OPERATOR'S MANUAL

V 3.5

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SAFETY PRECAUTIONS

The following safety precautions and advisories are used throughout this manual and are defined as follows.

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* WARNING! *
*Disregarding this text could result in **serious injury**.*

---

* CAUTION! *
Disregarding this text could result in damage to the machine.

---

* NOTE! *
■   An advisory text to hint or help understanding.

BE SURE TO READ THE FOLLOWING

---

* WARNING! *

<u>*Always*</u> *turn **OFF** Mains AC power and unplugged the game, before opening or replacing any parts.*

<u>*Always*</u> *when unplugging the game from an electrical outlet, grasp the plug, not the line cord.*

<u>*Always*</u> *connect the Game Cabinet to grounded electrical outlet with a securely connected ground line.*

<u>*Do Not*</u> *install the Game Cabinet outdoors or in areas of high humidity, direct water contact, dust, high heat or extreme cold.*

<u>*Do Not*</u> *install the Game Cabinet in areas that would present an obstacle in case of an emergency, i.e. near fire equipment or emergency exits.*

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* CAUTION! *

<u>*Always*</u> *use a Digital Multimeter, logic tester or oscilloscope for testing integrated circuit (IC) logic PC boards. The use of a continuity tester is not permitted.*

<u>*Do Not*</u> *Connect or disconnect any of the integrated circuit (IC) logic PC boards while the power is **ON**.*

<u>*Do Not*</u> *use any fuse that does not meet the specified rating.*

<u>*Do Not*</u> *Subject the game cabinet to extreme temperature variations. Reliability of electrical components deteriorates rapidly over 60 ^{o}C.*

MACHINE INSTALLATION and INSPECTION

When installing and inspecting *"Ripper Ribbit"*, be very careful of the following points and pay attention to ensure that the players can enjoy the game safely.

■ Be sure to turn the power **OFF** before working on the machine.

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* WARNING! *

<u>*Always*</u> *Turn* **OFF** *mains power before removing safety covers and refit all safety covers when work is completed.*

■ Make sure the power cord is not exposed on the surface (floor, ground, etc.) where people walk through.

■ Check that the rubber glide feet levelers are set evenly on the floor so that the game cabinet is unable to roll and is stable.

■ Always make complete connections for the integrated circuit (IC) logic PC Boards and other connectors. Insufficient insertion can damage the electrical components.

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* CAUTION! *

<u>*Before*</u> *switching the machine on be sure to check that it has been set on the correct voltage for your area!*

<u>*Refer*</u> *to the mains voltage adjustment section of this manual. Machines are normally shipped on 220V AC unless otherwise specified.*

■ Only qualified personnel should inspect or test the integrated circuit (IC) logic PC Boards.

■ If any integrated circuit (IC) logic PC Boards should need servicing. Please contact the nearest *LAI GAMES* distributor. *(Refer to the back page of this manual)*

INTRODUCTION

CONGRATULATIONS! You have just bought the *"Ripper Ribbit",* another great product from *LAI GAMES*. The pond is buzzing with activity and this is one hungry frog. In this fast action game the players have to judge the timing of the frog's tongue to catch the insects but watch out for the spiders. It will keep your players amused for hours.

We hope you take the time to read this manual and learn about the many other features and user-friendly adjustments that can be made to "fine-tune" the game for maximum earning potential.

DESCRIPTION

The *"Ripper Ribbit"* is a single player fast action ticket redemption game. Players aim to catch as many insects before the game timer expires. The more insects caught, the more tickets won.

PACKAGING

■ At delivery, the machine should arrive in good condition. To move the packaged machine for transport or placement, use a forklift and take care not to hit the package or stack heavy objects on top, as this may cause damage to the machine.

CONTENTS

■ The "Ripper Ribbit" cabinet
■ Keys: 2 x coin door keys
              2 x coin box keys
              2 x back door keys
              2 x ticket door keys
■ Operator's manual
■ IEC Power Cord   (In cash box)
■ Parts & Accessories   (In cash box)

SPECIFICATIONS

DIMENSIONS

- Weight: 143 kg   (316 lb)
- Height: 1920mm   (75")
- Width: 680mm   (28")
- Length: 1055mm   (42")
- Power: Maximum   450 W – (220V @ 2.1A)(120V @ 3.8A)

ELECTRIC SUPPLY

- The game has the option to operate on a 110V, 120V, 220V or 240V AC 50/60Hz single phase mains electric supply.
  The supply must be a three wire grounded supply.

---

* CAUTION! *

**Before** switching the machine on be sure to check that it has been set on the correct voltage for your area!

Please Refer to the mains voltage adjustment section of this manual. Machines are normally shipped on 220V AC unless otherwise specified.

LOCATION REQUIREMENTS

- Ambient temperature: between 5°C and 40°C.
- Ambient humidity: Low
- Ambient U.V. radiation: Very low
- Vibrations level: Low
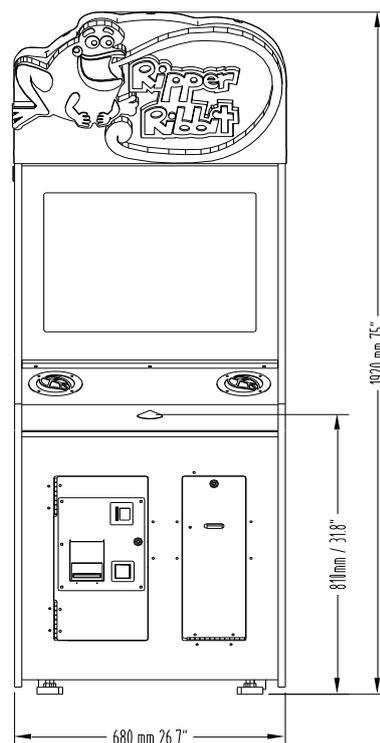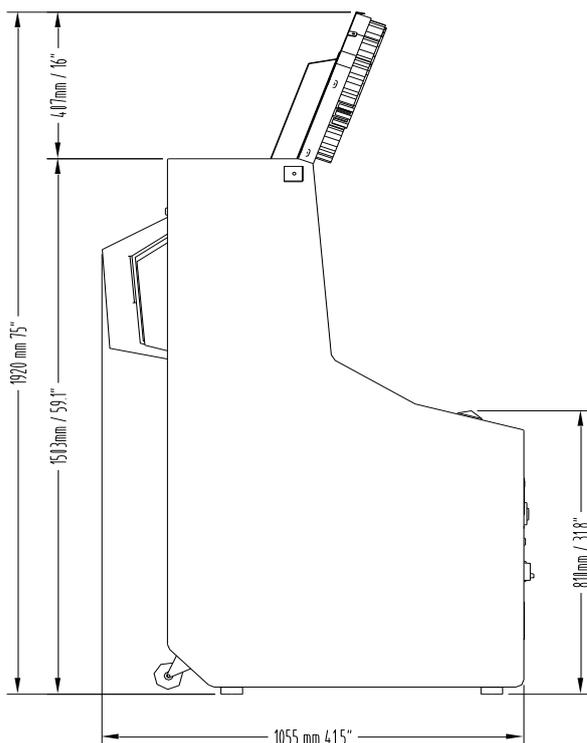
HOW TO PLAY

PLAYERS TIME THE FROG'S TONGUE TO CATCH INSECTS AND SCORE POINTS FOR TICKETS

■ Insert coin/s for credits.

■ Press the button to begin a game.

■ Use the button to time the frog's tongue to catch the insects.

■ The more insects you can catch the more points you will get before the game timer expires.

■ Bonus points are awarded for every falling cherry you catch.

■ Getting the frog's tongue caught by the spider will result in lost time.

■ Tickets are awarded based on number of points achieved during the game.

■ At the end of a game, Extra Tickets can be won by hitting the button during the Bonus Screen.

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OPERATION

The *"Ripper Ribbit"* game has three operational modes: Attract mode, Game Play mode and Test Mode.

OPERATIONAL DIAGRAM

```
                              ┌──────────────┐
                              │  POWER UP!   │
                              └──────────────┘
                                     │
   ┌──────────────────────────────────────────────────────────────────┐
   │                                 ▼                                   │
┌─────────────────┐        ┌──────────────┐        ┌──────────────┐    │
│ GUN ALIGNMENT   │ ◄───── │   ATTRACT    │ ─────► │    TEST      │ ───┘
│ MODE            │        │   MODE       │        │    MODE      │
└─────────────────┘        └──────────────┘        └──────────────┘
   │                              │
   │                              ▼
   │                       ┌──────────────┐
   └────────────────────── │  GAME PLAY   │
                           │  MODE        │
                           └──────────────┘
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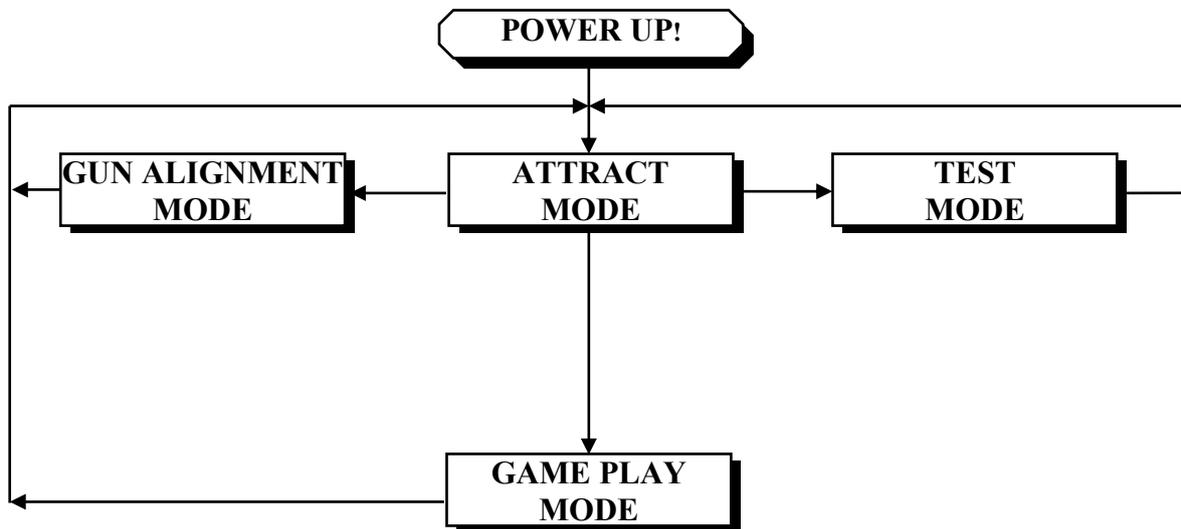
ATTRACT MODE

■ The Attract mode provides game sound and display while the game is not being played. This feature is to attract potential customers to play the game.

GAME PLAY MODE

■ The Ripper Ribbit has two play modes. The Standard *Coin Play* mode, where a coin, or coins are inserted. Or *Free Play* where no coins are necessary.

COIN PLAY

The *Coin Play* mode is entered from Attract mode, by inserting coins in any of the two coin slots on the front of the machine cabinet, then following the instructions in the "How to Play" section of this manual.

FREE PLAY

For a single free game, just press the Service button once. When issuing single free games in this manner, Tickets can be won as normal.

TEST MODE

The Ripper Ribbit has a *Test Mode* from which you can see game settings and test the switch inputs.
(Refer to the Test Mode Screen below).

TEST MODE SCREEN (V3.5)

| COIN Switch		RED Button
TICKET Notch	**0 0 0 0**	SERVICE Button
DIP Switch U7 4-3-2-1	**0 0 0 0 0 0 0 0 0 0 0 0**	DIP Switch SW3 8-7-6-5-4-3-2-1
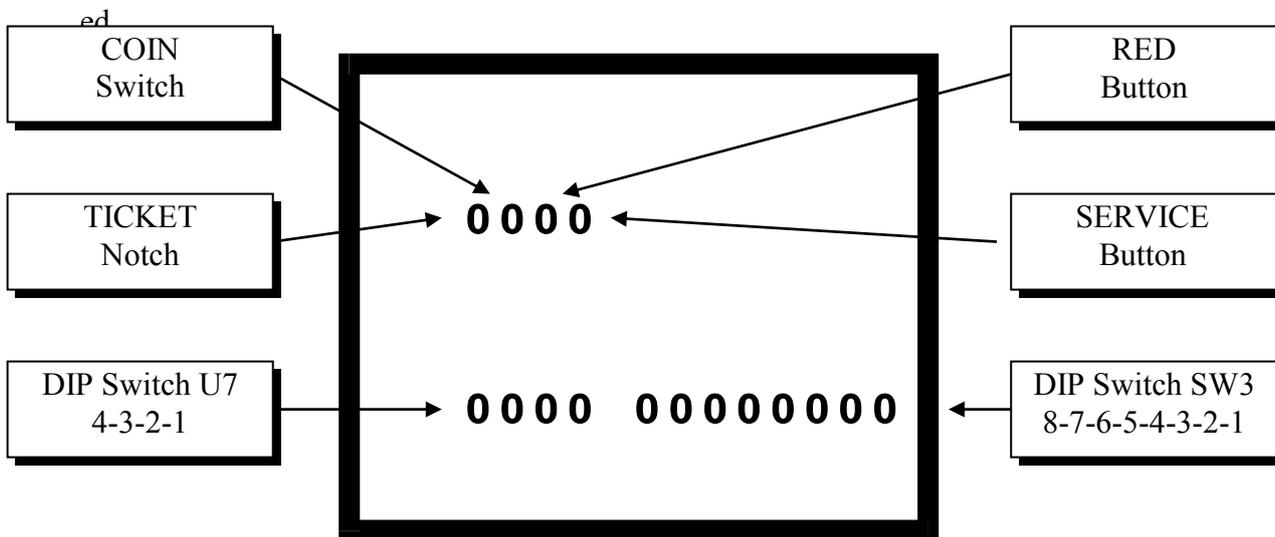
TEST MODE PROCEDURE

■ **ENTER** The *Test Mode* can be entered by pressing the red Test button located on the service bracket while in Attract mode once.

■ **TEST** Activating any of the switches will change the value from zero to **1** on the test screen.

■ **DIP SWITCH SETTINGS**
The two lower rows of zeros show the current settings of the DIP switch options.

■ **EXIT** The *Test mode* is exited by pressing the red Test button once.

SERVICE BRACKET

COIN Meter		SERVICE Push Button
	Coin Meter 1 TICKET METER SERVICE	TICKET Meter
TEST Push Button	TEST VOLUME	VOLUME Control

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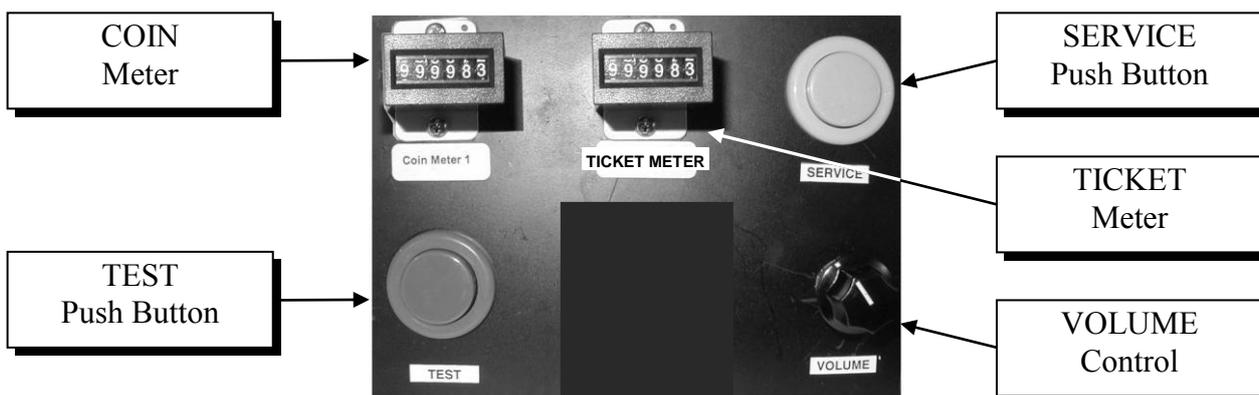
DIP SWITCH SETTINGS

Located near the Edge Connector of the Video Game PCB are two DIP Switches. One 8-Way DIP Switch marked as SW3 and a 4-way DIP Switch marked as U7. Use the DIP Switch table below to set the desired options for Ripper Ribbit.

DIP SWITCH TABLES (V3.5)

DIP Switch SW3	1	2	3	4	5	6	7	8
No. of Points per Ticket								
1000 Points per Ticket	ON	ON	ON					
800 Points per Ticket	ON	ON	OFF					
700 Points per Ticket ➤	*ON*	*OFF*	*ON*					
600 Points per Ticket	ON	OFF	OFF					
500 Points per Ticket	OFF	ON	ON					
400 Points per Ticket	OFF	ON	OFF					
300 Points per Ticket	OFF	OFF	ON					
200 Points per Ticket	OFF	OFF	OFF					
Bonus Screen Settings								
Screen Set No.1				ON	ON			
Screen Set No.2 ➤				*ON*	*OFF*			
Screen Set No.3				OFF	ON			
Screen Set No.4				OFF	OFF			
Initial Bonus Tickets								
No Bonus Tickets						ON	ON	ON
Starts at 5 Tickets						ON	ON	OFF
Starts at 10 Tickets						ON	OFF	ON
Starts at 15 Tickets ➤						*ON*	*OFF*	*OFF*
Starts at 20 Tickets						OFF	ON	ON
Starts at 25 Tickets						OFF	ON	OFF
Starts at 30 Tickets						OFF	OFF	ON
Starts at 35 Tickets						OFF	OFF	OFF

➤ **Factory Default Settings**

DIP SWITCH LOCATION

DIP Switch U7	1	2	3	4
No. Coin(s) per Credit(s)				
1 Coin for 1 Credit ➤	*ON*	*ON*		
2 Coins for 1 Credit	ON	OFF		
3 Coins for 1 Credit	OFF	ON		
1 Coin for 2 Credits	OFF	OFF		
Attract Sound				
No Attract Sound			ON	
Play every 3 min. ➤			*OFF*	
Bonus Tickets Increment				
Fixed Bonus Tickets				ON
Increment 1 ticket per game ➤				*OFF*

➤ **Factory Default Settings**
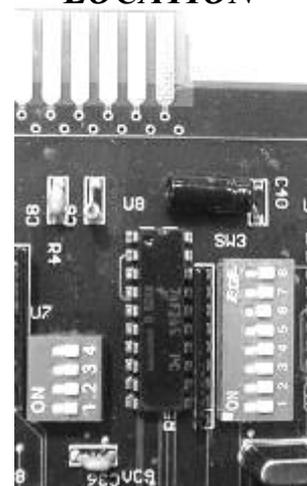
SETTINGS DETAILED

■ NUMBER OF POINTS PER TICKET

This sets the *Number of Points* needed for each Ticket won. The number of points per ticket is controlled by DIP Switch SW3 – 1 to 3.

No. of Points per Ticket	1	2	3	4	5	6	7	8
1000 Points per Ticket	ON	ON	ON					
800 Points per Ticket	ON	ON	OFF					
700 Points per Ticket ➢	*ON*	*OFF*	*ON*					
600 Points per Ticket	ON	OFF	OFF					
500 Points per Ticket	OFF	ON	ON					
400 Points per Ticket	OFF	ON	OFF					
300 Points per Ticket	OFF	OFF	ON					
200 Points per Ticket	OFF	OFF	OFF					

■ BONUS SCREEN SETTINGS

This sets the *Bonus Screen Set* for extra tickets that can be won during the Bonus Screen round at the end of the game. The number of tickets on each moving pad is controlled by DIP Switch SW3 – 4 & 5.

Bonus Screen Settings	1	2	3	4	5	6	7	8
Screen Set No.1				ON	ON			
Screen Set No.2 ➢				*ON*	*OFF*			
Screen Set No.3				OFF	ON			
Screen Set No.4				OFF	OFF			

The ticket values run clock-wise from the Bonus (Jackpot) value **[J]**. The starting point for the paten and is random located each bonus screen round. If Initial Bonus Tickets is set to No Bonus Tickets it will be replaced by the highest ticket value in the Bonus Screen Set.

Bonus Screen Ticket Values								
Screen Set No.1	**J**	0	2	1	1	1	1	0
Screen Set No.2 ➢	**J**	0	3	1	1	4	1	0
Screen Set No.3	**J**	1	3	4	1	3	2	1
Screen Set No.4	**J**	1	4	2	4	2	3	1

* NOTE! *
■ If *Initial Bonus Tickets* is set to **No Bonus Tickets** it will be replaced by the highest ticket value in the Bonus Screen Set.

■ INITIAL BONUS TICKETS

This sets the Initial Starting point for *Bonus Tickets* if won during the Bonus Screen round at the end of the game. The number of tickets the Incremental bonus is reset to is controlled by DIP Switch SW3 – 6 to 8.

Initial Bonus Tickets	1	2	3	4	5	6	7	8
No Bonus Tickets						ON	ON	ON
Starts at 5 Tickets						ON	ON	OFF
Starts at 10 Tickets						ON	OFF	ON
Starts at 15 Tickets ➤						*ON*	*OFF*	*OFF*
Starts at 20 Tickets						OFF	ON	ON
Starts at 25 Tickets						OFF	ON	OFF
Starts at 30 Tickets						OFF	OFF	ON
Starts at 35 Tickets						OFF	OFF	OFF

> ### * NOTE! *
> ■ If *Initial Bonus Tickets* is set to **No Bonus Tickets** it will be replaced by the highest ticket value in the Bonus Screen Set.

■ NUMBER of COIN(S) PER CREDIT(S)

This sets the *Number of Coins* required for one or more credits and is controlled DIP Switch U7 – 1 & 2.

No. Coin(s) per Credit(s)	1	2	3	4
1 Coin for 1 Credit ➤	*ON*	*ON*		
2 Coins for 1 Credit	ON	OFF		
3 Coins for 1 Credit	OFF	ON		
1 Coin for 2 Credits	OFF	OFF		

■ ATTRACT SOUND

This enables or disables the *Attract Sound* and is controlled DIP Switch U7 – 6 to 8.

Attract Sound	1	2	3	4
No Attract Sound			ON	
Play every 3 min. ➤			*OFF*	

■ BONUS TICKETS INCREMENT

This enables or disables the *Bonus Tickets Increment* and is controlled DIP Switch U7 – 6 to 8.

Bonus Tickets Increment				
Fixed Bonus Tickets				ON
Increment 1 ticket per game ➤				*OFF*

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ERRORS AND TROUBLESHOOTING

If the microprocessor detects any problems with the operation of the game, an Error will be displayed on the screen. There is one error message for Ripper Ribbit, listed as follows:

ERROR DESCRIPTION	SOLUTION
TICKET ERROR Jammed tickets, no tickets or no ticket notch pulse for longer than 3 seconds.	Clear ticket jam or replenish tickets. After this, push Test button once to dispense unpaid tickets.

TROUBLESHOOTING GAME ERRORS

■ **CLEARING GAME ERRORS**

Game errors can be cleared, by pushing the test button ONCE. The game will try and check if the error is fixed. If the reason for the error is fixed, the game will continue as normal. If the error is not fixed, the error will remain on the screen.

■ **TICKET ERROR**

This usually occurs if the game has run out of tickets or there is a ticket jam. A less common reason is if the game PCB tries to dispense tickets but doesn't get a notch pulse for approximately three seconds. Test the notch pulse by passing a ticket in and out of the notch sensor.

If the game was out of tickets, replace the tickets, clear the ticket jam and then push the test button once to clear the error. The game will then payout any owed tickets.

FUSE INFORMATION

> *** WARNING! ***
> *Always* turn **OFF** Mains power and unplugged the game, before replacing any fuses.

■ **MAIN AC SUPPLY FUSE (1 x 6 AMP FAST BLOW, M205 TYPE)**
This fuse is for the main AC supply and is situated in the IEC mains input socket.

> *** NOTE! ***
> ■ The power cord must be removed before the fuse can be accessed.

■ **MONITOR POWER FUSE (1 x 3 AMP FAST BLOW, M205 TYPE)**
This fuse is for the power supply on the 29" CGA Monitor PCB.

> *** CAUTION! ***
> *Do Not* use any fuse that does not meet the specified rating.

FUSE LOCATION DIAGRAM
As viewed from rear

Monitor Power
Fuse
3A QB M205

Main AC Supply
Fuse
6A QB M205

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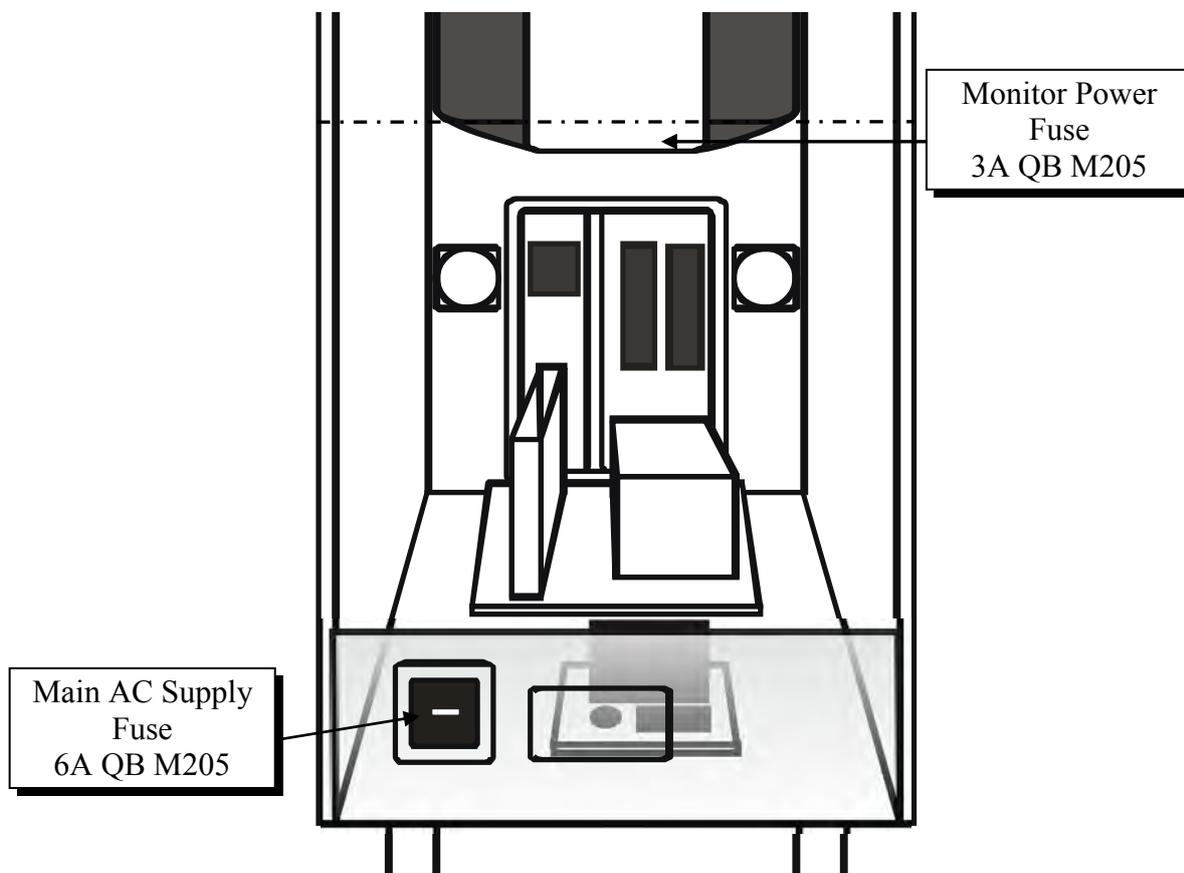
SECTION A: SERVICE INSTRUCTIONS
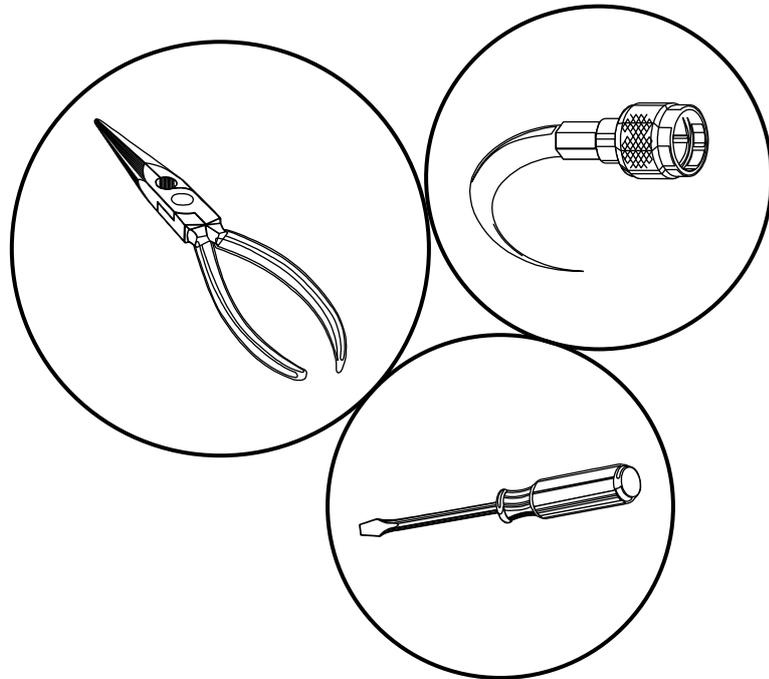
BE SURE TO READ THE FOLLOWING
Carefully before servicing this machine

A

LOCATING AND ACCESSING PARTS

PARTS LOCATION DIAGRAM
As viewed from front

Header Assembly

Header Art

Header Support Box

Top Glass Bracket

Front Monitor Glass

29" CGA Monitor

Bottom Glass Bracket

Monitor Display Area

RED Button

Speakers & Covers

Ticket Door

Coin Door

Coin Mechanisms

Coin Box

Rubber Glide (Leg Levelers)

Rubber Glide (Leg Levelers)

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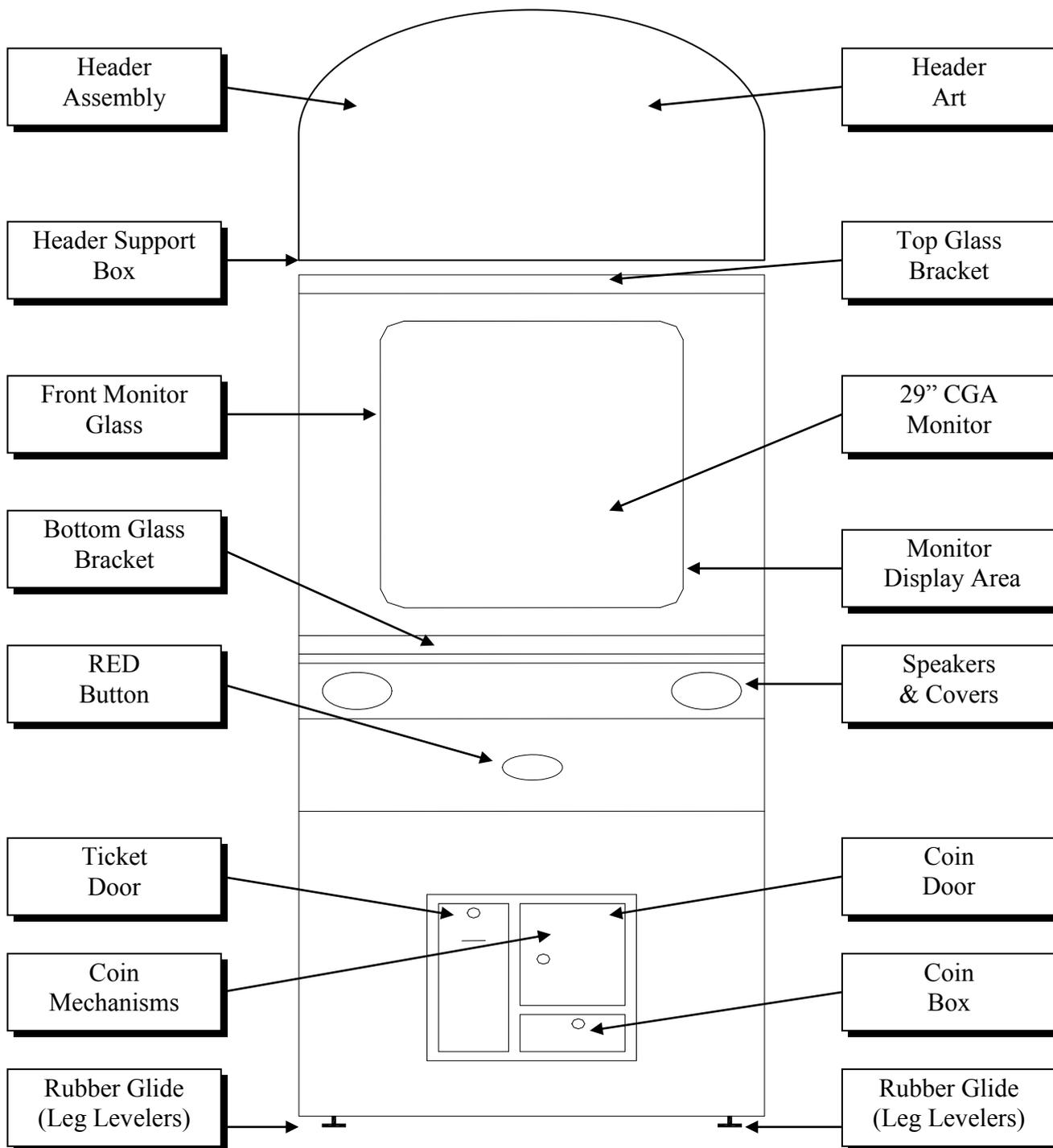
PARTS LOCATION DIAGRAM Cont.
As viewed from rear

Header
Assembly

Header
Mounting Box

Handle
Holes

Monitor
Cover

Back
Door

29" CGA Monitor
(Inside)

Ticket Mechanism
(Inside)

Coin Mechanisms
(Inside)

Service Bracket
(Inside)

Video Game PCB
(Inside)

Ticket Holder
(Inside)

Amplifier PCB
(Inside)

+12/+5VDC
Power Supply
(Inside)

Cash Box &
Housing
(Inside)

Power
Inlet (IEC)

Casters
(2 units)

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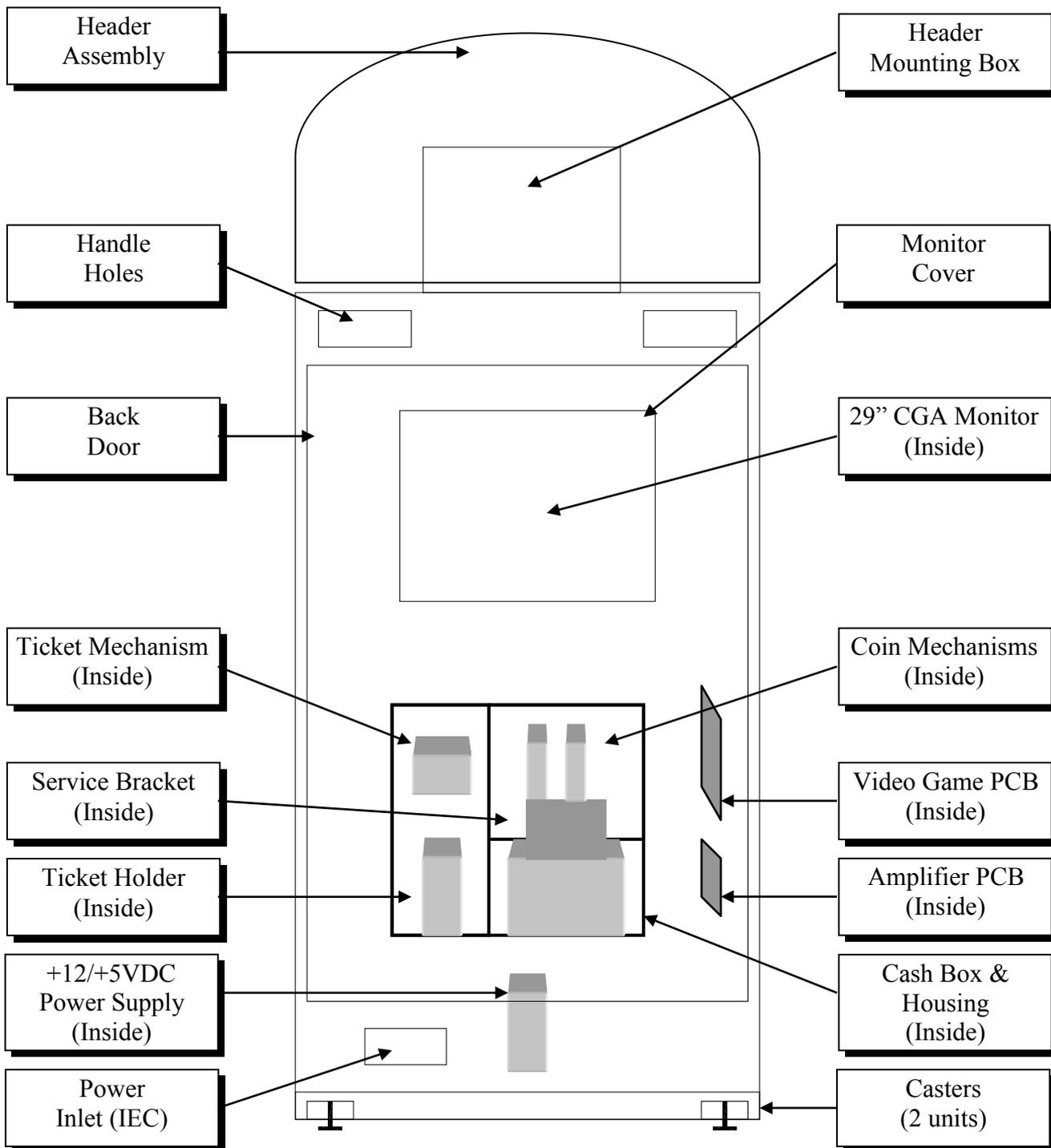
PARTS DESCRIPTION

■ **COIN MECHANISMS**

The coin mechanisms can be accessed inside the Coin door on the front of the machine cabinet.

■ **CASH BOX**

The cash box is located inside the coin door on the front of the machine cabinet.

■ **TICKET MECHANISM**

The ticket mechanism can be accessed inside the ticket door to the Right on the front of the machine cabinet.

■ **SPEAKERS**

Two speakers are located to the front of the cabinet above the control panel. Access is through the rear door.

■ **GAME CONTROLS:**

Located in the center of the machine cabinet. The control panel can be Access through the rear door.

START BUTTON: The Start button is the large RED round illuminated button. This button is used to start a game and control the frog's tongue.

■ **SERVICE CONTROLS:**

Located on the service panel mounted on top of the cash box and accessed trough the Coin Door.

SERVICE BUTTON: Used to input credits to the game without activating the coin counter, and to perform test procedures in combination with the test button

TEST BUTTON: Used to perform the test mode, in combination with the Service button.

VOLUME KNOB: Used to adjust the speaker's sound level.

SERVICE BRACKET
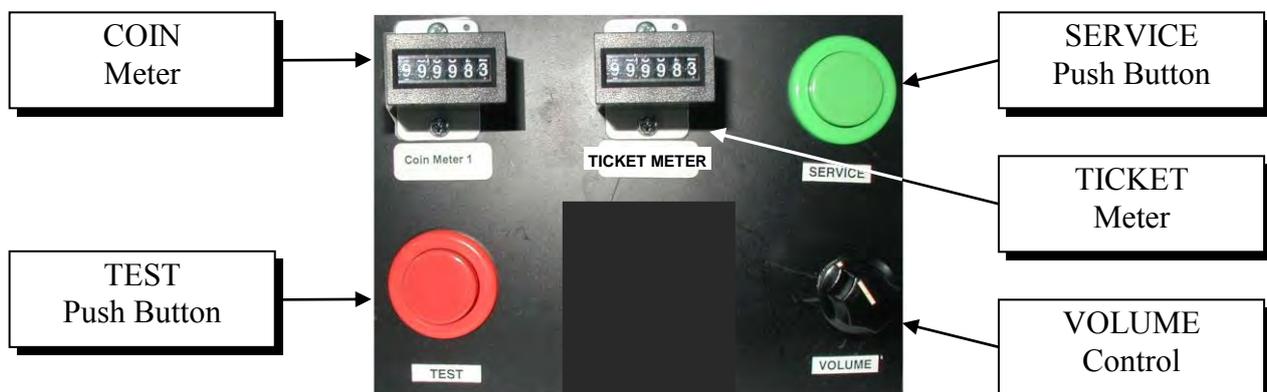
■ **POWER CORD**

The power cord is a standard IEC power cord (as used on computers) that is plugged in to the power inlet socket at the rear of the machine. The power cord can be removed for transport.

■ **POWER INLET**

The power inlet is located at the rear of the machine on the Left-hand side as viewed from the rear. It is a standard IEC inlet socket.

■ **MAINS SWITCH**

The mains switch is located on the power inlet assembly along with the mains fuse, and IEC inlet socket.

■ **FUSES**

For locations of all fuses refer to Fuses and Fuse location, page of this manual.

> **** WARNING! ****
> *__Always__ turn **OFF** Mains power and unplugged the game, before replacing any fuses*
> *__Always__ use the correct rated fuse. Refer to page for fuse information.*

■ **PCB's**

For location of all game PCB's, refer to the Parts Location diagram page 14 of this manual.

■ **POWER SUPPLY**

The power supply is located at the back of the cabinet and is accessed from the rear of the machine. It is a multi voltage switching power supply.

■ **29" CGA MONITOR**

The 29" CGA (15 KHz) Monitor is located at the back of the cabinet and is accessed from the rear of the machine.

LAMPS

* WARNING! *

Always *turn* **OFF** *Mains power and unplugged the game, before replacing any lamps.*

Always *allow time for cooling as Lamps that have been active for a time may still be too hot to touch.*

- **COIN DOOR LAMPS**
  The coin door lamps all are 12V/DC GE194 or equivalent and can be accessed through the coin door.

- **BUTTON LAMP**
  The button lamp is 12V/DC GE194 or equivalent and can be accessed through the coin door or back door.

* CAUTION! *
Always *replace the lamps with the same or equivalent size, wattage and voltage.*

MAINTENANCE

CLEANING AND CHECK UP

■ **EXTERIOR**

<u>**Regularly**</u> dust and clean the external cabinet areas as required, using a soft water-damp cloth and mild soap. Check for blown bulbs and replace as required.

Any scratches or marks in the acrylic can be buffed out using car polish or cut and polish.

> *** CAUTION! ***
> <u>***Do not***</u> *use solvents on the panels as it may affect the artwork.*

■ **INTERIOR**

<u>**Regularly**</u> dust and vacuum the interior of the cabinet, taking care to remove any objects that may have fallen on the PCBs. Check and tighten all fixing hardware and fasteners as required.

> *** WARNING! ***
>
> <u>*Always*</u> *turn* **OFF** *Mains power and unplugged the game, before cleaning the interior of the machine.*
>
> <u>*Always*</u> *after cleaning the cabinet interior, check all harness connectors and restore all loose or interrupted connections.*

<u>**Regularly**</u> check that the Button Lamp is operating and button switch is good. Replace the lamp if blown and replace the micro switch if necessary.

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SECTION B: TECHNICAL DETAILS
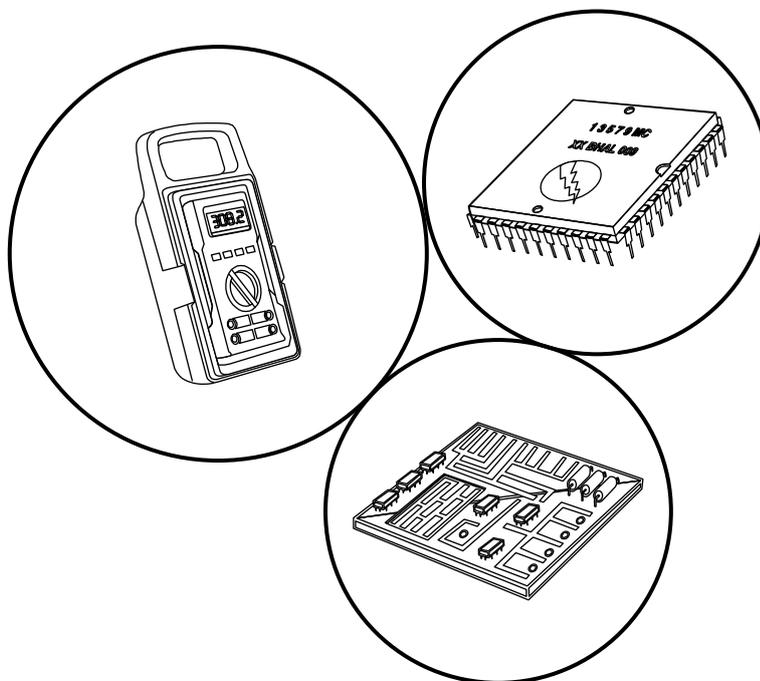
|	
⚠	It is advised that anybody using SECTION B for repairing or modifying any of the components of the game should be a qualified technician, having at least a basic knowledge of digital components, integrated circuits and electricity.	⚠

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MAINS VOLTAGE ADJUSTMENT

■ **POWER SUPPLY**

The Switch Mode Power Supply has a switch to set the mains voltage range. It is located at the rear of the game cabinet, and is accessed via the back door. Use a thin blade screwdriver to move the selector switch to the desired mains voltage (See Diagram Below)
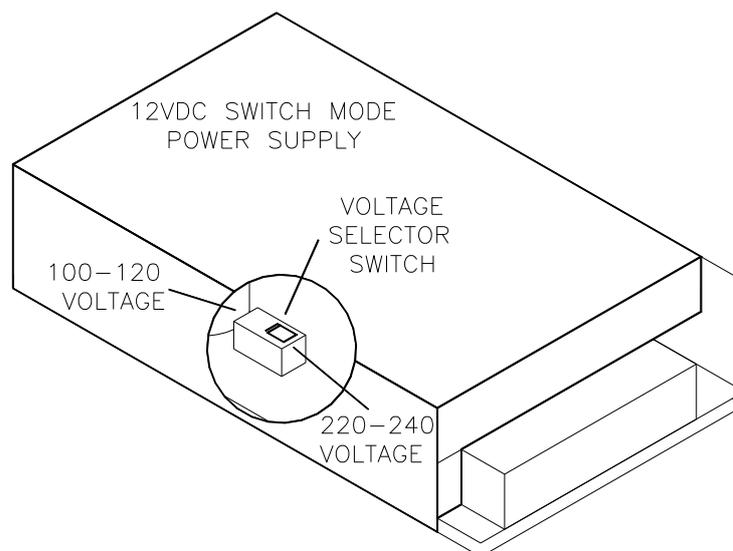
■ **29" CGA MONITOR**

The 29" CGA Monitor is a "Voltage Free" type and can run on any AC source between 95VAC and 250VAC.

TICKET DISPENSER REFERENCE GUIDE

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"Quick Release" Ticket Dispenser Features
All Models

1 Removable top metal ticket guide

9 Locating spring

8 Roller tension spring

2 Bottom metal ticket guide

Validation rollers emboss tickets

10 "Quick Release" Face Plate

6 Optical sensor w/dust cover

7

3 Ticket advance switch

11 Ticket stop adjustment

4 Braking system

5 Brake bracket

Deltronic Labs, Inc. 120 Liberty Lane, Chalfont, PA 18914 • 215-997-8616 • FAX# 215-997-9506 • www.deltroniclabs.com

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Ticket Dispenser Assembly

Details of Parts

F/N	Qty	Deltronic Labs P/N	Name
11	1	SHFT-IDLRLR/TD/	IDL. ROLLER SHAFT
12	1	RM-SFTMTR/TD/	MOTOR PIVOT SHAFT
13	1	SPAC PIVBLK/TD/4HOL	PIVOT BRACKET SPAC
14	1	RM-SPCPB/TD/	SPACER BLOCK
15	2	RM-RLRIDL/TD/VALD	IDLER ROLLER
16	1	RM-RLRDRV/TD/VALD	DRIVE ROLLER
17	2	SPRG-TENSN/TD/	TENSION SPRING
18	2	RM-BKTPVT/TD	MTR PIVOT BKT.
19	1	RM-PANLFT/TD/NOPM	FRONT PANEL
20	1	RM-WHLBRK/TD/	BRAKE WHEEL
21	1	SPRG-LOCAT/TD/	LOCATING SPRING
22	1	RM-BKTBRK/TD/	BRAKE BRACKET
23	1	RM-BKTUB/TD/3/8	URETHANE BRAKE
24	1	PCBD-1275/TD/ *	PC BOARD
25	1	RM MOTOR/TD/	MOTOR
26	2	RM-PLATFR/TD	FRAME PLATE
27	1	RM-CONN2P/TE/20G	2-PIN FEMALE CONN.
28	4	BRNG-F312/TT/BRASS	BUSHING
29	1	SPAC-PCBD/TD/	P.C. BOARD SPACER
30	1	SPAC-HEX/TD/1-1/4	HEX SPACER 1-1/4"
31	1	RM .1M/TT/50V	.1MFD 50V
32	1	SPAC-HEX/TD/1/4"	STAND OFF
33	1	GUID-BOTTOM/TD/MET	LOWER GUIDE MET.
34	4	RING-E25RT/TT/	RETAINING RING
35	1	GUID-TOP/TD/MET	TOP GUIDE METAL
36	2	PULY-SP212TE/NYLN **	SPACER WASHER
37	1	SPRG FRONTP/TD/	SPRING FRONT-PLATE
38	4	RM-PEMNUT/TD/FRPL	PEMNUT FRAME
39	2	RM-PEMNUT/TD/FRPN	PEMNUT FRONT
40	1	COVR-H21A/TD/OPTO	DUST COVER
41	1	CONN MOLEX/TD/4PM	4 WIRE MOLEX MA.
42	1	RM-LABEL/TD/ALUM.	LABEL ALUMINUM
43		WIRE-REDBLK/TD/MOTOR	
44	2	SPAC-PIVBRK/TD/HEX ***	SPACER 1/4" HEX.

* Order by Model #

** Note: F/N #36 replaces .032 and .093 spacer washers.

*** Note: F/N #44 replaces large spacer block.

Material List for Screws

| F/N	Qty	Part #	Description
1	11	RM-#4-40S/TD/1/4	4-40X1/4" SCREW
2	3	RM-#4-40R/TD/1/4	4-40 X 1/4" WASHER HEAD
3	2	RM-#4-40R/TD/1/2	4-40 X 1/2" WASHER HEAD
4	1	RM-#8SCRW/TD/	8-32 X 1-1/4"
5	1	RM-#4FLTW/TT/	#4 FLAT WASHER
6	5	RM-#4SPSW/TT/	#4 SPLIT LOC. WASHER
7	2	RM-#4-40T/TD/1/8	PHILLIPS TRUSSHEAD
8	1	RM-#6STAR/TD/	#6 INT STAR WASHER
9	1	SCRW-SET/TT/	8-32 X 3/16" SET SCREW
10	1	SCRW-SET/TD/BKWH	8-32 X 1/8 SET SCREW

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Control Board Rev. 8
DL-1275 with 12V meter output

The dispenser is controlled by the game software. The game turns on the dispenser with a logic high signal and monitors a return notch signal from the ticket dispenser to turn it off. It will dispense as many tickets as games options allow.
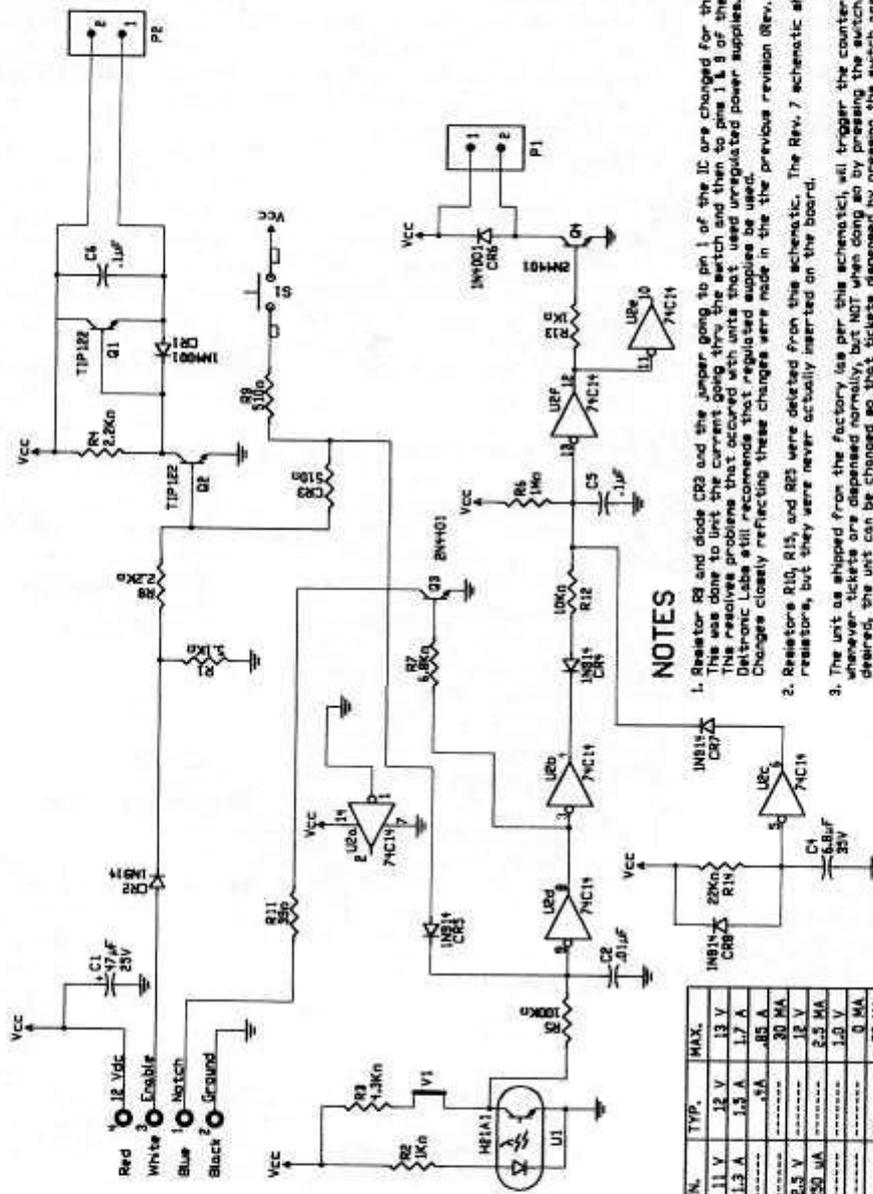
NOTES

1. Resistor R9 and diode CR3 and the jumper going to pin 1 of the IC are changed for this revision. This was done to limit the current going thru the switch and then to pin 1 & 3 of the IC. Deltronic Labs still recommends that regulated supplies be used. Changes closely reflecting these changes were made in the previous revision (Rev. 7).

2. Resistors R10, R15, and R23 were deleted from the schematic. The Rev. 7 schematic show these resistors, but they were never actually inserted on the board.

3. The unit as shipped from the factory (as per this schematic), will trigger the counter whenever tickets are dispensed normally, but NOT when doing so by pressing the switch. If desired, the unit can be changed so that tickets dispensed by pressing the switch are also counted. Do this by deleting diode CR5.

4. The unit can be made to conform to CE specifications by the addition of 4 components not shown here. If this is desired, please order the CE version, and the unit will be shipped with the necessary components.

5. The unit can be configured in a number of ways. Please check our "Full Options" schematic to see the different configurations. If this schematic is not included with your manual, contact us for a copy.

6. If tickets are highly translucent, the 1.3Kohm resistor (R3) can be lowered in value (e.g. 2.2 Kohm). For more sensitive adjustment, the jumper V1 can be replaced with a 25K pot, and the 1.3 Kohm resistor (R3) changed to 1Kohm.

	MIN.	TYP.	MAX.
MOTOR SUPPLY - V ---	11 V	12 V	13 V
I (START) ----	1.3 A	1.5 A	1.7 A
I (RUN) ------	-------	-------	.85 A
I (STANDBY) --	-------	xA	30 MA
MOTOR ENABLE ON - V --	2.5 V	-------	12 V
MOTOR ENABLE OFF - V --	250 µA	-------	2.5 MA
TICKET NOTCH - I SINK --	-------	-------	0 MA
V PULL UP --	-------	-------	50 MA
	-------	-------	30 V

MOTOR ENABLE

MOTOR OFF / MOTOR ON / MOTOR OFF

TICKET NOTCH (Open collector output)

Red 4 J2 Vdc
White 3 Enable
Blue 1 Notch
Black 2 Ground

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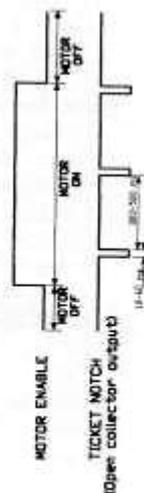
Control Board

Models DL-4-S-S DL-4-P-S

1. A, 74C14
2. D3, D7 & D8 are IN4001, others are IN457A or 914.
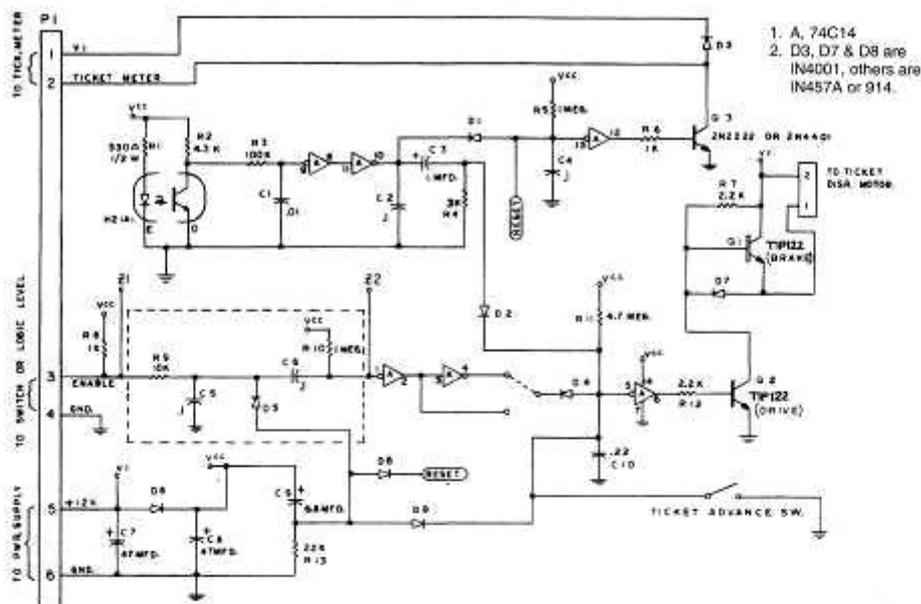
Model #DL-4-S-S, SW Input
Model #DL-4-P-S, Logic Input.

Note: With logic input components and dotted lines are omitted and Z1 is jumpered to Z2.
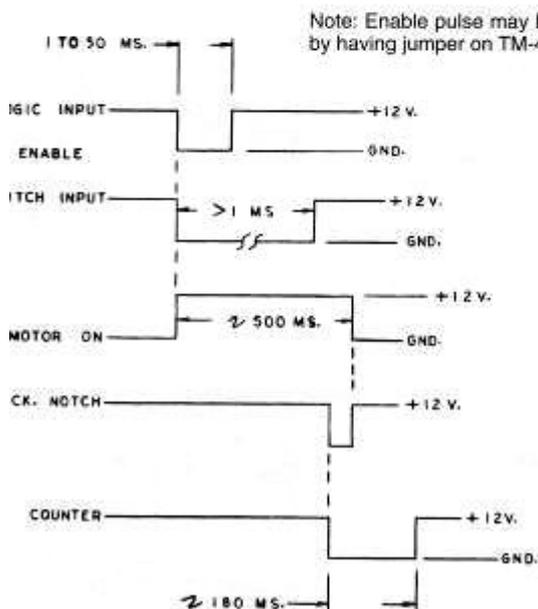
Note: Enable pulse may be positive or negative by having jumper on TM-4 in proper place.

TM-4 BOARD
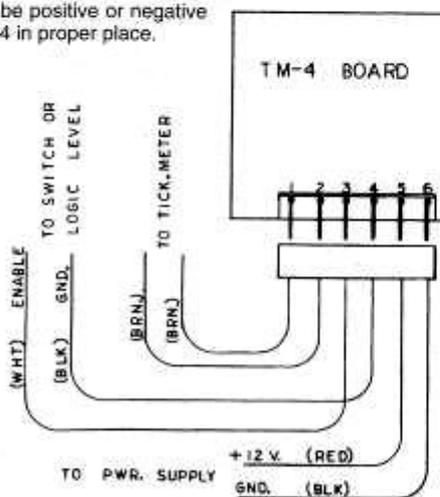
Note: On PCB TM-4, Rev. 1 & 2, Q1 and Q2 transistors are D40K1or equivalent.

Model #DL-4-S-S
Model #DL-4-P-S

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RIPPER RIBBIT JAMMA CONNECTOR LIST

SOLDER SIDE	JAMMA		PARTS SIDE
GND	A	1	GND
GND	B	2	GND
+5V	C	3	+5V
+5V	D	4	+5V
	E	5	
+12V	F	6	+12V
POLARIZING KEY	H	7	POLARIZING KEY
TICKET MOTOR DRIVE	J	8	COIN COUNTER
TICKET COUNTER	K	9	BUTTON LAMP
AUDIO GND	L	10	AUDIO Line +
	M	11	
GREEN*	N	12	RED*
SYNC*	P	13	BLUE*
SERVICE	R	14	VIDEO GND*
	S	15	TEST
MERCY TICKET DISABLE*	T	16	COIN SWITCH
	U	17	
	V	18	
	W	19	
	X	20	
	Y	21	
	A	22	BUTTON
	a	23	
	b	24	TICKET NOTCH
	c	25	
	d	26	
GND	e	27	GND
GND	f	28	GND

*Note: Video Outputs are CGA, 15 KHz only.

Connecting pin "T" to logic ground will disable Mercy Tickets (Version 3.5)

---

* NOTE! *

■ Polarity Key is to prevent accidental reverse insertion of edge connector

■ Check and adjust the +5VDC that it is between 4.8 and 5.1 Volts at the edge connector.

3 D PARTS EXPLODE

NO	PART NO	DESCRIPTION	QTY
01	RR A001	HEADER ASSEMBLY	1
02	BA1302	PCB FB29g STEREO AUDIO AMPLIFIER	1
03	BA1301	PCB ICE GAME BOARD	1
04	RR1-FW-003-R0	BACK DOOR	1
05	RR1-SA-001-R0	METAL BACK COVER	1
06	RR E001	DB BOX ASSEMBLY	1
06A	HA0007	DB BOX METAL ONLY	1
06B	EA1356	BINDING POST	1
06C	EA1358	SPLIT CORE EMI FILTER FOR CE MACHINE	1
06D	EA0649	IEC TYPE NOISE EMI FILTER	1
06E	RR H002	DB BOX HARNES	1
06F	EA0635	POWER LEAD MOLDED IEC TO 3 PIN USA	1
06G	EA0636	POWER LEAD MOLDED IEC TO 2 PIN INDO	1
06H	EA0637	POWER LEAD MOLDED IEC TO 3 PIN AU	1
06i	EA0639	POWER LEAD MOLDED IEC TO 3 PIN UK	1
07	HM0062	CASTOR WHEEL 3 INCH	2
08	HM0002	RUBBER MACHINE GLIDE	4
09	RR1-FW-004-R2	FRONT PANEL LOWER WOOD ONLY	1
09A	AT1303	STICKER FRONT PANEL	1
10	RR1-FW-001B-R0	CABINET SIDE LEFT WOOD ONLY	1
10A	AT1302	STICKER MACHINE SIDE LEFT	1
11	AT1310	ACRYLIC PLAYFIELD	1
12	EA0503	SWITCH MEDIUM ROUND RED BUTTON	1
13	RR1-FM-021-R2	SPEAKER COVER	2
14	EA1059	COLOUR PICTURE TUBE 29" CORION SAMSUNG	1
15	RR1-FW-011-R0	MONITOR GLASS BACK BOARD	1
15A	AT1304	STICKER MONITOR MASK	1
15B	RR1-FG-001-R0	FRONT GLASS	1
16	RR A002	TICKET DOOR ASSEMBLY	1
17	RR A003	COINDOOR ASSEMBLY	1
18	SP1-FM-019-R0	TICKET HOLDER	1
19	RR1-SA-003-R0	CASH BOX	1
20	RR1-SA-002-R0	HOUSING CASH BOX	1
21	RR E002	SERVICE PANEL ASSEMBLY	1
21A	RR1-FM-017-R0	SERVICE PANEL METAL ONLY	1
21B	EA0519	SWITCH SMALL ROUND RED BUTTON	1
21C	EA0520	SWITCH SMALL ROUND GREEN BUTTON	1
21D	EA1252	COIN COUNTER 12V REAR MOUNTING	1
21E	EE0689	POTENSIO CARBON DUAL GANG 50K Ohm	2
21F	EP0602	KNOB VOLUME	1
-	RR H003	SERVICE PANEL HARNESS	1
22	RR E003	POWER ASSEMBLY	1
23	RR1-FM-022-R0	BACK COVER SPEAKER	1
24	EA1201	SPEAKER 4" 8 OHM 40W	2
25	RR1-FW-001A-R0	CABINET SIDE RIGHT WOOD ONLY	1
25A	AT1301	STICKER MACHINE SIDE RIGHT	1
26	RR H004	MAIN HARNESS	1

PART ITEM

Page 28
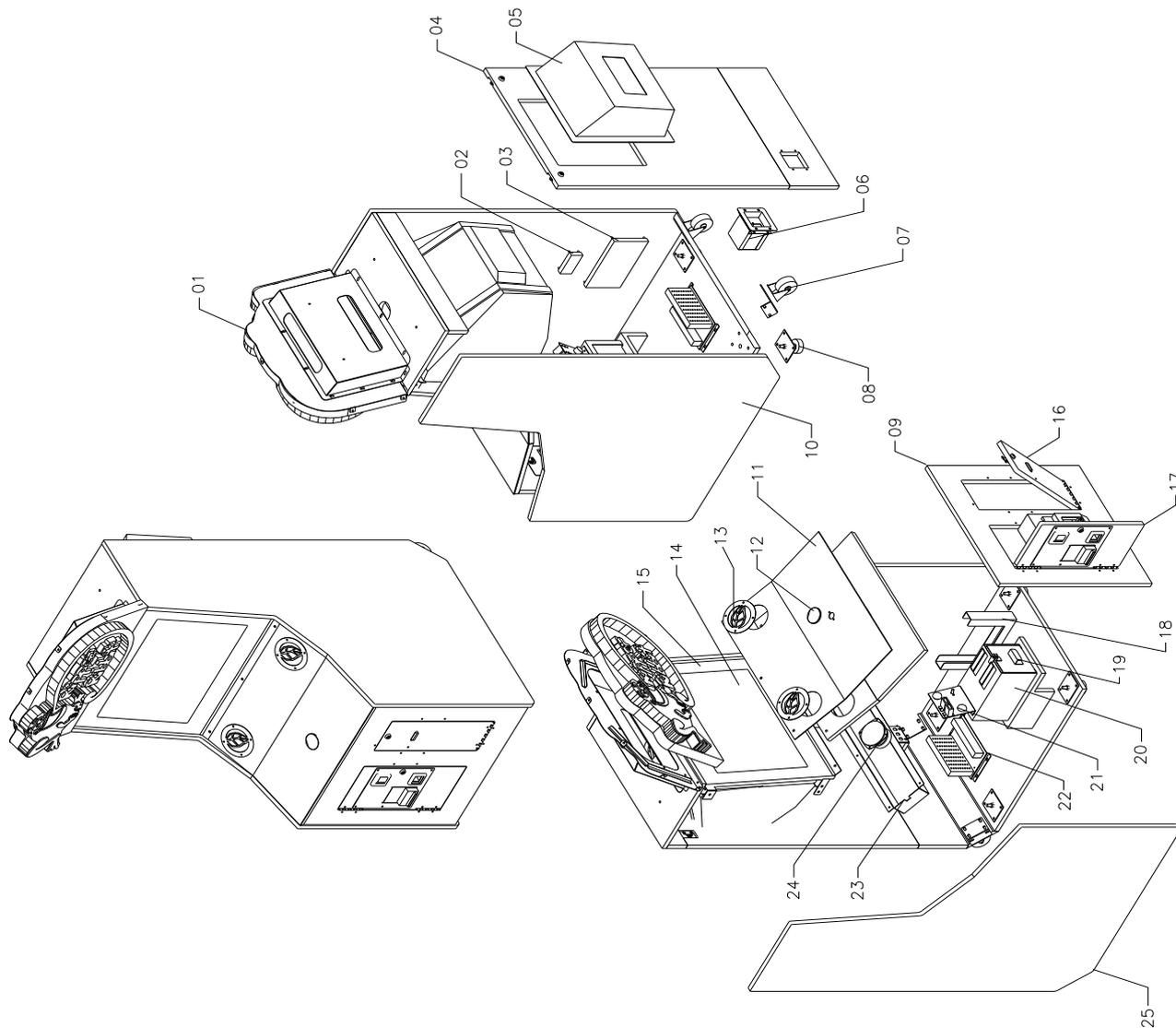
NO	PART NO	DESCRIPTION	QTY
01	RR A001	HEADER ASSEMBLY	1
01A	HP1302	HEADER ACRYLIC	1
01B	–	NEON 18 WATT	1
01C	–	NEON CLIP	2
01D	RR1-SA-003-R0	HEADER BRACKET	1
01E	–	END CAP HOLDER	2
16	RR A002	TICKET DOOR ASSEMBLY	1
16A	RR1-FW-013-R0	TICKET DOOR PANEL	1
16B	HM0004	LOCK ANGLE	1
16C	RR1-SA-004-R0	TICKET PLATE	1
16D	EA1102	TICKET DISPENCER ENTROPY	1
16E	RR1-MM-002-R0	TICKET DOOR HINGE	1
–	AT 1303	STICKER FRONT DOOR	1
17	RR A003	COINDOOR ASSEMBLY	1
17A	RR1-MM-001-R0	COINDOOR HINGE	2
17B	RR1-FM-022-R0	COINDOOR PLATE	1
17C	HM0004	LOCK ANGLE	1
17D	RR1-FW-014-R2	COINDOOR PANEL	1
17E	HA0014	COIN MECHANISM HOLDER	1
17F	EA1109	DOLLAR BILL ACCEPTOR	1
–	AT 1303	STICKER FRONT DOOR	1
–	RR H005	COIN DOOR HARNESS	1
22	RR E003	POWER ASSEMBLY	1
22A	EA1003	SWITCHING POWER SUPPLY 12V 12.5Amps	1
22B	RR1-FM-018-R0	TRAFO BRACKET METAL ONLY	1
22C	–	BALLAST 18 WATT	1
22D	–	STARTER BASE	1
–	RR H001	POWER HARNESS	1

PART ITEM

16. RR A003 TICKET DOOR ASSEMBLY

22. RR E006 POWER ASSEMBLY
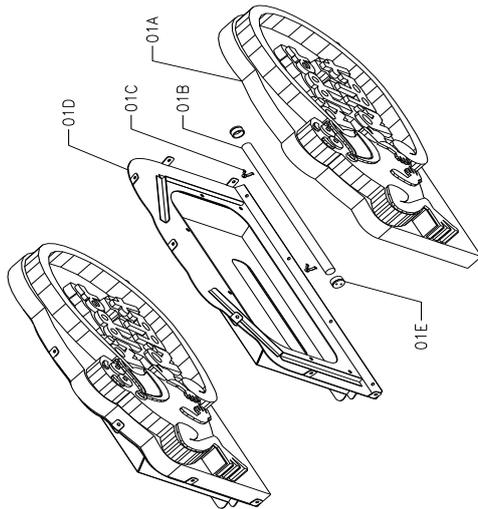
01. RR A001 HEADER ASSEMBLY
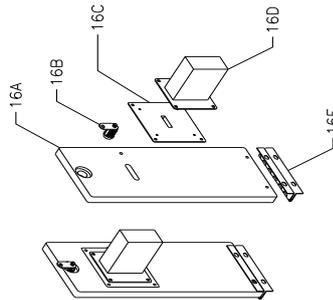
17. RR A004 COINDOOR ASSEMBLY

Page 29
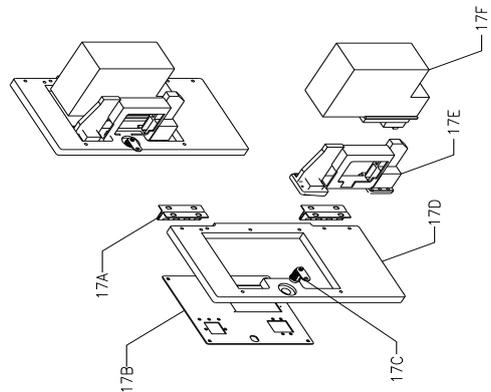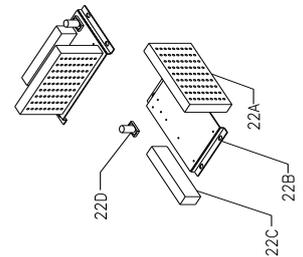
RIPPER RIBBIT WIRING DIAGRAM

POWER ENTRY MODULE
FUSE
FILTER
BROWN
GRN/YL
BLUE

MAINS DB BOX
250V 50/60HZ 6A

POWER SUPPLY
5VDC 15A
12VDC 4A

NEUTRAL	1	BLUE
ACTIVE	2	BROWN
EARTH	3	GRN/YL
GND	4	BLACK*4
GND	5	BLACK*4
+5VDC	6	RED *3
+12VDC	7	YELLOW*4
+12VDC	8	YELLOW*4

VIDEO CONNECTOR PCB

1	RED
2	GREEN
3	BLUE
4	GROUND
5	H/C SYNC
6	V SYNC

VIDEO 15-PIN

V-RED
V-GRN
V-BLU
V-GND
C-SYN

29" MONITOR
CGA, EGA, VGA
15-24-31 KHz
BROWN
GRN/YL
BLUE
POWER INLET
90-250V 50/60HZ

ICE VIDEO GAME BOARD
BA1301-CC
28-WAY EDGE CONNECTOR
NUMBERED = PARTS SIDE

GROUND 1 BLACK
GROUND A
GROUND 2 BLACK
GROUND B BLACK
+5VDC 3 RED
+5VDC C RED
+5VDC 4 RED
+5VDC D RED
5
E
+12VDC 6 YELLOW
+12VDC 7 YELLOW
H
COIN COUNT 8 COIN MTR
TICKET DRIVE J DRIVE
PLAY LAMP 9 PLAY-LP
TICKET COUNT K TICK MTR
AUDIO + 10 RD+WH
AUDIO - L SHEALD
11
M
VID RD 12 V-RED
VID GRN N V-GRN
VID BLU 13 V-BLU
VID SYNC P C-SYN
VID GND 14 V-GND
SERVICE R SERVICE
TEST 15 TEST
S
COIN 16 COIN
MERCY TK T
17 U
18 V
19 W
20 X
21 Y
PLAY BUTTON 22 PLAY
Z
23 a
TICKET NOTCH 24 NOTCH
b
25 c
26 d
SW GND 27
SW GND e GRN/BLK
SW GND 28 GRN/BLK
SW GND f

NOTE: ADD JUMPER TO DISABLE MERCY TICKETS

CONTROL PANEL
PLAY
PLAY SW
PLAY-LP
YELLOW
GRN/BLK

SERVICE BRACKET
TEST 1 1 TEST BUTTON
SERVICE 2 2 SERVICE BUTTON
GRN/BLK 3 3
COIN MTR 4 4
TICK MTR 5 5
6 6
RD 7 7 RD
RED 8 8 RED
SHIELD 9 9 SHD
WH 10 10 WH
WHT 11 11 WHT
SHIELD 12 12 SHD
YELLOW 13 13
14 14
BLACK 15 15

COIN COUNTER
TICKET COUNTER
VOLUME CONTROL

COIN 1 1 1 COIN 1
2 2 COIN 2
GRN/BLK 3 3 GRN/BLK
4 4
5 5
6 6
BLACK 7 7 BLACK
8 8
YELLOW 9 9 YELLOW

COIN SW1
COIN SW2
COIN DOOR
DOOR LIGHTS

AMPLIFIER PCB BA1302

AUDIO IN + 1 RED
AUDIO IN - 2 SHEALD
AUDIO IN - 3 WHT
AUDIO IN + 4

SPK LH + 1 SPK LH -
SPK LH - 2

SPK RH + 1 SPK RH -
SPK RH - 2

1
+12VDC 2 YELLOW
GROUND 3 BLACK

NOTCH 1 1 BLUE
BLACK 2 2 BLACK
DRIVE 3 3 WHITE
YELLOW 4 4 RED

TICKET MACHINE
TICKET DOOR

SPK LH + 1 1 +
SPK LH - 2 2
LEFT SPEAKER

SPK RH + 1 1 +
SPK RH - 2 2
RIGHT SPEAKER

LAI Games   ML
PROJECT RIPPER RIBBIT
TITLE RIPPER RIBBIT MAIN WIRING
FILE NAME Ripper Ribbit Main Wiring
DRAWN BY W.A.Hay   CHECKED BY <NAME>
DATE 13/08/2005   DATE <DATE>

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