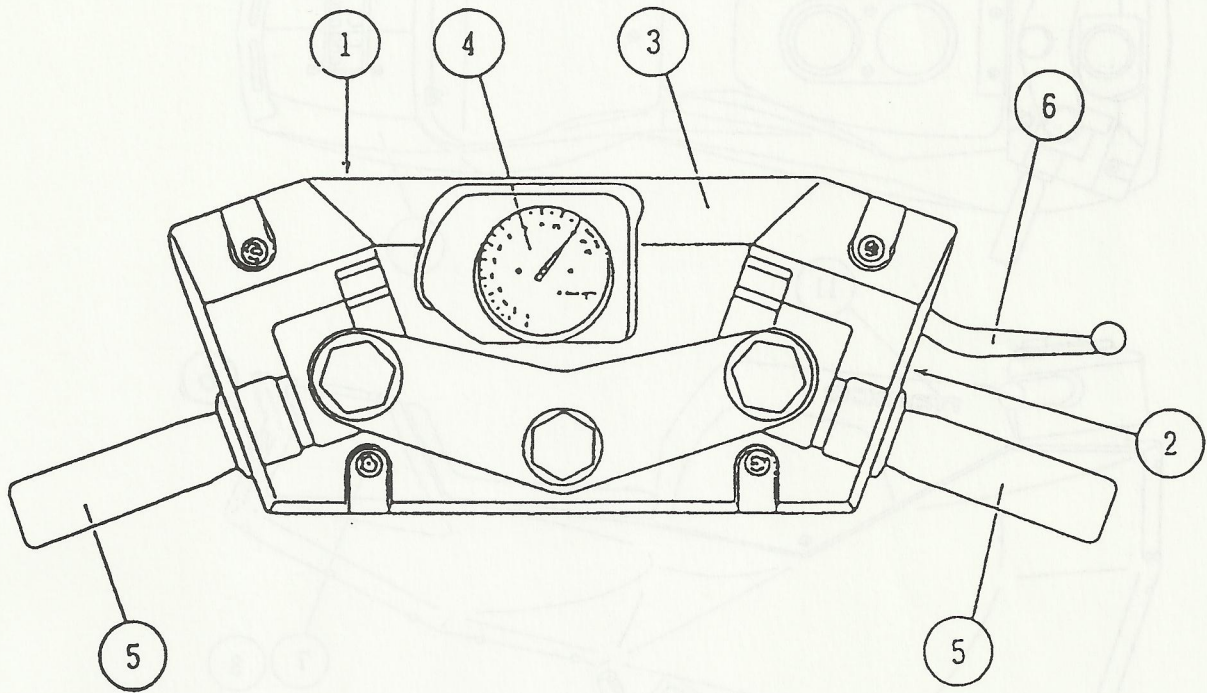
ITEM	DESCRIPTION	PART No
1	Frame, Motorcycle	88300262
2	Frame, Pedestal	88300267
3	Mast	88300639
4	Shaft	88300638
5	Stopper Housing	88300739
6	Cycle Speaker Plate	88300261
7	Diamond Plate	88300269
8	Closing Bracket	88300268
9	Spacer	88300636
10	Potentiometer Holder Bracket L/R	88300300/1
11	Volume Bracket	88300631
12	Spring Bracket	XEH261-228
13	Brkt. ABS Cover #2	88300257
14	Brkt. ABS Cover #5	88300259
15	Brkt. ABS Cover #1	88300259
16	Brkt. ABS Cover #3	88300258

ITEM	DESCRIPTION	PART No
17	Gas Tank	XEH90-0069500
18	Quadrant Gear	88300637
19	Motorcycle Side, Right	XEH90-00640-00
19	Motorcycle Side, Left	XEH90-00640-01
20	Stopper Rubber	88300634
21	Assembly, Handle Bar	-----
22	Shipping Bracket	88300266
23	Stopper Bracket	88300635
24	Pillow Unit	88300633
25	Rubber Spring	XEH09-261-262
26	Spur Gear	88300632
27	Swivel Castor	59000005
28	Leveler	88300079
29	Speaker	62000006
30	Potentiometer	008-006
31	Hit PCB	255-637

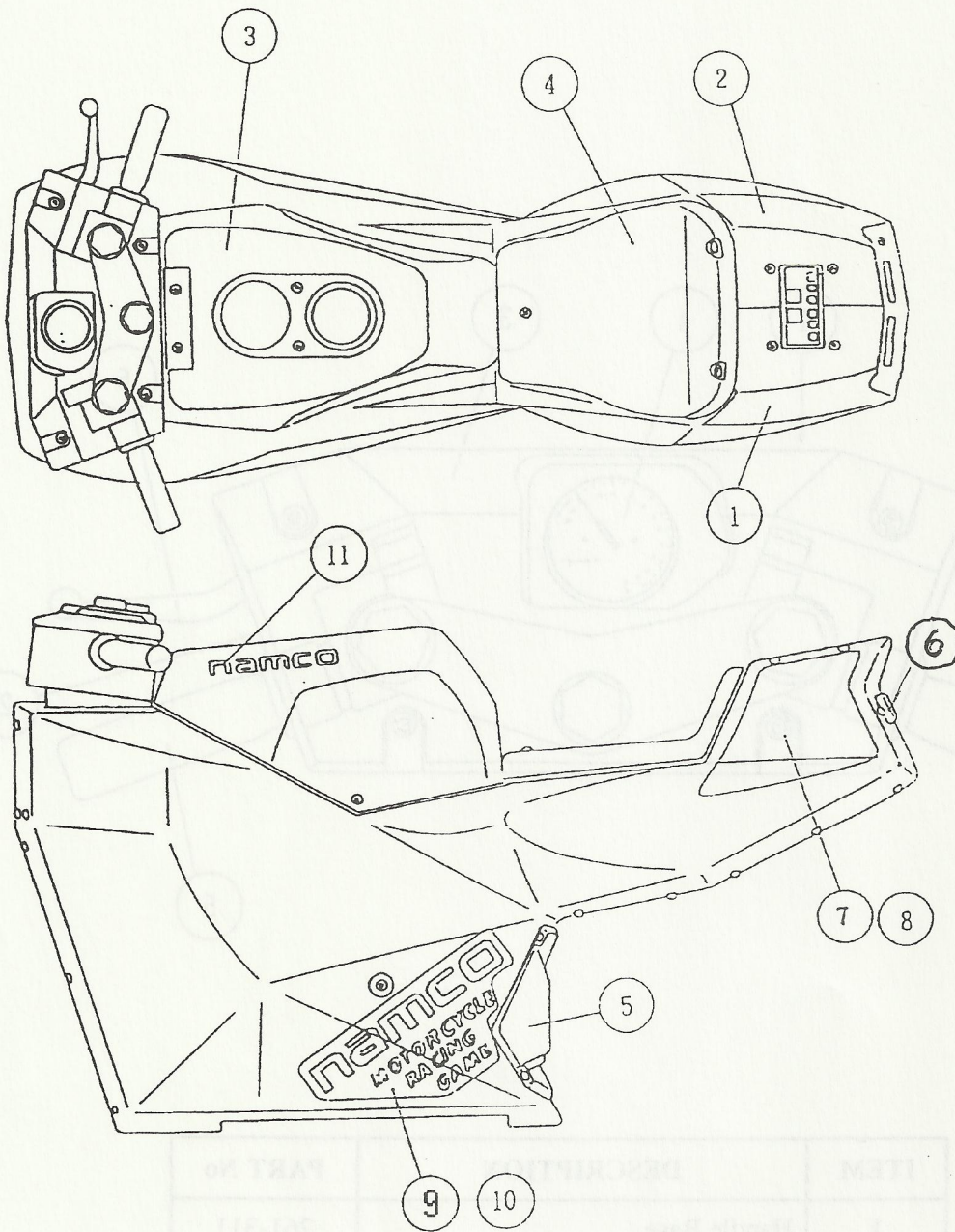


ITEM	DESCRIPTION	PART No
1	Brake Upper Plate	261-313
2	Throttle Volume Bracket	261-314
3	Brake Volume Bracket	261-315
4	Collar (A)	261-316
5	Collar (B)	261-318
6	Throttle Stopper	261-318
7	Slide Plate	261-319
8	Brake Spring	261-322
9	Brake Stopper	261-323

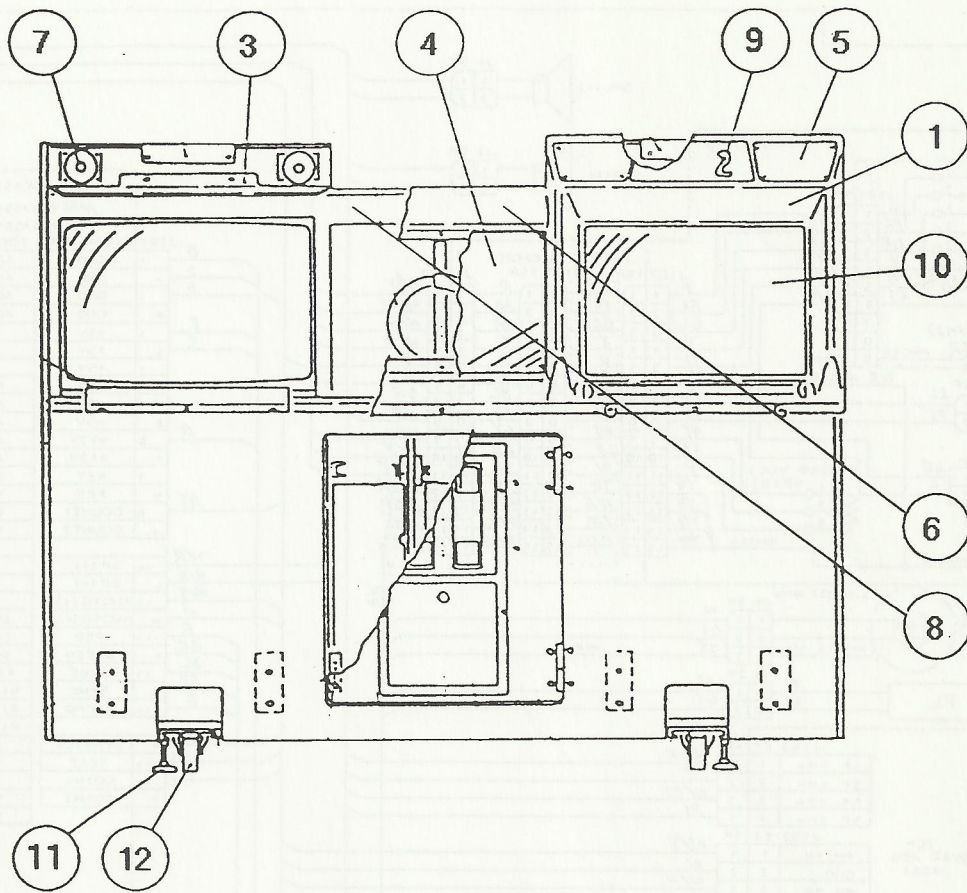
ITEM	DESCRIPTION	PART No
10	Grip Base (R)	240-102
11	Throttle Spring	240-116
12	Brake Gear	240-117
13	Brake Volume Gear	240-118
14	Stopper LOD	240-122
15	Spring Spacer	240-124
16	Spur Gear	240-126
17	Micro Switch	000-054
18	Potentiometer	008-006



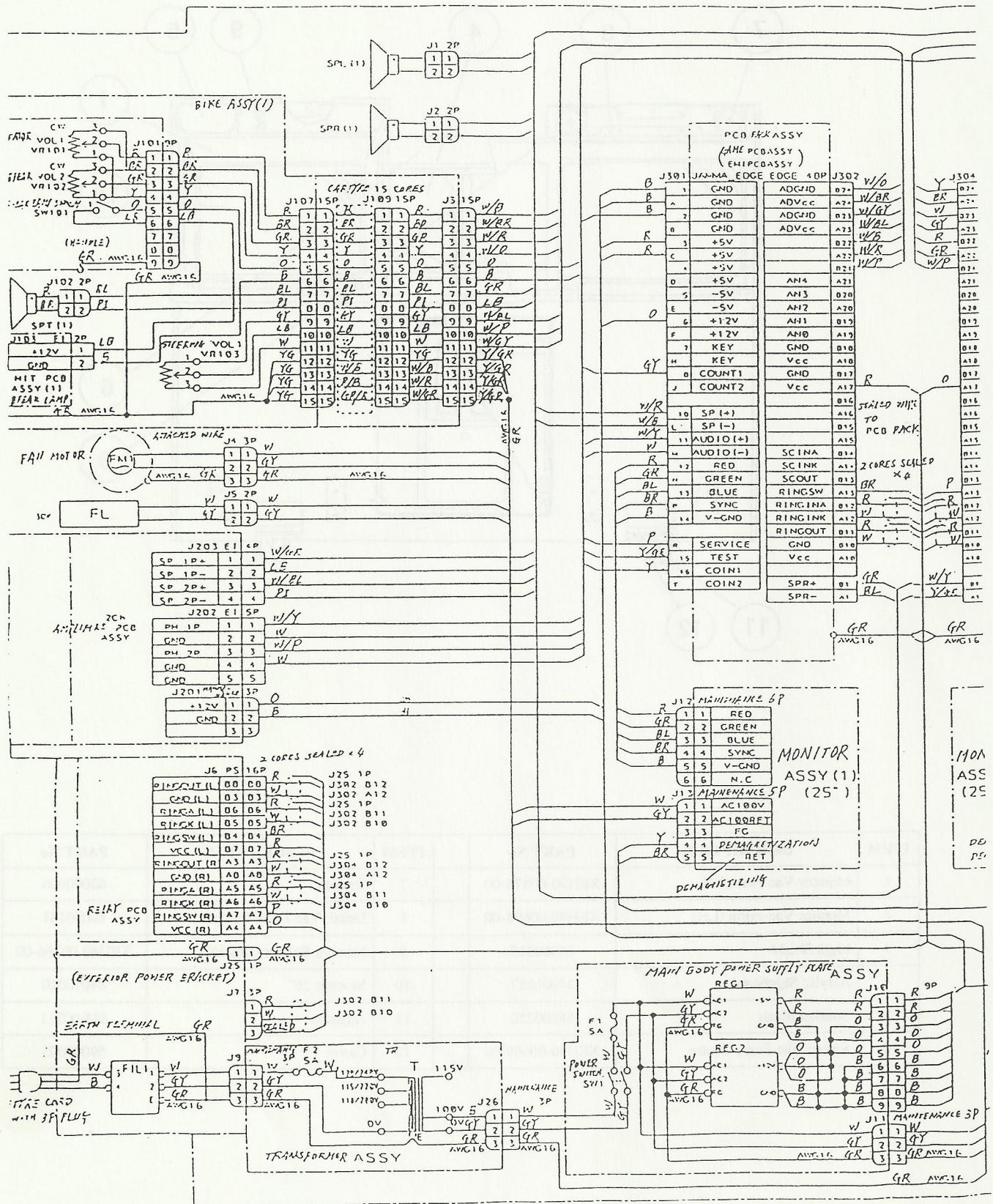
ITEM	DESCRIPTION	PART No
1	Handle Base	261-311
2	Cover	261-312
3	Handle Cover	261-320
4	Tachometer	261-321
5	Grip, Rubber	240-104
6	Brake Lever	240-105



ITEM	DESCRIPTION	PART No
1,2,3	Decal Set (Left)	40000185
1,2,3	Decal Set (Right)	40000186
4	Seat	XEH90-00696-00
5	Maintenance Cover	XEH90-00697-00
6	Tail Lamp	XEH90-00701-00
7,8	Number Sticker Base L&R	XEH40-00773-00
9	Sponsor Sticker (L)	261-242
10	Sponsor Sticker (R)	261-243
11	Namco Sticker	261-244



ITEM	DESCRIPTION	PART No	ITEM	DESCRIPTION	PART No
1	Monitor Vac-Form RH	XEH90-00878-00	7	Speaker	62000006
2	Monitor Vac-Form (LH)	XEH90-00698-00	8	Decal, Vac-Form Centre	40000181
3	Light Shield	88300315	9	Number Sticker (Black)	XEH40-00766-00
4	Acrylic Signboard	30000217	10	Monitor 26"	84000010
5	Speaker Mesh	88300250	11	Adjuster	883-00311
6	Screen Vac-Form Centre	XEH90-00699-00	12	Castor	59000005

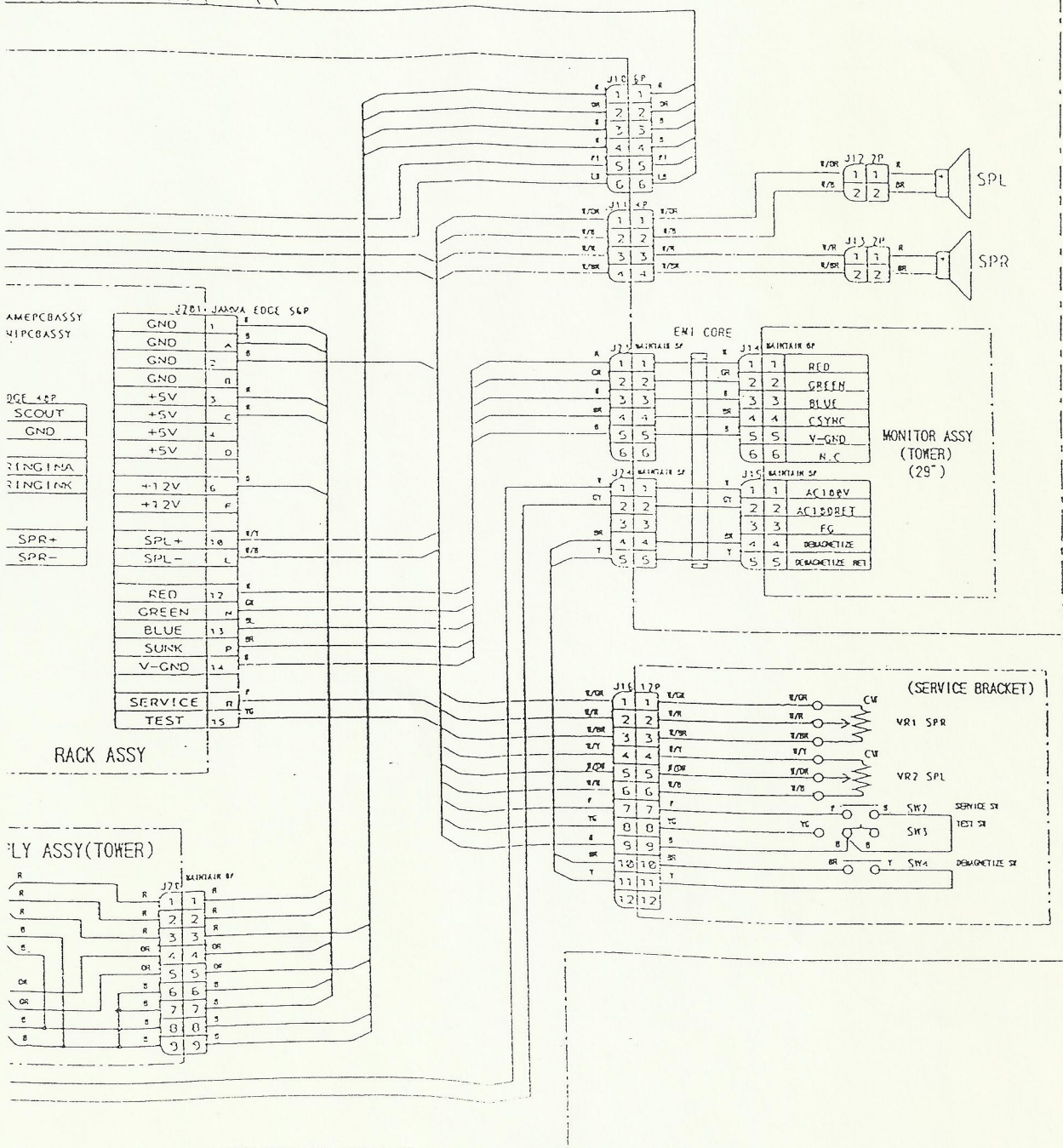


Suzuka 8 hours™ - Wiring Harness Diagram

DRIVE 7 SEG DRIVE
 BASSY(6) PCB BASSY(7)

4	4	GND
5	5	S-OUT
6	6	S-OUT .31T
7	7	S-IN
0	0	S-IN .05T

1	1	11.2V
2	2	+5V
3	3	GND
4	4	GND
5	5	S-OUT
6	6	S-OUT .31T
7	7	S-IN
0	0	S-IN .05T



LY ASSY(TOWER)

1	1	MAINTAIN SP
2	2	MAINTAIN SP
3	3	MAINTAIN SP
4	4	MAINTAIN SP
5	5	MAINTAIN SP
6	6	MAINTAIN SP
7	7	MAINTAIN SP
8	8	MAINTAIN SP
9	9	MAINTAIN SP

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