TM-284
1st printing

GAUNTLET™

Operators Manual

Complete with Illustrated Parts Lists

ATARI GAMES

Atari Games Corporation
Customer Service

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Gauntlet™ Operators Manual

with Illustrated Parts Lists

ATARI
GAMES

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Notice Regarding Non-ATARI Parts

WARNING

Use of non-ATARI® parts or modifications of any ATARI game circuitry may adversely affect the safety of your game, and may cause injury to you and your players.

You may void the game warranty (printed on the inside back cover of this manual) if you do any of the following:

- Substitute non-ATARI parts in the game.
- Modify or alter any circuits in the game by using kits or parts *not* supplied by Atari Games Corporation.

NOTE

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of Federal Communications Commission (FCC) Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area or modification to this equipment is likely to cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference. If you suspect interference from an ATARI® game at your location, check the following:

- All green ground wires in the game are properly connected as shown in the game wiring diagram.
- The power cord is properly plugged into a grounded three-wire outlet.

If you are still unable to solve the interference problem, please contact Customer Service at Atari Games Corporation. See the inside front cover of this manual for service in your area.

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Safety Summary

The following safety precautions apply to all game operators and service personnel. Specific warnings and cautions will be found throughout this manual where they apply.

⚠ WARNING ⚠

Properly Ground the Game. Players may receive an electrical shock if this game is not properly grounded! To avoid electrical shock, do not plug in the game until it has been inspected and properly grounded. This game should only be plugged into a grounded three-wire outlet. If you have only a 2-wire outlet, we recommend you hire a licensed electrician to install a grounded outlet. Players may receive an electrical shock if the control panel is not properly grounded! After servicing any parts on the control panel, check that the grounding wire is firmly secured to the inside of the control panel. Only then should you lock up the game.

AC Power Connection. Before connecting the game to the AC power source, verify that the game's power supply is properly configured for the line voltage in your location.

Disconnect Power During Repairs. To avoid electrical shock, disconnect the game from the AC power source before removing or repairing any part of the game. When removing or repairing the video display, extra precautions must be taken to avoid electical shock because high voltages may exist within the display circuitry and cathode-ray tube (CRT) even after power has been disconnected. Do not touch internal parts of the display with your hands or with metal objects! Always discharge the high voltage from the CRT before servicing this area of the game. To discharge the CRT: Attach one end of a large, well-insulated, 18-gauge jumper wire to ground. Momentarily touch the free end of the grounded jumper to the CRT anode by sliding it under the anode cap. Wait two minutes and discharge the anode again.

Use Only ATARI Parts. To maintain the safety integrity of your ATARI game, do not use non-ATARI parts when repairing the game. Use of non-ATARI parts or other modifications to the game circuitry may adversely affect the safety of your game, and injure you or your players.

Handle Fluorescent Tube and CRT With Care. If you drop a fluorescent tube or CRT and it breaks, it may implode! Shattered glass can fly six feet or more from the implosion.

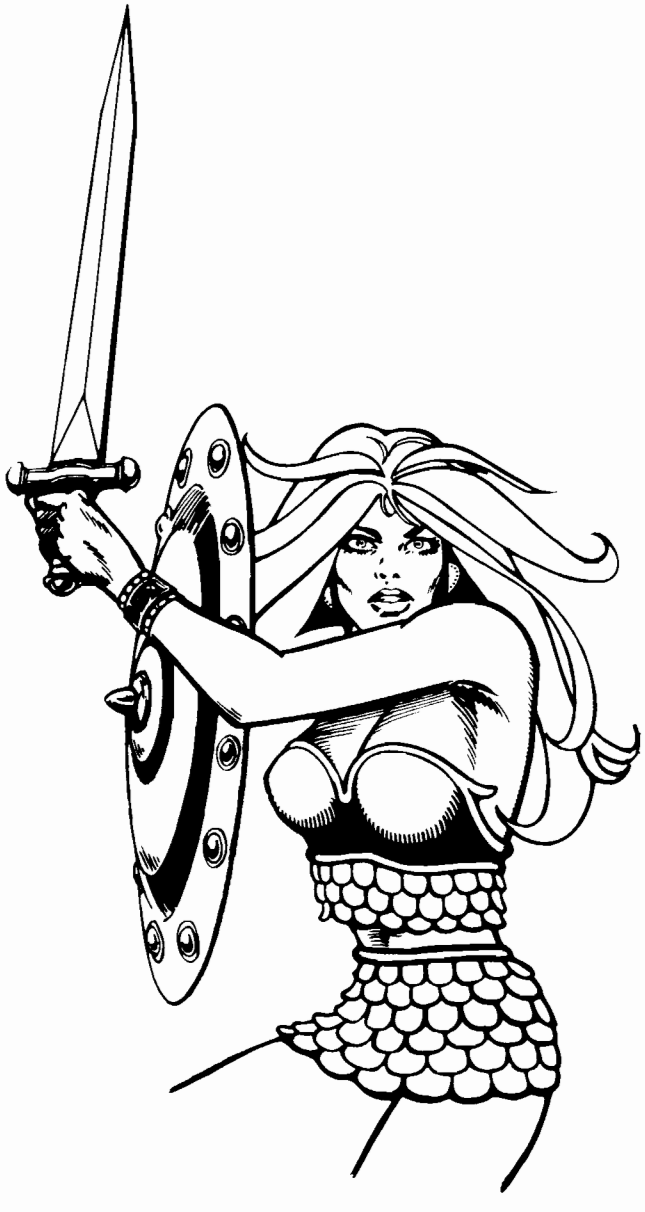
Use the Proper Fuses. To avoid electrical shock, use replacement fuses which are specified in the parts list for this game. Replacement fuses must match those replaced in fuse type, voltage rating, and current rating. In addition, the fuse cover must be in place during game operation.

CAUTION

Properly Attach All Connectors. Make sure that the connectors on each printed-circuit board (PCB) are properly plugged in. Note that they are keyed to fit only one way. If they do not slip on easily, do not force them. A reversed connector may damage your game and void the warranty.

Ensure the Proper AC Line Frequency. Video games manufactured for operation on 60 Hz line power (i.e., United States) must not be operated in countries with 50 Hz line power (i.e., Europe). The fluorescent light ballast transformer will overheat, causing a potential fire hazard if 60 Hz games are operated on power lines using 50 Hz. Check the product identification label of your game for the line frequency required.

Set-Up



How to Use This Manual

This manual includes information for setting up, playing, and maintaining your Gauntlet™ game.

This manual is divided into the following chapters:

- Chapter 1 contains set-up information.
- Chapter 2 contains game play information.
- Chapter 3 contains self-test procedures.
- Chapter 4 contains preventive and corrective maintenance procedures.
- Chapter 5 contains illustrated parts lists.

Schematic diagrams for the Gauntlet game circuitry are in the SP-284 Schematic Package Supplement included with this manual.

This chapter includes information for inspecting the game, installing the control panel, and setting up the game for operation. Read the information in this chapter carefully before applying power to the game.

⚠ WARNING ⚠

To avoid electrical shock, do not plug in the game until it has been properly inspected and set up for the line voltage in your area.

This game should only be connected to a grounded three-wire outlet. If you only have a two-wire outlet, we recommend you hire a licensed electrician to install a grounded outlet. Players may receive an electrical shock if the game is not properly grounded.

Do not touch internal parts of the display with your hands or with metal objects.

Chapter 1

Inspecting the Game

CAUTION

Do not install the control panel or plug in the game until you have completed the following inspection steps.

Please inspect your Gauntlet game carefully to ensure that the game is complete and delivered to you in good condition. Figure 1-1 shows the locations of the component parts of the game. Table 1-1 lists space, power, and environmental requirements. Do not install the control panel until the following inspection is completed:

1. Examine the exterior of the cabinet and the control panel for dents, chips, or broken parts.
2. Use a Phillips screwdriver to remove the screws holding the upper and lower rear-access panels to the cabinet. Unlock the lower rear-access panel and remove both rear access panels. Unlock and open the right and left coin doors. Inspect the interior of the cabinet as follows:
   a. Ensure that all plug-in connectors (on the cabinet harnesses) are firmly plugged in. Do not force connectors together. The connectors are keyed so they only fit in the proper orientation.
   b. Ensure that all plug-in integrated circuits on each PCB are firmly plugged into their sockets.
   c. Inspect the power cord for any cuts or dents in the insulation.
   d. Inspect the power supply. Make sure that the correct fuses are installed and that the voltage plugs (for games made in Ireland only) are inserted for the proper line voltage. Check that the harness is plugged in correctly and that the fuse-block cover is mounted in place. Check that the green ground wire is connected.
   e. Inspect other major subassemblies, such as the video display, printed-circuit boards (PCBs), controls, and speakers. Make sure they are mounted securely and that the green ground wires (where provided) are connected.
   f. Make sure the game power source and operating environment is within the limits specified in Table 1-1, Game Specifications.
   g. Install the control panel as described in the following procedure.

Installing the Control Panel

Perform the following procedure to install the control panel (see Figure 1-2).

1. Stand the control panel on the front edge of the cabinet so that it is held securely by the bracket mounted under the front edge of the panel.
2. Connect the four harness connectors to the game printed-circuit board (PCB) as shown in Figure 1-2.
3. Connect the green ground wire to the corresponding green wire in the cabinet.
4. Gently lift the control panel bracket free of the cabinet and lower the panel into the proper position on the front of the cabinet.
5. Reach up through the right and left coin door openings and fasten the two spring-draw latches located under the control panel on each side of the cabinet.

Control and Switch Locations

The following control and switch descriptions are for both the U.S. and Irish versions of the Gauntlet game. Refer to Figures 1-1 and 1-3 for illustrations showing the locations of the controls and switches.

Power On/Off Switch

The power on/off switch is located at the bottom rear of the cabinet (see Figure 1-1).

Volume Control

The volume control is located behind the upper right coin door on the Audio PCB for the U.S. version and on the utility panel for the Irish version. The volume control adjusts the level of sound produced by the game.

Coin Counters

The coin counter(s) is located behind the upper right coin door on the back of the shelf for the U.S. version and on the utility panel for the Irish version. The coin counter(s) records the number of coins entered.

Self-Test Switch

The self-test switch is located behind the upper right coin door on the Audio PCB for the U.S. version and on the utility panel for the Irish version. The self-test switch selects the Self-Test Mode to check game operation. Refer to Chapter 3 for a complete description of self-test operation.

Coin and Game Option Settings

The coin and game options are selected in the Self-Test Mode. Refer to the coin and game option screens described in Chapter 3 for the recommended settings and the procedure for selecting the options.

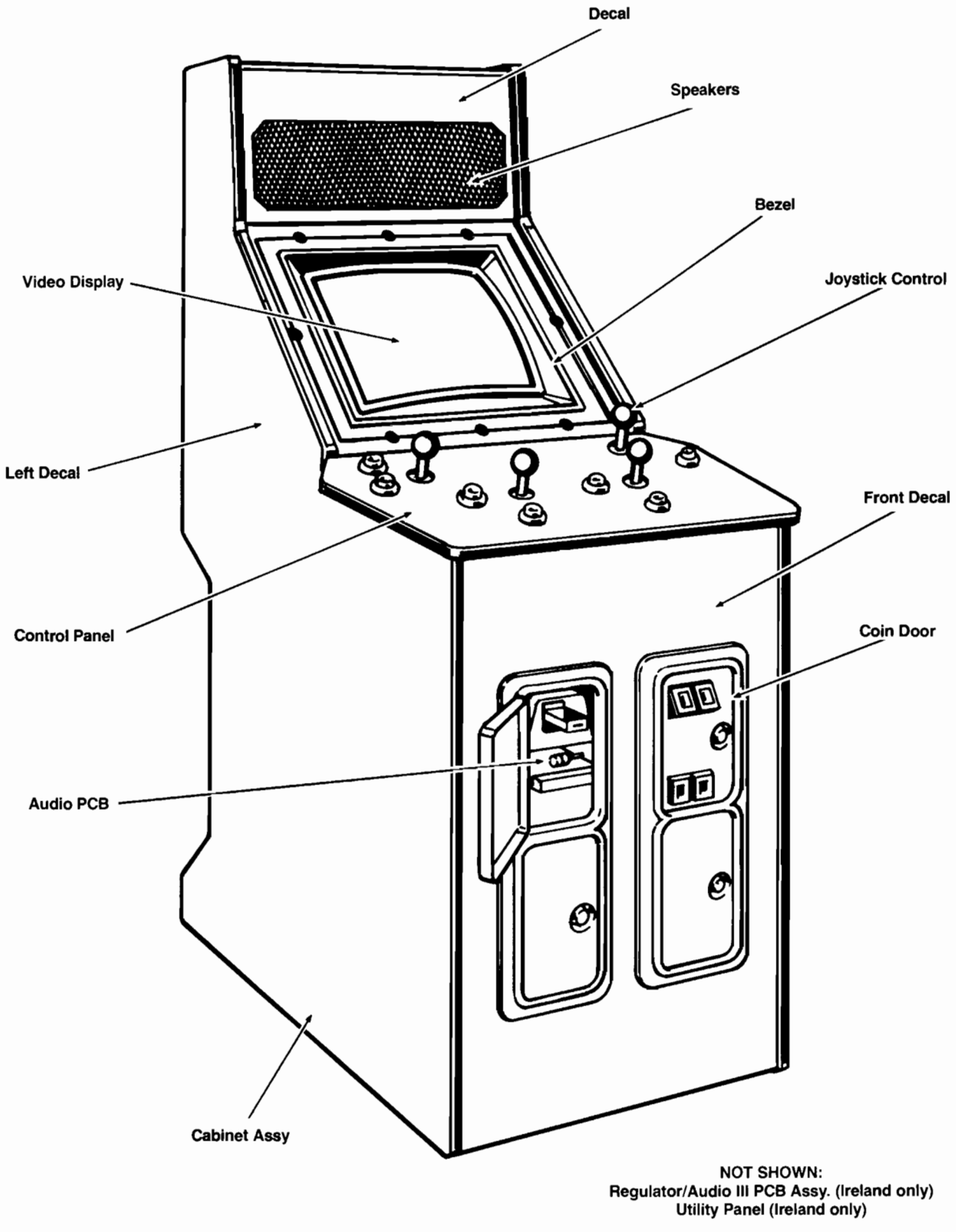


Figure 1-1 Game Overview

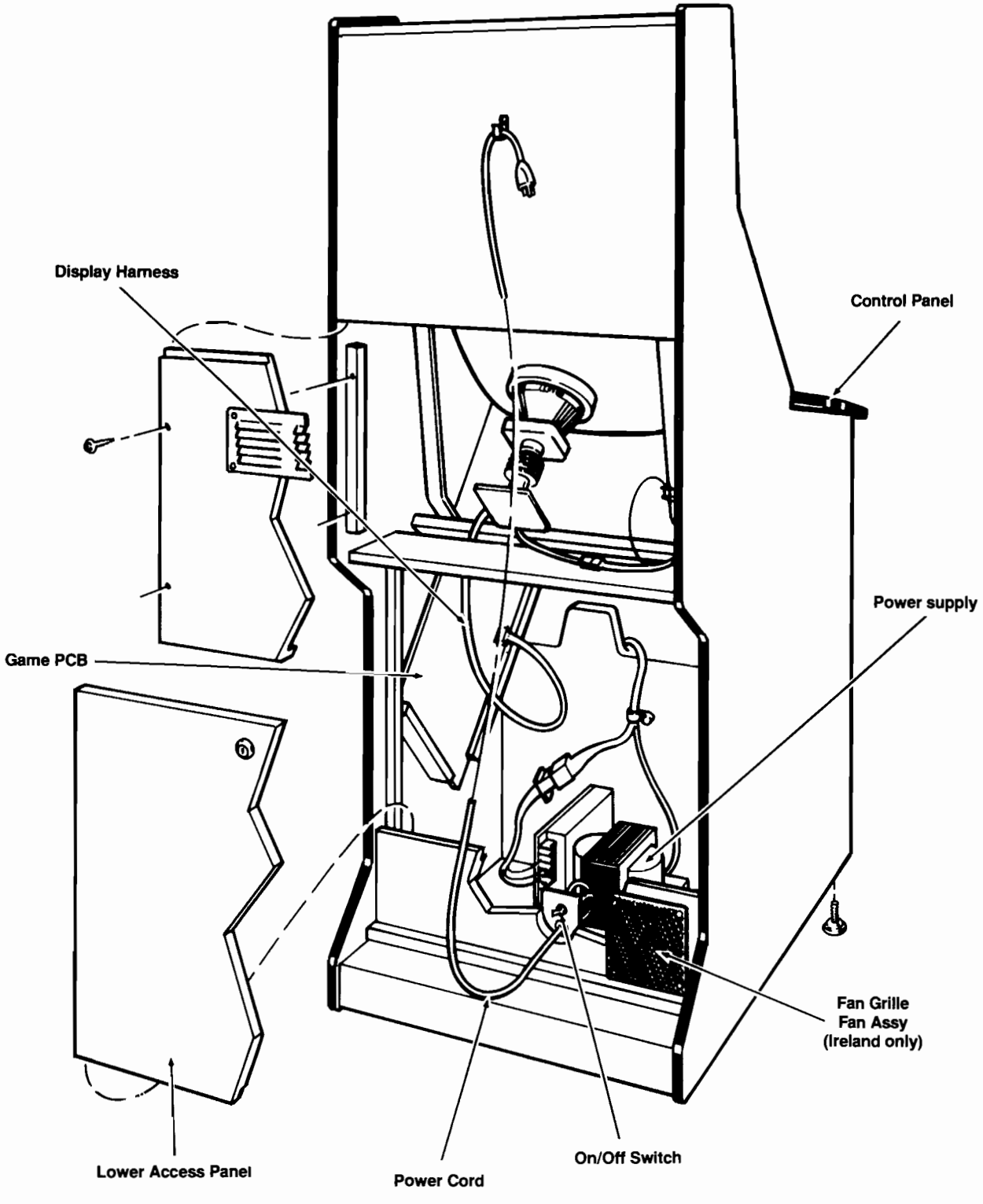


Figure 1-1 Game Overview, Continued

Table 1-1 Game Specifications

Characteristic	Specification
Power Consumption	175 V-A, 125 W RMS maximum
Temperature	+5° to +38° C (+37° to +100° F)
Humidity	Not to exceed 95% relative
Line Voltage	110 to 132 VAC (U.S. games) 200 to 264 VAC (Irish games)
Width	29 1/8 in. (74 cm)
Depth	39 in. (99 cm)
Height	66 in. (168 cm)
Weight	293 lbs. (133 kg)

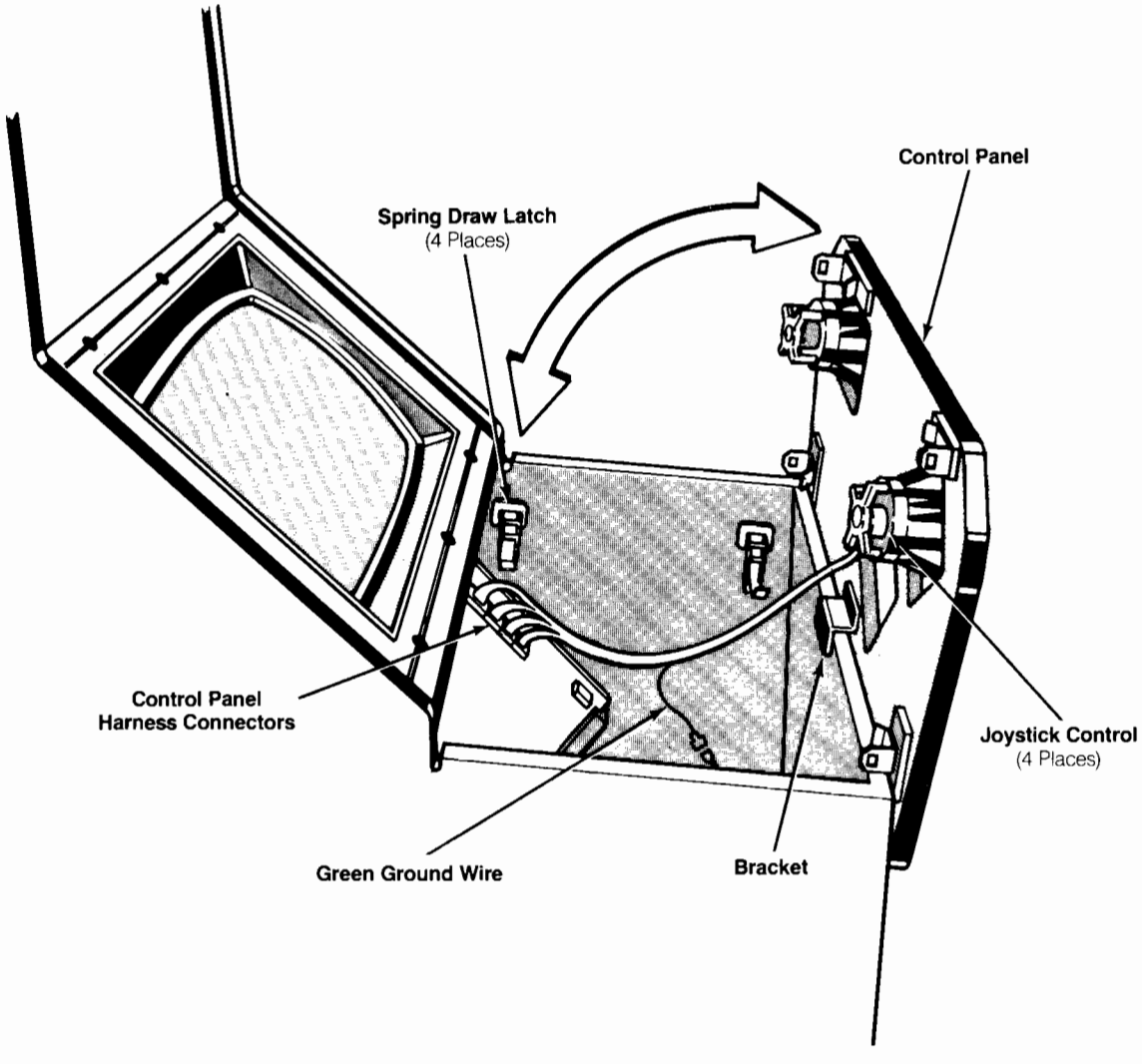


Figure 1-2 Control Panel Installation

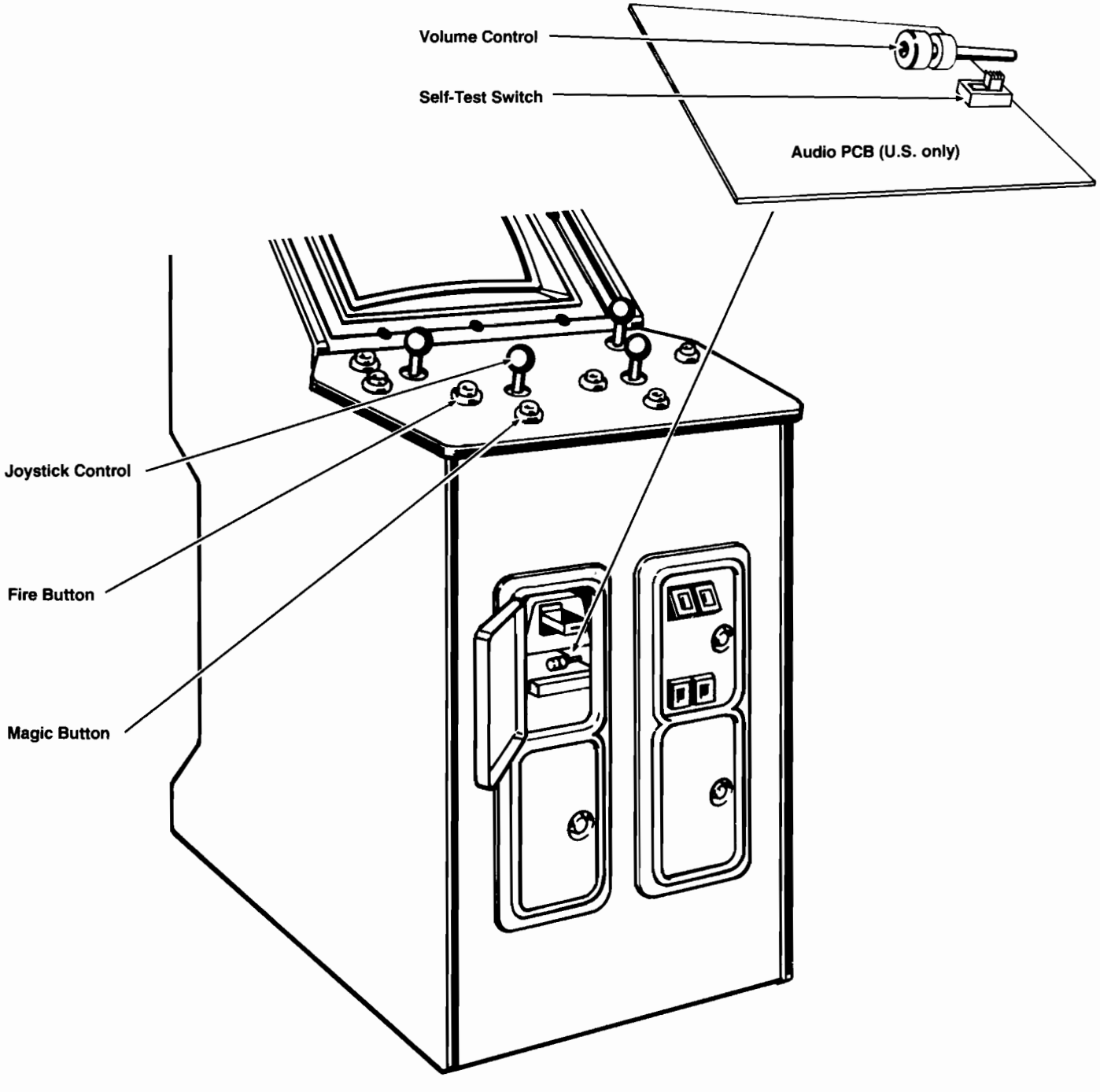


Figure 1-3 Control and Switch Locations

Game Play

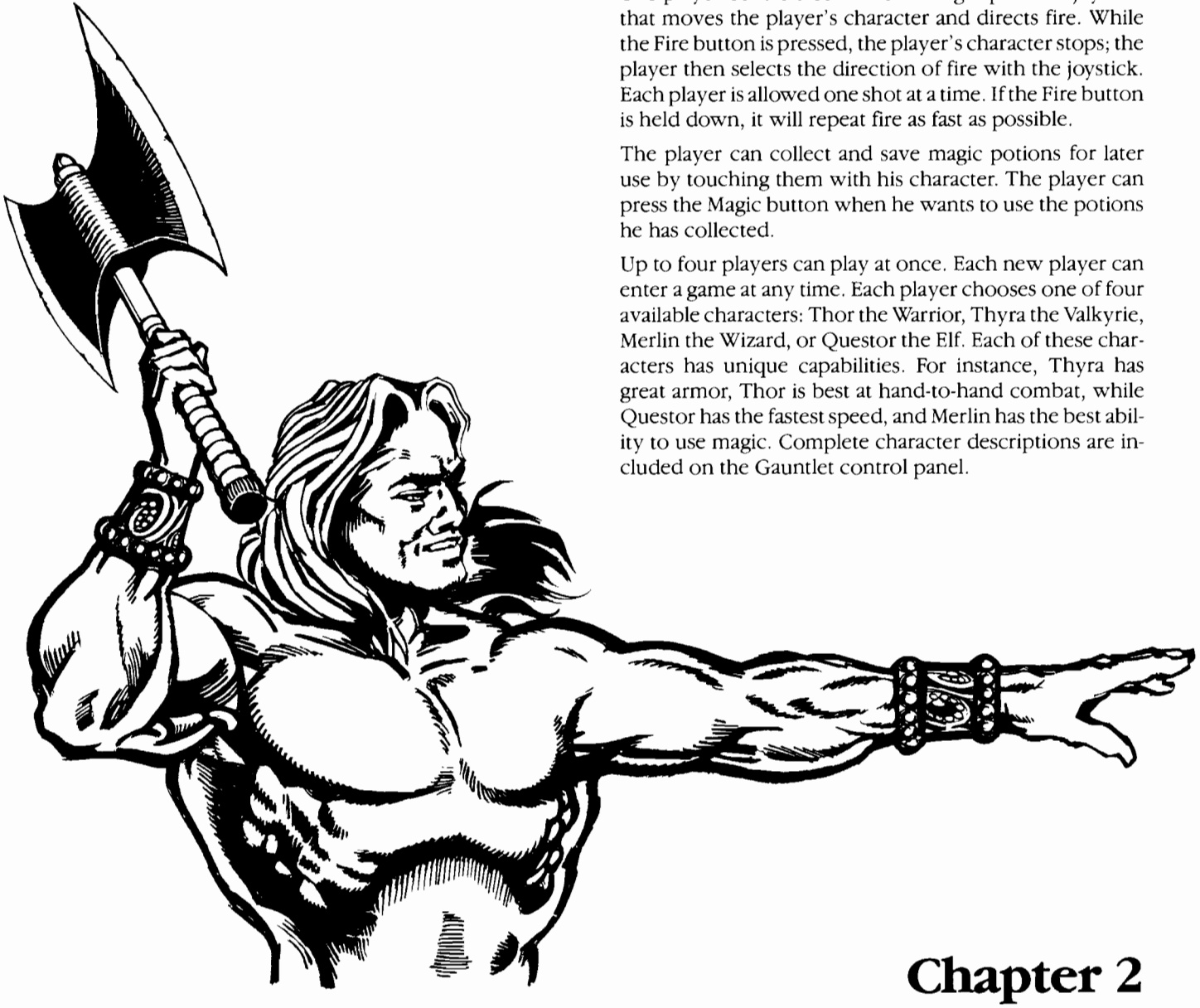
Gauntlet™ is a one-, two-, three- or four-player game where the players cooperatively explore a multitude of mazes. As players cooperate to fight off common enemies and try to find their way out of the various mazes, they must also compete with each other for food, treasure, magic potions and other helpful items.

Introduction

The player controls consist of an eight-position joystick that moves the player's character and directs fire. While the Fire button is pressed, the player's character stops; the player then selects the direction of fire with the joystick. Each player is allowed one shot at a time. If the Fire button is held down, it will repeat fire as fast as possible.

The player can collect and save magic potions for later use by touching them with his character. The player can press the Magic button when he wants to use the potions he has collected.

Up to four players can play at once. Each new player can enter a game at any time. Each player chooses one of four available characters: Thor the Warrior, Thyra the Valkyrie, Merlin the Wizard, or Questor the Elf. Each of these characters has unique capabilities. For instance, Thyra has great armor, Thor is best at hand-to-hand combat, while Questor has the fastest speed, and Merlin has the best ability to use magic. Complete character descriptions are included on the Gauntlet control panel.



Chapter 2

Attract Mode

The Attract Mode begins when the game is powered up or after exiting the Play or Self-Test modes. The Attract Mode ends when coins or tokens are inserted. The Attract Mode continuously cycles through the following displays:

- Game play demonstration
- Legend depicting all the objects the players can collect, such as treasure, food, and magic potions
- Seven individual screens displaying the descriptions for each of the following monsters:
  Ghosts
  Grunts
  Demons
  Lobbers
  Sorcerers
  Death
  Thief
- Audiovisual credits
- High score table: One screen displays the high score per coin for each of the four characters
- Gauntlet title screen

Play Mode

The action begins as the player(s) choose a character and enter the game by depositing coins or tokens in the proper slot. One coin slot is designated for each of the four unique characters: Thor the Warrior (coin slot on the far left marked with red), Thyra the Valkyrie (blue coin slot to the left of center), Merlin the Wizard (yellow coin slot to the right of center), and Questor the Elf (green coin slot to the far right).

The object of the game is to survive as long as possible while exploring each maze to find food, treasure, and magic potions. Players must search the maze to find the exit to the next level. Playing as a team will give the players the best chance for survival.

At level 1, players will find exits going to other levels. If the players choose, they may exit level 1 and jump as far ahead as level 8 and skip six levels. The first seven mazes are always the same. On level 8 and beyond, players will find themselves on any one of over a hundred different mazes. If a player survives long enough, mazes will be repeated in a different order to provide uninterrupted entertainment.

How long a player lasts (game time) depends upon the player's "health." Health is lost by contact with various monsters and as a function of elapsed time. Health can be regained or increased by consuming the food found in the maze or by depositing more coins. Thus, a player can continue to play and explore more and more mazes.

In addition to consuming food for health, players can collect treasure for points. Treasure increases a player's score multiplier when two or more players are playing the game.

In addition, magic potions affect all the enemies on the screen. These magic potions can be held for later use when many enemies can be destroyed at once. The magic potion is the only weapon that can kill the awesome Death.

Players can find certain magic potions that strengthen their character with extra speed, extra armor, etc. These strengths will remain with the character (until the Thief steals them or the player's health reaches zero) and are an incentive for players to keep depositing coins to play the game. Once a strong character is built up, a player can play longer for each unit of health.

Gauntlet incorporates many of the attractive characteristics of popular fantasy role-playing games. The medieval theme provides a setting for players to act out fantasies of combat and conquest.

High Score Mode

On Gauntlet, qualified players are allowed to enter their initials while other players continue to play the game. Thus, a player can exit the game without disrupting a game in progress.

Upon completing a game and if a player is among the top ten scorers recorded on the game, he has 45 seconds to

enter his first initial and 15 seconds for each of his next two initials. Players select their initials by moving the joystick and pressing the Magic or Fire buttons when the proper initial is displayed. Players can correct their initials by selecting the arrow that points to the left and pressing the Magic or Fire buttons, then repeating the procedure for entering their correct initials.

Hints for Game Play

The following hints will help you use your health more effectively and score more points per coin:

- Play cooperatively.
- Allow the player with the best ability to use magic (usually Merlin the Wizard, unless one of the other players has acquired the magic potion for extra magic) to pick up the magic potions.
- Save keys and potions and use them conservatively.
- Pay attention to your marching order. Allow the players with the best fighting ability and armor (usually Thyra the Valkyrie and Thor the Warrior) to lead the way and fend off attacks.
- Avoid contact with the ghosts: they take away your health very quickly and you cannot fight them hand-to-hand.

Maximizing Earnings

The Gauntlet game is designed to insure maximum earnings. In addition to the multiple-player aspect of the game, messages appear on the screen that encourage players to deposit more coins. Players can continue to buy health and play for as long as they want and explore an infinite number of levels.

Operator options on this game have been kept very simple. Thoroughly read Chapter 3, Self-Test, for the Coin Options, Game Options, Histograms, and Statistics screens so that you can effectively use the options available. Use the Self-Test screens showing Statistics and Histograms to evaluate game data, and the Game Options screen to make adjustments.

The key to maximum earnings is striking a midpoint on game times. Game times must be short enough so that player turnover is high. Conversely, game times must be long enough to give a player a good value and insure repeat play (repeat play is crucial to longevity). Gauntlet gives the operator the flexibility to tune game difficulty and enough statistics to intelligently make adjustments.

NOTE

The following recommendations are based on 25¢ per play, U.S. currency.

If collections seem low or are dropping off, check all player controls and coin mechanisms for proper operation. If the average game time per quarter is under 90 seconds, try changing the amount of health per coin to a higher number. This change should be quite obvious to players and should encourage more game play. If game times are still too short after a few weeks on a higher health per coin setting, try changing the game difficulty to an easier setting.

If the average game time per quarter is over 180 seconds, first try changing the game difficulty to a harder setting. If after a few weeks at this harder setting the average game time per quarter is still over 180 seconds, try an even harder setting. The amount of health per coin can also be reduced; however, this change will be more obvious to players and is likely to discourage them.

After changing the game difficulty settings, always clear or reset the Statistics by pressing the Warrior Magic button in the last Statistics screen.

Self-Test Mode

You can set the Gauntlet game to the Self-Test Mode by switching on the Self-Test switch behind the upper right coin door. Refer to Chapter 3 of this manual for detailed self-test information.

Self-Test

This game will test itself and provide visual and audible indications of the condition of the game circuitry and controls. Self-test information is visually displayed on the screen and audibly presented through the sound system. No additional equipment is required.

We suggest that you perform a self-test when you first set up the game, each time you collect the money, or when you suspect game failure. Coin and game options are selected in the Self-Test Mode.

Thirteen self-test screens provide a visual and audible check of the Gauntlet game circuits. Refer to Chapter 1 for the self-test switch location.

When the self-test switch is turned on, the game enters the Self-Test Mode. The following self-test screens are arranged in the sequence in which they occur when the self-test switch is turned on. After the Sound Test, the sequence starts over with the Switch Test. Turning the self-test switch off at any time during the Self-Test Mode causes the game to return to the Attract Mode.

Chapter 3

RAM/ROM Test

The RAM/ROM Test, as shown in Figures 3-1 and 3-2, provides a visual check of the game RAM, ROM, and associated circuitry. If the RAM and ROM Test passes, the display will advance to the Switch Test.

The RAM/ROM Test is divided into two sections. The condition of the RAM circuitry is displayed in the bottom half of the screen. If the RAM Test passes, after about an eight-second delay, the self-test skips to the ROM Test, and the condition of the ROM circuitry is displayed in the top half of the screen.

If a *Working RAM Error* message appears in the bottom half of the screen, check the RAMs at locations 6E, 7E, 6K, or 7K on the Game PCB. If the error message resembles Figure 3-1, refer to Table 3-1 for the faulty RAM locations on the Game PCB.

Perform the following procedure to use Table 3-1.

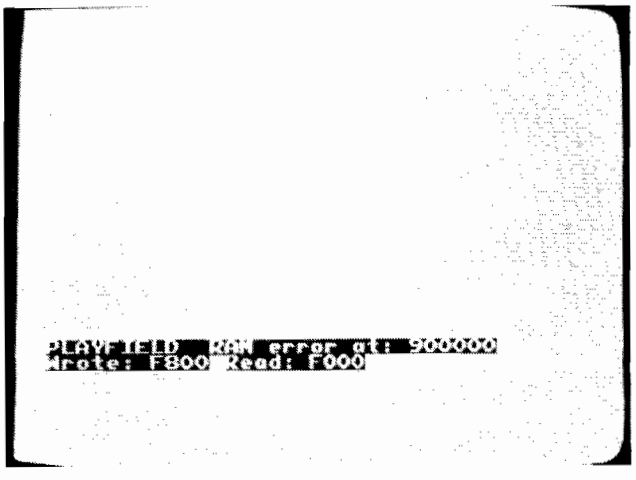


Figure 3-1 RAM Test Fails

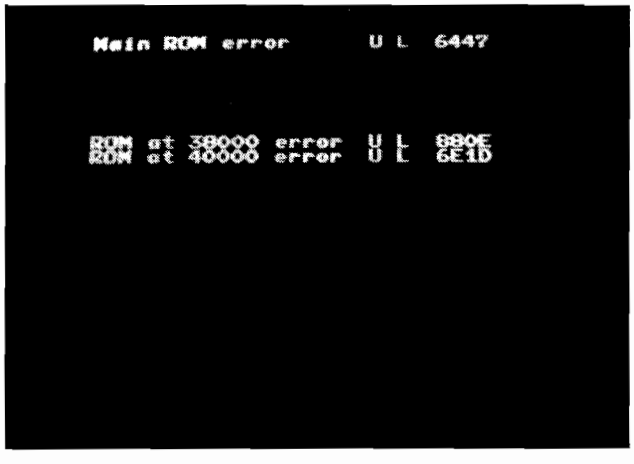


Figure 3-2 ROM Test Fails

Table 3-1 Faulty RAM Locations

Error Position	RAM Error: Play-field 900000 to 901FFF	Motion Object 902000 to 903FFF	Alpha/ Working 904000 to 905FFF	Color* 910000 to 9107FF
?XXX	6D	6C	6E	10L
X?XX	7D	7C	7E	10M
XX?X	6J	6F	6K	9L
XXX?	7J	7F	7K	9M

**10L = Intensity*
10M = Red
9L = Green
9M = Blue

Notes

1. *If the error message itself has bad lettering, then the fault is most likely the alpha/working RAMs at locations 6E, 7E, 6K, or 7K.*
2. *A completely blank screen or several wrong-color dots can indicate a fault in the color RAMs at locations 10L, 10M, 9L, or 9M.*

1. Note the *XXXX RAM error at: 90XXXX* message. If the error address is between 900000 and 901FFF, go to the **900000 to 901FFF** column in Table 3-1. Likewise, if the error address is between 902000 and 903FFF, go to the **902000 to 903FFF** column.
2. Note the *Wrote: XXXX Read: XXXX* message. Find the characters that do not match between the *Wrote* and *Read* words. For example, if the displayed error address is 900000 and the data is *Wrote: C000 Read: 8000*, then the error is in the first characters of the wrote/read messages (C and 8, respectively). This corresponds to ?XXX in the Error Position column of Table 3-1. Thus, the faulty RAM would most likely be at location 6D.

Another example is if the error address is 902060 and the data is *Wrote: E015 Read: E026*. Then the error is in the third and fourth characters of the wrote/read messages (15 and 26, respectively) which corresponds to XX?X and XXX? in the Error Position column of Table 3-1. Thus, the faulty RAM is most likely in locations 6F and 7F.

If the game shows RAM errors, press the Warrior Magic button to advance to the ROM Test.

If the ROM Test fails, error messages may appear in the top half of the screen as shown in Figure 3-2. If the upper (U) or lower (L) main memory ROM circuits on the Game PCB fail, a *Main ROM error U or L* message will appear at the top of the screen. Refer to Table 3-2 for the faulty upper or lower main memory ROM locations.

To exit from the RAM/ROM Test and obtain the Switch Test screen, press and hold down the Warrior Magic button for about a second, then release.

Table 3-2 Faulty Upper or Lower Main ROM Locations

Error Address	Location	
Main ROM	U = 9A	L = 9B
38000	U = 10A	L = 10B
40000	U = 7A	L = 7B

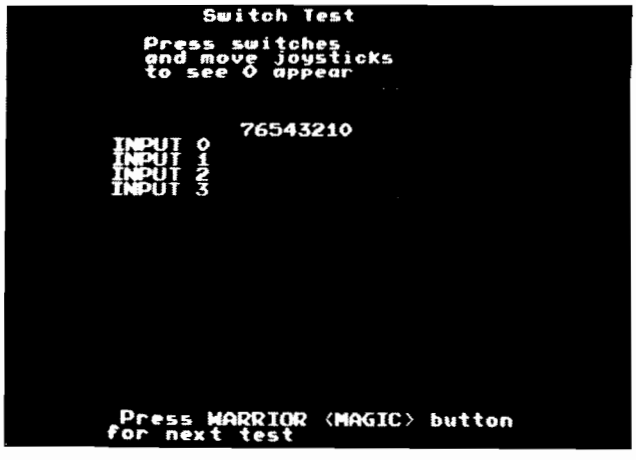


Figure 3-3 Switch Test

Table 3-3 Player Control Switch Test

Procedure	Test Indication 7	6	5	4	3	2	1	0
Joystick up	0							
Joystick down		0						
Joystick left			0					
Joystick right				0				
Press Fire							0	
Press Magic								0

Switch Test

The Switch Test is shown in Figure 3-3. This test checks the condition of the player controls. *INPUT 0* through *3* in the display corresponds to the player controls as follows:

INPUT 0 = Warrior (Thor)
INPUT 1 = Valkyrie (Thyra)
INPUT 2 = Wizard (Merlin)
INPUT 3 = Elf (Questor)

Operate the joysticks and pushbuttons for each player and check that the screen displays a 0 (zero) under the appropriate row of numbers as shown in Table 3-3.

If the joysticks are not placed exactly in one of the four quadrant positions, two zeros may appear in the display. However, if two zeros appear in all joystick positions or when any of the buttons are pressed, there may be a short between the joystick or pushbutton switches. This is indicated by the locations of the zeros. For example, when the joystick is moved to the right or left, zeros under the numbers 4 and 5 indicate a possible short between the right and left joystick leaf switches. No zeros when a control is operated indicates a possible open leaf switch contact.

Press the Warrior Magic button to obtain the next screen.

Coin Options

The Coin Options screen is shown in Figure 3-4. The Coin Options screen indicates the current coin option settings and is used to change those settings.

MULTIPLIER should have a red box around it. Move the Warrior joystick right or left to cycle through eight multiplier selections as follows:

- 1 Coin Counts as 1 Coin (Default)
- 1 Coin Counts as 2 Coins
- 1 Coin Counts as 3 Coins
- 1 Coin Counts as 4 Coins
- 1 Coin Counts as 5 Coin
- 1 Coin Counts as 6 Coins
- 1 Coin Counts as 7 Coins
- 1 Coin Counts as 8 Coins

Select the desired value. Note that the default (recommended) setting of *1 Coin Counts as 1 Coin* is highlighted in green.

Move the Warrior joystick down to move the red box to *BONUS ADDER*. Move the Warrior joystick right or left to cycle through seven bonus adder selections as follows:

- None (Default)
- 2 Coins Give 1 Extra Coin

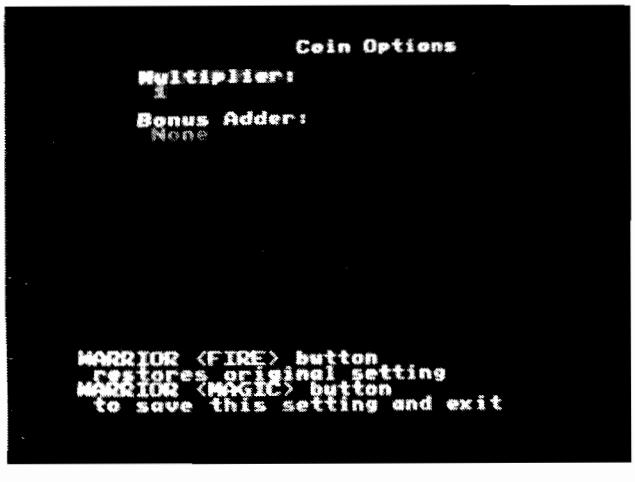


Figure 3-4 Coin Options

- 4 Coins Give 1 Extra Coin
- 4 Coins Give 2 Extra Coins
- 5 Coins Give 1 Extra Coin
- 3 Coins Give 1 Extra Coin
- Free Play

Select the desired value. Note that the default (recommended) setting *None* is highlighted in green.

If you replace the EEPROM at location 13A or a hardware problem occurs, the coin options will switch to the default (green) settings.

If you want to cancel the coin option changes and restore the original settings, press the Warrior Fire button.

Press the Warrior Magic button to set the game for the options selected and obtain the next screen. *Exiting from the Coin Options screen by turning off the self-test switch will* ***not*** *set the game for the selected coin options.*

Game Options

The Game Options screen is shown in Figure 3-5. This screen indicates the current game option settings, and is used to reset the high score table and change the game option settings. Refer to Table 3-4 for the available options and the default (recommended) settings. Note that the default settings are highlighted in green.

Move the Warrior joystick right or left and note that the settings in the red box change. Select the desired value. Move the Warrior joystick up or down to move the red box to the desired option. Move the Warrior joystick right or left to cycle through all the available game option settings, and select the desired value. Repeat this procedure for the remaining options.

If you want to cancel the option changes and restore the original settings, press the Warrior Fire button.

Press the Warrior Magic button to set the game for the options selected and obtain the next screen. *Exiting the Game Options screen by turning off the self-test switch will* ***not*** *set the game for the selected options.*

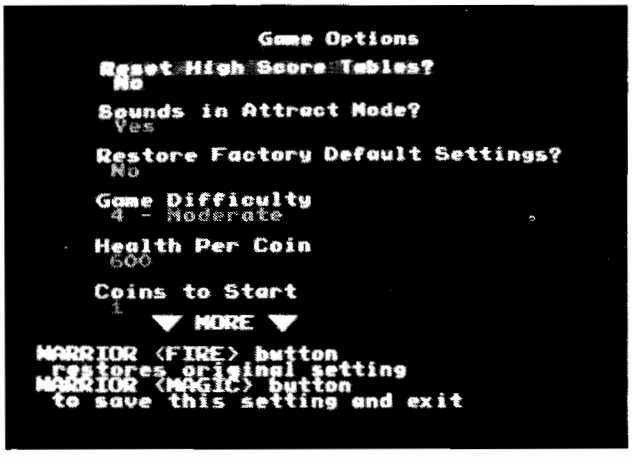


Figure 3-5 Game Options

Table 3-4 Game Option Settings

Option Name	Available Settings
Reset High Score Table	No Yes ◄
Sounds in Attract Mode	No Yes ◄
Restore Factory Default Settings	No ◄ Yes
Game Difficulty	0—Easiest 1 2—Easy 3 4—Moderate ◄ 5 6—Hard 7—Hardest
Health Per Coin	100, 125, 150, 175, 200, 225, 250, 300, 350, 400, 450, 500, 550, 600 ◄, 650, 700, 750, 800, 850, 900, 950, 1000, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, and 2000
Coins to Start	1 ◄, 2, 3, 4
Automatic Reset of High Score Tables	No Yes ◄
Disable Speech	No ◄ Yes

◄ *Manufacturer's recommended settings*

Restore Factory Default Settings—If you select *Yes* and exit from the Game Options Screen by pressing the Warrior Magic button, the game option settings stored in EEPROM will be cleared and replaced by the manufacturer's default (recommended) settings when the game enters the Attract Mode.

Game Difficulty—The Game Difficulty settings adjust the frequency of monster generation (hardest game difficulty generates monsters the fastest).

Game Difficulty or Health Per Coin—If you change the game difficulty or the health per coin values and exit the Game Options screen by pressing the Warrior Magic button, a screen with the message *PRESS BOTH WARRIOR BUTTONS TO ABORT CLEARING STATS* will appear as soon as the self-test switch is turned off and the game returns to the Attract Mode. If you press the Warrior Magic and Fire buttons simultaneously within the displayed 10-second countdown, the statistics, histograms, and high score table information will be retained. Otherwise they will be cleared (reset).

Automatic Reset of High Score Tables—If you select *Yes* and exit the Game Options screen by pressing the Warrior

Magic button, the High Score Table will automatically be reset to the factory scores and initials after every 2,000 games, but no less than 200 games since the last player entered initials.

Disable Speech—If you select *Yes* and exit the Game Options screen by pressing the Warrior Magic button, the speech portion of the game sounds will be disabled.

Press the Warrior Magic button to obtain the next screen.

Statistics

The Statistics screen appears as shown in Figure 3-6. This screen provides a visual check of the current game statistics. The statistics information is accumulated either from the first time the game was turned on or from the last time the statistics were reset. To reset the statistics information, press the Warrior Fire button.

The following information appears on the Statistics screen:

- The *Plyr 0–3 Coin* messages show the number of coins deposited in each of the four coin mechanisms.
- The *0–4 Plyr Mins* messages show the total time, in minutes, of all the 0-, 1-, 2-, 3-, and 4-player games that were played. (A "zero-player" game is the time that the game was turned on but not being played.)
- *Total Games* shows the total number of games played. One "game" is the time between leaving the Attract Mode and returning to it, regardless of time, number of coins inserted, or how many have played Gauntlet. The games are measured since the last time the statistics were cleared.
- *Error Count* shows the number of EEPROM errors that were detected. Replace the EEPROM at location 13A on the Game PCB if the errors detected exceed approximately 75 per week.
- *Total Coins* shows the total number of coins deposited in all the coin mechanisms.

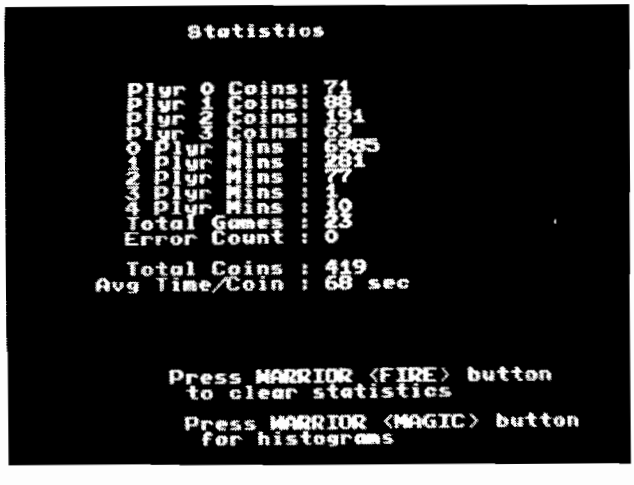


Figure 3-6 Statistics

- *Avg Time/Coin* shows the average game time per coin, in seconds, for all players.

Press the Warrior Magic button to obtain the next screen.

Histograms

One Histogram screen is shown in Figure 3-7. The Histograms for Players 0 through 3 (0 = Warrior, 1 = Valkyrie, 2 = Wizard, 3 = Elf) are selected by pressing the Warrior Magic button. For each of four players, these screens show the lengths of the games from 0 to 300 or more seconds. The Histograms also provide corresponding bar graphs.

The game times information is accumulated either from the first time the game was turned on or from the last time the game times were reset. To reset the Histograms, press the Warrior Fire button while displaying the Histogram for Player 3.

Press the Warrior Magic button to obtain the next screen.

Playfield Test

The Playfield Test appears as shown in Figure 3-8. The playfield that is displayed (Bank = 0 only, Banks 1 through 3 are not used) should not show any abnormalities. The right-hand edge of the screen should have 16 uniquely colored blocks (including two black blocks). These are the colors used in the playfield displayed on the screen. The Playfield Test indicates the condition of some of the graphics ROM, the vertical and horizontal scroll registers, and the joystick control.

Move the Warrior joystick to the left, and the playfield should slowly move to the left. Move the joystick up, and the playfield will move up—likewise for right and down.

Press the Warrior Magic button to obtain the next screen.

Motion Object Test

The Motion Object Test appears as shown in Figure 3-9. The seven groups of motion objects should be (from left

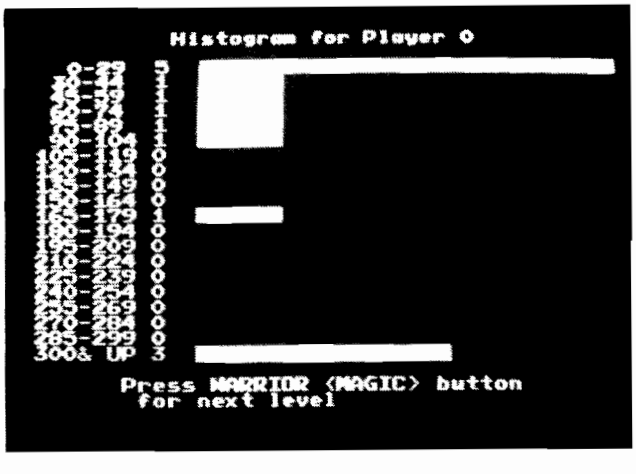


Figure 3-7 Histograms

Table 3-5 Motion Object Test Description

Controls	Press Fire	Press Magic	Move Joystick
Warrior	Object flips horizontally.	Selects next screen.	All objects scroll together.
Valkyrie	Object number increments.	Object number decrements.	Up—Vertical size increases. Down—Vertical size decreases. Right—Horizontal size increases. Left—Horizontal size decreases.
Wizard	Color Palette number increments.	Color palette number decrements.	Position of object moves (horizontally and vertically).
Elf	Picture number increments by 1.	Picture number decrements by 1.	Up—Picture number increments by size. Down—Picture number decrements by size.

Figure 3-8 Playfield Test

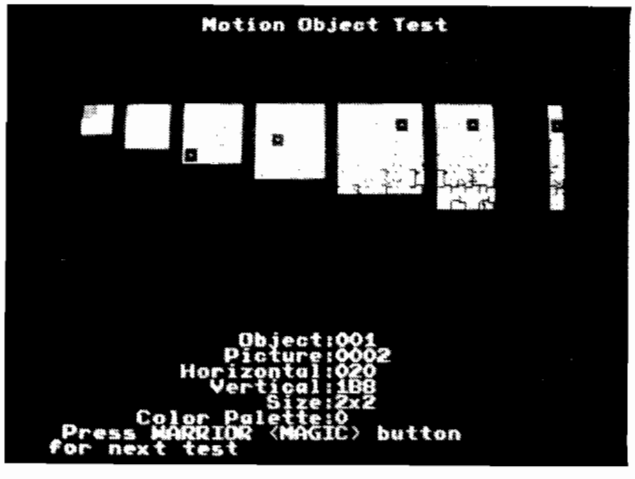


Figure 3-9 Motion Object Test

to right): 2 × 2, 3 × 3, 4 x 4, 5 × 5, 6 × 6, 7 × 7, and 8 × 8 squares. The Motion Object Test indicates the condition of the motion-object buffer circuit. The following information is provided at the bottom of the screen:

- *OBJECT* indicates the number of the motion object selected.
- *PICTURE* indicates the stamp number in ROM.
- *HORIZONTAL* indicates the horizontal position of the object.
- *VERTICAL* indicates the vertical position of the object.
- *SIZE* indicates the number of stamps across by the number of stamps down.
- *COLOR PALETTE* indicates the palette number for colors.

Perform the test procedure as described in Table 3-5.

NOTE

Upon entering the Motion Object Test, if a single object is moved down it will partially disappear under a black horizontal bar that runs across the screen on the line above the message *OBJECT:001*.

Press the Warrior Magic button to obtain the next screen.

Alpha Test

The Alpha Test should appear as shown in Figure 3-10. The Alpha Test indicates the condition of the alphanumerics circuit.

Press the Warrior Magic button to obtain the next screen.

Color Test

The Color Test appears as shown in Figure 3-11. The Color Test indicates the condition of the display color circuits.

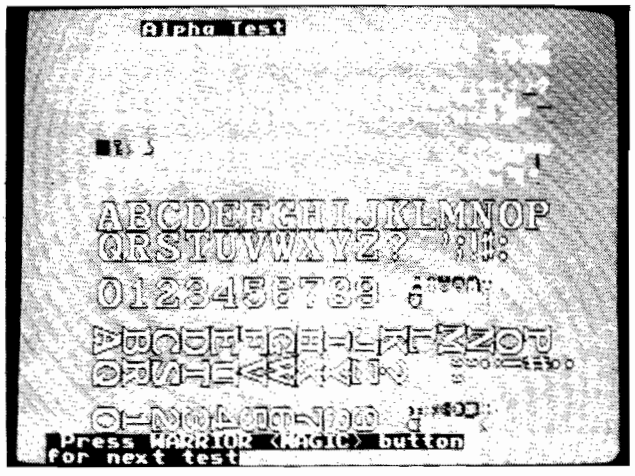


Figure 3-10 Alpha Test

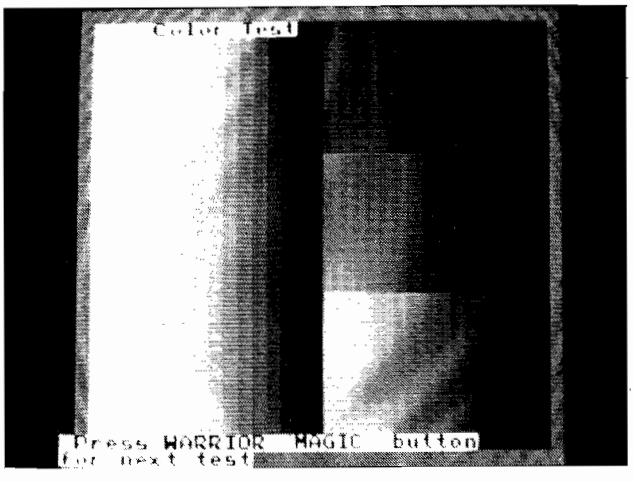


Figure 3-11 Color Test

The screen should show 16 vertical grey-scale bars and three blocks of red, green, and blue, each containing 16 vertical bars. The brightest bars should be on the left and darkest (black) on the right with a grey frame around the screen. This frame will help to identify the darkest color band. If the display characteristics are not correct, refer to the display manual for the color-gun adjustment procedure or to determine the possible cause of failure.

Press the Warrior Magic button to obtain the next screen.

Color Purity Test

The Color Purity Test consists of five color displays that indicate the condition of the display color-purity circuits. The first display to appear should be a red screen with the word RED displayed at the bottom of the screen as shown in Figure 3-12.

Press the Warrior Fire button, and the next display to appear should be green with the word GREEN displayed at the bottom of the screen. Press the Warrior Fire button to obtain a blue, white, and finally a grey screen. After the grey screen, the display will repeat the red, green, blue, white, and grey sequence again.

If the display characteristics are not correct, refer to the display manual for the color-purity adjustment procedure or the possible cause of failure.

Press the Warrior Magic button to obtain the next screen.

Convergence Test

The Convergence Test (as shown in Figure 3-13) should show a white grid pattern. The Convergence Test indicates the condition of the display size, centering, linearity, and convergence.

Press the Warrior Fire button; the grid pattern should turn violet. Pressing the Warrior Fire button again should cause the screen to turn green. Examine the grid pattern for the following characteristics (the violet and white patterns are used to adjust the display convergence):

- Insure that the corners of the pattern touch the corners of the CRT.
- Grid lines should show no pincushioning or barreling, and the lines should be straight within 3.0 mm.
- Violet and white pattern convergence should be within 2.0 mm.

If the display characteristics are not within these limits, refer to the display manual for the linearity and convergence adjustment procedures or to determine the possible cause of failure.

Move the Warrior joystick up and the pattern should slowly scroll up the screen. Moving the Warrior joystick to the left, right, or down should cause the pattern to scroll accordingly.

Press the Warrior Magic button to obtain the next screen.

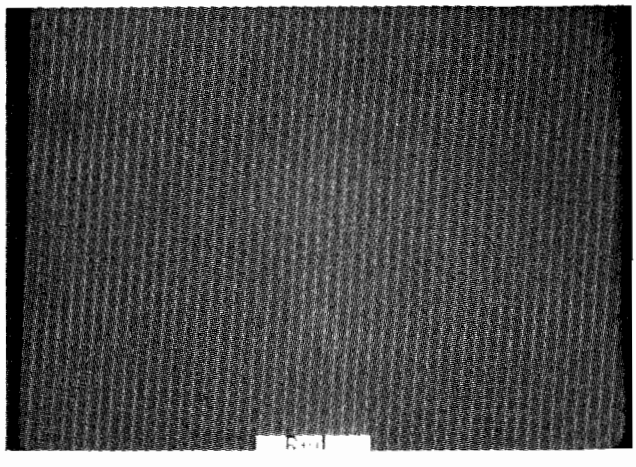


Figure 3-12 Color Purity Test

Sound Test

The Sound Test (as shown in Figure 3-14) indicates the condition of the coin mechanisms and the music, speech, and sound-effects circuits.

The sound microprocessor is reset at the beginning of this test. The game may take three seconds to produce the first sound. If the sound microprocessor reset fails, the message *SOUND PROCESSOR NOT RESPONDING* should blink near the top of the screen. If the sound microprocessor is good, check the coin mechanisms and the sound microprocessor circuits by observing the following messages:

- *CURRENT COIN VALUE* consists of four zeros. For each of the coin mechanisms, the first, second, third, and fourth 0 should change to a 1 as the coin switch is held down, and should change back to 0 when the coin switch is released.

- *NUMBER OF SOUNDS* indicates of the number of sounds used in the Gauntlet game.

- *SOUND CPU STATUS* indicates the condition of the sound microprocessor. If the sound microprocessor is good, the word *GOOD* should appear. If the sound microprocessor or associated circuitry is faulty, a number will appear (to indicate sound status) in addition to an error message located at the top of the screen. Refer to Table 3-6 for the error messages and faulty sound RAM and ROM locations on the Game PCB.

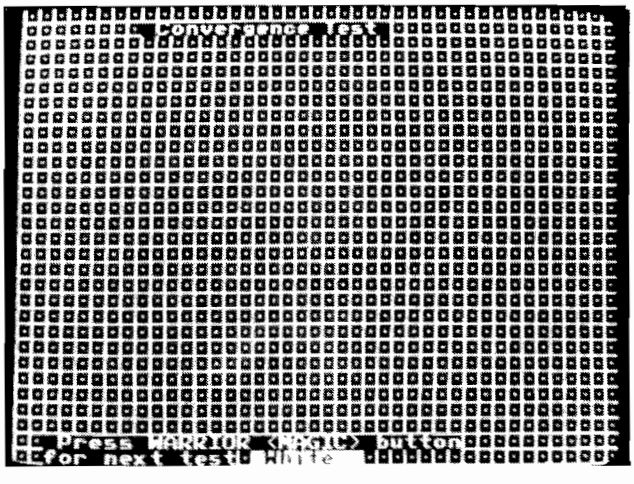


Figure 3-13 Convergence Test

- *SOUND #* indicates the sound selected by moving the Warrior joystick up (increments the sound number) or down (decrements the sound number). To hear the sound, press the Warrior Fire button one or more times. Moving the Warrior joystick right or left silences the sound. You can select the following integrated circuit (chip) tests during the Sound Test:
- *4 (Music Chip Test)* consists of eight tones in a major scale that alternate between sound channels (16 tones in all).

Table 3-6 Faulty Sound RAM and ROM Locations

Error Message	Location
Speech Chip Time Out	13/14R
Music Chip Time Out	15R
Interrupt Error	None
RAM 1 Error	16M
RAM 2 Error	16N/A
ROM 1 Error	16R
ROM 2 Error	16S
ROM 3 Error	16S

- *5 (Effects Chip Test)* consists of four tones in a major chord that come from both sound channels simultaneously.
- *8 (Speech Chip Test)* consists of a synthesized voice repeating the message "speech chip test."

Press the Warrior Magic button to return to the Switch Test.

Figure 3-14 Sound Test

Maintenance

This chapter includes preventive and corrective maintenance procedures for the Gauntlet game components that are subject to the most use. To assure maximum trouble-free operation from this game, we recommend that preventive maintenance be performed as described in this chapter.

Removal, disassembly, reassembly, and replacement procedures are provided for components that may require corrective maintenance. Appropriate references are provided to Chapter 5 Illustrated Parts Lists, to aid in locating the parts of this game that are mentioned, but not illustrated, in the maintenance procedures.

Chapter 4

Preventive Maintenance

Preventive maintenance includes cleaning, lubricating, and tightening hardware. How often preventive maintenance is performed depends upon the game environment and frequency of play. However, for those components listed in Table 4-1 Preventive-Maintenance Intervals, we recommend that preventive maintenance be performed at the intervals specified.

Preventive-Maintenance Intervals

The preventive-maintenance intervals specified in Table 4-1 are the recommended minimum requirements for the components listed.

WARNING

To avoid possible electrical shock, turn off the game before performing any maintenance procedures.

Removing the Control Panel

Perform the following procedure to remove/replace the control panel (see Figure 4-1).

1. Unlock and open the right and left coin doors.
2. Carefully reach up through the right and left coin door openings and release the four spring-draw latches located under the control panel: two latches are on each side of the cabinet.
3. Grasp the control panel on the top edge (next to the display) and gently tilt the panel up to the vertical position. Check that the control panel is held securely to the front edge of the cabinet by the bracket mounted under the front edge of the panel.
4. Disconnect the four joystick control harness connectors from the game PCB and disconnect the green ground wire.
5. Carefully lift the control panel from the cabinet.
6. Replace the control panel in the reverse order of removal.

Table 4-1 Recommended Preventive-Maintenance Intervals

Joystick Control	Lubricate and tighten hardware at least every three months.
Coin Mechanism	Inspect and clean (if required) whenever you collect coins. Because there is only one mechanism per player, the mechanisms may need to be cleaned more often than other games.

Cleaning the Pushbutton Leaf Switches

Perform the following procedure to clean the leaf switch contacts and tighten the securing hardware.

1. Follow the procedure described in steps 1–3 above for removing the control panel.
2. Use electrical contact cleaner to clean the contacts. Do not burnish them. When the pushbutton is pressed, the wiping action of the cross-bar contacts provides a self-cleaning feature. Then use the Self-Test to verify proper switch contact (see Figure 3-3).
3. Using a 15/16-inch open-end wrench, tighten the stamped nut securing the pushbutton leaf switches to the control panel.

Cleaning the Coin Mechanism

Use a soft-bristled brush to remove loose dust or foreign material from the coin mechanism. A toothbrush may be used to remove any stubborn build-up of residue in the coin path. After cleaning the coin mechanism, blow out all of the dust with compressed air.

Cleaning the Interior Components

Perform the following procedure to clean the components inside the cabinet.

WARNING

Turn off the game power, but do not unplug the power cord before cleaning inside the cabinet. The power cord provides a ground path for stray static voltages that may be present on the cleaning tools.

1. Unlock and remove the lower access panel.
2. Use a vacuum cleaner with a soft long-bristled brush attachment or a soft-bristled paint brush to remove loose dirt and dust accumulated on the inside of the cabinet. Be sure to clean the electrical components thoroughly (power supplies, PCB assemblies, display, etc.).

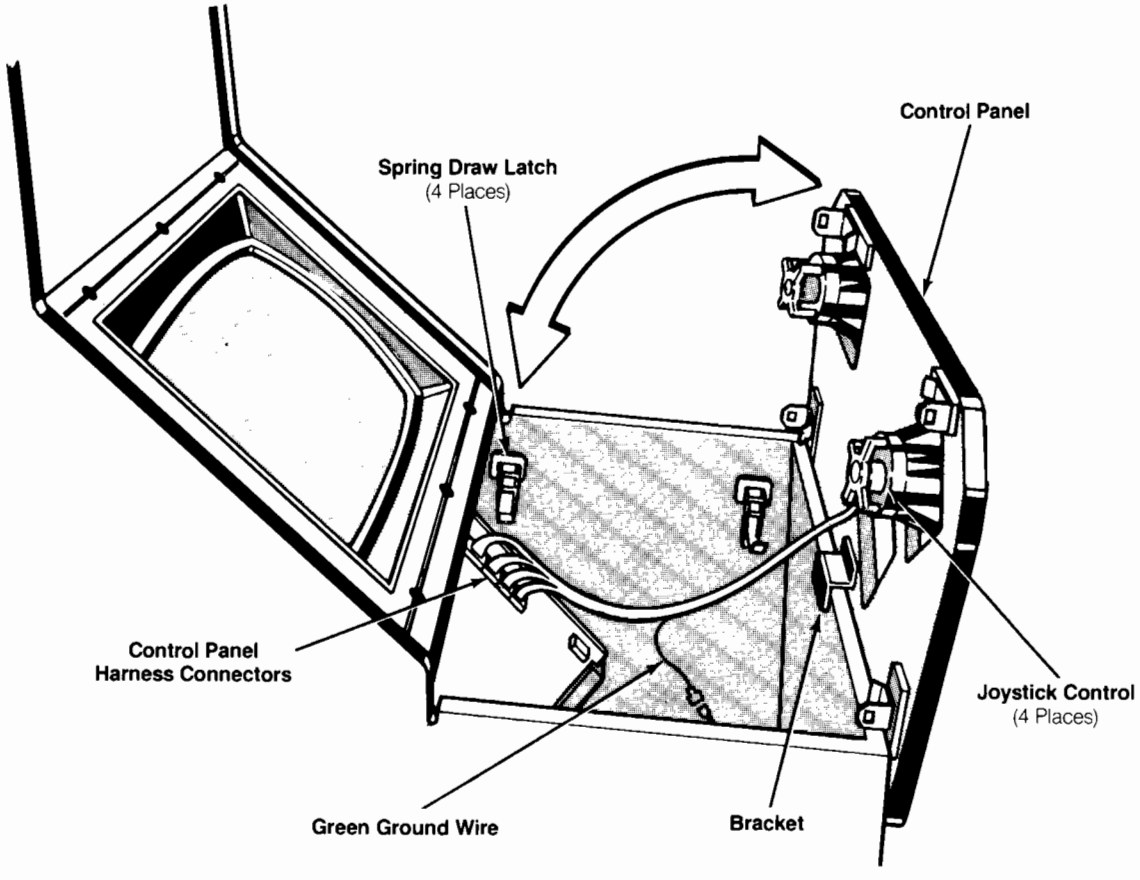


Figure 4-1 Control Panel Removal

CAUTION

Be extremely careful when cleaning the electrical components inside the cabinet. Avoid touching the electrical components with any solid object other than the soft bristles of the vacuum attachment or paint brush.

Joystick Controls

Preventive maintenance on the joystick control consists of inspecting the pivot and actuator balls for excessive wear or dirt, lubricating the pivot ball, adjusting the leaf switches and, if necessary, replacing or tightening the securing hardware.

Lubricating the Joystick Controls

Perform the following procedure to lubricate and tighten the joystick controls (see Figure 4-2).

1. Remove the control panel as previously described.
2. Apply a light film of Lithium grease (Atari part no. 107027-001) to the lubrication points shown in Figure 4-2.
3. Using a 3/8-inch wrench, tighten the four nuts holding the joystick to the control panel.
4. Using a ¼-inch wrench (or an appropriate tool), tighten the four screws holding the positioning plate to the lower housing.

Corrective Maintenance

Corrective maintenance consists of removing, disassembling, reassembling, and replacing the pushbutton leaf switches, joystick controls, game printed circuit board (PCB), video display, and speakers.

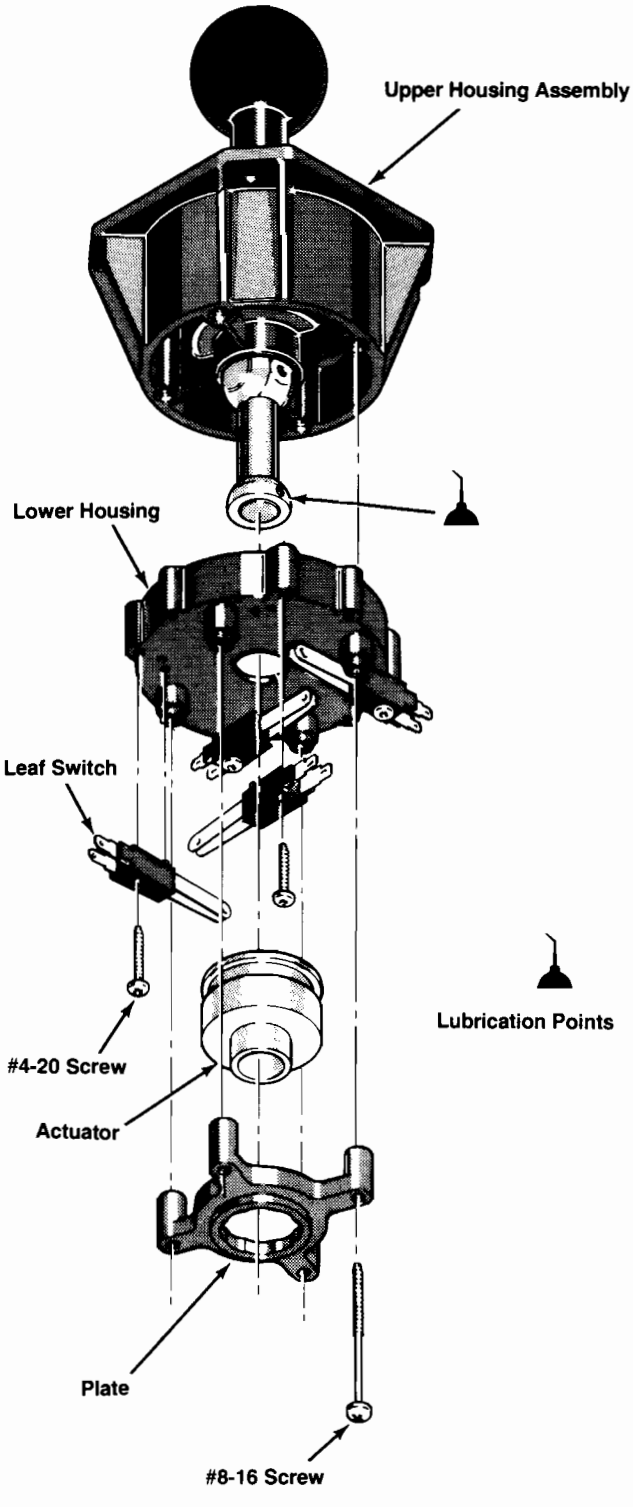


Figure 4-2 Joystick Lubrication

Removing the Pushbutton Leaf Switches

Perform the following procedure to remove/replace the pushbutton leaf switches or contacts (see Figure 4-3).

NOTE

Pushbutton leaf switches can be checked for proper operation by using the Self-Test.

Fire switches must be suitable for heavy-duty use. Replace only with switches of Atari part number 160013-002.

1. Open the control panel as described in steps 1 through 3 under *Removing the Control Panel*.
2. Using a 15/16-inch wrench, remove the stamped nut on the underside of the control panel. The button assembly on the top side of the control panel should not turn (see Figure 4-3).
3. Install the pushbutton switch in the reverse order of removal. Reconnect the harness wires to the switch terminals as shown in Figure 4-3.

Removing the Joystick

Perform the following procedure to remove/replace the joystick (see Figure 4-3).

1. Remove the control panel as described under *Preventive Maintenance*.
2. Disconnect the harness wires from the four leaf switch terminals.
3. Using a 3/8-inch wrench, remove the four nuts and washers holding the joystick assembly to the control panel.
4. Lift the joystick assembly out of the control panel.
5. Replace the joystick in the reverse order of removal. Reconnect the harness wires to the leaf switch terminals as shown in the Game Wiring Diagram in the *Schematic Package Supplement* (SP-284).

Disassembling the Joystick

Perform the following procedure to disassemble/reassemble the joystick assembly (see Figure 4-2).

1. Using a ¼-inch wrench (or appropriate tool), remove the four screws holding the positioning plate to the lower housing.
2. Remove the leaf switch actuator.
3. Remove the lower housing with the four leaf switches.

Reassembling the Joystick

Replace the joystick parts in the reverse order of removal. After reassembling the joystick, make sure the control handle returns freely to the center position.

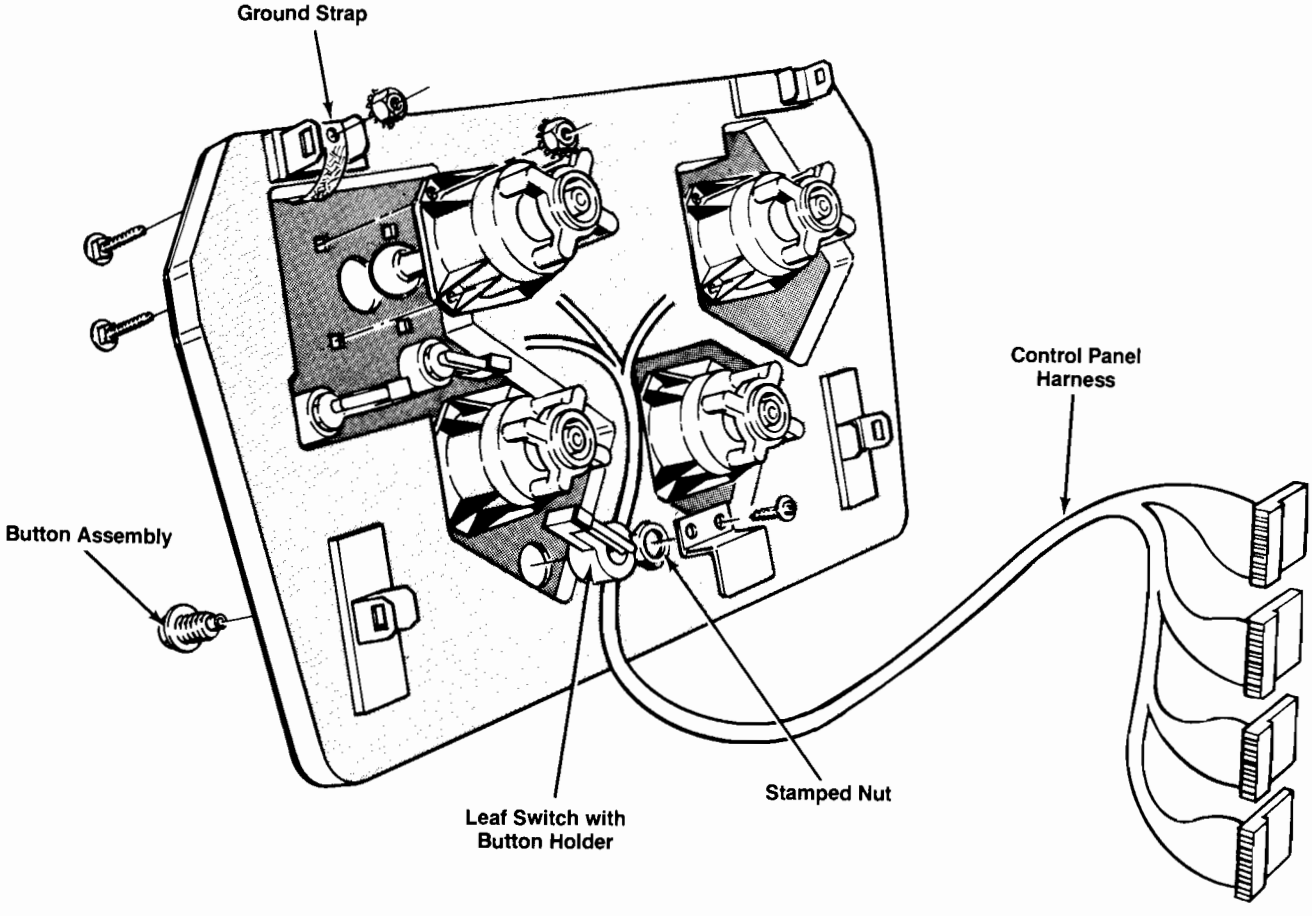


Figure 4-3 Pushbutton Leaf Switch Removal

Removing the Joystick Leaf Switches

Perform the following procedure to remove the leaf switches from the joystick (see Figure 4-2).

NOTE

You do *not* need to disassemble or remove the joystick from the control panel to remove the leaf switches.

1. Disconnect the two wires from the leaf switch.
2. Using a 5/64-inch hex wrench, remove the screw holding the leaf switch to the lower housing.
3. Replace the switch in reverse order of removal. Be sure to align the small extrusion on the bottom of the switch with the small hole nearest the screw casing on the bottom of the lower housing.
4. If required, adjust the switch to a narrow gap (about 1/16 inch).
5. Reconnect the harness wires as shown in the Game Wiring Diagram in the *Schematic Package Supplement* (SP-284).

Removing the Game PCB

Perform the following procedure to remove/replace the game PCB (see Figure 4-4).

1. Turn the game power off.
2. Rest the control panel in the open position as described under *Preventive Maintenance*.
3. Disconnect the eight harness connectors from the game PCB.
4. Using a Phillips screwdriver, remove the mounting screw and washers from the top front corner of the game PCB.
5. Grasp the front edge of the game PCB and gently slide it straight forward until it just clears the rear slotted guide.

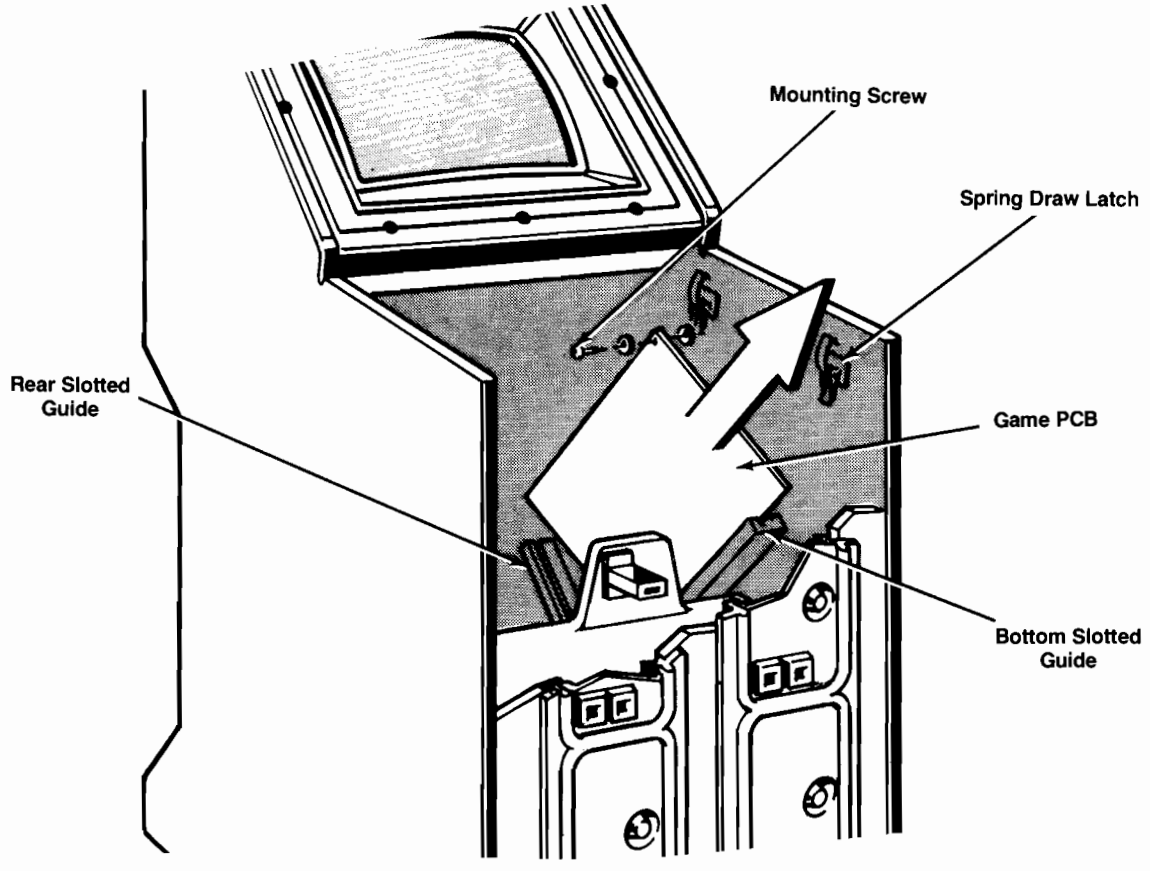


Figure 4-4 Game PCB Removal

6. Gently lift the PCB out of the bottom slotted guide. Be careful to avoid hitting the PCB on the spring-draw latches.
7. Replace the game PCB in the reverse order of removal. Attach the harness connectors as shown in Figure 4-1.

Removing the Video Display

Perform the following procedure to remove/replace the video display (see Figure 4-5).

1. Turn the game power off and wait two minutes. Unplug the power cord.
2. Remove the control panel as described under *Preventive Maintenance*.
3. Using a 1/8-inch hex driver, remove the eight screws holding the bezel to the front of the cabinet.
4. Remove the bezel.
5. Using a Phillips screwdriver, remove the four screws holding the upper access panel to the rear of the cabinet.

WARNING

High Voltage

The video display contains lethal high voltages. To avoid injury, do not attempt to service this display until you observe all precautions necessary for working on high-voltage equipment.

X-Radiation

The video display has been designed to minimize X-radiation. However, to avoid possible exposure to soft X-radiation, **never** modify the high-voltage circuitry.

Implosion Hazard

The cathode-ray tube may implode if struck or dropped. Shattered glass may cause injury within a 6-foot radius. Use care when handling the display.

6. Discharge the high-voltage from the cathode-ray tube (CRT) before proceeding. The display assembly contains a circuit for discharging the high voltage to ground when power is removed. However, to make certain, always discharge the display as follows.

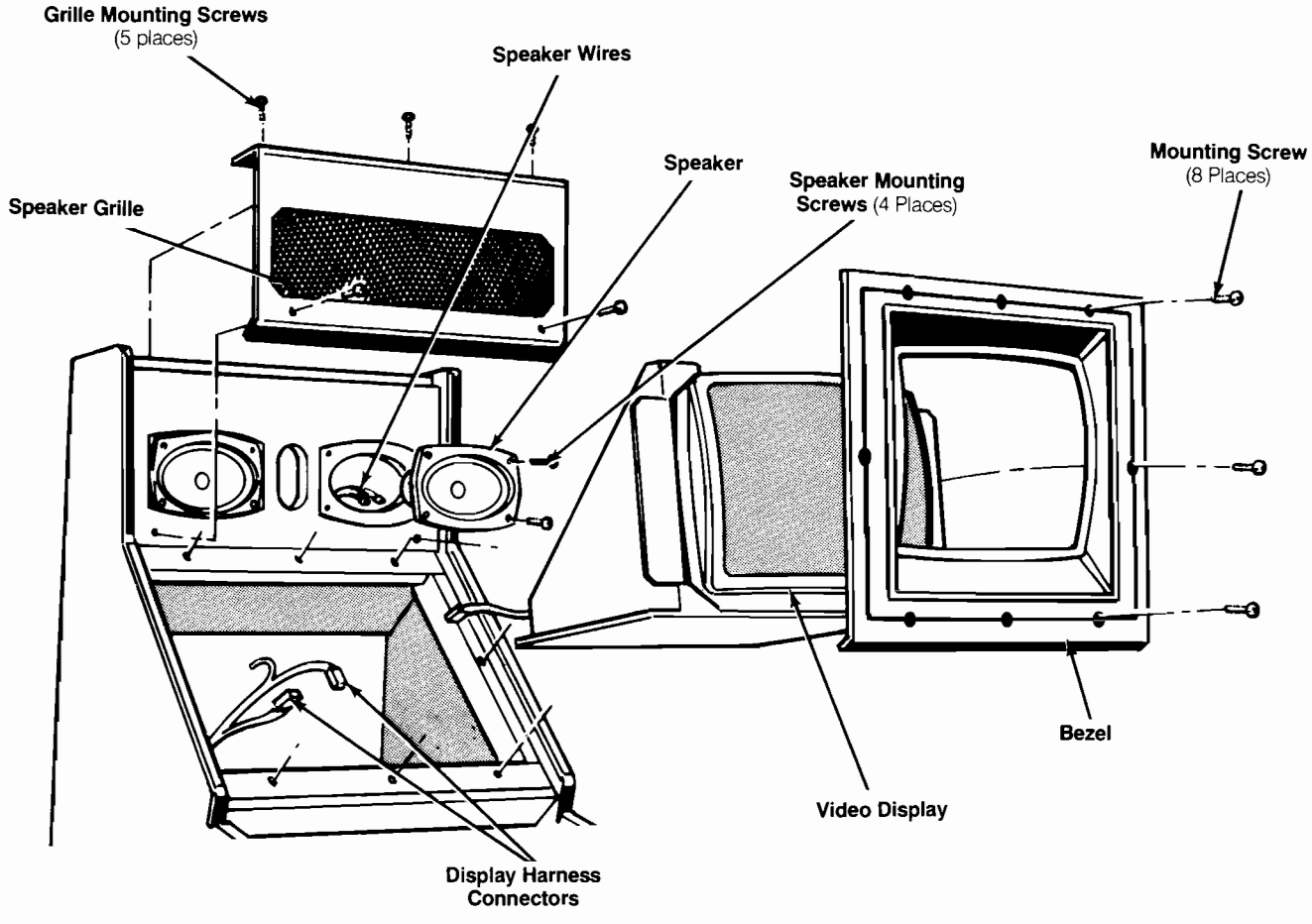


Figure 4-5 Video Display and Speaker Removal

a. Attach one end of a large, well-insulated, 18-gauge jumper wire to ground.

b. Momentarily touch the free end of the grounded jumper to the CRT anode by sliding it under the anode cap.

c. Wait two minutes and repeat part b.

7. From the back of the cabinet, unplug the display harness connectors from the display.

WARNING

To avoid dropping the video display, use extreme care when removing the display from the cabinet. We recommend that a second person *carefully* hold the display chassis from the back of the cabinet while the other person lifts it from the front of the cabinet.

8. Using a 7/16-inch wrench, reach through the control panel opening and remove the four nuts and washers holding the video display to the cabinet shelf.

9. Push the four carriage bolts up from the bottom of the shelf and remove them from the back of the cabinet.

10. Carefully slide the display out through the front of the cabinet.

11. Replace the video display as described in the following procedure.

NOTE

Whenever the cathode-ray tube is replaced, readjust the brightness, size, centering, purity, and convergence as described in the display manual.

Replacing the Video Display

Perform the following procedure to replace the video display in the cabinet (see Figure 4-5). Note that *this procedure requires a second person* to help hold the display in position while the other person tightens the mounting nuts.

WARNING

To avoid dropping the video display, use extreme care when replacing the display in the cabinet. We recommend that a second person *carefully* hold the display chassis from the back of the cabinet while the other person places it in the front of the cabinet.

1. Gently place the video display through the front of the cabinet and onto the shelf.
2. Position the display so that the four slots in the chassis are aligned with the corresponding mounting holes in the cabinet shelf.
3. From the back of the cabinet, insert the four carriage bolts into the four slots in the chassis and through the mounting holes in the shelf.
4. From the control panel opening, attach the four flat washers, four lock washers and nuts to the carriage bolts under the display shelf.
5. Place the bezel into the display opening and position it so that the eight mounting holes are aligned with the corresponding holes in the cabinet. Be sure to inspect the foam tape applied to the bottom lip of the bezel. This tape must be in good condition because it acts as a seal to prevent liquid from entering the cabinet interior.
6. Using a 1/8-inch hex driver, securely tighten the eight screws holding the bezel to the cabinet.
7. From the back of the cabinet, slide the display forward until the CRT face fits tightly against the bezel seal. Hold the display in position.
8. From the control panel opening, a second person must tighten the four mounting nuts under the shelf using a 7/16-inch wrench.
9. Connect the display harness to the display PCB.

Removing the Speakers

Perform the following procedure to remove/replace the speakers (see Figure 4-5).

1. Using a 1/8-inch hex driver, remove the three screws on top and two screws on the front of the speaker grille.
2. Lift the speaker grille from the cabinet.

CAUTION

Do not touch the speaker cones when handling the speakers. The cone material is fragile and can be easily damaged.

3. Using a Phillips screwdriver, remove the four screws holding the speaker to the cabinet. Do not let the speaker fall.
4. Lower the speaker just far enough to disconnect the two speaker wires.
5. Replace the speaker in the reverse order of removal.

Illustrated Parts Lists

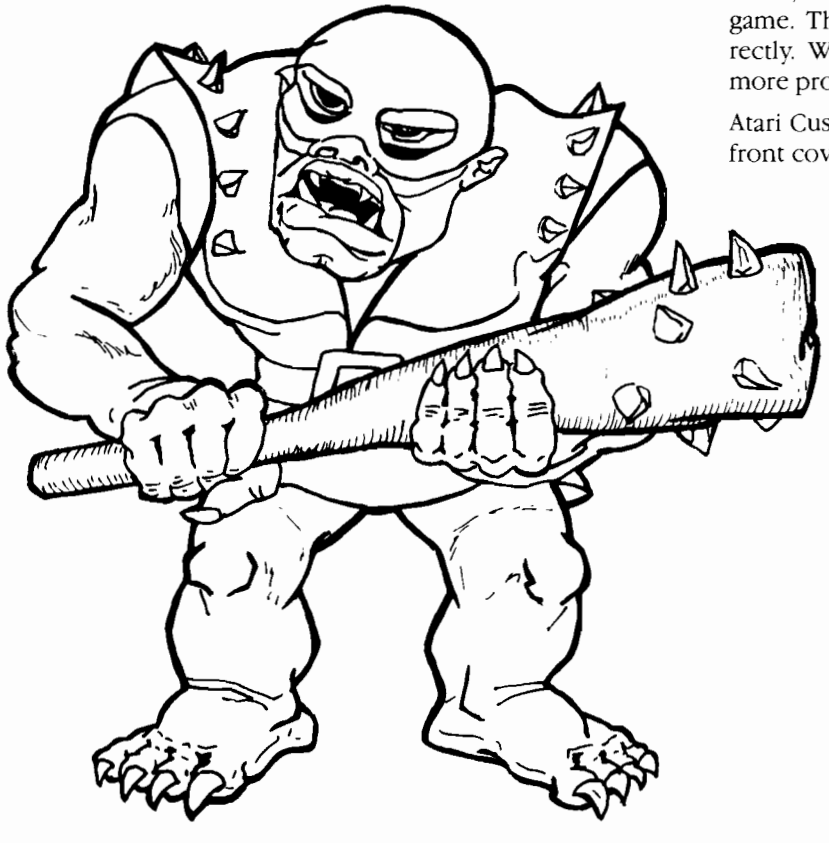
This chapter provides information you need to order parts for your game. Common hardware (screws, nuts, washers, etc.) has been deleted from most of the parts lists.

The PCB parts lists are arranged in alphabetical order by component. Each component subsection is arranged alphanumerically by reference designator or location.

Other parts lists are arranged alphanumerically by Atari part number. In these parts lists, all A-prefix numbers come first. Following these are numbers in sequence evaluated up to the hyphen, namely 00- through 99-, then 000598- through approximately 201000-.

When ordering parts, please give the part number, part name, number of this manual, and serial number of your game. This will help us fill your order rapidly and correctly. We hope the results will be less downtime and more profit from your game.

Atari Customer Service numbers are listed on the inside front cover of this manual.



Chapter 5

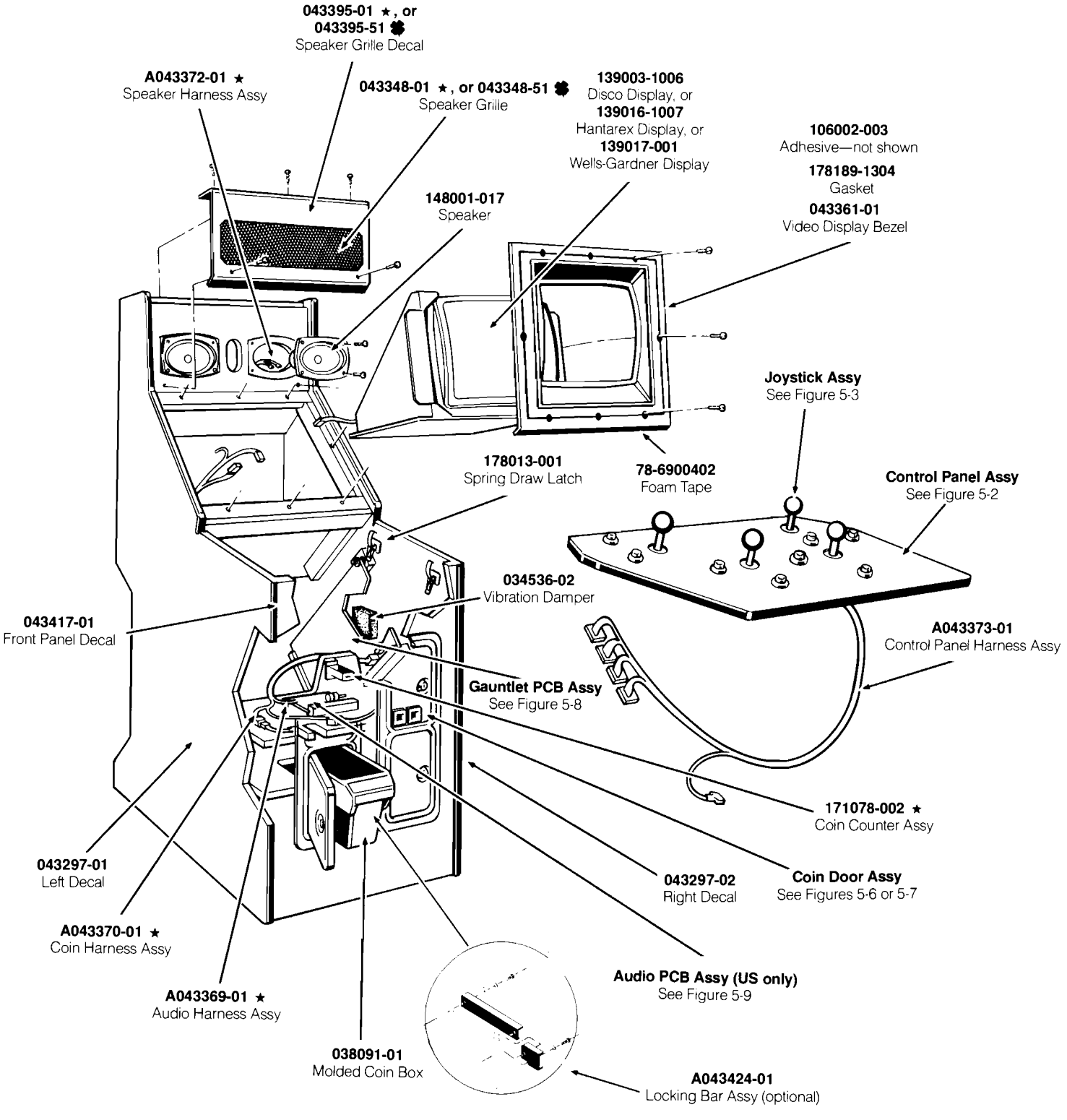


Figure 5-1 Cabinet-Mounted Assemblies A043350-01 and -51 D

★ Part used only in US-built cabinets
✾ Part used only in Ireland-built cabinets

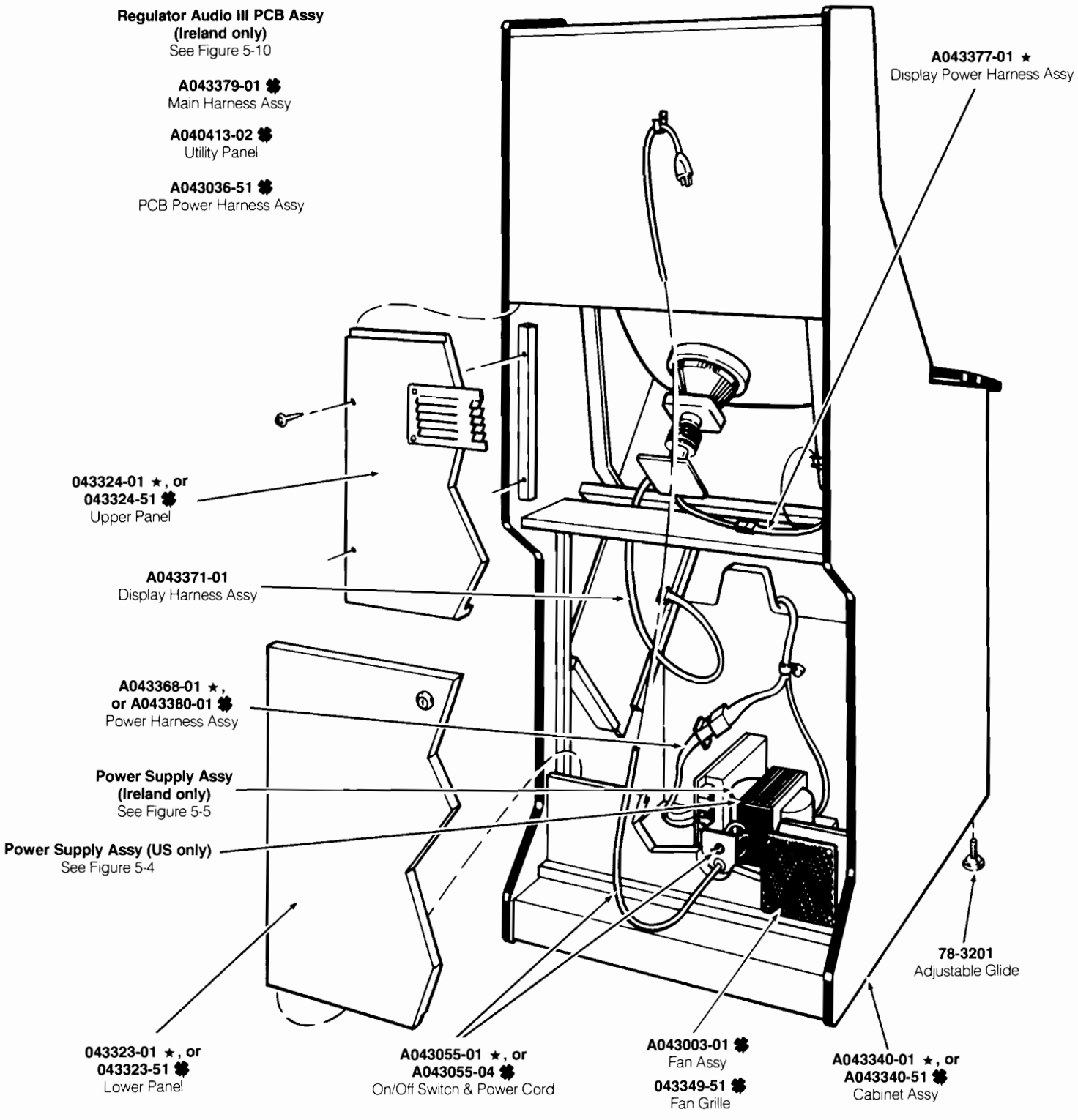


Figure 5-1 Cabinet-Mounted Assemblies, Continued

Cabinet-Mounted Assemblies
Parts List

Part No.	Description
	US-Built Cabinet Only
A043055-01	On/Off Switch with Power Cord
A043340-01	Cabinet Assembly
A043368-01	Power Harness Assembly
A043369-01	Audio Harness Assembly
A043370-01	Coin Harness Assembly
A043372-01	Speaker Harness Assembly
A043377-01	Display Power Harness Assembly
043323-01	Lower Rear Access Panel with Lock
043324-01	Upper Rear Panel with Ventilation Grille
043348-01	Speaker Grille
043349-01	Fan Grille
043395-01	Speaker Grille Decal with Graphics
171078-002	Coin Counter Assembly
	Ireland-Built Cabinet Only
A040413-02	Utility Panel, consisting of the following three items:
A002465-01	Coin Counter Assembly
A039254-01	Volume Control Harness Assembly
040412-01	Dual Volume Control Bracket
A043003-01	Ventilation Fan Assembly
A043036-51	PCB Power Harness Assembly
A043055-04	On/Off Switch with Power Cord
A043340-51	Cabinet Assembly
A043379-01	Main Harness Assembly
A043380-01	Power Harness Assembly
043323-51	Lower Rear Access Panel with Lock
043324-51	Upper Rear Panel with Ventilation Grille
043348-51	Speaker Grille
043349-51	Fan Grille
043395-51	Speaker Grille Decal with Graphics
	US- and Ireland-Built Cabinets
A043371-01	Display Harness Assembly
A043373-01	Control Panel Harness Assembly
A043424-01	Locking Bar Assembly (optional—can be used with either brand of coin door)
78-3201	Adjustable Glide
78-6900402	¼-Inch-Wide × 1/8-Inch-Thick Foam Tape (24 inches required)
034536-02	.50-Inch-Thick Foam Vibration Damper
038091-01	Molded Coin Box
043297-01	Left Side Panel Decal
043297-02	Right Side Panel Decal
043361-01	19-Inch Formed Video Display Bezel
043417-01	Front Panel Decal (above coin doors)
106002-003	Cyanoacrylate Adhesive
139003-1006	Disco (now known as AD1) 19-Inch Color Raster Display OR
139016-1007	Hantarex 19-Inch Color Raster Display OR
139017-001	Wells-Gardner 19-Inch Color Raster Display
148001-017	6 × 9-Inch, 8Ω, Shielded Speaker

Cabinet-Mounted Assemblies
Parts List, Continued

Part No.	Description
171078-002	Coin Counter Assembly
178013-001	Spring Draw Latch
178189-1304	Neoprene Gasket (5 feet required)
	The following six items are the technical information supplements to this game:
TM-284	Gauntlet™ Operators Manual
SP-284	Gauntlet Schematic Package Supplement
ST-284	Gauntlet Label with Self-Test Procedures and Option Settings
TM-210	Disco (now known as ADI) 19-Inch Color Raster Display Manual OR
TM-274	Hantarex 19-Inch Color Raster Display Manual OR
TM-283	Wells-Gardner 19-Inch Color Raster Display Manual

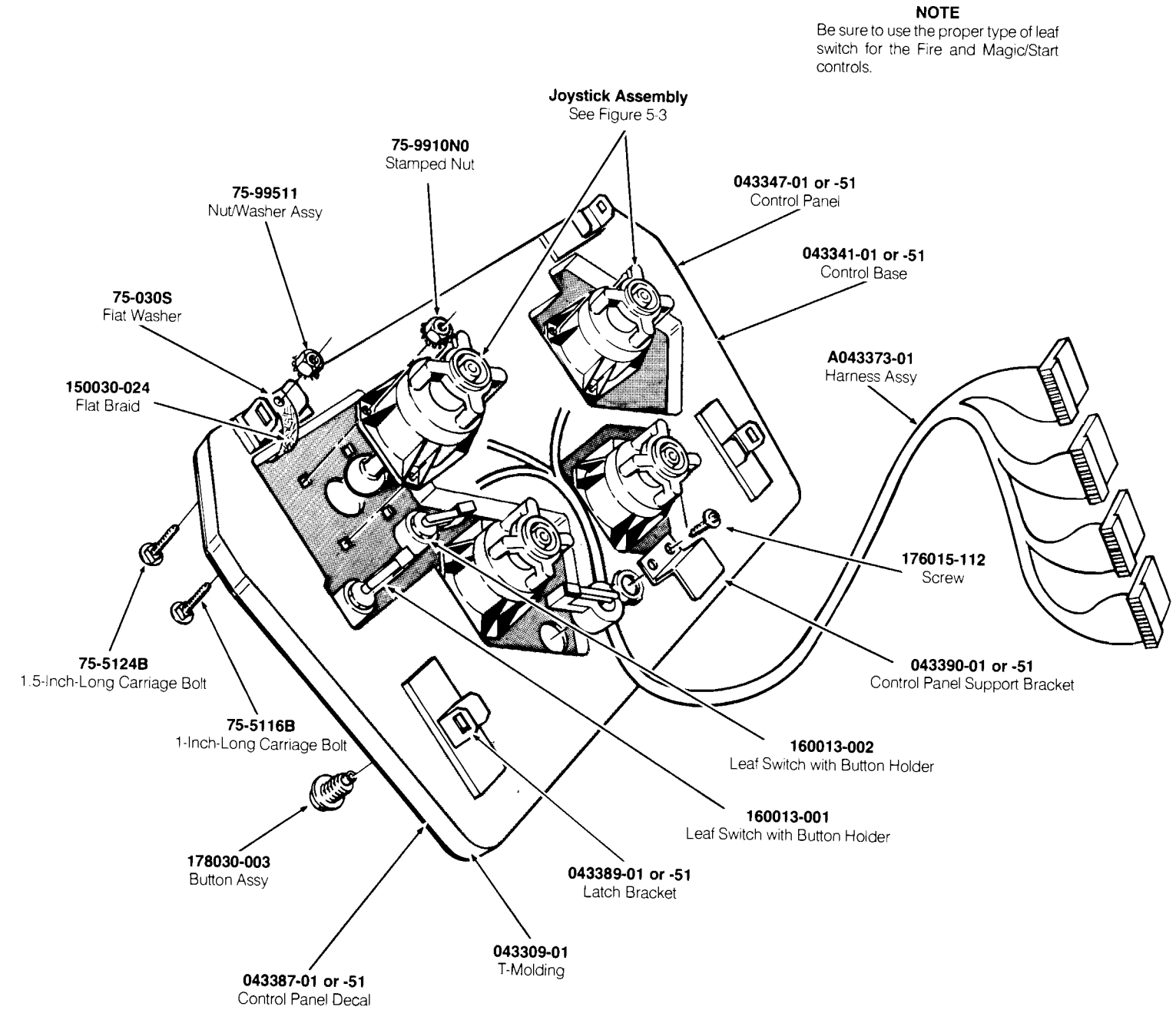


Figure 5-2 Control Panel Assembly
A043386-01 B (U.S.)
or A043386-51 B (Ireland)

Control Panel Assembly
Parts List

Part No.	Description
A043373-01	Control Panel Harness Assembly
75-030S	Washer, Flat, Wide-Pattern, #10
75-5116B	Bolt, Carriage, Blk, #10-24 × 1 Inch Long
75-5124B	Bolt, Carriage, Black, #10-24 × 1.50 Inch Long
75-9910N0	5/8-11 Stamped Nut
75-99511	#10-24 Nut/Washer Assembly
043309-01	T-Molding with Bead
043341-01	Base, Control (U.S.)
or	
043341-51	Base, Control (Ireland)
043347-01	Panel, Control (U.S.)
or	
043347-51	Panel, Control (Ireland)
043387-01	Decal, Control Panel (U.S.)
or	
043387-51	Decal, Control Panel (Ireland)
043389-01	Bracket, Spring Draw Latch (U.S.)
or	
043389-51	Bracket, Spring Draw Latch (Ireland)
043390-01	Bracket, Control Panel Support (U.S.)
or	
043390-51	Bracket, Control Panel Support (Ireland)
150030-024	Braid, Tinned Copper, 3/8-Inch Flat
160013-001	Leaf Switch with Button Holder (Embossed, Nickel-Silver-Plated Contacts)
160013-002	Leaf Switch with Button Holder (Gold-Plated Cross-Bar Contacts)
176015-112	Screw, Deep-Thread, Pan-Head, Cross-Recessed, #10 × ¾-Inch Long
178030-003	Button Assy, Black

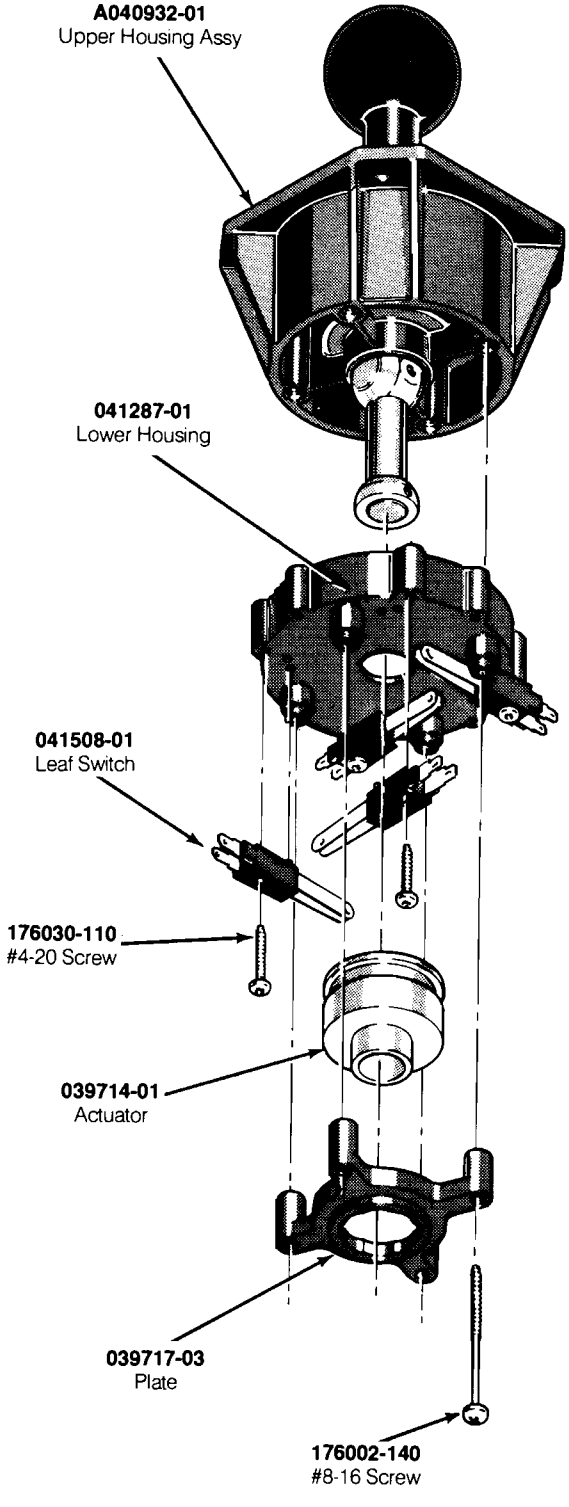


Figure 5-3 Joystick Assembly
A040934-03 B

Joystick Assembly
Parts List

Part No.	Description
A040932-01	Upper Housing Assembly
041287-01	Lower Housing
041508-01	Leaf Switch
039714-01	Actuator
039717-03	8-Position Positioner Plate with Detents
176002-140	#8-16 × 2.50-Inch-Long Self-Tapping Hex Washer-Head Screw
176030-110	#4-20 × .62-Inch-Long Hex Washer-Head Self-Tapping Screw

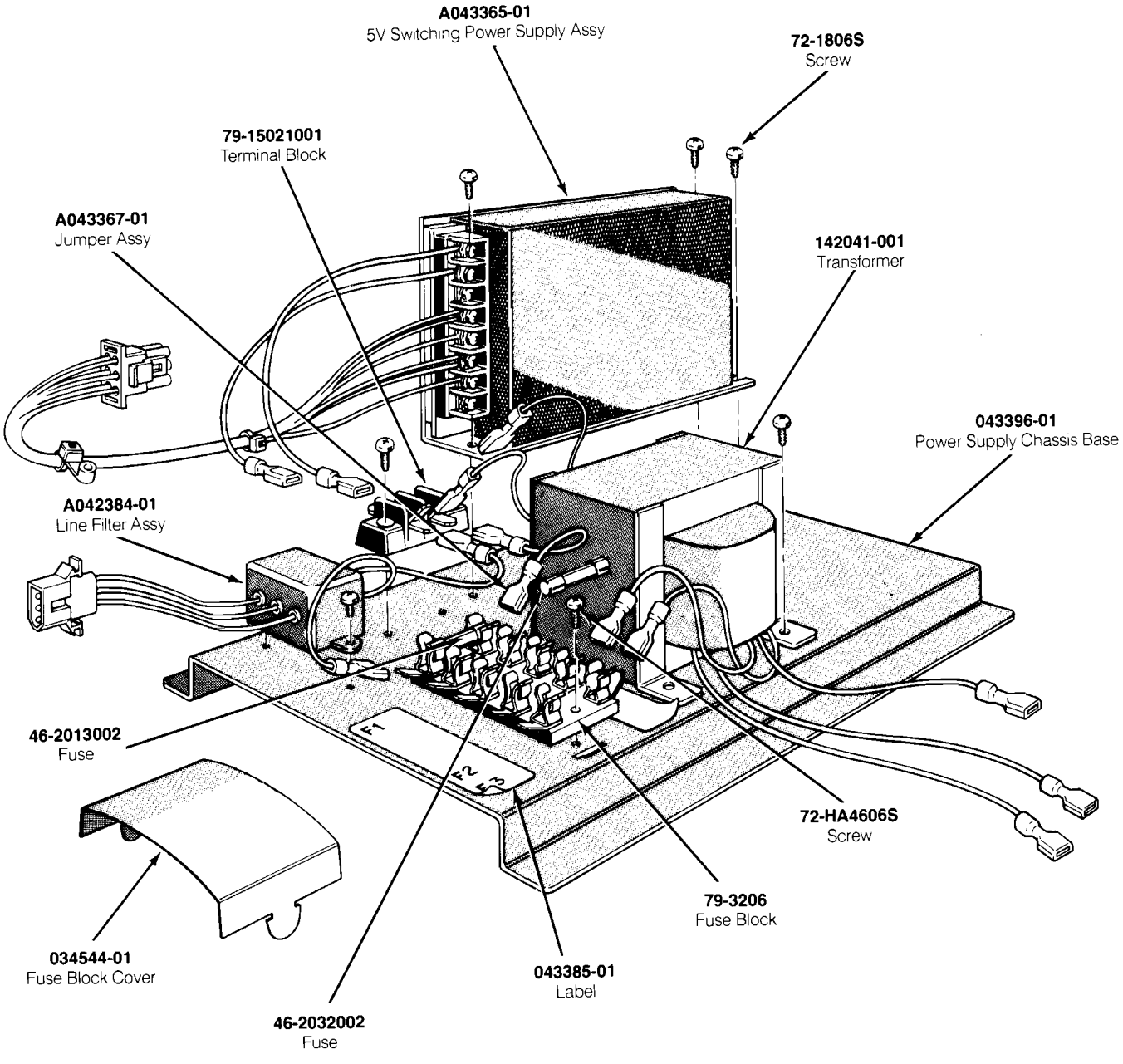


Figure 5-4 Switching/Linear (SL) Power Supply Assembly A043363-01 A

Switching/Linear (SL) Power Supply Assembly Parts List

Part No.	Description
043396-01	Power Supply Chassis Base
A043365-01	5V Switching Power Supply Assembly
A042384-01	Line Filter Assembly
A043367-01	Jumper Assembly
46-2013002	Fuse, 3 A, Slow-Blow, 250 V
46-2032002	Fuse, 2 A, Normal-Blow, 250 V
72-HA4606S	Screw, Thread-Forming, Pan-Head, Cross-Recessed, #6-32 × 3/8-Inch
72-1806S	Screw, #8-32 × 3/8-Inch-Long, Cross-Recessed, Pan-Head
79-15021001	Terminal Block, 2-Position
79-3206	Fuse Block, 5-Position
034544-01	Cover, Fuse Block
043385-01	Label, Power Supply (Fuses)
142041-001	Transformer

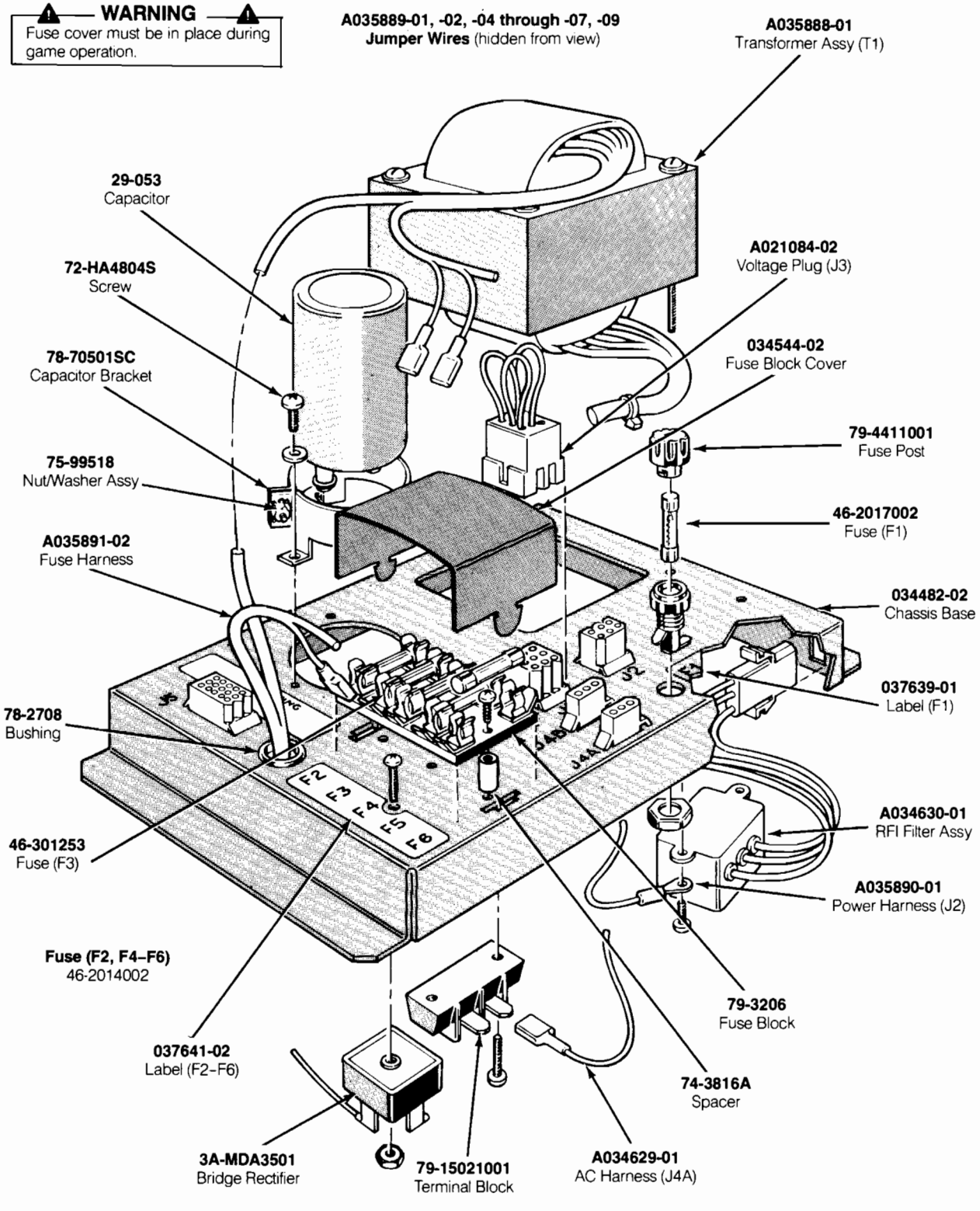


Figure 5-5 Linear Power Supply Assembly A037671-18 N

Linear Power Supply Assembly
Parts List

Designator	Description	Part No.
C1	27,000 μF, 15 VDC Electrolytic Capacitor	29-053
C1	2-Inch-Diameter Capacitor Mounting Bracket	78-70501SC
CR1	Type-MDA3501 Bridge Rectifier	3A-MDA3501
F1	Label with Fuse Value	037639-02
F1	4 A, 250 V, 3AG Slow-Blow Glass Cartridge-Type Fuse (Acceptable substitute is part no. 46-2014001)	46-2014002
F1	Panel-Mounting Non-Indicating 3AG Cartridge-Type Fuse Post	79-4411001
F2–F6	5-Position 3AG Fuse Block with ¼-Inch Quick-Disconnect Terminals	79-3206
F2–F6	Fuse Block Cover	034544-02
F2–F6	Label with Fuse Values	037641-02
F2, F4–F6	4 A, 250 V, 3AG Slow-Blow Glass Cartridge-Type Fuse (Acceptable substitute is part no. 46-2014001)	46-2014002
F3	25 A, 32 V, 3AG Slow-Blow Glass Cartridge-Type Fuse	46-301253
FL1	RFI Filter Assembly (designation not marked)	A034630-01
J2	Power Harness Assembly	A035890-01
J3	European Voltage Plug Assembly	A037479-02
J4A	AC Harness Assembly	A034629-01
T1	Transformer Assembly (Acceptable substitute is part no. A035888-02)	A035888-01
	Violet Jumper Assembly	A035889-01
	Orange Jumper Assembly	A035889-02
	White Jumper Assembly	A035889-04
	Violet/White Jumper Assembly	A035889-05
	Orange/Black Jumper Assembly	A035889-06
	Orange/White Jumper Assembly	A035889-07
	Black/Yellow Jumper Assembly	A035889-09
	Fuse Harness Assembly	A035891-02
	Shorting Power Plug Assembly	A039270-01
	#6-32 × 3/8-Inch Pan-Head, Cross-Recessed, Thread-Rolling, Zinc-Plated Steel Screw	72-HA4606S
	#8-32 × ¼-Inch Pan-Head, Cross-Recessed, Thread-Rolling, Zinc-Plated Steel Screw	72-HA4804S
	#8-32 × ¾-Inch Pan-Head, Cross-Recessed, Thread-Rolling, Zinc-Plated Steel Screw	72-HA4812S
	#8 × 1-Inch Round Unthreaded Aluminum Spacer	74-3816A
	#8-32 Nut/Washer Assembly	75-99518
	Nylon Type-6/6 Hole Bushing with 5/8-Inch Inside Diameter × 55/64-Inch Outside Diameter × ¼ Inches Thick	78-2708
	2-Circuit Single-Row Terminal Block	79-15021001
	#6-32 × 1½-Inch Pan-Head, Cross-Recessed, Type F, Zinc-Plated Steel Screw	85-22F624
	Power Supply Chassis Base	034482-02

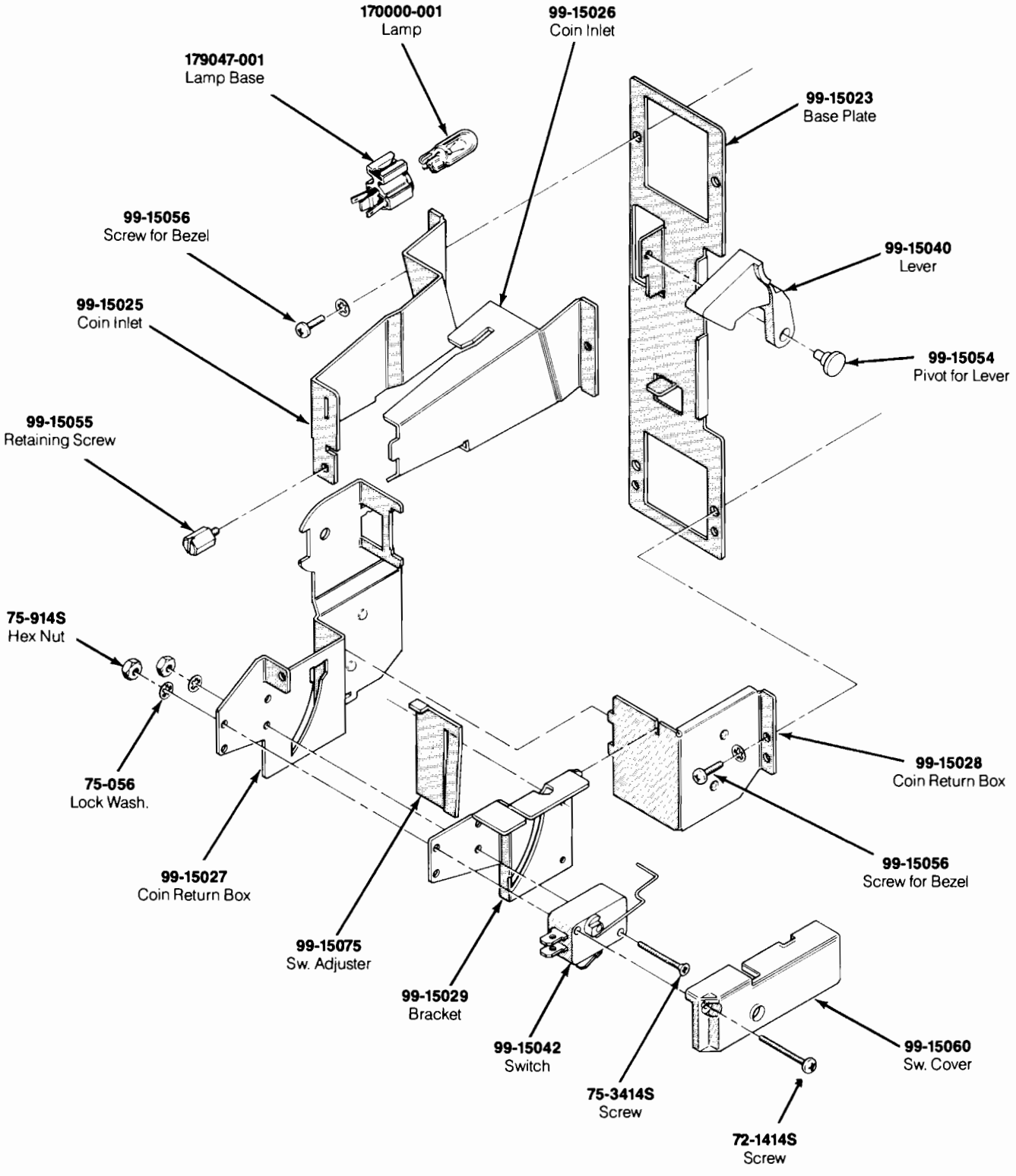
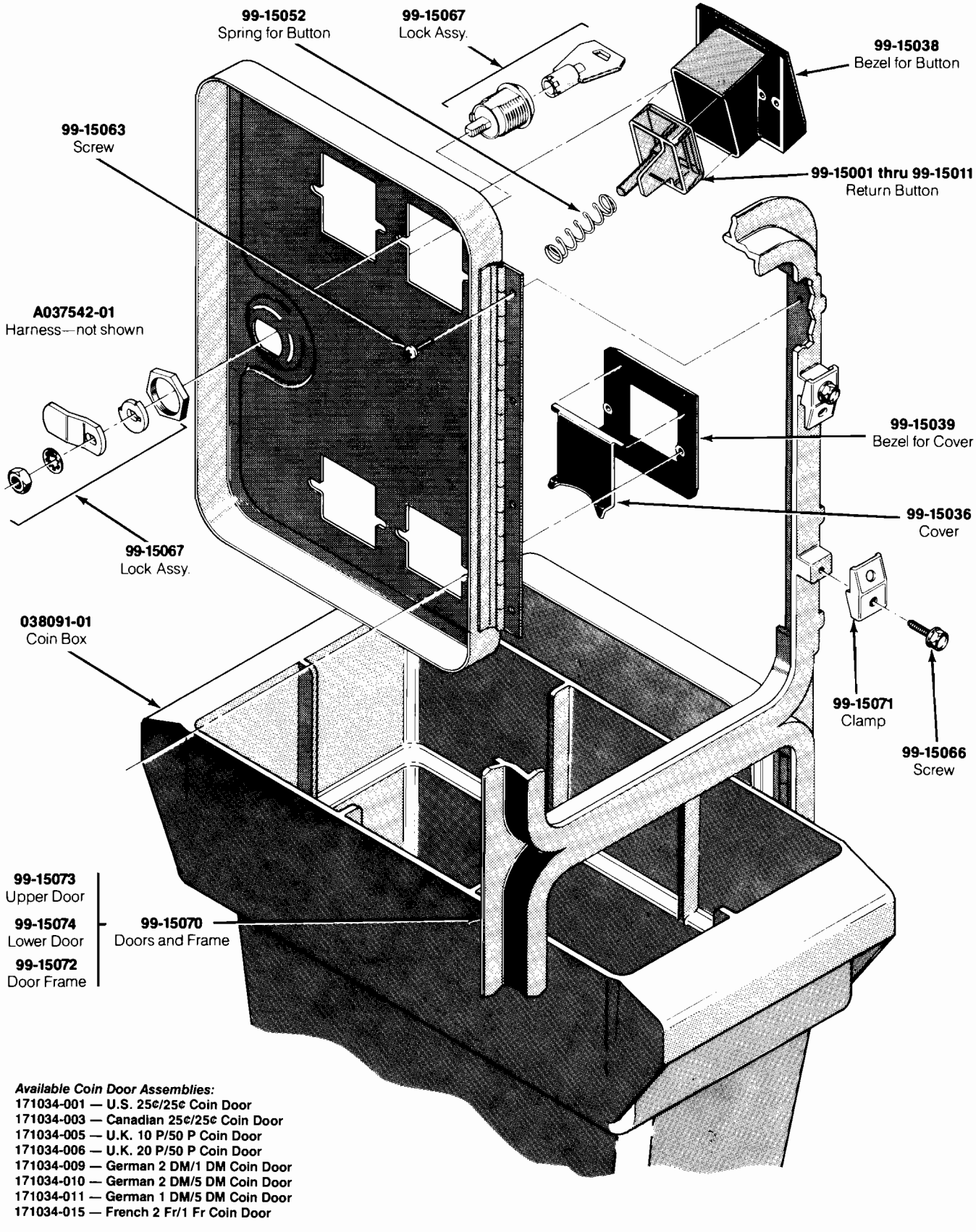


Figure 5-6 Coin Controls, Inc. Coin Door Assembly 171034-xxx A



Available Coin Door Assemblies:
171034-001 — U.S. 25¢/25¢ Coin Door
171034-003 — Canadian 25¢/25¢ Coin Door
171034-005 — U.K. 10 P/50 P Coin Door
171034-006 — U.K. 20 P/50 P Coin Door
171034-009 — German 2 DM/1 DM Coin Door
171034-010 — German 2 DM/5 DM Coin Door
171034-011 — German 1 DM/5 DM Coin Door
171034-015 — French 2 Fr/1 Fr Coin Door

Figure 5-6 Coin Controls, Inc. Coin Door Assembly, continued
171034-xxx A

Coin Controls, Inc. Coin Door Assembly Parts List

Part No.	Description
A036597-01	Harness Assembly (Ireland-Built cabinet only)
A037542-01	Harness Assembly
72-1414S	#4-40 x 7/8-Inch Cross-Recessed Pan-Head Steel Machine Screw
75-056	#6 Internal-Tooth Zinc-Plated Steel Lock Washer
75-914S	#4-40 Steel Machine Hex Nut
75-3414S	#4-40 x 7/8-Inch 82° Cross-Recessed Flat-Head Steel Machine Screw
99-15001	Coin Return Button with U.S. 25-cent Price Plate
99-15002	Coin Return Button with U.S. $1 Price Plate
99-15003	Coin Return Button with German 1 DM Price Plate
99-15004	Coin Return Button with German 2 DM Price Plate
99-15005	Coin Return Button with German 5 DM Price Plate
99-15006	Coin Return Button with Belgian 5 Fr Price Plate
99-15007	Coin Return Button with French 1 Fr Price Plate
99-15008	Coin Return Button with Japanese 100 Yen Price Plate
99-15009	Coin Return Button with British 10 Pence Price Plate
99-15010	Coin Return Button with Australian 20-cent Price Plate
99-15011	Coin Return Button with Italian 100 Lire Price Plate
99-15025	Left Half of Coin Inlet
99-15026	Right Half of Coin Inlet
99-15027	Side Plate of Coin Return Box
99-15028	Base Plate of Coin Return Box
99-15029	Switch Bracket
99-15036	Metal Coin Return Cover
99-15038	Bezel for Coin Return Button
99-15039	Metal Bezel for Coin Return Button
99-15042	Coin Switch for U.S. 25 cents
99-15052	Spring for Coin Return Button
99-15055	Retaining Screw
99-15056	#4-40 x 5/16-Inch Cross-Recessed Pan-Head Steel Machine Screw
99-15060	Switch Cover
99-15063	Screw for Hinge
99-15066	Screw for Clamp
99-15067	Lock Assembly
99-15070	Doors and Frame
99-15071	Clamp for Frame
99-15072	Door Frame
99-15073	Upper Door
99-15074	Lower Door
99-15075	Switch Adjuster
99-15083	Base Plate—includes:
99-15040	Lever
99-15054	Pivot for Lever
038091-01	Coin Box—not included in assembly (Acceptable substitute is part no. A037491-01)
170000-001	6.3 V Miniature Wedge-Base Incandescent Lamp
171006-035	Metal Coin Mechanism
171050-001	Dual Entry Face Plate
179047-001	Lamp Base

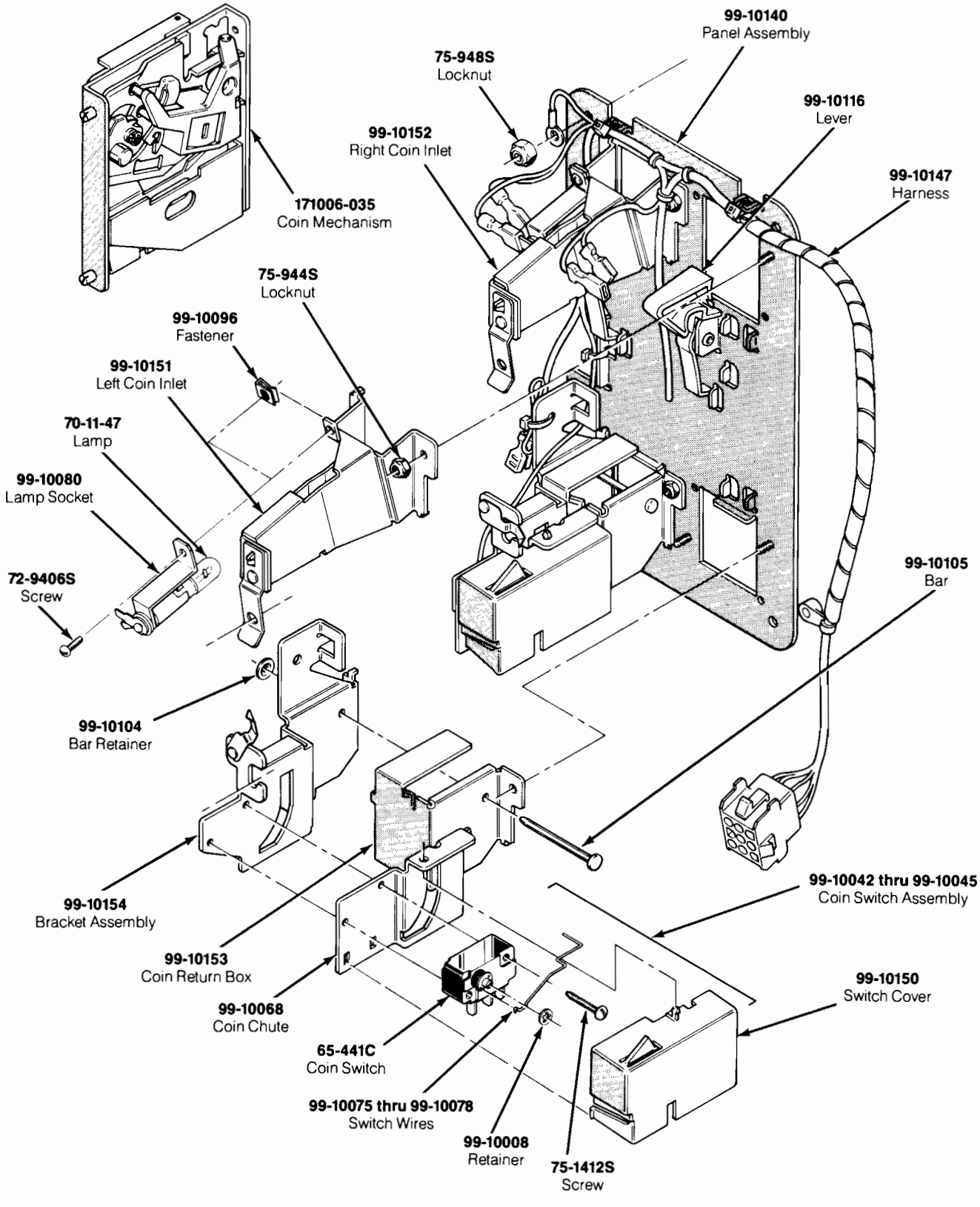


Figure 5-7 Coin Acceptors, Inc. Coin Door Assembly 171027-001 A

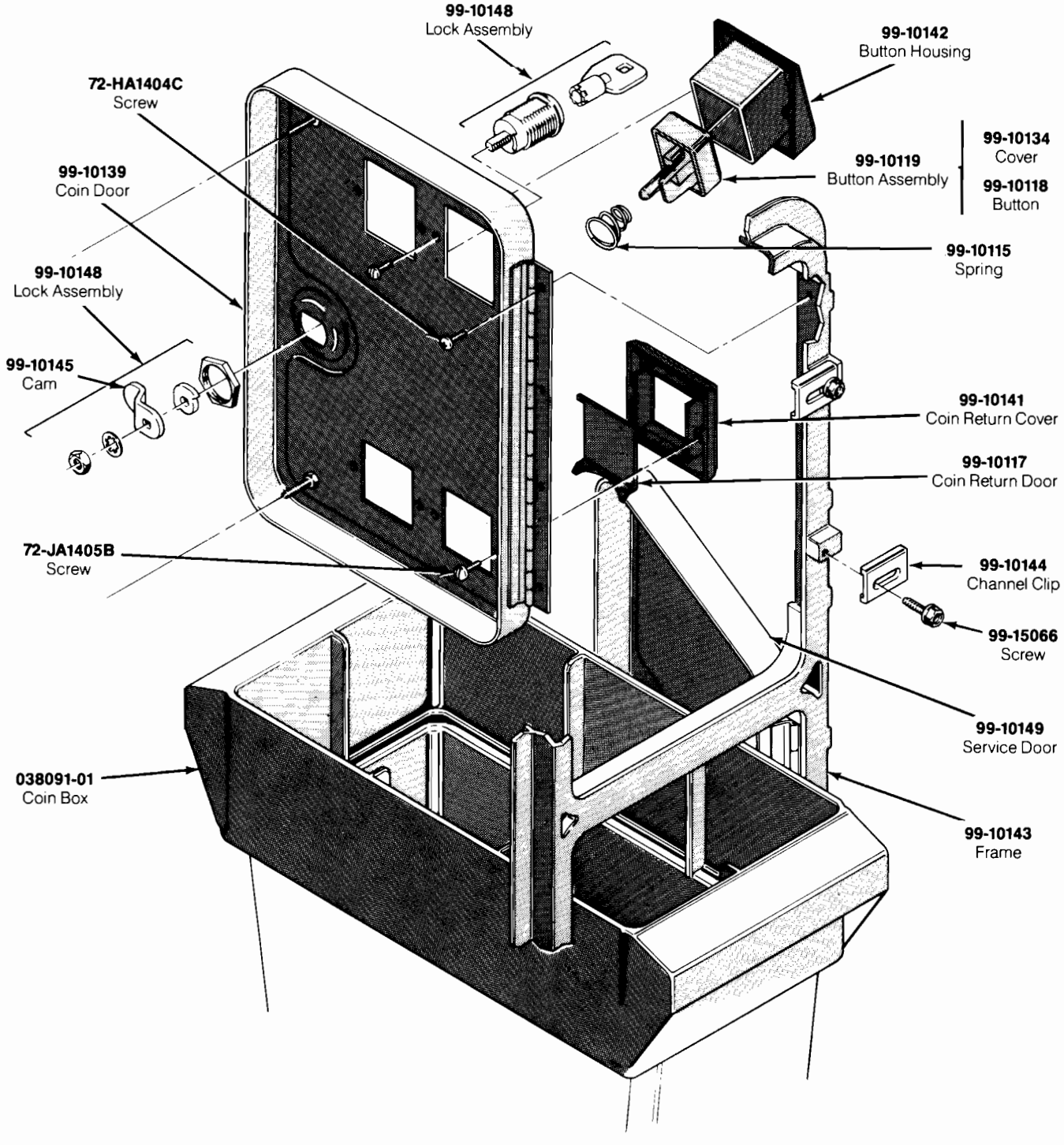


Figure 5-7 Coin Acceptors, Inc. Coin Door Assembly, continued
171027-001 A

Coin Acceptors, Inc. Coin Door Assembly
Parts List

Part No.	Description
65-441C	Coin Switch
70-11-47	Miniature Bayonet Lamp
72-9406S	#4-40 × 3/8-Inch Truss-Head Screw
72-HA1404C	#4-40 × ¼-Inch Pan-Head Screw
72-JA1405B	#4-40 × 0.31-Inch Pan-Head Screw
75-1412S	#4-40 × ¾-Inch Pan-Head Screw
75-994S	#4-40 Locknut
99-10008	Retainer
99-10042	Coin Switch Assembly for Belgian 5 Fr and U.S. $.25
99-10043	Coin Switch Assembly for German 1 DM, Japanese 100 Yen, Swiss 1 Fr
99-10044	Coin Switch Assembly for German 2 DM, Italian 100 L, U.S. $1.00
99-10045	Coin Switch Assembly for Australian $.20, German 5 DM, British 10 P
99-10068	Coin Return Chute
99-10075	Switch Wire (included in coin switch assembly 99-10043)
99-10076	Switch Wire (included in coin switch assembly 99-10042)
99-10077	Switch Wire (included in coin switch assembly 99-10044)
99-10078	Switch Wire (included in coin switch assembly 99-10045)
99-10080	Lamp Socket
99-10081	Key Holder
99-10096	Fastener
99-10104	Bar Retainer
99-10105	Bar
99-10115	Spring
99-10116	Plastic Coin Return Lever
99-10117	Steel Coin Return Door
99-10118	Amber Coin Return Button
99-10119	Amber Coin Button for U.S. $.25
99-10134	Coin Button Cover
99-10139	Coin Door
99-10140	Coin Door Inner-Panel Assembly
99-10141	Die-Cast Coin Return Cover
99-10142	Die-Cast Button Housing
99-10143	Coin Door Frame
99-10148	Lock Assembly
99-10149	Service Door
99-10150	Switch Cover
99-10151	Left Coin Inlet
99-10152	Right Coin Inlet
99-10153	Coin Return Box
99-10154	Bracket Assembly
99-15066	Screw for Clamp
171006-035	Metal Coin Mechanism for U.S. $.25

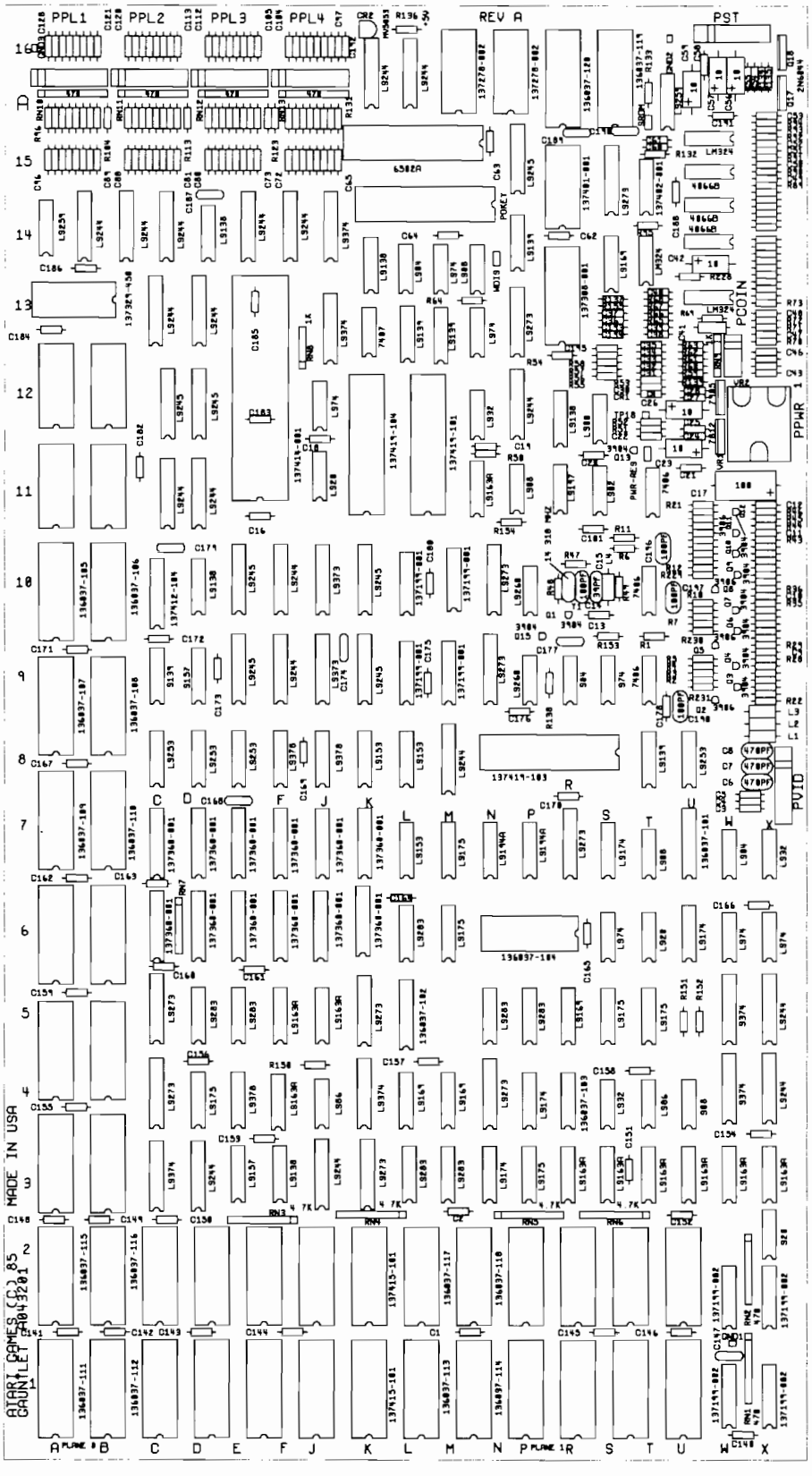


Figure 5-8 Gauntlet Game PCB Assembly A043201-21 B

Gauntlet Game PCB Assembly
Parts List

Designator	Description	Part No.
	Integrated Circuits	
1A	Integrated Circuit, EPROM, 300ns	136037-111
1B	Integrated Circuit, EPROM, 300ns	136037-112
1K	Integrated Circuit, Custom, SLAGS	137415-101
1L	Integrated Circuit, EPROM, 300ns	136037-113
1M/N	Integrated Circuit, EPROM, 300ns	136037-114
1W	Integrated Circuit, RAM, 2149H-2	137199-002
1X	Integrated Circuit, RAM, 2149H-2	137199-002
2A	Integrated Circuit, EPROM, 300ns	136037-115
2B	Integrated Circuit, EPROM, 300ns	136037-116
2K	Integrated Circuit, Custom, SLAGS	137415-101
2L	Integrated Circuit, EPROM, 300ns	136037-117
2M/N	Integrated Circuit, EPROM, 300ns	136037-118
2W	Integrated Circuit, RAM, 2149H-2	137199-002
2X	Integrated Circuit, RAM, 2149H-2	137199-002
⅔X	Integrated Circuit, 74S20	137423-001
3C	Integrated Circuit, 74LS374	37-74LS374
3D	Integrated Circuit, 74LS244	37-74LS244
3E	Integrated Circuit, 74LS157	37-74LS157
3F	Integrated Circuit, 74LS138	137177-001
3J	Integrated Circuit, 74LS244	37-74LS244
3K	Integrated Circuit, 74LS273	37-74LS273
3L	Integrated Circuit, 74LS283	137204-001
3M	Integrated Circuit, 74LS283	137204-001
3N	Integrated Circuit, 74LS174	37-74LS174
3P	Integrated Circuit, 74LS175	37-74LS175
3R	Integrated Circuit, 74LS163A	37-74LS163A
3S	Integrated Circuit, 74LS163A	37-74LS163A
3T	Integrated Circuit, 74LS163A	37-74LS163A
3U	Integrated Circuit, 74LS163A	37-74LS163A
3W	Integrated Circuit, 74LS163A	37-74LS163A
3X	Integrated Circuit, 74LS163A	37-74LS163A
4C	Integrated Circuit, 74LS273	37-74LS273
4D	Integrated Circuit, 74LS175	37-74LS175
4E	Integrated Circuit, 74LS378	137305-001
4F	Integrated Circuit, 74LS163A	37-74LS163A
4J	Integrated Circuit, 74LS86	37-74LS86
4K	Integrated Circuit, 74LS374	37-74LS374
4L	Integrated Circuit, 74LS169	137109-001
4M	Integrated Circuit, 74LS169	137109-001
4N	Integrated Circuit, 74LS273	37-74LS273
4P	Integrated Circuit, 74LS174	37-74LS174
4R	Integrated Circuit, PROM, 82S129	136037-103
4S	Integrated Circuit, 74LS32	37-74LS32
4T	Integrated Circuit, 74LS86	37-74LS86

Gauntlet Game PCB Assembly
Parts List, Continued

Designator	Description	Part No.
4U	Integrated Circuit, 74S08	37-74S08
4W	Integrated Circuit, 74S374	137206-001
4X	Integrated Circuit, 74LS244	37-74LS244
5C	Integrated Circuit, 74LS273	37-74LS273
5D	Integrated Circuit, 74LS283	137204-001
5E	Integrated Circuit, 74LS283	137204-001
5F	Integrated Circuit, 74LS163A	37-74LS163A
5J	Integrated Circuit, 74LS163A	37-74LS163A
5K	Integrated Circuit, 74LS273	37-74LS273
5L	Integrated Circuit, PROM, 82S147	136037-102
5N	Integrated Circuit, 74LS283	137204-001
5P	Integrated Circuit, 74LS283	137204-001
5R	Integrated Circuit, 74LS169	137109-001
5S	Integrated Circuit, 74LS175	37-74LS175
5T	Integrated Circuit, 74LS175	37-74LS175
5W	Integrated Circuit, 74S374	137206-001
5X	Integrated Circuit, 74LS244	37-74LS244
6C	Integrated Circuit, RAM, 1MS1420L	137360-001
6D	Integrated Circuit, RAM, 1MS1420L	137360-001
6E	Integrated Circuit, RAM, 1MS1420L	137360-001
6F	Integrated Circuit, RAM, 1MS1420L	137360-001
6J	Integrated Circuit, RAM, 1MS1420L	137360-001
6K	Integrated Circuit, RAM, 1MS1420L	137360-001
6L	Integrated Circuit, 74LS283	137204-001
6M	Integrated Circuit, 74LS175	37-74LS175
6P	Integrated Circuit, EPROM, 300ns	136037-104
6S	Integrated Circuit, 74LS74	37-74LS74
6T	Integrated Circuit, 74LS20	37-74LS20
6U	Integrated Circuit, 74LS174	37-74LS174
6W	Integrated Circuit, 74LS74	37-74LS74
6X	Integrated Circuit, 74LS74	37-74LS74
7A	Integrated Circuit, EPROM, 200ns	136037-109
7B	Integrated Circuit, EPROM, 200ns	136037-110
7C	Integrated Circuit, RAM, 1MS1420L	137360-001
7D	Integrated Circuit, RAM, 1MS1420L	137360-001
7E	Integrated Circuit, RAM, 1MS1420L	137360-001
7F	Integrated Circuit, RAM, 1MS1420L	137360-001
7J	Integrated Circuit, RAM, 1MS1420L	137360-001
7K	Integrated Circuit, RAM, 1MS1420L	137360-001
7L	Integrated Circuit, 74LS153	37-74LS153
7M	Integrated Circuit, 74LS175	37-74LS175
7N	Integrated Circuit, 74LS194A	37-74LS194
7P	Integrated Circuit, 74LS194A	37-74LS194
7R	Integrated Circuit, 74LS273	37-74LS273

Gauntlet Game PCB Assembly
Parts List, Continued

Designator	Description	Part No.
7S	Integrated Circuit, 74LS174	37-74LS174
7T	Integrated Circuit, 74LS08	37-74LS08
7U	Integrated Circuit, PROM, 82S147	136037-101
7W	Integrated Circuit, 74LS04	37-74LS04
7X	Integrated Circuit, 74LS32	37-74LS32
8C	Integrated Circuit, 74LS253	37-74LS253
8D	Integrated Circuit, 74LS253	37-74LS253
8E	Integrated Circuit, 74LS253	37-74LS253
8F	Integrated Circuit, 74LS378	137305-001
8J	Integrated Circuit, 74LS378	137305-001
8K	Integrated Circuit, 74LS153	37-74LS153
8L	Integrated Circuit, 74LS153	37-74LS153
8M	Integrated Circuit, 74LS244	37-74LS244
8P	Integrated Circuit, Custom, SYNGEN	137419-103
8T	Integrated Circuit, 74LS139	37-74LS139
8U	Integrated Circuit, 74LS253	37-74LS253
9A	Integrated Circuit, EPROM, 200ns	136037-107
9B	Integrated Circuit, EPROM, 200ns	137037-108
9C	Integrated Circuit, 74S139	37-74S139
9D	Integrated Circuit, 74S157	37-74S157
9E	Integrated Circuit, 74LS245	37-74LS245
9F	Integrated Circuit, 74LS244	37-74LS244
9J	Integrated Circuit, 74LS373	37-74LS373
9K	Integrated Circuit, 74LS245	37-74LS245
9L	Integrated Circuit, RAM, 2149H-3	137199-001
9M	Integrated Circuit, RAM, 2149H-3	137199-001
9N	Integrated Circuit, 74LS273	37-74LS273
9P	Integrated Circuit, 74LS260	137332-001
9R	Integrated Circuit, 74S04	37-74S04
9S	Integrated Circuit, 74S74	37-74S74
9T	Integrated Circuit, 7406	37-7406
10A	Integrated Circuit, EPROM, 200ns	136037-105
10B	Integrated Circuit, EPROM, 200ns	136037-106
10C	Integrated Circuit, SLAPSTIC	137412-104
10D	Integrated Circuit, 74LS138	137177-001
10E	Integrated Circuit, 74LS245	37-74LS245
10F	Integrated Circuit, 74LS244	37-74LS244
10J	Integrated Circuit, 74LS373	37-74LS373
10K	Integrated Circuit, 74LS245	37-74LS245
10L	Integrated Circuit, RAM, 2149H-3	137199-001
10M	Integrated Circuit, RAM, 2149H-3	137199-001
10N	Integrated Circuit, 74LS273	37-74LS273
10P	Integrated Circuit, 74LS260	137332-001
10T	Integrated Circuit, 7406	37-7406

Gauntlet Game PCB Assembly
Parts List, Continued

Designator	Description	Part No.
11C	Integrated Circuit, 74LS244	37-74LS244
11D	Integrated Circuit, 74LS244	37-74LS244
11J	Integrated Circuit, 74LS20	37-74LS20
11N	Integrated Circuit, 74LS163A	37-74LS163A
11P	Integrated Circuit, 74LS08	37-74LS08
11R	Integrated Circuit, 74LS197	137240-001
11S	Integrated Circuit, 74LS02	37-74LS02
11T	Integrated Circuit, 7406	37-7406
12C	Integrated Circuit, 74LS245	37-74LS245
12D	Integrated Circuit, 74LS245	37-74LS245
12E	Integrated Circuit, Microprocessor, MC68010-L8	137414-001
12J	Integrated Circuit, 74LS74	37-74LS74
12K	Integrated Circuit, Custom, PFHS	137419-104
12M	Integrated Circuit, Custom, GPC	137419-101
12N	Integrated Circuit, 74LS32	37-74LS32
12P	Integrated Circuit, 74LS244	37-74LS244
12R	Integrated Circuit, 74LS138	137177-001
12S	Integrated Circuit, 74LS00	37-74LS00
13C	Integrated Circuit, 74LS244	37-74LS244
13D	Integrated Circuit, 74LS244	37-74LS244
13J	Integrated Circuit, 74LS374	37-74LS374
13K	Integrated Circuit, 7407	37-7407
13L	Integrated Circuit, 74LS139	37-74LS139
13M	Integrated Circuit, 74LS139	37-74LS139
13N	Integrated Circuit, 74LS74	37-74LS74
13P	Integrated Circuit, 74LS273	37-74LS273
13R	Integrated Circuit, TMS5220C	137308-002
13/14A	Integrated Circuit, EPROM, 2804A	137329-450
13/14U	Integrated Circuit, LM324	37-LM324
14A	Integrated Circuit, 74LS259	37-74LS259
14A/B	Integrated Circuit, 74LS244	37-74LS244
14B	Integrated Circuit, 74LS244	37-74LS244
14C	Integrated Circuit, 74LS244	37-74LS244
14D	Integrated Circuit, 74LS138	137177-001
14E	Integrated Circuit, 74LS244	37-74LS244
14F	Integrated Circuit, 74LS244	37-74LS244
14J	Integrated Circuit, 74LS374	37-74LS374
14K	Integrated Circuit, 74LS138	137177-001
14L	Integrated Circuit, 74LS04	37-74LS04
14M	Integrated Circuit, 74LS74	37-74LS74
14N	Integrated Circuit, 74LS08	37-74LS08
14P	Integrated Circuit, 74LS139	37-74LS139
14S	Integrated Circuit, 74LS169	137109-001
14T	Integrated Circuit, LM324	37-LM324

Gauntlet Game PCB Assembly
Parts List, Continued

Designator	Description	Part No.
14U	Integrated Circuit, 4066B	37-4066
14/15U	Integrated Circuit, 4066B	37-4066
15L	Integrated Circuit, POKEY	137430-001
15P	Integrated Circuit, 74LS245	37-74LS245
15R	Integrated Circuit, YM2151	137401-001
15S	Integrated Circuit, 74LS273	37-74LS273
15T	Integrated Circuit, YM3012	137402-001
15U	Integrated Circuit, 4066B	37-4066
15/16L	Integrated Circuit, Microprocessor, 6502-A	90-6013
15/16U	Integrated Circuit, LM324	37-LM324
16K	Integrated Circuit, 74LS244	37-74LS244
16L	Integrated Circuit, 74LS244	37-74LS244
16N/P	Integrated Circuit, HM6116	137211-001
16M	Integrated Circuit, HM6116	137211-001
16R	Integrated Circuit, EPROM, 300ns	136037-120
16S	Integrated Circuit, EPROM, 300ns	136037-119
16T/U	Integrated Circuit, 74LS259	37-74LS259
VR1	Integrated Circuit, LM7812	37-7812
VR2	Integrated Circuit, LM7905	37-7905
	Capacitors	
C1, C2	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C3-5	Capacitor, Ceramic, 1000 pf, 100 V	122016-102
C6-8	Capacitor, Mica, 470 pf, 100 V	128002-471
C9-13	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C14	Capacitor, Mica, 100 pf, 100 V	128002-101
C15	Capacitor, Mica, 39 pf, 100 V	128002-390
C16	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C17	Capacitor, Electrolytic, 100 µf, 25 V	24-250107
C18-22	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C23	Capacitor, Electrolytic, 10 µf, 25 V	24-250106
C24, C25	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C26	Capacitor, Electrolytic, 10 µf, 25 V	24-250106
C27, C28	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C30-37	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C38	Capacitor, Ceramic, .018 µf, 50 V	122015-182
C39	Capacitor, Ceramic, .0039 µf, 50 V	122015-392
C40	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C41	Capacitor, Ceramic, .22 µf, 25 V	122004-224
C42	Capacitor, Electrolytic, 10 µf, 25 V	24-250106
C43-46	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C47	Capacitor, Ceramic, 1000 pf, 100 V	122016-102
C48	Capacitor, Ceramic, .047 µf, 50 V	122015-473
C49	Capacitor, Ceramic, .0022 µf, 50 V	122015-222
C50, C51	Capacitor, Ceramic, 1000 pf, 100 V	122016-102
C52	Capacitor, Ceramic, .0022 µf, 50 V	122015-222
C53-55	Capacitor, Ceramic, .1 µf, 50 V	122002-104
C56	Capacitor, Electrolytic, 10 µf, 25 V	24-250106
C57	Capacitor, Electrolytic, 10 µf, 25 V	24-250106
C58	Capacitor, Ceramic, .1 µf, 50 V	122002-104

Gauntlet Game PCB Assembly
Parts List, Continued

Designator	Description	Part No.
C59	Capacitor, Electrolytic, 10 μf, 25 V	24-250106
C60, C61	Capacitor, Ceramic, 1000 pf, 100 V	122016-102
C62-128	Capacitor, Ceramic, .1 μf, 50 V	122002-104
C140-192	Capacitor, Ceramic, .1 μf, 50 V	122002-104
C193	Capacitor, Ceramic, .0027 μf, 50 V	122015-272
C194	Capacitor, Ceramic, .0012 μf, 50 V	122015-122
C195	Capacitor, Ceramic, .0068 μf, 50 V	122015-682
C196-198	Capacitor, Mica, 100 pf, 100 V	128002-101
	Diodes	
CR1	Diode, Zener, 1N754A	131002-001
CR2	Diode, Light-Emitting, MV5053	38-MV5053
	Ferrite Beads and Inductors	
L1-3	Ferrite Bead, N12N	141003-005
L4	Inductor, 100 μH	41-3003
	Connectors	
PCOIN	Connector, 6-Pin, 0.1-Inch Centers	179118-006
PPL1-PPL4	Connector, 11-Pin, 0.1-Inch Centers	179118-011
PPWR	Connector, 12-Pin	179069-012
PST	Connector, 11-Pin, 0.1-Inch Centers	179118-011
PV1D	Connector, 11-Pin, 0.1-Inch Centers	179118-011
PWR-RES	Connector, Header, 2-Circuit	179048-002
SROM	Connector, Receptacle, 2-Circuit	179178-002
SROM	Connector, Header, 2-Circuit	179048-002
WDIS	Connector, Header, 2-Circuit	179048-002
	Transistors	
Q1	Transistor, 2N3904	34-2N3904
Q2	Transistor, 2N3906	33-2N3906
Q3, Q4	Transistor, 2N3904	34-2N3904
Q5	Transistor, 2N3906	33-2N3906
Q6, Q7	Transistor, 2N3904	34-2N3904
Q8	Transistor, 2N3906	33-2N3906
Q9, Q10	Transistor, 2N3904	34-2N3904
Q11	Transistor, 2N3906	33-2N3906
Q12, Q13	Transistor, 2N3904	34-2N3904
Q15	Transistor, 2N3904	34-2N3904
Q17	Transistor, 2N6044	34-2N6044
Q18	Transistor, 2N6044	34-2N6044
	Resistors	
R1	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R2	Resistor, ¼ W, 4.7 kΩ, ±5%	110000-472
R3	Resistor, ¼ W, 2.4 kΩ, ±5%	110000-242
R4	Resistor, ¼ W, 1.2 kΩ, ±5%	110000-122
R5	Resistor, ¼ W, 620 Ω, ±5%	110000-621
R6	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R7	Resistor, ¼ W, 4.7 kΩ, ±5%	110000-472
R8	Resistor, ¼ W, 2.4 kΩ, ±5%	110000-242

Gauntlet Game PCB Assembly
Parts List, Continued

Designator	Description	Part No.
R9	Resistor, ¼ W, 1.2 kΩ, ±5%	110000-122
R10	Resistor, ¼ W, 620 Ω, ±5%	110000-621
R11	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R12	Resistor, ¼ W, 4.7 kΩ, ±5%	110000-472
R13	Resistor, ¼ W, 2.4 kΩ, ±5%	110000-242
R14	Resistor, ¼ W, 1.2 kΩ, ±5%	110000-122
R15	Resistor, ¼ W, 620 Ω, ±5%	110000-621
R16	Resistor, ¼ W, 240 Ω, ±5%	110000-241
R17, R18	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R19	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R20	Resistor, ¼ W, 120 Ω, ±5%	110000-121
R21	Resistor, ¼ W, 240 Ω, ±5%	110000-241
R22	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R23	Resistor, ¼ W, 330 Ω, ±5%	110000-331
R24	Resistor, ¼ W, 390 Ω, ±5%	110000-391
R25	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R26	Resistor, ¼ W, 68 Ω, ±5%	110000-680
R27	Resistor, ¼ W, 10 Ω, ±5%	110000-100
R28	Resistor, ¼ W, 68 Ω, ±5%	110000-680
R29	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R30	Resistor, ¼ W, 330 Ω, ±5%	110000-331
R31	Resistor, ¼ W, 390 Ω, ±5%	110000-391
R32	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R33	Resistor, ¼ W, 68 Ω, ±5%	110000-680
R34	Resistor, ¼ W, 10 Ω, ±5%	110000-100
R35	Resistor, ¼ W, 68 Ω, ±5%	110000-680
R36	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R37	Resistor, ¼ W, 330 Ω, ±5%	110000-331
R38	Resistor, ¼ W, 390 Ω, ±5%	110000-391
R39	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R40	Resistor, ¼ W, 68 Ω, ±5%	110000-680
R41	Resistor, ¼ W, 10 Ω, ±5%	110000-100
R42	Resistor, ¼ W, 68 Ω, ±5%	110000-680
R43, R44	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R45	Resistor, ¼ W, 68 Ω, ±5%	110000-680
R46	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R47, R48	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R49	Resistor, ¼ W, 390 Ω, ±5%	110000-391
R50	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R51	Resistor, ¼ W, 4.7 kΩ, ±5%	110000-472
R52	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R53	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R54	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R55	Resistor, ¼ W, 56 kΩ, ±5%	110000-563
R56	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R57	Resistor, ¼ W, 5.6 kΩ, ±5%	110000-562
R58	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R59-64	Resistor, ¼ W, 1 kΩ, ±5%	110000-102

Gauntlet Game PCB Assembly
Parts List, Continued

Designator	Description	Part No.
R65	Resistor, ¼ W, 8.2 kΩ, ±5%	110000-822
R66	Resistor, ¼ W, 3.9 kΩ, ±5%	110000-392
R67	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R68	Resistor, ¼ W, 1.8 kΩ, ±5%	110000-182
R69, R70	Resistor, ¼ W, 2 kΩ, ±5%	110000-202
R71	Resistor, ¼ W, 5.6 kΩ, ±5%	110000-562
R72	Resistor, ¼ W, 1.2 kΩ, ±5%	110000-122
R73	Resistor, ¼ W, 470 Ω, ±5%	110000-471
R74	Resistor, ¼ W, 75 kΩ, ±5%	110000-753
R75	Resistor, ¼ W, 150 kΩ, ±5%	110000-154
R76	Resistor, ¼ W, 300 kΩ, ±5%	110000-304
R78	Resistor, ¼ W, 75 kΩ, ±5%	110000-753
R79	Resistor, ¼ W, 150 kΩ, ±5%	110000-154
R80	Resistor, ¼ W, 47 kΩ, ±5%	110000-473
R81	Resistor, ¼ W, 30 kΩ, ±5%	110000-303
R82	Resistor, ¼ W, 7.5 kΩ, ±5%	110000-752
R83, R84	Resistor, ¼ W, 15 kΩ, ±5%	110000-153
R85	Resistor, ¼ W, 7.5 kΩ, ±5%	110000-752
R86	Resistor, ¼ W, 30 kΩ, ±5%	110000-303
R87-94	Resistor, ¼ W, 12 kΩ, ±5%	110000-123
R95	Resistor, ¼ W, 560 Ω, ±5%	110000-561
R96-103	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R104	Resistor, ¼ W, 220 Ω, ±5%	110000-221
R105-112	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R113	Resistor, ¼ W, 220 Ω, ±5%	110000-221
R114-121	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R122, R123	Resistor, ¼ W, 220 Ω, ±5%	110000-221
R124-131	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R132, R133	Resistor, ¼ W, 10 kΩ, ±5%	110000-103
R134, R135	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R136	Resistor, ¼ W, 220 Ω, ±5%	110000-221
R137	Resistor, ¼ W, 12 kΩ, ±5%	110000-123
R138, R139	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R150-155	Resistor, ¼ W, 1 kΩ, ±5%	110000-102
R228	Resistor, ¼ W, 390 Ω, ±5%	110000-391
R229-231	Resistor, ¼ W, 3.9 kΩ, ±5%	110000-392
RN1, RN2	Resistor, SIP, 470 Ω (10-Pin)	118010-471
RN3-6	Resistor, SIP, 4.7 kΩ (10-Pin)	118010-472
RN7	Resistor, SIP, 470 Ω (8-Pin)	118007-471
RN8	Resistor, SIP, 1 kΩ (6-Pin)	118009-102
RN9	Resistor, SIP, 1 kΩ (6-Pin)	118009-102
RN10-13	Resistor, SIP, 470 Ω (10-Pin)	118010-471

Gauntlet Game PCB Assembly
Parts List, Continued

Designator	Description	Part No.
	Miscellaneous	
GND 1, GND 2, GND 3	Test Point	179051-002
Y1	Crystal, 14.318 MHz	90-101
	Socket, 16-Pin	79-42C16
	Socket, 20-Pin	79-42C20
	Socket, 24-Pin	79-42C24
	Socket, 28-Pin	79-42C28
	Socket, 40-Pin	79-42C40
	Socket, 64-Pin	79-42C64

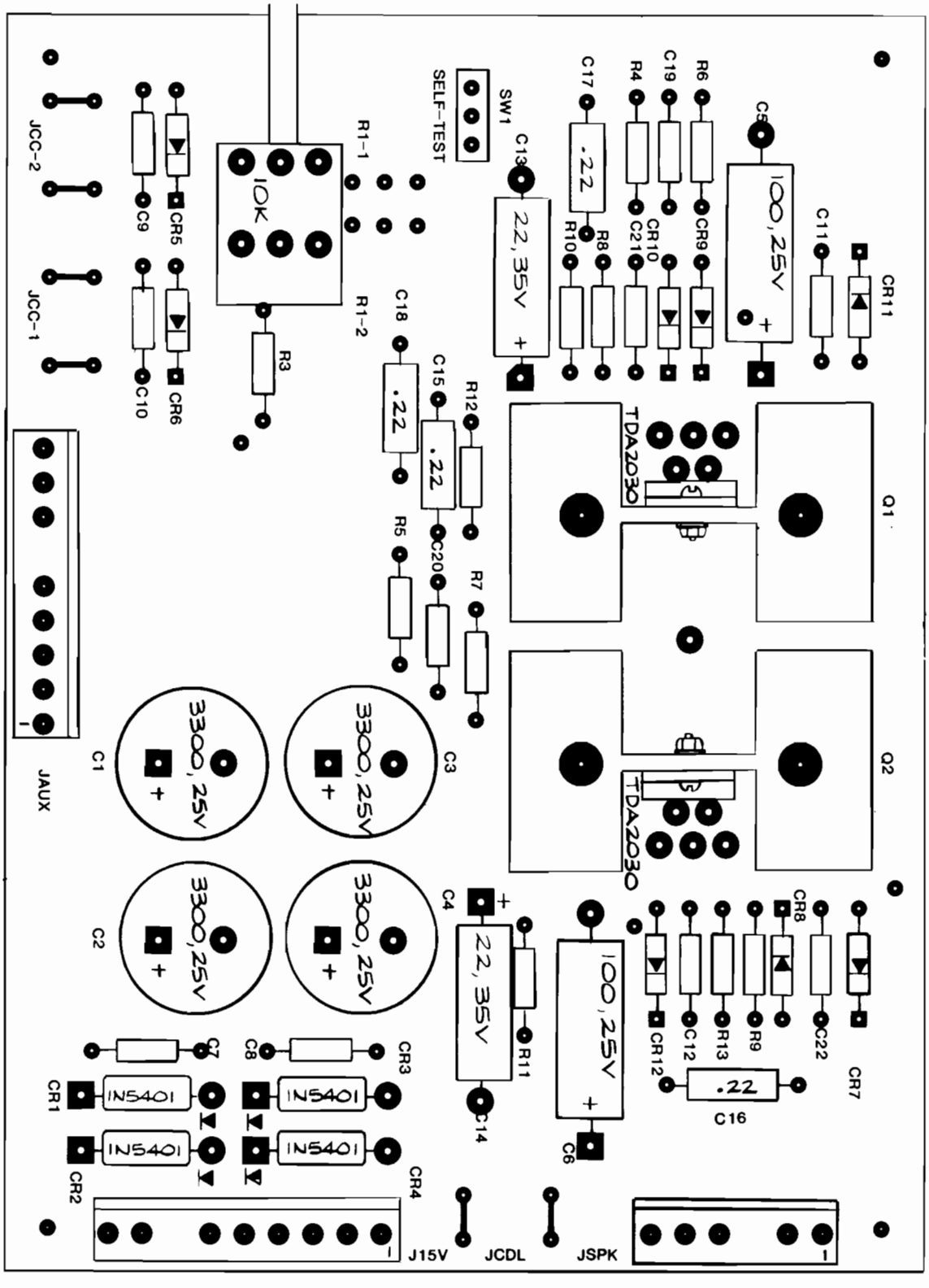


Figure 5-9 Audio PCB Assembly
A043354-01 B

Audio PCB Assembly
Parts List

Designator	Description	Part No.
C1–C4	Capacitor, Electrolytic, 3300 μf, 25 V	123003-338
C5, C6	Capacitor, Electrolytic, 100 μf, 25 V	24-250107
C7–C12	Capacitor, Ceramic, .1 μf, 25 V	122002-104
C13, C14	Capacitor, Electrolytic, 22 μf, 35 V	24-350226
C15–C18	Capacitor, Ceramic, .22 μf, 25 V	122006-224
C19, C20	Capacitor, Ceramic, .001 μf, 25 V	122002-102
C21, C22	Capacitor, Ceramic, .1 μf, 25 V	122002-104
CR1–4	Diode, 1N5401, 100 V, 3A	31-1N5401
CR5–12	Diode, 1N4001, 50 V	31-1N4001
J15V	Connector, Header, 9 Ckt., .156 Ctr.	179213-009
JAUX	Connector, Header, 9 Ckt., .156 Ctr.	179213-009
JCC-1, JCC-2	Term, Fast-on Tab, .187 × .020	179051-001
JCDL	Term, Fast-on Tab, .187 × .020	179051-001
JSPK	Connector, Header, 6 Ckt., .156 Ctr.	179213-006
Q1, Q2	Amplifer, TDA-2030	137301-001
R1	Resistor, Pot, 10 kΩ, Dual	119011-103
R3	Resistor, 10 Ω, ± 5%, ¼ W	110000-100
R4–R7	Resistor, 22 kΩ, ± 5%, ¼ W	110000-223
R8, R9	Resistor, 10 kΩ, ± 5%, ¼ W	110000-103
R10, R11	Resistor, 1 kΩ, ± 5%, ¼ W	110000-102
R12, R13	Resistor, 1 Ω, ± 5%, ¼ W	110000-010
SW1	Self-Test Switch, Slide, Miniature, SPDT	66-004
	Heat Sink, TO-220	178190-032
	Screw, Pan-Head, Cross-Recessed, #6-32 × 3/8-Inch Long	72-1606S
	Nut/Washer Assy, #6-32	75-99516

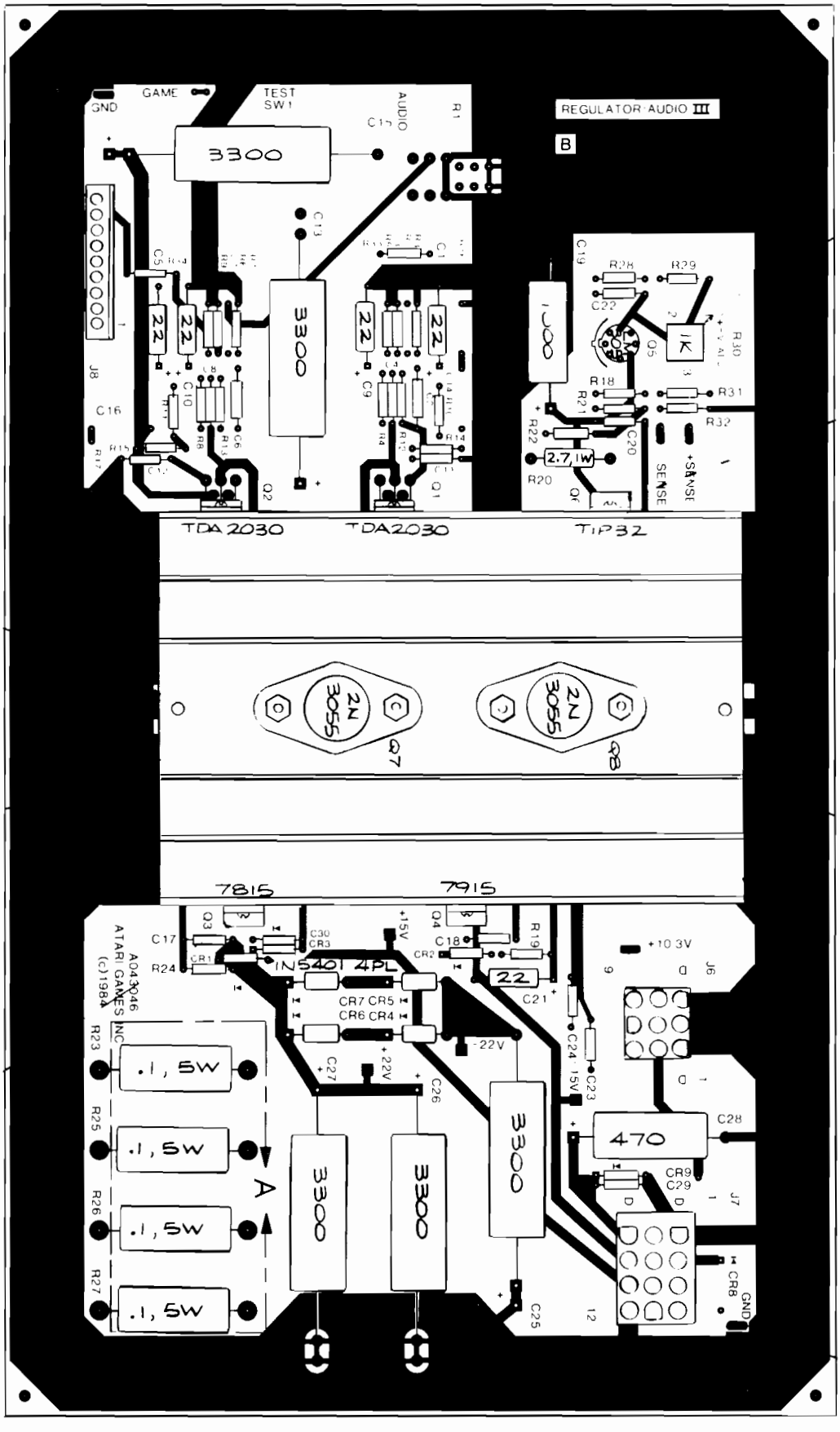


Figure 5-10 Regulator/Audio III Printed-Circuit Board Assembly A043046-01 C

Regulator/Audio III Printed-Circuit Board Assembly Parts List

Designator	Description	Part No.
	Capacitors	
C1	22 μF, 35 V Electrolytic Capacitor	24-350226
C2	0.22 μF, 25 V Ceramic Capacitor	122004-224
C3	0.001 μF, 50 V Ceramic Capacitor	122002-102
C4	0.1 μF, 50 V Ceramic Capacitor	122002-104
C5	22 μF, 35 V Electrolytic Capacitor	24-350226
C6	0.22 μF, 25 V Ceramic Capacitor	122004-224
C7	0.001 μF, 50 V Ceramic Capacitor	122002-102
C8	0.1 μF, 50 V Ceramic Capacitor	122002-104
C9, C10	22 μF, 35 V Electrolytic Capacitor	24-350226
C11, C12	0.1 μF, 50 V Ceramic Capacitor	122002-104
C13	3300 μF, 35 V Electrolytic Capacitor	24-350338
C14	0.22 μF, 25 V Ceramic Capacitor	122004-224
C15	3300 μF, 35 V Electrolytic Capacitor	24-350338
C16	0.22 μF, 25 V Ceramic Capacitor	122004-224
C17, C18	0.1 μF, 50 V Ceramic Capacitor	122002-104
C19	1000 μF, 25 V Electrolytic Capacitor	24-250108
C20	0.1 μF, 50 V Ceramic Capacitor	122002-104
C21	22 μF, 35 V Electrolytic Capacitor	24-350226
C22	0.001 μF, 50 V Ceramic Capacitor	122002-102
C23, C24	0.1 μF, 50 V Ceramic Capacitor	122002-104
C25–C27	3300 μF, 35 V Electrolytic Capacitor	24-350338
C28	470 μF, 25 V Electrolytic Capacitor	24-250477
C29, C30	0.1 μF, 50 V Ceramic Capacitor	122002-104
	Connectors	
J6	9-Position Header Connector	179069-009
J7	12-Position Header Connector	179069-012
J8	9-Position Polarized Header Connector with .156-Inch Centers	179213-009
	Diodes	
CR1–CR3	Type-1N4002 Diode	31-1N4002
CR4–CR7	Type-1N5401 Rectifier Diode	31-1N5401
CR9	Type-1N4002 Diode	31-1N4002
	Resistors	
R3	12 kΩ, ±5%, ¼ W Resistor	110000-123
R4, R5	100 kΩ, ±5%, ¼ W Resistor	110000-104
R7	12 kΩ, ±5%, ¼ W Resistor	110000-123
R8, R9	100 kΩ, ±5%, ¼ W Resistor	110000-104
R10, R11	1 kΩ, ±5%, ¼ W Resistor	110000-102
R12, R13	100 kΩ, ±5%, ¼ W Resistor	110000-104
R14, R15	10 kΩ, ±5%, ¼ W Resistor	110000-103
R18	100 Ω, ±5%, ¼ W Resistor	110000-101

(Continued on next page)

Regulator/Audio III Printed-Circuit Board Assembly Parts List, continued

Designator	Description	Part No.
R19	5.6 kΩ, ±5%, ¼ W Resistor	110000-562
R20	2.7 Ω, ±5%, 1 W Resistor	110009-027
R21	27 Ω, ±5%, ¼ W Resistor	110000-270
R22	100 Ω, ±5%, ¼ W Resistor	110000-101
R23	0.1 Ω, ±5%, 5 W Resistor	116007-001
R24	5.6 kΩ, ±5%, ¼ W Resistor	110000-562
R25–R27	0.1 Ω, ±5%, 5 W Resistor	116007-001
R28	2.7 Ω, ±5%, ¼ W Resistor	110000-027
R29	7.5 kΩ, ±5%, ¼ W Resistor	110000-752
R31	3.9 kΩ, ±5%, ¼ W Resistor	110000-392
R32	2.7 Ω, ±5%, ¼ W Resistor	110000-027
R33, R34	22 kΩ, ±5%, ¼ W Resistor	110000-223
	Transistors	
Q6	TIP-32 Transistor	33-TIP32
Q7, Q8	Type-2N3055 Transistor	34-2N3055
	Miscellaneous	
Q1, Q2	Type-TDA-2030 Amplifier	137301-001
Q3	Type-7815, +15 V Regulator	37-7815
Q4	Type-7915, −15 V Regulator	37-7915
Q5	Type-LM305 Regulator	37-LM305
R30	1k Horizontal Potentiometer	119002-102
(Q4, Q6)	Thermal Insulator	78-16014
(Q7, Q8)	Thermally Conductive Insulator	78-16008
	RTV Silicon Rubber Sealing Compound	78-13003
	Heat Sink	034531-01
	Test Point (Acceptable substitute is part no. 020670-01)	179051-002

Your Comments, Please!

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Gauntlet™

Coin Information and Game Statistics

Date: _____

Plyr 0 Coins	_____	Number of coins deposited in Warrior coin mechanism
Plyr 1 Coins	_____	Number of coins deposited in Valkyrie coin mechanism
Plyr 2 Coins	_____	Number of coins deposited in Wizard coin mechanism
Plyr 3 Coins	_____	Number of coins deposited in Elf coin mechanism
0 Plyr Mins	_____	Minutes of idle time
1 Plyr Mins	_____	Minutes played as a 1-player game
2 Plyr Mins	_____	Minutes played as a 2-player game
3 Plyr Mins	_____	Minutes played as a 3-player game
4 Plyr Mins	_____	Minutes played as a 4-player game
Total Games	_____	Total number of unique games played*
Error Count	_____	EEROM errors
Total Coins	_____	Total number of coins deposited in all four mechanisms
Avg. Time/Coin	_____	Average game time per coin in seconds

Histogram Information

Seconds	0 Warrior	1 Valkyrie	2 Wizard	3 Elf
0–29				
30–44				
45–59				
60–74				
75–89				
90–104				
105–119				
120–134				
135–149				
150–164				
165–179				
180–194				
195–209				
210–224				
225–239				
240–254				
255–269				
270–284				
285–299				
300 & up				

**One "game" is the time between leaving the Attract Mode and returning to it, regardless of time, number of coins inserted, or how many have played Gauntlet. The games are measured since the last time the statistics were cleared.*

Warranty

Seller warrants that its printed-circuit boards and parts thereon are free from defects in material and workmanship under normal use and service for a period of ninety (90) days from date of shipment. Seller warrants that its video displays and LaserVideo disc players (in games supplied with displays and video-disc players) are free from defects in material and workmanship under normal use and service for a period of thirty (30) days from date of shipment. None of the Seller's other products or parts thereof are warranted.

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(b) Such products are returned prepaid to Seller's plant; and

(c) Seller's examination of said products discloses to Seller's satisfaction that such alleged defects existed and were not caused by accident, misuse, neglect, alteration, improper repair, installation, or improper testing.

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