



# Tethered Gun – Two Player

## Setup and Operation Service Manual

Revision Halo-Tgun-2P-1.1-10.09.24



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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 ([ey@cryptsoft.com](mailto:ey@cryptsoft.com))

This product includes audio software developed by FMOD Studio. (<https://www.fmod.com/>)

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## Safety

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### 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) events—especially 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 units 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

The monitor contains no user serviceable parts. Do not attempt to service the monitor.

### 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.

### SURGE SUPPRESSOR

It is recommended that you plug your game’s power cord into a surge suppressor to help protect from power surges that may damage sensitive electronic components.

### WATER AND OTHER LIQUID

Do not install game near sprinkler or other water jet sources. Do not use water jet to clean game. Keep minimum clearance behind game and wall for proper ventilation but also prevent access of liquid from spills and sprays from entering ventilation holes.

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### 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.

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.

### TEMPERED GLASS WARNING

When handling the LCD display glass cover take special care and set the glass down softly on a flat surface free of debris. The edge of the glass is sensitive to hard impact. Shattered glass from the monitor can travel long distances and cause bodily injury. Use proper procedures when handling broken materials.

### 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. You may not reproduce this document or any of its contents without written authorization from Raw Thrills™, Inc. or PlayMechanix™ 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.



## Product Specifications

### Electrical Power

United States, Canada (ETL)

Voltage: 120VAC, 60 Hz

Operating AC Current: 5 Amps

International (CE)

Voltage: 230VAC, 50/60 Hz

Operating AC Current: 3 Amps

### Temperature

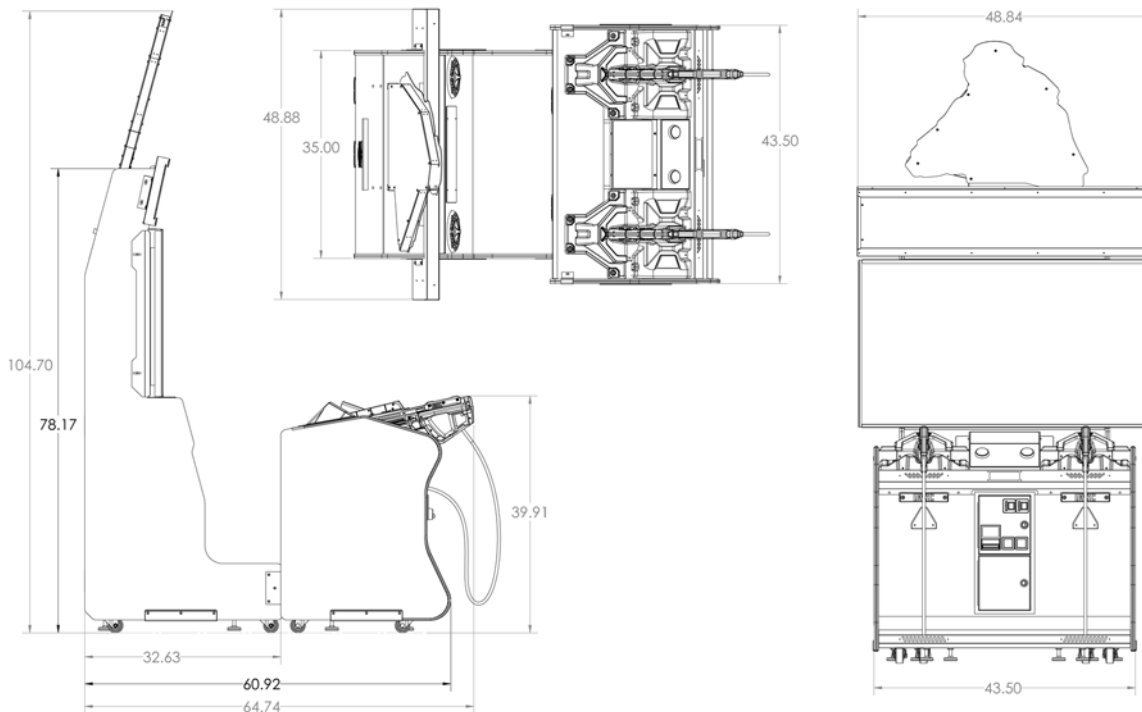
50° to 104° Fahrenheit (10° to 40° Celsius)

### Humidity

Must not exceed 95% relative humidity

### Cabinet Dimensions

Height	Width	Depth
104.70" (265.938 cm)	49.50" (125.73 cm)	64.74" (164.4396 cm)



## Fuse Replacement Guide

NOTE: FOR CONTINUED PROTECTION AGAINST FIRE AND ELECTRICAL DAMAGE,  
USE ONLY SPECIFIED FUSE TYPE AND VALUE.

Please see unit for specified fuse labeling. Abbreviations:

5A 250V	5A, 250VAC Fast Acting 3AG Fuse	Littlefuse 0312005.MXP (or equivalent)
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### Setup

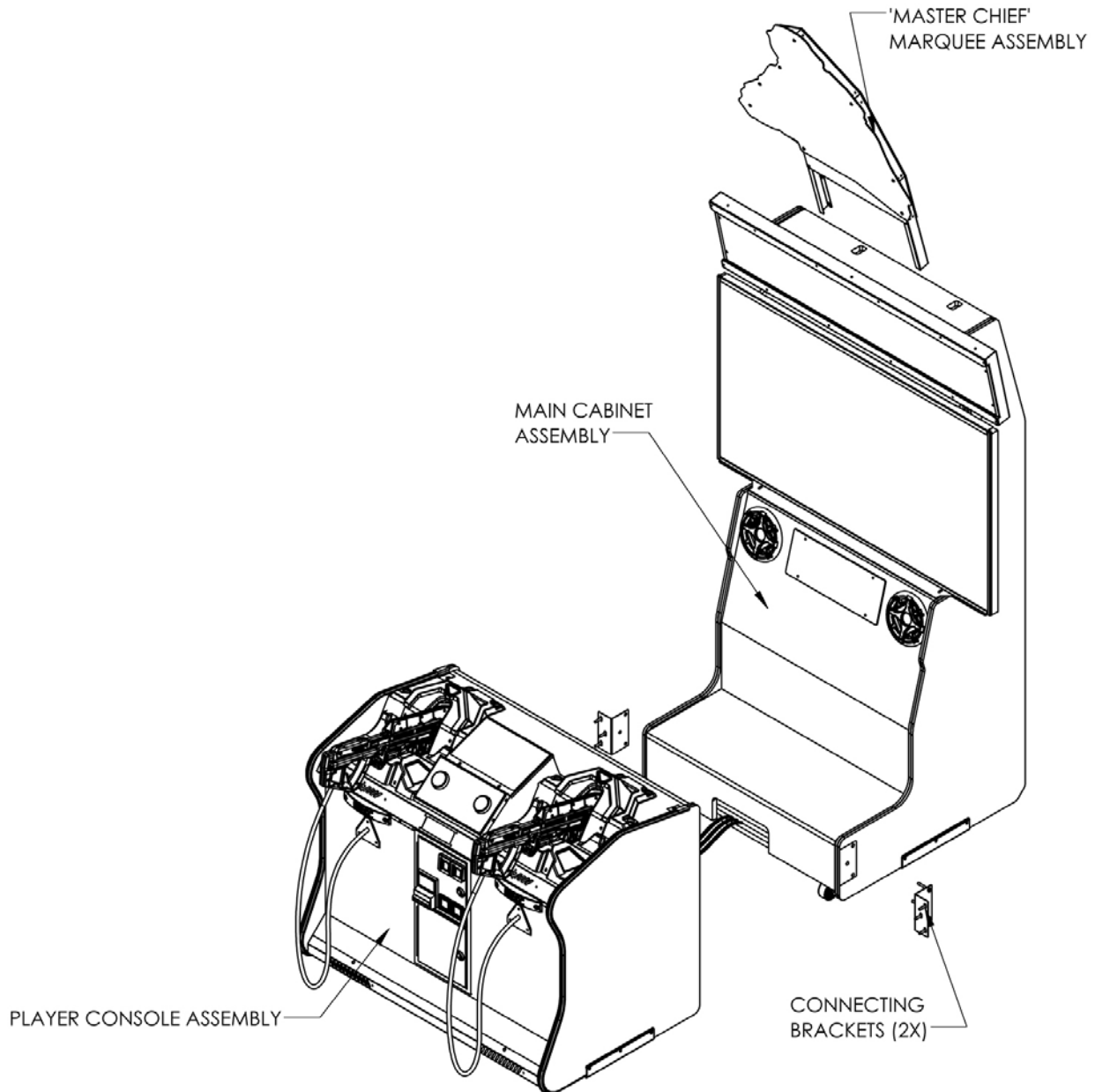
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#### Unpack Carton

1. Unpack all cartons and locate cabinet components

- Main Cabinet assembly
- Console assembly
- Master Chief marquee assembly
- Connecting brackets x2

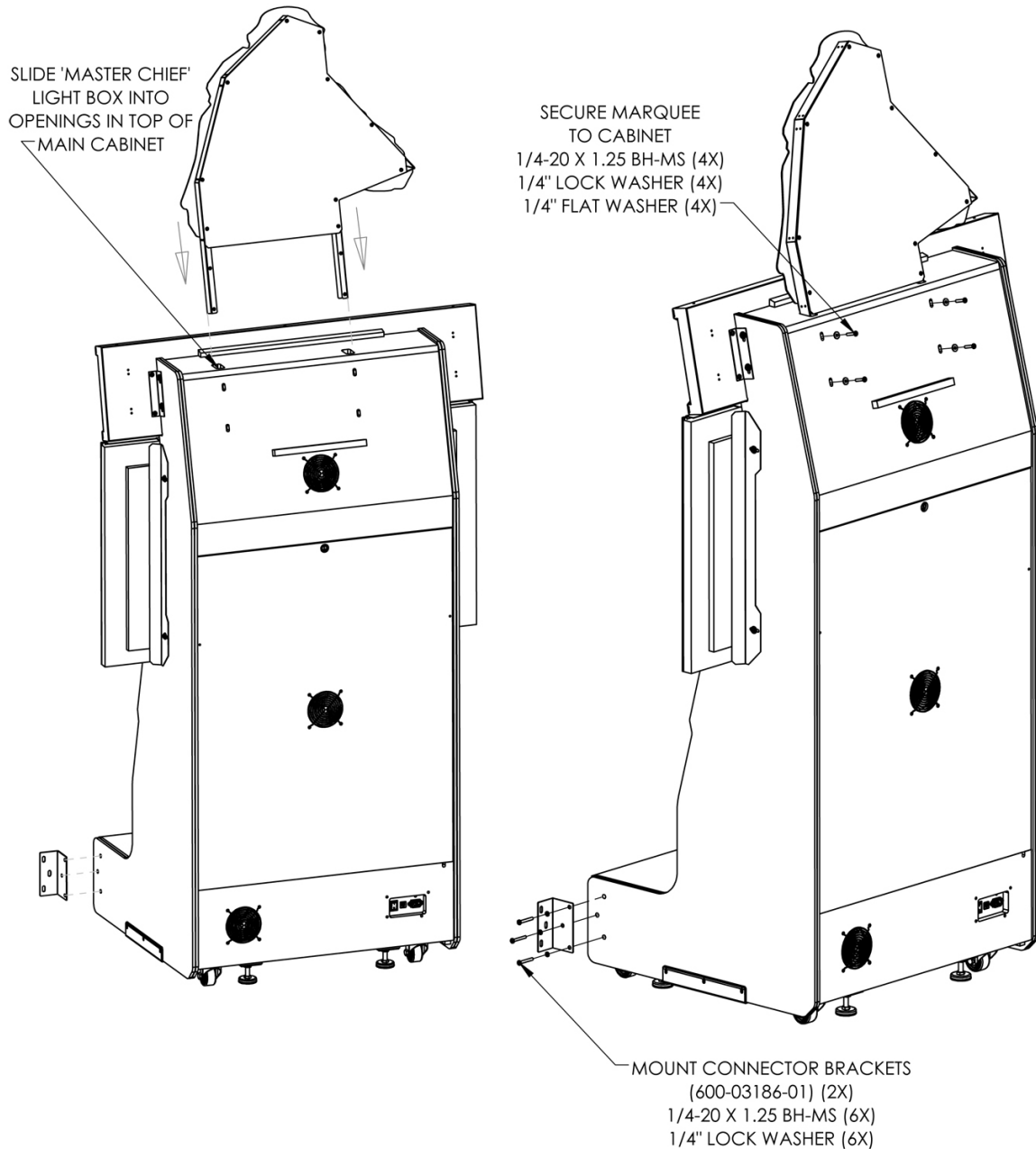
The main cabinet needs the Master Chief marquee and the connecting brackets mounted to the main cabinet before connecting the player console assembly.





## Attach Master Chief Marquee Assembly and Connector Brackets

1. Lift the Light Box assembly over the Main Cabinet assembly. Use a step ladder if needed.
2. Make cable connection between Light box assembly and Main Cabinet assembly.
3. Slide Light Box assembly into openings on top of Main Cabinet assembly.
4. Secure Light Box assembly using four 1/4-20 x 1.25 screws with flat and lock washers.
5. Secure both Connector Brackets using six 1/4-20 x 1.25 screws with flat and lock washers.

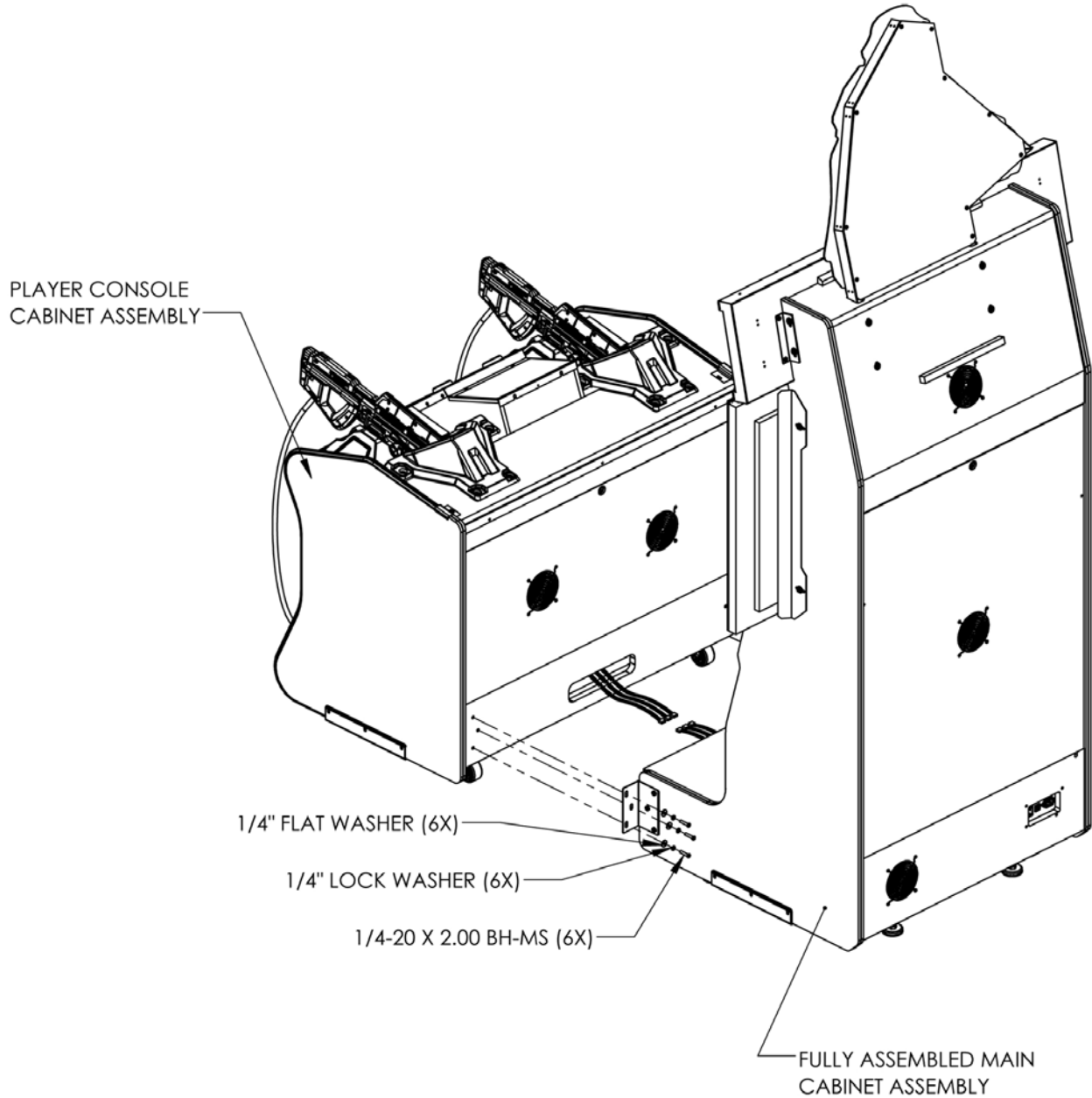




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### Attach Console Assembly to Main Cabinet Assembly

1. Position Console assembly in front of Main Cabinet assembly.
2. Make all cable connections between Console assembly and Main Cabinet assembly.
3. Secure Console Assembly to Connector Brackets using six 1/4-20 x 2.00 screws with flat and lock washers.







## Verify Cabinet Functionality

1. Verify the voltage in the nearest AC outlet.
2. Verify the AC outlet ground connection is present and working.
3. Verify that the specified operating current will not overload the supply circuits.
4. Plug the line cords into AC outlet.
5. Turn the main cabinet power switch to ON.
6. Verify that the cooling fans on the cabinet are working.  
*If not, turn off AC power and disconnect line cord. Contact Betson service*
7. Check that no component is excessively hot or emitting foul odors.  
*If so, turn off AC power and disconnect line cord. Contact Betson service.*
8. Once software loads, you will be asked to setup the cabinet software.

## Verify Input and Output Functionality

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

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### Card Reader Installation/Setup

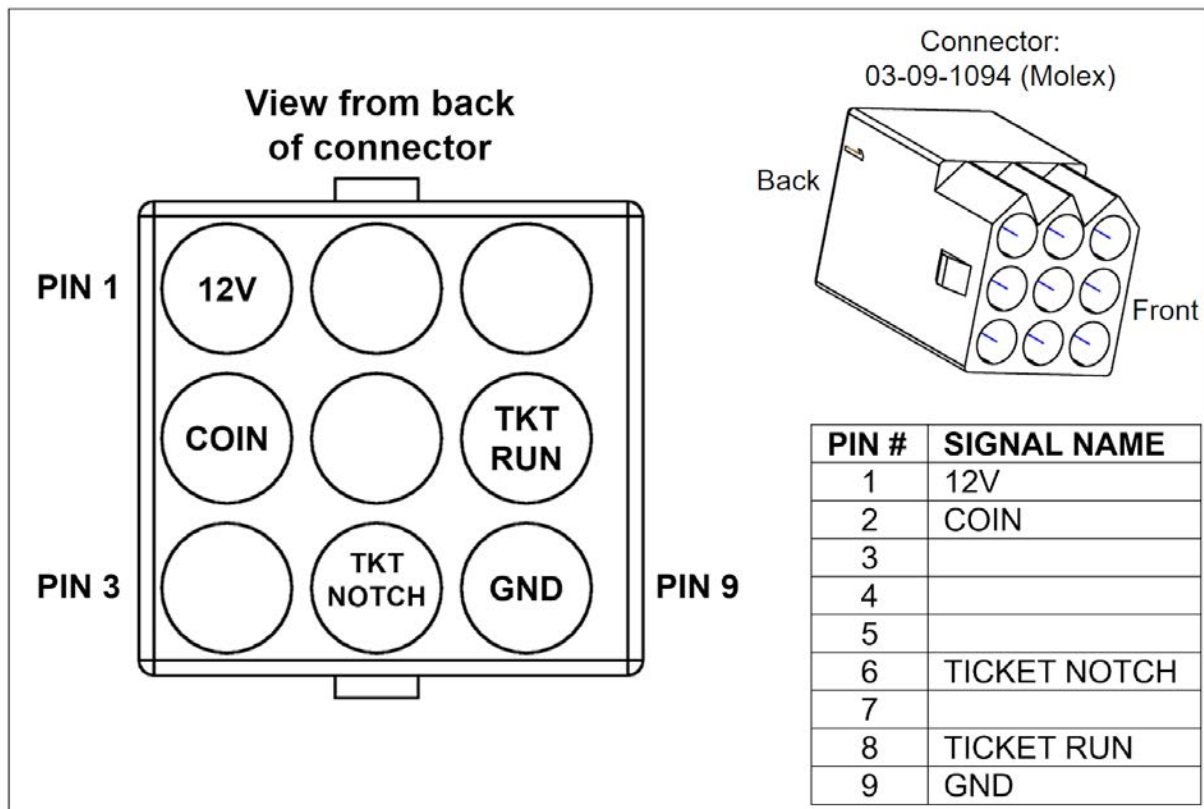
UCL, or Universal Card Link, is a debit card standard established by the American Amusement Machine Association. Visit <https://coin-op.org/standardization/> for the latest UCL standard and manual information.

You can choose to use 1 or 2 card readers in the pricing adjustments section of the test menu. It is recommended to use 2 card readers for best results.

There are (2) supplied UCL connections (located underneath the instruction plate that's above the start button plate).

If only (1) card reader will be used, use the P1 UCL connector.

The UCL connectors on this game use pins 1, 2, 6, 8, and 9. The other pins are unused. Each UCL connector can supply up to 1A at 12VDC.





## Maintenance

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### Hard Drive Recovery

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
- Erratic Game or Attract Mode
- A screen indicating Data Files Corrupted

### **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 main cabinet power switches.

### Flash Drive Restore

1. Turn both cabinet AC power switches to OFF.
2. Connect USB flash drive to an open USB port found inside the coin door.
3. Turn both cabinet AC power switches to ON.
4. Initial software loading may take several minutes. Check progress periodically.  
***Do not interrupt power or reset the game during recovery.***
5. When software has finished loading, a message indicates that restore is complete.
6. Turn both cabinet power switches to OFF and disconnect USB flash drive.
7. After 30 seconds, turn both cabinet power switches to ON.
8. After game restarts, the game will proceed through the Setup wizard with factory defaults.

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### Regular Gun Maintenance Procedure

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

1. **Verify trigger and button 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 the triggers are functioning properly.
2. **Verify reload functionality**  
Verify reload mechanisms are functional on all guns.
3. **Calibrate, calibrate, calibrate**  
Return to the Main Menu screen and select Gun Calibration. Follow the instructions earlier in this manual or on screen to calibrate all guns.

Calibrate 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 devices 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 functionality.

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



# Troubleshooting

**Warning: Review safety chapter before making any adjustments to game.**

## General Troubleshooting

Problem	Possible Cause	Solution
Game will not power up	Game not plugged in.	Plug game into outlet.
	Game not turned on.	Turn on main power switch.
	Game fuse is blown.	Check and replace fuse.
	Game power line circuit breaker tripped.	Check and reset game power line circuit breaker.
	No power to receptacle.	Test outlet and plug game into powered outlet.
	PC not turned on.	Ensure IEC cable tightly plugged in. Trace cable back to source to ensure continuity.
	PC BIOS set incorrectly.	Set PC BIOS to boot on power.

NO VIDEO message	Video cables not plugged in properly	Reattach and/or tighten video cable to monitor. Reattach and/or tighten video cable to PC.
	Faulty video cable	Replace video cable

No sound	Bad Connection	Check connection to speakers and amplifier board.
	USB Sound adapter Disconnected	Check USB cable and connection

Game does not load	Hard drive failure	Recover hard drive.  See procedure on pg 11.
Hard drive test reports "bad" or "missing" files.		
Game fails to finish loading.		
After resetting, game still reports an error.		
Game suggests inserting a boot DVD.		
Erratic game mode or attract mode.		
<p style="text-align: center;"><b>WARNING!</b> Data Files Corrupted. (Game Operation May Become Unstable.) Use "Test" Switch to Enter Test Mode and Run "File Test." Press Start To Continue.</p>		

Game resets	Bad file.	Run File Test. Restore hard drive.
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<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
Coin meter does not click	No pulse to meter	Check all wiring from meter to I/O board
	Faulty meter	Replace coin meter
Exits Test Mode every 3 seconds	Test button stuck in ON position	Slide or toggle button off after Test Menu appears
<i>Dongle Not Present</i>	Dongle missing or disconnected	Find dongle usb connection and reseal in USB port
	Faulty USB port	Connect dongle to another USB port
<i>Connect I/O Board or I/O Board Missing</i>	USB cable disconnected	Check USB connection from PC to I/O board Try connecting to a different USB port
	Blown fuse	Check and replace fuse.
	No power to RIO2 board	Check for proper voltage (+12V) at RIO2 P1 connector
	Bad RIO2 Board	Replace RIO2 board with known functional board
<i>Gun Recoil not functional</i>	Cable Disconnected	Verify all cables are connected
	Blown fuse	Check and replace fuse.



## Online Troubleshooting

Problem	Possible Cause	Solution
Game cannot connect to CoinUp® server. No IP address appears under Test Connections menu	No broadband internet service	Contact a local ISP to setup either cable modem or DSL service.
	Wrong router configuration	Configure router for DHCP (Dynamic Host Configuration Protocol).
	Disconnected Ethernet cable	Check that Ethernet cables are tightly connected at both ends. An audible click confirms tightness. Reboot game. In Diagnostic mode, select Online, then Test Connection. Confirm that IP address appears. The phrase eth0 must follow IP address.
	Faulty Ethernet cable	Test cable by connecting it from another PC into router or wall jack. Replace cable if faulty.
	Faulty Ethernet wall jack.	Plug Ethernet cable into a different jack.
	Broadband service is down.	Contact ISP.
	Faulty router	Plug Ethernet cable into different jacks in router. Plug Ethernet cable directly into DSL or cable modem instead of router. Replace router if faulty.
	Faulty network card	Call CoinUp® service

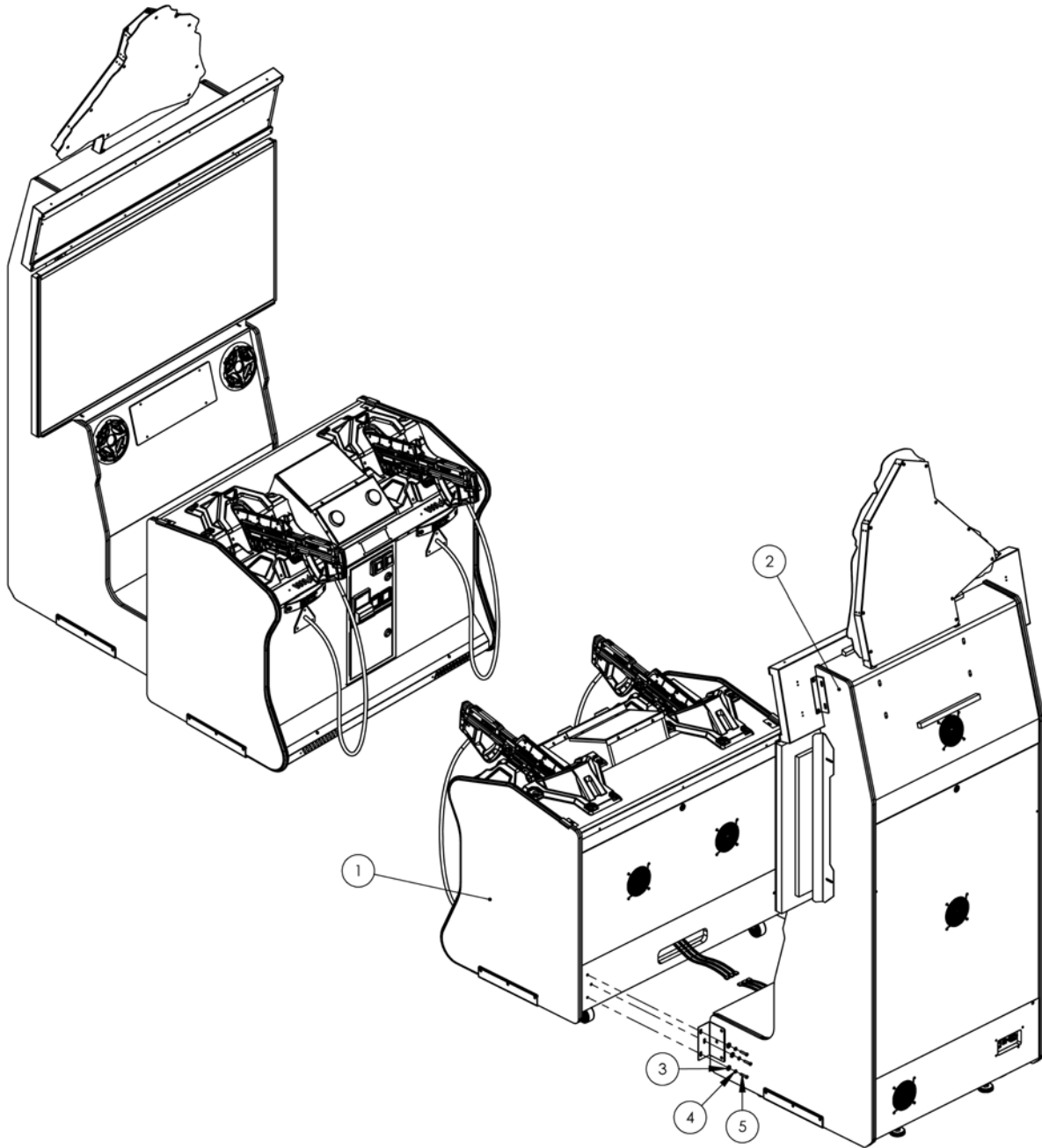
Problem	Possible Cause	Solution
Game has IP address and screen says <i>Server Ping Success</i> but Test Connection screen reports Database Ping failure or File Server Ping failure.	Firewall is blocking communication with server.	Read firewall documentation. Ensure configuration allows ICMP Echo. If router has built-in firewall, check router configuration. Enable communication on ports 80, 443, 7786, and 7787.
	Database or File Server is down	Wait 30 minutes and revisit Test Connection screen. If still reporting failure, call CoinUp® service.



## Halo – Tethered Gun – Two Player Service Manual

### Parts

#### Halo – Tethered Gun – Two Player – Cabinet Assembly

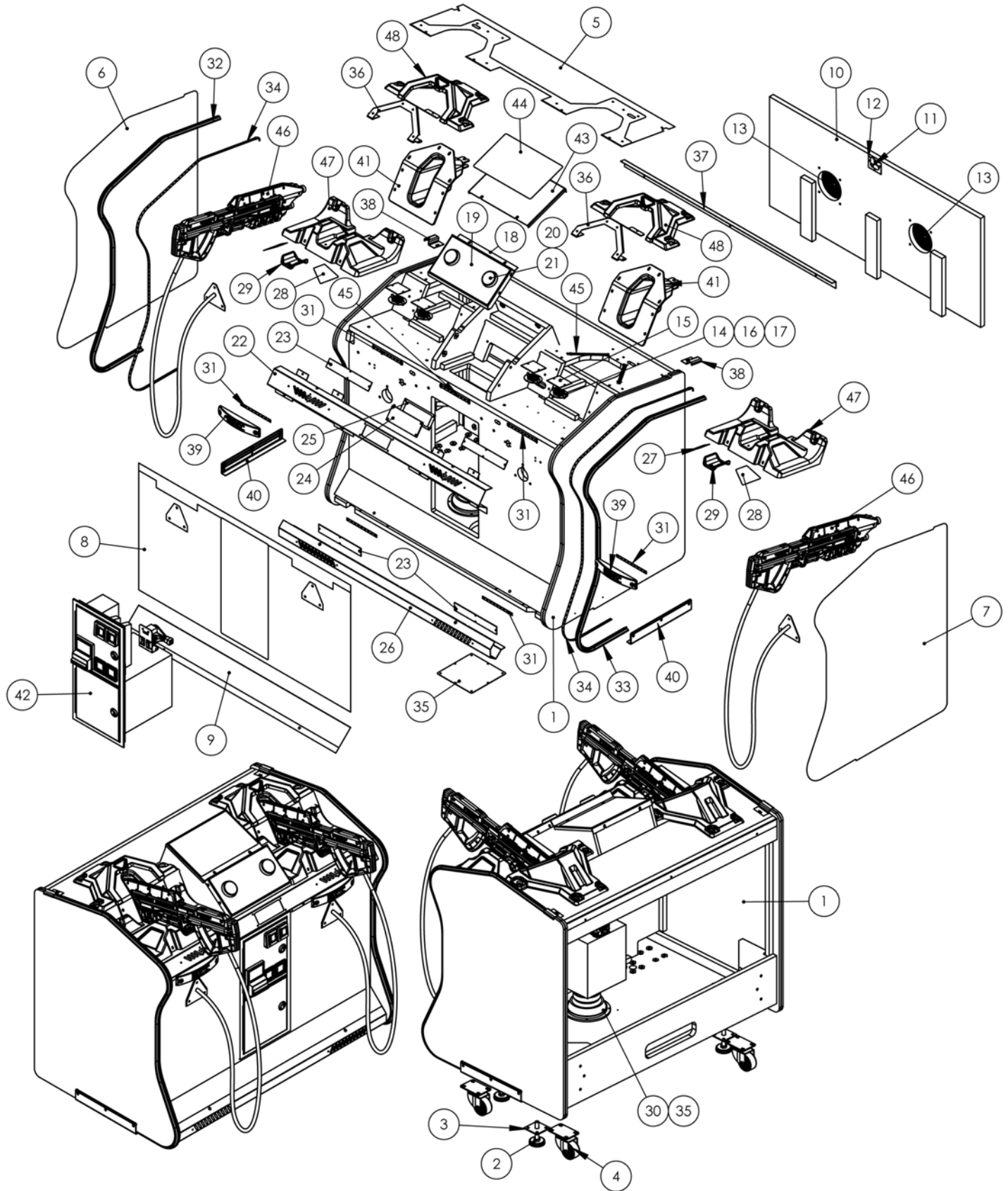


#### Halo – Tethered Gun – Two Player – Cabinet Assembly Part Numbers

Item	Part No.	Description	QTY
1	HALO-TGUN-2P-CONSOLE-ASSY	Halo Two Player Tethered Gun Console Assembly	1
2	HALO-TGUN-2P-MAIN-CAB-ASSY	Halo Two Player Tethered Gun Main Cabinet Assembly	1
3	Regular FW 0.25	1/4" flat washer - black	6
4	Regular LW 0.25	1/4" split lock washer - black	6
5	SBHSCREW 0.25-20x 1.25 HX-N	1/4-20 x 1.25" black tamper proof screw	6



## Halo - Tethered Gun - Two Player - Console Assembly



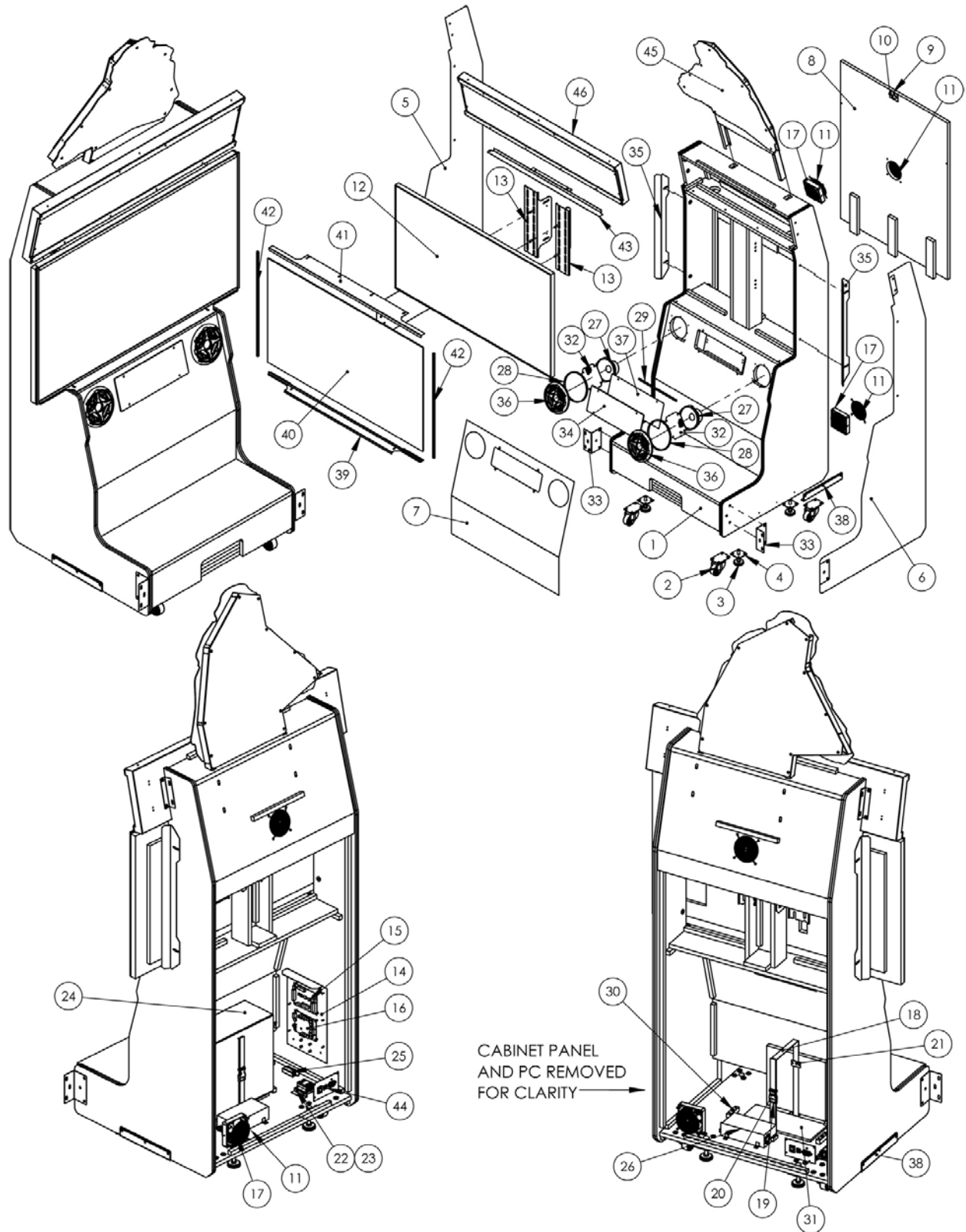
## Halo – Tethered Gun – Two Player Service Manual

### Halo – Tethered Gun – Two Player – Console Assembly Part Numbers

Item	Part No.	Description	QTY
1	601-01000-01-PART	Halo Tethered Gun Two Player Console	1
2	Leg Leveler	1/2-13 x 4" length leg leveler	4
3	Leg Leveler Plate	2.50 x 2.50 x 1/2-13 CTR – Leveler Plate	4
4	JULANG – 2.5 Inch Caster Assy	JULANG – 2.5" caster assembly	4
5	606-02030-01	Top Console Decal	1
6	606-02140-01	Halo Tethered Gun Two Player Console Decal – Left	1
7	606-02141-01	Halo Tethered Gun Two Player Console Decal – Right	1
8	606-02142-01	Halo Tethered Gun Two Player Console Decal – Front	1
9	606-02143-01	Halo Tethered Gun Two Player Console Decal – Lower	1
10	601-00983-01	Halo Tethered Gun Door Panel	1
11	Lock	Lock Standard	1
12	Lock Retainer	Lock Retainer N202-130	1
13	800-00001-00	120mm Wire Fan Guard	2
14	500-00205-01	White LED Superpuck PCB-36 LEDs	4
15	600-03199-01	Polypro light diffuser for puck light	4
16	#8x.375-SPACER	#8 x .375LG Spacer	8
17	#8x.188-SPACER	#8 x .375LG Spacer	8
18	600-03192-01	Halo Tethered Gun Two Player Control Panel	1
19	606-02144-01	Halo Tethered Gun Two Player Control Panel Decal	1
20	702-00094-01	Halo – Large Round Push Button – Green Start	1
21	702-00095-01	Halo – Large Round Push Button – Purple Start	1
22	600-03191-01	Halo Tethered Gun Two Player – Control Panel Retainer	1
23	600-03038-01	Halo Tethered Gun Polypropylene Shield	4
24	600-03195-01	Halo Tethered Gun Two Player – PETG Retainer	1
25	606-02148-01	Halo Tethered Gun Two Player – Translite Retainer	1
26	600-03190-01	Halo Tethered Gun Two Player – Base Retainer	1
27	606-02041-01	Halo Tethered Gun – 10mm Tray Decal - Left	2
28	606-02042-01	Halo Tethered Gun – 10mm Tray Decal – Right	2
29	603-01105-01	Halo Tethered Gun – Molded Gun Glide	2
30	2-1-11-00-00-000	Speaker Woofer 6.5" 4 OHM	1
31	15CM LED STRIP	15cm LED strip (RGB)	6
32	603-00718-01	Halo-55 Control Panel LED TMOLD (40cm)	1
33			1
34	500-00131-155	140cm-RGB-LED strip	2
35	600-00616-01	Grill Woofer	1
36	600-03016-01	Halo Tethered Gun – Bracket Gun Cover	2
37	600-03022-01	Halo Tethered Gun – Console Retainer – Top	1
38	600-03023-01	Halo Tethered Gun – Tmolding clip	2
39	603-00896-01	Halo Molded Cover	2
40	603-01002-01	12" clear Tmolding clip	2
41	603-01104-01	Halo Tethered Gun – Molded Holster	2
42	800-00005-01	BBHD Mid-width coin door	1
43	600-03193-01	Halo Tethered Gun Two Player Control Panel Bracket	1
44	606-02145-01	Halo Tethered Gun Two Player Control Panel Plate Decal	1
45	15CM LED STRIP (WHITE)	15cm LED strip (white)	5
46	820-00027-01	Halo Tethered Gun Assembly	2
47	603-01062-01-G (GREEN)	Halo Tethered Gun Tray (Green/Purple)	1
	603-01602-01-P (PURPLE)		1
48	603-01063-01-G (GREEN)	Halo Tethered Gun Cover (Green/Purple)	1
	603-01063-01-P (PURPLE)		1



## Halo - Tethered Gun - Two Player - Main Cabinet Assembly



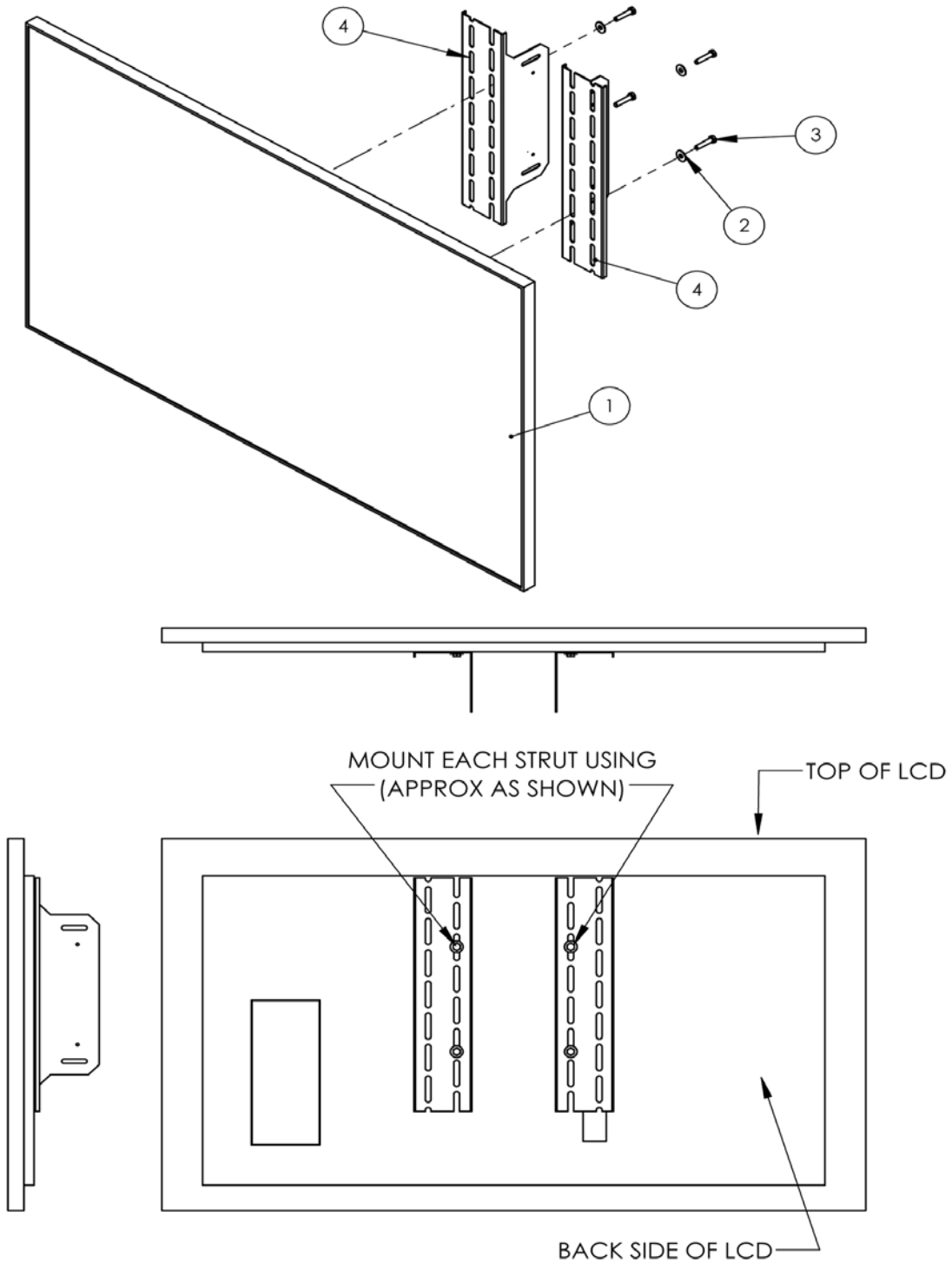


**Halo – Tethered Gun – Two Player Service Manual****Halo – Tethered Gun – Two Player – Main Cabinet Assembly Part Numbers**

Item	Part No.	Description	QTY
1	601-01001-01	ASSY-MAINCAB-HALO-TGUN-2P	1
2	JULANG – 2.5 Inch Caster Assy-part	JULANG – 2.5 INCH CASTER ASSY	4
3	Leg Leveler	1/2-13 x 4" Length	4
4	leg leveler plate	2.50 x 2.50 x 1/2-13 CTR – LEVELER PLATE	4
5	606-02136-01	HALO-TGUN-2P-LEFT-MAINCAB-DECAL	1
6	606-02137-01	HALO-TGUN-2P-RIGHT-MAINCAB-DECAL	1
7	606-02138-01	HALO-TGUN-2P-FRONT-MAINCAB-DECAL	1
8	601-00918-01	HALO-TGUN-2P-MAINCAB-DOOR-PANEL	1
9	Lock 7/8" w/ 1.25 Cam	Lock Assembly	1
10	N202-130	Retainer Lock	1
11	800-00001-00	120mm Wire Fan Guard	5
12	55-LCD-SAMSUNG-QB55B	55-LCD-SAMSUNG-QB55B	1
13	R1-1168	BRACKET-LCD-HALO-TGUN-2P	2
14	600-02049-01	RIO Mounting Plate (w/ Motion Control PCB)	1
15	500-00199-05	RIO2-PCB-ASSY	1
16	500-00212-03	RIO2-AUDIO-AMPLIFIER-PCBA	1
17	820-00001-00	FAN, 120VAC, 19/15W	2
18	87425K76 (56 length)	Nylon Strip 0.075" Thick, 1" Width, Black (56" Length)	1
19	29705T86 (male)	Plastic Buckle for 1" Wide Web (Male)	1
20	29705T86 (female)	Plastic Buckle for 1" Wide Web (Female)	1
21	600-00891-01	Securing Nylon Strap Plate	1
22	600-03119-01	Solid State Relay Bracket	1
23	800-00079-01	Crouzet 84137910N 25A Relay	1
24	LenovoM70t	LenovoM70t-PC-ASSY	1
25	380-00009-01	GROUND-LOOP-ISOLATOR	1
26	330-00003-01	HRP-600-12: 600W, 12V Dual Voltage Power Supply	1
27	2-1-10-00-00-000	5.25 Full Range Speaker	2
28	500-00245-55	55CM-RGB-CLEAR-ENCASED-LED-STRIP	2
29	30CM-WHITE-LED-STRIP	30cm Flexible LED Strip (White)	3
30	601-00580-01	PC Wood Cleat	2
31	600-00809-01	FOAM-PC-BASE-CUSHION	1
32	600-02568-01	GRILL-SPEAKER-NT	2
33	600-03186-01	HALO-TGUN-2P-CONNECTOR-BRACKET	2
34	600-03196-01	PETG-BELOW-LCD-HALO-TGUN-2P	1
35	600-03200-01	PLATE-LCD-SIDE-HALO-TGUN-2P	2
36	603-00890-01	SB3 Speaker Cover -IM (Plated)	2
37	606-02147-01	HALO-TGUN-2P-BELOW-LCD-TRANSLITE	1
38	603-01002-01	TMOLDING-CLIP-12INCH-CLEAR	2
39	R1-1169	RETAINER-GLASS-HALO-TGUN-2P	1
40	R22-1	GLASS-SHIELD-55-HALO-TGUN-2P	1
41	R1-1170	RETAINER-UPPER-GLASS-HALO-TGUN-2P	1
42	R4-1044	EDGE-GUARD-BLACK-TRIM-LOK-EGB7/16-GRGB	2
43	R1-1199	BRACKET-GAP-HALO-TGUN-2P	1
44	HALO-TGUN-2P-POWER-PLATE-ASSY	HALO-TGUN-2P-POWER-PLATE-ASSY	1
45	HALO-TGUN-2P-MC-MARQUEE-ASSY	HALO-TGUN-2P-MC-MARQUEE-ASSY	1
46	HALO-TGUN-2P-METAL-MARQUEE-ASSY	HALO-TGUN-2P-METAL-MARQUEE-ASSY	1



## Halo - Tethered Gun - Two Player - 55" LCD Assembly

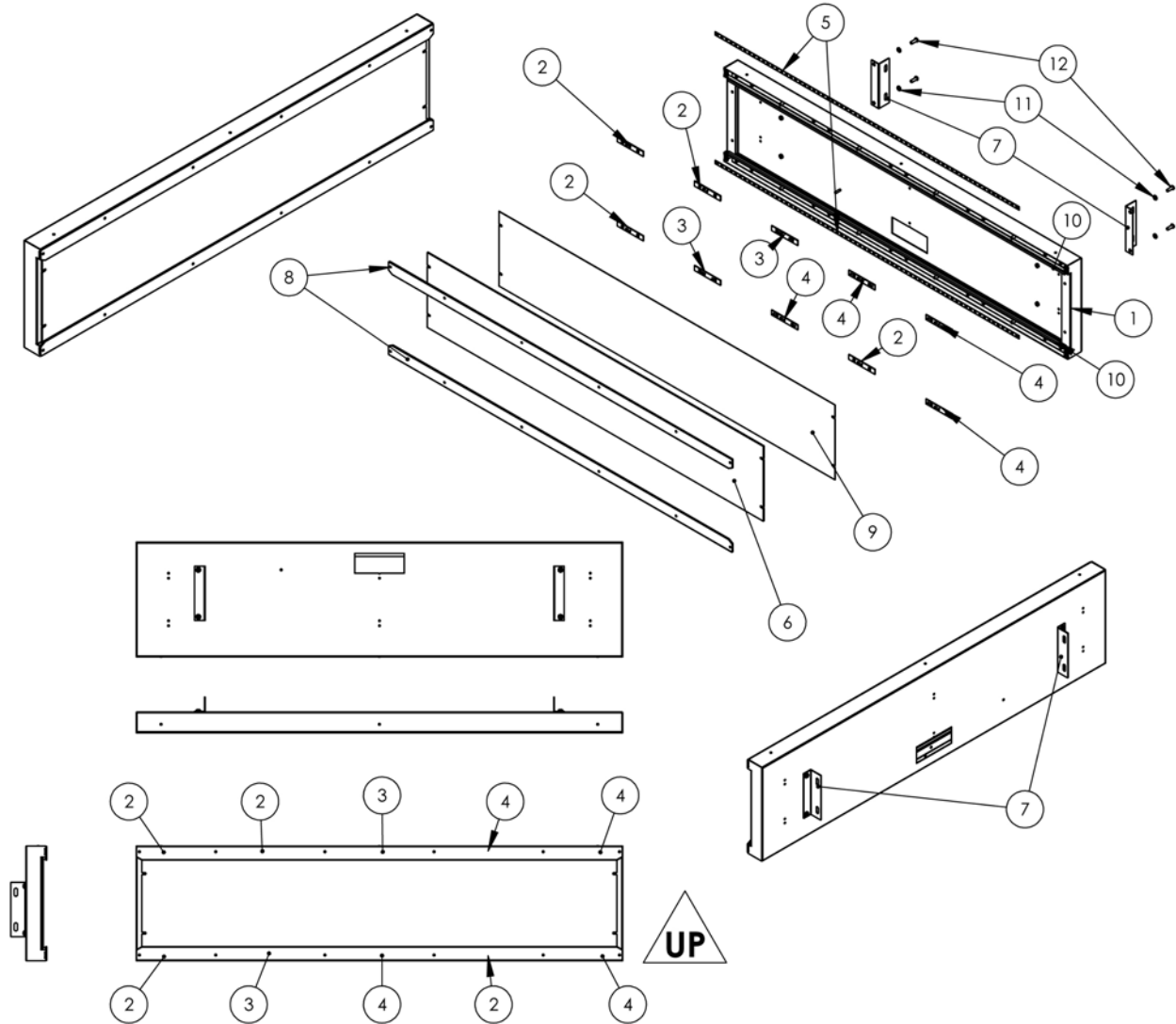


### Halo - Tethered Gun - Two Player - 55" LCD Assembly Part Numbers

Item	Part No.	Description	QTY
1	55-LCD-SAMSUNG-QB55B	55" LCD display	1
2	Regular FW 0.3125	M8 Washer	4
3	HFBOLT 0.3125-18X1.5X0.875-N	M8 x 40mm hex head bolt	4
4	R1-1168	BRACKET-LCD-HALO-TGUN-2P	2

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### Halo – Tethered Gun – Two Player – Marquee Assembly



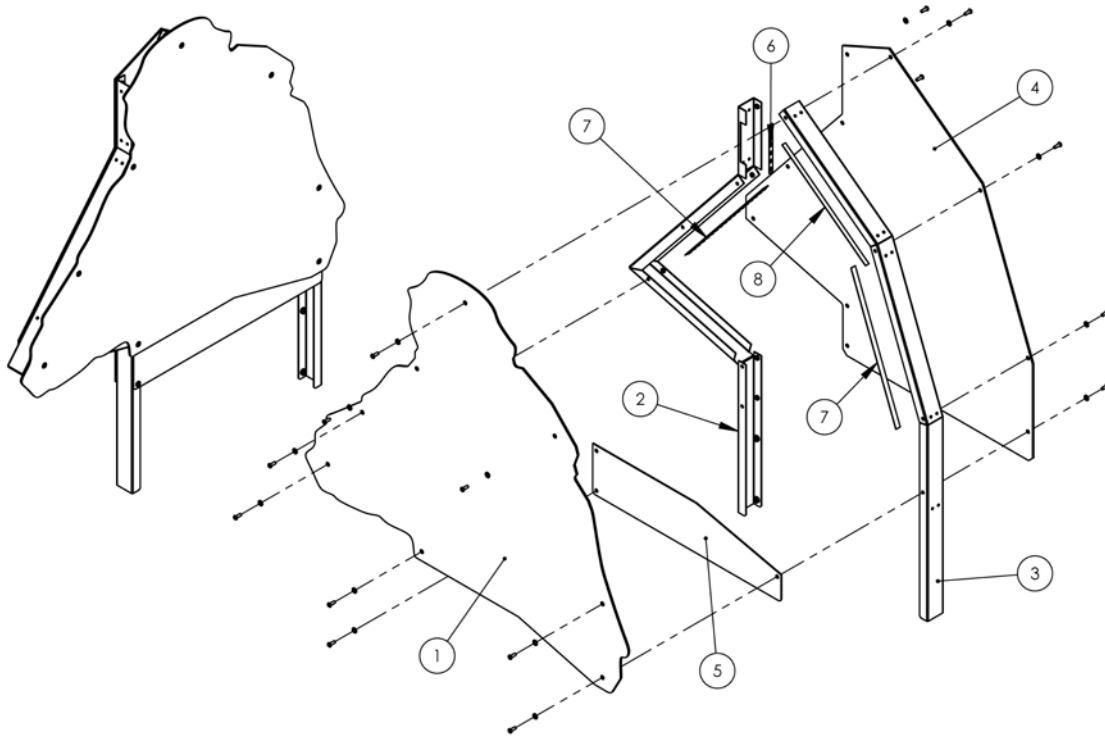
### Halo – Tethered Gun – Two Player – Marquee Assembly Part Numbers

Item	Part No.	Description	QTY
1	R1-1198	LIGHTBOX-HALO-TGUN-2P	1
2	500-00145-01	IR board #1	4
3	500-00145-02	IR board #2	2
4	500-00145-03	IR board #3	4
5	110cm LED strip (white)	110cm flexible LED strip (white)	2
6	600-03029-01	Halo Tethered Gun Two Player PETG marquee	1
7	600-03187-01	Halo Tethered Gun Two Player marquee bracket	4
8	600-03034-01	Halo Tethered Gun Two Player acrylic LED lens	2
9	606-02146-01	Halo Tethered Gun Two Player marquee translite	1
10	8694K131	Light Duty Blended EPDM Foam Strip	2
11	Regular LW 0.25	1/4" Flat Washer	4
12	SBHSCREW 0.25-20X0.75-HX-N	1/4-20 X .75 BHTP MACHINE SCREW	4





## Halo – Tethered Gun – Two Player – Master Chief Marquee Assembly

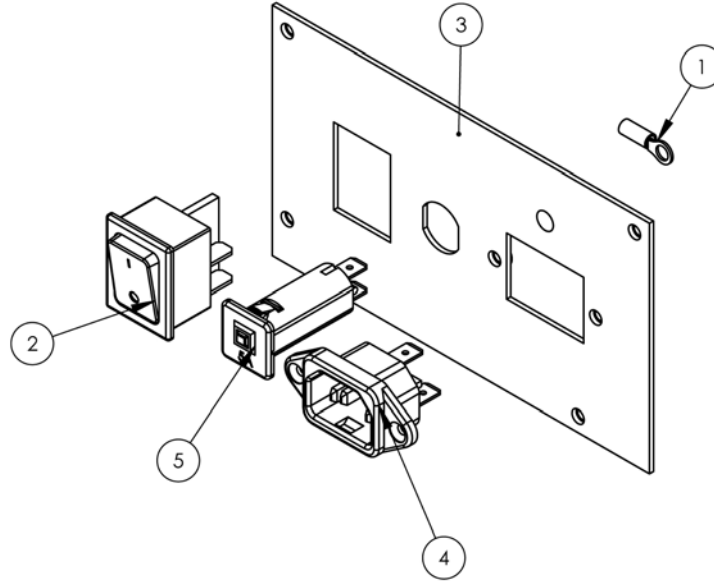


### Halo – Tethered Gun – Two Player – Master Chief Marquee Assembly Part Numbers

Item	Part No.	Description	QTY
1	606-01499-01	Master Chief screened PETG topper	1
2	600-03188-01	Halo Tethered Gun Two Player left Master Chief bracket	1
3	600-03189-01	Halo Tethered Gun Two Player right Master Chief bracket	1
4	600-03194-01	Halo Tethered Gun Two Player PVC foam Master Chief	1
5	600-03236-01	Halo Tethered Gun Two Player ABS light blocker	1
6	10cm LED strip (white)	10cm flexible LED strip (white)	1
7	30CM-WHITE-LED-STRIP	30cm flexible LED strip (white)	2
8	25CM-WHITE-LED-STRIP	25cm flexible LED strip (white)	1
9	Narrow FW 0.164	#8 flat black washer	19
10	SBHCSCREW 0.164-32x0.5-HX-N	8-32 x .50 black tamper proof screw	19

## Halo – Tethered Gun – Two Player Service Manual

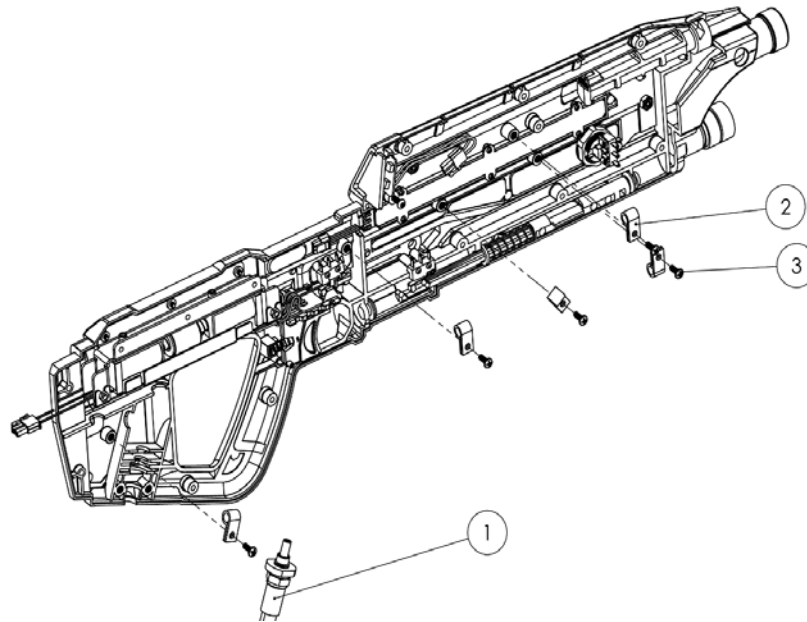
### Halo – Tethered Gun – Two Player – Power Plate Assembly



### Halo – Tethered Gun – Four Player – Power Plate Assembly Part Numbers

Item	Part No.	Description	QTY
1	Ring and Spade Tongue Terminal	Ring and Spade Tongue Terminal (#8 Screw)	1
2	1832-33-12	AC switch 15amp 125V heiland electric	1
3	600-01681-01	Plate AC – Line filter circuit breaker, on/off switch	1
4	Power Inlet Receptacle	IEC Appliance Inlet, Screw-on mounting, Front Side, quick-connect 10A	1
5	T9-611-5A	5A circuit breaker, fuseholder style, 1 pole (schurter #4404.007)	1

### Halo – Tethered Gun

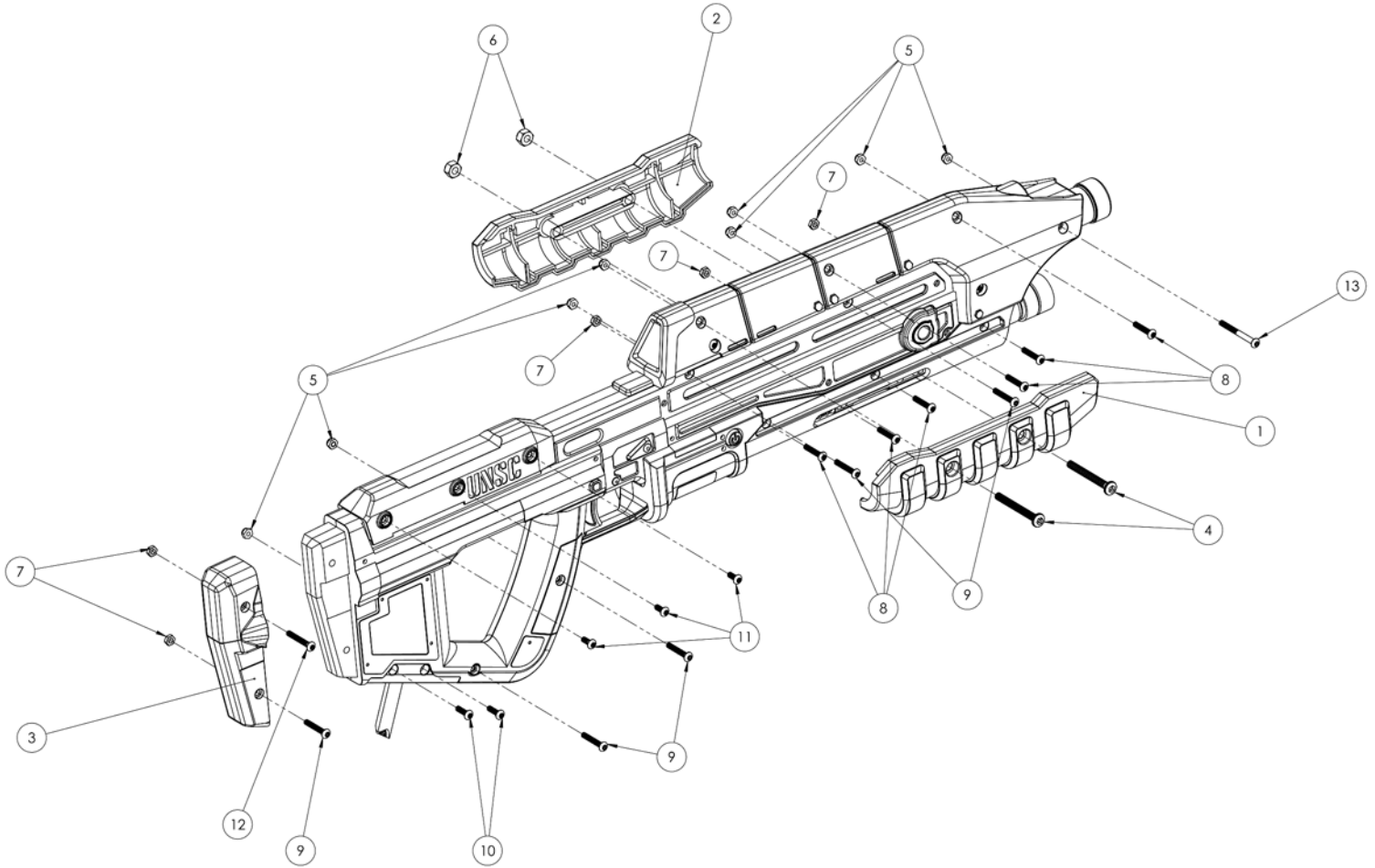


### Halo – Tethered Gun Part Numbers

Item	Part No.	Description	QTY
1	810-00486-01	Hose Harness	1
2	MMC 8876T13	Nylon Loop Clamp 1/4" ID	5
3	MMC 91772A146	6-32 x 3/8" Phillips screw	5



## Halo – Tethered Gun

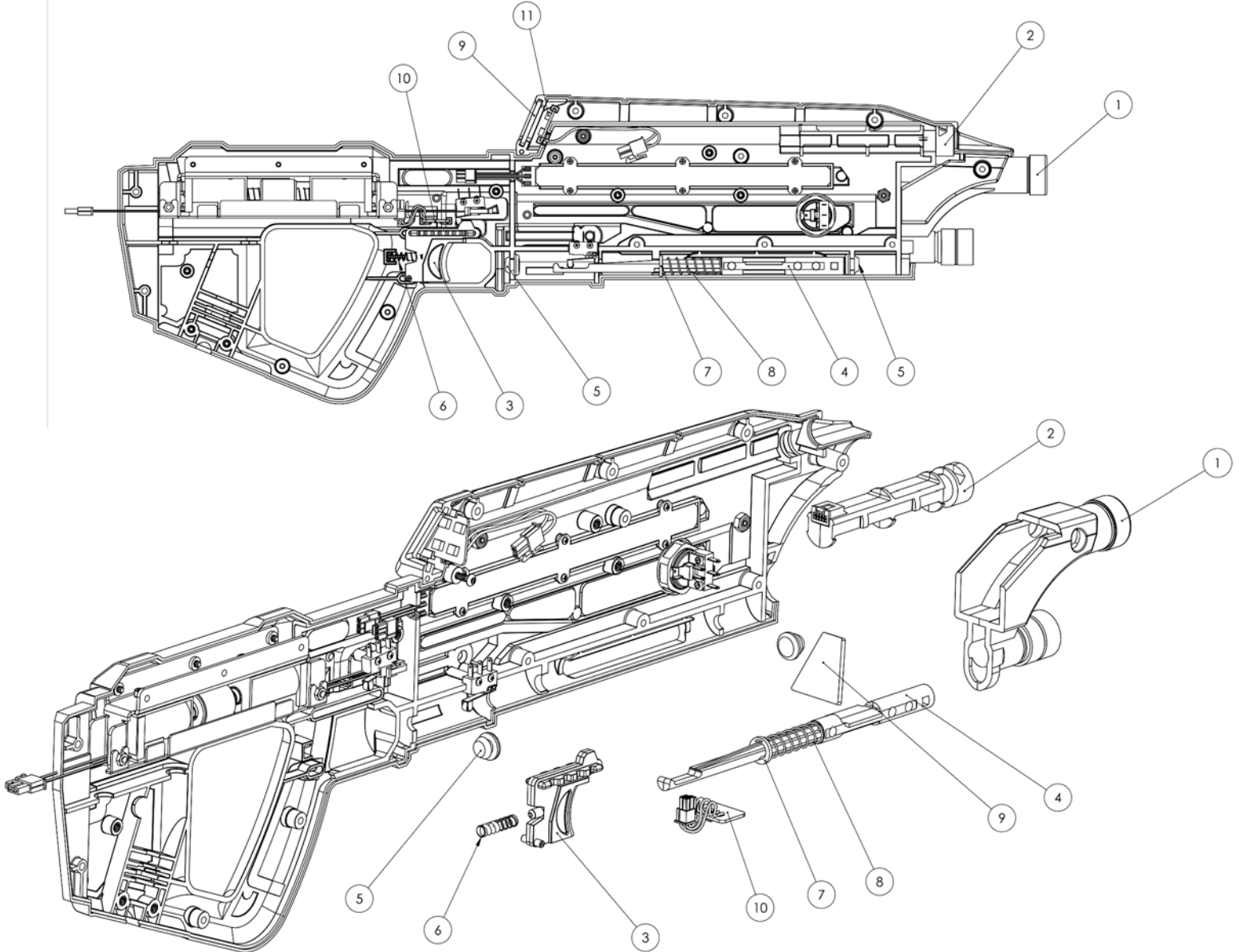


### Halo – Tethered Gun Part Numbers

Item	Part No.	Description	QTY
1	600-02935-01	Pump Right Half	1
2	600-02936-01	Pump Left Half	1
3	600-02940-01	Gun Butt	1
4		10-32 x 1 3/4" Long Black tamper proof screw	2
5		6-32 Black Nylok Nuts	8
6	MMC 90631A411	10-32 Black Nylok Nuts	2
7	MMC 90760A170	6-32 Black Thin Hex Huts	5
8	MMC 96075A118	6-32 x 3/4" Black tamper proof screw	6
9		6-32 x 7/8" Black tamper proof screw	5
10	MMC 96075A115	6-32 x 1/2" Black tamper proof screw	2
11	MMC 96075A111	6-32 x 3/8" Black tamper proof screw	3
12	MMC 96075A123	6-32 x 1" Black tamper proof screw	1
13		6-32 x 1.5" Black tamper proof screw	1

## Halo – Tethered Gun – Two Player Service Manual

### Halo – Tethered Gun

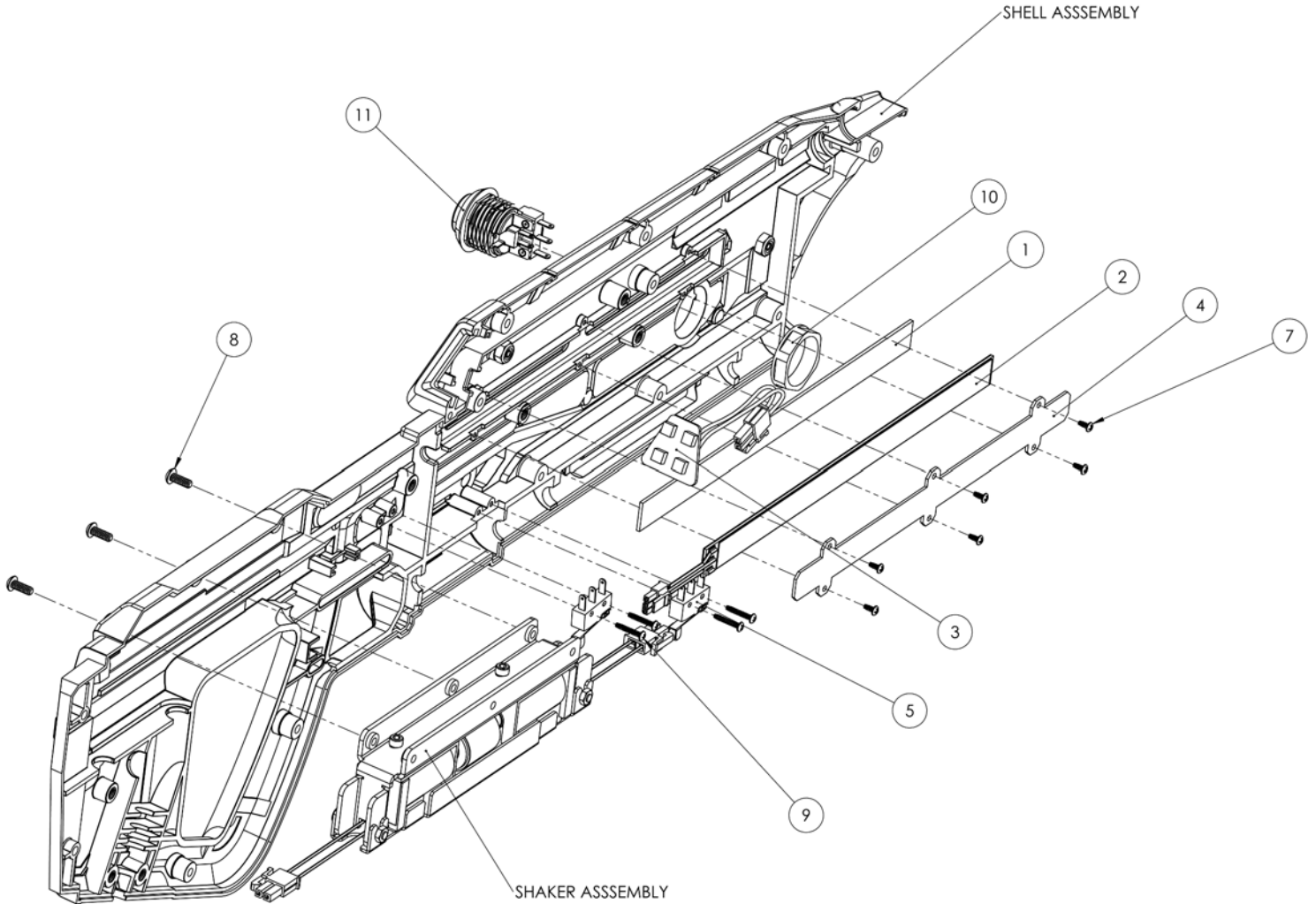


### Halo – Tethered Gun Part Numbers

Item	Part No.	Description	QTY
1	600-02939-01	Gun Barrel	1
2	820-00010-01	Camera Holder Assembly	1
3	600-02937-01	Trigger	1
4	600-02938-01	Pump Rod	1
5	600-00853-01	Pump Stop	2
6	600-03083-01	Trigger Spring	1
7	600-03077-01	Pump Spring Retainer	1
8	600-00858-01	Pump Spring	1
9	600-02941-01	Lighted Insert	1
10	500-00312-01	Trigger PCB	1



## Halo - Tethered Gun



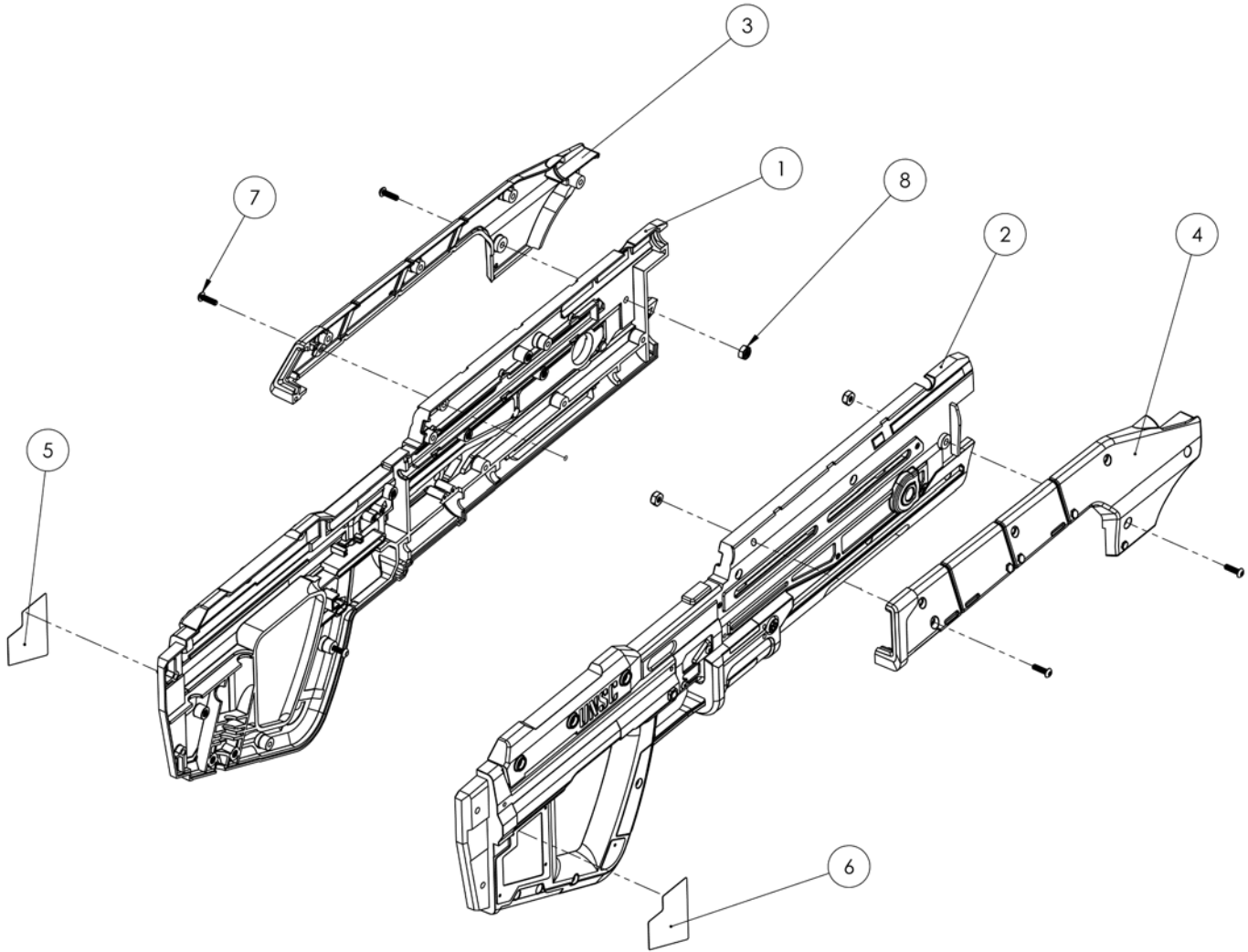
### Halo - Tethered Gun Part Numbers

Item	Part No.	Description	QTY
1	600-02954-01	Side LED lens	2
2	500-00310-01	Long LED PCB	2
3	500-00311-01	4 LED PCB	1
4	600-02951-01	LED Bracket	2
5	HAPP 95-4142-30	Cherry Switch and Actuator	2
7	MMC 99461A710	#2 x 3/16" thread forming screw	12
8	MMC 96075A111	6-32 x 3/8" black tamper proof screw	3
9	MMC 99461A735	#2 x 1/2" thread forming screw	4
10	HAPP 77-2014-00	Button nut (included with 77-2L12-30)	1
11	HAPP 77-2L12-30	Red Button	1



## Halo – Tethered Gun – Two Player Service Manual

### Halo – Tethered Gun – Shell Assembly

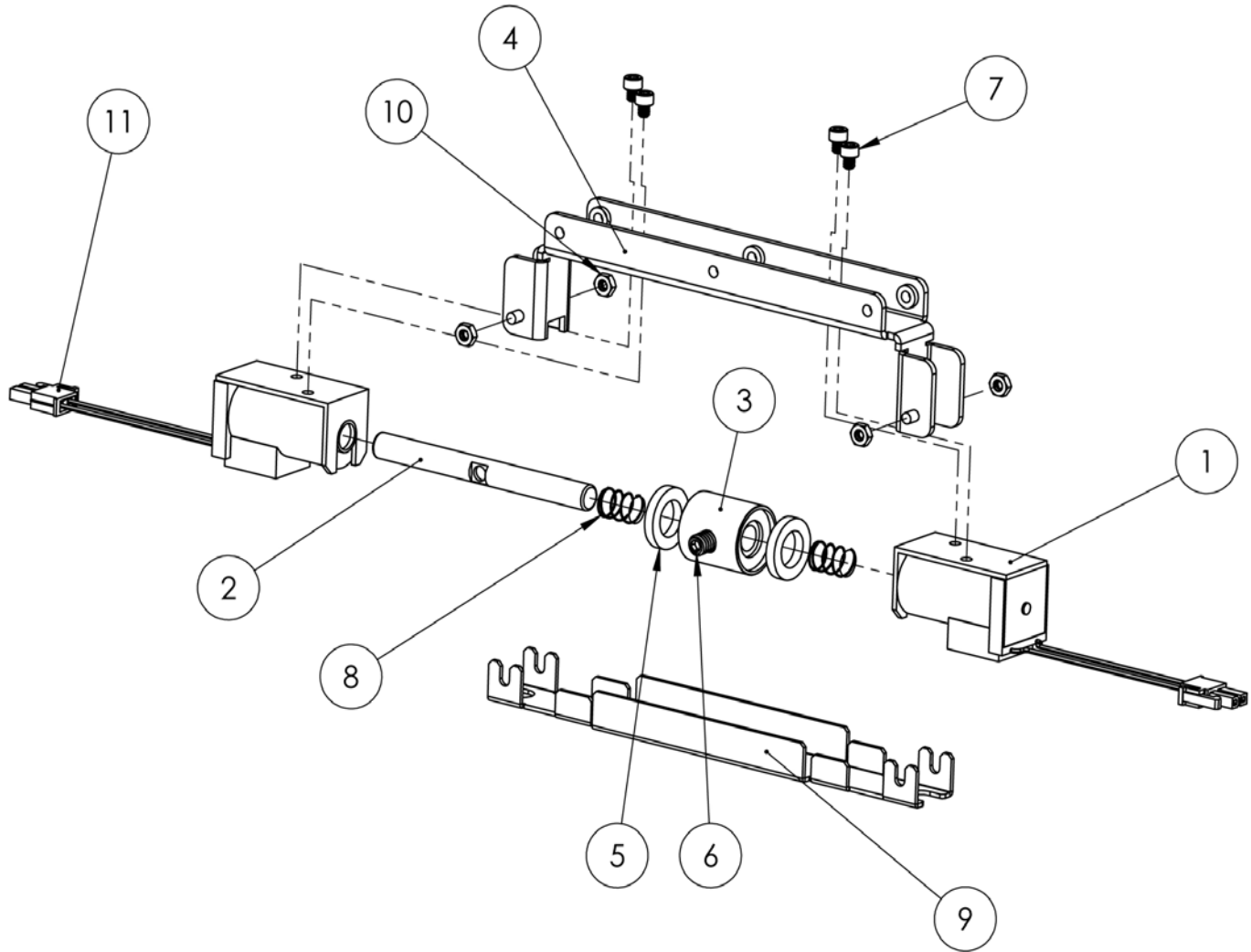


### Halo – Tethered Gun – Shell Assembly Part Numbers

Item	Part No.	Description	QTY
1	600-02931-01	Gun Body - Left	1
2	600-02932-01	Gun Body - Right	1
3	600-02933-01	Gun Cowl - Left	1
4	600-02934-01	Gun Cowl - Right	1
5	606-02043-01	Left Decal	1
6	606-02044-01	Right Decal	1
7	MMC 96075A115	8-32 x 1/2" black tamper proof screw	4
8	MMC 90101A009	8-32 thin lock nut	4



## Halo - Tethered Gun - Shaker Assembly



### Halo - Tethered Gun - Shaker Assembly Part Numbers

Item	Part No.	Description	QTY
1	604-00072-01	Solenoid	2
2	600-02943-01	Coil Shaft	1
3	600-02944-01	Coil Weight	1
4	600-02942-01	Coil Main Bracket	1
5	600-02945-01	Damper Pad	2
6	MMC 91385A534	1/4-20 x 5/16 cup point set screw	1
7	MMC 91251A269	6-32 x 5/32 socket head screw	4
8	600-02946-01	Coil Spring	2
9	600-03051-01	Heat Sink Bracket	1
10	MMC 90760A170	6-32 Nut	4
11	461-00012-02	Connector – molex 39-01-2020	2
12	403-00011-01	SBYV27-100-E3/54 Vishay Diode	2



## Halo – Tethered Gun – Two Player Service Manual

### Contact Information

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For an authorized distributor near you, visit Raw Thrills at <http://www.rawthrills.com/sales-service>

For service, contact your local distributor or your local Betson office for sales, technical information, warranty or repair. Betson can be reached at (800) 524-2343 or fax (201) 438-4837 [www.betson.com](http://www.betson.com)

**Betson Enterprises Headquarters**

303 Paterson Plank Rd.

Carlstadt, NJ 07072

(800) 524-2343 or (201) 438-1300

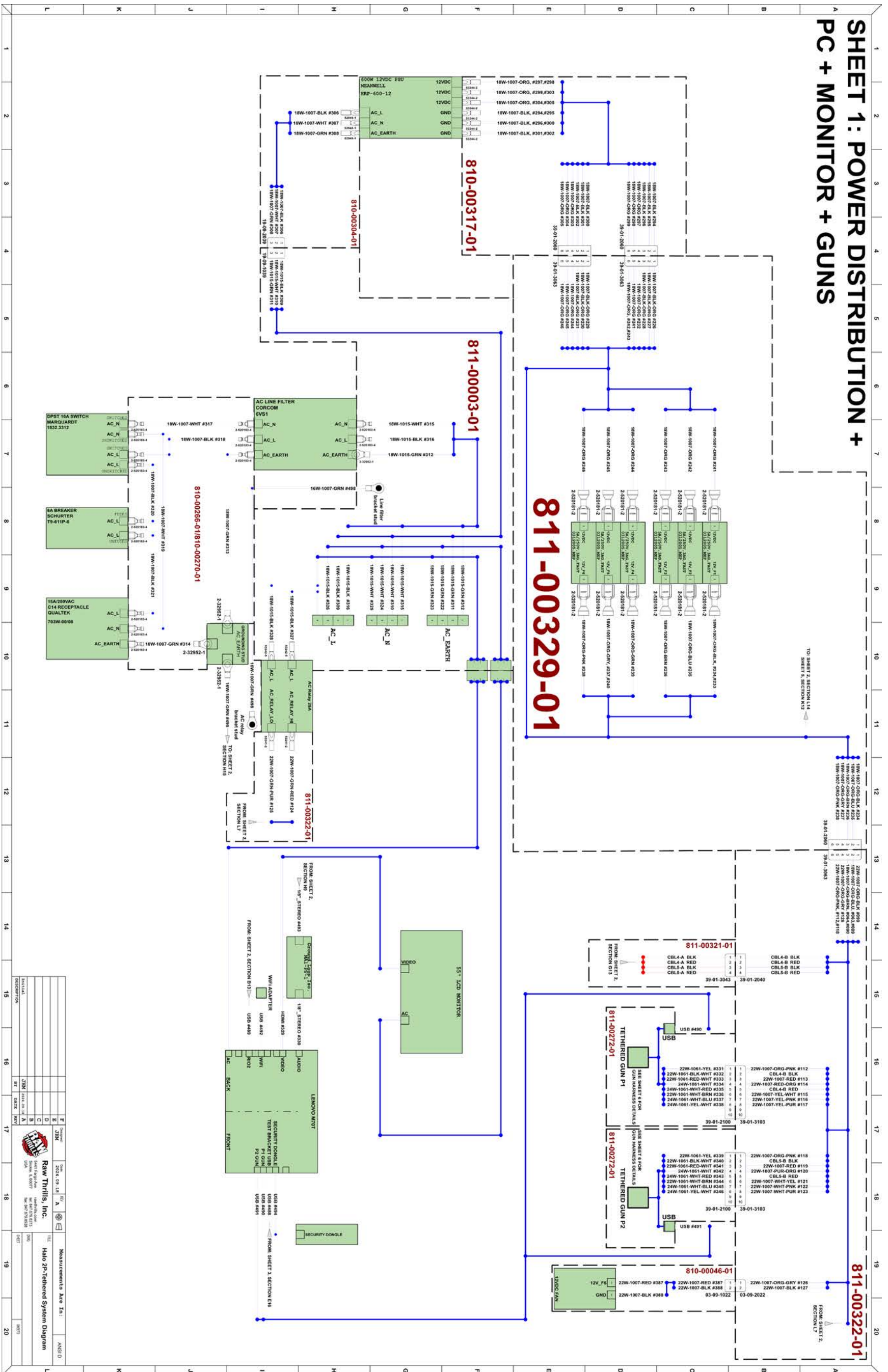
fax (201) 438-4837

[www.betson.com](http://www.betson.com)

### System Diagrams

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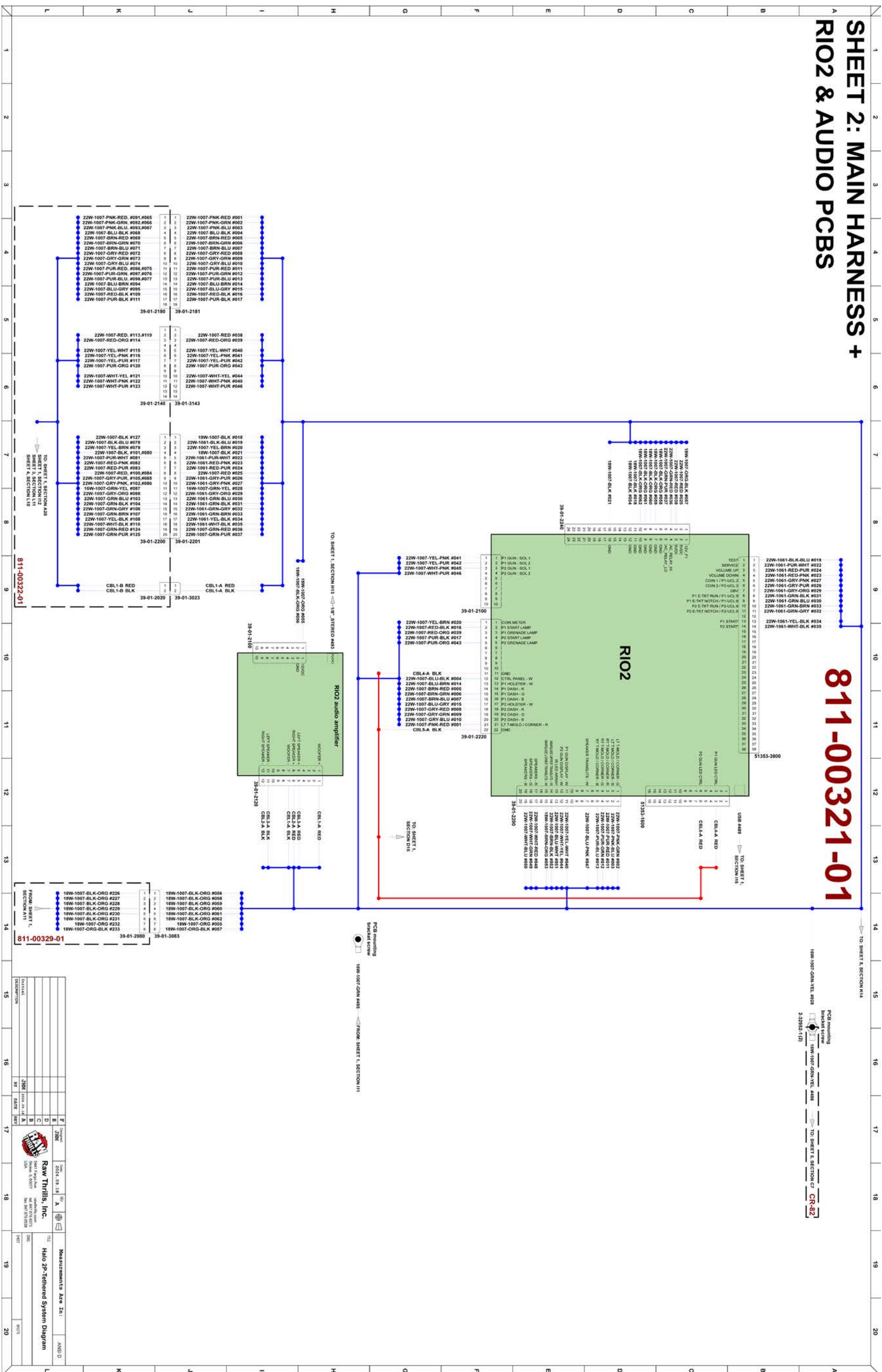
# SHEET 1: POWER DISTRIBUTION + PC + MONITOR + GUNS



DATE	BY	CHKD	APP'D
2024.09.14	JRM		
Raw Thrills, Inc. 3411 Fingert Ave. Dallas, TX 75244 972.342.1111 972.342.1111			
Halo 2p-Tethered System Diagram Measurements Are In: ANSIO			

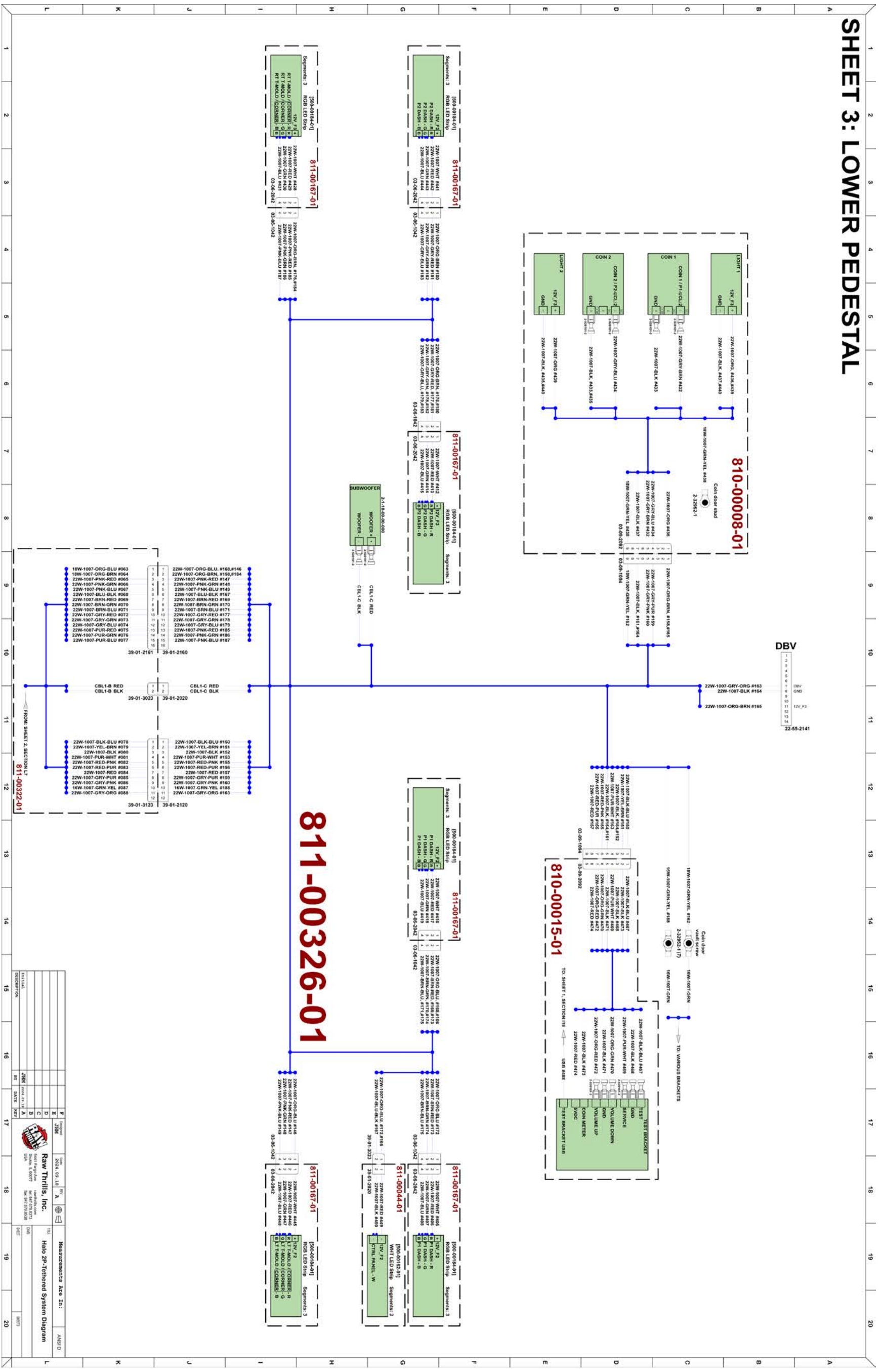
# SHEET 2: MAIN HARNESS + RIO2 & AUDIO PCBs

## 811-00321-01



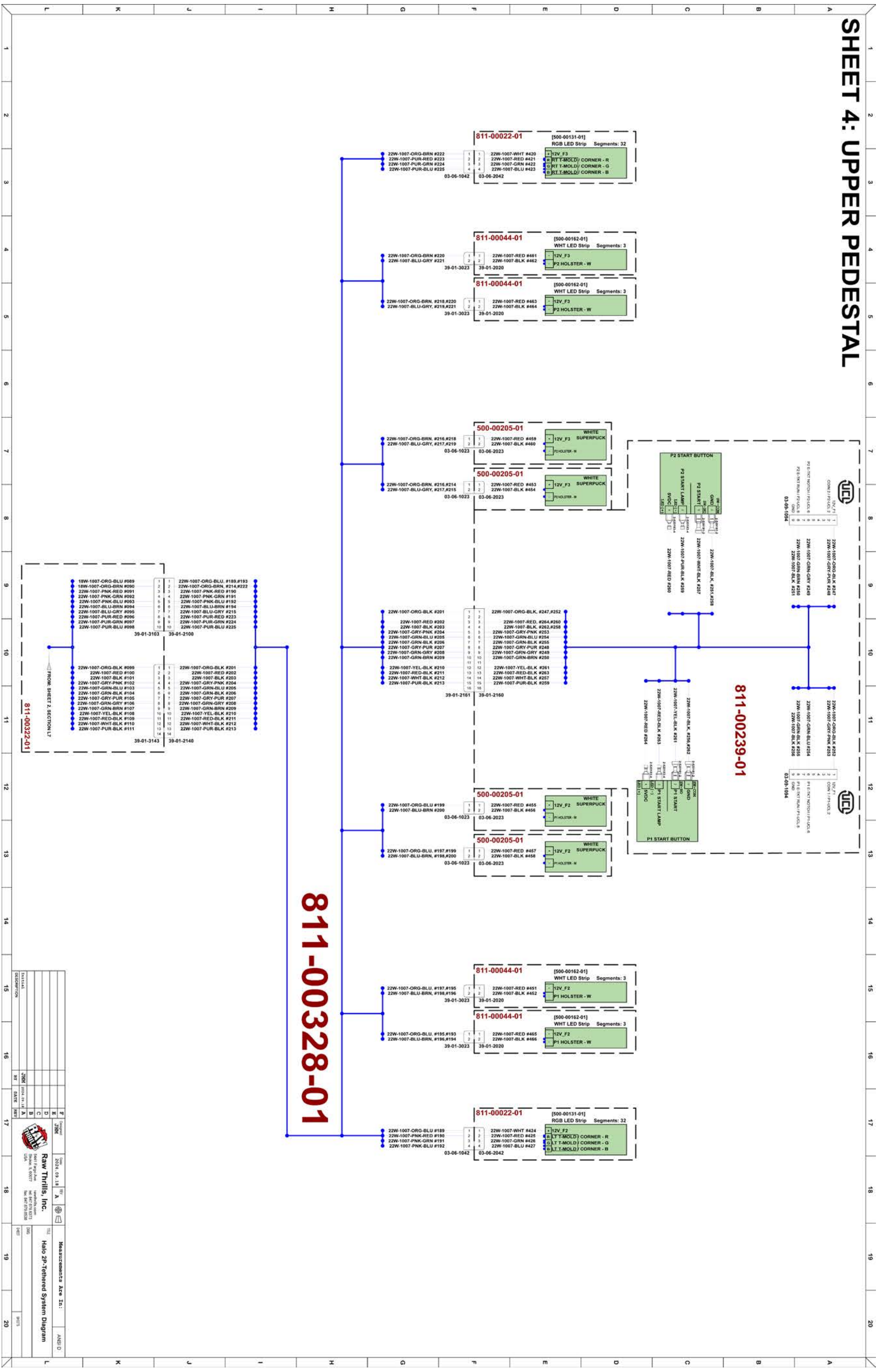


# SHEET 3: LOWER PEDESTAL



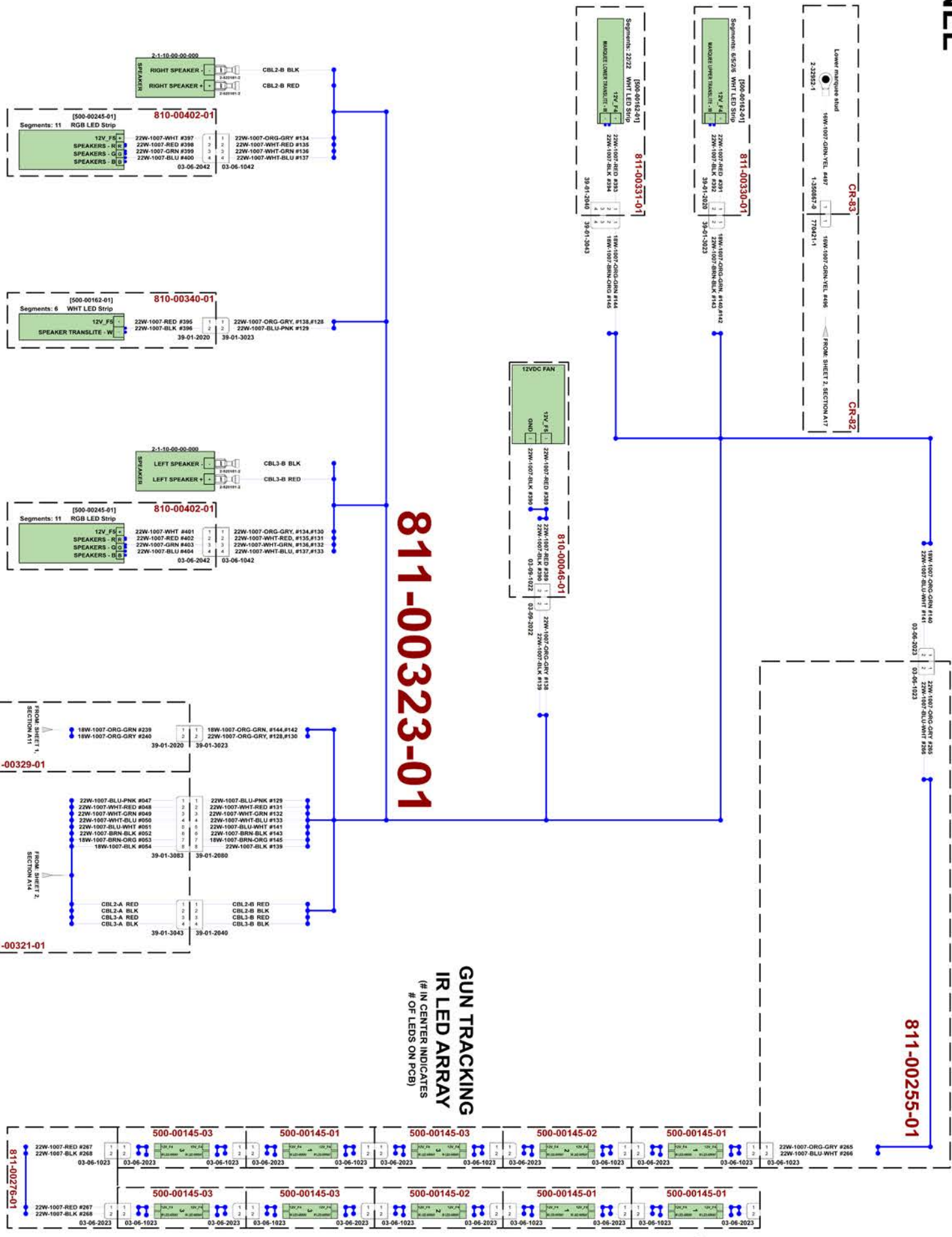
DATE	BY	CHKD	REV
2024.09.14	JHM		1
Raw Thrills, Inc. 5411 Regal Lane Aurora, IL 60007 Tel: 630.473.5000 Fax: 630.473.5000			
Measurements Are In:			ANSI D
Halo 2P Teahouse System Diagram			
SHEET NO: 3073			

**SHEET 4: UPPER PEDESTAL**





# SHEET 5: MARQUEE + SPEAKER PANEL



**811-00323-01**

**811-00255-01**

**GUN TRACKING  
IR LED ARRAY  
(# IN CENTER INDICATES  
# OF LEDES ON PCB)**

**TOP LEFT**

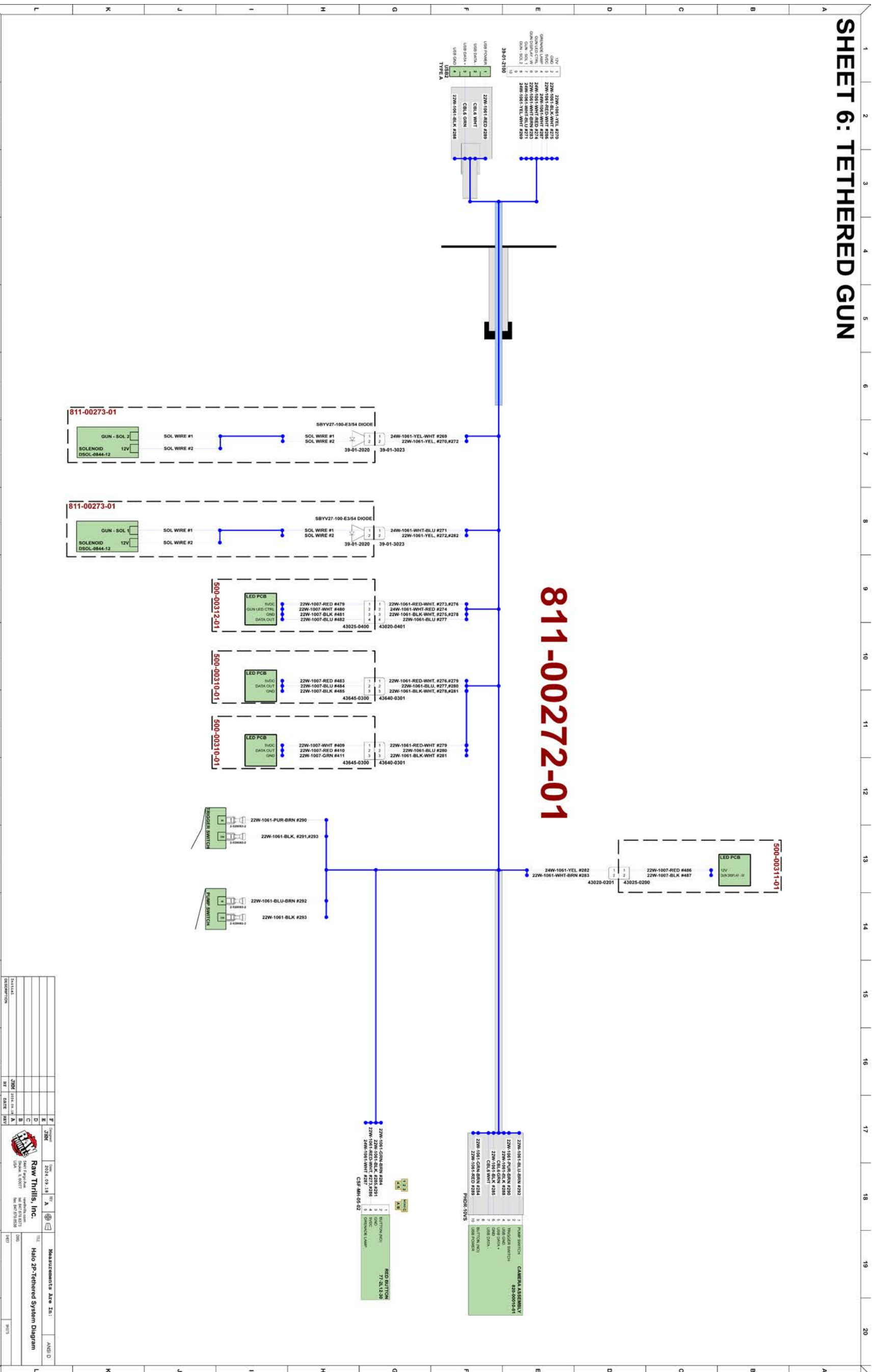
DATE	BY	CHKD	APP'D
03-06-2023	JMW		
03-06-2023	JMW		
03-06-2023	JMW		
03-06-2023	JMW		

**Raw Thrills, Inc.**  
 14000 E. Irving Ave.  
 Aurora, CO 80017  
 303.673.1500

Halo 2P Teahouse System Diagram  
 Measurements Are In: ANSIO

**SHEET 6: TETHERED GUN**

**811-00272-01**



DATE	2024.09.14	BY	JMR	REV	A
<b>Raw Thrills, Inc.</b> 34411 Fingert Ave Suite 6,0007 Las Vegas, NV 89119					
Measurement: As Is:					
Halo 2p-Tethered System Diagram					
ANSIO					
3625					