# A | | E \| S ARMAGEDDOA 

## Setup and Operation <br> Service Manual

For use with:
55" Deluxe Cabinet
42" Fixed Gun Cabinet

Revision AA-1.00-1.28.14-1


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This software is based in part on the work of the Independent JPEG Group.
This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org/)
This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)

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## Product Specifications

## Electrical Power

Domestic 120 VAC @ $60 \mathrm{~Hz}, 5 \mathrm{amps}$
International 240 VAC @ $50 \mathrm{~Hz}, 2.5 \mathrm{amps}$
Japan 100 VAC @ $50 \mathrm{~Hz}, 5 \mathrm{mps}$

## DC Power Fuse Guide

+5 VDC - 2 amp Slow Blow
+12 VDC - 7 amp Slow Blow

## Temperature

$32^{\circ}$ to $100^{\circ}$ Fahrenheit ( $0^{\circ}$ to $38^{\circ}$ Celsius)
Humidity
Must not exceed 95\% relative humidity

Cabinet and Carton Specifications

| Component | Height | Width | Depth |
| :---: | :---: | :---: | :---: |
| Assembled $55^{\prime \prime}$ | $106.31^{\prime \prime}$ | $52.02^{\prime \prime}$ | $58.63^{\prime \prime}$ |
| Deluxe Cabinet | $(2.7$ meters $)$ | $(1.32$ meters $)$ | $(1.49$ meters $)$ |
| Assembled $42^{\prime \prime}$ | $100.50^{\prime \prime}$ | $41.385^{\prime \prime}$ | $51.48^{\prime \prime}$ |
| Fixed Gun Cabinet | $(2.55$ meters $)$ | $(1.05$ meters $)$ | $(1.31$ meters $)$ |



Figure 1: 55" Deluxe Cabinet


Figure 2: 42" Fixed Gun Cabinet

## Safety

## OPERATION

Before operating game, read this manual. Failure to properly install and operate this game could result in malfunction or accident. Operate the game in accordance with the manual.

## TRANSPORTING

Cabinet is very heavy and contains fragile components. Use appropriate care when moving or transporting cabinet. Avoid rough handling.

## Handling Components

Many components are extremely sensitive to handling, environmental and Electrostatic Discharge (ESD) eventsespecially the computer. Do not handle it roughly. Before servicing, call your distributor and inquire about the PC warranty. Use proper ESD procedures when servicing. Protect components from harmful environmental conditions, such as extreme temperatures, excessive moisture or other damaging effects.

## DISCONNECT POWER

Always turn off power and unplug the unit before servicing or making adjustments, unless otherwise instructed. Installing or repairing components while power is on can damage the components and void the warranty.

## Grounding

Avoid electrical shock. Do not plug in AC power until you have inspected and properly grounded the unit. Only plug into a grounded, three-wire outlet. Do not use a "cheater" plug or cut off the ground pin on the line cord.

## ELECTRICAL SHOCKS

There is no isolation transformer in the cabinet. Disconnect AC power before servicing. However, be aware that lethal voltages can remain in the electronic components even when AC power is disconnected. Use extreme caution when servicing. Verify that there is a working ground connection. If the unit sustains water damage, cease using it immediately and unplug AC power.

## Monitor

Extremely high voltages exist in the monitor at all times. These high voltages exist even when the monitor is off and the AC line cord is disconnected. These voltages are extremely lethal and will cause death. The monitor contains no user serviceable parts. Do not attempt to service the monitor.

## Power Selector

Before installing game, ensure the voltage on the PC is set properly. There is a 115/230 VAC selector switch that must be set for the correct voltage for your site. Verify the fluorescent lamp rating. The rating must match the line voltage at the installation site.

## CONNECTORS

Ensure all connectors mate properly. If connectors do not slip in easily, do not force them. Connectors are often keyed and only connect one way. Check for correct orientation.

## COMPUTER

The computer contains sensitive components, including a hard drive. Do not handle it roughly. Call your distributor before servicing its internal components. Ask about warranty information as it relates to the PC.
Do not turn the PC power switch on or off. It should remain permanently in the ON position.
Cycle AC power on or off with the cabinet power switch.
A dongle has been inserted into one of the USB ports. This is required for game play.
Do not remove the dongle except for troubleshooting purposes.

## POWER CORD

If the power cord is damaged or lost, replace it with an identical cord as supplied by the manufacturer or an authorized service agent.

## WATER JETS

Do not install or operate game within operating perimeter of a water jet. Do not clean equipment using water jet.

## Hazard to Epileptics

A small portion of the population has an epileptic condition that may cause seizures. Affected persons experience seizure while watching some television pictures or playing certain video games. People who have not had seizures may still have an undetected epileptic condition. If anyone in your family has experienced epilepsy symptoms (seizures or loss of awareness), consult your physical before using video games. While children play video games, a parent should observe. Be alert to the following symptoms: dizziness, altered vision, eye or muscle twitching, involuntary movements, loss of awareness, disorientation or convulsions. If you or your child experiences these symptoms, discontinue use immediately and consult your physician.

## MANUAL

Keep this manual available and ready for use. If the game fails to function properly, turn off the machine and unplug the AC line cord. Contact your local distributor. Your warrantee, when applicable, lasts 60 days from your purchase date. You may not reproduce this document or any of its contents without written authorization from Raw Thrills ${ }^{\text {TM }}$, Inc. or PlayMechanix ${ }^{T M}$ Inc.

## SPECIFICATIONS

For reasons such as performance, this product's specifications may change without notice. Federal patent, copyright and other intellectual property laws protect the content, devices and design of the game and its equipment.

## Deluxe Cabinet Setup

## Unpack Cartons

1. Place the shipping crates on a flat stable surface.
2. Cut the banding straps and remove the cardboard lids.
3. Lift off the large cardboard container surrounding the cabinet and any shipping cleats.
4. Remove both guns from the carton situated on top of cabinet pedestal.
5. Place the guns in holsters on cabinet bezel.
6. With at least two people and a dolly, remove the cabinet from the shipping pallet.
7. Remove the coin door key from the coin return chute.
8. Open the top coin door.
9. Locate the key for the back door and the cash box.
10. Remove the items inside cash box: AC power cable, a bag of screws and tools, marquee power cable, this manual, registration packet, and cell antenna mount

## Setup Cabinet Pedestal

1. Using a wheeled cart and at least one assistant, transport the cabinet to a suitable playing area. Proximity to Neon Lights
Neon lights may reduce the ability of the IR sensors to accurately track the guns. Place the cabinet far away from neon lights or turn off any nearby neon lights.
2. Ensure the game cabinet is level and stable.

With at least one assistant, adjust the leg levelers.
3. Check the AC line cord for visible signs of damage.

Pay particular attention to the plug and line cord insulation.
4. Check for shipping damage to the following:

- Gun assembly: Left and right guns, gun holders, and cables
- Cabinet Marquee
- Cabinet back door
- Cabinet coin door
- Cabinet and gun decals


## Attach Marquee to Deluxe Cabinet

1. With an assistant and two ladders, lift marquee on top of cabinet.
2. Affix four hex bolts with washers to secure marquee to top of cabinet.
Caution: Avoid pinching cables.
3. Connect four cables from marquee to cabinet.
4. Affix six $1 / 4-20$ TORX screws with washers to secure mounting bracket to back of cabinet. Caution: Avoid pinching cables.
5. Affix four $1 / 4-20$ TORX screws with washers to
 secure mounting bracket to back of marquee.



Deluxe Cabinet Setup

## Attach Front Pedestal to Monitor Assembly

1. Move front pedestal assembly a few inches away from the monitor assembly.

## Connectors

Ensure all connectors mate properly. If connectors do not slip in easily, do not force them. Connectors are often keyed and only connect one way. Check for correct orientation.
2. Gently pull all connectors through the round holes in the front pedestal and monitor assembly.
3. Connect single-pin ground cable from monitor assembly to front pedestal.
4. Connect two USB cables from monitor assembly to two USB cables from front pedestal. Note: the USB gun cables are interchangeable. The PC will decide which is the right and left gun.
5. Connect the 10 -pin and 16 -pin data/power connectors from the monitor assembly to their mates from the front assembly
6. Move front pedestal so that it is flush with monitor assembly.


Caution: make sure cables are not pinched. Tuck them back through openings into either cabinet.
7. Align holes in monitor assembly brackets with holes in rear of front pedestal assembly. Adjust leg levelers on front pedestal assembly as needed.
8. Insert three $1 / 4-20$ TORX screws with flat washers through each of the three holes at the front of the bracket into the three holes of the front pedestal.
Do not tighten screws.
9. Repeat with other bracket.
10. Tighten all screws with supplied TORX wrench.

## Fixed Gun Cabinet Setup

## Unpack Carton

1. Place the crate on a flat stable surface, and cut the banding straps to remove cardboard.
2. Lift off the large cardboard container surrounding the cabinet and any shipping cleats.
3. With at least two people and a dolly, remove the cabinet from the shipping pallet.
4. Remove the coin door key from the coin return chute, and open the top coin door.
5. Locate the key for the back door and the cash box.
6. Remove the items inside cash box: AC line cord, a bag of screws and tools, and a warranty card.
7. Using a wheeled cart and at least one assistant, transport the cabinet to a suitable playing area.
8. With at least one assistant, adjust the leg levelers. Ensure the game cabinet is level and stable.
9. Check for shipping damage to the following: AC line cord, Left and right guns, Marquee/monitor glass, Cabinet back/coin doors, Cabinet and gun decals

## Attach Marquee Assembly to Fixed Gun Cabinet

1. Position back support on top of cabinet routing cables from cabinet through back support.

Caution: Do not pinch cables in mounting bracket.


Step 1 - Position Mounting Plate


Step 2 - Secure Mounting Plate to Cabinet
2. Affix four $1 / 4-20$ torx screws with washers to secure back support to top of cabinet.
3. With two assistants and two ladders, lift marquee on top of cabinet and connect the four cables from marquee to cabinet. Caution: Do not pinch cables in mounting bracket.


Step 3 - Connect Cables
4. Affix two $1 / 4-20$ torx screws with washers through back support into metal bottom of marquee.

## Do not fully tighten.

5. Affix two $1 / 4-20$ bolts with washers to secure marquee to top of cabinet. Do not fully tighten.
6. Affix four $1 / 4-20$ torx screws with washers to secure back support to back of marquee.
7. Tighten all screws.


## Cabinet Functionality Check

Verify Cabinet Functionality

1. Verify the voltage in the nearest AC outlet.
2. Verify the AC outlet ground connection is present and working.
3. Inside back of cabinet, verify the voltage selector switch is set for correct AC voltage.
4. Plug the line cord into the AC outlet, and turn the power switch to ON.
5. Verify that the cooling fans on the cabinet are working.
6. Check that no component is excessively hot or emitting foul odors.
7. If there are any problems with cabinet functionality, contact the distributor.

## Verify USB Connections

If USB connections are incorrect, an error screen will appear on start up. Reconnect devices to appropriate USB ports. *Wi-Fi adapter, card reader, and cell modem available in the Online Kit.


HP 6005


HP 6305

## Gun Calibration

1. Pull the trigger on the left gun to indicate that it is Player 1.
2. Aim and shoot as instructed.
3. The targeting reticle indicates the spot where the gun is aimed. Verify accuracy by pointing at different areas of the screen.
4. Accept calibration by pressing start button.
5. Repeat steps 2-5 for right gun.
6. Press Start button when finished.

## Verify Input and Output Functionality

See the Diagnostic Section for further information.

1. Enter the SWITCH TEST menu and verify all switches function.
2. Enter the SCREEN TEST menu and verify that video is acceptable.
3. Enter the SOUND TEST menu and verify the audio works and is not distorted.
4. Enter the COIN METER TEST and verify the operation of the coin meter.
5. Enter the START BUTTON LAMPS menu and verify that the lamps of the buttons work correctly.
6. Enter the WATCHDOG TEST menu, which re-boots the game.
7. Upon a successful re-boot, you are ready to make adjustments to pricing, volume and other functions found in the Diagnostic Section.

## Maintenance

## Regular Gun Maintenance Procedure

In order to maximize income potential, keep the guns in optimal working order by performing the following five-step procedure every time you empty the cash box.

1. Check the camera lens

Observe the tinted lens to ensure it has no cracks, scratches or dirt. Clean or replace the lens, if necessary.
2. Visually and manually inspect gun cable connections

Open the coin door to see them. Reach in and ensure the cables are fully connected and are not pinched by any components.
3. Verify switch functionality

Press the Test button on the service panel, select Tests, select Input Tests, and then select Switch Test (described earlier in this manual) to ensure all the gun switches are functioning properly. Switches in the gun include

- Trigger
- Reload
- Grenade

4. Calibrate, calibrate, calibrate

Return to the Main Menu screen and select Gun Calibration. Follow the instructions earlier in this manual or on screen to recalibrate both guns.
5. Check IR sensors
*Deluxe model only
The IR sensors are directly below and above the printed marquee on the monitor assembly. From the Main Menu, select Tests, select Input Tests, and select IR Gun Sensor Test. See pg 22

Recalibrate the guns any time the game is moved or the guns are repaired, replaced or swapped. Note: It is not advisable to replace or swap guns while power is on. Shut AC power off before connecting or disconnecting any components. If, for some reason, guns are changed while power is on, shut off AC power and reboot after the guns are connected again. Failure to do so may result in incorrect gun functionality.

> Following these procedures is critical to maintaining guns and maximizing revenue. Perform regular gun maintenance to keep your game in top working order.

## Fixed Gun Maintenance

Opening the Gun Case
Open the gun case to service the trigger, buttons, and coil assembly. You do not need to open the case to service the pots that aim the gun.

1. To open the gun case, first remove the 12 Torx security screws, shown by the single arrows in the picture below. Remove the corresponding nuts from the other side of the gun.
2. Remove the four screws, shown by double arrows in the picture below. These screw into the frame, so there are no nuts to remove.
3. Carefully, remove the left side cover from the gun, being careful not to pull the wires from the grenade button. The wires are long enough that you can set the cover on the control panel near the gun without disconnecting the wires.


## Closing the Gun Case

1. To close the gun case, align the slots that fit around the gun PCD, and then carefully put the two halves together. Make sure no wires or components get caught or pinched. Pay special attention to the area around the trigger and spring, the wires coming out of the frame shaft, and the wires attached to the coil and barrel light.
2. Insert the four screws shown with the double arrows. Partially tighten all four. Verify the case is mating properly, before tightening the screws fully.
3. Check the trigger to make sure it works properly. The trigger or spring could shift while assembling the case.
4. Replace the remaining 8 Torx screws and nuts, shown by the single arrows above.
5. Tighten all screws fully. Be carefully not to over tighten and crack plastic.

## Gun Trigger Service

1. Install the plastic trigger pressing against the spring. The bottom part of the trigger will press the switch actuator when a player pulls the trigger.
2. To replace the micro switch, remove the two screws that secure it. Remove the two wires and install them on the same terminals on the replacement switch.
3. Connect the signal wire to the NO connector (middle connector) and the black ground wire to the C connector.


## Gun Button LED Service

1. If you replace a button micro switch, connect the signal wire to the NO (middle) connector and the black ground wire to the C connector. Failure to do so will cause the buttons to not work.
2. To replace the LED bulb, pull the lamp assembly straight out of the button housing. Then, pull the bulb straight out of the lamp housing. The two lamp wires are interchangeable and can connect to either terminal on the lamp housing.

## Gun Coil Assembly Service

The coil assembly provides the force-feedback recoil when the gun is fired.

1. Open the gun case as described earlier.

2. Remove the two screws shown below from the right side of the gun.
3. Remove the nut that secures the ground wire to the ground lug on the side of the coil assembly mounting plate.
4. Remove the two screws that secure the coil assembly mounting plate to the gun shaft.
5. Reverse the steps to install the coil assembly. Be sure to secure the ground wire to the ground lug of the coil assembly mounting plate.


## Gun Pot and Gear Service

Each gun has two pots that measure the movement of the gun on the $x$-axis (left/right) and $y$-axis (up/down). The $x$-axis pot is located under the gun base below the trigger. The $y$-axis pot is located on the side of the gun base below the reload button.

Use the Gun Test \& Calibration screen in the diagnostic menu to test gun motion. To test a pot, swivel gun along an axis paying attention to the resistance. There should be a steady linear increase or decrease in resistance with no jumps. Replace the gears, if they are worn or cracked.

## Replacing a pot or gear shaft

1. Remove the six Torx security screws that secure the front and rear covers over the gun base.
2. Remove both covers.
3. Remove the two mounting nuts and remove the mounting plate from the pot to be replaced.
4. Using an Allen wrench to loosen the set screw from the gear shaft, and remove the gear shaft.
5. Using a $1 / 2^{\prime \prime}$ wrench, remove the nut and lock washer that secure the pot to the frame.
6. De-solder the wires and solder them on the same terminals on the replacement pot.
7. Install the new 5 k ohm pot with the same orientation. Make sure that the plastic keys on the pot mate properly with the metal.
8. Re-install the lock washer and nut, being careful not to over tighten.
9. Re-install the gear shaft and tighten the set screw.
10. Calibrate the gun using the diagnostic menu option after replacing a pot.


## Gun PCB

The gun driver board is mounted remotely in the cabinet and controls the voltage to the gun coil. There is one for each gun. Disconnect the cabinet from AC power before making any connections to the gun PCB. Hot-plugging any connector will damage the PCB.


## Hard Drive Recovery

Hard Drive Recovery is used to update your game with new software or return the game to factory Symptoms requiring hard drive recovery include:

- File Test reports bad or missing files
- Game fails to finish loading during startup
- After resetting the AC power, an error is reported
- You are prompted to insert a boot DVD
- Erratic Game or Attract Mode
- The following screen:



## COMPUTER

The computer contains sensitive components, including a hard drive. Do not handle roughly. Call your distributor before servicing its internal components. Ask about warranty information as it relates to the PC.

Do not use the PC on/off switch. Turn AC power on or off with the cabinet power switch.

1. With game and PC on, insert recovery DVD, marked as Disc 1, into DVD-ROM drive tray.
2. Close tray and Turn cabinet AC power switch to OFF.
3. Wait 30 seconds, then turn AC power switch to ON . Recovery begins automatically. If recovery fails to begin, check that disc is seated properly in DVD-ROM drive tray.
4. Initial software loading may take several minutes. Check progress periodically.

Do not interrupt power or reset the game during recovery.
5. At some point, the game will eject Disc 1 and prompt you to insert Disc 2 .
6. Swap discs and close the tray. Do not interrupt power or reset the game.
7. At some point, the game will eject Disc 2 and prompt you to insert Disc 3 .
8. Swap discs and close the tray. Do not interrupt power or reset the game.
9. When software has finished loading, a message indicates that restore is complete. When instructed to remove Disc 3, open DVD-ROM drive tray and remove disk.
10. Turn cabinet power switch off.
11. After 30 seconds, turn cabinet power switch on.
12. After game restarts, it will enter calibration mode. Re-calibrate guns.
13. Settings will now be factory defaults - make changes as desired.

## Diagnostic Menu System

## Diagnostic Menu Interface

The Service Panel should have four buttons. Pressing the TEST button at any point while the game is running will enter the diagnostic menu. This menu can be navigated with the service panel or the gun.

An on-screen message acknowledges changes or when you exit a selection without making a change.
At the bottom of each screen, there is a brief description of the highlighted menu option.
For clarity, all menu screens in this manual omit the header, background image, and control instructions.

## Navigating with Service Panel Switches

- TEST
- SERVICE
- Volume down
- VOLUME UP

enters diagnostic system or select highlighted menu option exit current menu moves down through menu or setting choices moves up through menu or setting choices


## Navigating with Gun

- The menu interface can be navigated with the gun by aiming and shooting.
- Shooting the right side options will perform the indicated action.
- Shoot scroll up or scroll down to highlight menu options.
- Shoot select to enter the highlighted menu or perform the highlighted option.
- Shoot exit to return to the prior menu or exit the diagnostic system.


## Menu Screens and Descriptions

## Main Menu

## MAIN MENU

Adjustments
Audits
Online
Resets
System Information
Tests
Utilities

- Adjustments pg 22 -modify various game settings
- Audits pg 26 - view various tracking statistics
- Online pg 27 - setup and manage online functionality
- Resets pg 31 - used to restore game to factory defaults
- Information pg 31 - view various hardware and software information
- Tests pg 34 - execute various diagnostic and maintenance tests
- Utilities pg 38 - contains tools for managing game performance


## Main Menu

## Adjustments

These menus control gameplay, coinage and sound adjustments.

## Adjustments

Game Adjustments
Online System Adjustments
Player Cost Adjustments
Sound Adjustments
Alternative Payment Adjustments
Hardware Adjustments
Coin Adjustments

You can improve earnings by customizing performance with game adjustments. Each variable on an adjustment menu changes an aspect of game play or appearance. Optimizing these settings can maintain or increase player interest. Monitor the effects of adjustments by comparing audit information and earnings before and after changes.

| Main Menu |  |
| :--- | :--- |
| Adjustments |  |
| $\quad$ Game Adjustments |  |



| Setting | Description | Default | Choices |
| :---: | :---: | :---: | :---: |
| Minimum <br> Game Time | Set the minimum play time. | $2: 30$ <br> minutes | Positive amount of <br> time. |
| Off-Screen <br> Reload | Allow the use of off-screen reload. | Off | Off/On |

## Main Menu

## Adjustments

Online System Adjustments

## ONLINE SYSTEM ADJUSTMENTS

Online Maintenance Hour Use Slow Network Wait Times DB Server Port
File Server Port

4:00 am-5:00 am
Off
Automatic
Automatic

| Setting | Description | Default | Choices |
| :---: | :--- | :---: | :---: |
| Online <br> Maintenance <br> Hour | The 60-minute period during which online-enabled <br> games contact the server to check for software <br> updates and synchronize with the game database. | $4: 00$ am <br> - <br> $5: 00 \mathrm{am}$ | 24 hours in one <br> hour increments |
| Use Slow <br> Network <br> Wait Times | Extends duration before time out to accommodate <br> slow network speeds. | Off | Off/On |
| DB Server <br> Port | Adjusts the ports used to connect to the DB server. | Automatic | Automatic, 21,80, <br> 443,7686 |
| File Serve <br> Port | Adjusts the ports used to connect to the File server. | Automatic | Automatic, 21,80, <br> $443,8080,8686$ |

Main Menu

| Adjustments |
| :--- | :--- |
| $\quad$ Player Cost Adjustments |

## Player Cost Adjustments

```
Freeplay
\begin{tabular}{|c|c|c|c|}
\hline Setting & Description & Default & Choices \\
\hline Freeplay & Allows play without money & OFF & OFF / ON \\
\hline Player Cost & Game start/continue cost & \(\$ 1.00\) & \begin{tabular}{c}
\(\$ 0.00-\$ 63.75\) incrementing by \\
coin base unit setting
\end{tabular} \\
\hline
\end{tabular}
\begin{tabular}{|l|}
\hline \multicolumn{2}{|l|}{ Main Menu } \\
\hline Adjustments \\
\(\quad\) Sound Adjustments \\
\hline
\end{tabular}

Sound Adjustments
```

Game Volume
20
Attract Volume
15
Attract Sound Frequency
Frequently

```
\begin{tabular}{|c|c|c|c|}
\hline Setting & Description & Default & Choices \\
\hline Game Volume & Modifies volume during game play & 20 & \(0-100\) \\
\hline Attract Volume & Modifies volume during attract mode & 15 & \(0-100\) \\
\hline \begin{tabular}{c} 
Attract Sound \\
Frequency
\end{tabular} & \begin{tabular}{c} 
Determines how often attract mode music \\
will be played
\end{tabular} & Frequently & \begin{tabular}{c} 
Off, Occasionally, \\
Frequently, or Always
\end{tabular} \\
\hline
\end{tabular}

\section*{Main Menu \\ Adjustments \\ Alternative Payment Adjustments}

\section*{Alternative Payment Adjustments}

Coin Meter on Credit Card
\begin{tabular}{|c|c|c|c|}
\hline Setting & Description & Default & Choices \\
\hline \begin{tabular}{c} 
Coin Meter on \\
Credit Card
\end{tabular} & \begin{tabular}{c} 
Determine if coin meter pulses when \\
credit cards are used
\end{tabular} & On & On/Off \\
\hline
\end{tabular}
\begin{tabular}{l}
\hline \multicolumn{2}{|l|}{ Main Menu } \\
\multicolumn{2}{|l|}{ Adjustments } \\
\(\quad\) Hardware Adjustments \\
\hline
\end{tabular}

\section*{Hardware Adjustments}

\section*{Force Feedback \\ On}
\begin{tabular}{|c|c|c|c|}
\hline Setting & Description & Default & Choices \\
\hline Force Feedback & Turn gun recoil on or off & On & On/Off \\
\hline
\end{tabular}


\section*{Coin Adjustments}

Currency Type
Coin Base Unit
Coin 1 Value
Coin 2 Value
DBV Pulse Value
Service Credit Value

Dollar
\$0.25
\(\$ 0.25\)
\$0.25
\$0.25
\$0.25
\begin{tabular}{|c|c|c|c|}
\hline Setting & Description & Default & Choices \\
\hline \begin{tabular}{l}
Currency \\
Type
\end{tabular} & Changing currency type resets coin door values. The denomination symbol changes on screen with each currency & Dollar & Yen, Won, Ruble, Real, Peso, Krona, Guilder, Franc, Can. Dollar, Coins, Euro, NZ Dollar, Rand, Pound, Aus. Dollar \\
\hline Coin Base Unit & Changes the amount by which monetary values increment & \$0.25 & \[
\begin{gathered}
\$ 0.25 \text { - } \$ 63.75 \text { in } \$ 0.01 \\
\text { increments }
\end{gathered}
\] \\
\hline Coin 1 Value & Sets the coin slot pricing & \$0.25 & \(\$ 0.25\) - \(\$ 63.75\) incrementing by coin base unit setting \\
\hline Coin 2 Value & Sets the coin slot pricing & \$0.25 & \(\$ 0.25\) - \(\$ 63.75\) incrementing by coin base unit setting \\
\hline DBV Pulse
Value & This setting determines how much game credit is awarded per pulse. With default setting of \(\$ 0.25\), every \(\$ 1\) bill will award \(\$ 1\) in game credit. Set to \(\$ 0.50\), every \(\$ 1\) bill will award \$2 in game credit. & \$0.25 & \$0.25-\$63.75 incrementing by coin base unit setting \\
\hline Service Credit Value & Set the amount of credit given by the service button & \$0.25 & \$0.25-\$63.75 incrementing by coin base unit setting \\
\hline
\end{tabular}

\section*{DBV PULSE VALUE}

DBV must be set to award four pulses per dollar. Consult DBV for dipswitch settings or programming instructions.


Audit screens help assess game performance, find intermittent problems, decide whether to adjust game difficulty and free game award and help maximize game earnings.

\begin{tabular}{l} 
Main Menu \\
Audits \\
\(\quad\) Coin Audits \\
\hline
\end{tabular}
\begin{tabular}{ll}
\hline Coin Audits & \\
Total Money In & \(\$ 0.00\) \\
Coins in Left Coin Slot & 0 \\
Money in Left Coin Slot & \(\$ 0.00\) \\
Coins in Right Coin Slot & 0 \\
Money in Right Coin Slot & \(\$ 0.00\) \\
Number of DBV Pulses & 0 \\
Money in DBV & \(\$ 0.00\) \\
Number of Credit Card Swipes & 0 \\
Credit Card Money & \(\$ 0.00\) \\
Service Switch Presses & 0 \\
Service Credit Money & \(\$ 0.00\) \\
\hline
\end{tabular}
\begin{tabular}{l} 
Main Menu \\
Audits \\
\(\quad\) System Audits \\
\hline
\end{tabular}
\begin{tabular}{ll} 
System Audits \\
& \\
Watchdogs & 0 \\
Exceptions & 0 \\
Bad Traps & 0 \\
Up Time: & 0 days, 00:00:00
\end{tabular}
```

MLIE|S
ARMAGEDDON

```
\begin{tabular}{l}
\hline \multicolumn{2}{|l|}{ Main Menu } \\
\multicolumn{2}{|l|}{ Audits } \\
\(\quad\) Gameplay Audits \\
\hline
\end{tabular}

Gameplay Audits
\begin{tabular}{ll} 
Player Starts & 0 \\
Continues & 0 \\
Continues Offered & 0 \\
Games Started & 0 \\
Games Ended (not won) & 0 \\
Games Ended (won) & 0 \\
\hline Average Game Time (playing) & \(00: 00: 00\) \\
\hline Total Game Time (playing) & 0 days, 00:00:00 \\
Average Game Time (total) & \(00: 00: 00\) \\
Total Game Time (total) & 0 days, 00:00:00
\end{tabular}

\section*{Main Menu}

Online
These menus cover all online interaction with CoinUp®.
Online

Connection Details and Test
Cellular Information
Wi-Fi Information
Online Synchronization
Connection Wizard
Cabinet Location/Registration
Software Update
Online Debug


Cellular Information provides all relevant information if a cell modem is being used.


Main Menu
Online

\section*{WI-FI Information}

Wi-Fi Information provides all relevant information if a wireless device is being used.


\section*{Main Menu}

Online

\section*{Online Synchronization}

This option executes synchronization with the online database. It will try to update the system clock, game registration, and other online features. This synchronization is also executed when the game is rebooted. Use this option to force any changes that have been made via coinup.com.
\begin{tabular}{l} 
Main Menu \\
Online \\
\(\quad\) Connection Wizard \\
\hline
\end{tabular}

The Connection Wizard is a step by step setup process for selecting and configuring the game's internet connection.


Online
Cabinet Location/Registration
This option displays current registration status for the machine. It allows the operator to register the machine to a location or change the registered location of the game. Game registration allows a variety of helpful interactions with coinup.com and online gameplay.


Online

\section*{Software Update}

This option contacts database and file servers to check for new software updates.
\begin{tabular}{|l|}
\hline \multicolumn{1}{|l|}{ Main Menu } \\
\hline Online \\
\(\quad\) Online Debug \\
\hline
\end{tabular}



Displays server name, IP, and port for both database and file servers.


This screen displays the client's authorization certificate.


This option activates the cell modem line for use.
\begin{tabular}{|c|}
\hline Main Menu \\
\hline Online \\
\hline Online Debug \\
\hline Accept Cell Contract \\
\hline
\end{tabular}

This option accepts the cellular contract.
```

Al|E|s
ARMAGEDDON

```
Main Menu

Online
Online Debug

\section*{Purge Query Cache}

Purging the query cache will clear any online information stored locally forcing the game to pull down the most current information.

\section*{Main Menu}

Resets
This menu allows for clearing of various settings and information.
Factory Reset clears everything and restores the machine to factory defaults.


\section*{Main Menu}

\section*{System Information}

\section*{System Information}

System Details
Hardware Monitoring
View Game Log
Switch Status Monitoring
Cellular Information
Wi-Fi Information


\section*{System Details}
\begin{tabular}{ll} 
BIOS & Vendor: Hewlett-Packard Version: 786G6 \\
Kate: 03/27/12 \\
Kernel & \(2.6 .39-\mathrm{jl2}\) \\
Processor & Intel \(^{\oplus}\) Celeron \({ }^{\oplus}\) CPU G530 @ 2.40GHz \\
Memory & 4147244 kb \\
G5 Rev & 14639 \\
Library Rev & 2269 \\
Engine version & 01.31 .00 \\
I/O lib & 01.02 .02 \\
IR Track & 03.04 .00 \\
SDL & 1.2 .14 \\
Sound Lib & 1.2 .11 \\
RIO & HW: FFFC SW: 0.15 \\
Card Reader & 1.6 .3 \\
Game Version & 2.00 \\
&
\end{tabular}

Main Menu
Information

\section*{Hardware Monitoring}

\section*{Hardware Monitoring}

System Uptime:
Connection Audits Since:

IO Board Connection:
IO Board Disconnects:
IO Board Last Disconnect:
Card Reader Connection:
Card Reader Disconnects:
Card Reader Last Disconnect:

0 days, 00 hours, 00 minutes
01.01.2014 12:00:00

Pass
0
Never
Pass
0
Never

Main Menu
Information
View Game Log
This page displays any logged events or errors that occur during the game.
\begin{tabular}{|l|l|}
\hline \multicolumn{2}{|l|}{ Main Menu } \\
\hline Information \\
\(\quad\) Switch Status Monitoring \\
\hline
\end{tabular}

\section*{Switch Status Monitoring}
\begin{tabular}{ll} 
Left Start Button Status & OK
\end{tabular}

Right Start Button Status
OK
Left Gun Trigger Status
OK
Right Gun Trigger Status
OK
Left Gun Reload Status
OK
Right Gun Reload Status
Left Gun Grenade Status
OK

Right Gun Grenade Status
OK
OK


See pg 28 - same screen as in Online Menu
Main Menu
\begin{tabular}{l} 
Information \\
\(\quad\) Wi-Fi Information \\
\(\quad\) See pg 28 - same screen as in Online Menu \\
\hline
\end{tabular}
```

Main Menu
Tests

```

These various tests check cabinet and game functionality. They are divided into submenus for input and output tests.

Tests

Input Tests
Video Tests
Coin Meter Test
Lamp Tests
Sound Tests
File Test
Watchdog Test


\section*{Input Tests}

Gun Force Feedback Tests
Switch Tests
Card Reader Test
Gun Camera Test


Test the various recoil settings for each gun.
\begin{tabular}{l}
\multicolumn{2}{|l|}{ Main Menu } \\
\multicolumn{2}{|l|}{ Tests } \\
\(\quad\) Input Tests \\
\(\quad\) Switch Tests \\
\hline
\end{tabular}

This checks input switch performance. By default, all switches should indicate inactive.
When a switch is pressed, it should indicate active and be highlighted on screen.


The Switch Test menu has a unique exit procedure, because it checks the switches normally used for navigation. To exit the switch test menu, press the test button five times.


On swipe, card reader should read the card type and indicate success/failure for track \(1 \& 2\). If results indicate failure, that card might be worn. If results indicate failure across several cards, card reader might be faulty.
```

Card Reader Test
Card Type: Player Card
Track 1 Data: Success
Track 2 Data: Success
Total \# of Swipes: 0
\# of Successful Swipes: 0
\# of Failed Swipes: 0
Swipe Card At Any Time.

```
```

Main Menu
Tests
Input Tests

```

\section*{Gun Camera Test}
*Only Present on DELUXE unit* This test displays the IR array information as interpreted by the gun's camera. This will be displayed onscreen as two rows of dots. If these dots do not display, there may be a problem with the camera or IR array boards. If any grouping of dots is not present or flickers, IR board should be replaced.

\section*{Main Menu}

Tests
Video Tests

\section*{Video Tests}

Screen Color Test
Screen Color Calibration


Screen Color test provides a full screen of a solid color. Press start button to cycle colors.
Main Menu
\begin{tabular}{|l|l|}
\hline Tests \\
\(\quad\) Video Tests \\
\(\quad\) Screen Color Calibration \\
\hline
\end{tabular}

Screen test provides a static picture and color bars to assist in adjusting monitor settings.
```

Main Menu

```

Tests
Coin Meter Test
Press a start button to increment the coin meter.

Tests

\section*{Lamp Tests}

This test checks for burned-out cabinet lamps. Use volume +/- to cycle through all the lamps.


This checks sound volume and quality. Missing sounds indicated digital flaws. Distorted sounds suggest analog flaws. Lack of sound suggests disconnected or bad cables or speakers. 100 and 1000 Hz tests generate specific frequency sounds on the indicated channel. Cancel these sounds by selecting another test or exiting the menu.

\section*{Main Menu}

Tests

\section*{File Test}

This tests the integrity of the contents of the hard drive, searching for corrupt or missing game files. Damaged or missing files register as failed and are listed. The only solution to this problem is to restore the system from the DVD-ROM, as described in the Restore the Hard Drive section.

\section*{Main Menu}

Tests

\section*{Watchdog Test}

This tests the Watchdog circuit, which protects the game against screen freezes (infinite loops). After a countdown, the game resets. To exit before the reset, press either Start or Volume button, squeeze a trigger or pump a gun. If the test succeeds, the game resets normally. If the test fails, the reset process loops or ends abnormally. See the Troubleshooting Chapter to diagnose and correct this problem.


\section*{Utilities}

Gun Calibration
Cabinet Suspend
Collection


This is the same procedure described earlier on pg 13 .
\begin{tabular}{l} 
Main Menu \\
\multicolumn{2}{|l|}{ Utilities } \\
\(\quad\) Cabinet Suspend \\
\hline
\end{tabular}

This option toggles a suspended state for maintenance to avoid online service changes.


\section*{Collection}

Take Collection
View Credit Card Fee Details
View Coinup Service Details
```

Al|E|s
ARMAGEDDOR

```
\begin{tabular}{l} 
Main Menu \\
\multicolumn{2}{|l|}{ Utilities } \\
\(\quad\) Collection \\
\(\quad\) Take Collection \\
\hline
\end{tabular}

\section*{Take Collection}
\begin{tabular}{|c|c|c|}
\hline Date of Last Collection: & \multicolumn{2}{|l|}{01.10.2012 (0.0 days)} \\
\hline Gross Collection & & \$0.00 \\
\hline Cash & \$0.00 & \\
\hline Cash Card & \$0.00 & \\
\hline Credit Card & \$0.00 & \\
\hline Player Account & \$0.00 & \\
\hline Service Credits & \$0.00 & \\
\hline Balance (Cash Card not included) & & \$0.00 \\
\hline Credit Card Fees & & - \$0.00 \\
\hline CoinUp Fees & & - \$0.00 \\
\hline Net Collection & & \$0.00 \\
\hline Operator Split & (50.0\%) & \$0.00 \\
\hline Location Split & (50.0\%) & \$0.00 \\
\hline
\end{tabular}
\begin{tabular}{l} 
Main Menu \\
\multicolumn{2}{|l|}{ Utilities } \\
\(\quad\) Collections \\
\(\quad\) View Credit Card Details \\
\hline
\end{tabular}

View Credit Card Details
\begin{tabular}{lr} 
Attempted Credit Transactions & 0 \\
Successful Credit Transaction & 0 \\
Total Charged & \(\mathbf{\$ 0 . 0 0}\) \\
\hline Transaction Fees & \(\mathbf{\$ 0 . 0 0}\)
\end{tabular}
\begin{tabular}{l} 
Main Menu \\
\multicolumn{2}{|l|}{ Utilities } \\
\(\quad\) Collections \\
\(\quad\) View Coinup Service Details \\
\hline
\end{tabular}

View Coinup Service Details
\begin{tabular}{lll} 
Online Subscription Service & (0.0 days) & \(\mathbf{\$ 0 . 0 0}\) \\
Cell Modem Charge & \((0.0\) days) & \(\mathbf{\$ 0 . 0 0}\) \\
Operations Charge & \((0.0\) days) & \(\mathbf{\$ 0 . 0 0}\) \\
Credit Card Fees & & \(\mathbf{\$ 0 . 0 0}\) \\
\hline Total Coinup Service & & \(\mathbf{\$ 0 . 0 0}\)
\end{tabular}

\section*{Troubleshooting}

Warning: Review safety chapter before making any adjustments to game.
General Troubleshooting
\begin{tabular}{|l|l|l|}
\hline \multicolumn{1}{|c|}{ Problem } & \multicolumn{1}{|c|}{ Possible Cause } & \multicolumn{1}{c|}{ Solution } \\
\hline Game will not power up & Game not plugged in. & Plug game into outlet. \\
\cline { 2 - 4 } & Game not turned on. & Turn on main power switch. \\
\cline { 2 - 3 } & Game fuse is blown. & Check and replace fuse. \\
\cline { 2 - 4 } & No power to receptacle. & \begin{tabular}{l} 
Test outlet and plug game into \\
powered outlet.
\end{tabular} \\
\cline { 2 - 4 } & PC not turned on. & \begin{tabular}{l} 
Turn PC power switch on. Ensure \\
IEC cable tightly plugged in. Trace \\
cable back to source to ensure \\
continuity.
\end{tabular} \\
\cline { 2 - 5 } & & See BIOS Settings chapter. \\
\hline
\end{tabular}
\begin{tabular}{|l|l|l|}
\hline Screen not powering on with game & TV Auto On not set & Consult TV manual for details. \\
\hline
\end{tabular}
\begin{tabular}{|l|l|l|}
\hline NO VIDEO message & Video cables not plugged in properly & \begin{tabular}{l} 
Reattach and/or tighten video cable \\
to monitor. \\
Reattach and/or tighten video cable \\
to PC.
\end{tabular} \\
\hline \multirow{3}{*}{} & & Replace video cable \\
\hline & Faulty video cable & Turn PC power switch on. \\
\cline { 2 - 3 } & PC not turned on. & Check connection to speakers. \\
\hline
\end{tabular}
\begin{tabular}{|l|l|l|}
\hline Game does not load & & \\
\hline \begin{tabular}{l} 
Hard drive test reports "bad" or \\
"missing" files.
\end{tabular} & & Recover hard drive. \\
\cline { 1 - 1 } Game fails to finish loading. & & Hee procedure on pg 16. \\
\hline \begin{tabular}{l|l|}
\hline After resetting, game still reports an \\
error.
\end{tabular} & & Sare
\end{tabular}
\begin{tabular}{|l|l|l|}
\hline Game resets & Bad file. & Run File Test. Restore hard drive. \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|}
\hline Problem & Possible Cause & Solution \\
\hline \multirow[t]{3}{*}{Guns won't register or function poorly} & Bad calibration & Calibrate guns. \\
\hline & Dirty/damaged lens & Clean gun lens. \\
\hline & Gun disconnected & Check USB connections. \\
\hline \multirow[t]{2}{*}{Coin meter does not click during Test} & No pulse to meter & Check all wiring from meter to I/O board \\
\hline & Faulty meter & Replace coin meter \\
\hline Exits Test Mode every 3 seconds & Test button stuck in ON position & Slide or toggle button off after Test Menu appears \\
\hline \multirow[t]{2}{*}{Dongle Not Present} & Dongle missing or disconnected & Find dongle USB connection and reseat in USB port \\
\hline & Faulty USB port & Connect dongle to another USB port \\
\hline \multirow[t]{4}{*}{Connect I/O Board or I/O Board Missing} & USB cable disconnected & \begin{tabular}{l}
Check USB connection from PC to I/O board \\
Try connecting to a different USB port
\end{tabular} \\
\hline & Blown fuse & Verify 5 V and 12 V fuses are not blown \\
\hline & No power to RIO board & Check for proper voltage ( \(+5 \mathrm{~V},+12 \mathrm{~V}\) ) at RIO P2 connector \\
\hline & Bad RIO Board & Replace RIO board with known functional board \\
\hline
\end{tabular}

\section*{Parts}

\section*{55" Deluxe Cabinet}

Deluxe Rear Pedestal
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description \\
\hline 1 & 601-00646-01 & 55" wood cabinet - rear pedestal \\
\hline 2 & 601-00649-01-ALIENS-DOOR-MAINCAB & Wood rear door 55" cabinet & 1 \\
\hline 3 & OutriggerAssem-RED & Outrigger assembly 55" cabinet & \\
\hline 4 & \(2-1-02-00-00-017\) & APS Power Supply (Bracket \#90-AP 188) & 1 \\
\hline 5 & \(820-00001-00\) & Fan 120mm - 120V AC 15/19w & 1 \\
\hline 6 & M00-00001-00 & Fan wire guard & 1 \\
\hline 7 & Main cab Side molding & Side molding & 1 \\
\hline 8 & HP6005 & Computer & 1 \\
\hline 9 & \(600-00171-01\) & Cabinet brace - T4/Aliens & 2 \\
\hline 10 & RIO_Aliens_ASSY & Rio board assembly & 1 \\
\hline 11 & \(600-01354-01\) & Dongle Holder Bracket & 2 \\
\hline
\end{tabular}


Deluxe Marquee Assembly
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & \(600-01128-01\) & \(55^{\prime \prime}\) Cabinet IR U-channel mounting bracket & 2 \\
\hline 2 & \(600-01129-01\) & \(55^{\prime \prime}\) cabinet marquee top retainer & 1 \\
\hline 3 & \(603-00674-01\) & Petg Aliens Marquee & 1 \\
\hline 4 & \(606-00844-01\) & Translite Aliens Marquee & 1 \\
\hline 5 & ASSY-55-U-CHANNEL-TOP & \(55^{\prime \prime}\) cabinet top U-channel & 1 \\
\hline 6 & ASSY-55-U-CHANNEL-BOTTOM & \(55^{\prime \prime}\) cabinet bottom U-channel & 1 \\
\hline
\end{tabular}


Deluxe Cabinet Monitor Assembly
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & \(601-00647-01\) & \(55^{\prime \prime}\) wood cabinet - monitor enclosure & 1 \\
\hline 2 & \(55-A L I E N-M A R Q-A S S Y\) & \(55^{\prime \prime}\) cabinet - marquee assembly & 1 \\
\hline 3 & ASSY-MARQUEE-LED-LIGHTS & \(55^{\prime \prime}\) cabinet LED lights & 1 \\
\hline 4 & ALIENS-55-LCD-ASSY & \(55^{\prime \prime}\) LCD monitor & 1 \\
\hline 5 & \(820-00001-00\) & Fan 120mm 120v ac \(15 / 19 \mathrm{w}\) & 2 \\
\hline 6 & \(800-00001-00\) & 120 mm wire fan guard & 2 \\
\hline 7 & ALIENS 55 SPEAKER ASSY (L) & Left speaker & 1 \\
\hline 8 & ALIENS 55 SPEAKER ASSY (R) & Right speaker & 1 \\
\hline 9 & \(600-01207-01-S T R U T-55 L C D ~\) & \(55 "\) LCD mounting struts & 2 \\
\hline
\end{tabular}


Deluxe Front Pedestal Assembly
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & 601-00648-01 & 55" wood cabinet - front pedestal & 1 \\
\hline 2 & ASSY-CONTROL-PANEL-ALIENS & Aliens control panel assembly & 1 \\
\hline 3 & ASSY-LEFT-HOLSTER-ALIENS & Aliens left holster assembly & 1 \\
\hline 4 & ASSY-RIGHT-HOLSTER-ALIENS & Aliens right holster assembly & 1 \\
\hline 5* & ASSY-CARDSWIPE-ALIENS & Aliens card swipe with blanking plate assembly & 1 \\
\hline 6 & 600-01134-01 & LED T-molding clip & 4 \\
\hline 7 & 603-00718-01 & LED T-molding approximately 60" & 2 \\
\hline 8 & 800-00005-00 (RED) & Red coin door & 1 \\
\hline 9 & 601-00685-01 & 8" woofer plate & 1 \\
\hline 10 & 2-1-18-00-00-000 & 8" woofer 4 ohm & 1 \\
\hline 11 & Triangle Gun Plate & Gun plate (included with gun assembly) & 2 \\
\hline 12 & 820-00022-00 & Aliens left dark grey gun with green butt & 1 \\
\hline 13 & 820-00023-00 & Aliens right dark grey gun with orange butt & 1 \\
\hline 14 & 600-00172-01 & Gun bracket & 2 \\
\hline 15 & 810-00053-01 & Service Button Assembly & 1 \\
\hline
\end{tabular}
*See pg 50 for more info on card swipe assembly and blanking plate


Deluxe Control Panel Assembly
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & \(603-00669-01\) & Aliens 55" cabinet control panel vacform & 1 \\
\hline 2 & \(603-00668-01\) & Aliens 55" cabinet control panel decal & 1 \\
\hline 3 & \(606-00853-01\) & Aliens 55" cabinet control panel translate instructions & 1 \\
\hline 4 & \(603-00670-01\) & Aliens 55" cabinet control panel polycarb oval & 1 \\
\hline 5 & \(606-00854-01\) & Aliens 55" cabinet control panel translite oval & 1 \\
\hline 6 & \(702-0007-01\) & Aliens left player start button & 1 \\
\hline 7 & \(702-00008-01\) & Aliens right player start button & 1 \\
\hline 8 & \(500-00158-01\) & \(5.91^{\prime \prime}(15 \mathrm{~cm})\) LED Strip (white) & 2 \\
\hline 9 & \(500-00157-01\) & \(9.84^{\prime \prime}(25 \mathrm{~cm})\) LED Strip (White) & 3 \\
\hline
\end{tabular}


Deluxe Alien Topper Assembly
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & \(600-01135-01\) & Aliens 55" cabinet header bracket & 1 \\
\hline 2 & \(606-00860-01\) & Aliens 55" cabinet topper front decal & \\
\hline 3 & \(603-00679-01\) & Aliens 55" cabinet formed topper & 1 \\
\hline 4 & ALIENS 55-Header Marquee Backlight Assy & Aliens 55" cabinet marquee backlight assembly & 1 \\
\hline 5 & Header-LED Shroud-ASSY & Aliens 55" Header LED shroud assembly & 1 \\
\hline 6 & ALIENS-Marquee-Pan-Assy & Aliens 55" marquee pan assembly & 1 \\
\hline 7 & \(606-00859-01\) & Aliens 55" topper back panel decal & 1 \\
\hline 8 & \(601-00655-01\) & Aliens 55" topper back panel & 1 \\
\hline 9 & \(600-01136-01\) & Aliens 55" topper bracket support & 1 \\
\hline
\end{tabular}



\section*{Service Manual}

\section*{Card Swipe Assembly with Blanking Plate}
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & \(600-01133-01\) & Bracket Control Panel & 1 \\
\hline 2 & \(600-00758-01\) & Blanking plate & 1 \\
\hline 3 & RHBOLT 0.19-24X0.75X0.75-C & Bolt & 2 \\
\hline 4 & MSHXNUT 0.190-24-S-N & Nut & 2 \\
\hline 5 & \(500-00035-01\) & White LED Spotlight & 2 \\
\hline
\end{tabular}

Card Swipe Assembly with Card Swipe*
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & \(600-01133-01\) & Bracket Control Panel & 1 \\
\hline 2 & \(600-00758-01\) & Blanking plate & 1 \\
\hline 3 & \(813-00012-01\) & Card Swipe & 1 \\
\hline 4 & RHBOLT 0.19-24X0.75X0.75-C & Bolt & 2 \\
\hline 5 & MSHXNUT 0.190-24-S-N & Nut & 2 \\
\hline 6 & \(90272 A 108\) & \(4-40 \times 3 / 8\) Panhead Phillips \#1 & 2 \\
\hline 7 & \(500-00035-01\) & White LED Spotlight & 2 \\
\hline
\end{tabular}


Figure 3: Card Swipe with Blanking Plate
Figure 4: Card Swipe Assembly
*Note: Card Swipe is part of Online Kit. Contact distributor for information regarding Online Kit.

Fixed Gun
Fixed Gun Assembly


Fixed Gun Assembly Part Numbers
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & 96-0853-30 & Bottom and base bracket sub assembly with bumper & 1 \\
\hline 2 & 96-0854-30 & Bracket sub assembly with handle \& mounting bracket coil pads & 1 \\
\hline 3 & 96-4923-00 & Shaft 5/8" diameter & 1 \\
\hline 4 & 96-4907-00 & Gear segment with hub & 1 \\
\hline 5 & 96-4960-00 & Spacer segment gear & 1 \\
\hline 6 & 42-0082-00 & Nut Keps 8-32 & 5 \\
\hline 7 & 43-0003-00 & 3/8 SAE flat washer zinc plated & 1 \\
\hline 8 & 43-0092-00 & Nut 3/8-16 nylock & 1 \\
\hline 9 & 43-0037-00 & Lock washer ext \#10 & 2 \\
\hline 10 & 43-0253-00 & Nut hex 10-32 jam nylock zinc plated & 1 \\
\hline 11 & 96-4904-00 & Bracket pot mounting horizontal & 1 \\
\hline 12 & 96-4913-00 & Bracket pot mounting vertical & 1 \\
\hline 13 & 96-4916-00 & Long life pot with nut \& washer & 2 \\
\hline 14 & 96-1084-00 & Left gun half & 1 \\
\hline 15 & 96-1083-00 & Right gun half & 1 \\
\hline 16 & 95-4142-00 & Switch assembly ball detect & 1 \\
\hline 17 & 75V-L012-20 & IPB with sub min sw sm cir red rd cap db ms 12v wht led lamp & 1 \\
\hline 18 & 96-2515-06 & Trigger black new style & 1 \\
\hline 19 & 96-0005-00 & Spring trigger return & 1 \\
\hline 20 & 77-2NL0-577 & VIt button rec amber no led & 1 \\
\hline 21 & 43-0280-00 & Hex head cap screw 10-32 x 1-1/4 & 1 \\
\hline 22 & 43-2327-00 & Screw \(8-32 \times 1-1 / 14^{\prime \prime}\) button head machine screw torx & 11 \\
\hline 23 & 96-2516-00 & Screw 10-32 \(\times 3 / 8\) " button head torx & 8 \\
\hline 24 & 43-0264-00 & Nut 8-32 hex nylock black & 14 \\
\hline 25 & 4008-01100-12 & Screw \(8-32 \times 3 / 4\) button head machine screw torx & 1 \\
\hline 26 & 43-0099-00 & Screw \(8-32 \times 1^{\prime \prime}\) button head machine screw torx & 2 \\
\hline 27 & 43-0172-00 & Screw \#2 \(\times 1 / 2\) type B. PPH & 2 \\
\hline 28 & 96-0831-10 & Cover & 1 \\
\hline 29 & 96-4917-01 & Gear 32DP 16T . 25 bore . 5 long & 2 \\
\hline 30 & 43-0011-00 & Set Screw 6-32" \(\times 3 / 16\) cup point & 2 \\
\hline 31 & 96-1080-10 & LED light tube & 1 \\
\hline - & 96-1081-00 & Main harness & 1 \\
\hline - & 90-1013-00 & Tie wrap 4" & 10 \\
\hline - & 43-0127-00 & Tie plate & 1 \\
\hline - & 96-0703-01 & Shrink tubing & 6 \\
\hline - & 96-0078-01 & Tubing Heat Shrink 3/16 x 3/4 & 2 \\
\hline
\end{tabular}

\section*{Fixed Gun Cabinet Assembly}

Fixed Gun Cabinet Parts and Assembly


Fixed Gun Cabinet Parts List
\begin{tabular}{|c|c|c|c|}
\hline Item & Part No. & Description & QTY \\
\hline 1 & 601-00686-01 & Aliens 42" Fixed Gun Cabinet & 1 \\
\hline 2 & AP -480 & Base Assembly with casters \& levelers & 2 \\
\hline 3 & Rear Door w-lock & Rear door with lock & 1 \\
\hline 4 & 600-00585-01 & Woofer Grill & 1 \\
\hline 5 & 606-00910-01 & Aliens-42 Woofer panel decal & 1 \\
\hline 6 & 26093-00 & Kick panel & 1 \\
\hline 7 & 2-1-10-00-00-000 & 5.25 Speaker & 2 \\
\hline 8 & 600-00586-01 & Side Speaker Grill & 2 \\
\hline 9 & 800-00047-00 & Aliens-coin door mid width - red with black bezels & 1 \\
\hline 10 & 702-00027-00 & CCFL Red Kit 2 bulbs and 1 in- verter & 2 \\
\hline 11 & AP-486 & 42" LCD Strut - right side & 1 \\
\hline 12 & AP-487 & 42" LCD Strut - left side & 1 \\
\hline 13 & 23-410 & Wood spacer - 42" strut & 2 \\
\hline 14 & 600-00803-01 & Top Plate - Main cabinet & 1 \\
\hline 15 & 606-00915-01 & Aliens 42" top plate decal & 2 \\
\hline 16 & 603-00563-01 & \(1.5 \times 2.5\) rect tube cap/alliance plastic rcr25151216a & 2 \\
\hline 17 & 01-1826 & Mounting bracket - t 600 & 2 \\
\hline 18 & 601-00676-01 & Alien 42" marquee adapter panel & 1 \\
\hline 19 & Aliens 42-T-Molding & Header Support Panel & 1 \\
\hline 20 & Aliens 42 Control Panel Assembly & Control Panel Bezel \& Assembly & 1 \\
\hline 21 & 2-1-02-00-00-017 & APS Power Supply (90-AP-188) & 1 \\
\hline 22 & 820-00023-00(R) & Aliens 42 Fixed Gun / Happ 96-7751-00 & 1 \\
\hline 23 & 820-00023-00(L) & Aliens 42 Fixed Gun / Happ 96-7751-00 & 1 \\
\hline 24 & 600-00758-01 & Card Swipe Bracket & 1 \\
\hline 25 & 2-1-18-00-00-000 & 8" woofer, 4 ohm, poly-mica cone & 1 \\
\hline 26 & 600-01136-01 & Aliens Topper Support Bracket & 1 \\
\hline 27 & 600-01304-01 & 42" Monitor Back Door & 1 \\
\hline 28 & 850-00017-01 & HP 6005 PC & 1 \\
\hline 29 & Alien-header-assy-42fixed-md & Aliens 42" Fixed Gun Header Assembly & 1 \\
\hline 30 & 42-LCD-ASSY & 42" Monitor Assembly & 1 \\
\hline 31 & Torx 2 INCH & 2" Torx screw, lock and flat washer & 2 \\
\hline 32 & Torx 3_4 & \(3 / 4 /\) Torx screw, lock and flat washer & 10 \\
\hline 33 & 93827A211 & \(1 / 4\)-20 nut & 2 \\
\hline 34 & Torx 1-1_4 & 1-1/4" Torx screw, lock and flat washer & 2 \\
\hline 35 & 601-00690-01 & Wood clamp & 1 \\
\hline 36 & 601-00580-01 & PC Wood Cleat & 1 \\
\hline 37 & 606-00909-01 & Aliens 42" Fixed Gun Left side cabinet decal & 1 \\
\hline 38 & 606-00908-01 & Aliens 42" Fixed Gun Right side cabinet decal & 1 \\
\hline 39 & 606-00920-01 & Kick Panel Decal & 1 \\
\hline 40 & 600-01354-01 & 01-1668, dongle holder & 1 \\
\hline 41 & 810-00053-01 & Test Service Button Assembly & 1 \\
\hline 42 & 606-00918-01 & Aliens 42" Fixed Gun Center Angle panel decal & 1 \\
\hline 43 & Aliens_42 RIO Assembly & Rio board assembly & 1 \\
\hline 44 & 600-01361-01 & Kick Board Mounting Plate/01-1696 & 1 \\
\hline 45 & 500-00054-01 & Kickboard PCB (24V/5A) & 2 \\
\hline 46 & 603-00603-01 & 1-1/2" Sheet metal cap plug & 2 \\
\hline 47 & 93275k12 & Foam Tape, \(1 / 8^{\prime \prime}\) thick \(\times 1 / 2^{\prime \prime}\) wide, \(39^{\prime \prime}\) length & 1 \\
\hline
\end{tabular}

\section*{Deluxe Gun Assembly}

Deluxe Gun Parts List
\begin{tabular}{|c|c|c|c|}
\hline Item No. & Qty. & Part No. & Description \\
\hline 1 & 1 & 96-0974-00 & Rifle Half Left F/Raw Thrills \\
\hline 2 & 1 & 96-0973-00 & Rifle Half Right F/Raw Thrills \\
\hline 3 & 2 & 95-4142-10 & Switch Assy Ball Detect \\
\hline 4 & 1 & 77-2L12-300SPCL & IPB SM Cir Red VIt Red Cap 6V Lamp DA3 MS No Printing \\
\hline 5 & 1 & 96-0985-00 & Barrel Cap \\
\hline 6 & 1 & 96-0988-00 & Trigger Raw Thrills Rifle \\
\hline 7 & 1 & 96-0981-00 & Plastic Butt Cap \\
\hline 8 & 1 & 96-0983-00 & Plastic Reload Cap \\
\hline 9 & 1 & 96-1045-00 & Trigger Spring \\
\hline 10 & 1 & 77-2014-00 & Nut F/VIt PB \\
\hline 11 & 12 & 43-0095-00 & Screw 6-32 3 3/8 BHMS T-10 TORX \\
\hline 12 & 7 & 43-1247-00 & Screw 6-32 \(\times 5 / 8\) BH TORX Black \\
\hline 13 & 1 & 96-1047-20 & Hose and Harness Assembly USB 12 Cond \\
\hline 14 & 1 & 820-00010-01 & Camera Assembly (Complete) \\
\hline 15 & 1 & 500-00038-01 & Kick Board \\
\hline 16 & 1 & 96-1106-00 & Urethane Bumper 5/16 ID \(\times 5 / 8 \mathrm{OD} \times 3 / 4 \mathrm{~L}\) \\
\hline 17 & 1 & 96-1041-00 & Recoil Rod for Raw Thrills Rifle \\
\hline 18 & 2 & 43-2365-00 & Bushing Flange JFI-0506-06 \\
\hline 19 & 2 & 96-1049-00 & Miner General Bumper Ref. \# GBA-098S \\
\hline 20 & 2 & 43-0995-00 & \#10 Flat Washer \\
\hline 21 & 2 & 43-0740-00 & Screw 10-32 x ½ BHCS \\
\hline 22 & 1 & 96-1044-00 & Recoil Rod Spring for Raw Thrills Rifle \\
\hline 23 & 4 & 43-0172-00 & Screw, \#2 x \(1 / 2\) Type B. PPH \\
\hline 24 & 1 & 43-0067-00 & Screw, \(8 \times 3 / 8\) Phil Hi-Low PH \\
\hline 25 & 2 & 43-0436-00 & Screw \#4 x 11/4 PH Pan Head \\
\hline 26 & 1 & 96-1051-00 & Reload Spring F/Raw Thrills Rifle \\
\hline 27 & 2 & 96-1109-00 & Urethane Stop F/Raw Thrills Reload \\
\hline 28 & 1 & 95-4372-00 & Grommet for \(1 / 4\) Dia. Hole . 44 OD x . 44 LG \\
\hline 29 & 13 & 43-0429-00 & Washer, M3 Split Ring Lock Washer \\
\hline 30 & 5 & 43-0492-00 & Screw, 4-40 x . 25 PH Pan Head \\
\hline 31 & 8 & 43-1061-00 & Screw, M \(3 \times 6 \mathrm{~mm}\) \\
\hline 32 & 1 & 95-4466-00 & Grommet Bumper F/. 25 dia. Hole . 50 OD x .15 LG \\
\hline 33 & 1 & 96-0987-00 & Brass Knocker \\
\hline 34 & 1 & 96-0986-00 & Solenoid Housing Bracket F/Raw Thrills Rifle \\
\hline 35 & 1 & 96-1040-00 & Solenoid F/Raw Thrills Rifle \\
\hline 36 & 7 & 43-0375-00 & Nut 6-32 Hex Nylock Black \\
\hline 37 & 1 & 96-0985-10 & Front Cap Upper F/T4 Rifle \\
\hline 38 & 1 & 43-2927-00 & Threaded Snap 10-32 F/T4 Rifle \\
\hline 39 & 1 & 43-2350-00 & Nut Hex 10-32 Jam Nylock Black Oxide \\
\hline 40 & 1 & 90272A112 & Screw 4-40 x 11/16 Torx Black Oxide \\
\hline 41 & 1 & 43-1322-10 & Nut Nylock, 4-40 Hex Black Oxide \\
\hline \multirow[t]{3}{*}{42} & 1 & 500-00083-01 & LED PCB F/T4 Rifle \\
\hline & 1 & 96-0019-00 & Right Side Decal \\
\hline & 1 & 96-0019-10 & Left Side Decal \\
\hline
\end{tabular}


\section*{HIIE\|S}

Electrical Wiring


Fixed Gun Cabinet Wiring Diagram


\section*{Contact Information}

For an authorized distributor near you, check the Raw Thrills website at www.rawthrills.com
Contact Betson Enterprise Headquarters or your local Betson office for sales, technical information, warranty or repair. Betson can be reached at (800) 524-2343 Fax (201) 438-4837 www.betson.com

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