GALACTIX

Service Manual
For Parts or Service contact
Betson Enterprises at 1(800) 828-2048

Rev 3.0

1. Safety Notices

The following safety instructions apply to all game operators. We recommend that you read this page before setting-up GalacTix. Use the following safety guidelines to help protect the system from potential damage and to ensure your personal safety.

- GalacTix will function at either 115V or 230V. The location of the voltage switch can be found on **Page 8**.
- If operating at 230V, the operator must use a CE certified power cord rated for 250V, 5A.
- To help prevent electric shock, plug the system power cables into properly grounded power sources. These cables are equipped with 3-prong plugs to help ensure proper grounding.
  Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3-wire cable with properly grounded plugs.
- Do not spill food or liquid on your system.
- Do not push any objects into the openings of the system. Doing so can cause fire or electric shock by shorting out interior components.
- Keep your game far away from radiators and heat sources.
- Do not block cooling vents.
- Before working on the machine be sure to unplug it.
- Be sure to use fuses that meet the specified rating. (5A, 250V Fast-blow) Using fuses exceeding the specified rating can cause a fire and electrical shock.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

FCC Compliance
Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

2. Connecting the Projector and Mirror Box

The projector and mirror box are both shipped under the Nose Cone. The Projector Mounting Board and Mirror Box have dowels so that they will align properly. **BE SURE TO ALIGN DOWELS WITH THE CORRESPONDING HOLES**.

Mirror Box

Projector

Projector Mount

Mirror

Mirror Mount Brackets

Dowel Goes In Center Hole

Projector Base

Dowel Goes In Center Hole
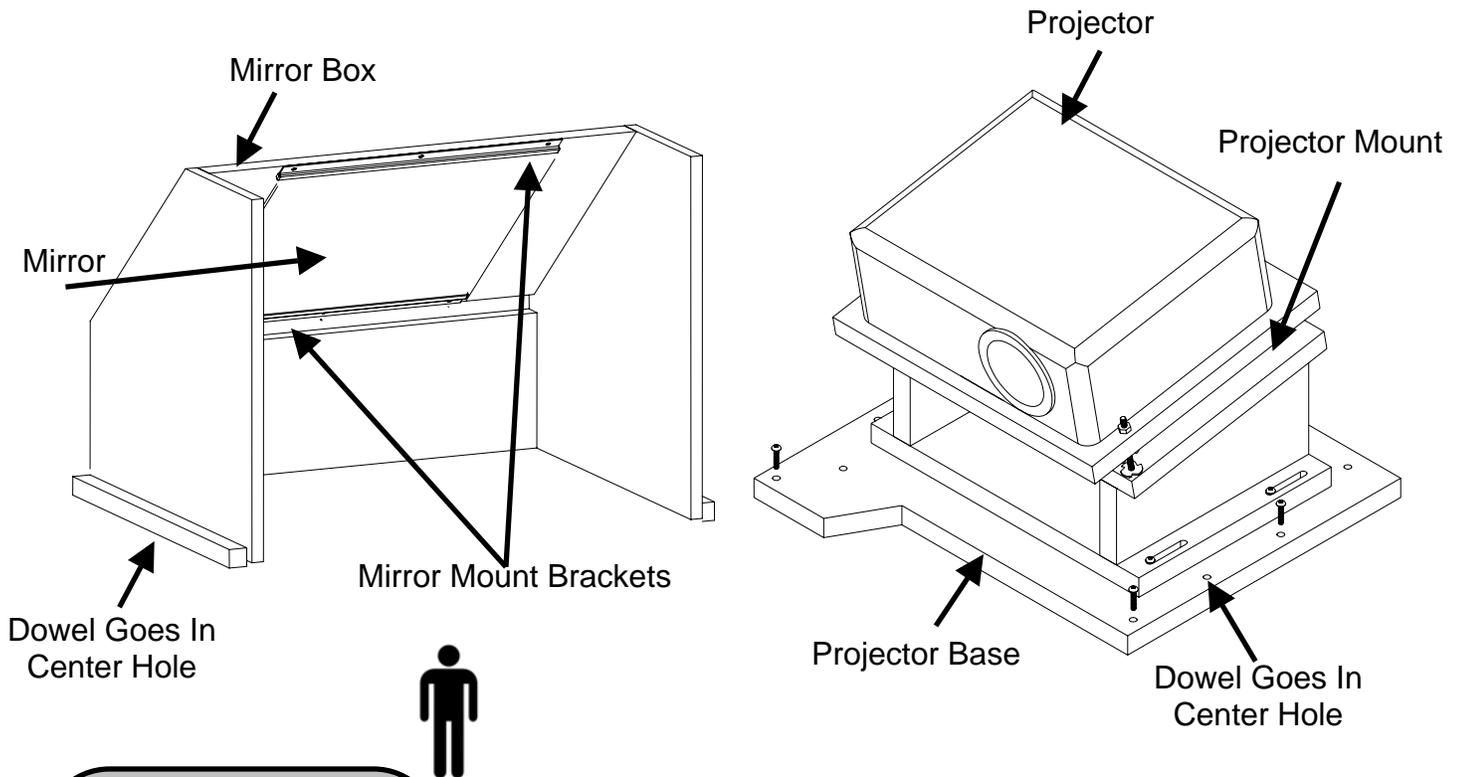
REQUIRES 1 PERSON

Set the **Mirror Box** in position, with the **Mirror** over the projection cutout, making sure the dowels go in their holes. Secure it to the Top Projector Cabinet with four of the screws in the bag labeled **Projector and Mirror**.

Next, set the complete **Projector Mount Assembly** in position, with the lens aimed at the **Mirror**. When the dowels are in the holes, secure the assembly with four of the screws in the bag labeled **Projector and Mirror**.
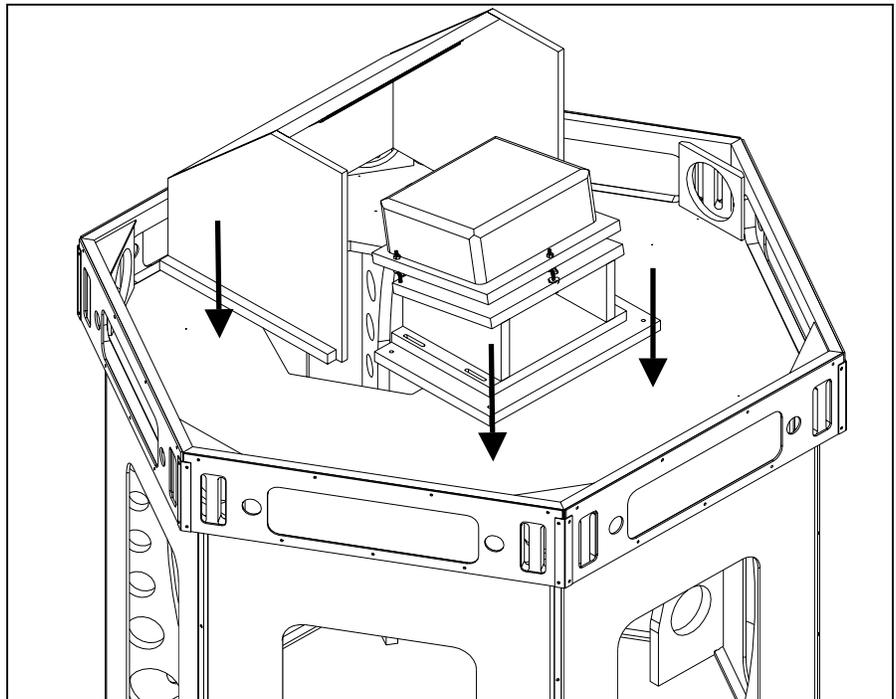
The projector has been set up at the factory. **Do not adjust position until you have connected the projector to the cabinet and turned the machine on**.

3. Aligning the Projector

Turn GalacTix on and check whether the projector needs to be adjusted. The projector may also need to be adjusted after removing or servicing it. There is no definitive way to align the projector. Rather, you may have to make a couple adjustments, then go back and adjust it again.

With GalacTix on, enter the Service Menu, and then enter the Diagnostics Menu. Select *Video* and open the WHITE screen. This will project a pure white screen that is the exact size of the gameplay screen.

Use the projector menu to set the keystone to -10. To make the image fit perfectly on the screen, you may need to adjust the keystone to -8 through -11, but -10 is the GalacTix default setting and the best place to start.

Correcting keystone

Keystoning refers to the situation where the projected image is noticeably wider at either the top or bottom. It occurs when the projector is not perpendicular to the screen.

To correct this, you will need to manually correct it following ONE of these steps.

- Using the remote control

Press △/▽ on the projector or remote control to display the Keystone correction page. Press △ to correct keystoning at the top of the image. Press ▽ to correct keystoning at the bottom of the image.

- Using the OSD menu (On Screen Display)
1. Press **MENU/EXIT** and then press ◀/▶ until the **DISPLAY** menu is highlighted.
2. Press ▼ to highlight **Keystone** and press **MODE/ENTER.** The **Keystone** correction page displays.
3. Press △ to correct keystoning at the top of the image. Press ▽ to correct keystoning at the bottom of the image.

Press ▽/▲   **Press △/▼**
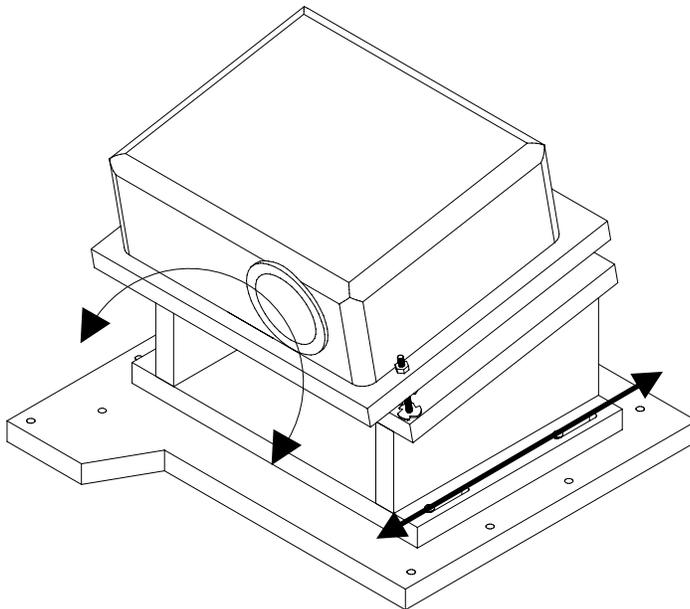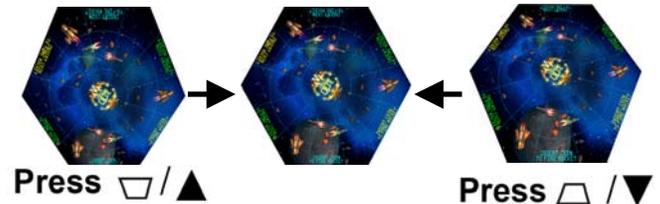
The projector base always stays in the same position, while the projector mount moves forward or backward

The projector mount is mounted with slots so the entire unit can move forward or backward on the **projector base**. The projector base has multiple T-Nuts, so the screws can be moved to another set if the slots do not give enough movement. There is also enough room to aim the projector right or left.

Move the projector BACK to increase the size of the projected image.

Move the projector FORWARD to shrink the size of the projected image.

Turn the base LEFT or RIGHT to center the projected image.

When in the correct position, tighten the 4 screws at the base.

4
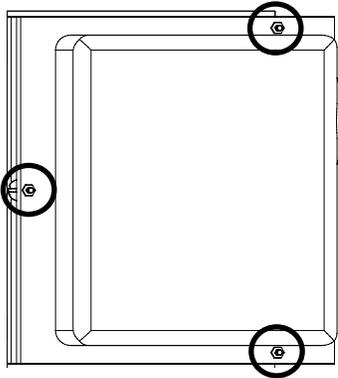
The three bolts circled here are used to change the pitch and to level the projector.

Raising or lowering the nut in the rear will change the pitch of the projector, which will raise or lower the image on the screen

Adjusting the bolts on either side of the front will help level the projector, making the image square on the screen
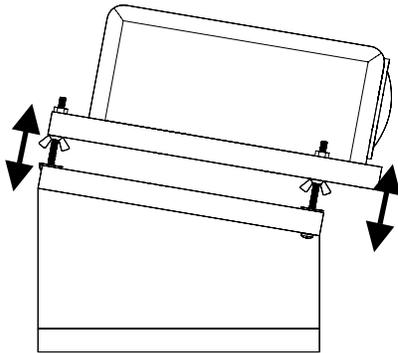
This side view shows how to adjust the pitch of the projector

Raising the 2 front nuts and the rear nut will raise the projector

Raising the 2 front nuts and lowering the rear nut will move the projected image up

Lowering the 2 front nuts and raising the rear nut will move the projected image down
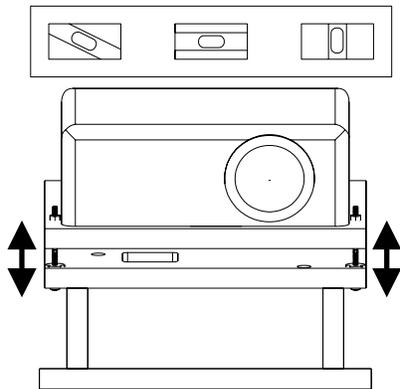
Adjust the 2 front nuts to change how level the projector is. This will ensure that the text on screen is straight.

When it is aligned, the projector itself will not necessarily be level. To align it correctly, the projector might be tilted left or right.

When the projector is correctly aligned, tighten the nuts on top, then the wing nuts below.
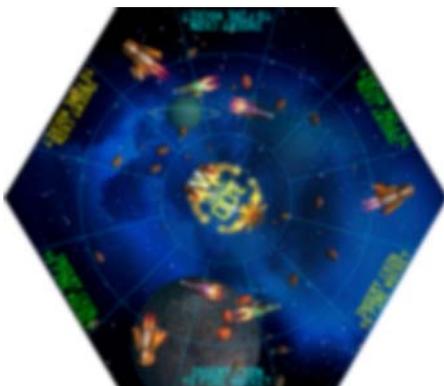
Manually focus the projector with the focus ring above the lens when it is in position. Adjust the focus so the center of the screen is the most clear.
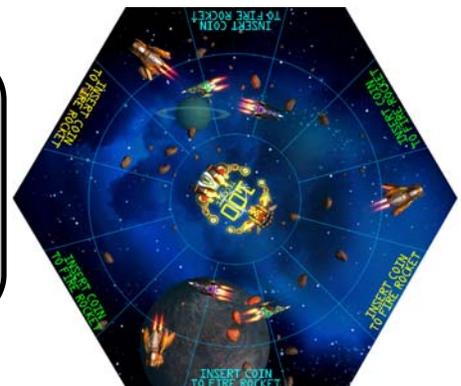
4. Connecting the Fins

To protect the fins from warping during shipment, two fins are not attached to the cabinet. Both fins connect to the **Door Hinges**.

2 x
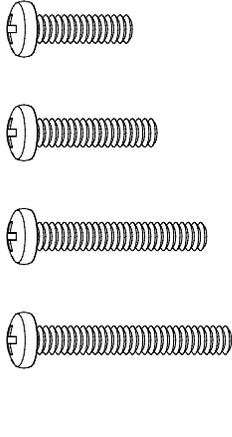
REQUIRES 1 PERSON

The two fin assemblies connect to the two **Door Hinges**. Locate the bag of fasteners labeled **Fins**. This bag includes (2) **6-32 x 1/2" Self-Tapping Screws**, (2) **6-32 x 5/8" Self-Tapping Screws**, (2) **6-32 x 7/8" Self-Tapping Screws**, and (2) **6-32 x 1" Self-Tapping Screws**.

Open one of the doors to the cabinet. Hold the **Fin Assembly** in place on the **Door Hinge**. Use a **6-32 x 1/2" Self-Tapping Screw** to attach it through the top hole of the fin bracket. Use the 5/8" screw through the second hole, the 7/8" through the third, and the 1" screw in the bottom hole. Repeat this on the other **Door Hinge** to connect the other **Fin Assembly**.

5. Connecting the Nosecone
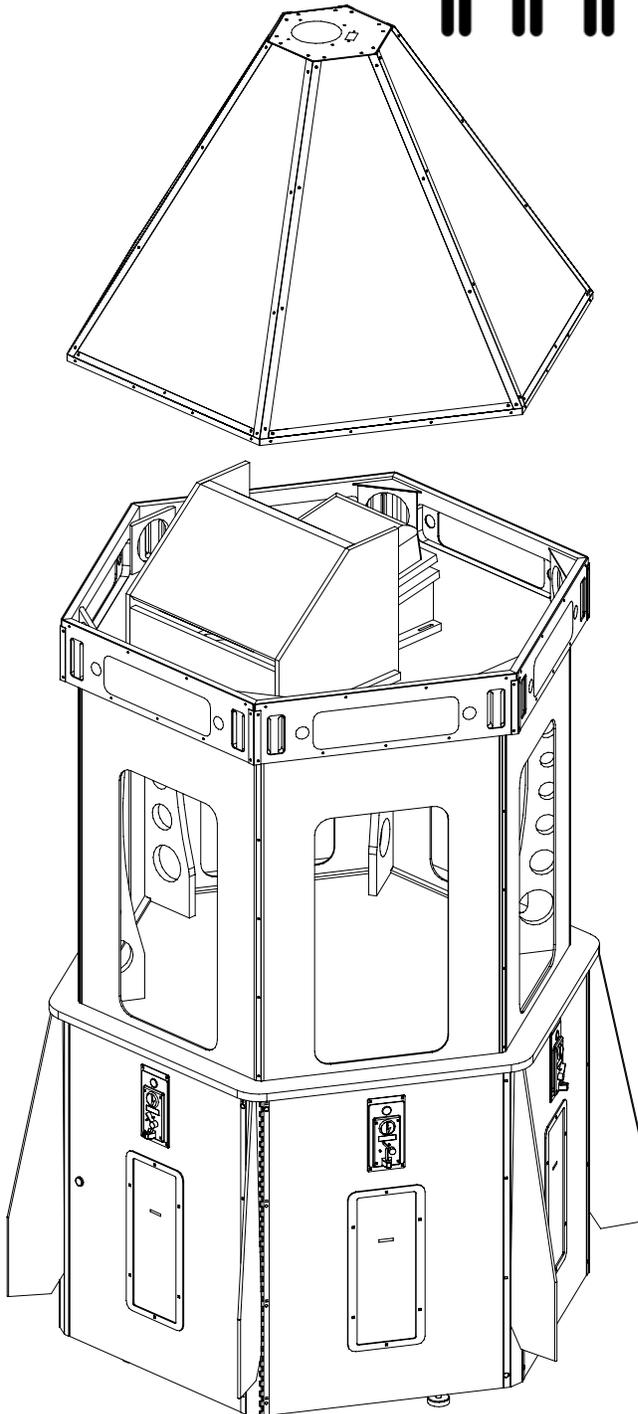
REQUIRES 2-3 PEOPLE

The **Nose Cone** has an A/C access hole next to the fan. If you are going to run the A/C through the top of the game, go to **page 10** for instruction before installing the **Nose Cone**.

Locate the bag of fasteners labeled **Nose Cone**, which contains **(24) #6 x 5/8" Black Screws**.

Find the cable harness hanging over the top edge of GalacTix. This will connect to the **Chase Top** cable harness in the **Nose Cone**.

With the help of another adult, lift the **Nose Cone** to the top of the main cabinet. Be very careful to not hit the **Projector** or **Mirror Box**

Set the **Nose Cone** on top of the cabinet so that it is still easy to lift.

Connect the **Chase Top Cable** inside the **Nose Cone** to the corresponding cable on top of the **Main Cabinet**.

Turn the game on. Check that all **LED PCBs** in the **Nose Cone** are lighting up and the fan in the top is running.

Push the **Chase Top Cable** inside the **Nose Cone**. Adjust the **Nose Cone** so that it slides onto the **Main Cabinet**, making sure not to pinch the **Chase Top Cable**.

With **GalacTix** turned on, walk around the cabinet and check that there are no shadows on any of the marquees. If there is a shadow, lift the **Nose Cone** on that side and adjust what is causing it (cables, packing material, and etcetera).

Use the **(24) #6 x 5/8" Black Screws** to secure the **Nose Cone** to the **Main Cabinet**.

6. Service Door and Operator Door

GalacTix has two doors on opposite sides, and each has its own purpose.

The **Operator Door** opens to the **Cash Box**, **Service Panel**, **Projector PCB**, and the backside of the **Power Switch**.

See **page 9** for information on the **Projector PCB** and **Rechargeable Battery Pack**.

The **Service Panel** is used to access the Menus and holds the **Coin** and **Ticket Meters**. See **page 13** for **Service Panel** layout and menu information.

See **page 50** for a complete wiring diagram

Behind Operator Door

Service Panel

Projector PCB

Battery Packs

Cash Box

Power Switch Under Cabinet
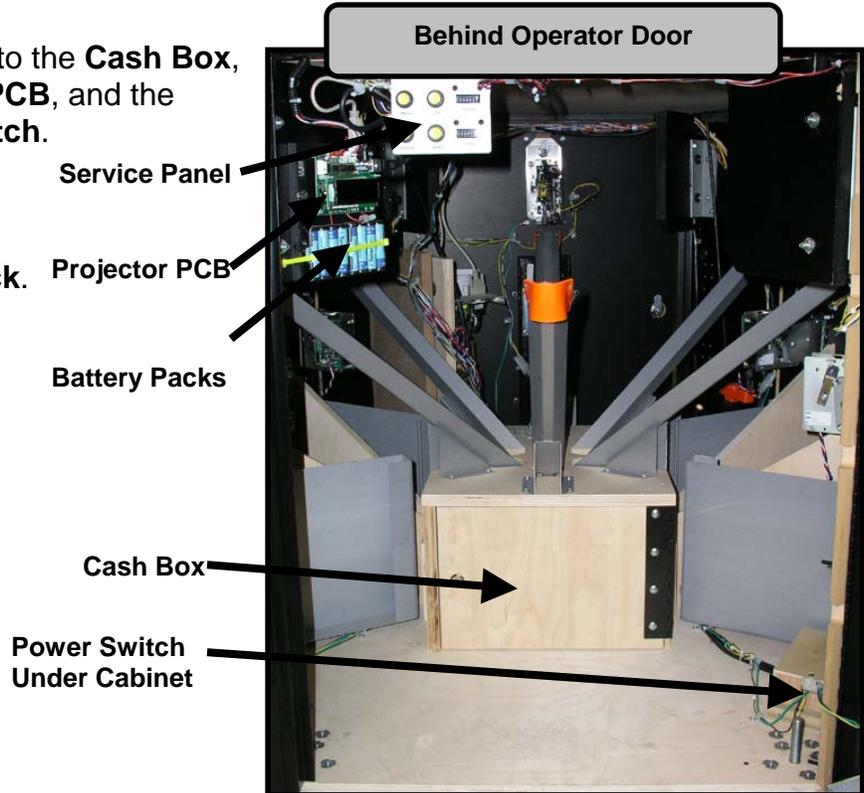
The **Service Door** is used to access the **Computer Shelf** and **Power Inlet Plate**.

The **Service Door** is marked with a red high voltage warning label below the ticket door.

The **Computer Shelf** is mounted on the right side behind the **Service Door**. There is a yellow power button (circled in the image) that is used to turn on the computer if the BIOS battery needs to be replaced.

Power Supply Voltage Switch 115V / 230V

Behind Service Door
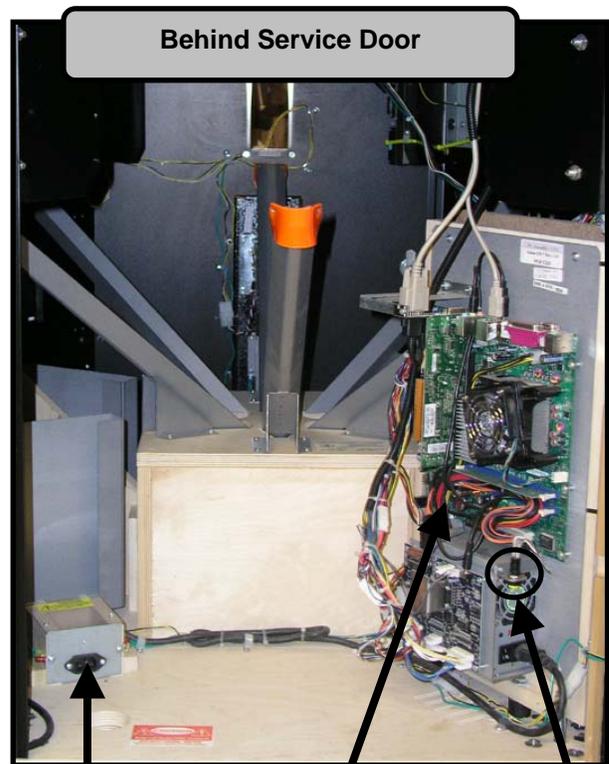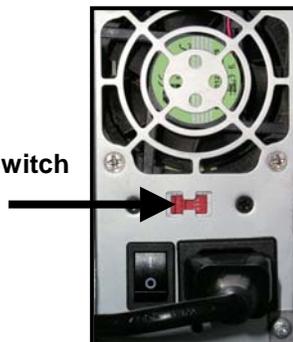
Power Inlet Plate   Computer Shelf

PC Power Button

7. Rechargeable Battery Pack and Projector PCB

The **rechargeable battery pack** powers the **projector fans** and **Projector PCB** long enough to cool the projector and elongate the life of the projector lamp. When the **Projector PCB** recognizes that the computer has shut down, it will turn on the external projector fans for 3-5 minutes. When power is restored, the **Projector PCB** will recognize the computer and turn the **Projector** back on. The battery pack will recharge while the game is on.

Rechargeable Battery Packs

There are two battery packs that contains four AA rechargeable **NiMH** batteries each. If the batteries need to be replaced, **you MUST use nickel-metal hydride rechargeable batteries**. Do not reverse polarity if replacing the batteries.

Projector PCB

The projector PCB is located behind the Operator Door, which accesses the cash box. It is used to turn the projector on or off. When the projector turns on, the PCB will automatically adjust the brightness, contrast and horizontal flip of the projector.

The board runs on 12V, supplied by the LCD Power Cable, which is drawn from the ticket low switch cable while power is on, and from the batteries when power is off.

The board communicates with the projector through the RS232 port.

The board recognizes when the computer is on through USB.

Status Lights

Just below the LCD Display on the Projector PCB is a row of six status LEDs.

HB – The PCB is on and working correctly.

RX – The PCB is receiving signals from the projector.

TX – The PCB is transmitting to the projector.

OFF – The projector is currently off.

COOL – The projector is in cool down mode. The lamp will cool before coming back on.

ON – The projector is currently on.

LCD Display

The display will also show the status of the projector and USB power. It will display whether the computer or the projector is on or off. It will display how much time is left until the PCB will try turning the projector back on during cool down. The display will also show whether there are any projector errors, such as an abnormal shutdown.

To initialize the Projector Setup function of the Projector PCB and display any errors that have occurred, push the Reset Button (shown above). This will reset all settings that the Projector PCB controls, as well as display any accumulated errors.
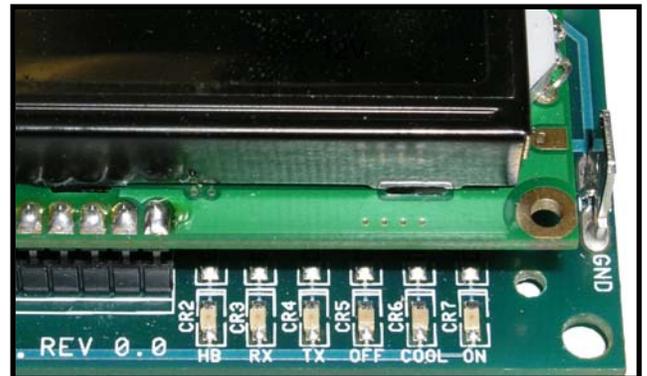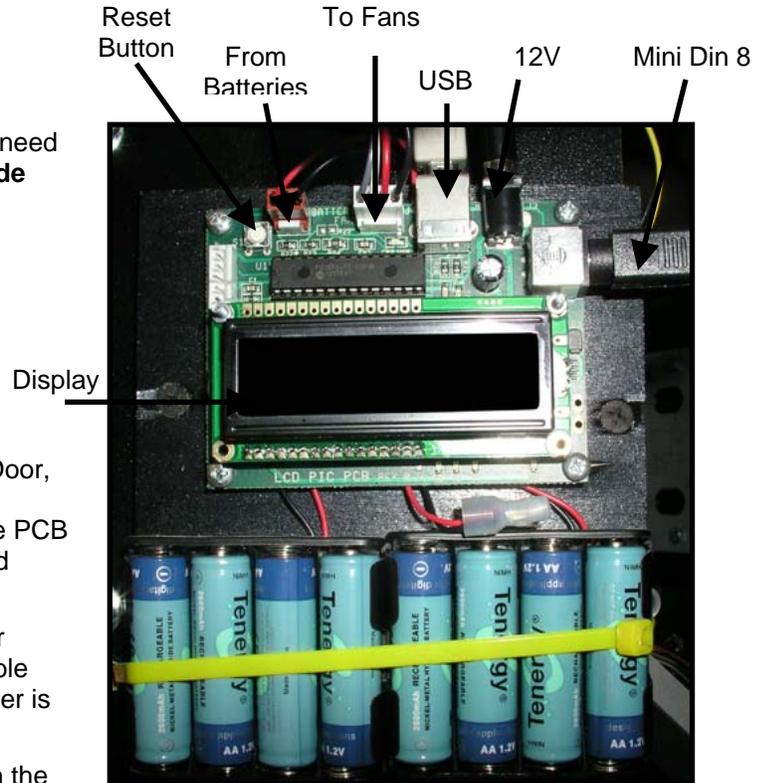
8. Servicing Lights in Nose Cone

Remove the screws that hold the **Nose Cone** to the **Cabinet**

With the help of another person, lift the **Nose Cone** up without removing it. Disconnect the **Chase Top Cable** to free the **Nose Cone**.

Remove the **Nose Cone** and set it on the floor, protecting it from damage. Be very careful not to hit the **Projector** or **Mirror Box** when removing the **Nose Cone**.

If one of the **LED Boards** was not working, check that the cables connected to the boards in the **Nose Cone** have not become disconnected.

If replacing a **CCFL Tube**, remove the white lamp guard to access the bad bulb.

9. Extending Lamp Life: Economy Mode

The lamp in the projector will normally last from 3,000 to 4,000 hours. To extend the life of the lamp, you can change the projector to Economy Mode.

Economy Mode reduces the projector's power consumption by 20% and increases the life of the bulb by 1/3. This will make the projected image darker, which might make the game's screen harder to see in areas with bright ambient light.

To set the projector to Economy Mode, use either the remote or the buttons on the projector to enter the projector's menu. Go to System Setup: Advanced. Select Lamp Settings, then Lamp Mode. Use Left or Right to turn Economy Mode on or off. Press Menu again to exit.

See **pages 23-24** for more information on Economy Mode and when to change the lamp.

MX613ST
Projector Lamp
Part Number
000-LMP-5JJ3T05

10. Drop Down A/C Access

At the top of the **Nose Cone** is a cut out for drop down A/C access. If you are running the power cord through the top of the game, <u>**THE POWER CABLE MUST BE CONNECTED WHILE INSTALLING THE NOSE CONE**</u>.

There is an IEC cable extension that is installed in the cabinet. It runs from the top of the cabinet, next to the projector, down to the **power inlet plate** behind the **Service Door**.

Find the 6' power cable in the **Cash Box**. Feed the female end of this cable down through the top of the hole in the **Nose Cone**, leaving the male end of the cable sticking out of the top.

As you are connecting the **Nose Cone** (See **page 7**) connect the female end of the power cable to the male end of the extension next to the projector.

Finally, open the **Service Door** and connect the other end of the extension cable to the **power inlet plate**.
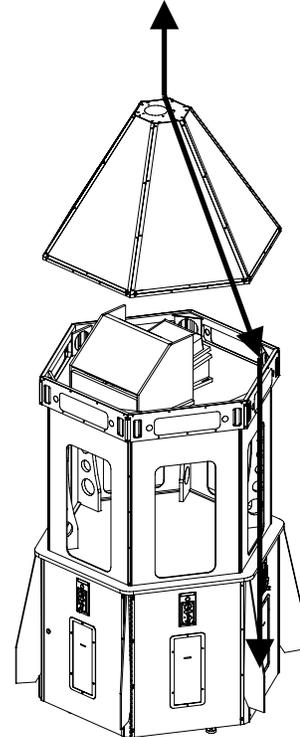
11. Controls and functions

Projector
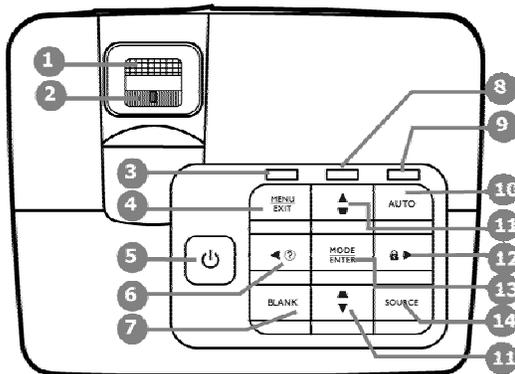
1. **Focus ring**

   Adjusts the focus of the projected image.

2. **Zoom ring**

   Adjusts the size of the image.

3. **POWER indicator light**

   Lights up or flashes when the projector is under operation.

4. **MENU/EXIT**

   Turns on the On-Screen Display (OSD) menu. Goes back to previous OSD menu, exits and saves menu settings.

5. **⏻ POWER**

   Toggles the projector between standby mode and on.

6. **◄ Left/ ⑦**

   Starts the FAQ function.

7. **BLANK**

   Used to hide the screen picture.

8. **TEMPerature warning light**

   Lights up red if the projector's temperature becomes too high.

9. **LAMP indicator light**

   Indicates the status of the lamp. Lights up or flashes when the lamp has developed a problem.

10. **Auto**

    Automatically determines the best picture timings for the displayed image.

11. **Keystone/Arrow keys (▽ / ▲ Up, △ / ▼ Down)**

    Manually corrects distorted images resulting from an angled projection.

12. **► Right/ 🔒**

    Activates panel key lock.

    When the On-Screen Display (OSD) menu is activated, the #6, #11, and #12 keys are used as directional arrows to select the desired menu items and to make adjustments.

13. **MODE/ENTER**

    Selects an available picture setup mode.

    Activates the selected On-Screen Display (OSD) menu item.

14. **SOURCE**

    Displays the source selection bar.

Remote control
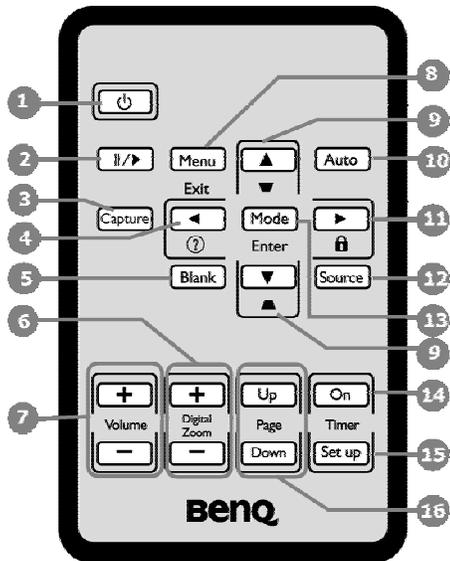
1. ⏻ **POWER**

   Toggles the projector between standby mode and on.

2. ‖/▶ **Freeze**

   Freezes the projected image.

3. **CAPTURE**

   Captures the projected picture and save it as your startup screen.

4. ◀ **Left/** ⑦

   Starts the FAQ function.

5. **BLANK**

   Used to hide the screen picture.

6. **Digital Zoom (+, -)**

   Magnifies or reduces the projected picture size.

7. **Volume +/-**

   Adjusts the sound level.

8. **MENU/EXIT**

   Turns on the On-Screen Display (OSD) menu. Goes back to previous OSD menu, exits and saves menu settings.

9. **Keystone/Arrow keys (** ▽ / ▲ **Up,** △ / ▼ **Down)**

   Manually corrects distorted images resulting from an angled projection.

10. **Auto**

    Automatically determines the best picture timings for the displayed image.

11. ▶ **Right/** 🔒

    Activates panel key lock.

    When the On-Screen Display (OSD) menu is activated, the #4, #9, and #11 keys are used as directional arrows to select the desired menu items and to make adjustments.

12. **SOURCE**

    Displays the source selection bar.

13. **MODE/ENTER**

    Selects an available picture setup mode.

    Activates the selected On-Screen Display (OSD) menu item.

14. **Timer On**

    Activates or displays an on-screen timer based on your own timer setting.

15. **Timer Set up**

    Enters presentation timer setting directly.

16. **PAGE UP/PAGE DOWN**

    Operate your display software program (on a connected PC) which responds to page up/down commands (like Microsoft PowerPoint).

12. Adjusting Ticket Payout Percentage

GalacTix is a skill-based game, and payout percentage will change depending on the demographic of your customers. With the default game settings, which can be found on **page 15**, GalacTix pays out 8-9 tickets per coin. On average, changing the **Difficulty** without changing the default ticket values will adjust the ticket payout as follows:

> **Extra Hard**: ~3 Tickets
> **Very Hard**: ~4 Tickets
> **Hard**: ~5 Tickets
> **Medium Hard**: 6-7 Tickets
> **Medium**: 8-9 Tickets
> **Medium Easy**: 10-11 Tickets
> **Easy**: 12-13 Tickets

If the payout is still different from the desired payout, you can adjust a number of settings in the **Game Settings** menu.

> - Turning **Auto Mothership Difficulty** ON will let GalacTix adjust the difficulty of the mothership, depending on the skill level of the players in the location to match the **Ideal Ticket Payout**.

> -Change Mothership to **Easy** to open the space between the two ships, making it easier to hit the Bonus and increase the ticket payout. Change Mothership to **Hard** to close the space, which will make it more difficult and lower the ticket payout.

> -If you are using **Fire Buttons**, you can adjust the number of missiles a player gets per credit. Increase the number of missiles to raise the ticket payout. Decrease the number of missiles to lower the ticket payout. This will cause a large change in the ticket payout.

> -You are also able to change the number of tickets awarded for hitting every type of ship and the Mothership Bonus. Lower the number of tickets awarded to lower ticket payout, or raise the number of tickets awarded to raise the ticket payout.

> - See **Page 14** for the range of ticket settings

Divide Tickets By 2

For locations that value a single ticket as two tickets, GalacTix can award half as many tickets to the player as shown in game. This setting can be found at the bottom of Ticket Settings in the service menu. Note that when DIVIDE TICKETS BY 2 is on, all ticket payout settings should be set to an even number.

13. Main Menu

The Service Panel is located behind the **Operator Door**, on top of the cash box. Press **Menu** to enter the service menu and to make selections. Use **Up** and **Down** to navigate the menus and change selected settings.

GALACTIX
CHICAGO GAMING
V 0.9.7
MARCH 3, 2010

Main Menu

VOLUME 50
TICKET SETTINGS
GAME SETTINGS
AUDITS
TICKET DIAGS
DIAGNOSTICS
RESET MENU
UPDATE
EXIT WITHOUT SAVING
EXIT AND SAVE
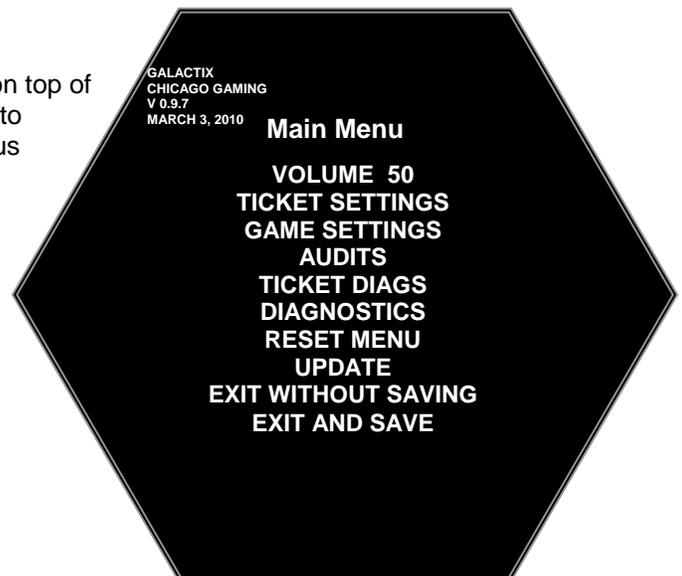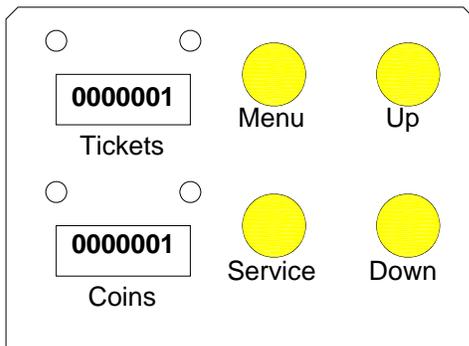
| **Volume** | - Set Volume from 0-100 |

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GALACTIX
CHICAGO GAMING
V 0.9.7
MARCH 3, 2010

TICKET FIXED PAYOUT            OFF
TICKETS FOR INNER GUARD        2
TICKETS FOR OUTER GUARD        3
TICKETS FOR SQUADRON           5
TICKETS FOR EXPLOSION          2
TICKETS FOR MOTHERSHIP MISS    1
MOTHERSHIP MISS ZONES          ON
TICKETS FOR MOTHERSHIP ZONE 1  2
TICKETS FOR MOTHERSHIP ZONE 2  4
TICKETS FOR MOTHERSHIP ZONE 3  6
TICKETS FOR BONUS MISS         10
 TICKETS FOR BONUS             100
AUTO TRY RELOAD                ON
TICKET DIVIDE BY 2             OFF

        RETURN TO MAIN MENU
```

Ticket Fixed Payout – Off / 1-20
When Ticket Fixed Payout is set to 1-20, GalacTix will payout that set amount of tickets every time, regardless of what the player hits. When it is OFF, GalacTix will payout a different amount of tickets for each type of ship a player hits. You can adjust those values with the following settings.

Tickets for Inner Guard – 0-30
These are the common ships circling closest to center

Tickets for Outer Guard – 0-30
These are the common ships circling outside of others

Tickets for Squadron – 0-30
These less common ships appear on screen, circle the mothership and leave

Tickets for Explosion – 0-30
This is when a player's missile hits another exploding missile

Tickets for Mothership Miss – 0-10
This is when a missile hits the empty center after somebody else gets the Bonus

Mothership Miss Zones – ON / OFF
If this setting is ON, GalacTix will award a different number of tickets for Mothership Miss, depending on how close the player was to hitting the jackpot. The Mothership is divided into three zones that have independently controlled ticket values; the back of the ship, the "arms" of the ship, and the area right next to the Mothership opening.

Tickets for Mothership Zone 1 – 0-30
Zone 1 is the part of the Mothership that is farthest from the opening

Tickets for Mothership Zone 2 – 0-30
Zone 2 is between Zone 1 and Zone 3 on the Mothership

Tickets for Mothership Zone 3 – 0-30
Zone 3 is the part of the Mothership that is closest to the opening

Tickets for Bonus Miss – 0-30
This is when a missile hits the side of the mothership

Tickets for Bonus – 0-200
This is when a missile hits the Bonus number in the center of the Mothership

Auto Try Reload – On / Off
When this is On, GalacTix will recognize when loading new tickets. When a ticket passes through the opto on the ticket mech, the game will wait a couple of seconds, and then it will start feeding the new tickets through to pay out tickets owed. If it is Off, it will not recognize new tickets. GalacTix will only pay out owed tickets from a reloaded mech when the player at that position wins more tickets.

Ticket Divide By 2 – On / Off
When this is On, GalacTix will dispense half as many tickets as a player wins. This is used in locations where a single ticket has the value of two. When this is On, make sure all ticket settings are set to an even number.

Game Settings

```
GALACTIX
CHICAGO GAMING
V 0.9.7
MARCH 3, 2010
                GAME SETTINGS
DIFFICULTY                      MEDIUM
AUTO MOTHERSHIP DIFFICULTY         ON
IDEAL TICKET PAYOUT                 8
MOTHERSHIP                      MEDIUM
MISSILE JITTER                     5%
COIN DROP DELAY                    0%
ACCRUE MISSILES                   OFF
BUTTON FIRE DELAY                 OFF
COIN PROMPT            "INSERT COIN"
IDLE VOLUME                       50%
SECONDS UNTIL IDLE                 60
SECONDS PLAYER ACTIVE              10
SQUADRON ONLY IN MULTIPLAYER      OFF
OUTER GUARD ON                     ON
INNER GUARD ON                     ON
SQUADRON ON                        ON

           RETURN TO MAIN MENU
```

Difficulty – Easy / Medium Easy / Medium / Medium Hard / Hard / Very Hard / Extra Hard

> **The difficulty level determines how quickly ships spawn and how fast the ships move**. Easier difficulties have a longer spawn time for a ship after it has been destroyed, and the ships move slowly. Higher difficulties keep the ships spawning more quickly and spinning faster.

Mothership – Easy / Medium / Hard

> This setting changes how large the opening to the Bonus is. Easy gives more room, while Hard closes the gap. If **Auto Mothership Difficulty** is ON, you cannot directly change this setting.

Auto Mothership Difficulty – ON / OFF

When this setting is turned ON, GalacTix will automatically adjust the difficulty of the mothership to keep the ticket payout as close to the **Ideal Ticket Payout** as possible while leaving all other settings the same. After the first 100 plays, GalacTix compares the actual ticket payout to the **Ideal Ticket Payout**. If it is paying out too high, the mothership difficulty will go up, and if it is paying out too low, the mothership difficulty will go down. If, after some time, the actual ticket payout is still to far from the ideal payout, you will need to change other settings to adjust payout. See **page 13** for more information on adjusting ticket payout percentage.

Ideal Ticket Payout – 0-30

If Auto Mothership Difficulty is ON, set Ideal Ticket Payout to the desired average number of tickets to be paid out per credit. If Auto Mothership Difficulty is OFF, this setting is inaccessible.

Missile Jitter – 0-10%

Missile Jitter is another setting that controls the difficulty of the game. This setting will vary the speed at which a player fired missile will travel, and is used to introduce a slight element of randomness into the game. Changing Missile Jitter to 0% will cause every missile fired by every player to travel with the exact same speed. As you increase the percentage, every missile will have a wider range of speeds, up to 10% faster or slower than the default speed. A low jitter percentage is easier, and a high missile jitter is more difficult.

Coin Drop Delay – 0%-15%

Coin Drop Delay, like Missile Jitter, is a setting that adjusts the difficulty of the game. With coin drop delay set to 0%, the missile will be fired as soon as GalacTix recognizes that a player has entered a credit. If this setting is set to anything above 0%, there will be a small delay (up to 15%) between the credit being recognized and the missile being fired.

Accrue Missiles – Off / 1-5

This is used to set how many missiles a player receives per credit, and it can only used when the cabinet has the optional Fire buttons installed. If the game does not have fire buttons, Accrue Missiles must be set to Off.

Button Fire Delay – ON / OFF

If this is ON, there will be a 1 second pause after firing a missile before a player can fire again.

Coin Prompt – "Insert Coin" / "Swipe Card" / "Insert Key"

This changes the player prompt. Change the Coin Prompt to match the input method that is installed on the game.

Idle Volume – 20%-100%
Set the volume when the game goes idle as a percentage of main volume

Seconds Until Idle – 60-300
Set the time it takes the game to go idle

Seconds Player Active – 1-60
When more than one person is playing, GalacTix automatically decreases the ships' respawn time to keep the difficulty the same for each player. This setting adjusts how long each player counts as active.

Squadron Only In Multiplayer – ON / OFF
When this setting is ON, the Squadron ships will only appear when more than 1 player is active

Outer Guard On – ON / OFF
Inner Guard On – ON / OFF
Squadron On – ON / OFF

These three settings allow you to turn OFF any of the three ship types. If this is set to ON, that ship type will appear in game. If it is set to OFF, that ship type will not appear.

Audits

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AUDITS

	CURRENT	LIFETIME
TOTAL COINS	0	0
TOTAL TICKETS	0	0
TICKETS PER COIN	0	0
COIN CHUTE 1	0	0
COIN CHUTE 2	0	0
COIN CHUTE 3	0	0
COIN CHUTE 4	0	0
COIN CHUTE 5	0	0
COIN CHUTE 6	0	0
TICKETS 1	0	0
TICKETS 2	0	0
TICKETS 3	0	0
TICKETS 4	0	0
TICKETS 5	0	0
TICKETS 6	0	0
GUARD INNER	0	0
GUARD OUTER	0	0
SQUADRON	0	0
MOTHERSHIP MISS	0	0
PRIZE MISS	0	0
EXPLOSION	0	0
MOTHERSHIP	0	0
TIME ON	0Y 0D 00:00:00	0Y 0D 00:00:00
PLAY TIME	0Y 0D 00:00:00	0Y 0D 00:00:00

PRESS DOWN TO CLEAR CURRENT AUDITS
PRESS MENU TO EXIT

The Audits Screen shows Total Coins, Total Tickets and Tickets Per Coin to calculate the payout percentage. This screen also shows the number of coins entered into each mechanism, number of tickets won from each mechanism, and the number of times each ship type has been hit.

GALACTIX
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MARCH 3, 2010   **Ticket Tests**

RESET ALL TICKETS
DISPENSER 1
DISPENSER 2
DISPENSER 3
DISPENSER 4
DISPENSER 5
DISPENSER 6
RETURN TO MAIN MENU
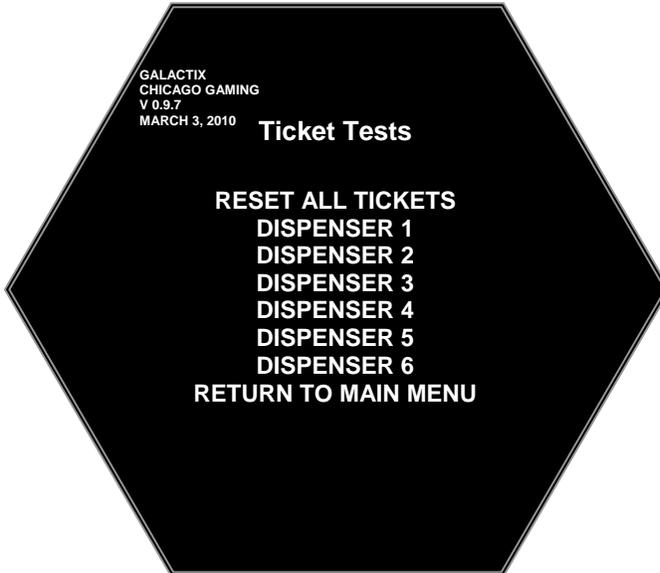
The Ticket Diags menu is used to test the functionality of each ticket mechanism and reset owed tickets to zero.

Reset All Tickets
Selecting this will reset owed tickets for every player back to zero

Dispenser 1-6
Choose a ticket dispenser from this list to run diagnostics on that specific mechanism. This will take you to a new screen.
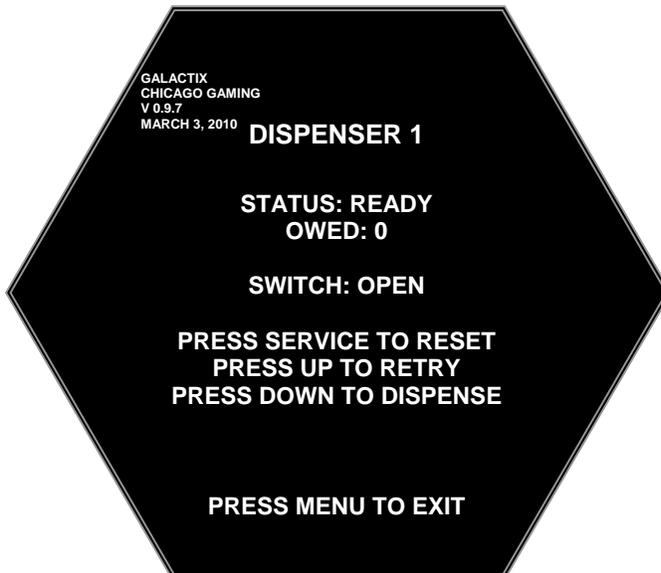
This is the individual ticket diagnostic menu. From here you can see the status of each mech, check if the mech can see the notch in the tickets, test the mech by dispensing a ticket, or reset owed tickets for one mech, rather than all six at once.

Status – Ready / Dispensing / Error
The status shows what state the mechanism is in.

Owed – Shows how many tickets are currently owed at that position

Switch – Shows whether the ticket notch switch is open or closed.

Press Service to Reset – Pressing service while in this menu will reset owed tickets to zero only for the specific ticket mechanism you are testing.

Press Up to Retry – Press up to force the mechanism to try to dispense owed tickets

Press Down to Dispense – Press down to dispense a single ticket from the mech you are testing.

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MARCH 3, 2010   **DISPENSER 1**

STATUS: READY
OWED: 0

SWITCH: OPEN

PRESS SERVICE TO RESET
PRESS UP TO RETRY
PRESS DOWN TO DISPENSE

PRESS MENU TO EXIT

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DIAGNOSTICS

SWITCHES
LAMPS
VIDEO
AUDIO
MOTHERBOARD
CLICK COIN METER
CLICK TICKET METER
RETURN TO MAIN MENU
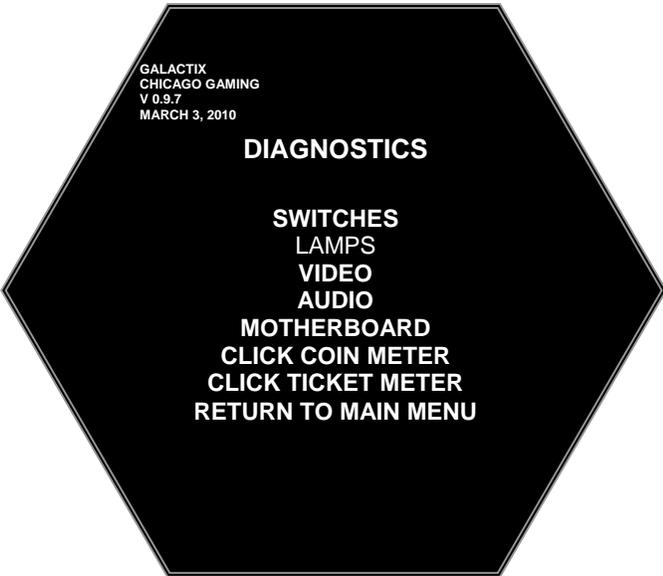
Switches – Select this option to test the functionality of the switches.

Video – Select this option to test that the monitor is working properly.

Audio – Select this option to test that the speakers are working correctly.

Motherboard – This gives information about the hardware in the computer as well as software version numbers

Click Coin Meter – This sends a pulse to the Coin Meter. Use this to quickly test that the Coin Meter is working.

Click Ticket Meter - This sends a pulse to the Ticket Meter. Use this to quickly test that the Ticket Meter is working.

Switch Test

PLAYER 1

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PLAYER 6

PLAYER 2

SWITCH TEST

COIN 1	**SERVICE**
COIN 2	**MENU**
COIN 3	**UP**
COIN 4	**DOWN**
COIN 5	**FIRE 1**
COIN 6	**FIRE 2**
TICKET 1	**FIRE 3**
TICKET 2	**FIRE 4**
TICKET 3	**FIRE 5**
TICKET 4	**FIRE 6**
TICKET 5	
TICKET 6	

PLAYER 5

PLAYER 3

PRESS MENU AND SERVICE TO EXIT

PLAYER 4
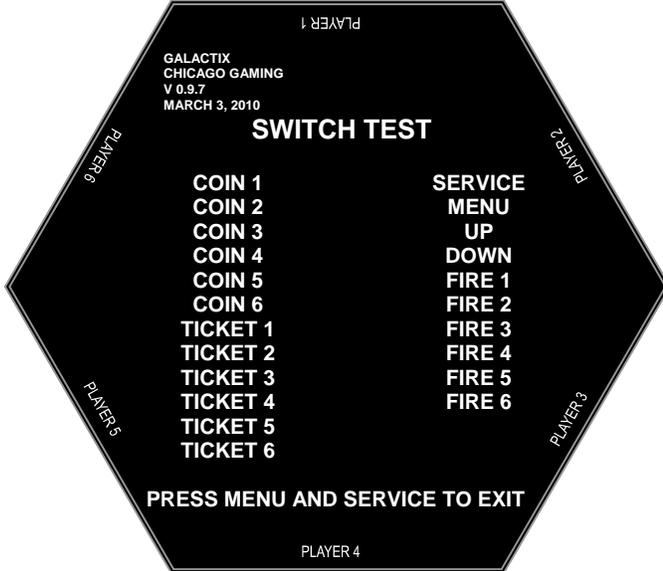
Switches – Activating a switch will cause its name to light up on the screen. The Coin switches are activated when the comparator recognizes a coin. If a coin mech is always on, check that the switch on the back is set to N.O. The Ticket switches are active when the ticket mechanism sees a notch in the tickets.

Lamp Test

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LAMP TEST
IO BOARD REVISION: 01

ALL LAMPS FLASHING
PRESS ANY BUTTON
FOR INDIVIDUAL LAMP TEST

PRESS MENU AND SERVICE TO EXIT
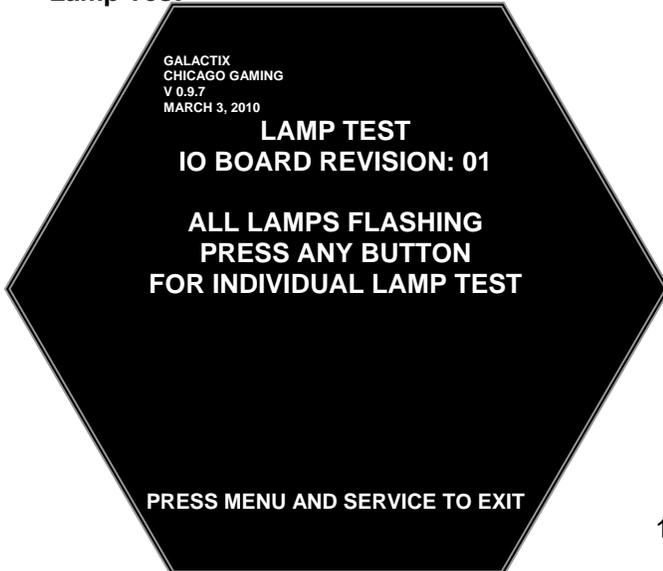
Lamp Test – Use the Lamp Test to check the lights in the fire buttons and make sure the Chase Lights in the Marquee and Nose Cone are working properly

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LAMP TEST
IO BOARD REVISION: 01

PRESS MENU FOR CHASE 1
PRESS SERVICE FOR CHASE 2
PRESS UP FOR CHASE 3
PRESS DOWN FOR CHASE 4

PRESS FIRE BUTTONS TO
TEST FIRE LAMPS
(IF INSTALLED)

PRESS MENU AND SERVICE TO EXIT

Video Diagnostics

Use Up and Down to navigate the menu and press enter
to select a test screen. Press enter again to return to Video Diagnostics Menu.

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VIDEO DIAGNOSTICS

COLOR BARS
CONVERGANCE
WHITE
RED
GREEN
BLUE
RETURN TO DIAGNOSTICS MENU

Color Bars

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Convergence

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White

Red

Green

Blue

Audio Diagnostics

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CHICAGO GAMING
V 0.9.7
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AUDIO DIAGNOSTICS

100 HZ
1000 HZ
10000 HZ
RETURN TO DIAGNOSTICS MENU
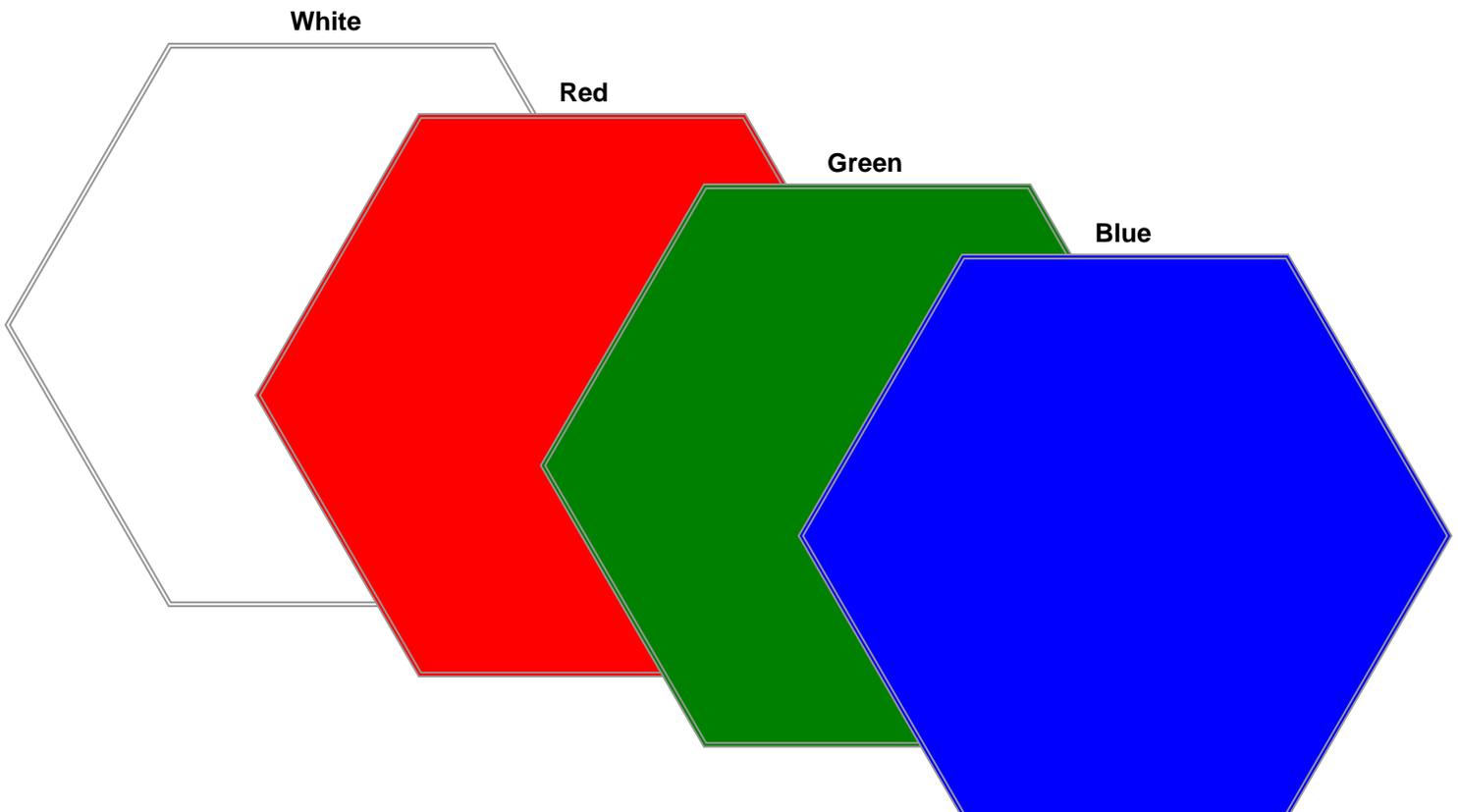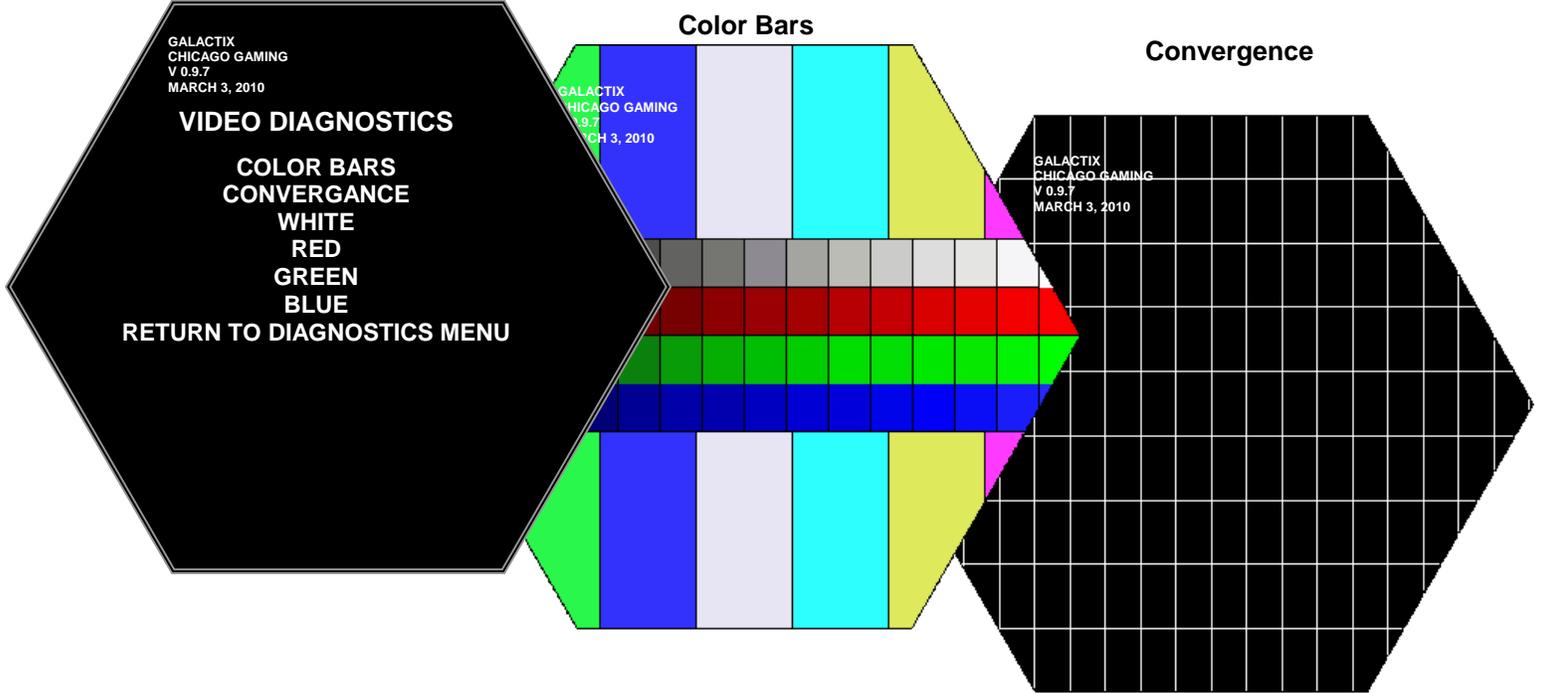
100 HZ – This tests the speakers at 100HZ

1000 HZ – This tests the speakers at 1000HZ

10000 HZ – This tests the speakers at 10000HZ

Motherboard

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MOTHERBOARD INFORMATION:
UNKNOWN
UNKNOWN
BIOS: 150
VIDEO: NVIDIA 9500 GT
AUDIO: INTEL 8201G (ICH7)
NIC: INTEL PRO / 100 VM
SOFTWARE VERSION: V 1.0.1
IO BOARD REVISION: 02

PRESS ANY BUTTON TO EXIT

This screen gives information about the computer in the game. This includes which Motherboard, the BIOS version, the I/O board version, etc.

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RESET MENU

RESET CURRENT AUDITS
RESET ADJUSTMENTS
RESET ALL TICKETS
FACTORY RESET ALL
RETURN TO MAIN MENU

Reset Audits - Prompts to confirm reset current audits

Reset Adjustments – Prompts to confirm reset adjustments

Reset All Tickets – Does not prompt to confirm reset tickets

Factory Reset All – Prompts to confirm factory reset all

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RESET CURRENT AUDITS

THIS ACTION CANNOT BE UNDONE
ARE YOU SURE?

PRESS MENU TO CONFIRM
PRESS SERVICE TO CANCEL

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MARCH 3, 2010

RESET ADJUSTMENTS

THIS ACTION CANNOT BE UNDONE
ARE YOU SURE?

PRESS MENU TO CONFIRM
PRESS SERVICE TO CANCEL

GALACTIX
CHICAGO GAMING
V 0.9.7
MARCH 3, 2010

FACTORY RESET ALL

THIS ACTION CANNOT BE UNDONE
ARE YOU SURE?

PRESS MENU TO CONFIRM
PRESS SERVICE TO CANCEL

Update

PUTT
CHICAGO GAMING
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SYSTEM UPDATE
WARNING: THIS WILL OVERWRITE FLASH MODULE

PLEASE CONNECT THUMB DRIVE WITH UPDATE AND PRESS MENU

PRESS MENU TO START UPDATE PROCESS
PRESS SERVICE TO EXIT

The software on GalacTix can be updated through a USB drive. Connect the drive with **ONLY** the update on it, enter the System Update Menu and press the Menu button. You can cancel by pressing Service. When the update is complete, turn the power off, remove the USB drive and turn the power back on.

14. Projector Maintenance

The following pages are taken from the BenQ MX613ST Projector User Guide and may reference some pages that are not included or numbered differently.

Maintenance

Care of the projector

Your projector needs little maintenance. The only thing you need to do on a regular basis is to keep the lens and case clean.

Never remove any parts of the projector except the lamp. Contact your dealer if other parts need replacing.

Cleaning the lens

Clean the lens whenever you notice dirt or dust on the surface.

- Use a canister of compressed air to remove dust.
- If there is dirt or smears, use lens-cleaning paper or moisten a soft cloth with lens cleaner and gently wipe the lens surface.
- Never use any type of abrasive pad, alkaline/acid cleaner, scouring powder, or volatile solvent, such as alcohol, benzene, thinner or insecticide. Using such materials or maintaining prolonged contact with rubber or vinyl materials may result in damage to the projector surface and cabinet material.

Cleaning the projector case

Before you clean the case, turn the projector off using the proper shutdown procedure as described in "Shutting down the projector" on page 43 and unplug the power cord.

- To remove dirt or dust, wipe the case with a soft, lint-free cloth.
- To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral pH detergent. Then wipe the case.

⚠ **Never use wax, alcohol, benzene, thinner or other chemical detergents. These can damage the case.**

Storing the projector

If you need to store the projector for an extended time, please follow the instructions below:

- Make sure the temperature and humidity of the storage area are within the recommended range for the projector. Please refer to "Specifications" on page 61 or consult your dealer about the range.
- Retract the adjuster feet.
- Remove the battery from the remote control.
- Pack the projector in its original packing or equivalent.

Transporting the projector

It is recommended that you ship the projector with its original packing or equivalent. When you carry the projector yourself, please use the original box or provided soft carry case.

Lamp information

Getting to know the lamp hour

When the projector is in operation, the duration (in hours) of lamp usage is automatically calculated by the built-in timer.

☞ See **"Setting Lamp Mode as Economic"** below for more information on Economic mode.

To obtain the lamp hour information:

1. Press **MENU/EXIT** and then press ◀/▶ to highlight the **SYSTEM SETUP: Advanced** menu.
2. Press ▼ to highlight **Lamp Settings** and press **MODE/ENTER**. The **Lamp Settings** page displays.
3. You will see the **Equivalent Lamp Hour** information displaying on the menu.
4. To leave the menu, press **MENU/EXIT**.

You can also get the lamp hour information on the **INFORMATION** menu.

Extending lamp life

The projection lamp is a consumable item that normally can last up to 3000-4000 hours with proper usage. To keep the lamp life as long as possible, you can do the following settings via the OSD menu.

- **Setting Lamp Mode as Economic**

Using **Economic** mode reduces system noise and power consumption by 20%. If the **Economic** mode is selected, the light output will be reduced and result in darker projected pictures.

Setting the projector in **Economic** mode also extends the lamp operation life. To set **Economic** mode, go into the **SYSTEM SETUP: Advanced** > **Lamp Settings** > **Lamp Mode** menu and press ◀/▶.

- **Setting Auto Power Off**

This function allows the projector to turn off automatically if no input signal is detected after a set period of time to prevent unnecessary waste of lamp life.

To set **Auto Power Off**, go into the **SYSTEM SETUP: Basic** > **Operation Settings** > **Auto Power Off** menu and press ◀/▶. The time period can be set from 5 to 30 minutes in 5-minute increments. If the preset time lengths are not suitable for your presentation, select **Disable**. The projector will not automatically shut down in a certain time period.

Timing of replacing the lamp

When the **Lamp indicator** lights up red or a message appears suggesting it is time to replace the lamp, please install a new lamp or consult your dealer. An old lamp may cause a malfunction in the projector and in some instances the lamp may explode.

Contact your distributor for a replacement lamp.

⚠ **The LAMP indicator light and TEMPerature warning light will light up if the lamp becomes too hot. Turn the power off and let the projector cool for 45 minutes. If the Lamp or Temp indicator still lights up after turning the power back on, please contact your dealer. See "Indicators" on page 59 for details.**

The following Lamp warning displays will remind you to change the lamp.

Status	Message
Install a new lamp for optimal performance. If the projector is normally run with **Economic** selected (See "Getting to know the lamp hour" on page 54), you may continue to operate the projector until the next hour lamp warning appears. Press **MODE/ENTER** to dismiss the message.	**Notice** ⚠ **Order Replacement Lamp** Lamp>XXXX Hours Order a new lamp at lamp.benq.com **OK**
It is strongly recommended that you replace the lamp at this age. The lamp is a consumable item. The lamp brightness diminishes with use. This is normal lamp behavior. You can replace the lamp whenever you notice that the brightness level has significantly diminished. Press **MODE/ENTER** to dismiss the message.	**Notice** ⚠ **Order Replacement Lamp** Lamp>XXXX Hours Order a new lamp at lamp.benq.com **OK**
The lamp MUST be replaced before the projector will operate normally. Press **MODE/ENTER** to dismiss the message.	**WARNING** **Out of Lamp Usage Time** ⚠ Replace lamp (refer to User Manual) Then reset lamp timer Order a new lamp at lamp.benq.com **OK**

☞ **"XXXX" shown in the above messages are numbers that vary depending on different models.**

Replacing the lamp

⚠ • To reduce the risk of electrical shock, always turn the projector off and disconnect the power cord before changing the lamp.

• To reduce the risk of severe burns, allow the projector to cool for at least 45 minutes before replacing the lamp.

• To reduce the risk of injuries to fingers and damage to internal components, use caution when removing lamp glass that has shattered into sharp pieces.

• To reduce the risk of injuries to fingers and/or compromising image quality by touching the lens, do not touch the empty lamp compartment when the lamp is removed.

• This lamp contains mercury. Consult your local hazardous waste regulations to dispose of this lamp in a proper manner.

• To assure optimal performance from the projector, it is recommended that you purchase a qualified projector lamp for lamp replacement.

• If lamp replacement is performed while the projector is suspended upside-down from the ceiling, make sure that no one is underneath the lamp socket to avoid any possible injury or damage to the human eyes caused by fractured lamp.

1. Turn the power off and disconnect the projector from the power outlet. If the lamp is hot, avoid burns by waiting for approximately 45 minutes until the lamp has cooled.

2. Loosen the screw that secures the lamp cover on the side of the projector until the lamp cover loosens.
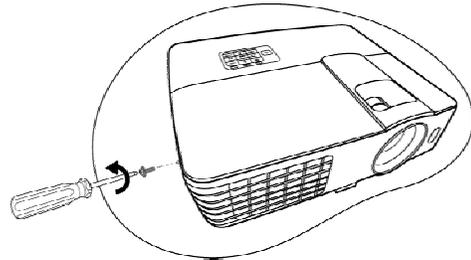
3. Remove the lamp cover from the projector.
4. Remove and dispose of the protection film.

⚠ • Do not turn the power on with the lamp cover removed.

• Do not insert your fingers between the lamp and the projector. The sharp edges inside the projector may cause injuries.
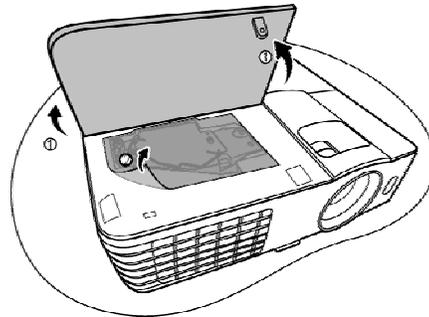
5. Loosen the screw that secures the lamp.
6. Lift the handle so that it stands up.
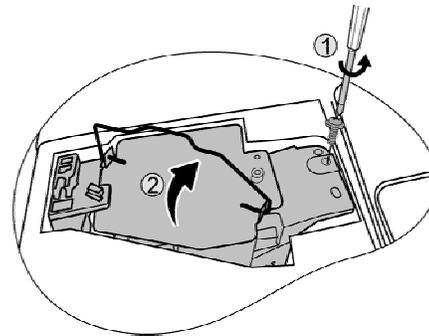
7. Use the handle to slowly pull the lamp out of the projector.

⚠ • **Pulling it too quickly may cause the lamp to break and scatter broken glass in the projector.**

• **Do not place the lamp in locations where water might splash on it, children can reach it, or near flammable materials.**

• **Do not insert your hands into the projector after the lamp is removed. If you touch the optical components inside, it could cause color unevenness and distortion of the projected images.**
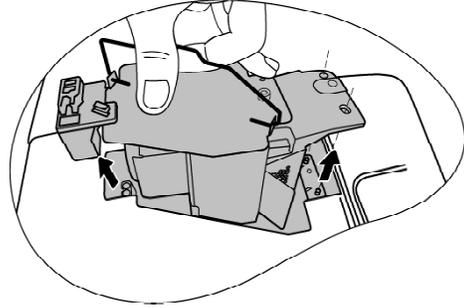
8. As shown in the figure, lower the new lamp.
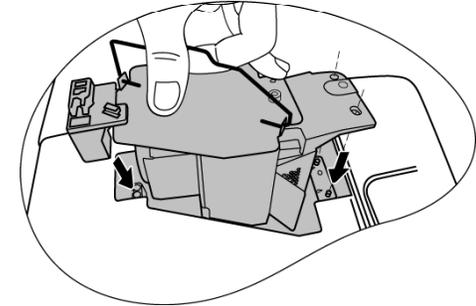
9. Tighten the screw that secures the lamp.
10. Ensure the handle is fully laid flat and locked in place.

⚠ • **Loose screw may cause a bad connection, which could result in malfunction.**

• **Do not over tighten the screw.**
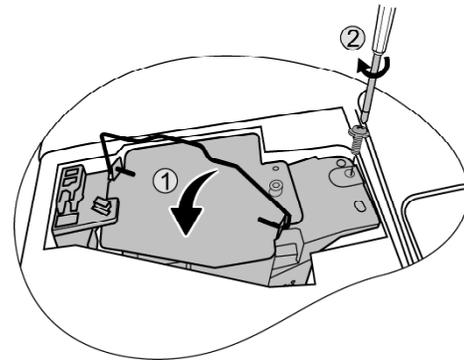
11. Replace the new protection film that comes with the new lamp.
12. Replace the lamp cover on the projector.
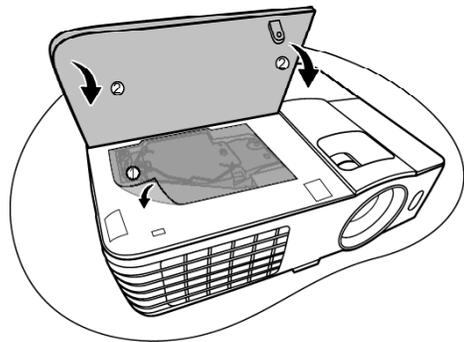
13. Tighten the screw that secures the lamp cover.

⚠ • **Loose screw may cause a bad connection, which could result in malfunction.**

• **Do not over tighten the screw.**
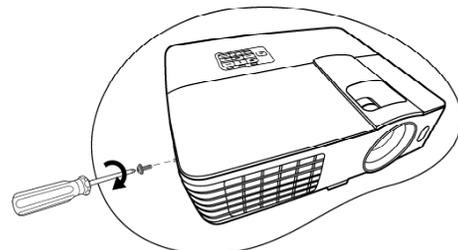
14. Connect the power and restart the projector.

⚠ **Do not turn the power on with the lamp cover removed.**

Resetting the lamp timer

15. After the startup logo, open the On-Screen Display (OSD) menu. Go to the **SYSTEM SETUP: Advanced** > **Lamp Settings** menu. Press **MODE/ENTER**. The **Lamp Settings** page displays. Highlight **Reset Lamp Timer**. A warning message is displayed asking if you want to reset the lamp timer. Highlight **Reset** and press **MODE/ENTER**. The lamp time will be reset to "0".

⚠ **Do not reset if the lamp is not new or replaced as this could cause damage.**

Indicators

Light			Status & Description
POWER	TEMP	LAMP	
Power events			
Orange	Off	Off	Stand-by mode.
Green Flashing	Off	Off	Powering up.
Green	Off	Off	Normal operation.
Orange Flashing	Off	Off	• The projector needs 90 seconds to cool down as it was abnormally shut down without the normal cooling down process. • The projector needs to cool for 90 seconds after the power is turned off. • The projector has shut down automatically. If you try to re-start the projector, it will shut down again. Please contact your dealer for assistance.
Lamp events			
Orange Flashing	Off	Red	The projector has shut down automatically. If you try to re-start the projector, it will shut down again. Please contact your dealer for assistance.
Off	Off	Red	1. The projector needs 90 seconds to cool down. Or 2. Please contact your dealer for assistance.
Thermal events			
Off	Red	Off	
Off	Red	Red	
Off	Red	Green	
Off	Red	Orange	
Red	Red	Red	
Red	Red	Green	
Red	Red	Orange	The projector has shut down automatically. If you try to re-start the projector, it will shut down again. Please contact your dealer for assistance.
Green	Red	Red	
Green	Red	Green	
Green	Red	Orange	
Orange	Red	Red	
Orange	Red	Green	
Orange	Red	Orange	
Off	Green	Red	
Off	Green	Green	

Maintenance

Care of the projector

Your projector needs little maintenance. The only thing you need to do on a regular basis is to keep the lens and case clean.

Never remove any parts of the projector except the lamp. Contact your dealer if other parts need replacing.

Cleaning the lens

Clean the lens whenever you notice dirt or dust on the surface.

- Use a canister of compressed air to remove dust.
- If there is dirt or smears, use lens-cleaning paper or moisten a soft cloth with lens cleaner and gently wipe the lens surface.
- Never use any type of abrasive pad, alkaline/acid cleaner, scouring powder, or volatile solvent, such as alcohol, benzene, thinner or insecticide. Using such materials or maintaining prolonged contact with rubber or vinyl materials may result in damage to the projector surface and cabinet material.

Cleaning the projector case

Before you clean the case, turn the projector off using the proper shutdown procedure as described in "Shutting down the projector" on page 43 and unplug the power cord.

- To remove dirt or dust, wipe the case with a soft, lint-free cloth.
- To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral pH detergent. Then wipe the case.

⚠ **Never use wax, alcohol, benzene, thinner or other chemical detergents. These can damage the case.**

Storing the projector

If you need to store the projector for an extended time, please follow the instructions below:

- Make sure the temperature and humidity of the storage area are within the recommended range for the projector. Please refer to "Specifications" on page 61 or consult your dealer about the range.
- Retract the adjuster feet.
- Remove the battery from the remote control.
- Pack the projector in its original packing or equivalent.

Transporting the projector

It is recommended that you ship the projector with its original packing or equivalent. When you carry the projector yourself, please use the original box or provided soft carry case.

15. GalacTix Parts List

Part Picture	Part Number	Part Name	Qty.
	GTX-CCC-LOWCAB	Cabinet - Main	1
	GTX-CCC-PROJCAB	Cabinet - Top	1
	GTX-CCC-RIBS	Cabinet - Ribs	6
	GTX-CCC-PROJMNT	Cabinet – Projector Mount	1
	GTX-CCC-PROJBAS	Cabinet – Projector Base	1
	GTX-SUB-PCSHELF	Computer Shelf Subassembly (Motherboard, Processor, Ram, Heat Sink, Fan, I/O Board, Power Supply, Metal Computer Shelf)	1
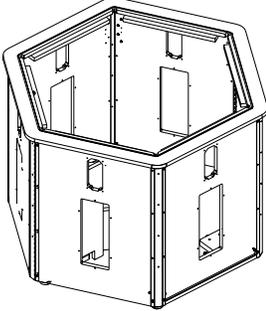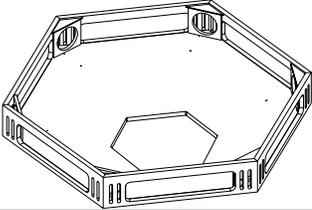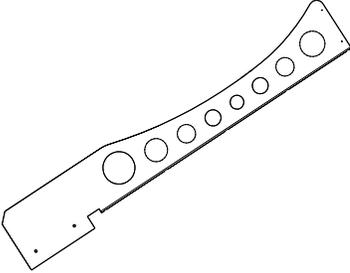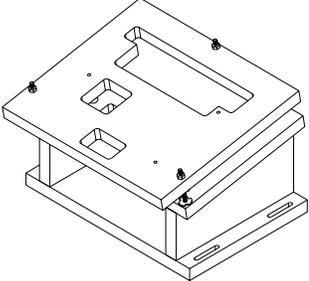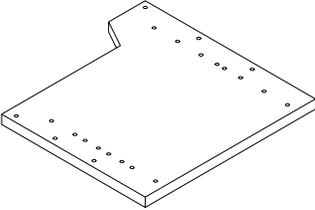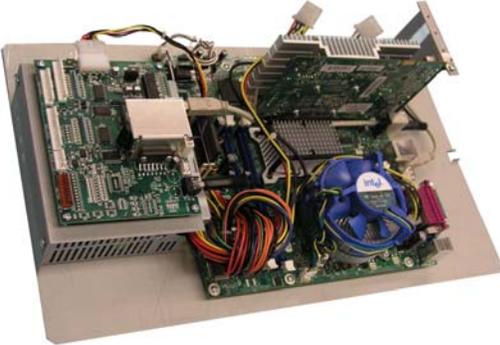
	000-ELE-270WPWR	270 Watt PC Power Supply - Sparkle Part #FSP270-50SNV	1
	000-ELE-2GIDECR	IDE Compact Flash (2GB)	1
	000-CBL-FLSHPWR	IDE Compact Flash Power Cable	1
	PUT-PCB-MBIN048	Motherboard - D945PLNML S775 800FSB DDR2 UATX BULK	1
	GTX-PCB-USBIO	GalacTix USB I/O Audio Amp	1
	PUT-MLS-AHSNK15	Amp Heat Sink 1516	1
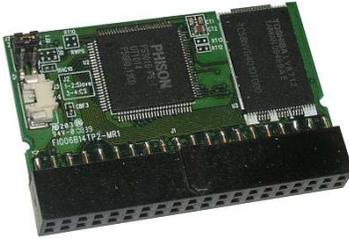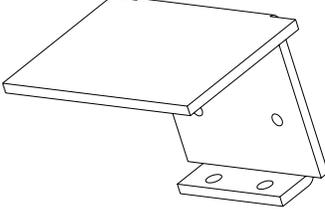
	000-PCB-VN9502T	Biostar Graphics Card Part #VN9502THG1-YB1RY	1
	PUT-ELE-1GBRAM	1GB RAM DDR2 533MHz PC2-4200	1
	PUT-ELE-PRIN780	Processor - Celeron 2.8GHZ S775 533FSB 64BIT BULK	1
	PUT-ELE-SUPACC	Celeron Fan/Heat Sink	1
	000-MLW-80MMGRD	80mm Fan Grill, for Processor Fan	1
	PUT-MLS-IOMOUNT	IO PCB Mount	1
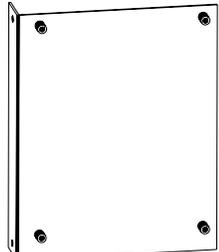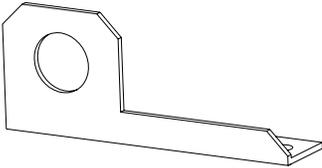
	PUT-MLS-PBTNBRK	Power Button Bracket	1
	PUT-MLS-VIDOBRK	Video Support Bracket	1
	PUT-MLS-ELECPNL	Computer Shelf	1
	GTX-PCB-RS232PI	Projector PCB	1
	000-ELE-9VACADP	9V A/C Adapter	1
	000-CBL-20MDIN8	20' Mini Din 8 Cable, Male to Male	1
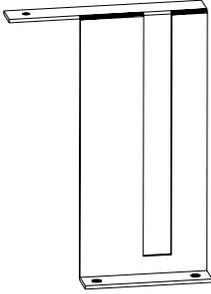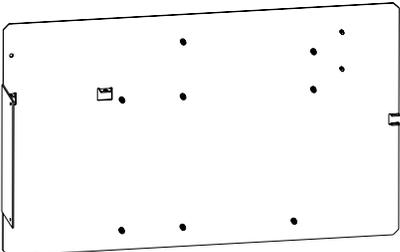
	000-CBL-10VGAMM	10' VGA Cable, Male to Male	1
	000-CBL-35ADIO2	3.5mm Stereo Audio Cable, 2'	1
	000-CBL-3USBAB	3' USB Cable, A-Male to B-Male	1
	000-CBL-6USBAB	6' USB Cable, A-Male to B-Male	1
	000-ELE-MX613ST	BenQ Digital Projector MX613ST	1
	000-LMP-5JJ3T05	MX613ST Projector Replacement Lamp, Part #5J.J3T05.001	1
	000-ELE-80MMFAN	Projector Fan, 80mm	2
	000-MLW-80MMGRD	80mm Fan Guard	2
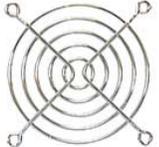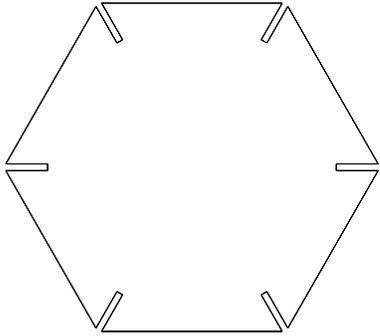
	GTX-PLS-WHTSCRN	Projector Screen Cut to Size	1
	GTX-SUB-NOSCONE	Complete Nose Cone Assembly (Art Panels, Brackets, Fan, LED PCBs)	1
	GTX-MLS-NCCAP1	Nose Cone Cap (Rev 0.1)	1
	000-ELE-12VDCFN	12V DC Fan, 120mm	1
	000-MWF-FANGRIL	4.68" Chrome Fan Guard, for Nose Cone Fan	1
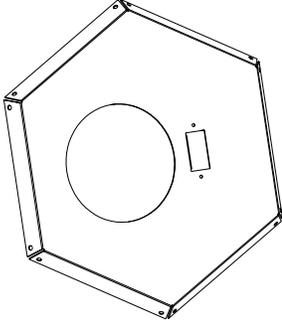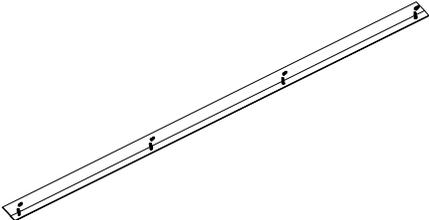
	GTX-MLS-NCSBRK1	Nose Cone Side Bracket (Rev 0.1)	6
	GTX-MLS-BASBRK1	Nose Cone Base Bracket (Rev 0.1)	6
	GTX-SUB-CONEPNL	Nosecone Panel Assembly (Plastic with Decal and LED Diffuser)	1
	GTX-ART-NCONE	Nosecone Art (decal only)	6
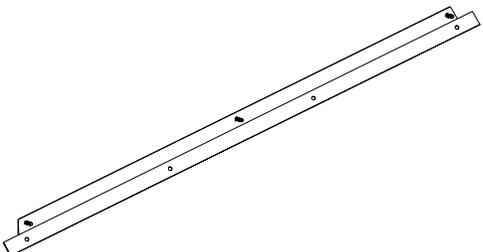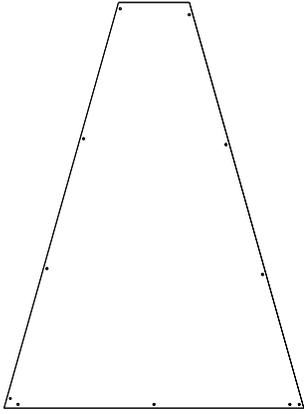
	GTX-PLS-NOSCONE	Polycarbonate Nose Cone Pieces	6
	GTX-MLS-LEDMONT	LED PCB Mount	6
	GTX-PCB-LEDARAY	Nose Cone LED PCB	6
	GTX-SUB-MIRRBOX	Mirror Box Subassembly	1
	GTX-GLS-12X12MR	12" x 12" x 1/8" Mirror	1
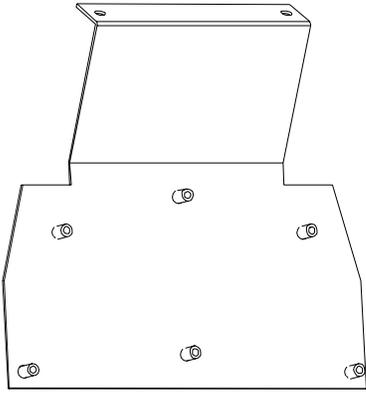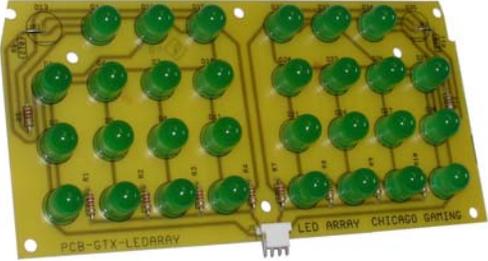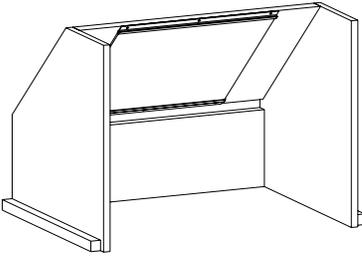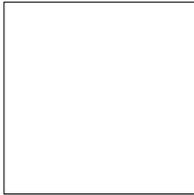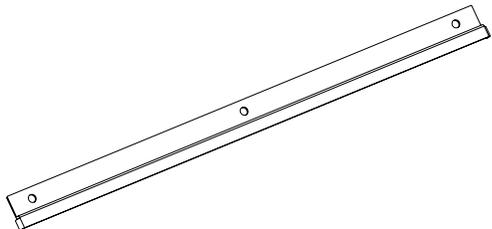
	GTX-MLS-MIRRBKT	Mirror Mount Bracket	2
	000-LCK-CH751	CH751 Locks	8
	GTX-ART-MARQUEE	Marquee	6
	GTX-PCB-LEDPUCK	Marquee LED PCBs	12
	GTX-MLS-SPKGRIL	GalacTix Speaker Grill	12
	000-SPK-475IN8O	Speakers 4 ¾" 8 Ohm	6
	000-LMP-12CCFL	12" CCFL White (2 Bulbs, 1 Inverter)	3
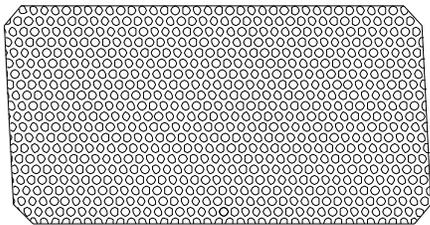
	000-LMP-12INBLB	Single 12" CCFL Bulb	
	000-ELE-INVRTER	CCFL Inverter	
	015-MLS-AGLBRKT	Angle Bracket	12
	015-MLS-CFBALST	CCFL Inverter Bracket	3
	GTX-MLS-BLNKPLT	Coin Blank Plate	6
	GTX-MLS-MECHPLT	Coin Mech Plate	6
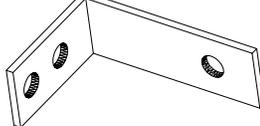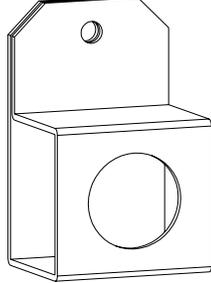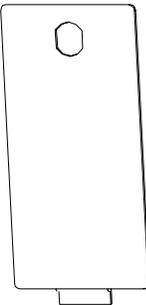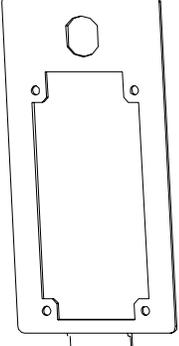
	000-CUR-WEICOIN	Coin Mechanism Model #S-071CS	6
	GTX-MLS-FIREBLK	Fire Blank Plate	6
	GTX-ART-COININS	Insert Coin Decal	6
	GTX-ART-LOWSIDE	Lower Side Art	6
	GTX-ART-TICKETS	Tickets Decal	6

	GTX-SUB-WNDWART	Side Glass with Art	6
	GTX-GLS-BODGLAS	Side Glass 3/16" Tempered Grey, 22-7/16" x 32-9/16"	6
	GTX-ART-WINDOW	Window Art (Decal only)	6
	GTX-SUB-TICKDOR	Ticket Door Assembly (Includes Frame, Door, Ticket Holder, Lock, Ticket Low Switch, Ticket Low Cable)	6
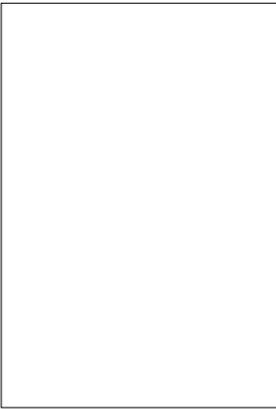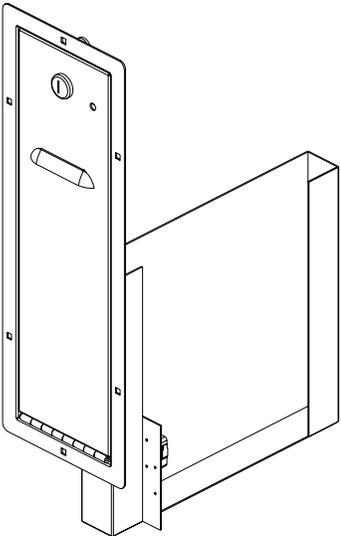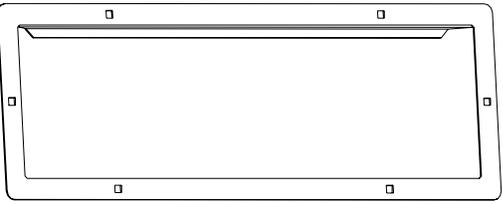
	GTX-MLS-TICFRAM	Ticket Door Frame	6
	GTX-MLS-TICKDOR	Ticket Door	6
	GTX-MLS-TIKHOLD	Ticket Holder	6
	000-MCH-DL1275	Ticket Dispenser Deltronics Model #DL-1275	6
	000-LMP-5MMRED	5MM Red Ticket Low LED	6
	000-LMS-LEDCR17	LED Clip & Ring, Black, T-1-3/4 LED	6
	GTX-MLS-CINCHUT	Coin Chute	6
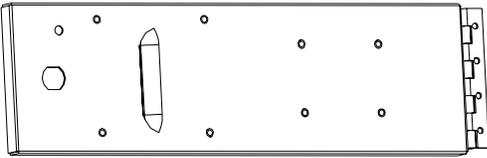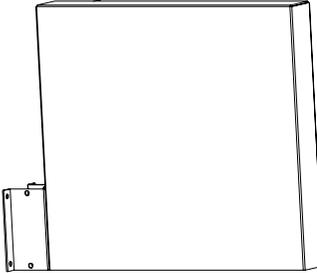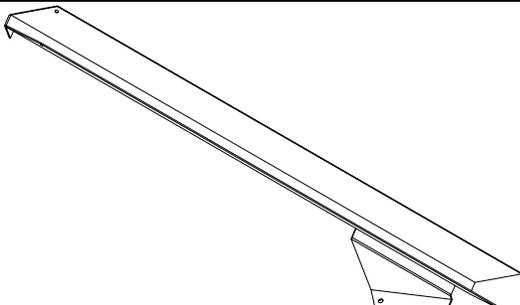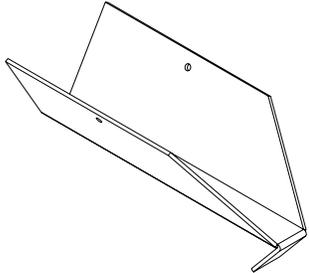
	GTX-MLS-COINEXT	Coin Chute Extension	6
	GTX-MLS-CONTBRK	Counter Button Plate	1
	000-HAP-MBUTTON	Mini Pushbutton, Black Bezel Yellow Center	4
	000-HAP-12VMETR	12V 7 Digit Meter with Leads	2
	GTX-CCC-CASHBOX	Cash Box with Handles	1
	000-HDL-4INCHST	4" Chest Handle	2
	GTX-MLS-FIREPLT	Fire Switch Plate	6
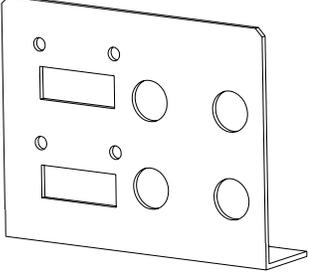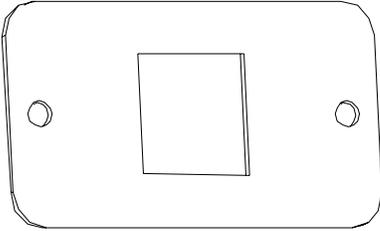
	GTX-HAP-FIREBTN	Fire Button	6
	000-HAP-MINSWTC	Miniature Snap Switch	6
	000-LMP-12VT134	T1-3/4 LED, 12V	6
	GTX-MLS-GLASRTN	Glass Retainer Bracket	6
	GTX-MLS-ISIDCPL	Inside Coupler	4
	GTX-MLS-MARQBRK	Marquee Bracket	6
	GTX-MLS-MONTPLT	Mech Mount Plate	6
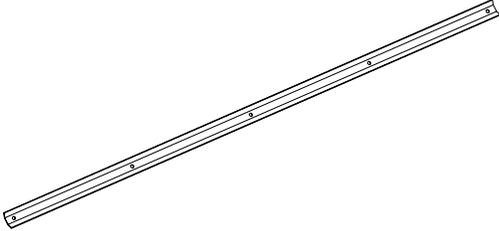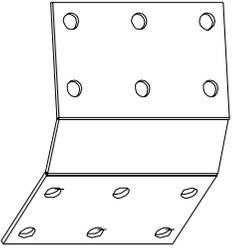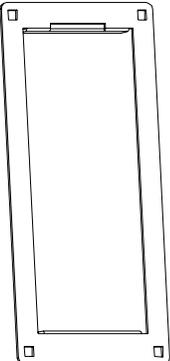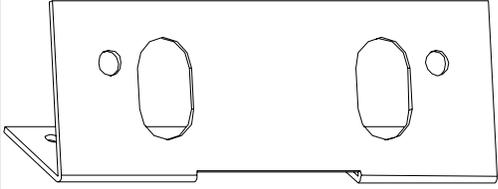
	GTX-MLS-RIBMTBK	Rib Mount Bracket	6
	000-MLS-PWRPLT	Power Switch Plate for Alco Switch	1
	000-SWC-ALCO16A	Alco Switch	1
	000-CBL-6PWR18G	6" Power Cable	1
	000-ELE-FILTINL	Filter, Yunpen 6A, IEC connector	
	000-ELE-FUSHOLD	Fuse base	1
	000-FUS-5A250V	Fuse	1
	GTX-MLS-RIBTPBK	Rib Top Bracket	6
	GTX-MLS-VLTHING	Vault Hinge	1
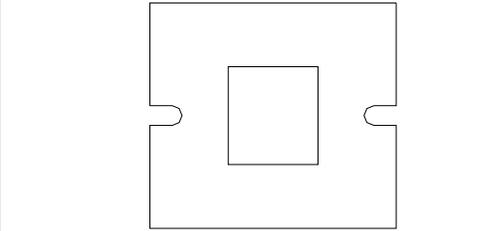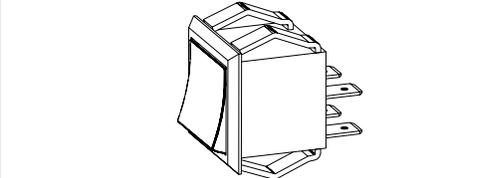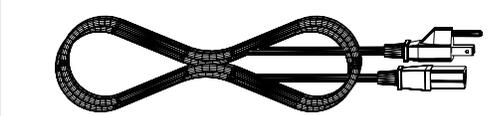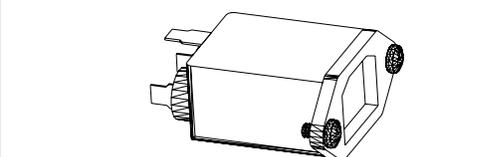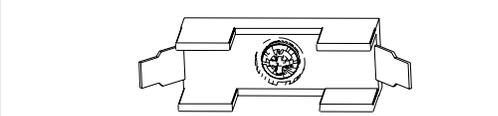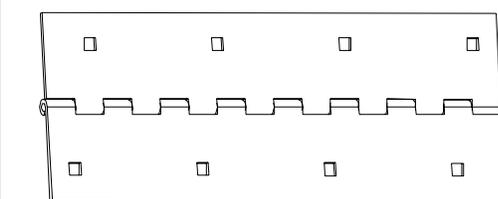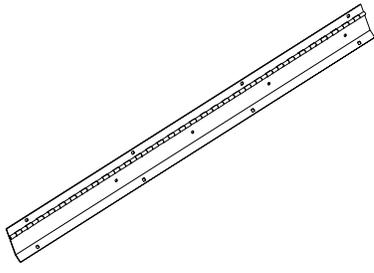
	GTX-MLS-DORHING	Door Hinge	1
	GTX-MLS-DORJAMB	Door Jamb	1
	GTX-MLS-SIDCOUP	Side Coupler	4
	GTX-MLS-FINSTDL	Fin Stud Plate Left	6
	GTX-MLS-FINSTDR	Fin Stud Plate Right	6
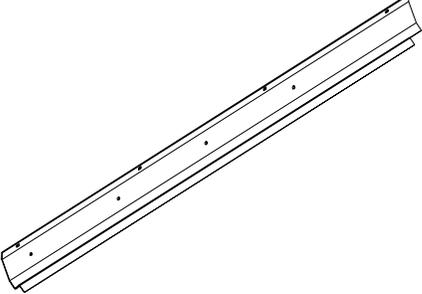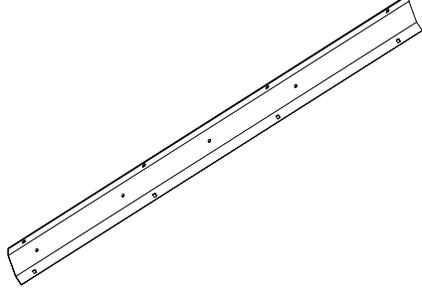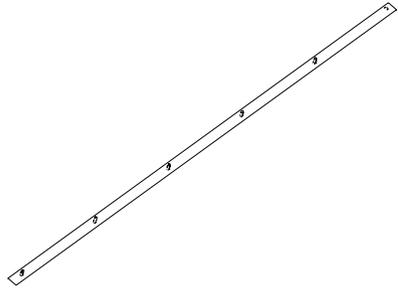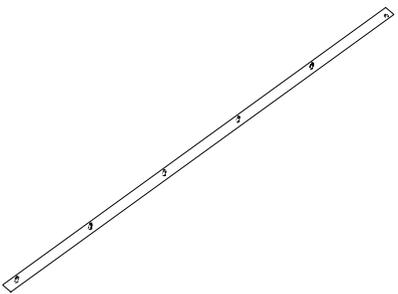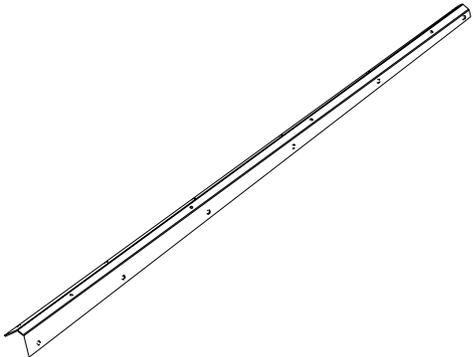
|			
	GTX-MLS-FINBASE	Fin Base Mount	6
	GTX-SUB-FINS	Fin Assembly with Fin Base, Left Stud Plate and Right Stud Plate	6
	GTX-PLS-FINSIDE	GalacTix Fin Side (1 Side)	6
	GTX-MLS-CASTBOX	Caster Mount Box	3
	000-HDW-3SCASTE	3" Swivel Caster	3
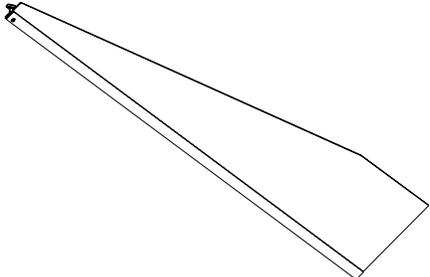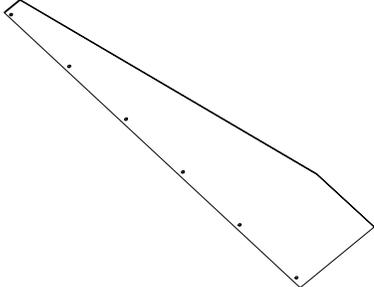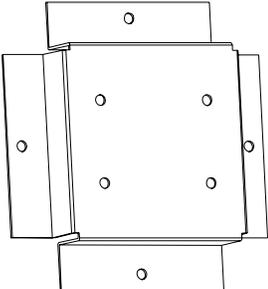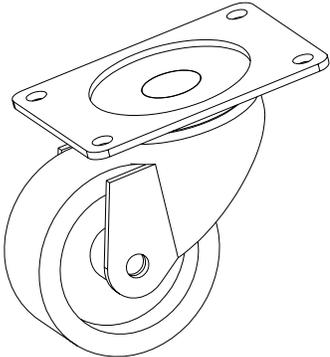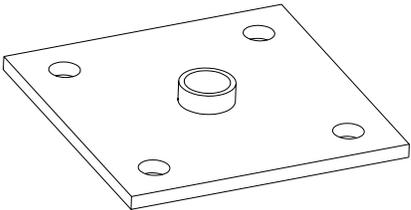
|	Part Number	Description	Qty
	000-HDW-5LEGPLT	½" Leg Leveler Plates	4
	000-LVR-1213X3	Leg Levelers, ½-13 x 3"	5
	GTX-CBL-TICKSWC	Ticket Low Switch Cable	6
	GTX-CBL-FIRESWC	Fire Button Cable	1
	GTX-CBL-CHASLIT	Marquee Chase Light Cable	1
	GTX-CBL-COINTIX	Coin and Ticket Cable	1
	GTX-CBL-SERVICE	Service Cable	1
	GTX-CBL-SPEAKER	Speaker / Marquee Cable	1
	GTX-CBL-TICKLIT	Ticket Low Light Cable	1
	GTX-CBL-CHASPWR	Chase Power Cable	1
	GTX-CBL-CHASTOP	Chase Top Cable	1
	GTX-CBL-MARQPWR	Marquee Power - Speaker	1
	GTX-CBL-ACPOWER	AC Wiring Harness	1
	PUT-CBL-POWRBRK	CPU Power Button Cable	1
	PUT-CBL-RESET	Computer Reset Cable	1
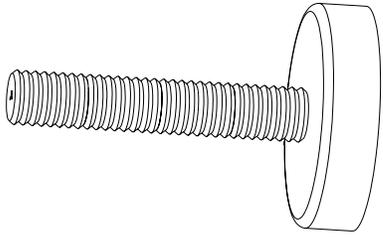
16. Block Diagram

This diagram shows how the main components in GalacTix are connected. The **Computer Shelf** and **Projector** plug into the **Power Splitter**. The **A/C Harness** powers the **Projector PCB** while the game is on, but the **Battery Pack** powers the **Projector PCB** and **Projector Fans** after the game is shut off. The batteries run the fans for **3-5 minutes after power down**, which helps cool the projector and extend the life of the lamp.

See **Page 9** for more information on the **Rechargeable Battery Pack** and **Projector PCB**.

17. Wiring Schematic

Main wiring schematic for GALAC TIIX, Chicago Gaming Company.

18. Board Layout

USB - I/O PCB

CHICAGO GAMING COMPANY INC.
4616 WEST 19TH STREET
CICERO IL 60804

Document Number: PUT-PCB-IO+AMP
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