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BULK & AMUSEMENT EXPERTS

CRANE/CLAW MACHINE MANUAL

Applicable to the following machines:

Mini Mighty (19.5")
Mega Treasure (22")
To the Extreme (25")
Joy Catcher (31")



Table of Contents

Warnings…… Page 1

Introduction…… Page 2

Game Overview ……... Page 3

How to Set Up a New Machine …… Pages 4-5

Machine Diagram…….. Page 6

How to Enter the Settings Menu …….. Pages 6-7

Navigating the Settings ……..…… Pages 7-10

Adjusting the Claw Strength…….. Page 11

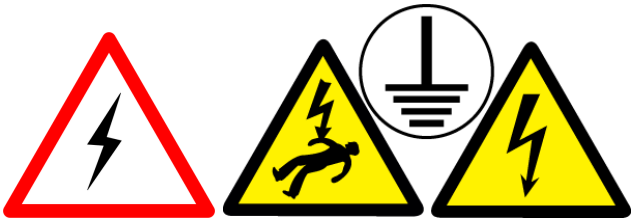
Taking Proper Care of the Machine…….. Pages 12-13

Common Mistakes Operators Make …… Pages 14-15

Error Codes ……. Pages 16-17

Installing or Replacing Cashless Payment Devices ……. Pages 17-19

Appendix I (FAQ) …… Page 20
Appendix II (Claw Sizes) ……Page 21
Appendix III (Warranty) ……. Pages 22-23
Appendix IV (Resource Video Links) …….. Page 24



WARNING & SAFETY INFORMATION

Please read the warnings **carefully** before operating, servicing, or transporting the machine. Failure to follow these warnings may result in **injury, equipment damage**, or **voiding of warranty**.

- THIS MACHINE CONTAINS **HIGH-VOLTAGE COMPONENTS (120VAC/220VAC**)
- ONLY **QUALIFIED** PERSONNEL SHOULD OPEN THE CONTROL PANEL OR PERFORM INTERNAL MAINTENANCE.
- ALWAYS **DISCONNECT POWER** BEFORE SERVICING OR PERFORMING ANY MAINTENANCE.
- DO NOT EXPOSE THE MACHINE TO **WATER, MOISTURE**, OR OPERATE IN **WET ENVIRONMENTS.**
- ENSURE THE POWER OUTLET OUTPUT MATCHES THE **VOLTAGE REQUIREMENTS** SPECIFIED ON THE MACHINE LABEL.
- **DO NOT** USE A **DAMAGED** POWER OUTLET OR **DAMAGED** POWER CORD.
- DO **NOT MODIFY** HARDWARE OR SOFTWARE UNLESS EXPLICITLY INSTRUCTED BY THE DISTRIBUTOR OR MANUFACTURER.
- DO NOT ALLOW **UNAUTHORIZED USERS** TO ACCESS THE SETTINGS MENU OR INTERNAL COMPARTMENTS.
- PLACE THE MACHINE ON A **LEVEL SURFACE** AWAY FROM HIGH-TRAFFIC **WALKWAYS** OR **EMERGENCY EXITS.**
- KEEP AWAY FROM **DIRECT SUNLIGHT, HEATING ELEMENTS**, AND **EXTREME TEMPERATURES**.
- DO NOT STACK OBJECTS ON TOP OF THE MACHINE OR THE POWER CORD AND DO NOT **OBSTRUCT** AIR VENTS.
- THE OPERATOR IS SOLELY RESPONSIBLE FOR ENSURING COMPLIANCE WITH **LOCAL LAWS AND REGULATIONS**, ESPECIALLY THOSE RELATING TO GAMING, PRIZE REDEMPTION, AND FAIRNESS.
- THE MANUFACTURER AND DISTRIBUTOR ARE **NOT LIABLE** FOR INJURIES, LOSS OF EARNINGS, OR DAMAGES RESULTING FROM IMPROPER SETUP, UNAUTHORIZED MODIFICATIONS, OR MISUSE OF THE MACHINE.
- ONLY AUTHORIZED TECHNICIANS SHOULD PERFORM REPAIRS

This product is intended for **commercial use** and should be operated responsibly. Follow all instructions in this manual for safe and effective use. For service or support, contact your authorized distributor.

Introduction

Congratulations on the purchase of your new claw machine!

Welcome to a new standard in claw machine excellence. It is recommended that you read this manual completely.

Our claw machines are designed with the future in mind, combining advanced functionality for seasoned operators with user-friendly, hassle-free configuration for newcomers. We offer some of the most accessible and intuitive machines on the market, all while continuing to innovate the technology within. The settings manual was thoughtfully developed not only by a software engineer but also by an experienced claw machine operator, ensuring intuitive navigation and practical features that truly meet the needs of both new and experienced users.

This manual covers everything you need — from setup and configuration to expert optimization tips. Every machine, regardless of model, is built with care and precision, carrying a legacy of excellence from the moment it's assembled on the factory floor to the moment it reaches your door!

Your claw machine is equipped with a tri-motor compact gantry bridge upon which the claw travels to adequately reach all four corners of the machine and everything in between while giving precise aim and control to the player. A prize detection system makes accounting and book keeping much more efficient and helps you stay true to your desired pay out.

With extensive customization options, you can fine-tune claw strength, set prize win rates, control lighting, set music, and more giving you full control over the user experience and ultimately your return on investment.

Should you need assistance, our customer support team and online troubleshooting guides are here to help you maximize your machine’s uptime and performance.

We thank you once again for your purchase once again and we’re so glad that we get the opportunity to be a part of your vending and arcade journey!

Andy Denton
Owner, CEO

Family Fun & Games

Game Overview

1. **Insert Payment**
   The player inserts coins, bills, or a swipe/tap to start the game. The full price must be paid to unlock the joystick/button controls.

2. **Claw Movement Begins**
   The claw moves to the center of the playfield. Once it's in position, the joystick and button activates for the player to use.

3. **Position the Claw**
   The player uses the joystick to move the claw in any of four directions, aiming it over the prize of their choice.

4. **Drop the Claw**
   When ready, the player presses the drop button (located next to the joystick). The claw descends toward the prize.

5. **Claw Closure & Lift**
   When the claw reaches the bottom (detected by string slack), it closes with a pre-set grip strength determined by the operator. The claw then lifts and adjusts its grip strength based on the machine's payout settings.

6. **Prize Outcome**
   - If the prize stays in the claw, it's carried to the prize chute and dropped. The exterior lights may flash on the machine if a win occurs and the "win" music will begin playing
   - If the prize falls before reaching the chute, no win is awarded.

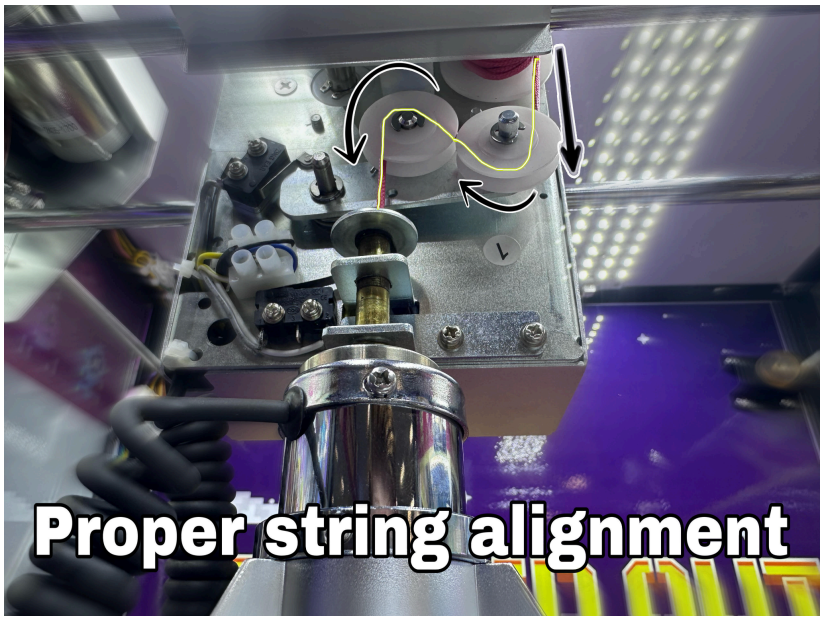
7. **Prize Retrieval**
   If successful, the player opens the prize door to collect their prize from the receptacle.

8. **End of Game**
   The game ends after each play, and the player must insert more payment to play again.

How to set up a new machine

1. Remove Packing Materials
Carefully remove zip ties, foam, bubble wrap, and tape around the claw gantry.
Do NOT cut the red claw string or black/gray coil wire at any time!!!

2. Power On & Claw Position Check
Ensure the claw is sitting upright on the playfield or dangling safely above it, then plug in the machine. The claw should rise and return to the prize chute. If not, confirm all **four white wheels** are seated properly on the gantry rods. If the claw does not rise smoothly or not at all then you may need to check the string pulley. **Diagram below for proper string alignment.**



3. Access the Settings Menu
Entering and navigating the settings menu is simple. Locate the yellow button inside the control panel door or the green keypad hung on the front or side wall inside the bottom half of the machine.

- **Green keypad**: Hold the **MODE** button
  Yellow button: Hold for 5 seconds until the settings appear on the LCD screen near the joystick.
- Use the joystick or arrow keys to navigate. Tap right or press ENTER to select.
- See **Navigating Settings Menu Section** for more detail on all setting options.

4. Adjust Settings

- **System Setting**: Game mode, price per play, game time, accessibility, etc.
- **Gantry Test**: Claw strength and behavior. More in-depth information in the following section.

5. Confirm Claw Alignment
Make sure the claw returns directly over the prize chute during operation.

6. Test Payment Devices

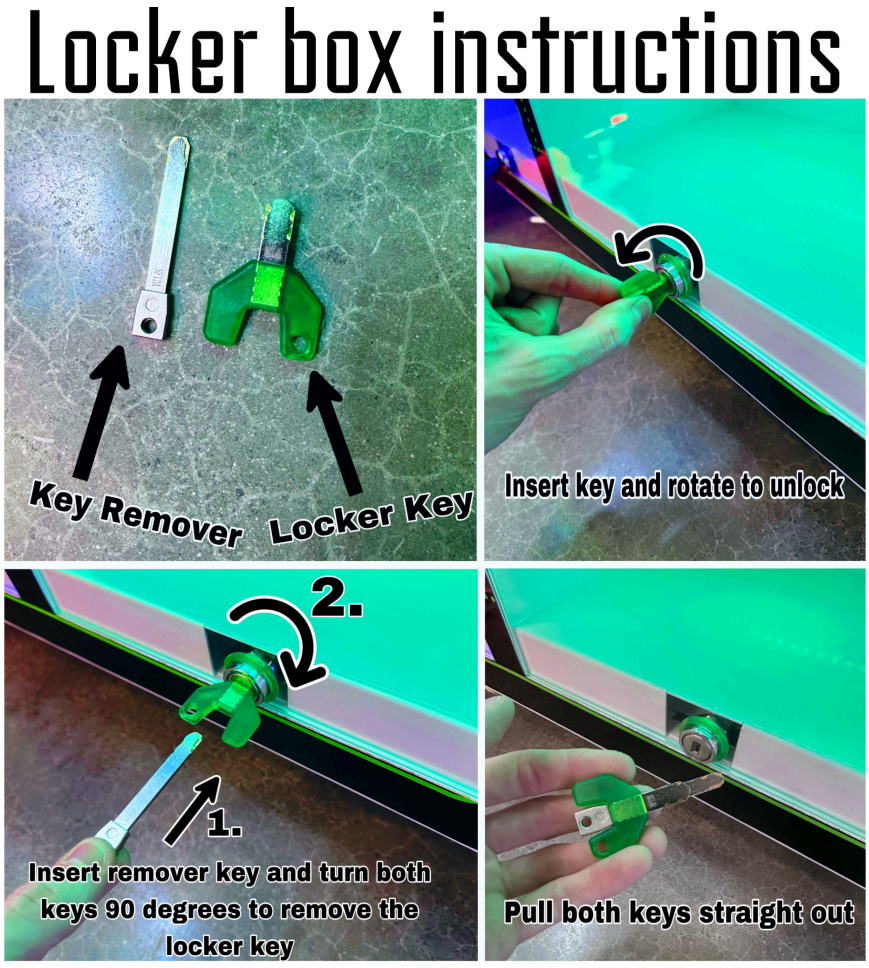
- Insert a sample coin in the **left-side slot** of the coin mechanism(s)
- Run a bill through dollar bill acceptor, if applicable, and confirm proper crediting
  Adjust DIP switches if pulse counts are incorrect
- Credit Card Readers (Nayax and Cantaloupe supported) - follow onboarding and testing instructions from device manufacturers

7. Final Assembly

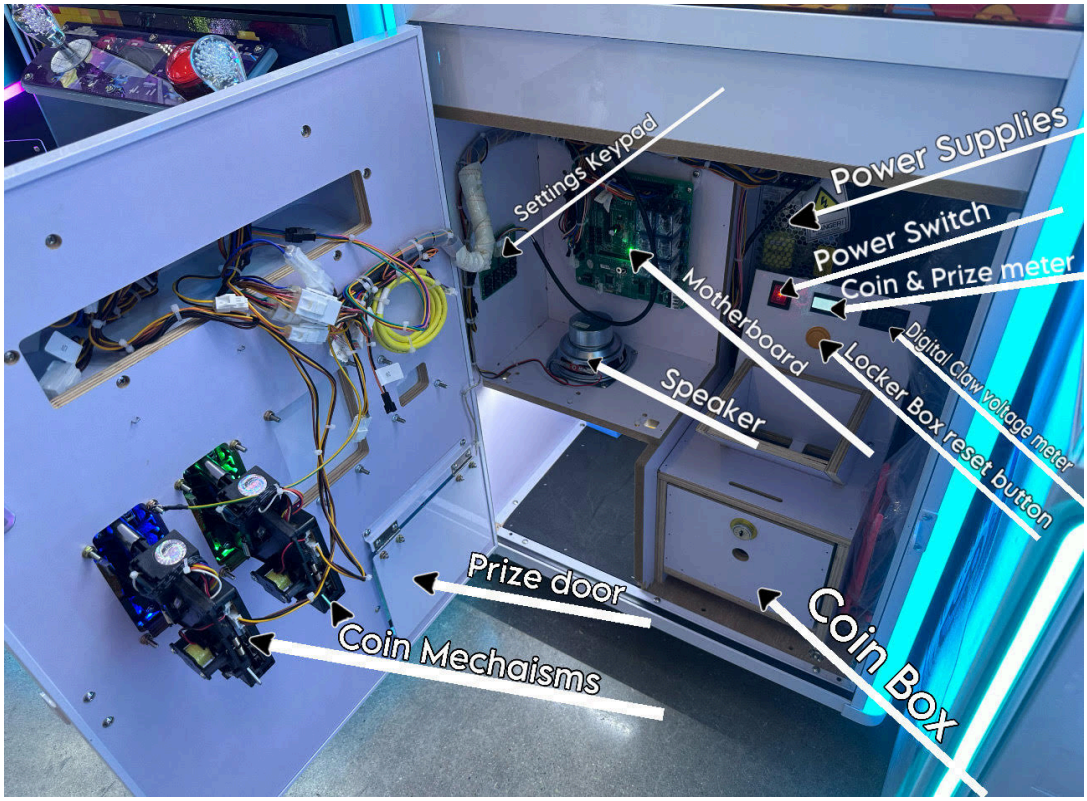
Attach any header marquees or locker box add-ons to enhance the machine's appearance and visibility. The locker box is optional; however, if installed, the following steps are required:

- Connect the prize door sensor cord from the locker box to the corresponding cord located at the top of the machine.
- Connect the power and lighting cord from the locker box to the matching electrical cord from the machine.
- Secure the locker box to the machine using the four included screws. Insert the screws through the pre-drilled holes in the locker box into the top of the machine. All required screws are included in the parts bag.

Refer to the diagram below for details on the key and lock mechanism.



Refer to the diagram below for details on what's inside the main cabinet.



Coin & Prize Meter- The coin/prize meter is located in the bottom compartment of the machine. The top number is the total number of coins inserted into the machine over the total lifetime use of the machine. The bottom number is the total number of items that have crossed the prize sensor infrared beam over the total lifetime use of the machine. The numbers on this screen **cannot** be reset and **will not** be reset if you clear the account/audit history on the machine. Look for a small white illuminated screen such as the one pictured here.



How to enter the settings menu

Entering and navigating the settings menu is simple. Locate the yellow button inside the control panel door **or** the green keypad hung on the front or side wall inside the bottom half of the machine.

To enter the settings menu:

- If your machine has a **yellow settings button**:
  → Press and hold the **yellow button** until the menu appears.

- If your machine uses the **green keypad**:
  → Press and hold the **MODE** button.

Navigating the Settings

If using the yellow button system:

- Use the **joystick** to scroll through the settings.
- Push the joystick **to the right** to select a setting.
- Press and hold the **yellow button again** to save and exit.

If using the green keypad:

- Use the **two leftmost buttons** to scroll **up and down** through the menus.
- Use the **next two buttons (second from the left)** to adjust the **volume** up or down.
- Press **ENTER** to go into a menu.
- Press **EXIT** to go back or leave a menu. (Note: your settings will be saved when hitting exit, but not if you simply hit ENTER)
- Press and hold **MODE** to save and exit after making changes.
- The **CLEAR** button removes all active credits (only works on the home screen).

System info: This will give you the option to view your machine's serial number, software version number, the date the machine was manufactured, and check or clear the game audits/history of all the coins in and prizes won.

System setting:

- **Coins per credit** is the price per play on the machine. This ranges from Free play all the way up to a maximum of $24.75. This is the cost to play the machine 1 time. Free play can be used by having players press the main claw drop button to start a play. (Some software may vary) The machine will still accept money on free play but there will be no payment required to play and any payment received will be added to the on screen balance.
  Ex: $1 per play is 4 coins/pulses to play.

- **Attract mode set** is the time interval of how often the machine will play the game music to attract players to the machine. Please note that if the volume is muted you will hear nothing when the attract music plays. The attract music is the same music as the game music and plays at the same volume. The time interval can be set to 0 or all the way up to 10 minute intervals. You can also raise or lower the volume of the music with the Volume knob inside the control panel door.
- **Alarm sound** is the setting that allows you to choose how long the machine will play the siren/alarm noise after going into an error state. This ranges from 0 seconds to 600 seconds. The alarm will continue to play for the set amount of time and the screen will display the error type even after the alarm stops sounding.

- **Play time out** is the amount of game time a player has to move the claw. At the end of the allotted game time the claw will drop automatically. This setting ranges from 10-60 seconds and is used for the duration of every play on the machine. Essentially this setting is choosing the duration of each play on the machine.
- **Award credit** is the number of coins/pulses that the machine must accept before giving 1 bonus coin/pulse which is immediately added to the on screen balance. You can set this anywhere from “no award credit” to 10 coins before an award credit is given.

  Ex: If **Award credit** is set to 4 this means if a player inserts 4 coins they will receive 1 bonus coin/pulse on screen. Therefore if they insert $4 consecutively they will get 5 plays on the machine while only paying for 4 plays.

- **Avg. Win Ratio** is the payout rate for the machine. This means how many prizes should be won within a set amount of plays. You can adjust the win ratio from 1-250 plays per prize. This setting only takes effect when the game mode is set to “Normal mode.”

  Ex: If the Avg. win ratio is set to 6 games/prize then the machine will use the High, mid, and low strength until play #6. On play #6 only the “high” strength will be used. Plays 1-5 will all use the high, mid, and low strengths.

  IMPORTANT

  *The payout rate is not a strict payout. If you set the claw too strong then players will end up winning with their own skill because it will be too easy. It is recommended to test all prizes to ensure that the claw forces them to slip out on all non-winning plays. If you set the “high” strength setting too low then it also might be impossible to win even when the machine is due to pay out a prize because the machine uses the “high” strength for all pay out/winning plays. It is recommended to set the high strength strong enough to pick up the prizes.

  *The payout does not guarantee a win, however it will certainly make it easier to win because the machine is not actively trying to force a loss upon the player.

  *The claw will continue to use the “high” strength on all future plays until a prize is won or crosses the prize detection system assuming the game mode is set on “Normal,” then it will begin using high, mid, and low for the next payout cycle.

  -See Claw strength settings on page 11

  LCD Screen adjust controls how bright or dim the lettering on the white LCD screen is. The LCD screen being referred to is located next to the joystick. The setting ranges from 45- 63 units. 45 is the most dim and 63 is the brightest.

- **Vending option-** This lets you enable “Play till you win mode.” This means players will have more than one attempt to win a prize and after they pay for one play they can

continue playing. If they win a prize then the machine will stop giving the player more credits until they pay for more plays. You can enable or disable this setting.

Ex: A player pays $1 to play the machine. The player does not win on play #1 so the machine acknowledges that and gives them another play. If they win then the machine stops giving them more attempts. If the player loses then the machine gives them another attempt

*In order for Vend Mode or “Play til You Win” to work properly the game mode must be set on “Normal mode” and the Grab times setting must be set on anything higher than 1. Please note that “Grab times” are the number of additional attempts the player gets if a prize is not won.

- **Grab Times-** These are the the number of additional attempts a player will have in order to win a prize. This setting can be set from 1-50 plays. Grab times will be displayed to the player on the lcd screen.

  Ex: A player pays $1 to play. They lose on their first play so the machine counts down by 1 grab time and lets them play again. They win so the machine clears the remaining grab times and goes back into standby.

  *If a player does not win within the allotted number of grab times unfortunately they wont receive any compensation from the machine so it is recommended to set grab times to 50 for Vend option/Play till you win and Buy Now mode.

- **Claw down pos** is the amount the claw will lower down into the prize chute before letting go of the prize at the end of every play regardless if you pick up a prize or not. This setting ranges from 0-350 units. 0 will disable this setting. This setting is good for a gentle release of prizes after being won and brought back to the prize chute.
- **Air catch mode:** This setting gives players the opportunity to close the claw mid-air while it is going down to grab the prize of their choice. This is a strong advantage to the player. You can enable or disable this setting.
- **Prize chute pos:** This setting tells the machine where the prize receptacle is. You have the option to choose the front corner or the back corner and the claw will return home to that chosen corner after every play. It is recommended to leave this setting alone if the claw is already capable of dispensing prizes to players properly.
- **LED state/mode:** Controls the colors of the illuminated parts of the machine if applicable. Some machines have the ability to change the colors or turn off the LED lighting entirely while others are fixed on one or multiple colors and can not be turned off. Some machines have the ability to flash the lighting automatically which is typically found on LED setting 8-15.
- **Game mode: Normal mode** is used for most functions. Random mode op1 will make your payout ratio dependent upon the “win percentage” setting. **Random op1 and Random op2** will have a random prize payout ratio which abides by the set win percent, not to be confused with the Avg Win ratio setting. Random op1 will only pay out one time

randomly then go back to non-winning mode. Random op2 will continue to use the “high” strength until a prize crosses the sensor. After a prize is won then another randomized pay out cycle will cycle through.

*Vend mode or Buy Now mode will take effect when the game mode is set to Random op1 or Random op2.

- **Win percentage:** This controls the payout rate when the game mode is set to Random op1 or Random op2.
  Ex: If the win percent is set to 15% then 15 random plays out of 100 plays on the machine will use the “High” strength only.

- **Buy Now Mode-** This allows you to give players the option to buy a prize outright from the machine. The option will appear on the home screen and they must select “Buy Now” or “Play Now” using the joystick before inserting their payment. This is not the same as Vend mode because Buy Now mode does not override the ability to play the machine on normal mode with the high, mid, and low strengths. Buy now mode will in fact use only the “high” strength. Buy Now mode also uses the Grab times setting. It is recommended to set Grab Times to 50 when enabling Buy Now mode. In simple terms “Buy now mode” is a secondary game type presented on the home screen in standby whereas “Vend mode” limits the entirety of the machine’s abilities to "Play till you win.”

- **Buy It Price:** This setting takes effect when Buy Now mode is enabled. This is the price to outright buy a prize from the machine. You can set this anywhere from $0.25 to $99.75. It is recommended to set this price higher than the normal cost per play.
  Ex: Cost per play is set at $1 for a *chance* to win. The “Buy it price” should cover the cost of the item and include a profit margin of your choice. If you have $2 prizes inside the machine it is recommended to charge $3 or more for the Buy it price.

- **Auto exit time:** This is how long the machine will display the settings menu on screen before auto- exiting the settings when nobody is actively making adjustments to the settings. The range is 10 seconds -180 seconds.
  Ex: If you begin to adjust settings and you step away from the machine then after X amount of seconds the machine will auto-exit from the settings menu to prevent others from tampering with the settings menu.

- **Display mode:** When the machine is on the home screen it will display the cost per play as a dollar amount or as a coin amount.
  Ex: Play now $1.00 Ex: Play now 4 coins

- **Music select:** You can choose the music by selecting a number from 0-2. Each number correlates to a song. There is no option to turn off the music while maintaining the game sound effects. You must mute the game with the volume controls as this is an all or nothing scenario. All the music and all the sounds or no music and no sounds.

I/O Test- Allows you to test all the inputs and outputs by pressing any switch, button, or trigger on the machine. This can help you find broken wires or damaged switches, buttons, or triggers. You can also test all of the audio and sound effects contained on the sound chip within this menu.

Adjusting the Claw Strength

Navigate to “Gantry test” on the first menu screen after pressing and holding “Mode” or pressing and holding the yellow button.

Gantry test

- **Test high power**- This is the strength used when the claw initially grabs the prize when the claw has descended fully. (VR1) The claw will sample the voltage by closing itself and displaying the voltage on applicable machines with the digital volt meter. This strength will also double as your **payout strength** and will be the only strength used for Vend mode/play till you win as well as Buy it now mode.
- **Test mid power**- This is the strength used when the claw has risen about half way back to the top. (VR2) The claw will sample the voltage by closing itself and displaying the voltage on applicable machines with the digital volt meter
- **Test low power**- This is the strength used when the claw has hit the top of the gantry. (VR3) The claw will sample the voltage by closing itself and displaying the voltage on applicable machines with the digital volt meter.

  Ex: If you set High power to 70, mid power to 30, and low power to 20 then the claw will grab, loosen slightly, and then the prize will slip out more than likely. However you can also make mid power less than low power if you would like the prize to slip out of the claw as the claw is rising.

  *Please note that depending on your claw shape and claw size you may need to set some claw shapes and sizes stronger or weaker than others to achieve a good strength.

- **Test gantry move -** Clicking on this menu option will cause the gantry to move to the middle and drop the claw then the claw will close and rise back up and return to the home position.

Burn in test - Auto tests the machine to ensure that the software programming is intact on the software card and on the main board.

Factory setting - This menu option will revert all the settings back to the factory defaults. You must select “Yes” to revert all settings back to the factory defaults or select “No” to exit out.

Modify password - Allows password protection on some of the settings. You can set this password simply by scrolling through the numbers to raise and lower them in each column. This setting is not used in most cases.

Taking Proper Care of the Machine

In order to give your machine the longest lifetime possible with the highest profitability it is important to do preventative maintenance and routine checks.Claw machines are just like cars, they **require** regular attention to detail and maintenance to keep them running as long as possible with minimal down time.

Routine checks:

- Test the coin mech(s) to ensure there are no jams as well as the bill validator.
- Test all 4 directions on the joystick and use the drop button.
- Ensure the drop button is firmly mounted to the top of the control panel as this may loosen over time.
- Analyze the gantry to make sure it moves smoothly and swiftly in all 4 directions and registers all of the limit switches.
- Check that the gantry has the colored rubber belts on both sets of wheels for front and backward motion.
- Check the prize door and all locks for looseness and tighten them as needed

Uses $1 per play price guide

10,000 coins or 2,500 plays ($2,500 inserted)

- Check that the prize sensor acknowledges all wins, if not then adjust the sensitivity or clean dust and debris off.
- Check that the sample coin inside the coin mech(s) is still installed good
- Make sure the drop button is tightly mounted to the control panel and that the button still clicks
- Make sure the joystick is not loose and that it can press all 4 switches easily and with equal effort.

20,000 coins or 5,000 plays ($5,000 inserted)

- Repeat all of the steps from the previous maintenance check(s)
- Check the claw string for any areas of fraying
- Ensure that the spring loaded up trigger switch is still in good operation and is not too stiff or too loose
- Tighten the bolts or screws on the prize door
- Tighten the bolts or screws on the joystick mounting piece
- Drop the claw half way and then lift it up manually to check if the string slack arm detector is still in good operation
- Push on the gantry connector to ensure it has a solid connection

After 40,000 coins or 10,000 plays ($10,000 inserted)

- Repeat all of the steps from the previous maintenance check(s)

- Inspect the black or gray claw coil wire for any exposed wires or peeling rubber
- Add lubrication to all 3 gears and motors in the gantry
- You may want to replace the joystick as this gets more wear and tear due to the fact that even when no money is inserted, people can still move it and add wear to the micro switches inside of it
- Ensure that both colored bands stretch across both sets of wheels on the front/back wheels of the gantry. They should be wrapped over top of each wheel, not making contact with anything else. Check for small cracks in the rubber.
- Tighten any exposed screws on the exterior of the cabinet
- Check the interior and exterior lights for dead bulbs or segments
- You may want to wipe down the claw assembly and dust it off, wipe down the gantry rails and the wheels to ensure good traction and no dust.
- Tighten the screws on the gantry covers so that they don't fall off
- Inspect your power cord for any wear and tear then replace if needed

After 200,000 - 400,000 coins or 50,000 - 100,000 plays ($50,000-$100,000 inserted)

- Repeat all of the steps from the previous maintenance check(s)
  *The following are all preventative maintenance and may not require immediate replacement
- Replace the power supply or supplies to prolong the life of the machine if the machine has been left on 24/7 up until this point
- Replace the colored bands on the wheels of the gantry to prolong the life of the machine
- Replace the drop button/drop button trigger switch as this is likely worn down.
- Replace the coin mechanisms for the best sensitivity and to prevent false coins
- Replace the claw string if it is frayed or fuzzy
- Check the claw for missing paint around the tips of the prongs and on the claw cap and replace the claw if needed. This helps prizes not get dirty or cling to the claw at undesired times.
- Clean your bill validator with a cleaning card to ensure proper detection of bills
- Replace all of the limit switches in the gantry to prolong the machine's performance.
- Inspect all harness connections for potential broken or folded wires
- Inspect all 3 gears and replace any if they appear rounded or carved in the center of the teeth on the gears.
- Replace the motors if they have gotten slower or appear to be chewed up.
- Play the machine and listen to the ice cube style relays to ensure they click properly. Check for potential burnishing as this can lead to false relay triggers at unwanted times and can lead to a **fire** if the gantry motors remain engaged as a result.

Common Mistakes Operators Make

Setting the Claw Too Strong for Your Desired Win Rate

The only reliable way for your claw machine to adhere to a specific payout ratio is by adjusting the claw's grip strength so that prizes occasionally slip out. If the claw is set too strong, players may win simply by being skilled, leading to more frequent prize payouts than intended.

Solution: Test your prizes using the exact claw assembly and machine model where they'll be placed. Use your hands to position the prizes in various ways inside the claw, and play the machine repeatedly. Observe how and when the prizes fall. The ideal setup causes the prize to slip in a way that feels natural and not obviously rigged.

If you win too often during testing, the claw may be set too strong, or the machine may be due for a payout. Additionally, the prize may not be triggering the win sensor correctly and might require a sensitivity adjustment.

*Note: Be cautious about setting your claw strength too strong as this can lead to burning out your coil faster.

Failing to Set the Price Per Play and Configure Payment Devices

If you forget to program the correct price per play or fail to test your payment devices, you risk losing revenue or creating a poor user experience. For example, if your bill validator is set to send only one pulse per dollar, but your machine requires four pulses to register a $1 credit, players will unknowingly be charged $4 to play.

Unconfigured coin mechanisms without a sample coin may also fail to register credits, and coin jams will occur, potentially damaging the mech.

Solution: Run a dollar bill through the validator and verify how many credits are registered. Adjust the DIP switches on the bill validator if needed to ensure the correct number of pulses is sent. Also, place a sample coin in the spring-loaded slot on the left side of the coin mech to ensure it functions properly.

Neglecting Routine Maintenance

A new claw machine may run without issues for the first few years, but this does not exempt the machine from wear and tear. Common failure points include gears, motors, belts, pulleys, switches, and other mechanical components. Even premium machines require regular attention.

Solution: Inspect your machine during every visit. Listen for unusual sounds or behaviors and check for any operational inconsistencies. Preventative maintenance is essential. Keep spare parts on hand, and replace any components that appear worn or are likely to fail in the near future.

Using the default locks or not using padlocks

Relying on the default locks that come with your machine may seem safe, but in reality, most units are shipped with identical keys. This creates a potential security risk, especially if other operators in your area are using the same machines. There's also the possibility—however rare—that a route technician or employee from a larger vending company could mistake your machine for one of theirs and accidentally collect from it using their matching key.

Solution: To avoid these issues, it's strongly recommended that you replace the factory locks or add high-strength padlocks on each and every padlock loop for an extra layer of security.

Not Checking Prize Sensor Sensitivity

Failing to check the sensitivity of the prize detection sensor—especially on machines that use a single prize detector—can result in inaccurate payout tracking.

If the sensor is not sensitive enough, it may fail to detect actual wins. This prevents the payout management system from resetting, which can lead to overpaying as the machine continues to allow additional wins under the “Normal/standard” game mode.

On the other hand, if the sensor is too sensitive, it may trigger false positives by detecting a win when no prize was actually dropped. This causes the payout counter to reset prematurely, potentially preventing legitimate wins. This will also trigger the win sound effect and possibly flash or blink the led lights every single time a play has been completed

Solution: Test and adjust the sensor sensitivity to ensure it accurately detects when a prize has been won. This will help maintain proper payout ratios and ensure a fair, reliable experience for players. For single prize sensors, be sure to check that the felt is fully in tact

Using the Incorrect Game Mode

Choosing the right game mode is essential, as each mode affects how and when prizes are awarded. Some modes follow a fixed payout ratio, others use a random payout system, and some allow for “winner every time” or “buy it now” features.

Using the wrong game mode especially when stocking higher-value prizes can lead to a significant profit loss and even a total loss. For example, in **random payout mode**, the machine selects a win at any time within the programmed ratio, but not even the operator can predict when that will be. If you place a $200 prize in a machine set to a 1% win ratio, that means one win will take place every 100 plays. At $1 per play, you would only earn a maximum of $100 before giving away a $200 prize resulting in a $100 loss. If on the very first play the machine decides to pay out then you lose $199. In addition if you did play till you win mode or buy it now mode you would have to basically sell the prize for more than the retail value and this may deter players in some cases.

Solution:
When using higher-value items, always select **Normal (or Standard) Mode**, which follows a strict, fixed payout ratio. This allows you to control profitability, assuming the claw strength is also adjusted appropriately. With Normal mode, the machine will only award a win when the payout ratio has been met, ensuring that you can maintain your desired profit margins.

Error Codes-

*Quick fixes are not permanent solutions, they are temporary fixes that can help you when you are in need of a faster alternative fix.

Coin SW Error
Cause: One or both black switches on the back of the coin mech are flipped incorrectly. May also be caused by coin/bill jams or wiring issues/ loose connections.
Symptoms: Coin mech or bill acceptor not powering on or not registering payments.

Quick Fix: Power off the machine, then unplug the coin mech or bill acceptor, then power the machine back on and the error should clear.

Prize SW Error
Cause: Blocked or misaligned prize sensor. May be covered by prizes, foreign objects, or dust.

Fix: Clean the sensor and ensure nothing is blocking it including dust and debris. You may need to adjust the sensitivity using the dial on the sensor on single sensor machines. (Accessible on the motherboard in back cabinet of machine)
Quick Fix: Power off the machine and unplug the prize sensor, then power machine back on

Left SW / Right SW Error
Cause: The gantry fails to hit the left or right limit switch. May be due to worn gears or motors. The gantry might be off the rails or misaligned. The metal gantry covers may be getting caught on things as well. Some models require the gantry's metal cover to press the switch properly.

Fix: Check if the motors spin and gears spin as well. Check wiring on the motors and switches.

Up SW Error
Cause: The claw does not reach or does not trigger the spring-loaded strike point at the top of the gantry after descending and rising back up.

Fix: Check that the claw is pressing and depressing the limit switch that is near the spring loaded strike point. Check that string is not tangled. Check for disconnected wires on the switch. Also check the motor and gear as well as the wiring for the up/down motor. (Located on the back right half of the gantry.)

Back SW Error
Cause: The gantry is not detecting rear movement via the back limit switch or forward movement from the front switch.

Fix: Check that the motor functions and gears are in good condition. Check the wires on the front or back limit switch located on the left portion of the slanted metal cover on the gantry/bridge. Check the wires going to the motor.

Sometimes if the issue is wiring related you will need to inspect the main harness for the gantry which is located in the back left or back right corner. Sometimes a wire may have come loose from the white or black connectors. You can also use a multimeter to check wire continuity if necessary.

> Note: Some software versions will auto-resume normal gameplay if a limit switch is not triggered within 10–15 seconds. This will cause longer delays between plays.

Installing or Replacing Cashless Payment Devices (Nayax & Cantaloupe)

This machine is compatible with MDB (Multi-Drop Bus) cashless payment devices, including Nayax and Cantaloupe (ePort) credit card readers. These devices allow customers to complete transactions using credit cards, debit cards, and mobile payment methods. Only manufacturer-approved MDB devices should be installed to ensure proper communication and reliable operation.

Safety Precautions

- Turn OFF the machine and disconnect from the main power supply before installation or service.
- Observe anti-static handling procedures when working with electronic components.
- Do not modify wiring harnesses or connectors.

Installation Procedure

1. Access Service Area
   Unlock and open the main service door to access the control board and MDB harness.
2. Mount the Device
   - Install the Nayax or Cantaloupe reader into the designated front panel opening or mounting bracket.
   - Secure using the supplied screws or mounting hardware.
   - Ensure the display is clearly visible to the customer.
3. Connect MDB Harness
   - Locate the machine's MDB port on the control board.
   - Connect the card reader's MDB cable to the MDB port.
   - If required, connect the supplied MDB Y-splitter harness (for sharing with other payment devices).
4. Antenna & Signal Setup (if applicable)
   - Position the antenna (internal or external) away from metal obstructions.
   - Ensure adequate cellular signal for transaction processing.
5. Power On and Initialization
   - Restore power to the machine.
   - The card reader will automatically power on and begin initialization.
   - Wait for the device to display a ready/idle screen (e.g., "Swipe/Insert/Tap").
6. Machine Configuration
   - Enter the machine's service menu.

    - Enable MDB cashless payment.
    - Set pricing and credit settings to ensure compatibility with cashless transactions.
7. Test Transaction
    - Perform a test vend using a credit/debit card or mobile wallet.
    - Confirm that credit is registered and gameplay is enabled.
    - Verify successful transaction approval on the reader display.

Replacement Procedure

1. Power Down
   Turn off and unplug the machine.
2. Disconnect Existing Device
    - Unplug the MDB connector from the control board.
    - Remove any antenna or auxiliary connections.
3. Remove Device
    - Unscrew and remove the existing reader from the mounting location.
4. Install New Device
    - Install the replacement Nayax or Cantaloupe unit following the *Installation Procedure* above.

Troubleshooting

- Reader Does Not Power On
    - Verify MDB connection is secure.
    - Confirm the MDB port is supplying power.
- “No Communication” or Reader Not Recognized
    - Ensure MDB is enabled in the service menu.
    - Check for damaged cables or loose connections.
- Transaction Declined or Fails
    - Verify cellular/network signal strength.
    - Confirm the device is activated with the payment provider (Nayax or Cantaloupe).
- Machine Does Not Credit Game After Payment
    - Check pricing configuration and MDB credit settings.
    - Ensure compatibility between control board firmware and reader.

Notes

- Nayax and Cantaloupe devices must be activated and registered through their respective service platforms prior to use.
- Firmware updates may be required for proper MDB communication.
- Do not install multiple cashless devices unless supported by the control system.
- Refer to the device manufacturer’s documentation for advanced setup, telemetry, and reporting features.

Appendix 1: Frequently Asked Questions

- **Q: What are the dimensions of the machine?**

  A: See Table

Machine	**Dimensions excluding headers and control panel**	**Dimensions w/ header and control panel and other accessories**	**Weight in pounds**
Mini Mighty	19.5" W x 19.5" D x 57.75" H	19.5" W x 24.5" D x 68.5" H	165
Mega Treasure 22”	22" W x 22" D x 60.5" H	22"W x 25.5" D x 71.25" H	163
To the Extreme 25"	24.75" W x 25" D x 72.75" H	24.75" W x 31" D x 78.75" H	225
Joy Catcher 31”	30.25" W x 28" D x 72.5" H	30.25" W x 33.5" D x 81.5" H	286

- **Q: What size prizes does it support?**
  A: Mostly, this will depend on the claw size you chose. Reference chart in Appendix II.

- **Q: Does it support card readers?**
  A: Yes, Nayax and Cantaloupe ready.

- **Q: Does it support card readers?**
  A: Yes, all CandyMachine machines come Nayax ready. Other devices can be added.

- **Q: Can I add a credit card reader later?**
  A: Yes, you can order a cable and install it yourself and remove the face plate on the front of the machine to install the device.

- **Q: What are the electrical power requirements and how much does the machine use?**
  A: See table below

Machine	19.5” Claw	22” Claw	25” Claw	31” Claw
Power Requirements	110V / 120W	110V / 75W	110V / 120W	110V / 100W
Voltage/Ampere	~1 Amp peak	0.7 Amps peak	~1.1 Amps peak	~0.9 Amps peak

Appendix II: Claw Sizes

Recommend Claw Sizes for the 19.5” Mini Mighty







Recommended Claw Sizes for 22” and 25” Claw Machines (it can also use any of the above mentioned claws)







Recommended Claw Size for 31” Machines (it can also use any of the above mentioned claws)





(Claw tips can be added to D3 and D5/H5 claws)

Claw Size	Recommended Plush or Toy
M1	2-3 inch plush, 2” Rubber Ducks, 2-3 inch capsules or balls
M3	2-4 inch plush, 2” Rubber Ducks, 2-4 inch capsules or balls
D3	5-8 inch items
D5/H5	6-12 inch items
Scoop Claw	2-3 inch items like ducks, capsules or balls
Candy Claw	Best for small loose items like candy

Appendix III: Warranty Policy
General Warranty Overview
At Candymachines.com, we stand behind the quality and workmanship of our products. We offer the following warranties on our machines, parts, and select items:

- Claw Machines & Amusement Machines with 2-Year Warranty: 2-Year Limited Warranty (Warranty is non transferrable)
- Other Claw Machines & Amusement Machines: 1-Year Limited Warranty (Warranty is non transferrable)
- Parts & Accessories: Covered by their respective manufacturer's warranty.
- Customized Products (e.g., custom wraps): 30-day warranty against defects in materials or workmanship.

Important Note:
All warranties apply to original purchasers only with proof of purchase.

Warranties cover defects in materials and workmanship but exclude damage from misuse, modifications, or user error.

Warranty Coverage Details
What Is Covered
Claw Machines (2-Year Limited Warranty): Manufacturing defects in core machine components, repairs or replacement of qualifying defective parts. Excludes add-ons (e.g., bill acceptors, Nayax) and external damage.

Parts Sold Separately: Covered only by their respective manufacturer warranties (e.g., Nayax systems, bill acceptors).

Customized Products (e.g., Custom Wraps): 30-day coverage for misprints, peeling, or bubbling. Excludes installation errors or improper handling.

External Damage: No coverage for flood, fire, or other natural disasters. Consider Vendsurance for protection. Criminal activity, such as vandalism or theft, is also not covered.

User-Caused Damage: Warranty is void for improper installation or modifications (e.g., painting, rewiring, or replacing parts).

Normal Wear: Regular wear on consumable parts (e.g., lightbulbs, decals, toy grippers) is excluded.

Misuse: Examples include glass door breakage caused by customers or overloading machines beyond their recommended capacity.

Replacement Parts Policy
Defective Parts: Return of defective parts is required before shipping a replacement, except for parts under $25 with verified evidence (photo or video). Customers are responsible for all shipping expenses.

Non-Warranty Replacements: Parts for user-caused damage are available at retail price.

Additional Warranty Terms
Shipping Damage (7-Day Guarantee): Report shipping damage within 7 days, including photos/videos for claims. After 7 days, standard warranty applies (excluding physical damage).

Warranty Guidelines: Shipping damage with evidence is covered under the 7-Day Guarantee. Normal-use part failures are covered under the standard warranty, but modified machines and customer-installed add-ons void the warranty. External damage is not covered.

Custom Product Guidelines: Defects within 30 days are eligible for replacement. Installation damage is not covered.

Performance Issues: Manufacturing defects are covered for repair or replacement. User error or external damage is the customer’s responsibility.

Appendix IV: Helpful Video Tutorial Links

Changing out your Claw

Unbox and Setup a 22” Claw Machine