



ABRIDGED

Oktoberfest Service Manual

“Information On Tap”



.....

WARNING!

STOP AND READ – UNPLUGGING BOARD CONNECTORS WHILE THE MACHINE IS POWERED ON CAN, AND MOST LIKELY WILL, DESTROY THE BOARD!!! THIS IS NOT COVERED UNDER AMERICAN PINBALL’S WARRANTY AND YOU WILL BE RESPONSIBLE FOR ALL ASSOCIATED REPAIR COSTS. NO EXCEPTIONS.

Oktoberfest Service Manual

WWW.AMERICANPINBALL.COM
VERSION 1.0111
PART NUMBER: DOC0002-01

LIMITED WARRANTY

.....

American Pinball Inc. ("Seller") warrants only the original purchaser of its products that the items listed below are free of defects in material & workmanship under normal use and service for the specified warranty period. Warranties are non-transferable.

COVERAGE

The limited Warranty covers defective workmanship and materials as follows:

1. All parts of the pinball machine, excluding standard plastic, bumper post, rubber rings and wear and tear parts for 90 days from the date of invoice or shipment by distributor.
2. The LCD monitor for 1 year from the date of invoice or shipment by distributor.

CONDITIONS

The original purchaser must register the Limited Warranty by completing the Product Registration Form on the American Pinball Website within 15 days of receipt. In the event of a warranty for the above coverage to apply, the Original Purchaser must open a Service Ticket at www.americanpinball.com/support/service/ or call 1-833-API-HELP. Service-related questions can be sent via e-mail to service@americanpinball.com.

Defective parts need to be sent to American Pinball at the purchaser's expense, if the defective parts cannot be removed, the entire Pinball Machine will need to be returned to the Distributor for repair or replacement. All parts must be properly packaged with an RMA tag/Trouble ticket and returned freight prepaid to the Sellers facility.

EXCLUSIONS

The Limited Warranty does not cover service, labor or shipping and handling. Damage, wear and or breakage not caused by defective materials or workmanship shall not be covered by the warranty. Damage incurred during shipping and handling shall not be covered by the warranty.

DISCLAIMER OF IMPLIED WARRANTY

Except as specifically provided in a written contract between Seller and Purchaser, there are no other warranties, express or implied, including any implied warranties of merchantability or fitness for a particular purpose.

DISCLAIMER OF DAMAGE

This warranty does not apply to any parts damaged to improper handling or due to improper installation, usage or alteration, In no event shall the Seller be held liable for any anticipated profits, loss of profits, loss of use, accidental or consequential damages or any other losses incurred by the customer regarding the purchase of an AMERICAN PINBALL, INC. product.

CAUTIONS, WARNINGS & NOTICES

.....

CAUTION! FOR SAFETY AND RELIABILITY, DO NOT SUBSTITUTE PARTS, EQUIPMENT OR ADD GAME CIRCUITRY MODIFICATIONS. SUCH MODIFICATIONS MAY ADVERSELY AFFECT GAME PLAY OR CAUSE INJURIES AND MAY RESULT IN VOIDING OF THE WARRANTY. ALWAYS TRANSPORT PINBALL GAMES WITH THE HINDGE BACKBOX IN THE FOLDED POSITION. CONTACT AUTHORIZED SERVICE PERSONNEL BEFORE PERFORMING ANY REPAIR. ANY SUCH REPAIRS SHOULD BE DONE WITH THE LINE VOLTAGE DISCONNECTED. FOR SERVICING TIPS, REFERENCE THE USER MANUAL OR CONTACT AMERICAN PINBALL INC. TECHNICAL SUPPORT. SUBSTITUTION OF PARTS AND EQUIPMENT MAY VOID FCC TYPE ACCEPTANCE.

WARNING! EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A "CLASS A" COMPUTING DEVICE. PURSUANT TO SUBPART J OF PART 15 OF THE FCC RULES AND REGULATIONS. FCC RULES ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST RF ENERGY WHEN OPERATED IN A COMMERCIAL ENVIRONMENT. OPERATION IN A PRIVATE RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE IN WHICH CASE THE USER AT ITS OWN EXPENSE WOULD BE REQUIRED TO TAKE WHATEVER MEASURES TO CORRECT SUCH INTERFERENCE.

WARNING!

OPENING THE COIN DOOR EXPOSES HIGH VOLTAGE PARTS IN THE GAME, AND DIRECT CONTACT TO THESE HIGH VOLTAGE PARTS CAN LEAD TO SERIOUS OR FATAL INJURIES. THIS EQUIPMENT IS TO BE SERVICED BY TRAINED PROFESSIONALS ONLY.



NOTICES

Cable harness placement and ground strap routing in the game have been designed to keep RF radiation and conduction within levels accepted by the FCC rules. To maintain these levels, reposition harnesses and reconnect grounds to their original placements, if they become disconnected or removed for servicing.

COMPLIANCE, LEGAL AND WARNINGS

RF INTERFERENCE NOTICE

CABLE HARNESS PLACEMENT AND GROUND STRAP ROUTING have been designed to keep RF radiation and conduction within levels accepted by FCC rules.

DO NOT ALTER WIRING OR GROUND STRAPPING. Position wiring and ground strap back to their original position if they become loose or are removed for service.

LEGAL

OKTOBERFEST, PINBALL ON TAP and all related characters are trademarks of American Pinball. MAGICGLASS / BEERGLASS and this manual are trademarks of American Pinball. Any reproductions or modifications are illegal.

WARNINGS

American Pinball authorized parts are to be used only. Using ANY unauthorized parts will void all warranties and may cause injury to persons or property.

All servicing of equipment must be completed by competent personnel. Pinball machines are complex and present an electrical shock hazard. Not following these guidelines can be fatal.

DOCUMENT REVISION HISTORY

100-1002	January 2019	Initial Release of Document
----------	--------------	-----------------------------

REGIONAL CONTACTS

AMERICAN PINBALL
1448 YORKSHIRE DRIVE
STREAMWOOD, IL 60107
847-893-6800
833.API.HELP

CONTENTS

.....

	Coverage	iii
	Conditions	iii
	Exclusions	iii
	Disclaimer of Implied Warranty	iii
	Disclaimer of Damage	iv
	CAUTIONS, WARNINGS & NOTICES	iv
	NOTICES	v
	Contents	vii
1	Overview	1
	About this Manual	1
2	Unpacking Instructions	4
	Unpacking Oktoberfest	4
	Tools Required for Unpacking	4
	To Unpack Oktoberfest	5
	Leveling Oktoberfest	7
3	Service Menu	8
	Oktoberfest Service Menu	8
	API Cockpit	9
	Tests	10
	To access Oktoberfest's Test menu	12
	Switch Testing	13
	Playfield Switch Map	14
	Playfield Coil Map	15
	Fuse Table	16
	Coil Testing	17
	LED Testing	17
	Display Test	17
	Cabinet Tests	17
	Bar Door Test	17
	Coil Adjustment Settings	18
	To access Oktoberfest's Coils settings	18
	Oktoberfest Coil Setup	18
	Features Adjustment Settings	20
	To access Oktoberfest's Feature settings	20

	Coin Door and Dollar Bill Acceptor Information	24
	Pricing Adjustment Settings	25
	To access Oktoberfest's Pricing settings	25
	Replay Adjustment Settings	27
	Sound Adjustment	28
	How to Create a Custom Message	29
	Standard Adjustment	30
	Presets	32
	Switch Table	34
	Coil Table	38
	Cabinet Board Set	39
	Bottom Playfield PCB and Dip Switch Settings	40
	Opto Board Connector	41
4	Oktoberfest Code Update	42
	Code Update Procedure	42
	Formatting Your USB PC and MAC	43
	Oktoberfest Log Copy	44

LIST OF FIGURES

.....

Post Locations	2
Rubber Ring Location	3
Authorized American Pinball Carton	4
Service Menu	9
Service Menu Navigation Buttons	12
Test Menu	12
Switch Testing Menu	13
Switch Map	14
Coil Map	15
Cabinet Board Assembly	39
Dipswitch Settings and Bottom PCB Drawing	40
Opto Board Connector	41

LIST OF TABLES

.....

Commonly used terms in the Oktoberfest Service Manual documentation	1
Service Menu Icons	10
Tests Menu Icons	11
API Cockpit Navigation	13
Fuse Table	16
Coil Adjustment Settings	18
Features Adjustment Settings	20
Price Table	25
Pricing Adjustment Settings	26
Replay Adjustment Settings	27
Sound Adjustments	28
Standard Adjustment Settings	30
Presets	32
Switch Table	34
Coil Table	38

OVERVIEW

ABOUT THE MANUAL

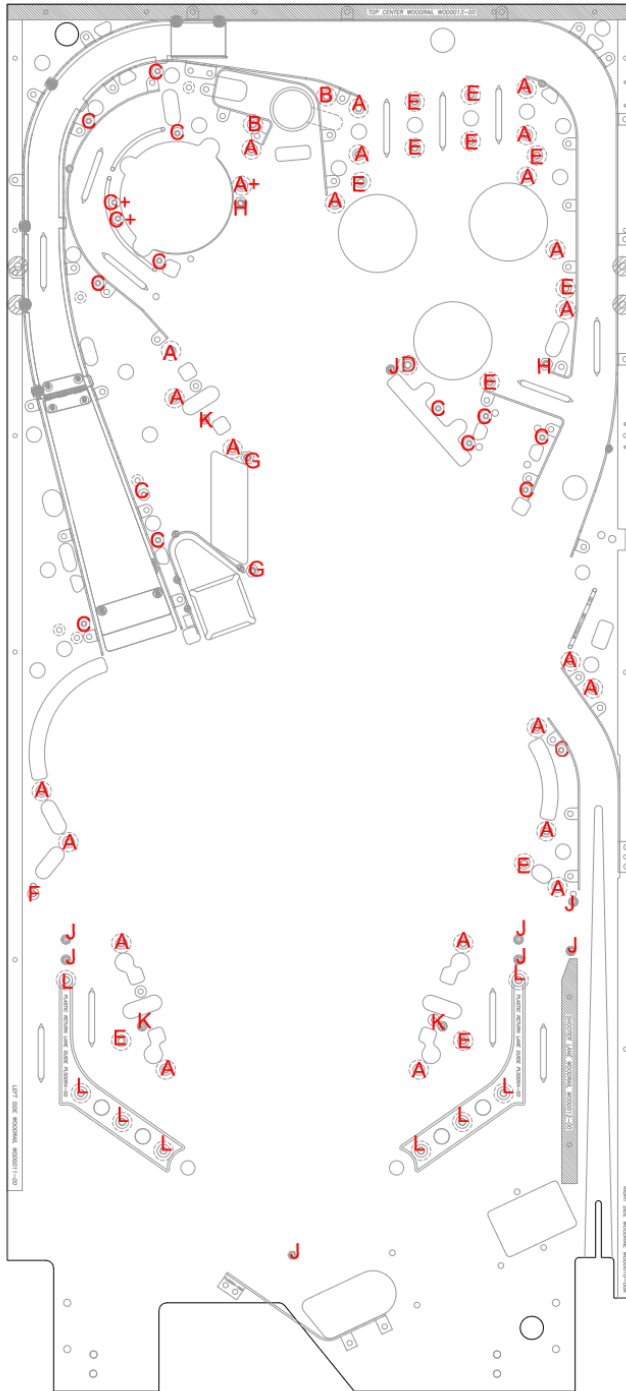
This manual details the integral aspects of the Oktoberfest pinball machine. The following chapters are included in this manual.

Chapter	Title
Chapter 1	Overview
Chapter 2	Unpacking Instructions
Chapter 3	API Cockpit / Service Information
Chapter 4	Code Update / Game Logs / USB

Table 1-1 Commonly used terms in the Oktoberfest Service Manual documentation.

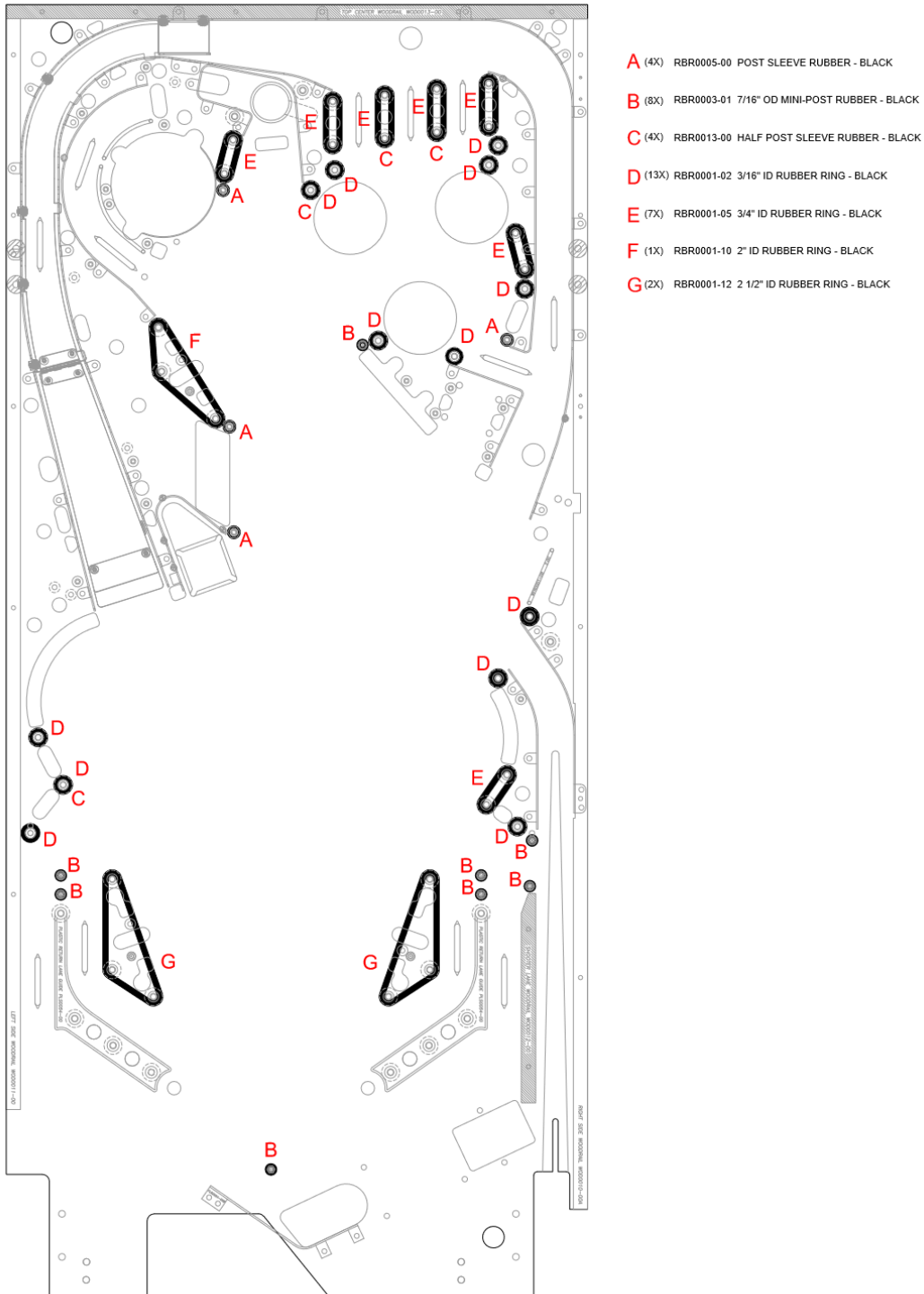
Term	Description
ADJ	Abbreviation for the adjustment menu, when certain settings are adjusted/configured
AUD	Abbreviation for the Audit menu, where audits can be run for the machine.
DIAG	Abbreviation for the Diagnostic menu, where diagnostics can be run for the machine.
Plumb Bob Tilt	Weighted Tilt Assembly.
P3-ROC Board	Designed to control all the real-time signaling on a pinball machine. Note: The documentation for the P3-ROC Boards is available at americanpinball.com/support
UTIL	Abbreviation for the Utility menu, where utilities can be run for the machine.

Figure 1-1 Post Locations



- A** (23X) PST0001-00 CLEAR POST
PST0003-00 POST FASTENING SCREW (STD MTG)
- A+** (1X) PST0001-00 CLEAR POST
PST0003-00 POST FASTENING SCREW (STD MTG)
WAS0008-00 #8 WASHER (UNDER POST)
- B** (2X) PST0001-00 CLEAR POST
PST0003-01 POST FASTENING SCREW (RAMP MTG)
- C** (14X) PST0001-00 CLEAR POST
PST0003-02 POST FASTENING SCREW (WOOD)
- C+** (2X) PST0001-00 CLEAR POST
PST0003-02 POST FASTENING SCREW (WOOD)
WAS0008-00 #8 WASHER (UNDER POST)
- D** (1X) PST0001-00 CLEAR POST
MAS0008-36 8-32 X 2 1/4 PPH MS
NUT0008-00 8-32 NYLON LOCK NUT - LOW PROFILE
- E** (11X) PST0001-00 CLEAR POST
MAS0008-24 8-32 X 1 1/2 PPH MS
- F** (1X) PST0001-00 CLEAR POST
MAS0008-32 8-32 X 2 PPH MS
WAS0008-00 #8 WASHER
NUT0008-00 8-32 NYLON LOCK NUT - LOW PROFILE
- G** (2X) PST0004-01 5/16 HEX SLEEVE POST (STD)
- H** (2X) PST0004-00 5/16 HEX SLEEVE POST (PLAIN)
- J** (8X) PST0002-00 10-32 MINIPOST (FULL THREAD)
- K** (3X) PST0002-02 MINIPOST (WOOD)
- L** (8X) PST0003-00 POST FASTENING SCREW (STD MTG)

Figure 1-2 Rubber Ring Location



UNPACKING INSTRUCTIONS

UNPACKING OKTOBERFEST

In order to fully enjoy Oktoberfest in the manner it is designed to be played, please adhere to the following unpacking instructions.

CAUTION! OKTOBERFEST WEIGHS IN EXCESS OF 250 LBS. AT LEAST TWO PEOPLE ARE REQUIRED TO UNPACK AND MANEUVER THE MACHINE.

TOOLS REQUIRED FOR UNPACKING

A pair of scissors or a utility knife is all that you will need to unpack Oktoberfest

To unpack Oktoberfest

Your Oktoberfest machine should appear in the following carton.

Figure 2-1 Authorized American Pinball Carton.

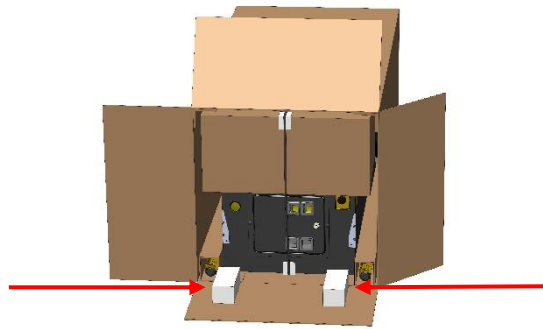


UNPACKING OKTOBERFEST CONTINUED

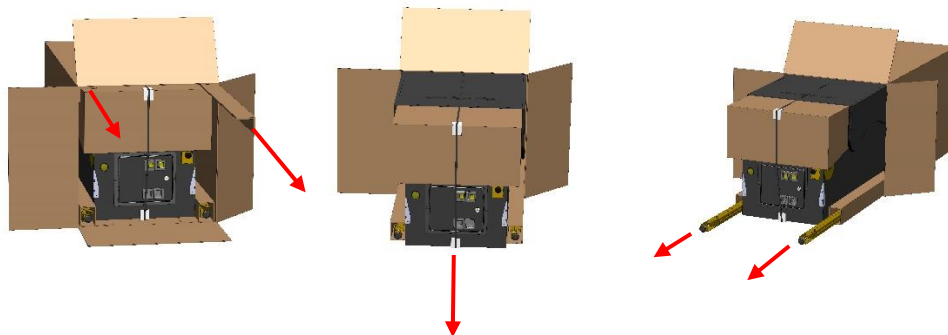
Using a pair of scissors, carefully cut the bands highlighted with the red arrows.



Lay the box down on the "Truck this side only" side. Remove the 2 pieces of Styrofoam.



Remove the 2 top corner protectors highlighted in the picture (left) and pull out the game by the center strap (center). Next remove the 4 legs from the bottom corner protectors (right).

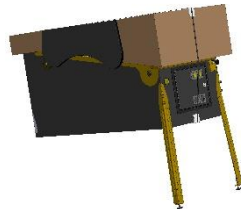


UNPACKING OKTOBERFEST CONTINUED

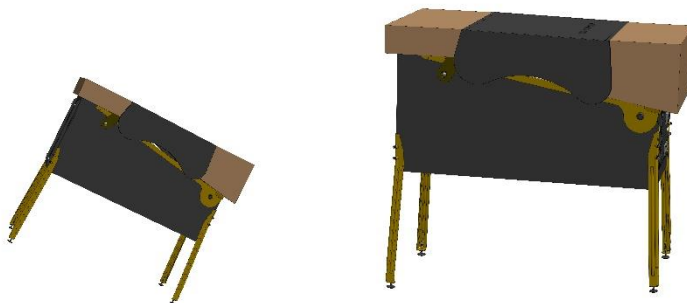
Slide the game completely out of the box (left), and carefully stand the game up (center). Cut the shrink wrap by the front legs and install the legs with the supplied hardware (right).



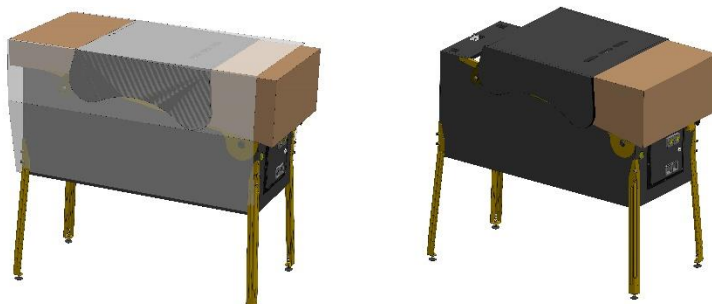
Lay the game down and cut away the shrink wrap covering the rear leg mounting area.



Carefully lift the game up. Install the 2 rear legs with the included hardware. Stand the game up on all 4 legs once rear legs are installed.



Cut and remove the center band, all the shrink wrap as well as the 2 cardboard protectors for the front and back.

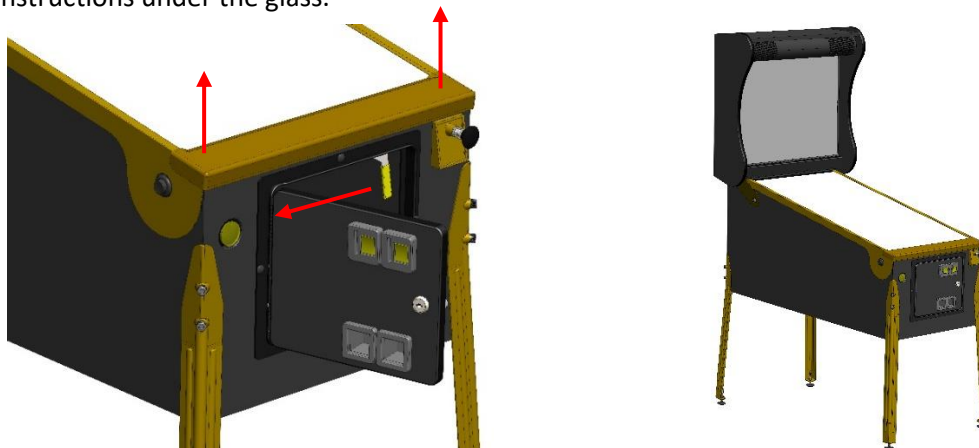


UNPACKING OKTOBERFEST CONTINUED

Lift the head and insert the supplied hex wrench into the lock mechanism and turn clockwise to lock.



Remove the keys from the ball shooter, one set is for the coin door the other set is for the front coin door. Open the coin door and move the lock down handle to the left and pull up on the front trim. Remove the trim from the clear protector. Pull the glass off and follow the instructions under the glass.



LEVELING YOUR AMERICAN PINBALL MACHINE

The game, by default sits at 6 degrees. However, depending on the floor, you may have to adjust Oktoberfest so that the game is properly leveled left to right and or at the proper pitch. With the leg levelers all the way in (no threads showing below the leg) the game will be at 6 degrees.

Service Menu

OKTOBERFEST SERVICE MENU

This chapter includes service menu settings. The service menu accesses the following settings for optimal play and maintenance.

- Tests
- Settings
- Statistics
- Utilities
- Health Meter

Before You Begin

- Have you unpacked your Oktoberfest machine and set it up according to the instructions in the manual?
- Have you downloaded the most current code from American Pinball's Support site?
- Have you registered your game? <https://www.american-pinball.com/support/register/>
Games must be registered prior to receiving warranty parts or support

Note: Settings are occasionally updated. Please refer to American Pinball's Support site for the most current documentation.

API COCKPIT

Oktoberfest's service menu contains tests for all the electrical and mechanical functions within the game.

Figure 3-1 Service Menu



Table 3-1 Service Menu Icons

Tests		<p><u>This includes tests in the following areas</u></p> <ul style="list-style-type: none"> • Switches • Coils • LEDs • Displays • Cabinet • Bar Door
Settings		<p><u>This includes adjustments in the following settings</u></p> <ul style="list-style-type: none"> • Standard Adjustment Settings • Replay Adjustment Settings • Coil Adjustment Settings • Sound Adjustment Settings • Feature Adjustment Settings • Pricing Adjustment Settings • Presets
Statistics		<p><u>This includes Audits for the following Statistics</u></p> <ul style="list-style-type: none"> • Basic Statistics • Feature Statistics • Standard Statistics • Game Time Statistics • Earning Statistics • Score Breakdown Statistics

Table 3-1

Service Menu Continued

Utilities		<u>This includes Information for the following Utilities</u> <ul style="list-style-type: none">• Oktoberfest Balls• Statistic Clear• Date and Time Set• Restoration of Default Settings
Health Meter Green		<u>The Health Meter Provides a Quick Analysis of the Overall State of Oktoberfest</u> Oktoberfest has no Issues
Health Meter Yellow		Oktoberfest may have Switch Issues
Health Meter Red		Oktoberfest may have Missing Balls

TESTS

The test menu includes several diagnostic tests for assuring that your machine is operating properly. The Test Menu provides tests for the following items.

- Switches
- Coils
- LEDs
- Display
- Cabinet
- Bar Door

Table 3-2

Test Menu Icons

Switches	
Coils	
LED	
Display	
Cabinet	
Bar Door	

To Access Oktoberfest's Test Menu

1. Power on the Machine
2. Open the coin door
3. Press the MENU SELECT button to access the service mode

Figure 3-2

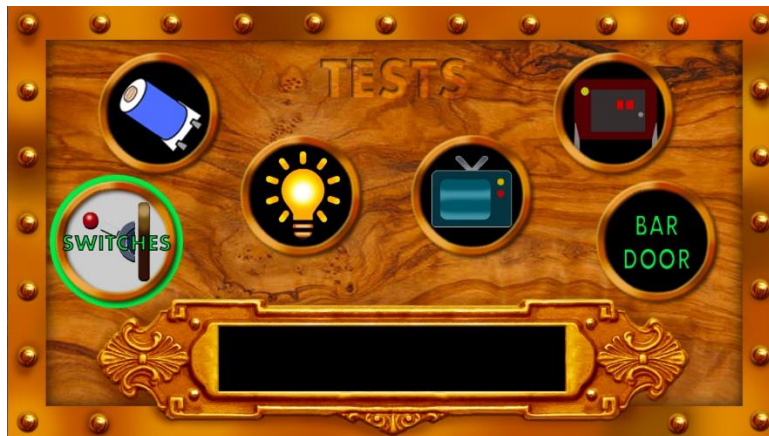
Service Menu Navigation Buttons



4. Press the Red +/- button to select the Test Icon
5. Press the MENU SELECT button to enter Test

Figure 3-3

Test Menu



6. Use the flipper buttons to toggle through the different tests

Table 3-3 API Cockpit Navigation

API Cockpit Button	Flipper Button Equivalent	Functionality
Green	Press right and left flipper button simultaneously	<ul style="list-style-type: none"> Back one level Exit
Red (+)	Right flipper	<ul style="list-style-type: none"> Increases through menu by one Advance to the right or down
Red (-)	Left flipper	<ul style="list-style-type: none"> Decrease through menu by one Advance to the left or up
Black	Start	<ul style="list-style-type: none"> Menu Enter Select current choice

SWITCH TESTING

The Switch Test screen shows all the switches, grouped by their boards, there are 16 individual switches per board and are displayed in columns. That means all the switches in one column are all on the same switch board. Each switch board has 2 groups of 8 switches and each group of 8 switches will all share the same primary wire color. Opto switches do not share a primary wire color. All contact switches (micro, standup and rollover) will have a brown background when open, this background color will change to light green when made. Opto switches will be dark green when they are open, and the background will change to light green when detecting a ball. A switch with a red background indicates a switch that has not been made in a while and should be checked to ensure it is working properly.

Figure 3-4 Switch Testing Menu

Left Flipper	Pop Bumper Exit	Right Ramp Entry	Ball Trough 6	Bar Open	Left Outlane
Right Flipper	POPS Duck	Right Ramp Exit	Ball Trough 5	Bar Closed	Left Inlane
Upper Right Flipper	Right Orbit	Left Orbit	Ball Trough 4	Bartender Home	Left Slingshot
Enter	Bottom Pop Bump	Coaster Ramp	Ball Trough 3	Left Orbit Exit	Left Flipper EOS
Exit	Left Pop Bumper	Barrel Ramp	Ball Trough 2	Coaster Exit	Skill Shot
Down	Right Pop Bumper	TBD37	Ball Trough 1	Right Orbit Exit	Left Outlane Stand
Up	TAIP	Bartender Subw	Ball Trough Jam	TBD70	Bar Hit
Tilt	TLAP	TBD39	Shooter Lane	TBD71	TBD 87
Start Button	ITAP	OKTOBER	Right Flipper EOS	Upper Duck	(FEST
Coin Door	Barrel Lock 1	OKTOBER	Right Outlane	Left Orbit Made	Spinner
Coin 1	Barrel Lock 2	OKTOBER	Right Inlane	Coaster Lock 3	Right Duck
Coin 2	Barrel Lock 3	OKTOBER	Right Slingshot	Coaster Lock 2	(PIRIST
DBA	VUK	OKTOBER	Right Outlane St	Coaster Lock 1	PIRIST
Coin 4	Drop Target	OKTOBER	FEST	Scoop	PIRIST
Coin 5	Captive Ball 2	OKTOBER	FEST	Upper Slingshot	PROIST
Mag Nab Button	Captive Standup	LEFT DUCK	FEST	Captive Ball 1	PROIST

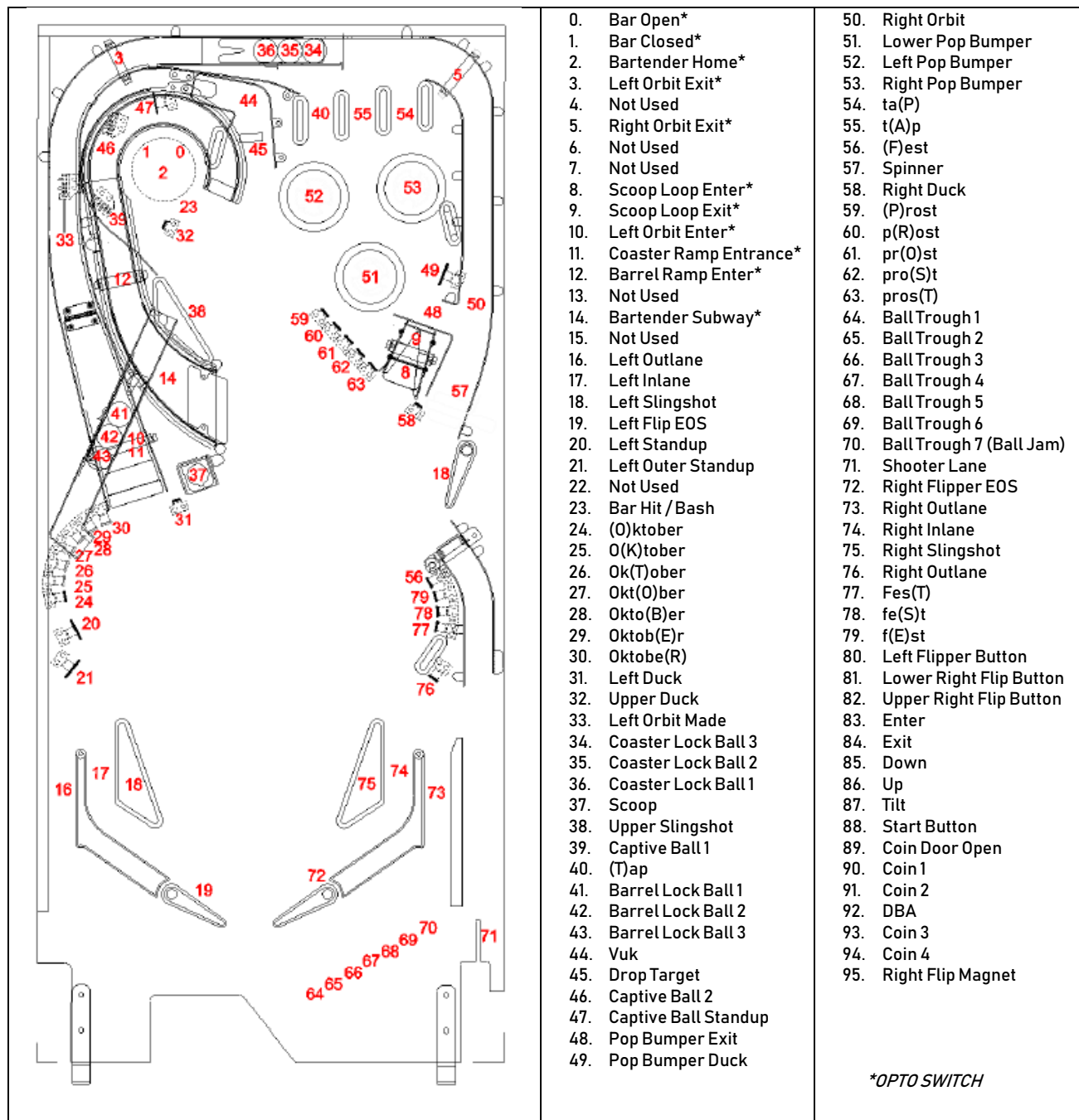
WIRE COLOR: VIO-RED
BOARD: 3 BANK: 8 PIN: 4
Right Inlane
Left Outlane
Left Inlane

Note For a more extensive description of each switch on Oktoberfest, refer to the Switch Location Chapter.

PLAYFIELD SWITCH MAP

Figure 3-5

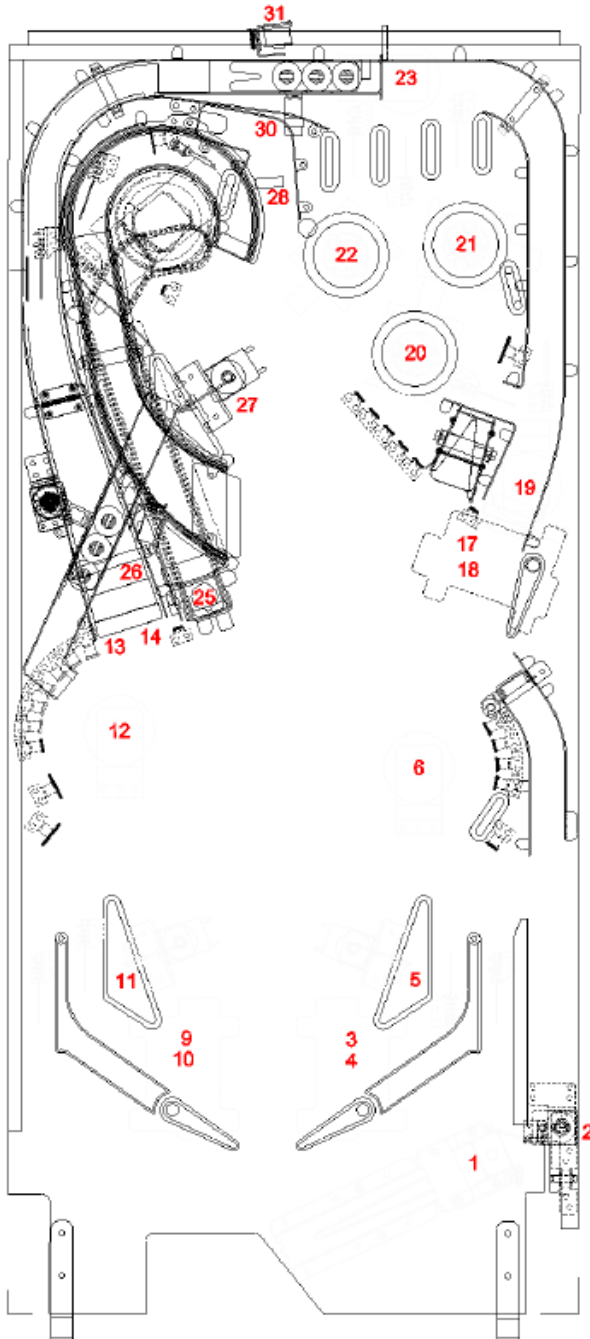
Switch Map



PLAYFIELD COIL MAP

Figure 3-6

Coil Map



1. Trough Kicker
2. Auto Fire
3. Lower Right Flip Main
4. Lower Right Flip Hold
5. Right Slingshot
6. FEST Magnet
7. Not Used
8. Not Used
9. Lower Left Flip Main
10. Lower Left Flip Hold
11. Left Slingshot
12. OKTOBER Magnet
13. Up Ramp Main
14. Up Ramp Hold
15. Not Used
16. Not Used
17. Upper Right Flip Main
18. Upper Right Flip Hold
19. Flipper Magnet
20. Lower Pop Bumper
21. Right Pop Bumper
22. Left Pop Bumper
23. Lane Magnet
24. Not Used
25. Scoop
26. Barrel Release
27. Upper Slingshot
28. Drop Target Up
29. Not Used
30. VUK
31. Roller Coaster Ball Release

Table 3-4**Fuse Table**

Fuse Name	Fuse Rating	Type	Fuse Voltage
Coil Driver	5 Amp	5x20 Slow Blow	250 Volt
	5 Amp	5x20 Slow Blow	250 Volt
Coil Driver	5 Amp	5x20 Slow Blow	250 Volt
	5 Amp	5x20 Slow Blow	250 Volt
Main Fuse	6 Amp	3AG Slow Blow	250 Volt
Add On Board F1	4 Amp	5x20 Slow Blow	250 Volt
Add On Board F2 (1)	4 Amp	5x20 Slow Blow	250 Volt
RGB Playfield	1 Amp	5x20 Slow Blow	250 Volt
RGB Back Panel	4 Amp	5x20 Slow Blow	250 Volt

(1) Only used when 48 volt Knocker is installed.

COIL TESTING

To test the coils, you must close the coin door to activate the High-Power Interlock switch. Press the start button to disable or enable Coil Testing.

LED TESTING

When first entering LED Test, all LED's flash on the playfield, rotating through red, green, blue and white.

You also can walk through the LED's one-by-one. LED testing is designed to follow the playfield in a logical sequence.

DISPLAY TEST

The main display proceeds through a series of colors (red, green and blue) and a test pattern.

CABINET TESTS

The Cabinet tests provide diagnostics for the start button, optional shaker motor, backbox Lighting and playfield back board lighting.

BAR DOOR TEST

A test to ensure that the bar door stepper is functioning.

COIL ADJUSTMENT SETTINGS

Coil settings allow you to control the “strength” of the various mechanisms on the playfield.

To access Oktoberfest's Coil settings



1. Power on the machine.
2. Open the coin door
3. Press the MENU SELECT button to access the service mode.
4. Press the red +/- button to select the Settings icon.
5. Press the MENU SELECT button to enter the Settings section.
6. Use the red +/- buttons to page through the different settings to the Coil settings.
7. Press the green BACK EXIT button to return to the previous menu.

OKTOBERFEST COIL SETUP

Individual coil strength can be adjusted to enhance game play.

CAUTION! *Increasing coil strength can create undesirable results such as broken plastics as well as expedited playfield wear. Increased coil strength wear and tear is not covered under our warranty. Keep coil strength as low as possible.*

Table 3-5 Coil Adjustment Settings

Name	Description	Value
Auto Fire	Specifies the strength of the Auto Fire feature.	Options: 1 to 35 Default: 24
Barrel Release	Specifies the strength of the Barrel Release.	Options: 1 to 35 Default: 20
Bottom Pop	Specifies the strength of the Bottom Pop.	Options: 1 to 35 Default: 10
Roller Coaster Release	Specifies the strength of the Roller Coaster Release.	Options: 1 to 35 Default: 20
Drop Target	Specifies the strength of the Drop Target.	Options: 1 to 35 Default: 16
Drop Target Trip	Specifies the strength of the Drop Target Trip N/U	Options: 1 to 35 Default: 20

Table 3-5 Coil Adjustment Settings Cont.

Name	Description	Value
FEST Magnet	Specifies the strength of the Fest Magnet.	Options: 1 to 35 Default: 20
LWR L Flipper Hold	Specifies the strength of the Lower Left Flipper Hold.	Options: 1 to 35 Default: 20
LWL L Flipper Main	Specifies the strength of the Lower Left Flipper Main.	Options: 1 to 35 Default: 26
LWR R Flipper Hold	Specifies the strength of the Lower Right Flipper Hold.	Options: 1 to 35 Default: 20
LWR R Flipper Main	Specifies the strength of the Lower Right Flipper Main.	Options: 1 to 35 Default: 28
Flipper Magnet	Specifies the strength of the Flipper Magnet.	Options: 1 to 35 Default: 20
UP R Flipper Hold	Specifies the strength of the Upper Right Flipper Hold.	Options: 1 to 35 Default: 20
UP R Flipper Main	Specifies the strength of the Upper Right Flipper Main.	Options: 1 to 35 Default: 26
Lane Magnet	Specifies the strength of the Lane Magnet.	Options: 1 to 35 Default: 20
Left Pop	Specifies the strength of the Left Pop.	Options: 1 to 35 Default: 10
Left Slingshot	Specifies the strength of the Left Slingshot	Options: 1 to 35 Default: 9
Oktober Magnet	Specifies the strength of the Oktober Magnet.	Options: 1 to 35 Default: 20
Ramp Hold	Specifies the strength of the Ramp Hold.	Options: 1 to 35 Default: 20
Ramp Lower	Specifies the strength of the Ramp Lift.	Options: 1 to 35 Default: 10
Right Pop	Specifies the strength of the Right Pop.	Options: 1 to 35 Default: 10
Right Slingshot	Specifies the strength of the Right Slingshot.	Options: 1 to 35 Default: 9
Scoop	Specifies the strength of the Scoop.	Options: 1 to 35 Default: 10
Trough Kicker	Specifies the strength of the Trough Kicker.	Options: 1 to 35 Default: 16
Upper Slingshot	Specifies the strength of the Upper Slingshot.	Options: 1 to 35 Default: 9
VUK	Specifies the strength of the VUK.	Options: 1 to 35 Default: 20

FEATURE ADJUSTMENT SETTINGS

Feature settings address conditions that are specific to the game.

To access Oktoberfest's Feature settings



1. Power on the machine.
2. Open the coin door
3. Press the MENU SELECT button to access the service mode.
4. Press the red +/- button to select the Settings icon.
5. Press the MENU SELECT button to enter the Settings section.
6. Use the red +/- buttons to page through the different settings to the Coil settings.
7. Press the green BACK EXIT button to return to the previous menu.

Table 3-6 Feature Adjustment Settings

Name	Description	Value
Bar Super Skill Difficulty	Specifies the level of difficulty for the Super Skill shot	Options: Extra Easy – Extra Hard Default: Medium
Beer Barrel Lock Difficulty	Specifies the level of difficulty for Beer Barrel Lock.	Options: Extra Easy – Extra Hard Default: Medium
Beer Barrel MB Ball Save Time	Specifies the time Ball Save is on after Beer Barrel MB starts.	Options 1 to 30 Default: 12
Bumper Cars Hits To Win	Specifies the number of pop bumper hits to win Bumper Cars.	Options: 1 to 50 Default: 30
Bumper Cars Initial Time	Specifies the initial time for Bumper Cars	Options: 1 to 90 Default: 45
Bumper Multiplier Time	Specifies the time for Bumper Multiplier.	Options: 1 to 45 Default: 20
Bumpers For Auto MagNab	Specifies the number of pop bumpers for MagNab.	Options: 1 to 50 Default: 20
Calorie Coma Start Difficulty	Specifies the Calorie Coma Start Difficulty	Options: Extra Easy – Extra Hard Default: Medium
Chugging Initial Time	Specifies the initial time for Chugging.	Options: 1 to 90 Default: 45

Table 3-6 Feature Adjustment Settings Continued

Name	Description	Value
Corkscrew Last Chance Time	Specifies the Corkscrew Last Chance Time	Options: 1 to 31 Default: 12
Corkscrew MB Ball Save Time	Specifies the ball save time for Corkscrew MB.	Options: 1 to 30 Default: 12
Duck Derby Ball Save Time	Specifies the ball save time for Duck Derby.	Options: 1 to 30 Default: 20
Duck Derby Difficulty	Specifies the difficulty of Duck Derby.	Options: Extra Easy – Extra Hard Default: Medium
Duck Derby Shots To Win	Specifies the shots to win Duck Derby.	Options: 1 to 15 Default: 8
Duck Hunt Hits To Win	Specifies the number of hits to win Duck Hunt.	Options: 1 to 10 Default: 5
Duck Hunt Initial Time	Specifies the initial time of Duck Hunt	Options: 1 to 90 Default: 45
Ducks for Duck Derby	Specifies the number of ducks for Duck Derby.	Options: 25 to 145 Default: 50
Ducks to Light Extra Ball	Specifies the number of ducks to light Extra Ball.	Options: 1 to 100 Default: 25
Eating Contest Initial Time	Specifies the initial time of Eating Contest.	Options: 1 to 90 Default: 45
Food Stand Timer	Specifies the Food Stand Timer.	Options: 1 to 90 Default: 30
Free Stein at Start of Game	Specifies Free Stein at Start of Game.	Options: Yes or No Default: No
Fud Frenzy Initial Time	Specifies the initial time of Fud Frenzy.	Options: 1 to 90 Default: 45
Fud Frenzy Switches to Win	Specifies the number of switches to win Fud Frenzy.	Options: 1 to 90 Default: 75
Initial Bar Hits Required	Specifies the number of hits to open bar initially.	Options: 1 to 10 Default: 1
Initial Corkscrew Jackpot Shots	Specifies the initial Corkscrew shots for Jackpot.	Options: 1 to 5 Default: 2
Initial Mag-Nabs	Specifies the number of initial Mag-Nabs at the beginning.	Options: 1 to 10 Default: 2
Initial Spins for Food Stand	Specifies the number of spins needed for Food Stand.	Options: 1 to 50 Default: 25
Juggling Ball Save Time	Specifies the ball save time for Juggling Ball.	Options: 1 to 30 Default: 12
Juggling Shots To Win	Specifies the number of shots to win Juggling.	Options: 1 to 9 Default: 7
Last Call Flipper Delay	Specifies Last Call Flipper Delay.	Options: Extra Easy – Extra Hard Default: Medium
Looper Initial Time	Specifies the initial time of Looper.	Options: 1 to 90 Default: 45

Table 3-6 Feature Adjustment Settings Continued

Name	Description	Value
Looper Loops To Win	Specifies the number of Looper Loop[s] to win.	Options: 1 to 10 Default: 5
Max Bar Hits Required	Specifies the maximum number of Bar Hits needed.	Options: 1 to 10 Default: 5
Max Steins of Same Kind	Specifies the maximum number of the same Steins.	Options: 1 to 5 Default: 3
Mechanical Knocker on Bumper Cars	Specifies Mechanical Knocker on Bumper Cars.	Options: Soft, Medium, Loud, Off Default: Off
Mechanical Knocker on Shooting Modes	Specifies Mechanical Knocker on Shooting Modes.	Options: Soft, Medium, Loud, Off Default: Off
One handed Play	Specifies if One Handed Play is activated.	Options: On/Off/Player Selected Default: Player Selected
Otto	Specifies if Otto is activated.	Options: On - Off Default: On
Outlane Modes on Save Number	Specifies the number of Saves needed to Award the Outlane Mode to keep your ball.	Options: 2 to 5 Default: 3
Playfield X Time	Specifies the time Playfield X is on.	Options: 1 to 45 Default: 20
Release Beer Barrel Locks at Game End	Specifies whether to Release Beer Barrel Locked Balls at the End of the Game	Options: Yes/No Default: Yes
Release Roller Coaster Locks at Game End	Specifies whether to Release Roller Coaster Locked Balls at the End of the Game	Options: Yes/No Default: Yes
Ring Toss Initial Time	Specifies the initial time of Ring Toss.	Options: 1 to 90 Default: 45
Rockin' Express Initial Time	Specifies the initial time of Rockin' Express.	Options: 1 to 90 Default: 45
Rockin' Express Spins to Win	Specifies the Number of Spins to Win.	Options: 5 to 95 Default: 25
Rotor Difficulty	Specifies the Rotor Difficulty.	Options: Extra Easy – Extra Hard Default: Medium
Rotor Initial Time	Specifies the initial time of Rotor.	Options: 1 to 90 Default: 45
Rotor Shots To Win	Specifies the number of shots to win Rotor.	Options: 1 to 9 Default: 3
Scoop Eject Ball Saver	Specifies if ball save is on after a scoop eject.	Options: On - Off Default: On
Skill Shot Timer	Specifies how long Skill Shot is active after a ball launch.	Options: 1 to 15 Default: 5
Sky Slide Drop Target Time	Specifies the Time the Sky Slide Drop Target stays down.	Options: 1 to 30 Default: 10
Sky Slide Initial Time	Specifies the initial time of Sky Slide.	Options: 1 to 90 Default: 45

Table 3-6 Feature Adjustment Settings Continued

Name	Description	Value
Sky Slide VUKs To Win	Specifies the number pf VUK's to win Sky Slide.	Options: 1 to 10 Default: 3
Stein Race Ball Save Time	Specifies the time Ball Save is on for Stein Race.	Options: 1 to 30 Default: 12
Stein Race Initial Time	Specifies the initial time for Stein Race.	Options: 1 to 90 Default: 45
Stein Racing Shots to Win	Specifies the number of shots to win Stein Racing.	Options: 1 to 6 Default: 4
Steins to Light Extra Ball	Specifies the number of Steins to light Extra Ball.	Options: 1 to 14 Default: 5
Super Skill Timer	Specifies the time Super Skill Shot is on.	Options: 1 to 10 Default: 5
Tap It Customers To Win	Specifies the number of Customers needed to win Tap It.	Options: 1 to 49 Default: 20
Tap It Difficulty	Specifies Tap It Difficulty.	Options: Extra Easy – Extra Hard Default: Medium
Target Shooting Initial Time	Specifies the initial time of Target Shooting.	Options: 1 to 90 Default: 45
Tent Start Difficulty	Specifies the Tent Start Difficulty.	Options: Extra Easy – Extra Hard Default: Medium
Tents to Light Extra Ball	Specifies the number of Tents to light Extra Ball.	Options: 1 to 14 Default: 5

COIN DOOR INFORMATION

Dollar Bill Acceptor (DBA)

Any standard up stacker DBA with a bill cassette of 500 or less, operating at 12 Volts DC can be used.

Coin Door

US Coin Door	PUR0001-00
European Coin Door (*not included w/ door)	PUR0007-00
*European Coin Door Cable	WCA0036-00
*European Interface Board	PCB0024-00

PRICING ADJUSTMENT SETTINGS

Pricing adjustment settings address settings related to game unit value, free play and currency management.

Pricing establishes the game unit of value, which should be the lowest denomination of currency based on coin door configuration.

To access Oktoberfest's Pricing settings



1. Power on the machine.
2. Open the coin door.
3. Press the MENU SELECT button to access the service mode.
4. Press the red +/- button to select the Setting icon.
5. Press the MENU SELECT button to enter the setting selection.
6. Use the flipper buttons to page through the different settings to the Pricing settings.
7. Press the green BACK EXIT button to return to the previous menu.

Table 3-7 Price Table

Desired Coinage	Set "Pricing Plan"
25 cents per game	1 unit = 1 credit
25 cents per game or 2 games for 75 cents	1 unit for 1 credit, 2 for 3
50 cents per game	2 units for 1 credit
50 cents per game or 5 games for 2 dollars	2 units for 1 credit, 4 for 3
50 cents per game or 5 games for 3 dollars	2 units for 1 credit, 5 for 3
50 cents per game or 5 games for 2 dollars	2 units for 1 credit, 8 for 5
75 cents per game or 3 games for 2 dollars	3 units for 1 credit, 8 for 3
75 cents per game	3 units for 1 credit
1 dollar per game (Default setting)	4 units for 1 credit
1 dollar per game or 3 games for 2 dollars	4 units for 1 credit, 8 for 3
1 swipe per game	1 swipe for 1 credit
Overseas Options	Set "Pricing Plan"
	10 units for 1 credit
	15 units for 1 credit
	20 units for 1 credit
	10 units for 1 credit, 20 for 3
	10 units for 1 credit, 40 for 5

Table 3-8 Pricing Adjustment Settings

Name	Description	Value
Bill Validator	Set the number of units to a single pulse from the validator is worth. Determines how many units to credit based on pulses.	Options: 1 to 19 Default: 1
Coin Slot 1 Units	Specifies how many units are credited in Coin Slot 1 when a coin is inserted.	Options: 1 to 20 Default: 1
Coin Slot 2 Units	Specifies how many units are credited in Coin Slot 2 when a coin is inserted.	Options: 1 TO 20 Default: 1
Coin Slot 4 Units	Specifies how many units are credited in Coin Slot 4 when a coin is inserted.	Options: 1 to 20 Default: 1
Coin Slot 5 Units	Specifies how many units are credited in Coin Slot 5 when a coin is inserted.	Options: 1 to 20 Default: 1
Credits	Specifies the number of credits currently on the machine. This can be adjusted, as needed.	Options: 0 to 98 Default: 0
Currency	Specifies the currency accepted for game play.	Options: Dollar, Euro, Pound, Kroner Default: Dollar
Free Play	Enables/disables Free Play	Options: On, Off Default: Off
Max Service Credits	The highest number of credits that can be added to the machine.	Options: 0 to 98 Default: 30
Pricing Plan	Specifies the number of units (see unit value) for 1 credit of play.	Options: 1 unit = 1 credit 1 unit for 1 credit, 2 for 3 2 units for 1 credit 2 units for 1 credit, 4 for 3 2 units for 1 credit, 5 for 3 2 units for 1 credit, 8 for 5 3 units for 1 credit, 8 for 3 3 units for 1 credit 4 units for 1 credit 4 units for 1 credit, 8 for 3 10 units for 1 credit 15 units for 1 credit 20 units for 1 credit 10 units for 1 credit, 10 for 3 10 units for 1 credit, 40 for 5 1 swipe for 1 credit Default: 4 units for 1 credit
Unit Value	Specifies the amount in U.S. currency required to play a game. <i>Note: This applies to the lowest denomination that Oktoberfest accepts.</i>	Options: .1, .2, .25, .5, 1, Default: .25

REPLAY ADJUSTMENT SETTINGS

To access Oktoberfest's Replay Settings



1. Power On the machine.
2. Open the coin door.
3. Press the MENU SELECT button to access the service mode.
4. Press the red +/- button to select the Settings icon.
5. Press the MENU SELECT button to enter the Settings section.
6. Use the red +/- buttons to page through the different settings to the Replay setting.
7. Press the green BACK EXIT button to return to the previous menu.

Table 3-9 Replay Adjustment Settings

Name	Description	Value
Replay Award Level 1	Specifies the point total required to receive an award that is defined in Replay Award Type	Options: 50K, 5M Increments: 10K Default: 500K
Replay Award Level 2	Specifies the point total required to receive an award that is defined in Replay Award Type	Options: 50K, 5M Increments: 10K Default: 750K
Replay Award Level 3	Specifies the point total required to receive an award that is defined in Replay Award Type	Options: 50K, 5M Increments: 10K Default: 1M
Replay Award Level 4	Specifies the point total required to receive an award that is defined in Replay Award Type	Options: 50K, 5M Increments: 10K Default: 1.5M
Replay Award Type	Specifies the type of reward given to the player based upon a defined accomplishment (refer to Replay Award Level settings)	Options: Free game, Extra Ball, Points, Off Default: Extra Ball
Replay Boost	Specifies the amount of points that each replay value will be increased. After each game in which a replay is earned, all replay levels are increased by the defined replay boost amount. For any game in which a replay was not won, the amount is reduced by the boost amount. For example, if three games in a row earn a replay, each replay amount is set to the original value + (3* boost value). If on the next game the replay is not earned, it drops to original value+ (2* boost value).	Options: 10K, 1M Increments: 5K Default: 50K

Table 3-9 Replay Adjustment Settings Continued

Replay Levels	Specifies how many replay levels are active	Options: 1,4 Increments: 1 Default:1
Replay Percentage	Specifies the percentage of games that award the player a replay if using replay type.	Options: 0 to 50 Increments: 1 Default: 5
Replay Type	Specifies the type of replay awarded to the player.	Options: Fixed, Boost Default: Fixed

SOUND ADJUSTMENT SETTINGS

.....

Sound settings allow you to control the level of verbiage in the game. In a home setting you may want to initially have all the callouts enabled. However, you may find, with time, that the game is too verbose. The sound adjustment settings allow you to enable or disable these narrations.

To access Oktoberfest's Sound Settings



1. Power on the machine.
2. Open the coin door.
3. Press the MENU SELECT button to access the service mode.
4. Press the red +/- button to select the Settings icon.
5. Press the MENU SEECT button to enter the Settings section
6. Use the flipper buttons to page through the different settings to the Sound setting.
7. Press the green BACK EXIT button to return to the previous menu.

Table 3-10 Sound Adjustment Settings

Name	Description	Value
Initial Volume	Specifies the initial Volume	Options: 1 to 10 Default: 5

HOW TO CREATE A CUSTOM MESSAGE

1. Create a PNG image, 1366x768 with whatever you want on it.
Name the file *custom_message.png* and put that file on a USB stick (with no game code) see the section “Oktoberfest Code Update” for information on how to format your USB stick.
2. Insert the USB stick into the USB extension cable inside the coin door on the right side, after several seconds you will get a screen with green type that says, ‘audits copied . . .’
Power Cycle Game.
3. After you power cycle, go into Settings->Standard and set ‘Custom Message’ to ‘On’.

STANDARD ADJUSTMENTS SETTINGS

Standard adjustments address global options, such as the number of balls per game, tilt settings and replay award settings.

To access Oktoberfest's Standard Adjustment Settings



1. Power on the machine.
2. Open the coin door.
3. Press the MENU SELECT button to access the service mode.
4. Press the red +/- button to select the Settings icon.
5. Press the MENU SELECT button to enter the Settings section.
6. Use the red +/- buttons to page through the different settings to the Standard Adjustment.
7. Press the green BACK EXIT button to return to the previous menu.

Table 3-11 **Standard Adjustments**

Name	Description	Value
Attract Music Mode	Enables/Disables Oktoberfest's "Attract Mode" music.	Options: On/Off Default: Off
Attract Mode Sounds	Enables/Disables Oktoberfest's "Attract Mode" Sounds.	Options: On/Off Default: Off
Back Glass Brightness	Adjusts the Brightness of the Back Glass	Options: 0-11 Default 5
Back Panel Brightness	Adjusts the Brightness of the Back Panel	Options: 0-11 Default 5
Ball Save Timer	Specifies the duration in Seconds that the game provides a ball save.	Options: 0-61 Default:12
Balls Per Game	Specifies the number of balls per game	Options: 1-5 Default:3
Clear Shooter Lane After 60 Seconds	Auto fires an un-plunged ball in the shooter lane.	Options: On/Off Default: Off
Coin Door Ball Save	Saves Ball after drain when Door was Opened	Options: On/Off Default: Off
Custom Message	Turns custom message on or off	Options: On/Off Default: Off
Family Friendly	Family Friendly Speech	Options: Yes/No Default: Yes

Table 3-11 Standard Adjustments Continued

NAME	Description	Value
Flipper Hold Boost	Provides extra Holding Power to the flippers. <i>*flippers can make a buzzing sound when enabled*</i>	Options: On/Off Default: Off
Knocker	Selects audio knocker or *mechanical knocker <i>*mechanical knocker is available from your distributor or American Pinball's online store</i>	Options: Off, Audio High Volume, Audio Low Volume, Mechanical Default: Audio High Volume
Limit High Score to 3 Characters	Changes high score from 10 letters to 3 letters	Options: On/Off Default: Off
Match Award	Enables the Match award	Options: Credit/Off Default: Credit
Match Feature	Enables the Match Feature	Options: On/Off Default: On
Match Percentage	Determines how frequently the player will match	Options: 0-50 Default: 5
Max Number of Extra Balls	The number of Extra Balls that can be won in a game	Options: 0-10 Default: 1
Shaker Motor	Enables/Disables optional Shaker Motor	Option: On/Off Default: Off
Shaker Usage	Specifies the frequency that the Shaker Motor is used in the game.	Options: Low, Medium and High Default: Medium
Show Game Time in Last Scores	Game time is shown at the end of the game.	Options: On/Off Default: On
Tilt Bob Settle Time	Sets how much time passes after a Tilt Warning before the system responds to another Tilt Bob trigger.	Options: 0-7 Default: 1
Tilt Warnings	Specifies the number of times the player is warned before a tilt	Options: 0-8 Default: 2
Tournament Mode	Enables Tournament Mode presets	Options: On/Off Default: Off

PRESETS

The Preset feature allows you to load a profile setting. There are 8 presets available. In addition, from the Preset menu, you can save your current settings and re-load them.

Note: Presets are subject to change. Refer to American Pinball's Support page for the most current listings of Presets.

To access Oktoberfest's Presets



1. Power on the machine.
2. Open the coin door.
3. Press the MENU SELECT button to access the service mode.
4. Press the red +/- button to access the settings icon.
5. Press the MENU SELECT button to enter Settings selection.
6. Use the flipper buttons to page through the different settings to the Preset settings.
7. Press the green BACK EXIT button to return to the previous menu.

Table 3-12 Presets

PRESET	Extra Easy	Easy	Medium Default	Hard	Extra Hard	Competition	Home	Location
Standard:								
Ball Save time	18	15	12	9	6			
Clear Shooter Lane After 60 Sec	Off	Off	Off	Off	Off	Off	Off	On
Multiple Ball Saves Allowed	Yes	Yes	No	No	No			
Tilt Warnings	4	3	2	1	1			
Tilt Bob Settle Time	4	3	3	3	2			
Max Number of Extra Balls	6	5	4	3	2			
Match Feature						Off	Off	
Tournament Mode						On		
Pricing:								
Free Play							On	Off
Replay:								
Replay Award Type						Off	Extra Ball	
Features:								
Bar Super Skill Shot Difficulty	Extra Easy	Easy	Medium	Hard	Extra Hard			
Beer Barrel Lock Difficulty	Extra Easy	Easy	Medium	Hard	Extra Hard			
Beer Barrel MB Ball Save Time	18	15	12	9	6			
Bumper Cars Hits To Win	15	22	30	37	45			
Bumper Cars Initial Time	60	52	45	37	30			
Bumpers For Auto MagNab	10	15	20	25	30			
Bumper Multiplier Time	30	25	20	15	10			
Chugging Initial Time	60	52	45	37	30			
Corkscrew MB Ball Save Time	18	15	12	9	6			
Duck Derby Ball Save Time	30	25	20	15	10			
Duck Derby Difficulty	Extra Easy	Easy	Medium	Hard	Extra Hard			
Duck Derby Shots To Win	4	6	8	10	12			
Ducks For Duck Derby	30	40	50	60	70			
Duck Hunt Hits To Win	3	4	5	6	7			
Duck Hunt Initial Time	60	52	45	37	30			

Table 3-12 Presets (Continued)

PRESET	Extra Easy	Easy	Medium	Hard	Extra Hard	Competition	Home	Location
Ducks To Light Extra Ball	15	20	25	30	35			
Food Stand Timer	45	37	30	23	15			
Free Stein At Start Of Game	Yes	No	No	No	No			
Fud Frenzy Initial Time	60	52	45	37	30			
Fud Frenzy Switches To Start	50	62	75	87	100			
Initial Bar Hits Required	0	1	1	2	3			
Initial Corkscrew Jackpot Shots	4	3	2	2	1			
Initial Mag-Nabs	4	3	2	1	0			
Initial Spins For Food Stand	15	20	25	30	35			
Juggling Ball Saves Time	18	15	12	9	6			
Juggling Shots To Win	3	5	7	9	11			
Looper Initial Time	60	52	45	37	30			
Looper Loops To Win	3	4	5	6	7			
Max Bar Hits To Win	3	4	5	5	6			
Max Steins Of Same Kind	3	3	3	3	3			
Playfield X Time	40	30	20	20	15			
Ring Toss Initial Time	60	52	45	37	30			
Rockin' Express Initial Time	60	52	45	37	30			
Rockin' Express Spins To Win	25	37	50	62	75			
Rotor Difficulty	Extra Easy	Easy	Medium	Hard	Extra Hard			
Roto Initial Time	60	52	45	37	30			
Roto Shots To Win	1	2	3	4	5			
Skill Shot Timer	10	7	5	4	3			
Sky Slide Drop Target Time	20	15	10	8	8			
Sky Slide Initial Time	60	52	45	37	30			
Sky Slides VUK's To Win	1	2	3	4	5			
Stein Race Ball Save Time	18	15	12	9	6			
Stein Racing Shots To Win	2	3	4	5	6			
Stein Race Initial Time	60	52	45	37	30			
Steins To Light Extra Ball	3	4	5	6	7			
Super Skill Timer	10	7	5	4	4			
Tap It Customers To Win	10	15	20	25	30			
Tap It Difficulty	Extra Easy	Easy	Medium	Hard	Extra Hard			
Target Shooting Initial Time	60	52	45	37	30			
Tents To Light Extra Ball	3	4	5	6	7			
Tent Start Difficulty	Extra Easy	Easy	Medium	Hard	Extra Hard			

Table 3-13 Switch Table

SW NUM	Switch Name → ALL OPTO	Control Color	Board Pin Number
0	Bar Open	Brown	2
1	Bar Closed	Red	3
2	Bartender Home	Orange	4
3	Left Orbit Exit	Yellow	5
4	Not Used	Green	6
5	Right Orbit Exit	Blue	7
6	Not Used	Violet	8
7	Not Used	Gray	9
	Switch Ground	Black	10

SW NUM	Switch Name → ALL OPTO	Control Color	Board Pin Number
8	Scoop Loop Enter	Brown	2
9	Scoop Loop Exit	Red	3
10	Left Orbit Enter	Orange	4
11	Coaster Ramp Entrance	Yellow	5
12	Barrel Ramp Enter	Green	6
13	Not Used	Blue	7
14	Bartender Subway	Violet	8
15	Not Used	Gray	9
	Switch Ground	Black	10

SW NUM	Switch Name / TYPE	Control Color	Board Pin Number
16	Left Outlane / Micro	Black / Gray	2
17	Left Inlane / Micro	Black / Brown	3
18	Left Slingshot / Leaf	Black / Red	4
19	Left Flipper EOS / Leaf	Black / Orange	5
20	Left Stand Up / Stand Up	Black / Yellow	6
21	Left Outer Stand Up / Stand Up	Black / Green	7
22	Not Used	Black / Blue	8
23	Bar Hit / Bash	Black / Violet	9
	Switch Ground	Black	10

Table 3-13 Switch Table Continued

SW NUM	Switch Name → ALL STAND UP	Control Color	Board Pin Number
24	(O)ktober	Brown / Black	2
25	o(K)tober	Brown / Gray	3
26	ok(T)ober	Brown / Red	4
27	okt(O)ber	Brown / Orange	5
28	okto(B)er	Brown / Yellow	6
29	oktob(E)r	Brown / Green	7
30	oktobe(R)	Brown / Blue	8
31	Left Duck	Brown / Violet	9
	Switch Ground	Black	10

SW NUM	Switch Name / Type	Control Color	Board Pin Number
32	Upper Duck / Stand Up	Red / Black	2
33	Left Orbit Made / Micro	Red / Brown	3
34	Coaster Lock Ball 3 / Membrane	Red / Gray	4
35	Coaster Lock Ball 2 / Membrane	Red / Orange	5
36	Coaster Lock Ball 1 / Membrane	Red / Yellow	6
37	Scoop / Micro	Red / Green	7
38	Upper Slingshot / Stand Up	Red / Blue	8
39	Captive Ball 1 / Micro	Red / Violet	9
	Switch Ground	Black	10

SW NUM	Switch Name / Type	Control Color	Board Pin Number
40	(T)ap / Micro	Orange / Black	2
41	Barrel Ball Lock 1 / Membrane	Orange / Brown	3
42	Barrel Ball Lock 2 / Membrane	Orange / Red	4
43	Barrel Ball Lock 3 / Membrane	Orange / Gray	5
44	VUK / Micro	Orange / Yellow	6
45	Drop Target / Micro	Orange / Green	7
46	Captive Ball 2 / Micro	Orange / Blue	8
47	Captive Ball Stand Up / Stand Up	Orange / Violet	9
	Switch Ground	Black	10

Table 3-13 Switch Table Continued

SW NUM	Switch Name / Type	Control Color	Board Pin Number
48	Pop Bumper Exit / Micro	Yellow / Black	2
49	Pop Bumper Duck / Stand Up	Yellow / Brown	3
50	Right Orbit / Micro	Yellow / Red	4
51	Lower Pop Bumper / Leaf	Yellow / Orange	5
52	Left Pop Bumper / Leaf	Yellow / Gray	6
53	Right Pop Bumper / Leaf	Yellow / Green	7
54	ta(P) / Micro	Yellow / Blue	8
55	t(A)p / Micro	Yellow / Violet	9
	Switch Ground	Black	10

SW NUM	Switch Name / Type	Control Color	Board Pin Number
56	(F)est / Stand Up	Green / Black	2
57	Spinner / Micro	Green / Brown	3
58	Right Duck / Stand Up	Green / Red	4
59	(P)rost / Stand Up	Green / Orange	5
60	p(R)ost / Stand Up	Green / Yellow	6
61	pr(O)st / Stand Up	Green / Gray	7
62	pro(S)t / Stand Up	Green / Blue	8
63	pros(T) / Stand Up	Green / Violet	9
	Switch Ground	Black	10

SW NUM	Switch Name / Type	Control Color	Board Pin Number
64	Ball Trough 7 / Opto	Blue / Black	2
65	Ball Trough 6 / Opto	Blue / Brown	3
66	Ball Trough 5 / Opto	Blue / Red	4
67	Ball Trough 4 / Opto	Blue / Orange	5
68	Ball Trough 3 / Opto	Blue / Yellow	6
69	Ball Trough 2 / Opto	Blue / Green	7
70	Ball Trough 1 (Jam) / Opto	Blue / Gray	8
71	Shooter Lane / Micro	Blue / Violet	9
	Switch Ground	Black	10

Table 3-13 Switch Table Continued

SW NUM	Switch Name / Type	Control Color	Board Pin Number
72	Right Flipper EOS / Leaf	Violet / Black	2
73	Right Outlane / Micro	Violet / Brown	3
74	Right Inlane / Micro	Violet / Red	4
75	Right Slingshot / Leaf	Violet Orange	5
76	Right Outlane Stand Up / S. U.	Violet / Yellow	6
77	fes(T) / Stand Up	Violet / Green	7
78	fe(S)t / Stand Up	Violet / Blue	8
79	f(E)st / Stand Up	Violet / Gray	9
	Switch Ground	Black	10

SW NUM	Switch Name / Type	Control Color	Board Pin Number
80	Left Flipper Button / Leaf	White / Black	2
81	Lower Right Flipper Button / Leaf	White / Brown	3
82	Upper Right Flipper Button / Leaf	White / Red	4
83	Enter / Push Button	White / Orange	5
84	Exit / Push Button	White / Yellow	6
85	Down / Push Button	White / Green	7
86	Up / Push Button	White / Blue	8
87	Tilt / Plumb Bob	White / Violet	9
	Switch Ground	Black	10

SW NUM	Switch Name / Type	Control Color	Board Pin Number
88	Start Button / Push Button	Gray / Black	2
89	Coin Door Open / Interlock	Gray / Brown	3
90	Coin #1 / Micro	Gray / Red	4
91	Coin #2 / Micro	Gray / Orange	5
92	DBA / Bill Validator	Gray / Yellow	6
93	Coin #3	Gray / Green	7
94	Coin #4	Gray / Blue	8
95	Right Flipper Magnet / Leaf	Gray / Violet	9
	Switch Ground	Black	10

Table 3-14 Coil Table

Coils RED Group 48 Volts	IRL540N Transistor	Transistor Control Color	Coil Number	Coil / Part Number
Lower Left Flipper Main	Q1	Red / Black	9	FL11629 / COI0003-00
Lower Left Flipper Hold	Q2	Red/ Brown	10	FL11629 / COI0003-00
Left Slingshot	Q3	Red / Gray	11	26-1200 5 / COI000-00
Oktober Magnet	Q4	Red / Orange	12	COI0002-00
Up Ramp Main	Q5	Red / Yellow	13	26-600 / COI0007-00
Up Ramp Hold	Q6	Red / Green	14	33-3500 / COI0007-00

Coils BROWN Group 48 Volts	IRL540N Transistor	Transistor Control Color	Coil Number	Coil / Part Number
Trough Kicker	Q9	Brown / Black	1	26-1200 / COI0005-00
Shooter Lane / Auto Fire	Q10	Brown / Gray	2	23-800 / COI0001-00
Lower Right Flipper Main	Q11	Brown / Red	3	COI0009-00
Lower Right Flipper Hold	Q12	Brown / Orange	4	COI0009-00
Right Slingshot	Q13	Brown / Yellow	5	26-1200 / COI0005-00
Fest Magnet	Q14	Brown / Green	6	COI0002-00

Coils BLUE Group 48 Volts	IRL540N Transistor	Transistor Control Color	Coil Number	Coil / Part Number
Upper Right Flipper Main	Q1	Blue / Black	17	FL11629 / COI0003-00
Upper Right Flipper Hold	Q2	Blue / Brown	18	FL11629 / COI0003-00
Flipper Magnet	Q3	Blue / Red	19	COI0002-00
Lower Pop Bumper	Q4	Blue / Orange	20	23-800 / COI0001-00
Right Pop Bumper	Q5	Blue / Yellow	21	23-800 / COI0001-00
Left Pop Bumper	Q6	Blue / Green	22	23-800 / COI0001-00
Lane Magnet	Q7	Blue / Gray	23	COI0002-00

Coils YELLOW Group 48 Volts	IRL540N Transistor	Transistor Control Color	Coil Number	Coil / Part Number
Scoop	Q9	Black / Gray	25	26-1200 / COI0005-00
Barrel Release	Q10	Black / Brown	26	32-1800 / COI0011-00
Upper Slingshot	Q11	Black / Red	27	26-1200 / COI0005-00
Drop Target Up	Q12	Black / Orange	28	23-800 / COI0001-00
Not Used	Q13	Black / Yellow	29	
VUK	Q14	Black / Green	30	26-1200 / COI0005-00
Roller Coaster Ball Release	Q15	Black / Blue	31	32-1800 / COI0011-00

Reference Figure 3-6 for Coil Location by Coil Number

Fig 3-7

Cabinet Board Assembly

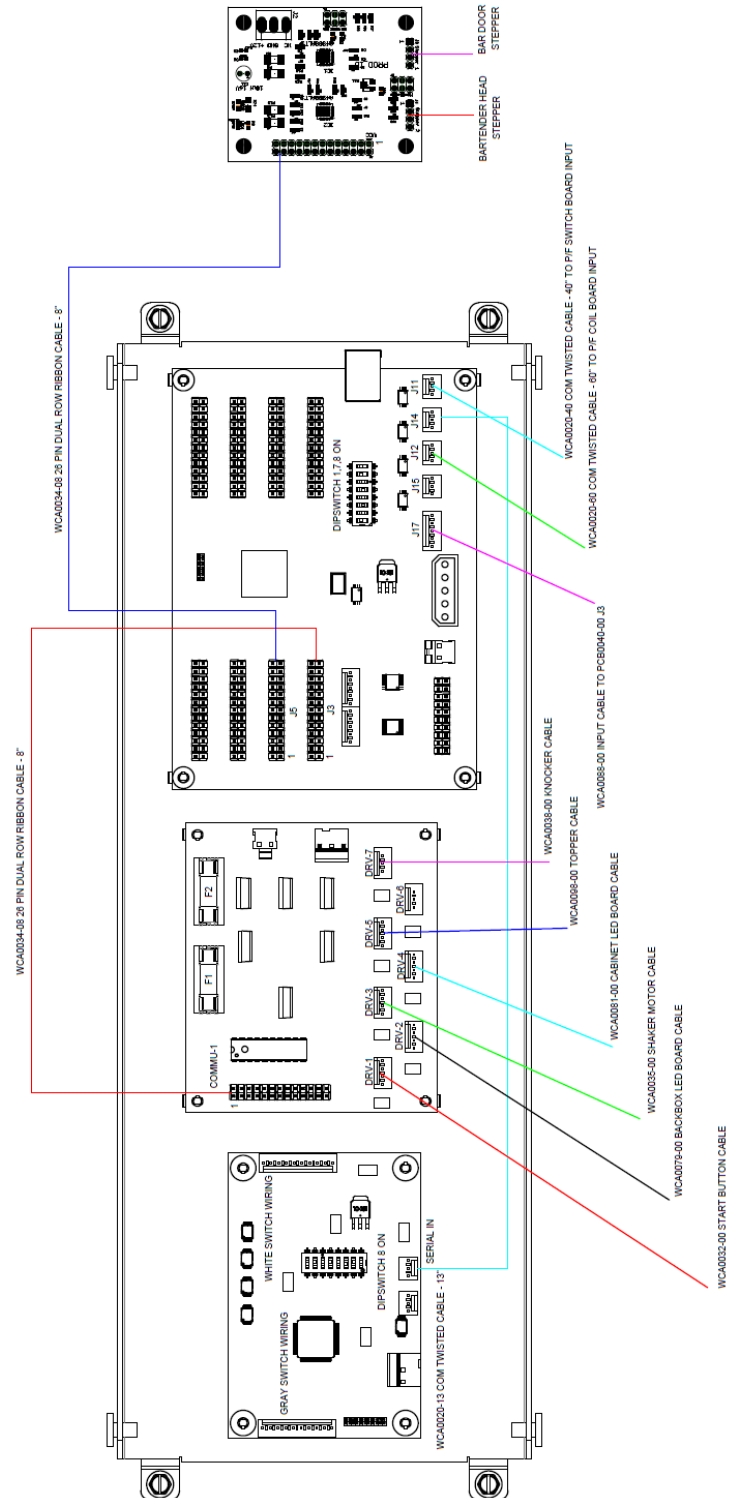


Fig 3-8

Dip Switch and Bottom Playfield PCB's

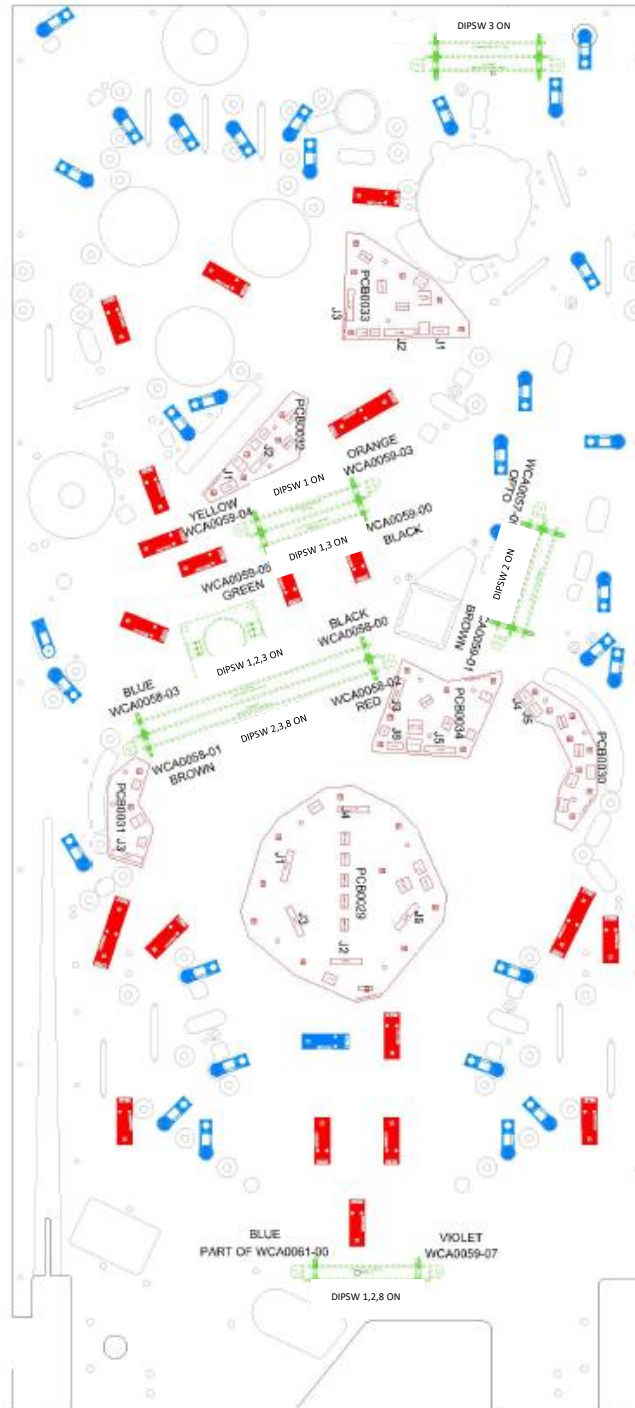
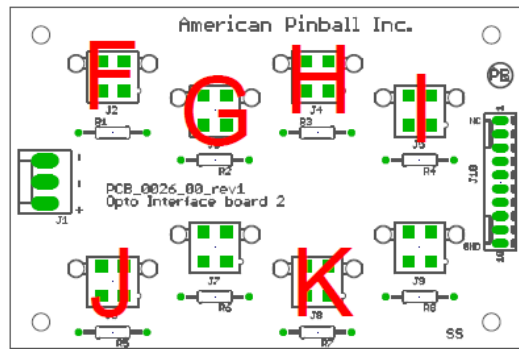
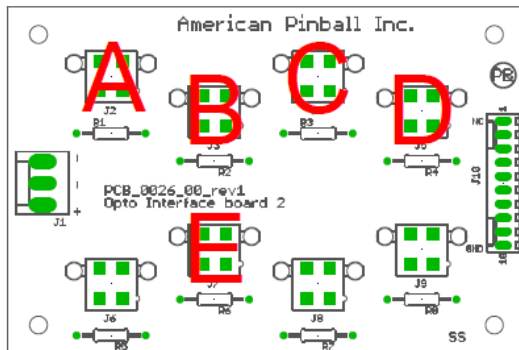


Fig 3-9

Opto Board Connector



- A BAR OPEN OPTO SWITCH
- B BAR CLOSED OPTO SWITCH
- C BARTENDER OPTO SWITCH
- D LEFT ORBIT EXIT OPTO SWITCH
- E RIGHT ORBIT EXIT OPTO SWITCH
- F SCOOP LOOP ENTER OPTO SWITCH
- G SCOOP LOOP EXIT OPTO SWITCH
- H COASTER RAMP ENTRANCE OPTO SWITCH
- I LEFT ORBIT OPTO ENTER
- J BARREL RAMP ENTER OPTO SWITCH
- K BARTENDER SUBWAY OPTO SWITCH

Oktoberfest Code Update

CODE UPDATE PROCEDURE

Please have the following items available before performing a code update:

- A FAT 32 formatted 2.0 USB drive with at least 4 GB of storage
- Latest version of Oktoberfest code, which can be downloaded from www.american-pinball.com/support/updates/ to your computer.

WARNING! OPENING THE COIN DOOR EXPOSES HIGH VOLTAGE PARTS IN THE GAME, AND DIRECT CONTACT TO THESE HIGH VOLTAGE PARTS CAN LEAD TO SERIOUS OR FATAL INJURIES. THIS EQUIPMENT IS TO BE SERVICED BY TRAINED PROFESSIONALS ONLY.



To download Oktoberfest code to a Microsoft Windows PC

1. Go to www.american-pinball.com/support/updates/
2. Compare the game version on your machine to the most current Oktoberfest version available on the site.
3. If your machine is running the most current version of code, enjoy your game! Otherwise, proceed to the next step.
4. Insert a formatted USB drive with at least 4GB of storage into your computer.
5. From File Explorer, right click on the USB drive.
6. Select Format Drive FAT 32.

To download Oktoberfest Code to a MAC

1. Go to www.american-pinball.com/support/updates/
2. Compare the game version on your machine to the most current Oktoberfest version available on the site.
3. If your machine is running the most current version of code, enjoy your game! Otherwise, proceed to the next step.
4. Insert a formatted USB drive with at least 4GB of storage into your computer.
5. Open Disk Utility.
6. Select USB Drive.
7. Select Erase.
8. Select Format FAT 32.

To update Oktoberfest code

1. Copy the Oktoberfest update package (.pkg) code file to the USB drive.
2. Open the coin door and locate the provided USB extension cable on the right-hand side of the coin door below the flipper switch.
3. Insert the USB drive with the code update package into the USB extension cable.
4. If Oktoberfest is powered off, turn on (USB can be inserted with power on).
Oktoberfest will recognize the USB drive and will provide a message on the monitor stating that you have 5 seconds to remove the USB drive or the machine will begin the update process.
5. When the code update process is complete an "Update Complete" message appears.
Remove the USB drive from the USB extension cable.
6. Power cycle the game.
7. Enjoy your updated game!

Note: The version of the code running on your machine will be displayed during startup and from the API cockpit.

OKTOBERFEST LOG COPY

To assist in game development and troubleshooting, American Pinball may ask for a copy of the game logs.

To copy game logs

1. Open the coin door and locate the provided USB extension cable on the right-hand side of the coin door below the flipper switch.
2. Insert the USB drive into the USB extension cable.
3. If Oktoberfest's power is turned off, turn on.
4. Wait for the completion screen on the monitor and remove the USB drive.
5. Power cycle the game.



Part Number DOC0002-00
Written by BTA
For Support Call Your Distributor
or
833.API.HELP