Operators Manual

BALLOON BUSTER

PLEASE NOTE

- Read this manual BEFORE operating the machine.
- Keep this manual for your reference.
- Go to **www.laigames.com** click on Operator Access to register your games and receive future updates.

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URS
UKAS QUALITY MANAGEMENT 043-A
ISO 9001: 2008 Cert No.17460

Correspondence regarding this machine should be addressed to your closest LAI Games office or LAI Games Distributor.
For contact details, refer to the back page of this manual.

LAI Games

sales@laigames.com www.laigames.com

LAI Games Note

Dear Customer,

Keep up to date with new software updates or Service Bulletins for this game.

Check our website at *www.laigames.com* and click on Support, where you will find links to all the Bulletins and Software updates to keep your game in top working order.

Thanks,

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SAFETY PRECAUTIONS

The following safety precautions and advisories are used throughout this manual and are defined as follows.

* WARNING! *

Disregarding this text could result in **serious injury**.

* CAUTION! *

Disregarding this text could result in damage to the machine.

* NOTE! *

Is an advisory text to hint or help understand more!

BE SURE TO READ THE FOLLOWING

* WARNING! *

Always turn **OFF** Mains AC power and unplug the game before opening or replacing any parts.

Always grasp the plug, not the line cord, when unplugging the game from an electrical outlet.

Always connect the Game Cabinet to a grounded electrical outlet with a securely connected ground line.

Do Not install the Game Cabinet outdoors or in areas of high humidity, direct water contact, dust, high heat or extreme cold.

Do Not installs the Game Cabinet in areas that would present an obstacle in case of an emergency, i.e. near fire equipment or emergency exits.

* CAUTION! *

Always use a Digital Multimeter, logic tester or oscilloscope for testing integrated circuit (IC) logic PC boards. The use of a continuity tester is not permitted.

Do Not connect or disconnect any of the integrated circuit (IC) logic PC boards while the power is **ON**.

Do Not uses any fuse that does not meet the specified rating.

Do Not Subject the game cabinet to extreme temperature variations. Reliability of electrical components deteriorates rapidly over 60 ^{o}C.

MACHINE INSTALLATION and INSPECTION

When installing and inspecting ***Balloon Buster***, be very careful of the following points and pay attention to ensure that the players can enjoy the game safely.

- Be sure to turn the power **OFF** before working on the machine.

> * WARNING! *
>
> **Always** Turn **OFF** mains power before removing safety covers and refit all safety covers when work is completed.

- Make sure the power cord is not exposed on the surface (floor, ground, etc.) where people walk.

- Check that the rubber glide feet levellers are set correctly on the floor so that the game cabinet is level and stable.

- Always make complete connections for the integrated circuit (IC) logic PC Boards and other connectors. Insufficient insertion can damage the electrical components.

> * CAUTION! *
>
> **Before** Switching the machine on be sure to check that it has been set on the correct voltage for your area!

- Only qualified personnel should inspect or test the integrated circuit (IC) logic PC Boards.

- If any integrated circuit (IC) logic PC Boards should need servicing, please contact the nearest LAI Games Distributor. (Refer to the back page of this manual)

INTRODUCTION

CONGRATULATIONS! On your purchase of ***Balloon Buster***, a challenging and fun direct prize vending game from LAI Games.

We hope you take the time to read this manual and learn about the many features and user-friendly adjustments that can be made to fine-tune the game for maximum earning potential.

DESCRIPTION

The objective of ***Balloon Buster*** is to aim a sharpened dart to pop a balloon that is holding a prize. The dart is aimed using a joystick (or button) to move to the correct horizontal position and then an UP button is pushed to move the dart vertically. When the UP button is released, the vertical movement stops and the dart travels forwards towards the balloon. The dart must be accurately positioned for it to enter the open hole in front of the balloon and pop it.

HOW TO PLAY

Players try to align the dart so it goes through the hole in front of a balloon and pops it to release the prize hanging underneath.

- Pay to play.
- Use the joystick (or button) to move the dart to the desired left/light position.
- Press and hold the UP button to move the dart vertically towards the correct target.
- Release the UP button to fire the dart to try and pop the balloon.
- If the dart position is accurately aligned with the hole, the dart will enter the hole, pop the balloon, and drop the prize.

PACKAGING

At delivery, the machine should arrive in good condition. To move the packaged machine for transport or placement, use a forklift and take care not to hit the package or stack heavy objects on top, as this may cause damage to the machine.

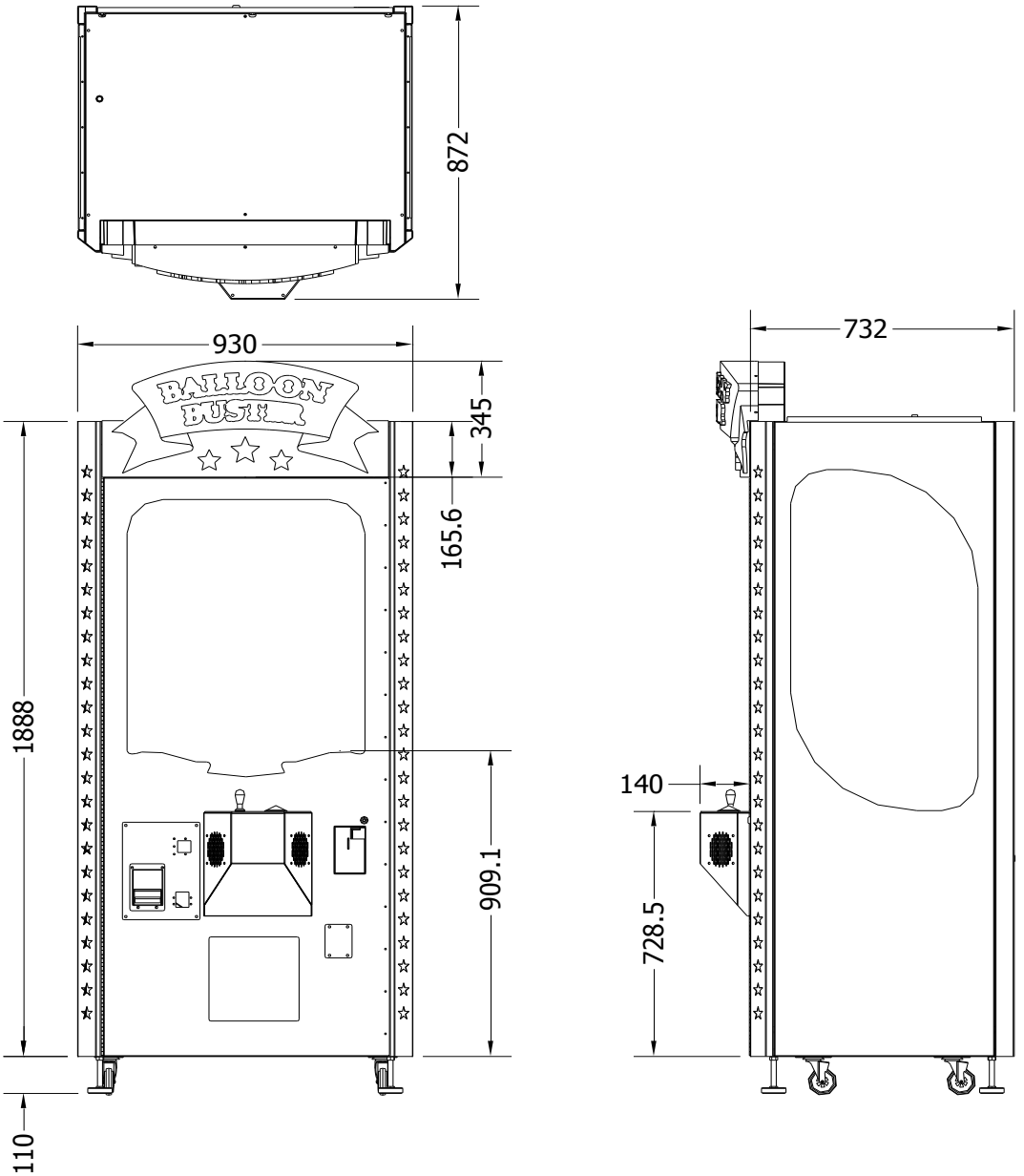
CONTENTS

- The Balloon Buster cabinet
- Keys: 2 x coin door keys
  2 x back door keys
- Operator's manual
- IEC Power Cord (In cash box)
- Parts & Accessories (In cash box)
- Spare Balloons (In cash box)
- Balloon Size gauge (In cabinet)
- Prize hanging cords (In cash box)

SPECIFICATIONS

DIMENSIONS

- Weight: 205 kg (452lb)
- Height with header: 2180 mm (86”)
- Height without header: 2000 mm (79”)
- Width: 870 mm (34”)
- Length: 930 mm (37”)
- Power: Maximum 300W – (220V @ 1.6A)(120V @ 2.7A)



ELECTRIC SUPPLY

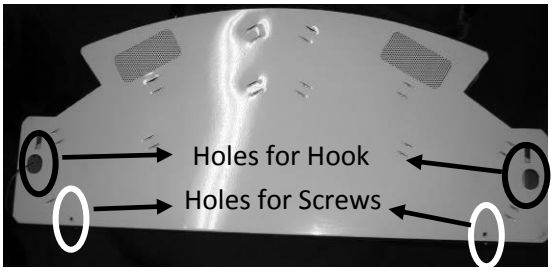
The game has the option to operate on an 110V, 120V, 220V or 240V AC 50/60Hz single phase mains electric supply.
The supply must be a three wire grounded supply.

> * CAUTION! *
> **Before** switching the machine on be sure to check that it has been set on the correct voltage for your area!
> **Please** Refer to the mains voltage adjustment section of this manual. Machines are normally shipped on 220V AC unless otherwise specified.

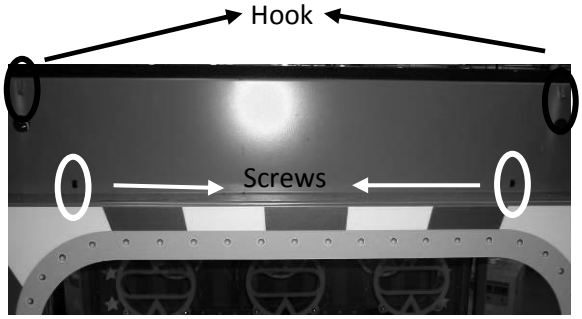
LOCATION REQUIREMENTS

- Ambient temperature: 5C - 40C.
- Ambient humidity: Low
- Ambient U.V. radiation: Very low
- Vibrations level: Low

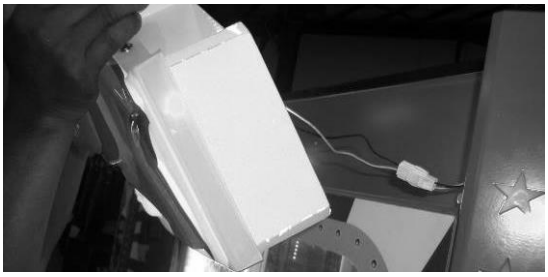
HEADER INSTALLATION GUIDE



Header Back view



Header base on cabinet



After unpacking the header, position it so you can connect the LED lamp to the cabinet.
Position the header so the hook on the cabinet can enter the hole on the back of header.

Secure the header with 2 screws from inside the cabinet.

PRE GAME OPERATION SET UP PROCEDURE

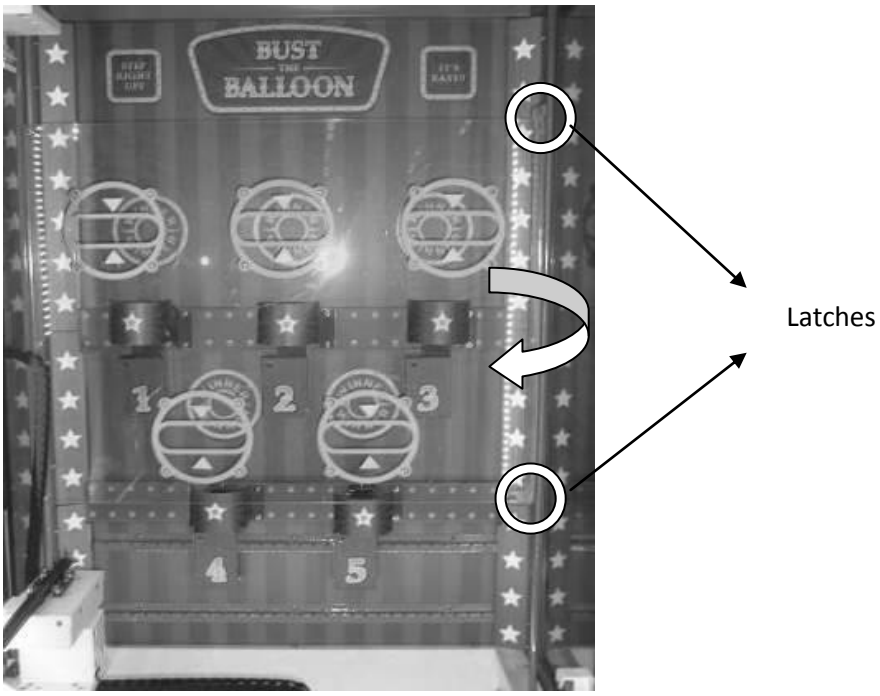
ALIGNMENT

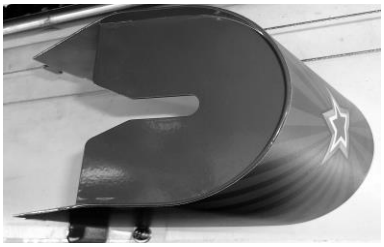
Balloon Buster has three modes for dart alignment – *Auto Align*, *Manual Align* and *Check*. *Auto Align* will run through all five target holes and automatically align the dart to each hole. *Manual Align* allows the operator to manually align the dart to each target hole, using the dart right, left, forward and backwards buttons on the service panel. *Check* will automatically check the dart alignment of each target hole, and log an error if any of the target holes are incorrectly aligned. See **Dart Alignment Mode (page 32)** for instructions on how to use each alignment mode correctly. LAI Games strongly recommends performing an alignment check every two weeks, when prizes are reloaded, and when the machine is moved.

IMPORTANT
The dart must be aligned before first-time operation

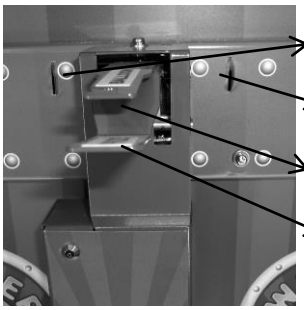
ATTACHING BALLOONS AND LOADING PRIZES

First, open the target acrylic in front of the prize and balloon holders by unhooking the top and bottom latches on the right hand side.





In newer machines, five steel prize arm shrouds are packed separately inside the game. These prize arm shrouds can be removed when loading prizes.

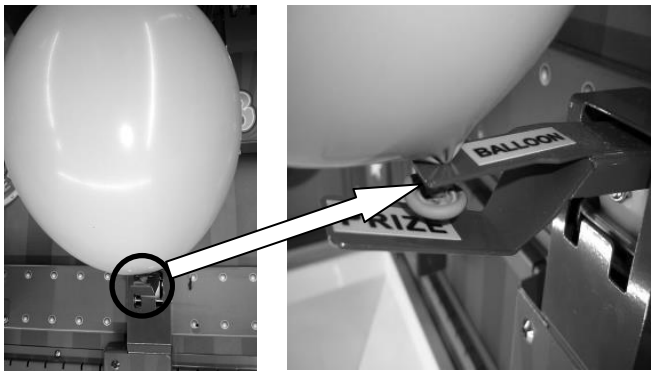


Prize arm and balloon holder mechanism with shroud removed.

STEP 1

Inflate the balloon and tie a knot in the bottom. Use the balloon gauge to inflate the balloon to the correct size. Attach the balloon to the balloon holder by sliding the balloon knot into the shot in the balloon holder.

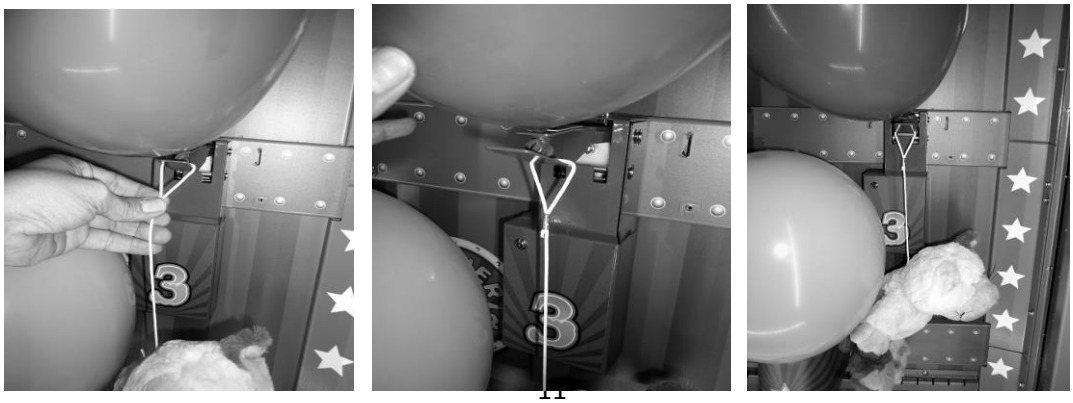
STEP 2



Attach the balloon to the balloon holder.

STEP 3

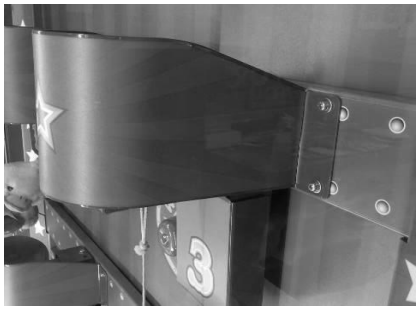
Hang a prize from the prize arm using the prize string supplied. Use the correct length, so that the prize is clearly visible to players when hanging below the prize arm shroud.



STEP 4

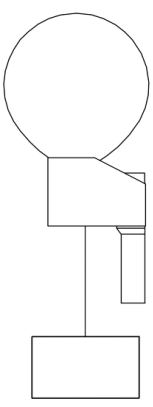
Use the hooks on either side of the top edge of the shroud to hang the shroud from the two slots. After insertion, make sure the shroud is level and fully inserted into both slots.


In older models, prize arm shrouds are bolted on, as shown below. Prize loading works the same way in these models, prizes and balloons must simply be loaded around the shroud.

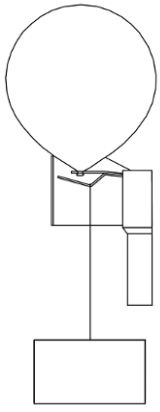


PRIZE ARM MECH SAFETY

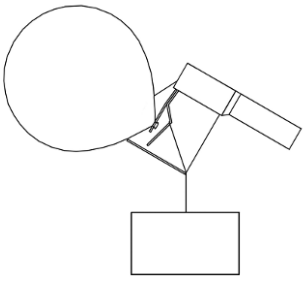
There are a number of safety measures in place to ensure that prizes are not vended at the incorrect times.



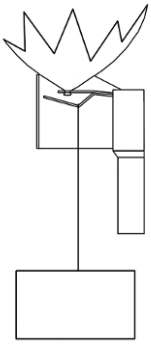
The side view of a correctly loaded prize arm, with balloon and shroud



The side view of a correctly loaded prize arm, with balloon. Shroud is see-through.



If the machine is tipped forward, the shroud prevents the prize from falling, as shown here.



As the prize is not physically attached to the balloon, the prize will not drop if a balloon is deflated or busts outside of normal gameplay.

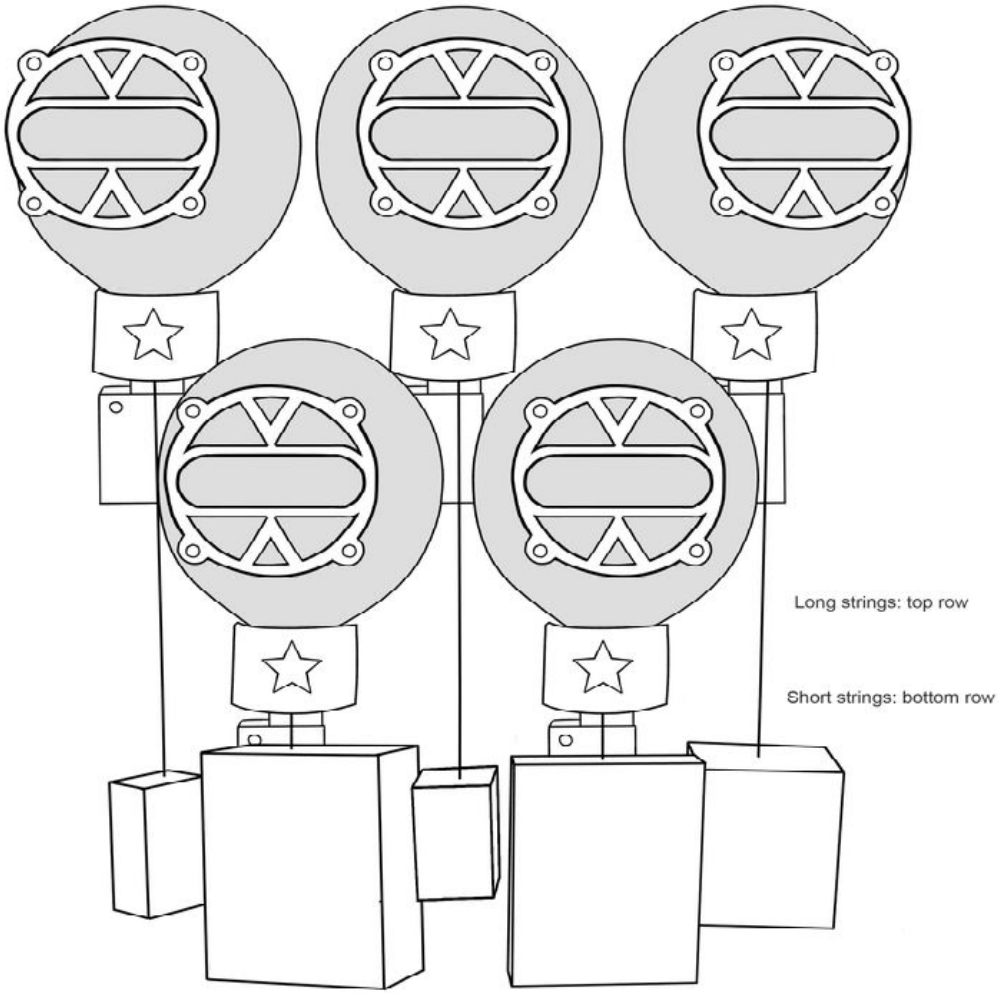


Illustration demonstrating a fully loaded prize area.

* NOTE! *
Try to place larger prizes on the inside prize arms. If using a mix of prizes, try to stagger large and small prizes as pictured.

* NOTE! *
If you ever need to release a prize hanger this is easily done using the Run test in the test mode.

IMPORTANT NOTICE

Powerful illegal hand-held laser pointers (with an output power of 1 watt or more) are capable of cutting through coloured prize strings. The law in most countries restricts the power of laser pointers to around 5mW, but illegal high powered lasers are now available via the internet.

We strongly recommend that operators of ***Balloon Buster*** use white prize strings and white plastic tie-wraps to attach prizes to strings.

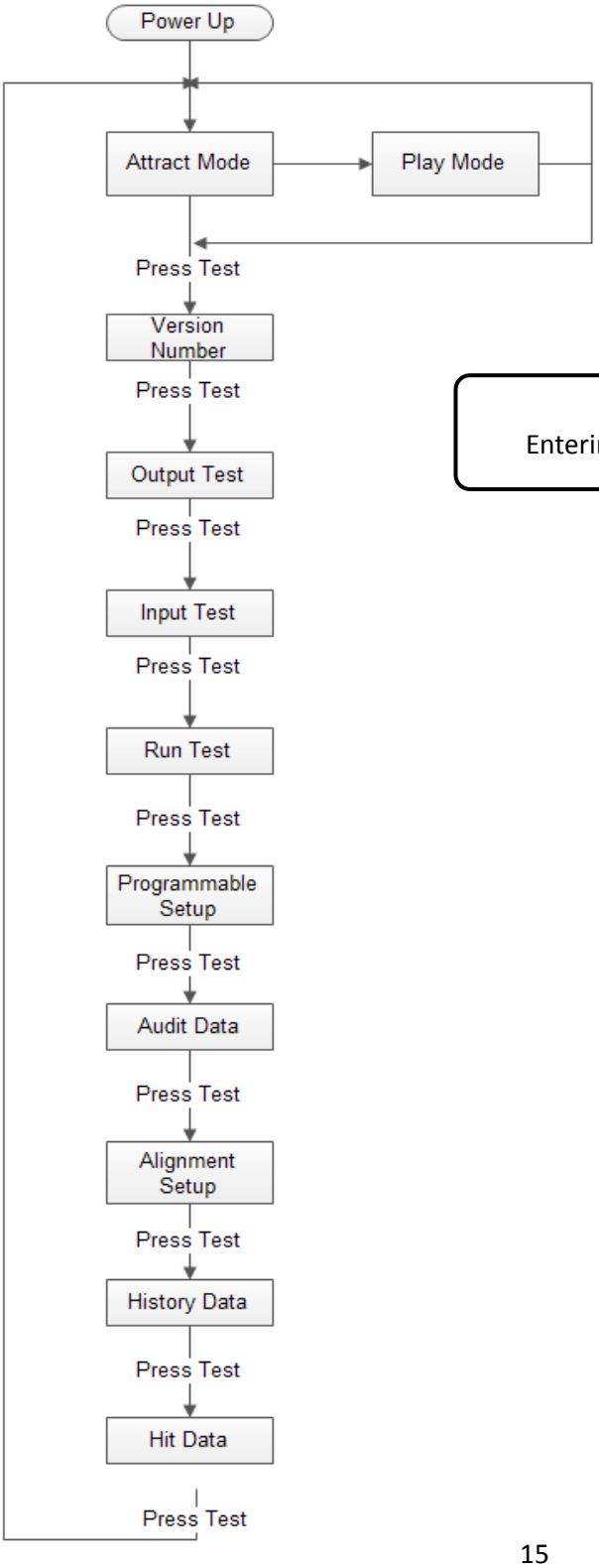
RECOMMENDED PRIZE WEIGHT AND DIMENSION

- Maximum Weight = 1.5 Kg (3.5 lbs.)
- Dimension = 280 x 100 x 150 mm

OPERATION

Balloon Buster has a number of operational modes: Attract mode, Play mode, Test mode, Programmable Adjustments Mode, Alignment mode, History mode and Audits Mode.

OPERATIONAL DIAGRAM



* NOTE! *
Entering test mode will clear any stored credits

ATTRACT MODE

The Attract mode provides a light and sound display, while the game is not being played. This feature is to attract potential customers to play the game. The attract mode sound can be turned on and off or adjusted for how often it is played *(refer to the programmable adjustment page for instructions).*

PLAY MODE

Balloon Buster has two play modes. The Standard Coin Play mode, where a coin must be inserted to play, and Free Play mode where no coins are necessary.

COIN PLAY

Coin Play mode is entered from Attract mode, by inserting coins in any of the two coin slots on the front of the machine cabinet, then following the instructions in the "How to Play" section of this manual.

FREE PLAY

Free Play mode is entered from Attract mode by holding the SERVICE button for longer than five seconds F r E E will be displayed on the 4-digit LED display.

For a single free game, just press the SERVICE button once. When issuing single free games in this manner, prizes can be won as normal.

TEST MODE

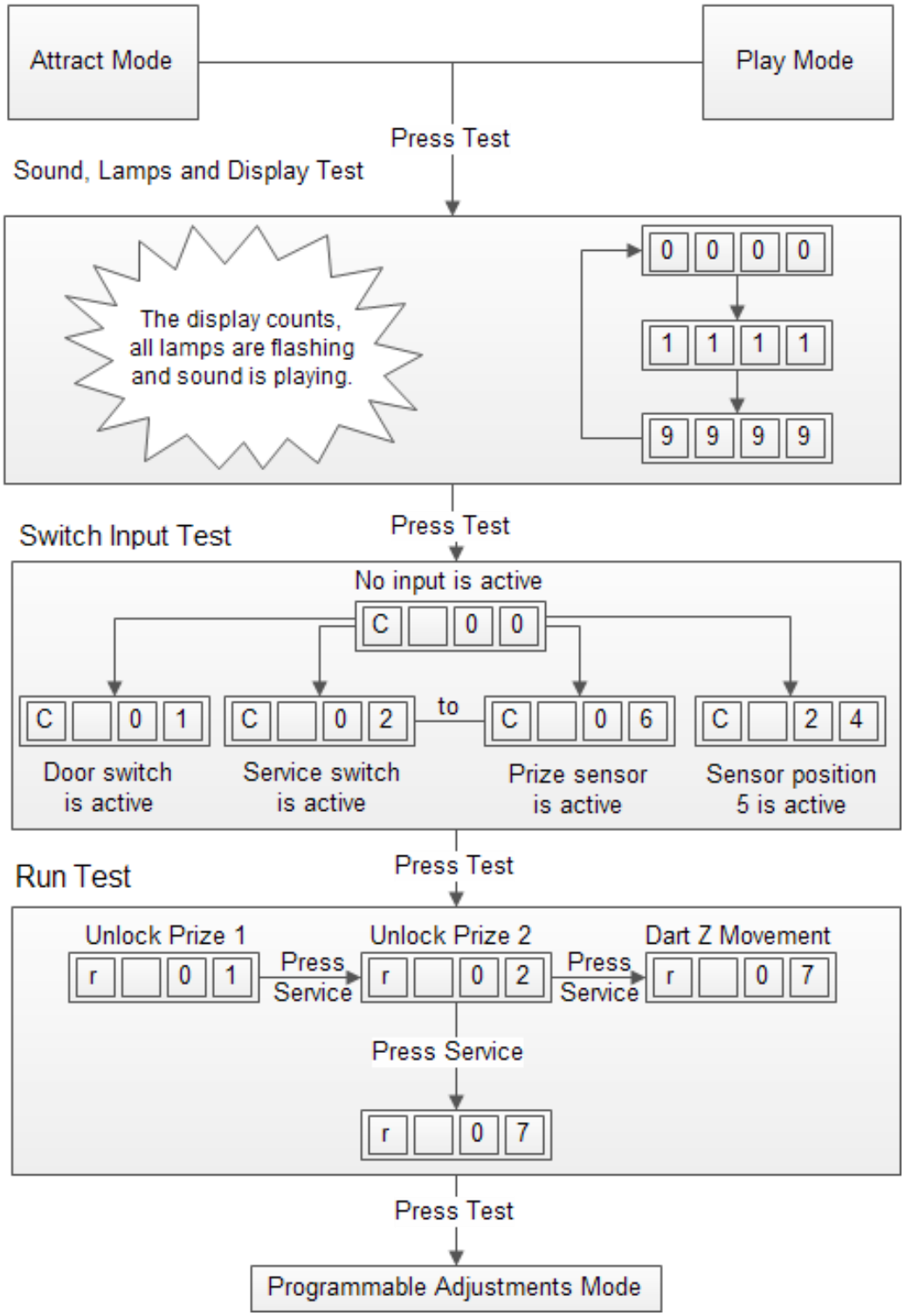
The ***Balloon Buster*** test mode has three test configurations that allow you to test the functionality of the Sound, Light, Display, Game Switches and perform an operational test of the Dart (refer to the test Mode Diagram below).

The test mode is also used for clearing Game Errors. If there is an active error, its error code will be displayed. To try to clear the error code, press the red TEST button. The error can be bypassed by quickly pressing the red TEST button again

* NOTE! *

Entering test Mode will clear any credits remaining in the game.

TEST MODE DIAGRAM



SOUND, LAMPS & DISPLAY TEST

The Sound, Lamp & Display Test is entered from Attract mode by pressing the red TEST button until the credit display shows the display test pattern.

> * NOTE! *
> If there is an active error displayed, press the red TEST button once to try and clear the error.
> If the error code will not clear, it can be bypassed by quickly pressing the red TEST button twice.

DURING THE TEST

- Game music and a voice over will be played.
- The credit display will count from 0000 to 9999 and then repeat.
- The Prize LED will run a test pattern sequence.
- The UP button lamps will flash on and off.

The Sound, Display & Dart test is exited by pressing the red TEST button.

SWITCH TEST

The Switch test can be entered by pressing the TEST button once while in the Sound, Lamp & Display test or by pressing the TEST button while in Attract mode till C-XX is displayed on the 4-digit display where 'XX' is a number representing the switch that is active.

TESTING THE GAME SWITCHES

All game switches have a code from C1 to C24 as tabled below. By activating any of the switches, their code will be displayed on the 4-digit display. In the normal condition with the dart in the home position, C-11, C-12 and C-13 will be active and shown in the 4- Digit display.

> * NOTE! *
> The machine will automatically run a brief switch and dart test every time it is switched on.

CODE	DISPLAY	SWITCH FUNCTION
C-0	C - 0 0	No Input Active
C-1	C - 0 1	Door Switch
C-2	C - 0 2	Service switch Active
C-3	C - 0 3	Ticket Notch (if ticket/capsule option is fitted)
C-4	C - 0 4	Coin 1 Switch Active
C-5	C - 0 5	Coin 2 Switch Active
C-6	C - 0 6	Prize Sensor Active
C-7	C - 0 7	UP button Active
C-8	C - 0 8	Down Button Active
C-9	C - 0 9	Right Button Active
C-10	C - 1 0	Left Button Active
C-11	C - 1 1	X Home Switch (On Gantry)
C-12	C - 1 2	Y Home Switch (On Gantry)
C-13	C - 1 3	Z Home Switch (On Gantry)
C-14	C - 1 4	Z Maximum Switch (On Gantry)
C-15	C - 1 5	X Maximum Switch (On Gantry)
C-16	C - 1 6	Tilt Sensor
C-17	C - 1 7	Fail Switch
C-18	C - 1 8	Reverse Button
C-19	C - 1 9	Forward Button
C-20	C - 2 0	Left/Right Position Sensor 1
C-21	C - 2 1	Left/Right Position Sensor 2
C-22	C - 2 2	Left/Right Position Sensor 3
C-23	C - 2 3	Left/Right Position Sensor 4
C-24	C - 2 4	Left/Right Position Sensor 5

The Switch Test is exited into Run Test Mode by pressing the red TEST button once.

RUN TEST

- ENTER

The Run test can be entered by pressing the red TEST button once while in the Switch test or by pressing the red TEST button while in Attract mode until r r r r is displayed on the 4-digit display.

- SELECT

The green SERVICE button is pressed once to enter the run test mode. The credit display will indicate r - 0 1, for the first Prize Lock/Unlock mechanism run test. The green SERVICE button is then pressed again to step to the next prize lock mechanism test r-02 and so on up to r-07.

- RUN

Use the UP button to unlock the Prize locks and the joystick, Up, Down, Left, Right, Forward or Backward Button and service panel buttons to operate the Dart Mechanism in the r-06 and r-07 Run tests.

- PRIZE ARMS

When stepping through the Prize Arms 1-5 a small red LED indicator on the prize arms will light to show which arm is active. Push the UP button on the player console to release and unlock the prize arm. The Arm needs to be manually locked by pushing it up firmly by hand until it reached the end of its travel. You should hear a 'click'.

- EXIT

The Run test is exited into Programmable Adjustments Mode by pressing the red TEST button once.

CODE	DISPLAY	FUNCTION
r-1	r - 0 1	Unlock Prize Arm 1
r-1	r - 0 2	Unlock Prize Arm 2
r-3	r - 0 3	Unlock Prize Arm 3
r-4	r - 0 4	Unlock Prize Arm 4
r-5	r - 0 5	Unlock Prize Arm 5
r-6	r - 0 6	XY motor movement Left/Right, Up/Down
r-7	r - 0 7	Dart (Z) movement in and out

PROGRAMMABLE ADJUSTMENTS MODE

Balloon Buster has many programmable adjustments that can be changed in this mode. They are P01 to P15 and their codes and values are displayed alternatively during the adjustment procedure.

Example: Code **P01** *(Number of Coins Mech 1)* is displayed as P □ 0 1 and its value of **1** as □ □ □ 1 on the 4-digit display.

PROGRAMMABLE ADJUSTMENTS PROCEDURE

- ENTER

The Programmable Adjustments Mode can be entered by pressing the red TEST button once while in the Run test or by stepping the red TEST button while in Attract mode until P P P P is displayed on the 4-digit credit display.

- SELECT

The green SERVICE button is pressed to step through each of the adjustment configurations, starting from the P P P P display, P01 being the first step, continuing through to P15, and then looping again from P01 to P15 until the mode is exited.

- CHANGE

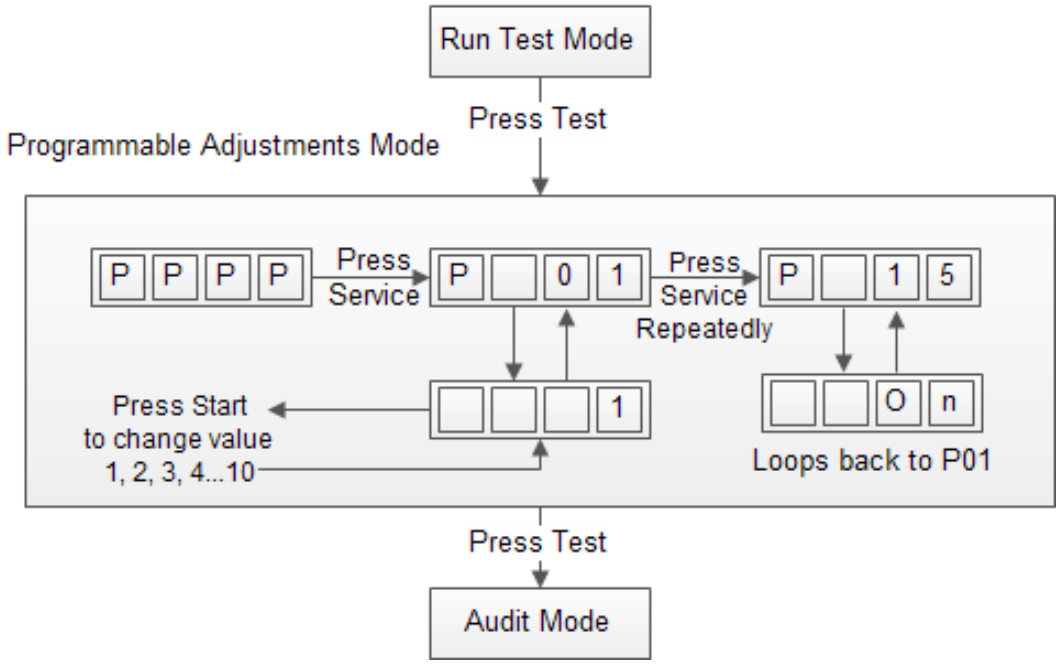
The UP button on the player console is pressed to change the displayed value. The value can only be stepped up by using the UP button, but the value will loop back to its minimum value the next step after its max value.

- EXIT

The Programmable Adjustments mode is exited into Audits mode, by pressing the TEST button once.

> * NOTE! *
> Certain program adjustments have a fast adjustment feature. By holding the UP button down, the values step through quicker.

PROGRAMMABLE ADJUSTMENTS MODE DIAGRAM



PROGRAMMABLE ADJUSTMENT BALLOON BUSTER VERSION 2.0

CODE	PROGRAMMABLE ADJUSTMENTS	OPTIONAL VALUES	DEFAULT SETTINGS	FEATURES
P01	1 - 20	1,2,3,….20	1	Coin 1 – Coins / Credit
P02	1 - 10	1,2,3,…..20	1	Coin 1 – Games / Credit
P03	ON or OFF	ON or OFF	OFF	Activate Multiple Bonus Pricing Coin slot 1
P3-1	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 1** Number Coins for Bonus Pricing level 1
P3-2	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin1** Number of bonus credits on Pricing level 1
P3-3	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin1** Number Coins for Bonus Pricing level 2
P3-4	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 1** Number of bonus credits on Pricing level 2
P3-5	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 1** Number Coins for Bonus Pricing level 3
P3-6	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 1** Number of bonus credits on Pricing level 3
P04	1 - 20	1, 2, 3…20	1	Coin 2 – Coins / Credit
P05	1 - 10	1, 2, 3…20	1	Coin 2 – Games / Credit
P06	OFF or ON	ON or OFF	OFF	Activate Multiple Bonus Pricing Coin slot 2
P6-1	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 2** Number Coins for Bonus Pricing level 1
P6-2	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 2** Number of bonus credits on Pricing level 1
P6-3	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 2** Number Coins for Bonus Pricing level 2
P6-4	OFF - 99	OFF,1,2,3, - 99	OFF	**Coin 2** Number of bonus credits on Pricing level 2
P6-5	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 2** Number Coins for Bonus Pricing level 3
P6-6	OFF - 99	OFF,1,2,3 - 99	OFF	**Coin 2** Number of bonus credits on Pricing level 3
P07	OFF – 30 Min	OFF, 1 – 30 Min	3 Min	Attract Mode Sound
P08	gLob or LocA	gLob or LocA	gLob	Prize Win Management
P09	1 – 3000	1-20 (1), 25-100(5), 110-500(10), 550 – 3000 (50)	800	AGW Global Adjustment (available if P08 set to gLob)
P09-1	1 – 3000	1-20 (1), 25-100(5), 110-500(10), 550 – 3000 (50)	800	AGW Target 1 Adjustment (Available if P08 set to LocA)
P09-2	1 – 3000	1-20 (1), 25-100(5), 110-500(10), 550 – 3000 (50)	800	AGW Target 2 Adjustment (Available if P08 set to LocA)
P09-3	1 – 3000	1-20 (1), 25-100(5), 110-500(10), 550 – 3000 (50)	800	AGW Target 3 Adjustment (Available if P08 set to LocA)
P09-4	1 – 3000	1-20 (1), 25-100(5), 110-500(10), 550 – 3000 (50)	800	AGW Target 4 Adjustment (Available if P08 set to LocA)
P09-5	1 – 3000	1-20 (1), 25-100(5), 110-500(10), 550 – 3000 (50)	800	AGW Target 5 Adjustment (Available if P08 set to LocA)
P10	ON or OFF	ON or OFF	OFF	Prize on Free Mode
P11	1 - 4	1,2,3,4	1	Error Message Option
P12	Mercy Prize System	tic/caP	tic	Optional Mercy Prize either Tickets or Capsules
P13	OFF – 20	OFF,1, 2, 3 …20	OFF	Number of Mercy
P14	bEF or Aft	bEF or AFt	Aft	Mercy Adjustment (not seen if P13 Off)
P15	ON or OFF	ON or OFF	OFF	Common Coin Option

PROGRAMMABLE ADJUSTMENTS DETAILED

- **P01 = COIN 1: NUMBER OF <u>COINS</u> PER CREDIT**
  (Default 01) (Adjustable 1 – 20)

This sets the number of coins that need to be inserted into coin mechanism 1, for each credit. It can be set between 1 to 20 coins for one credit.

- **P02 = COIN 1: NUMBER OF GAME <u>PLAYS</u> PER CREDIT** *(Default 01) (Adjustable 1 – 20)*

This sets the number of games for each credit inserted into coin mechanism 1. It can be set between 1 to 20 plays for each credit.

- **P03 = COIN 1: <u>ACTIVATE</u> MULTIPLE BONUS PRICING**
  (Default OFF) (Adjustable ON – OFF)

Note: Settings P 03 and P 03-1 through to P03-6 are only used for the setting of bonus credit levels e.g. $0.50c/1 play, $1/3plays, $2/7plays, $5/20 plays

This turns on the multiple bonus credit system and activates the settings for up to 3 bonus levels on coin mechanism 1. If set to OFF, this means the multiple bonuses is disabled, if the setting is changed to ON the multiple bonus setting will be active and open the next sub-menu P03-1 and so on.

- **P03 - 1 = COIN 1: NUMBER OF COINS REQUIRED TO REACH BONUS CREDIT LEVEL 1** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of coins (or Bill Acceptor pulses) that need to be inserted into coin mechanism 1 to reach the bonus credit level 1. If set to OFF P03-2 will not open.

Examples	(Base price $0.25c)	(Base Price $0.50c	(Base Price $0.50c)	(Base Price $1.00)
P Setting Adjustment	1 *play* **<u>$ 0.25c</u>** 3 *plays* **<u>$ 0.50c</u>** 7 *plays* **<u>$ 1.00</u>** ($0.25c coins or DBA set on $0.25c pulses)	1 *play* **<u>$ 0.50c</u>** 3 *plays* **<u>$ 1.00</u>** 7 *plays* **<u>$ 2.00</u>** ($0.25c coins or DBA set on $0.25c pulses)	1 *play* **<u>$ 0.50c</u>** 3 *plays* **<u>$ 1.00</u>** 8 *plays* **<u>$ 2.00</u>** 22 *plays* **<u>$ 5.00</u>** ($0.25c coins or DBA set on $0.25c pulses)	1 *play* **<u>$ 1.00</u>** 3 *plays* **<u>$ 2.00</u>** 8 *plays* **<u>$ 5.00</u>** 18 *plays* **<u>$ 10.00</u>** ($0.25c coins or DBA set on $0.25c pulses)
P01 / P04	1	2	2	4
P02 / P05	1	1	1	1
P03 / P06	ON	ON	ON	ON
P3-1 / P6-1	2	4	4	8
P3-2 / P6-2	1	1	1	1
P3-3 / P6-3	4	8	8	20
P3-4 / P6-4	3	3	4	3
P3-5 / P6-5	OFF	OFF	20	40
P3-6 / P6-6	OFF	OFF	12	8

- **P03 - 2 = COIN 1: NUMBER OF BONUS CREDITS GIVEN AT BONUS LEVEL 1** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of bonus credits that are given when credit Level 1 is reached. This bonus amount is the **additional** number of credits required above the **base price**. If set to OFF **P03-3** will not open.
Note: The Base Price is the normal price setting for one game.

e.g. If the game is set for $0.25c/1play then the base price is $0.25c, if the game is set for $0.50c/1play then the base price is $0.50c, if the game is set for $1.00/1play then the base price is $1.00.

- **P03 - 3= COIN 1: NUMBER OF COINS REQUIRED TO REACH BONUS CREDIT LEVEL 2** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of coins (or Bill Acceptor pulses) that are needed to be inserted into coin mechanism 1 to reach the bonus credit level 2. The setting value must be higher than setting value of **P03-1**. If set to OFF **P03-4** will not open.

- **P03 - 4 = COIN 1: NUMBER OF BONUS CREDITS GIVEN AT BONUS LEVEL 2** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of bonus credits that are given when credit Level 2 is reached. This Bonus amount is the **additional** number of credits required above the **base price**. If set to OFF **P03-5** will not open.

- **P03 - 5= COIN 1: NUMBER OF COINS REQUIRED TO REACH BONUS CREDIT LEVEL 3** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of coins (or Bill Acceptor pulses) that are needed to be inserted into coin mechanism 1 to reach the bonus credit level 3. The setting value must be higher than setting value of **P03-3**. If set to OFF **P03-6** will not open.

- **P03 - 6 = COIN 1: NUMBER OF BONUS CREDITS GIVEN AT BONUS LEVEL 3** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of bonus credits that are given when credit Level 3 is reached. This Bonus amount is the **additional** number of credits required above the **base price**.

- **P04 = COIN 2: NUMBER OF COINS PER CREDIT** *(Default 01) (Adjustable 1 – 20)*

This sets the number of coins that need to be inserted into coin mechanism 2, for each credit. It can be set between 1 to 20 coins for each credit.

- **P05 = COIN 2: NUMBER OF GAME PLAYS PER CREDIT** *(Default 01) (Adjustable 1 – 20)*

This sets the number of games for each credit inserted into coin mechanism 2. It can be set between 1 to 20 plays for each credit.

- **P06 = COIN 2: ACTIVATE MULTIPLE BONUS PRICING** *(Default OFF) (Adjustable ON – OFF)*

Note: Settings P 06 and P 06-1 through to P06-6 are only used for the setting of bonus credit levels e.g. $0.50c/1 play, $1/3plays, $2/7plays, $5/20 plays

This turns on the multiple bonus credit system and activates the settings for up to 3 bonus levels on coin mechanism 2. It can be set to ON or OFF. The *default* setting is "OFF" this mean the multiple bonuses is disabled, if the setting change to ON the multiple bonus setting will be active and open the next sub-menu **P06-1** and so on.

- **P06 - 1 = COIN 2: NUMBER OF COINS REQUIRED TO REACH BONUS CREDIT LEVEL 1** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of coins (or Bill Acceptor pulses) that need to be inserted into coin mechanism 2 to reach the bonus credit level 1. If set to OFF **P06-2** will not open.

- **P06 -2 = COIN 2: NUMBER OF BONUS CREDITS GIVEN AT BONUS LEVEL 1** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of bonus credits that are given when credit Level 1 is reached. This Bonus amount is the **additional** number of credits required above the **base price**. If set to OFF **P06-3** will not open.
Note: The Base Price is the normal price setting for one game.
e.g. If the game is set for $0.25c/1play then the base price is $0.25c, if the game is set for $0.50c/1play then the base price is $0.50c, if the game is set for $1.00/1play then the base price is $1.00.

- **P06 – 3= COIN 2: NUMBER OF COINS REQUIRED TO REACH BONUS CREDIT LEVEL 2** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of coins (or Bill Acceptor pulses) that are needed to be inserted into coin mechanism 2 to reach the bonus credit level 2. The setting value must be higher than setting value of **P06-1**. If set to OFF **P06-4** will not open.

- **P06 - 4 = COIN 2: NUMBER OF BONUS CREDITS GIVEN AT BONUS LEVEL 2** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of bonus credits that are given when credit Level 2 is reached. This Bonus amount is the **additional** number of credits required above the **base price**. If set to OFF **P06-5** will not open.

- **P06 – 5 = COIN 2: NUMBER OF COINS REQUIRED TO REACH BONUS CREDIT LEVEL 3** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of coins (or Bill Acceptor pulses) that are needed to be inserted into coin mechanism 2 to reach the bonus credit level 3. The setting value must be higher than the setting value of **P06-3**. If set to OFF **P06-6** will not open.

- **P06 -6 = COIN 2: NUMBER OF BONUS CREDITS GIVEN AT BONUS LEVEL 3** *(Default OFF) (Adjustable OFF – 99)*

This sets the number of bonus credits that are given when credit Level 3 is reached. This Bonus amount is the **additional** number of credits required above the **base price**.

- **P07 = ATTRACT MODE SOUND** *(Default 3 Min) (Adjustable OFF, 1 – 30 Min)*

Turns the *attract mode sound* **OFF** or adjusts how often the attract mode sound plays. This is the sound and music that the game generates to attract customers when it is not being played. The music will cycle based on the time interval selected.

- **P08 = Prize Win Management** *(Default gLob) (Adjustable gLob or locA)*

Sets whether the Average Games per Win (AGW) setting is the same for all five prize arms (global) or the AGW is separately adjustable for each individual prize arm (local).

  - gLob (Global) This makes a single AGW setting for the whole game and means that all prize arms will operate on one setting (P09) This is used when all prizes in the game are of a similar value.
  - LocA (Local) This allows each of the 5 prizes arms to have their AGW set individually and will open up settings P9 – 1 to P9 – 5. Each individual target can be set accordingly.

- **P09 = GLOBAL AGW ADJUSTMENT** *(Default 800) (Adjustable 1 - 3000)*

Note: this adjustment is only available when P08 is set to Global
The global AGW sets all five targets to the same difficulty. For instance, if the AGW is set to 200, one prize will be won on an average of every 200 plays. If the AGW is set to 1 there is no win management.
The value setting increments from 1-20 in single steps, 25-100 in steps of 5, 100-500 in steps of 10, and 500-3000 in steps of 50.

- **P09 – 1 = LOCAL AGW ON Target 1** *(Default 50) (Adjustable 1 -3000)*

Note: this adjustment is only available when P08 is set to local
The local AGW sets each target individually. For instance, if the Target 1 AGW is set to 200, a prize will be won on that target on an average of every 200 plays. If the AGW were set to 1 there would be no win management.
The value setting increments from 1-20 in single steps, 25-100 in steps of 5, 100-3000 in steps of 10.

- **P09 – 2 = LOCAL AGW ON Target 2** *(Default 50) (Adjustable 1 - 3000)*

Note: this adjustment is only available when P08 is set to local
The local AGW sets each target individually. For instance, if the Target 2 AGW is set to 200, a prize will be won on that target on an average of every 200 plays. If the AGW were set to 1 there would be no win management.

The value setting increments from 1-20 in single steps, 25-100 in steps of 5, 100-3000 in steps of 10.

- **P09 – 3 = LOCAL AGW ON Target 3** *(Default 50) (Adjustable 1 - 3000)*

Note: this adjustment is only available when P08 is set to local
The local AGW sets each target individually. For instance, if the Target 3 AGW is set to 200, a prize will be won on that target on an average of every 200 plays. If the AGW were set to 1 there would be no win management.

The value setting increments from 1-20 in single steps, 25-100 in steps of 5, 100-3000 in steps of 10.

- **P09 – 4 = LOCAL AGW ON Target 4** *(Default 50) (Adjustable 1 - 3000)*

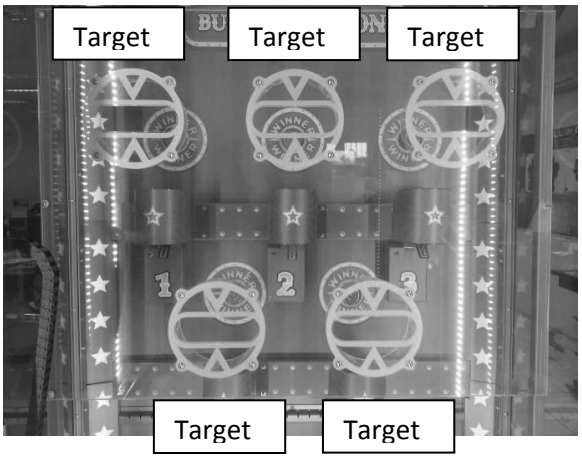
Note: this adjustment is only available when P08 is set to local
The local AGW sets each target individually. For instance, if the Target 4 AGW is set to 200, a prize will be won on that target on an average of every 200 plays. If the AGW were set to 1 there would be no win management.

The value setting increments from 1-20 in single steps, 25-100 in steps of 5, 100-3000 in steps of 10.

- **P09 – 5 = LOCAL AGW ON Target 5** *(Default 50) (Adjustable 1 - 3000)*

Note: this adjustment is only available when P08 is set to local
The local AGW sets each target individually. For instance, if the Target 5 AGW is set to 200, a prize will be won on that target on an average of every 200 plays. If the AGW were set to 1 there would be no win management.

The value setting increments from 1-20 in single steps, 25-100 in steps of 5, 100-3000 in steps of 10.



Window Bracket position

- **P10 = PRIZES IN FREE MODE** *(Default OFF) (Adjustable ON or OFF)*

Sets if prizes are won during the free play game mode. If set to OFF, the machine will not dispense the prize when a balloon is popped in Free Play mode.

- **P11 = Error Message Option** *(Default 1) (Adjustable 1 - 4)*

Sets the way error messages are handled by the game.

Setting	Voice Over	4 Digit Display
1	Played	Displayed
2	Played	Error will display when TEST button is pressed and the next TEST button press will try clear the error
3	Not Played	Displayed
4	Not Played	Error will display when TEST button press and the next TEST button will try clear the error

- **P12 = MERCY PRIZE SYSTEM** *(Optional kit required) (Default Tic) (Adjustable Tic/Cap)*

This option, as well as P13 and P14, are used if the optional Mercy Ticket or Mercy Capsule kit is fitted to the game. The setting is set to TIC if the ticket dispenser kit is fitted or to CAP if the capsule dispenser kit is fitted.

- **P13 = NUMBER of MERCY TICKETS/CAPSULES** *(Optional kit required) (Default OFF) (Adjustable OFF – 20)*

This option adjusts the number of mercy tickets/capsules that are paid out if the optional ticket dispenser or capsule dispenser is fitted. When set to OFF, nothing is dispensed and P14 will be hidden.

- **P14 = OPTIONAL MERCY SYSTEM MODE ADJUSTMENT** *(Optional kit required) (Default bEF) (Adjustable bEF – AFt)*

Note: this option is not seen if P13 is set to OFF.
This option adjusts the way that mercy tickets or capsules are paid out if the optional ticket dispenser or capsule dispenser is fitted,

  - bEF = Tickets/Capsules are always dispensed on start of the game.
  - Aft = Tickets/Capsules are dispensed at the end of the game.

- **P15 = COMMON COIN SYSTEM** *(Default OFF) (Adjustable ON or OFF)*

Note: Only turn common coin on when both coin inputs are set to the same setting.
Controls whether the common coin system is active or not. When set to OFF this means both coin inputs (coin 1 and coin 2) operate separately. When set to ON this means both coin inputs will be added together and combined to a common credit pool.

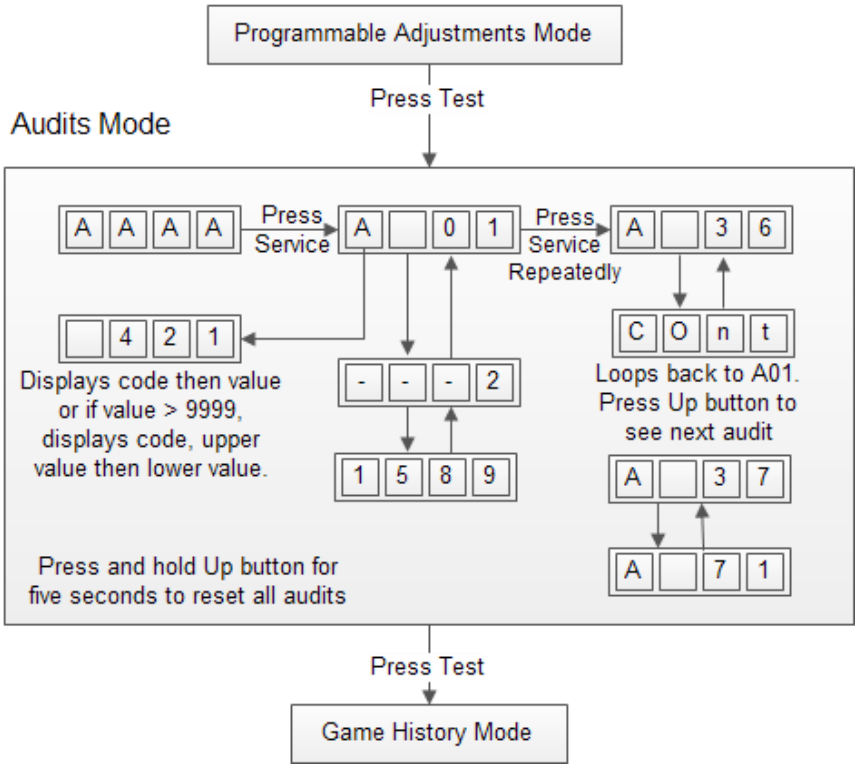
AUDITS MODE

Audits Mode allows the operator to view statistics on all areas of Game Play. This enables the operator to make calculated adjustments and fine tune the machine to maximize earning potential. The Audits mode stores bookkeeping records of the games processed since the audits were last reset. While in Audits mode, the resettable game audits can be reset to zero by pressing and holding the UP on the player console, button for 5 seconds.

Balloon Buster has many audits that can be viewed in this mode. They are A01 to A71 and their codes and values are displayed alternatively on the 4 digit display during Audit Mode. The normal user game audits are A01-A36. After that, "Cont" is displayed in the 4 digit display and then the audit will step back to A01. To open the full audits from A37-A71 press the UP button on the player console when the game displays "Cont."
Example: Code **A01** will be displayed as A □ 0 1 and a value of **421** as □ 4 2 1 on the 4-digit display.
Large values like **21589** will be displayed as - - - 2 then 1 5 8 9 on the 4-digit display.

* NOTE! *
ALL Audits will **STOP INCREMENTING** when the "Total Number of Games Played", audit A-07, reaches 60,000.
They must be reset by holding the Start button for longer than 5 seconds while in Audits mode.

AUDITS MODE DIAGRAM



* NOTE! *
For audits values that are greater than 4 digits, the audits' values will be displayed in two steps. The first number is displayed as - - - 2 which has leading dash symbols. The second number is displayed as 1 5 8 9 which has no leading dash symbols.

The Audits mode is entered from Programmable Adjustments mode by pressing the red TEST button once, or from Attract mode by pressing the red TEST button until A A A A is displayed on the 4-digit display.

- **SELECT**

The green SERVICE button is pressed for advancing through the set of audits configurations, starting from the A A A A display. A01 is the first step, continuing through to A36 then "cont" and then looping again from A01 to A36 until the mode is exited. To open the full set of audits press the UP button while "Cont" is displayed.

- **RESET**

The entire set of resettable user audits can be reset during any of the audit configurations, by holding the UP button on the player console for longer than 5 seconds. The displays will be cleared while still holding the button pressed and will return to the same audit step after releasing the button. The value of all audits will be reset to "00 000".

- **EXIT**

Audits mode is exited into Dart Alignment mode, by pressing the red TEST button once.

AUDITS REFERENCE TABLE

CODE	DISPLAY	AUDIT FUNCTION
A01	A-01	Total Coins In Mechanism 1
A02	A-02	Total Coins In Mechanism 2
A03	A-03	Total Number of Service Credits
A04	A-04	Total Number of Games played (Local and Global)
A05	A-05	Total Skill Wins (Local and Global)
A06	A-06	Average Games /Win (Global) Since Last AGW Change
A07	A-07	Average Games /Win (Local) at Prize Target 1 Since Last AGW Change
A08	A-08	Average Games /Win (Local) at Prize Target 2 Since Last AGW Change
A09	A-09	Average Games /Win (Local) at Prize Target 3 Since Last AGW Change
A10	A-10	Average Games /Win (Local) at Prize Target 4 Since Last AGW Change
A11	A-11	Average Games /Win (Local) at Prize Target 5 Since Last AGW Change
A12	A-12	Number of Games GLOBAL Since Last AGW change
A13	A-13	Number of Games LOCAL Since Last AGW Change at Prize Target 1
A14	A-14	Number of Games LOCAL Since Last AGW Change at Prize Target 2
A15	A-15	Number of Games LOCAL Since Last AGW Change at Prize Target 3
A16	A-16	Number of Games LOCAL Since Last AGW Change at Prize Target 4
A17	A-17	Number of Games LOCAL Since Last AGW Change at Prize Target 5
A18	A-18	Total LOCAL Games
A19	A-19	Number of Wins GLOBAL Since Last AGW change
A20	A-20	Number of Wins LOCAL Since Last AGW Change of Prize Target 1
A21	A-21	Number of Wins LOCAL Since Last AGW Change of Prize Target 2
A22	A-22	Number of Wins LOCAL Since Last AGW Change of Prize Target 3
A23	A-23	Number of Wins LOCAL Since Last AGW Change of Prize Target 4
A24	A-24	Number of Wins LOCAL Since Last AGW Change of Prize Target 5
A25	A-25	Total LOCAL wins
A26	A-26	Number of Wins GLOBAL Since Last AGW Change at Prize Target 1
A27	A-27	Number of Wins GLOBAL Since Last AGW Change at Prize Target 2
A28	A-28	Number of Wins GLOBAL Since Last AGW Change at Prize Target 3
A29	A-29	Number of Wins GLOBAL Since Last AGW Change at Prize Target 4

A30	A-30	Number of Wins GLOBAL Since Last AGW Change at Prize Target 5
A31	A-31	Number of Miss at Prize Target 1
A32	A-32	Number of Miss at Prize Target 2
A33	A-33	Number of Miss at Prize Target 3
A34	A-34	Number of Miss at Prize Target 4
A35	A-35	Number of Miss at Prize Target 5
A36	A-36	Number of Total Misses
	Cont	Normal Audits are to A36 then displays “Cont” push UP button for A37-A71
A37	A-37	Coin 1 Counter (un-reset able)
A38	A-38	Coin 2 Counter (un-reset able)
A39	A-39	Total Wins (Local and Global) (un-reset able)
A40	A-40	Total Games Played (Local and Global) (un-reset able)
A41	A-41	Total Skill Wins (Local and Global) (un-reset able)
A42	A-42	Total number of Mercy Payouts (un-resettable)
A43	A-43	Checksum (un-resettable)
A44	A-44	Skill Wins Global Since Last AGW Change
A45	A-45	Skill Wins Local Since Last AGW Change
A46	A-46	Global Main
A47	A-47	Global Bonus
A48	A-48	Global 2nd Bonus
A49	A-49	Hole 1 Main
A50	A-50	Hole 2 Main
A51	A-51	Hole 3 Main
A52	A-52	Hole 4 Main
A53	A-53	Hole 5 Main
A54	A-54	Hole 1 Bonus
A55	A-55	Hole 2 Bonus
A56	A-56	Hole 3 Bonus
A57	A-57	Hole 4 Bonus
A58	A-58	Hole 5 Bonus
A59	A-59	Pending Skill Wins Global
A60	A-60	Pending Skill Wins at Hole-1
A61	A-61	Pending Skill Wins at Hole-2
A62	A-62	Pending Skill Wins at Hole-3
A63	A-63	Pending Skill Wins at Hole-4
A64	A-64	Pending Skill Wins at Hole-5
A65	A-65	Balance Skill Wins Global
A66	A-66	Balance Skill Wins at Hole-1
A67	A-67	Balance Skill Wins at Hole-2
A68	A-68	Balance Skill Wins at Hole-3
A69	A-69	Balance Skill Wins at Hole-4
A70	A-70	Balance Skill Wins at Hole-5
A71	A-71	Checksum of Main and Bonus

* NOTE! *

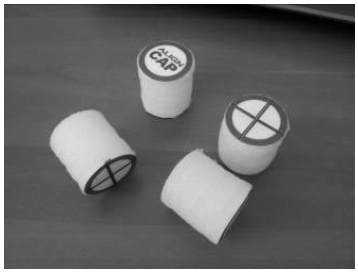
LAI Games Customer Support may request the values of these manufacturers’ audits to help with any service issues.

DART ALIGNMENT MODES

Balloon Buster has three modes for dart alignment – *Auto Align*, *Manual Align* and *Check*.
***Auto Align* -** run through all five target holes and automatically align the dart to each hole.
***Manual Align* -** manually align the dart to each target hole, using the dart right, left, forward and backwards buttons on the service panel.
***Check* -** automatically check the dart alignment of each target hole, and log an error if any of the target holes are incorrectly aligned.

LAI Games strongly recommends performing an alignment check every two weeks, when prizes are reloaded, and when the machine is moved.

ATTACHING THE FOAM CAP



SHORTCUT TO AUTO ALIGN

Note: This is a fast simple method of quickly and regularly checking game alignment.

1. From gameplay or Attract mode, press and hold the UP button on the player control panel and press the red TEST button once, while still holding UP. The credit display should now show Auto.
2. Press the UP button on the player control panel – the credit display should now show CAP. Attach the cap included to the front of the dart as shown above, then press the UP button on the player console to run auto alignment.
3. The game will start from Hole 1 and step through all holes to check if they are aligned first, it will only align the holes that need to be aligned.
4. During auto alignment, the credit display will read POS2 - POS2 - where 2 is the number of the target hole currently being aligned.
5. Once the process is finished, the credit display will flash ALGN Good to verify that all targets have been aligned correctly. The cap can now be removed from the dart.
6. Press the UP button once to exit and return to the attract mode. **Remember to remove the cap before returning to the attract mode**.

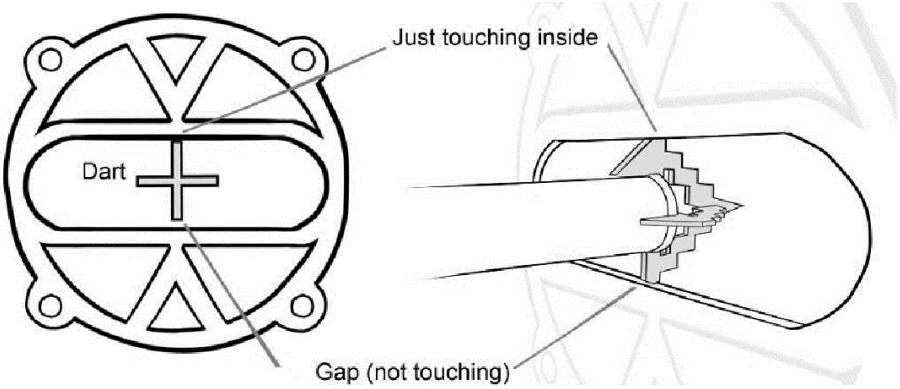
AUTO ALIGNING THE DART

1. From Attract mode, press the TEST button until you see ALGN on the credit display, then press the SERVICE button once. The credit display should now show Auto.
2. Press the UP button on the player control panel – the credit display should now show CAP. Attach the cap included to the front of the dart as shown above, then press the UP button again to run the Auto Alignment setup.
3. During auto alignment, the credit display will show POS2 - POS2 - where 2 is the number of the target hole currently being aligned.

4. Once the process is finished, the credit display will flash ALGN Good to verify that all targets have been aligned correctly. The cap can now be removed from the dart.
5. Press the red TEST button once to return to the operator menu. **Remember to remove the cap before returning to gameplay**.

ALIGNING THE DART MANUALY

1. From Attract mode, press the TEST button until you see ALGN on the credit display, then press the SERVICE button twice. The credit display should now show ALnS.
2. Press the blue UP button on the player control panel to move the dart into position, or press the green SERVICE button to select the next target hole.
3. Use the Move Up, Move Down, Dart Forward, Dart Reverse buttons on the service panel to align the dart once in position.
4. Align the top edge of the dart to the top of the target as pictured.
5. When complete, press the green SERVICE button to select the next target or press the red TEST button to return to the operator menu. **Remember to remove the cap before returning to the attract mode**.



CHECK DART ALIGNMENT

1. From Attract mode, press the red TEST button until you see ALGN on the credit display, then press the green SERVICE button three times. The credit display should now show CHEC
2. Press the blue UP button once and you should see CAP on the display.
3. Attach the foam dart cap, then press the blue UP button to start check mode.
4. The machine will check the alignment for all five target holes and log an error for any incorrectly aligned holes. If any holes are aligned incorrectly, the credit display will flash ALGN FAIL F-H2, where H2 refers to the incorrectly aligned hole (hole 2 in this case). Perform an auto align if any of the target holes return an error.
5. When the process is finished, remove the foam cap from the dart. **Remember to remove the cap before returning to gameplay**.

* PLEASE NOTE! *

Dart Alignment is critical to game payout and safe operation. If the dart alignment is incorrect on any of the five prize holes, payout management cannot be accurate. Alignment must be done when the game is initially set up on site.

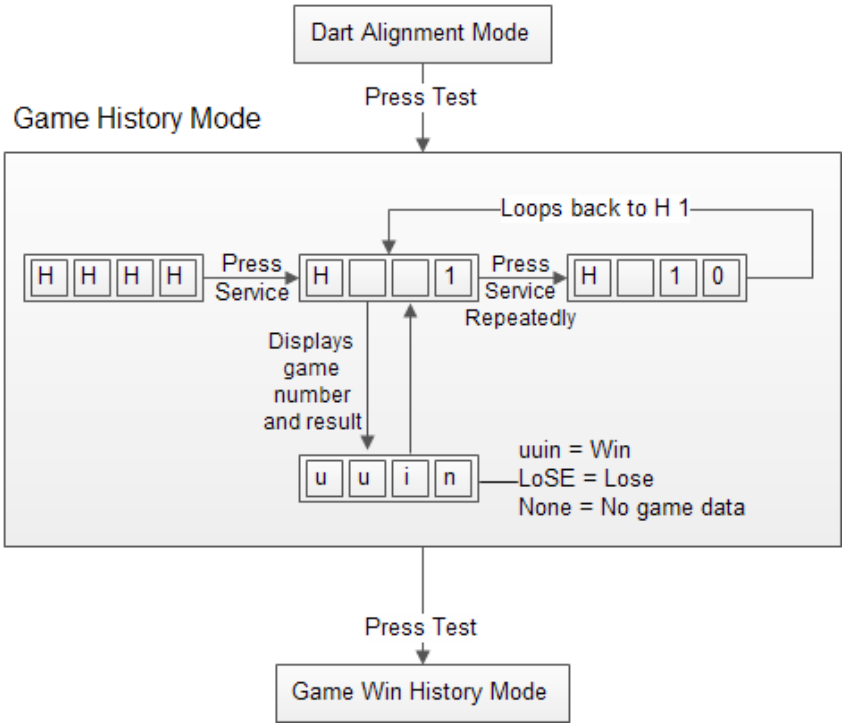
Checking of dart alignment is quick and easy, so LAI Games recommends regular checks. Good times to check alignment are when new prizes are loaded, at collection times or any time a game is moved.

REMEMBER REGULAR ALIGNMENT CHECKS REDUCE THE CHANCES OF IRREGULAR PAYOUTS

GAME HISTORY MODE

Game History mode allows the operator to view the results and details of the last 10 games played. This enables the operator to verify the player's game results and verify if there was a win or lose and the actual positioning of the dart for each of those 10 games.

GAME HISTORY MODE DIAGRAM



* NOTE! *
Score Histories will be erased if the game is switched off.

GAME HISTORY PROCEDURE

- **ENTER**

Game History mode is entered from Dart Alignment mode by pressing the red TEST button once or from Attract mode by pressing the red TEST button until H H H H is displayed on the 4-digit display.

- **SELECT**

The green SERVICE button is pressed to advance through Game Histories, starting from the H H H H display, H01 being the first step and the most recent game, continuing through to H10, and then looping again from H01 to H10 until the mode is exited. For each of the Game Histories the display will alternate between the history number and display a "win" or "LoSE" depending on the result of that game. To check the end position of the dart for that game, press the UP button and the dart will move to the position of the game that was played. The Dart Forward and Backward buttons can be used for a closer inspection of the dart position if required.

- **EXIT**

Game History mode is exited into Game Attract mode, by pressing the TEST button twice.

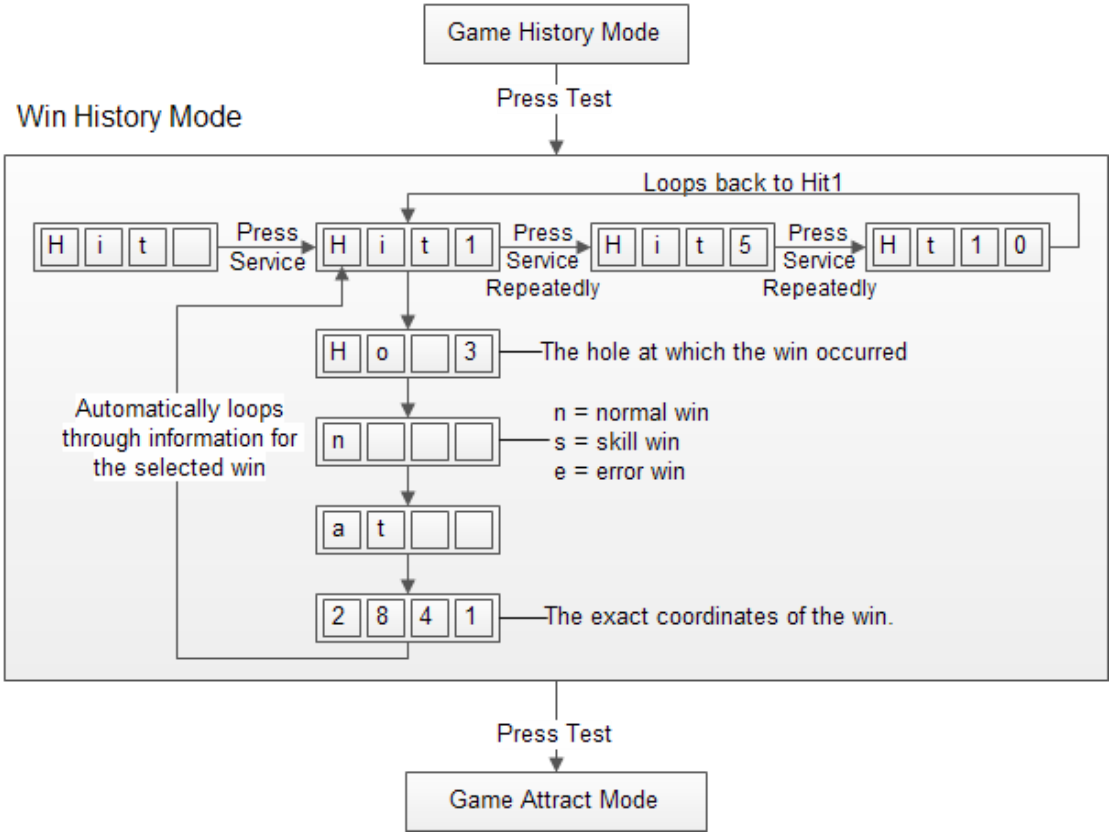
GAME HISTORY QUICK REFERENCE TABLE

CODE	DISPLAY	HISTORY RESULTS
H01	H - 0 1	*Most Recent Game (Win Or Lose)*
H02	H - 0 2	*2nd Most Recent Game (Win Or Lose)*
H03	H - 0 3	*3rd Most Recent Game (Win Or Lose)*
H04	H - 0 4	*4th Most Recent Game (Win Or Lose)*
H05	H - 0 5	*5th Most Recent Game (Win Or Lose)*
H06	H - 0 6	*6th Most Recent Game (Win Or Lose)*
H07	H - 0 7	*7th Most Recent Game (Win Or Lose)*
H08	H - 0 8	*8th Most Recent Game (Win Or Lose)*
H09	H - 0 9	*9th Most Recent Game (Win Or Lose)*
H10	H - 1 0	*10th Most Recent Game (Win Or Lose)*

WIN HISTORY MODE

By using the Win history Mode, the operator can view the last ten wins and details of these wins. This enables the operator to verify a win and to check the location and the actual positioning of the dart for each of those ten wins.

WIN HISTORY MODE DIAGRAM



WIN HISTORY PROCEDURE

- **ENTER**

Win history mode is entered from History mode by pressing the TEST button once or from Attract mode by pressing the TEST button until **Hit** is displayed on the 4-digit display. Press the green SERVICE button to enter Win history Mode.

- **SELECT**

The green SERVICE button is pressed for advancing through the set of Win Histories, starting from the Hit display, Hit1 being the first step and the most recent win in the game, continuing through to Ht10, and then looping again from Hit1 to Ht10 until the mode is exited. For each Win History the display will alternate between the win number (e.g. Hit1), the hole at which the error occurred (e.g. Ho3), the type of win (n for a normal win, s for a skill win and e for an error win) then "At" followed by the exact coordinates of the win (e.g. 2841).

To check the end position of the dart for that winning game, press the UP button and the dart will move to the position it was in when the game was won. The Dart Forward and Backward buttons can be used for a closer inspection of the dart position if required.

- **EXIT**

Win History mode is exited into Game Attract mode, by pressing the TEST button once.

ERRORS AND TROUBLESHOOTING

If the game microprocessor detects any problems with the operation of the game, an Error will be displayed on the 4-digit display and the machine will play the voice message "Please Call the Attendant". Some error messages will only be displayed when test mode is entered. Errors are displayed on the displays as Err X, where 'X' is the error number. The error messages for *Balloon Buster* are listed below.

ERROR CODE QUICK REFERENCE TABLE

CODE	ERROR DESCRIPTION	SOLUTION
Err1	TICKET/CAPSULE (optional) No tickets/Capsules or Jammed	Check there are tickets/capsules Check the ticket notch or capsule sensor/switch Check the drive output to the ticket/capsule dispenser.
Err2	UP BUTTON JAMMED or active for longer than 30 seconds	Check button function using switch test Check the NO/NC connection of the button micro switch
Err3	EEPROM ERROR Problem with on-board EEPROM	The main MCU is getting errors reading the EEPROM (24C16 IC on MCU).

Err4	PRIZE DEPLOYMENT ERROR Prize sensor or no prizes. This is a hard error Test mode can be accessed by pressing TEST button.	Clear any objects that may be blocking the sensor Check the prize sensor Check prize sensor wiring and connectors Fill the cabinet with prizes Check the prize holder arm is working
Err5	DART ERROR No dart home switch input for 30 seconds or more. This is a hard error NOTE: Error 5 not used After V2.00	Check for the dart home switch Check each position sensor Check the dart motor Check the fuse and motor PCB Check dart wiring and connectors
Err6	MACHINE ERROR Home position X and Y switch This is a hard error NOTE: Error 6 not used After V2.00	Check the X,Y mechanism home switches Check the X,Y motor Check for a faulty string cable
Err7	PIN LOCK PCB COMMUNICATION ERROR	Check the ribbon cable from main PCB to pin lock PCB Check the power connection on +24 VDC
Err8	HOME SWITCH ERROR NOTE: Error 8 not used After V2.00	Check the Y home switch Check the connection to the Y home switch Check the motor for Y axis
Err9	X Motor or Photo Sensor Error Horizontal motor jammed or not moving	Check the X motor connection/operation and voltage Check for any blockage/operation on the 5 target position sensor PCB Check for a faulty string cable Check any faulty pulley
Err10	X Motor or X Home switch error Horizontal motor always running, not stopping	Check the X home limit switch Check connection to the X limit switch
Err11	Y stepper motor or Y home switch error Y motor vibrating without stopping	Check the Y stepper motor Check Y limit switch connection Check the rubber belt tension
Err12	Dart (Z) motor or Z home switch Z motor always running, not stopping	Check the Z limit switch inside the box Check the darts nylon gears positions Check the Z motor voltage and connection
Err13	Dart (Z) Motor or Z spring switch error Dart will not stop when it hits the cover	Check the spring limit switch inside the box Check the spring tension and micro switch Check for any stiff movement

Err14	Dart (Z) Motor or Hit Target Switch Error Dart enters target but isn't detected	Check the hit target limit switch inside the box (dart fully extended) Check the limit switch connection
Err15	Alignment Data EEPROM Error This is a hard error	The MPU is reading bad alignment data. Please try to run the Auto Align or manually align all five holes
Err16	AGW Value Error This is a hard error	The MPU is reading bad AGW Data. Go to the P09 settings and change the AGW value to update the data and play a game then set the AGW to the correct value.
Err17	Win Error A win is detected but the dart didn't fully extend. This is a hard error	Check for small or deflated balloons or a blunt dart tip. Check that the spring push back switch inside the dart box is not too weak or that the micro switch operates to easily.

TROUBLESHOOTING GAME ERRORS

- **CLEARING GAME ERRORS**

Game errors can be cleared by pushing the TEST button once. The game will check if the error is fixed. If the cause of the error is fixed, the game will continue as normal. If the error is not fixed, the error will remain on the display. For a hard error, powering the machine OFF and ON again will clear the error.

- **Err1 – TICKET/CAPSULE ERROR**

This error is usually displayed if the ticket dispenser is not functioning properly, or if tickets are jammed. Check that the ticket dispenser is full and that the ticket sensor/switches are working properly. The ticket dispenser can vend a ticket that can be pushed in and out of the sensor to test it. Use the switch test to help check the sensor/switch. An active switch will display as C1 in switch test. Use a digital multi meter to check the voltage drive from the main CPU output to the motor or ticket connector.

- **Err2 – UP BUTTON JAMMED**

This error is usually displayed if the UP button is active or jammed on for longer than 30 seconds. Check the mechanical operation of the UP button and also the micro switch. Lastly, make sure the micro switch wiring is connected to the Normal Open and the Common contact of the micro switch. Use the switch test to help check the UP button - an active/pushed button will be displayed as C7.

- **Err3 – EEPROM ERROR**

This error means that the CPU cannot read the EEPROM, or is receiving errors during communication with the EEPROM (The 23C16 IC on the main MCU PCB). This could cause problems with the game audits and program settings. The first thing to do is try to switch the machine ON and OFF at least twice. If the message still appears then replace the EEPROM IC (Atmel 24C16) on the CPU PCB with the new EEPROM. If there is still an error message, this could be a problem with the game audits and program. If this error cannot be cleared, please send your main MCU PCB to the nearest authorized LAI Games Distributor for repair.

- **Err4 – PRIZE DEPLOYMENT ERROR**

This error is displayed when the prize sensor is not functioning either during the start up test or in game play, a prize has not dropped or sensed when it has been won or there are no prizes inside the cabinet and the game times out. This is a hard error and will stop the game operating but you can still access the test mode by pressing the TEST button twice to troubleshoot the problem.
Clear any blockage in front of the sensor and release any prize that might be stuck. test or re-adjust the prize sensor by turning the sensitivity screw in the sensor body if required. Check that all the prize arms are working in the run test and that there are no mechanical jams.

- **Err5 – DART ERROR** *(NOTE: Error 5 not used After V2.00)*

This error occurs if the dart is jammed for longer than 30 seconds. Make sure all home position sensor/switches are working, especially the home switch for the dart inside the dart assembly. Make sure the Dart DC motor is running properly and fuses for the motor on the Motor PCB are functioning.

- **Err6 – MACHINE ERROR** *(NOTE: Error 6 not used After V2.00)*

This error occurs if the X, Y home position cannot be detected longer than 30 seconds. Make sure all the X,Y switches are in position and function normally. Make sure the X,Y motor is working properly and make sure the string cable is intact.

- **Err7 – PIN LOCK PCB COMMUNICATION**

This error occurs if the pin lock PCB communication with the main PCB failed. It will show Err7 after timeout. Make sure the ribbon cable from main PCB to the pin lock PCB is intact that the 24 VDC power rail is applied.

- **Err8 – HOME SWITCH** *(NOTE: Error 8 not used After V2.00)*

This error occurs if the Y home switch isn't activated in a certain time. Make sure that the switch and Y motor are in good working order.

- **Err9 – X MOTOR (Left/Right) or PHOTO SENSOR ERROR**

This error occurs when horizontal movement gets jammed or does not move at all. Make sure that the X motor is working properly in game play or using the run test and test that all five photo sensor PCBs for target positions are working correctly. Use the switch test to help check the target sensors; these will be displayed as C20, C21, C22, C23 and C24.

- **Err10 – X MOTOR(Left/Right) or X HOME SWITCH ERROR**

This error occurs when the MCU doesn't read the X home switch and/or the left/right motor is not working and cannot return home. Make sure that the X home switch is operating correctly, the connections are good and in the proper position (NO), and that the left/right motor works correctly in game and in run test. Use the switch test to help check the X Home switch; an active switch will be displayed as C11.

- **Err11 – Y MOTOR (Up/Down) OR Y HOME SWITCH ERROR**

This error occurs when the MCU doesn't read the Y home switch. The up/down motor always runs, vibrates and never goes back to home position. Make sure that the Y home switch is operating correctly, the connections are good and in proper position (NO) and that the up/down stepper motor works correctly in game and in run test. Use the switch test to help check the Y home switch; an active switch will be displayed as C12.

- **Err12 – Z (DART) MOTOR OR Z (DART) HOME SWITCH ERROR**

This error occurs when the MCU doesn't read the Z home switch, and/or the dart motor is not working and cannot return to the home position. Make sure that the Z home switch is operating correctly, the connections are good and in the proper position (NO) and that the dart motor works correctly in game and in run test. Use the switch test to help check the Z home switch; an active switch will be displayed as C13.

- **Err13 – Z (DART) MOTOR OR Z SPRING (FAIL) SWITCH ERROR**

This error occurs when the MCU doesn't read the fail switch. This is the switch that operates when the dart is pushed back against the spring mechanism when it misses the hole and hits the acrylic. To make sure that the fail switch is operating correctly, check that the spring mechanism is lubricated and moves smoothly, and that the switch connections are good and in the proper position (NO). Use the switch test to help check the fail switch; an active switch will be displayed as C17.

- **Err14 – Z (DART) MOTOR OR Z MAX SWITCH ERROR**

This error occurs when the MCU doesn't read the Z max switch, and/or the dart motor is not working. Make sure that the Z max switch is operating correctly, the connections are good and in the proper position (NO) and that the dart motor works correctly in game and in run test. Use the switch test to help check the Z max switch; an active switch will be displayed as C14.

- **Err15 – ALIGNMENT DATA EEPROM ERROR**

This error occurs when the alignment data in the EEPROM for darts is not correct. Re- align the dart using the Auto Alignment or manually align all holes in the test mode. This will update the data in EEPROM.

- **Err16 – AGW VALUE ERROR**

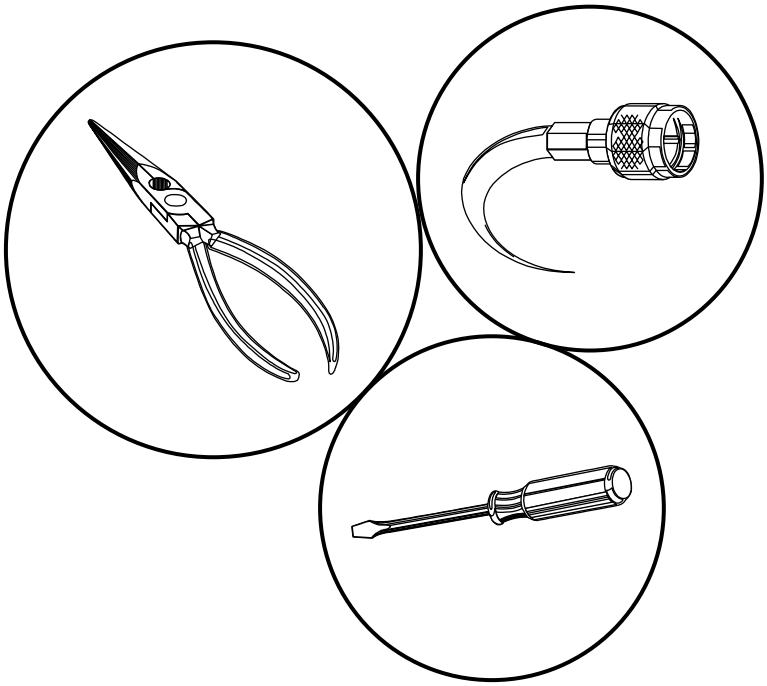
This error occurs when the AGW data in the EEPROM is not correct. Go into test mode and change the value of P09, play a game, then set P09 to the correct value and exit the test mode again to save it.

- **Err17 – WIN ERROR**

This error occurs when a player wins, the dart enters the target hole and doesn't set off the Z Max switch but it sets off the spring fail switch. The balloon may or may not pop and the prize doesn't drop.
Check for small or deflated balloons or a blunt dart tip. Check that the spring push back switch inside the dart box is not weak or that the micro switch operates too easily.

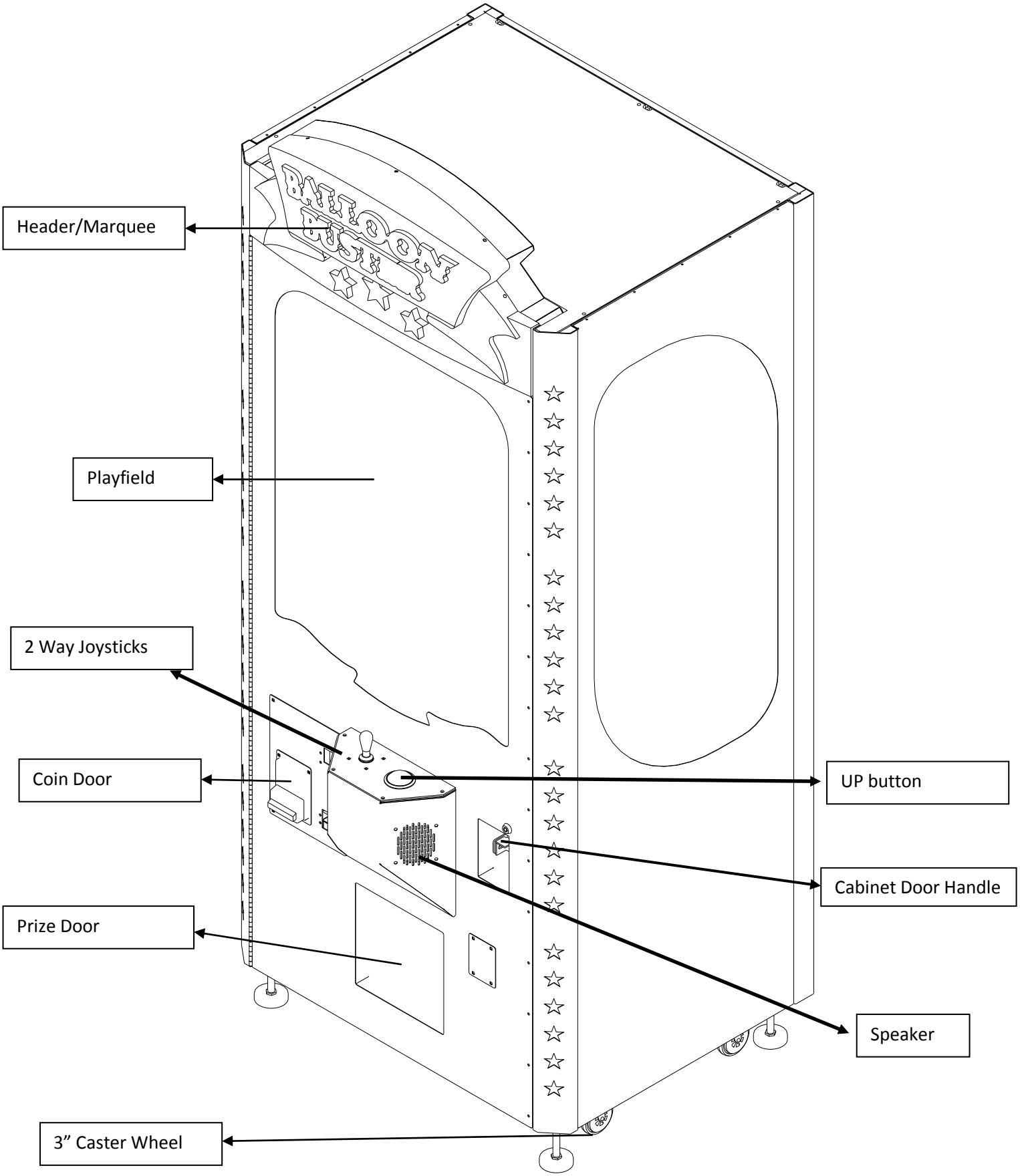
* NOTE! *
The XY mechanism won't move when the front door is open.

SECTION A: SERVICE INSTRUCTIONS

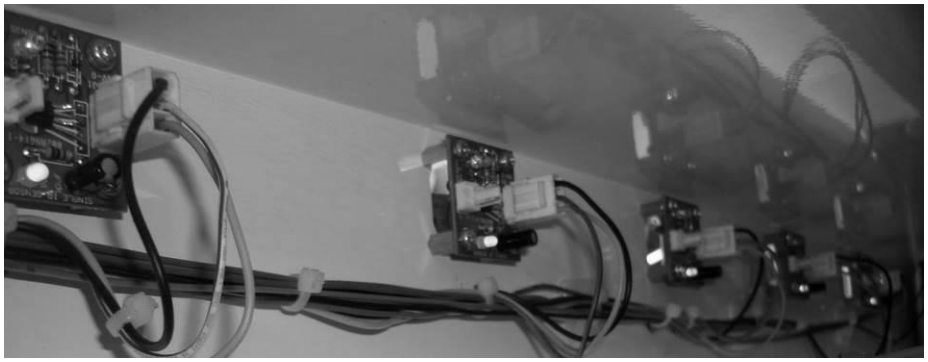


Be sure to read the following carefully before servicing the machine

LOCATING AND ACCESSING PARTS

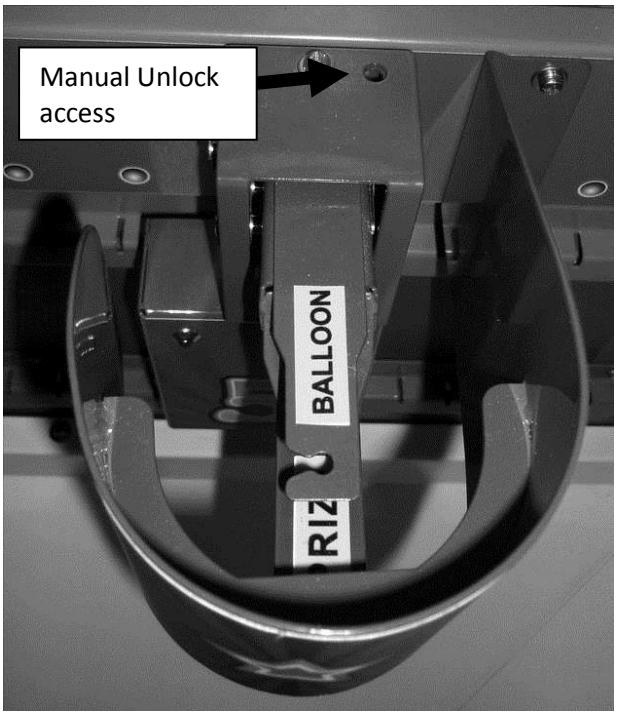


PCB ACCESS



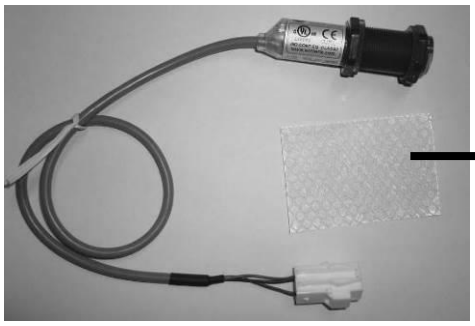
Position Sensor PCB BAFB84A in front of Game

PRIZE LOCKING MECHANISM



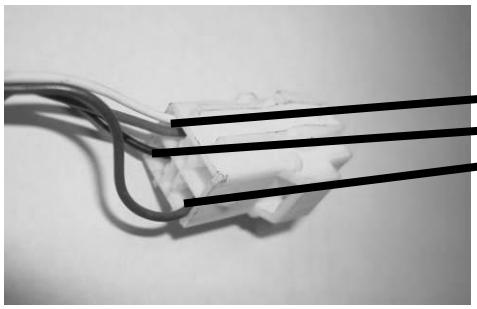
* CAUTION! *
Prize on each prize arm
Maximum Weight = 1.5 Kg (3.5 lbs), Dimension 280 x 100 x 150 mm

PRIZE SENSOR

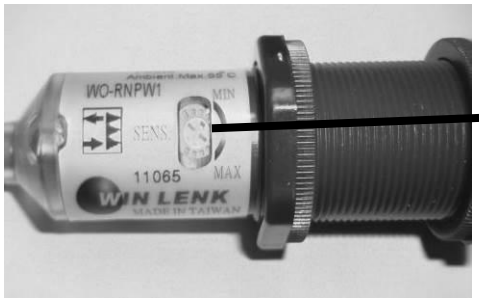


Prize Sensor WO-RNPW1

Win Link Retro Reflective

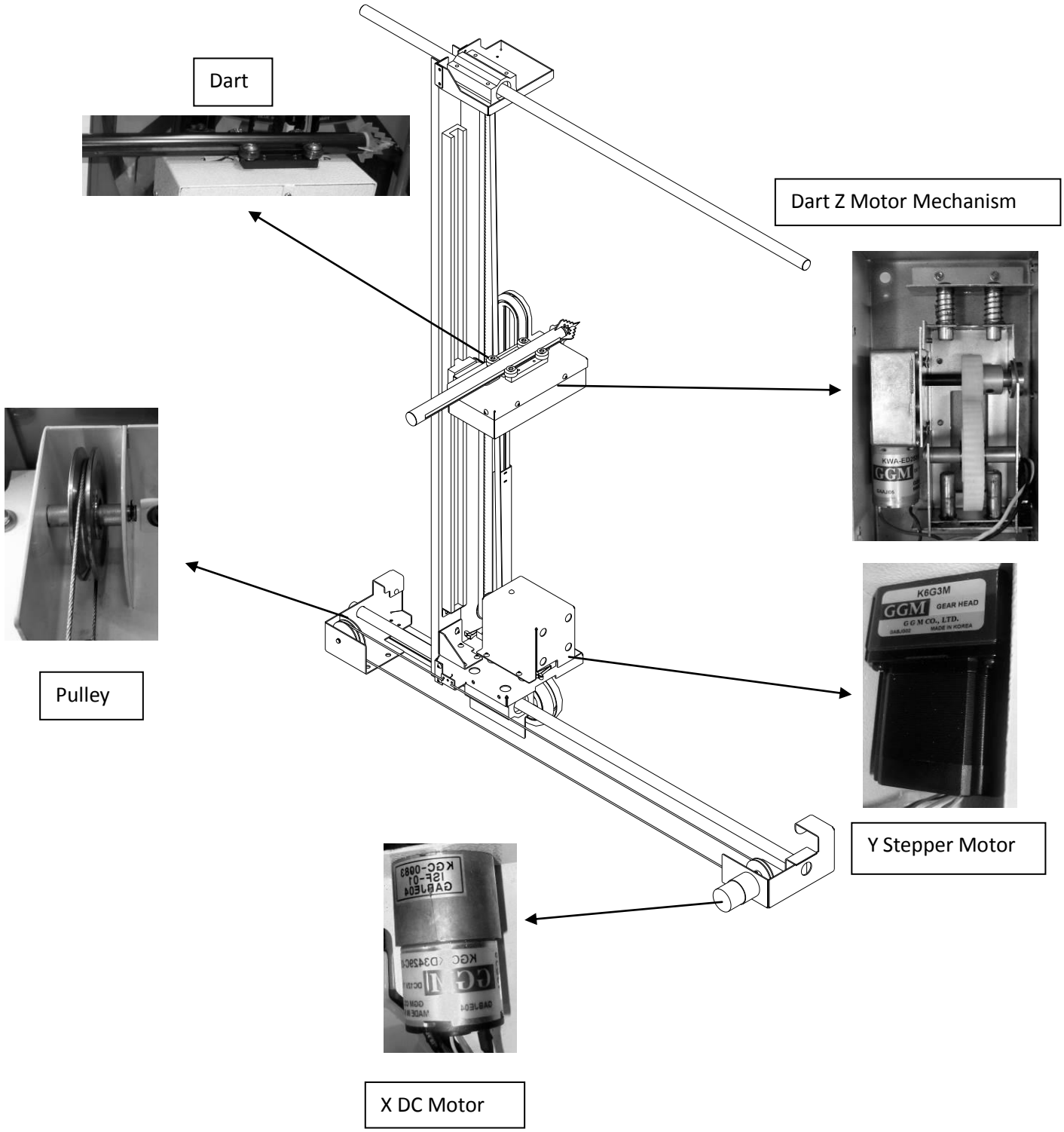


Blue/White = GND
Black = Output
Logic



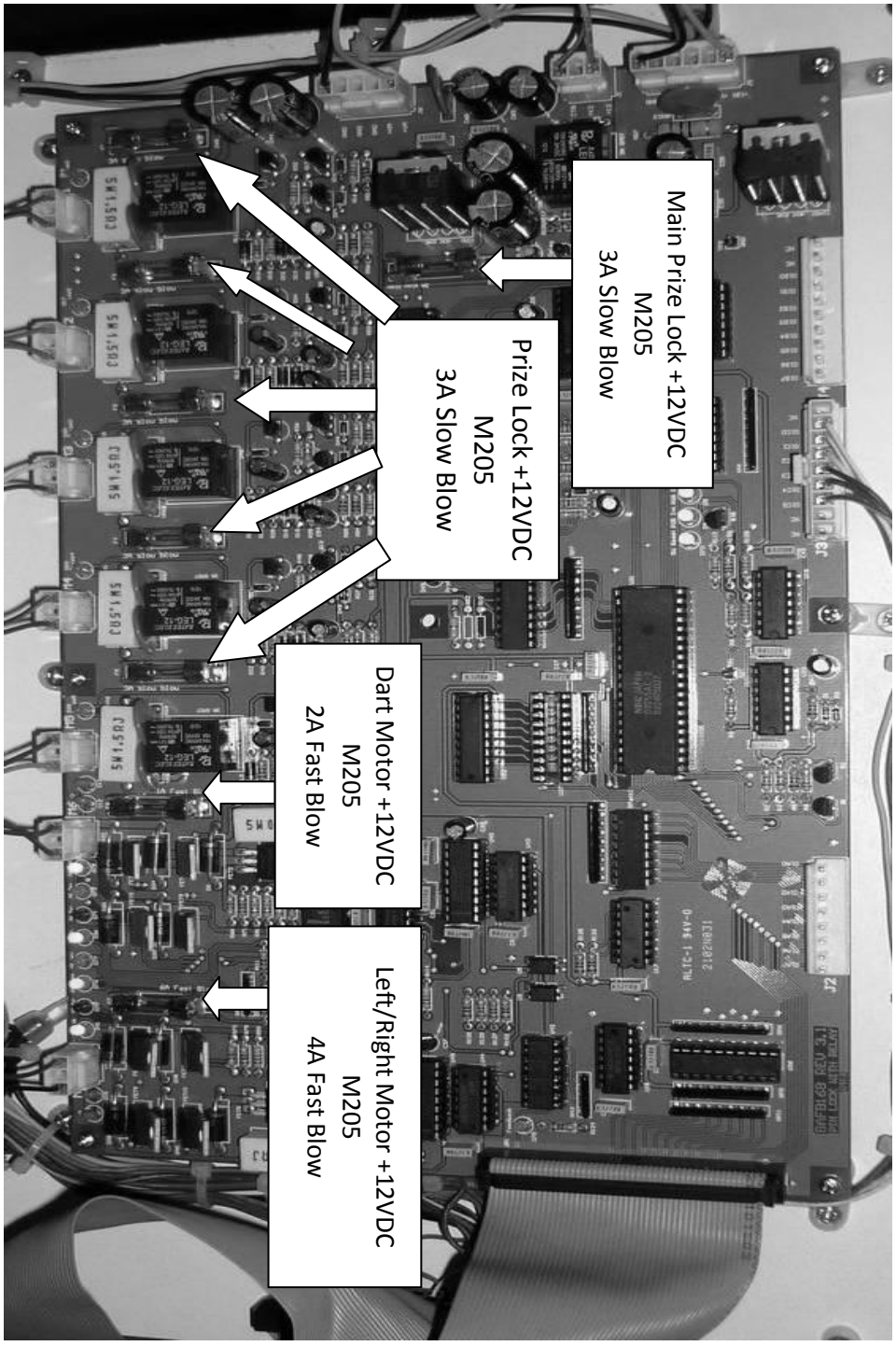
Sensitivity Adjustment

XYZ MECHANISM EXPLODED VIEW



BAFB168 PIN LOCK PCB DETAIL

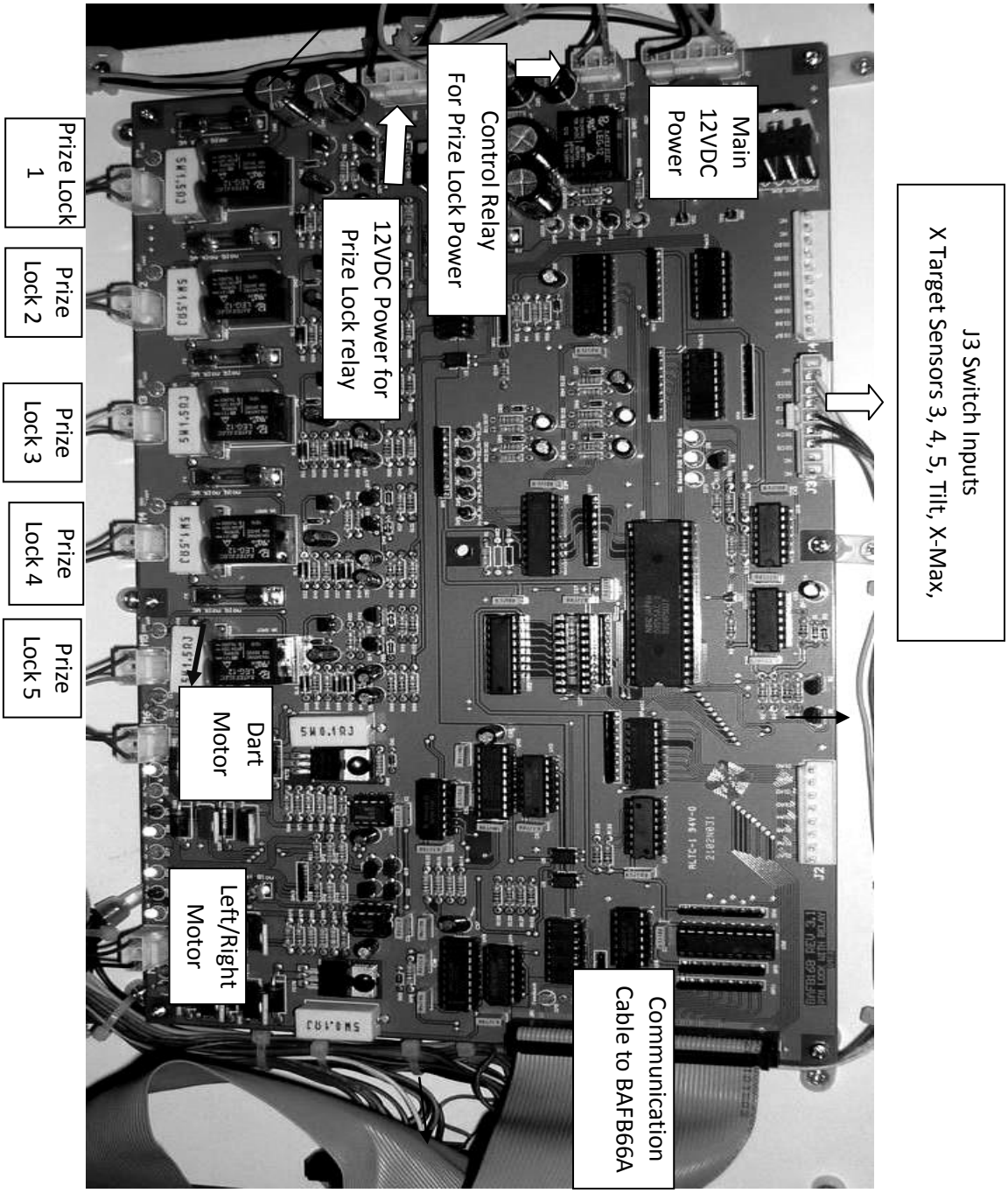
FUSES



NOTE

Note: When replacing fuses always use the same ratings as mentioned.

CONNECTIONS



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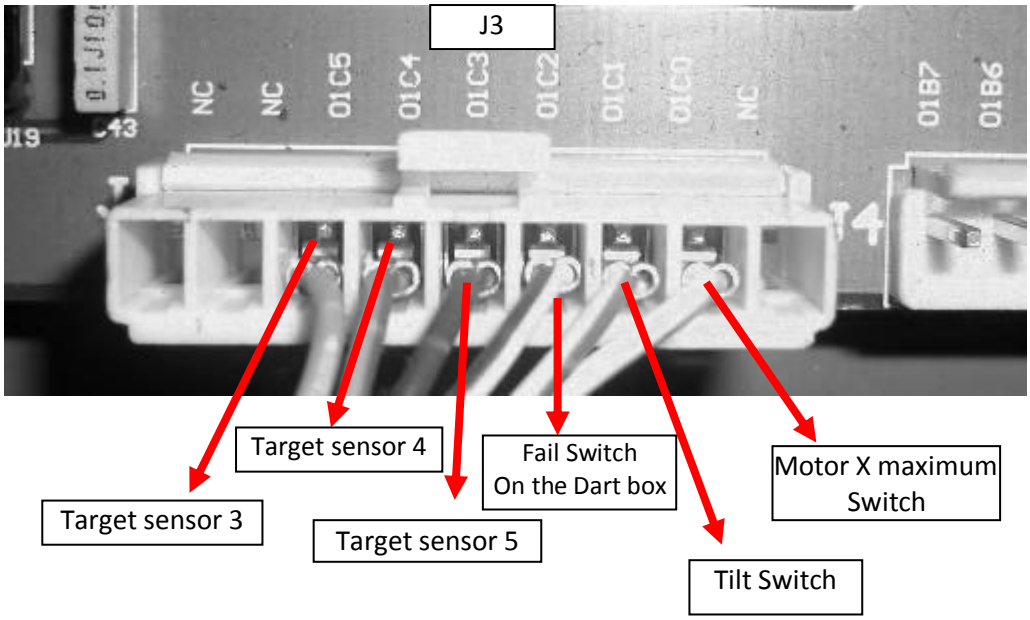
CONNECTIONS DETAIL

Input J3

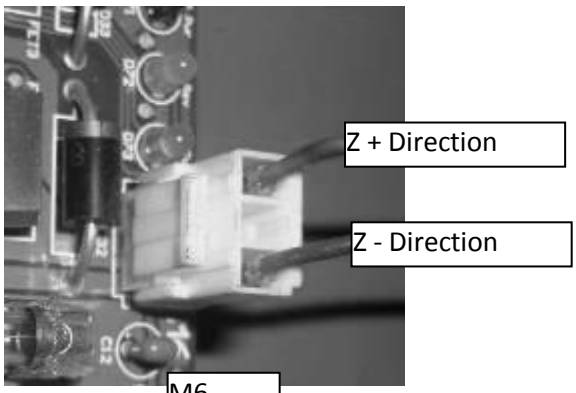


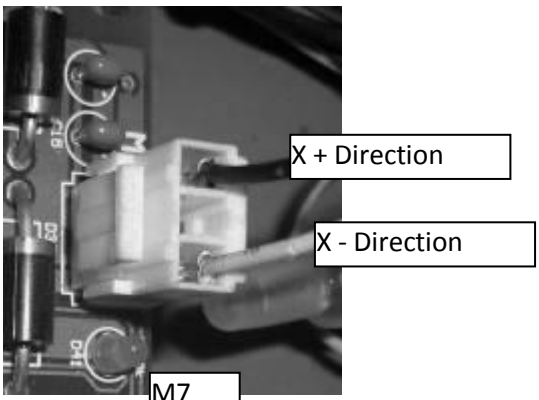
Five target sensors, BAFB84A located on the back of the service bracket.

Normal open condition

Blocked/Active LED ON

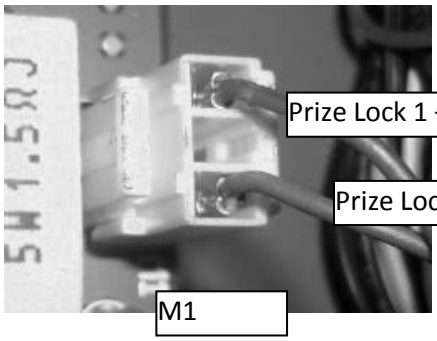
Motor Z (dart motor) and Motor X (left/right) connections.

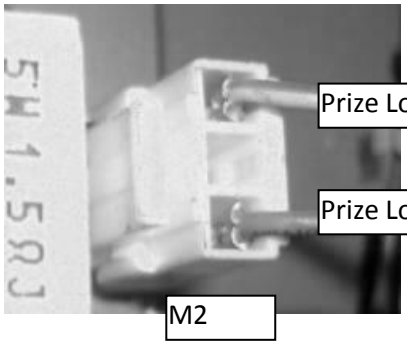


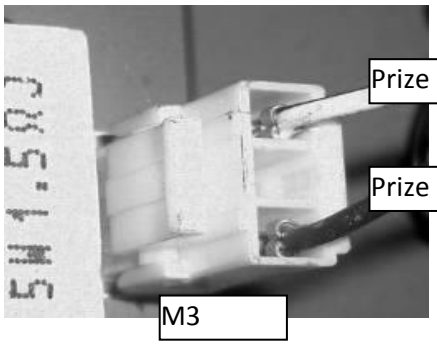


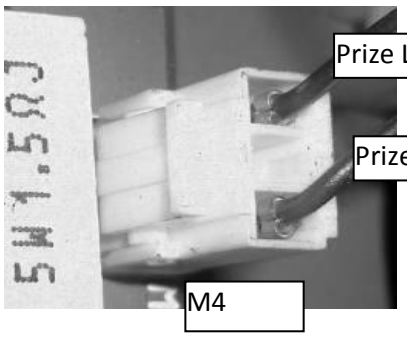
NOTE
The Z and X Motors are Bi Directional so the -/+ will change depending on the direction the motors are being driven.

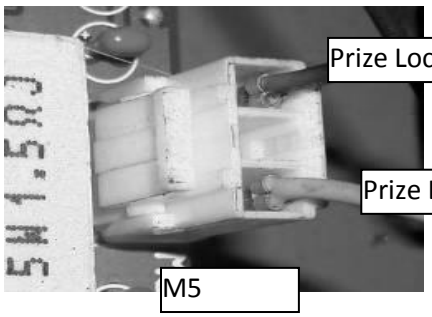
Prize Lock connection



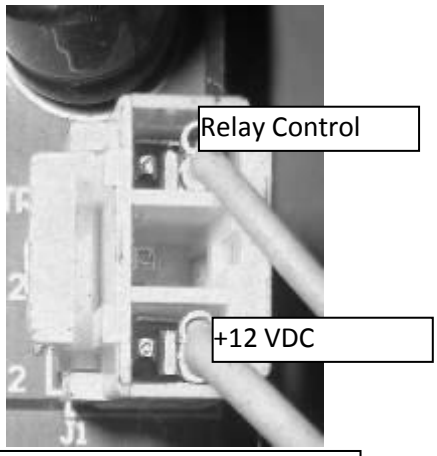




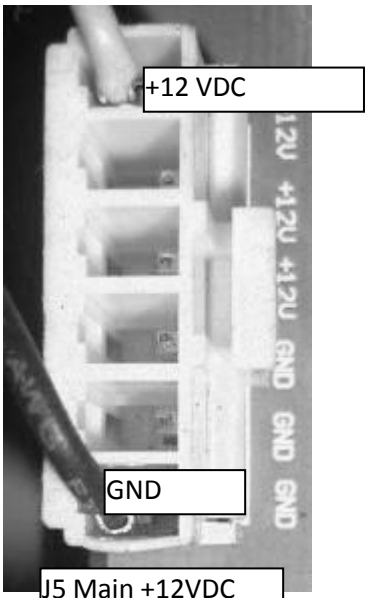


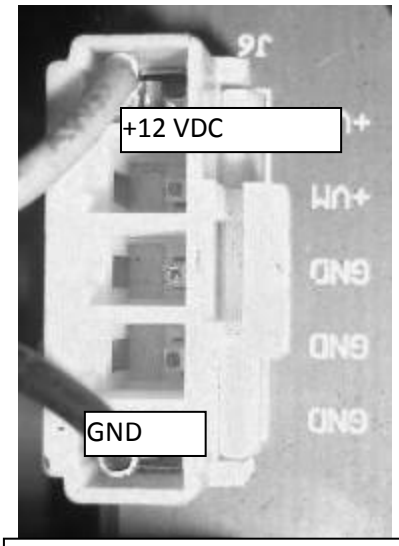


Power Connectors



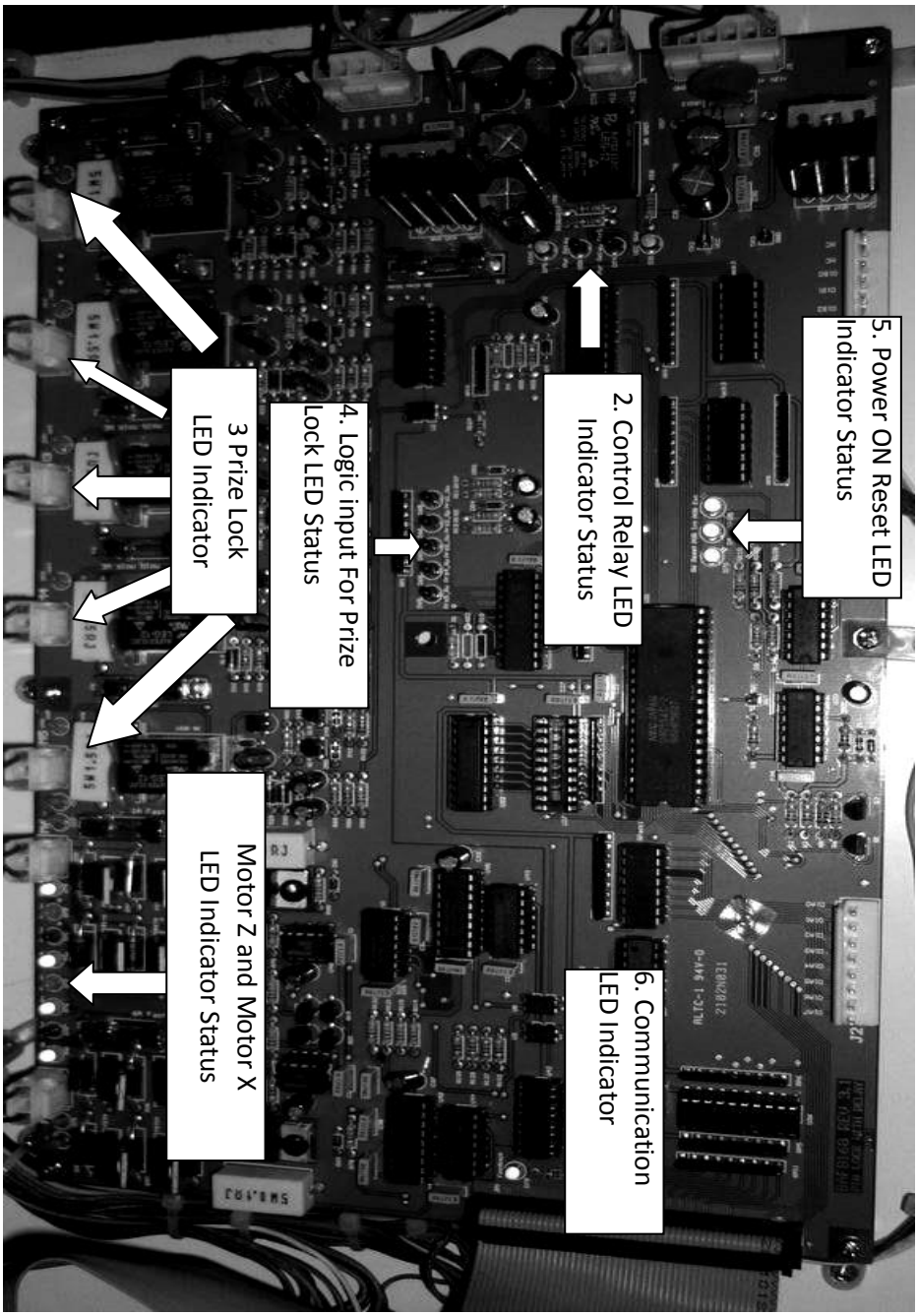
J1 Prize Lock Power Relay Control





J6 Main Prize Lock & Motor +12VDC

LED INDICATORS

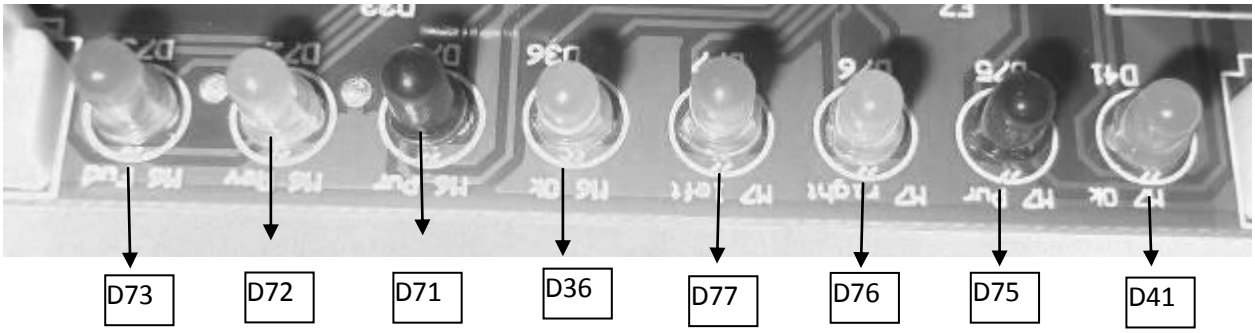


NOTE

The LED lit (ON) in the photo above is in normal operation condition.

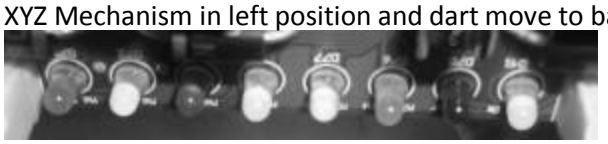
LED INDICATOR DETAILS

MOTOR Z AND MOTOR LED INDICATOR



D41= Current sensing indicator “Normal Lit”, Off Means Over load (Motor X).
D75= Power Enable Motor X
D76= Right direction Motor X (Facing to the game)
D77= Left direction Motor X
D36= Current sensing indicator “Normal Lit”, Off Means Over load (Motor Z).
D71= Power Enable Motor Z
D72= Backward direction Motor Z.
D73= Forward direction Motor Z.

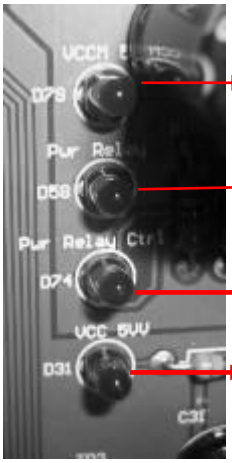
XYZ Mechanism in left position and dart move to backward position.



XYZ Mechanism in left position and dart move to forward position.

XYZ Mechanism in right position and dart home position.

CONTROL RELAY LED INDICATOR



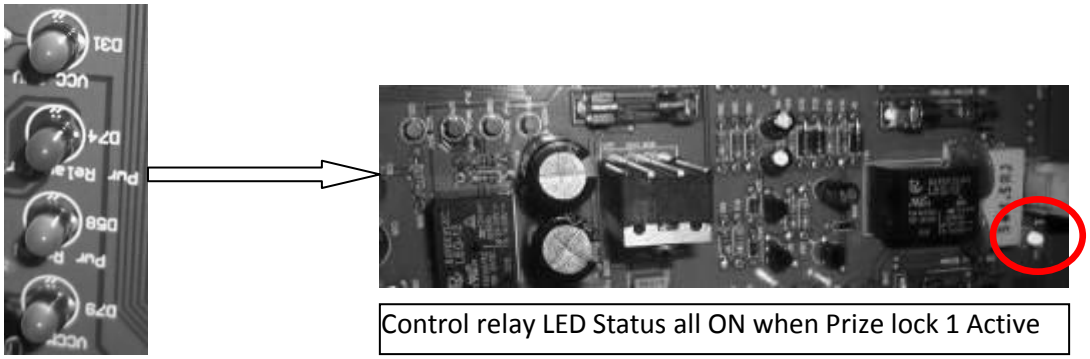
D79 | D79=Power +5VDC for Relay Control

D58 | D58= Power Relay 12 VDC (activate all Prize Lock relays) to All relays

D74 | D74= Power Relay Control1 (Logic input for Relay) from BAFB66A

D31 | D31=Power +5VDC for Prize Lock Relays

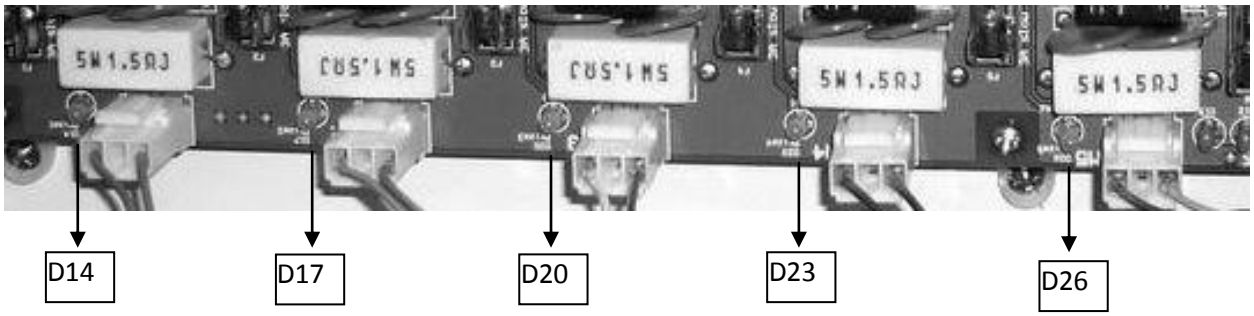
Logic input active and control relay for prize lock relay active.



Control relay LED Status all ON when Prize lock 1 Active

Normal/Standby mode LED indicator status on control relay,

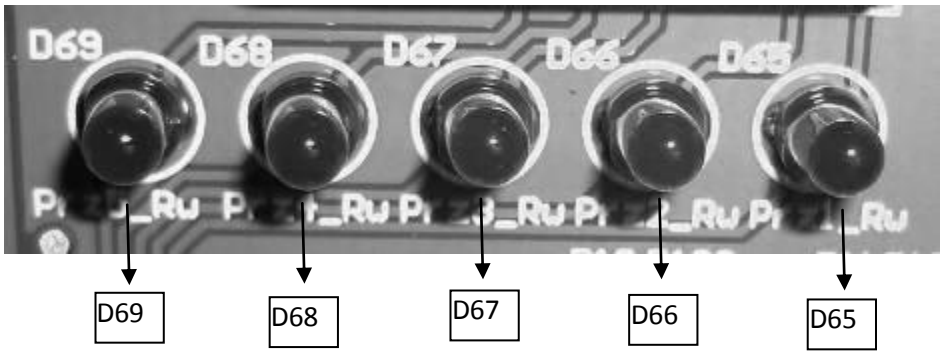
PRIZE LOCK LED INDICATOR



D14=Prize Lock 1 active LED On
D17=Prize Lock 2 active LED On
D20=Prize Lock 3 active LED On
D23=Prize Lock 4 active LED On
D26=Prize Lock 5 active LED On

Prize Lock 1 Active LED On

LOGIC INPUT FOR PRIZE LOCK LED STATUS

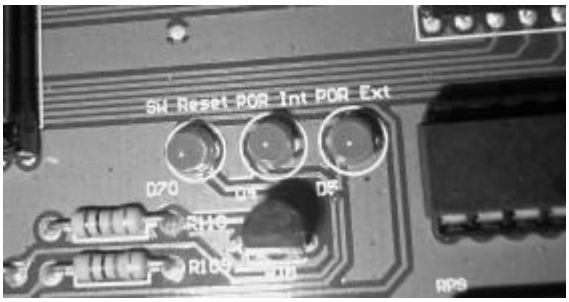


D65=LED on Logic Input for Prize Lock 1
D66=LED on Logic input for Prize Lock 2
D67= LED on Logic input for Prize Lock 3
D68= LED on Logic input for Prize Lock 4
D69=LED on Logic input for Prize Lock 5

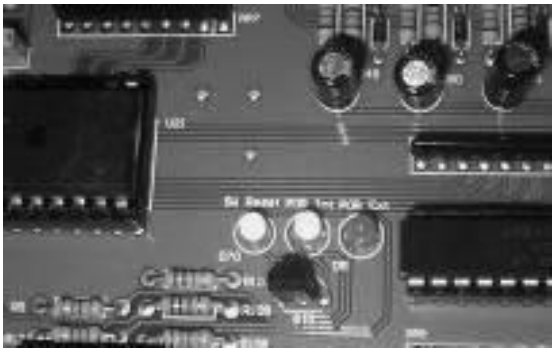
NOTE
If the Logic input on either Prize Lock or Prize Lock LED not Lit then Relay or Control Relay have problem.

POWER ON RESET LED STATUS

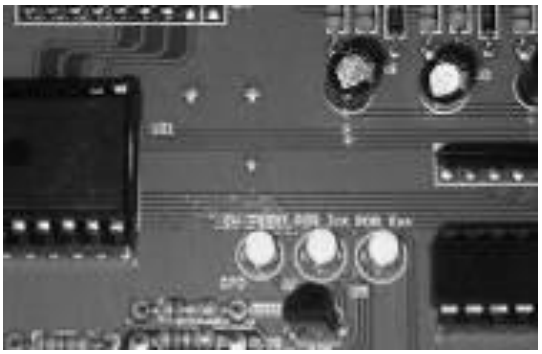
Power OFF LED status



Boot up sequence and or when the PCB has a problem. Power on reset LED Status.

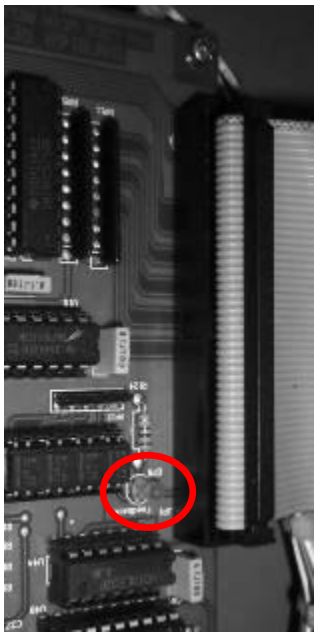


Normal Operation Power on reset LED Status.

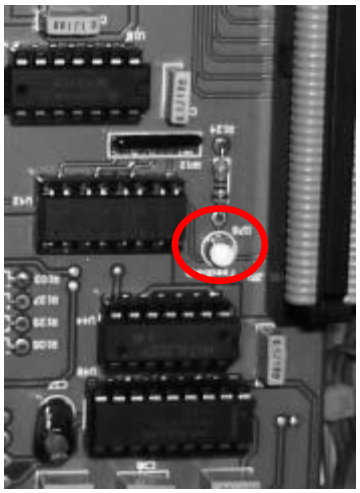


FEEDBACK/COMMUNICATION LED STATUS

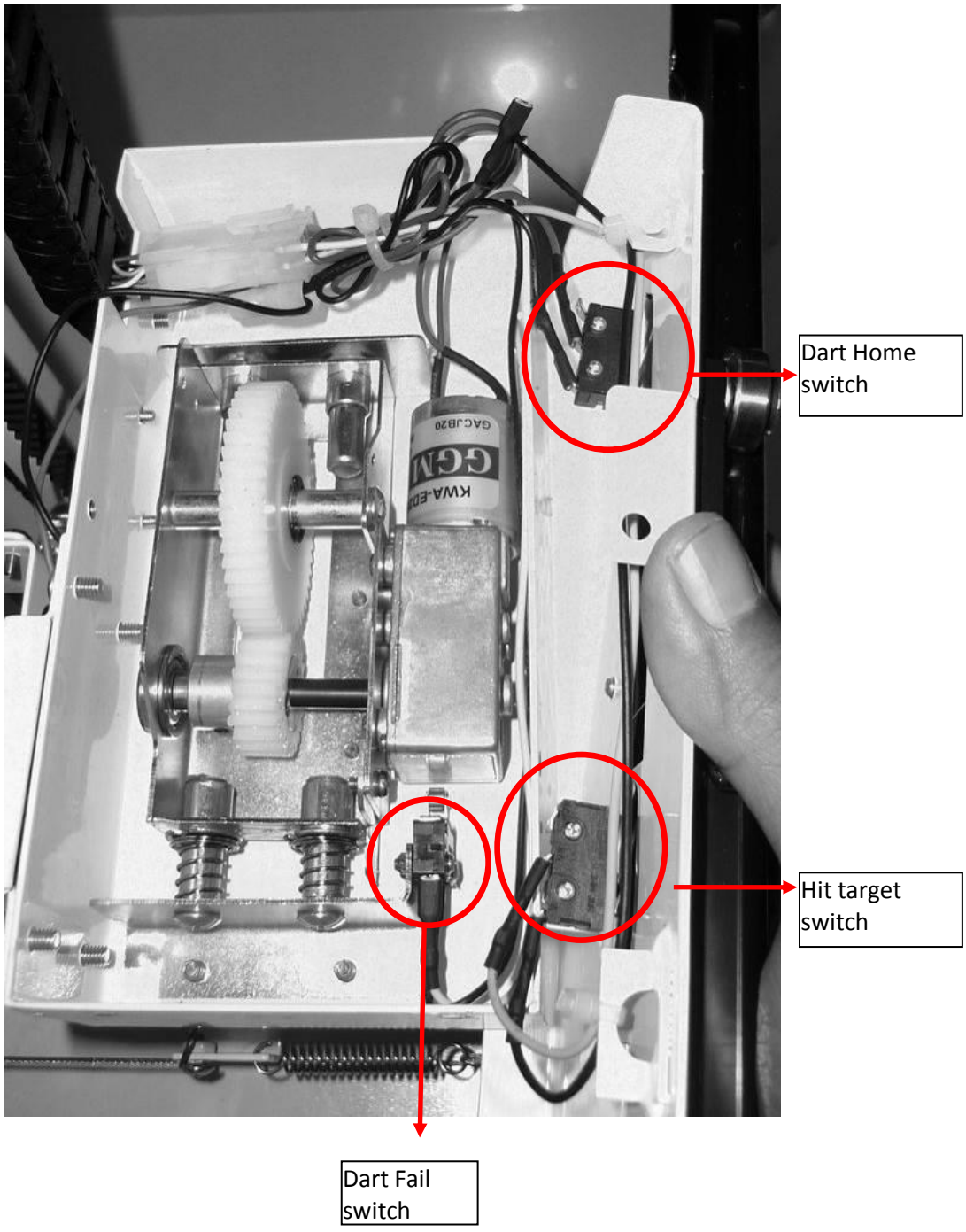
Feedback/communication LED Status OFF when there is no power and or communication failed.



Feedback/communication LED Status will turn ON for a few seconds during the boot up sequence and should always be blinking on normal operation.



DART BOX SWITCH FUNCTIONS DETAIL



PARTS DESCRIPTION

- **COIN MECHANISMS**

The coin mechanisms can be accessed inside the main front door to the right on the front of the machine cabinet.

- **CASH BOX**

The cash box is located inside and behind the coin door on the front of the machine cabinet.

- **SPEAKERS**

Two speakers are located to the front of the cabinet below the control panel. Access is through the back of front door by unscrewing the metal cover.

- **CONTROL PANEL**

The control panel is located in the center of the machine cabinet. The control panel can be accessed through the front door from the back by unscrewing the metal bracket.

UP BUTTON: The UP button is a large, round blue illuminated button. This button is used to start the game, to fire the dart and for testing and program adjustments.

JOYSTICK: The joystick is used for moving the dart into the right position during gameplay.

SERVICE CONTROLS: The service panel is located and accessed through the front door. The test and service Panel is mounted on the door.

SERVICE BUTTON: Used to input credits to the game without activating the coin counter, and to perform test procedures in combination with the TEST button.

TEST BUTTON: Used to enter and navigate test mode.

MOVE RIGHT BUTTON: Used to move dart to the right during test mode.

MOVE LEFT BUTTON: Used to move the dart to the left during test mode.

MOVE UP BUTTON: Used to move the dart up during test mode.

MOVE DOWN BUTTON: Used to move the dart down during test mode.

DART FORWARD: Used to move the dart forward during test mode

DART REVERSE: Used to move the dart backwards during test mode

VOLUME KNOB: Used to adjust the speaker's sound level.

Service Panel

Test and Service Panel

LAMPS

* WARNING! *

Always turn OFF Mains power and unplugged the game before replacing any lamps.

Always allow time for cooling as lamps that have been active for a time may still be too hot to touch.

COIN DOOR LAMPS (LED)
The coin door lamps all are 12V/DC T10 LED or equivalent and can be accessed through the coin door.

BUTTON LAMPS (LED)
The button lamps all are 12V/DC T10 LED or equivalent and can be accessed through the coin door or back door.

HEADER LAMPS
These are white LED strips.

CABINET LAMPS
There are two 23 watt energy saver lamps on top of the inside of the cabinet. Maximum two 25 watt energy saver lamps can be use inside the cabinet. There are also LED strips lighting the cabinet.

CABINET SIDE LAMPS
There are software controlled LED strip lights for lighting the left and right corners of the cabinet.

* CAUTION! *

Always replace the lamps with the same or equivalent size, wattage and voltage.

MAINTENANCE

CLEANING AND CHECK UP

EXTERIOR

Regularly dust and clean the external cabinet areas as required, using a soft water-damp cloth and mild soap. Check for blown bulbs and replace as required.

Any scratches or marks in the acrylic can be buffed out using car polish or cut and polish**.**

> * CAUTION! *
> Do not use solvents on the panels as it may affect the artwork.

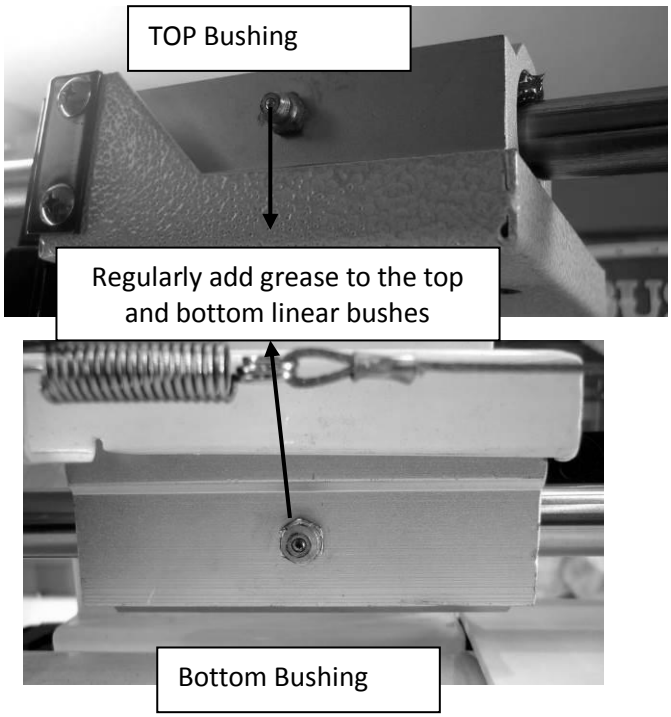
INTERIOR

Regularly dust and vacuum the interior of the cabinet, taking care to remove any objects that may have fallen on the PCBs. Check and tighten all fixing hardware and fasteners as required.

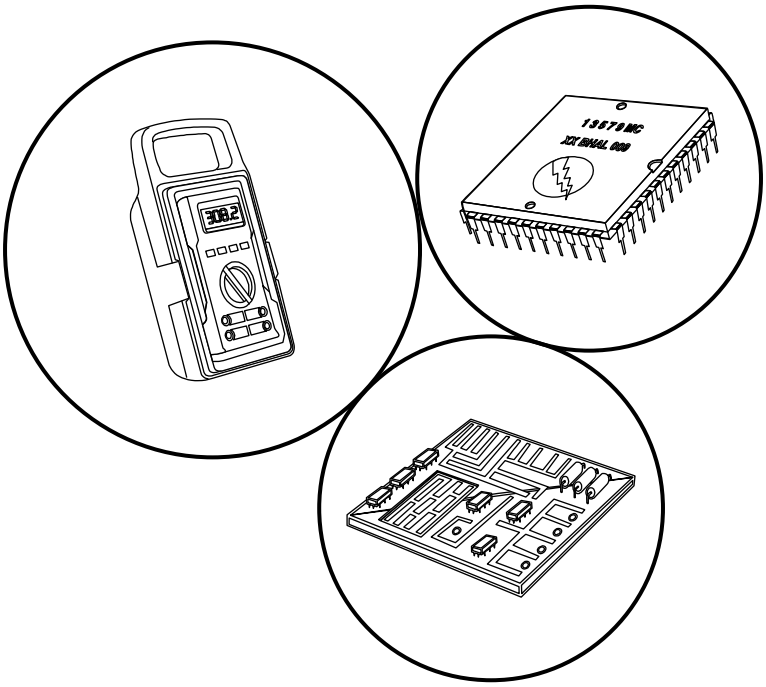
> * WARNING! *
> Always turn OFF Mains power and unplugged the game, before cleaning the interior of the machine.

Regularly check that all the motors, bushings and button lamps are operating through the sounds, lamps and motor test. Replace any globes that are not operational.

Regularly grease the linear bearing for the XY mechanism and the slide rails/mechanism/springs inside the dart assembly.



SECTION B: TECHNICAL DETAILS

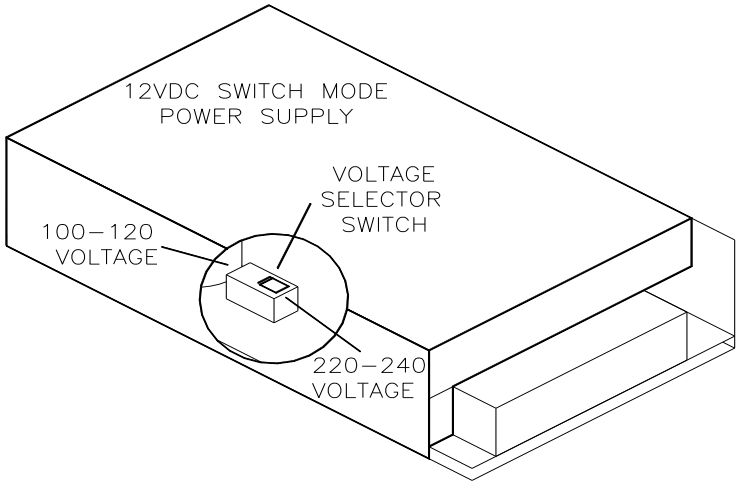


It is advised that anybody using SECTION B for repairing or modifying any of the components of the game should be a qualified technician, having at least a basic knowledge of digital components, integrated circuits and electricity.

MAINS VOLTAGE ADJUSTMENT

POWER SUPPLY

The switch mode power supply has a switch to set the mains voltage range. It is located at the rear of the game cabinet, and is accessed via the back door. Use a thin blade screwdriver to move the selector switch to the desired mains voltage (See Diagram Below)



CONNECTION DETAIL

Main FB66 PCB 28 Way Edge Connector

Components Side	Solder side
GND 1	A GND
GND 2	B GND
+12VDC 3	C +12V
+12VDC 4	D +12V
Z-max switch - P1A7 5	E P1B7 TEST button input
Z-home switch – P1A6 6	F P1B6 SERVICE button input
Y-home switch – P1A5 7	G P1B5 Door switch
X-home switch – P1A4 8	H P1B4 -
Left button Input P1A3 9	I P1B3 notch of Ticket (input)
Right button Input P1A2 10	J P1B2 Coin_1 input
Down button Input P1A1 11	K P1B1 Coin_2 input
UP button Input P1A0 12	L P1B0 Prize Sensor input
P1C7 13	M P2C7 Display 7 Segment Clock
- P1C6 14	N P2C6 Display 7 Segment data

- P1C5 15	O P2C5 -
- P1C4 16	P P2C4 5th Target Indicator
Target 1 Sensor - P1C0 17	Q P2C0 1st Target Indicator
Target 2 Sensor - P1C1 18	R P2C1 2nd Target Indicator
Reverse-button - P1C2 19	S P2C2 3rd Target Indicator
Fwd-button - P1C3 20	T P2C3 4th Target Indicator
GND 21	U GND
GND 22	V GND
JST 7	JST 5
Dir stepper Y P2A0 1	1 P2B0 (PNP) Ticket Drive
Enable stepper Y P2A1 2	2 P2B1 Ticket Counter
Clock stepper Y P2A2 3	3 P2B2 Coin 1 Counter
Led strip control left P2A3 4	4 P2B3 Coin 2 Counter
- P2A4 5	5 P2B4 Prize Counter
- P2A5 6	6 P2B5
Control Relay for FB168 P2A6 7	7 P2B6 UP Button Light
Led strip control right P2A7 8	8 P2B7

* NOTE! *
All switches that not write (NC) are NO (Normally Open).

FB168 PINOUTS

J1 (6 WAY JST)

1. + 12VDC
2. + 12VDC
3.
4.
5. GROUND
6. GROUND

J6 (5 WAY JST)

1. + 12VDC
2. + 12VDC
3.
4. GROUND
5. GROUND

J3 (9 WAY JST)

1. -
2. -
3. Target 3 sensor
4. Target 4 sensor
5. Target 5 Sensor
6. Fail Switch
7. Tilt Sensor
8. X -Max Sensor
9.

MOTOR OUT 1 (3 WAY JST)

1. TARGET LOCK 1+
2. –
3. GND POWER

MOTOR OUT 2 (3 WAY JST)

1. TARGET LOCK 2+
2. –
3. GND POWER

MOTOR OUT 3 (3 WAY JST)

1. TARGET LOCK 3+
2. –
3. GND POWER

MOTOR OUT 4 (3 WAY JST)

1. TARGET LOCK 4+
2. –
3. GND POWER

MOTOR OUT 5 (3 WAY JST)

1. TARGET LOCK 5 +
2. –
3. GND POWER

MOTOR OUT 6 (3 WAY JST)

1. MOTOR AXIS Z +
2. –
3. MOTOR AXIS Z –

MOTOR OUT 7 (3 WAY JST)

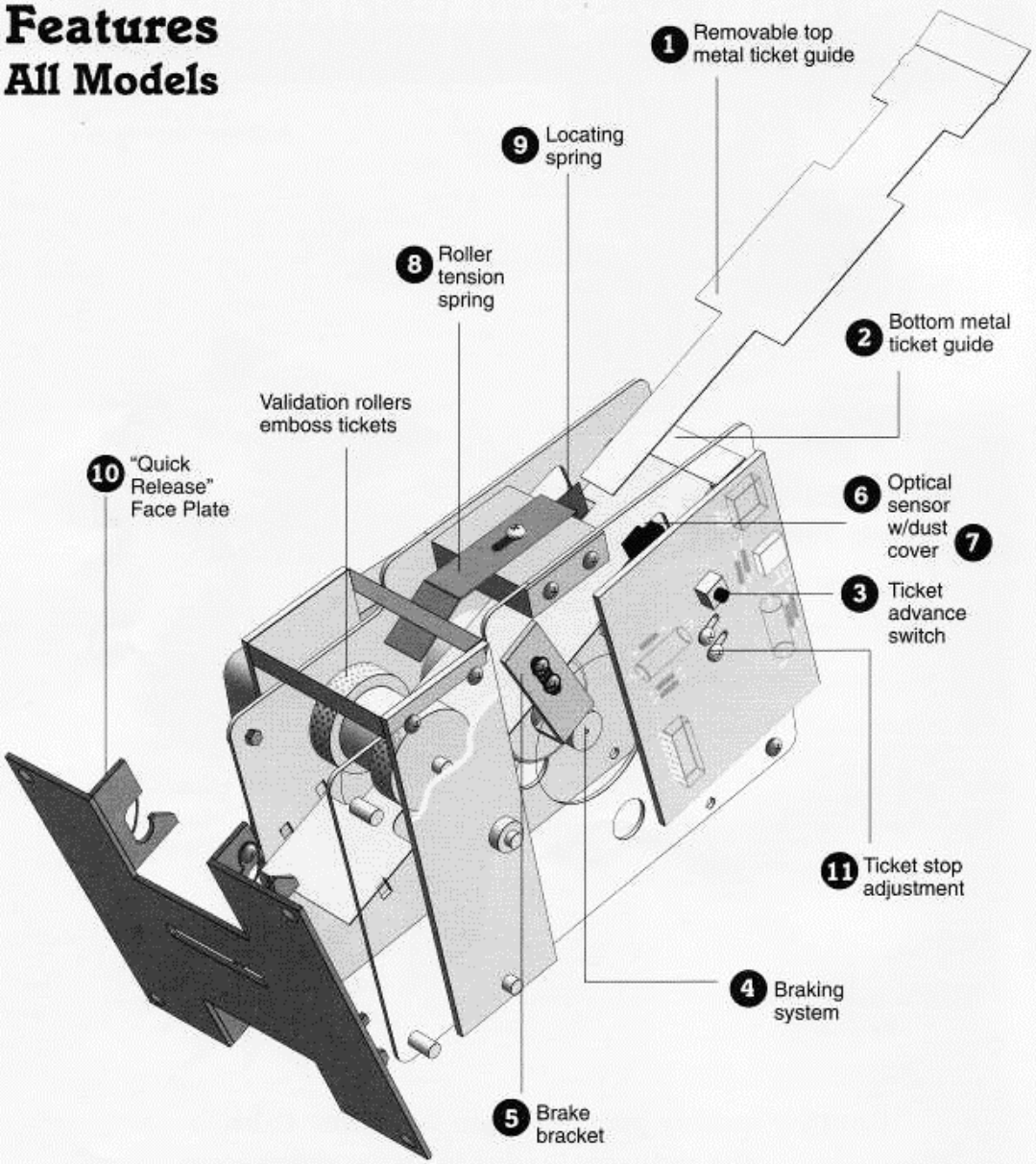
1. MOTOR AXIS X+
2. -
3. MOTOR AXIS X-

TICKET DISPENSER REFERENCE GUIDE

"Quick Release" Ticket Dispenser

Features

All Models



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Ticket Dispenser Assembly

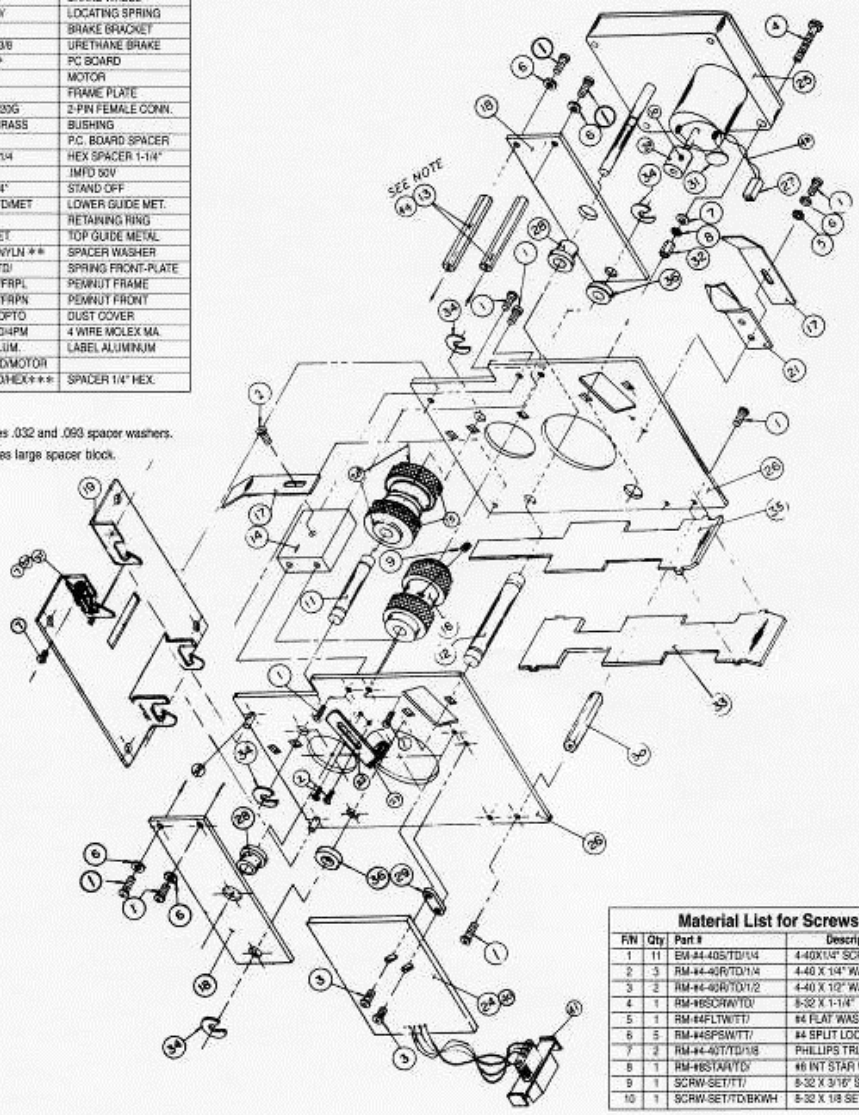
Details of Parts

F/N	Qty	Deltronic Labs P/N	Name
11	1	SHFT-IDLRLR/TD/	IDL. ROLLER SHAFT
12	1	RM-SFTMTR/TD/	MOTOR PIVOT SHAFT
13	1	SPAC PIVBLK/TD/4HOL	PIVOT BRACKET SPAC
14	1	RM-SPCPB/TD/	SPACER BLOCK
15	2	RM-RLRIDL/TD/VALD	IDLER ROLLER
16	1	RM-RLRDRV/TD/VALD	DRIVE ROLLER
17	2	SPRG-TENSN/TD/	TENSION SPRING
18	2	RM-BKTPVT/TD	MTR PIVOT BKT.
19	1	RM-PANLFT/TD/NOPM	FRONT PANEL
20	1	RM-WHLBRK/TD/	BRAKE WHEEL
21	1	SPRG-LOCAT/TD/	LOCATING SPRING
22	1	RM-BKTBRK/TD/	BRAKE BRACKET
23	1	RM-BKTTUB/TD/3/8	URETHANE BRAKE
24	1	PCBD-1275/TD/ *	PC BOARD
25	1	RM MOTOR/TD/	MOTOR
26	2	RM-PLATFR/TD	FRAME PLATE
27	1	RM-CONN2P/TE/320G	2-PIN FEMALE CONN.
28	4	BRNG-F312/TT/BRASS	BUSHING
29	1	SPAC-PCBD/TD/	P.C. BOARD SPACER
30	1	SPAC/HEX/TD/1-1/4	HEX SPACER 1-1/4"
31	1	RM .1M/TT/50V	IMFD 50V
32	1	SPAC-HEX/TD/1/4"	STAND OFF
33	1	GUID-BOTTOM/TD/MET	LOWER GUIDE MET.
34	4	RING-E25RT/TT/	RETAINING RING
35	1	GUID-TOP/TD/MET	TOP GUIDE METAL
36	2	PULY-SP212/TE/NYLN **	SPACER WASHER
37	2	SPRG FRONTP/TD/	SPRING FRONT-PLATE
38	4	RM-PEMNUT/TD/FRPL	PEMNUT FRAME
39	2	RM-PEMNUT/TD/FRPN	PEMNUT FRONT
40	1	COVR-H21A/TD/OPTO	DUST COVER
41	1	CONN MOLEX/TD/4PM	4 WIRE MOLEX MA.
42	1	RM-LABEL/TD/ALUM.	LABEL ALUMINUM
43		WIRE-RED/BLK/TD/MOTOR	
44	2	SPAC-PIVBRK/TD/HEX***	SPACER 1/4" HEX.

* Order by Model #

** Note: F/N #36 replaces .032 and .093 spacer washers.

*** Note: F/N #44 replaces large spacer block.



Material List for Screws

F/N	Qty	Part #	Description
1	11	RM-#4-40S/TD/1/4	4-40X1/4" SCREW
2	3	RM-#4-40R/TD/1/4	4-40 X 1/4" WASHER HEAD
3	2	RM-#4-40R/TD/1/2	4-40 X 1/2" WASHER HEAD
4	1	RM-#8SCRW/TD/	8-32 X 1-1/4"
5	1	RM-#4FLTW/TT/	#4 FLAT WASHER
6	5	RM-#4SPSW/TT/	#4 SPLIT LOC. WASHER
7	2	RM-#4-40T/TD/1/8	PHILLIPS TRUSSHEAD
8	1	RM-#8STAR/TD/	#8 INT STAR WASHER
9	1	SCRW-SET/TT/	8-32 X 3/16" SET SCREW
10	1	SCRW-SET/TD/BKWH	8-32 X 1/8 SET SCREW

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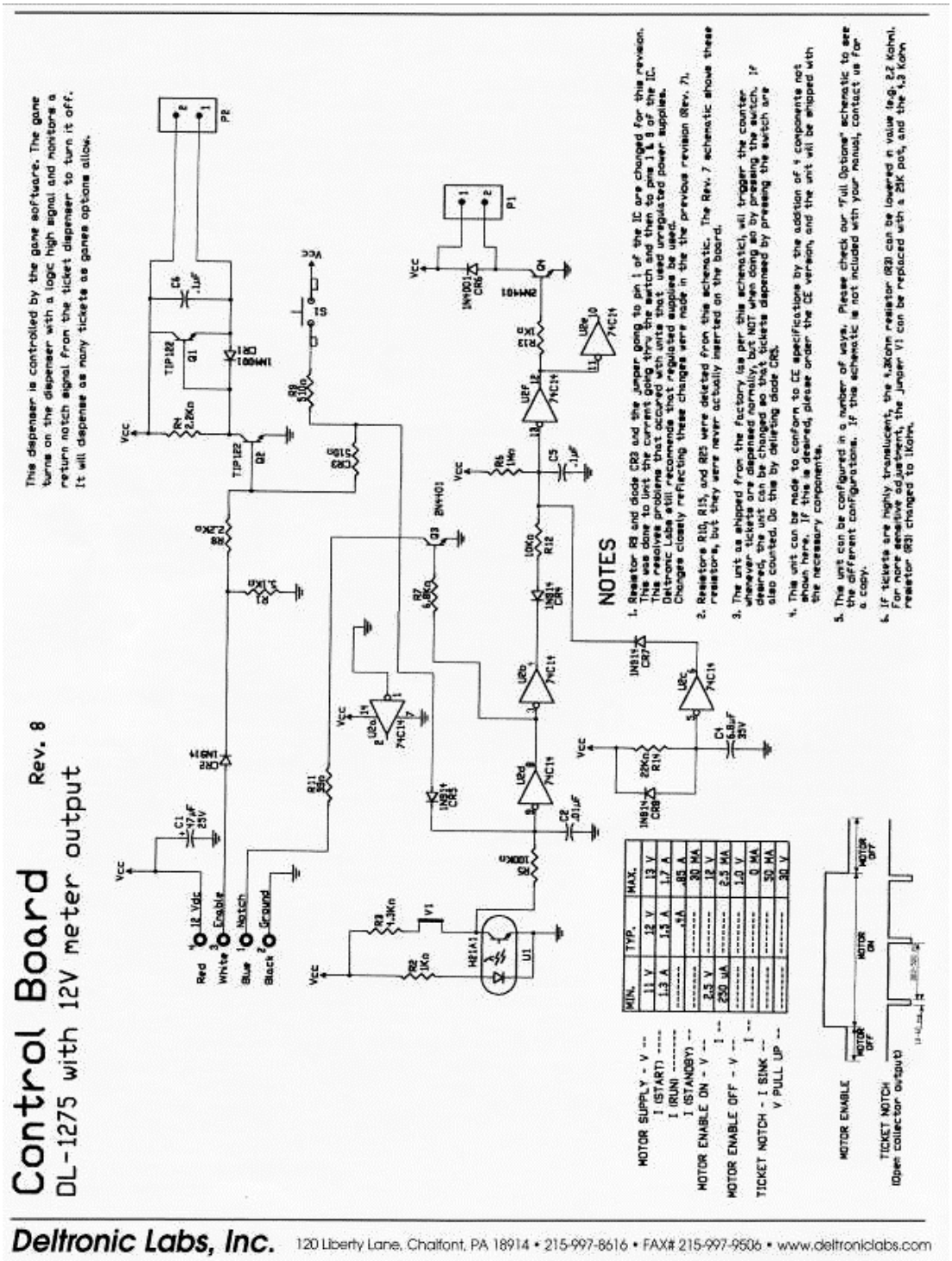
Control Board
Rev. 8
DL-1275 with 12V meter output
This dispenser is controlled by the game software. The game turns on the dispenser with a logic high signal and monitors a return notch signal from the ticket dispenser to turn it off. It will dispense as many tickets as games options allow.
NOTES
1. Resistor R3 and diode CR3 and the jumper going to pin 1 of the IC are changed for this revision. This was done to limit the current going thru the switch and then to pins 1 & 8 of the IC. This resolves problems that occured with units that used unregulated power supplies. Deltronic Labs still recommends that regulated supplies be used. Changes closely reflecting these changes were made in the previous revision (Rev. 7).
2. Resistors R10, R15, and R23 were deleted from the schematic. The Rev. 7 schematic shows these resistors, but they were never actually inserted on the board.
3. The unit as shipped from the factory (as per the schematic) will trigger the counter whenever tickets are dispensed normally, but NOT when doing so by pressing the switch. If desired, the unit can be changed so that tickets dispensed by pressing the switch are also counted. Do this by deleting diode CR5.
4. This unit can be made to conform to CE specifications by the addition of 4 components not shown here. If this is desired, please order the CE version, and the unit will be shipped with the necessary components.
5. The unit can be configured in a number of ways. Please check our "Full Options" schematic to see the different configurations. If this schematic is not included with your manual, contact us for a copy.
6. If tickets are highly translucent, the 1.2Kohm resistor (R3) can be lowered in value (e.g. 2.2 Kohm). For more sensitive adjustment, the Jumper V1 can be replaced with a 25K pot, and the 1.2 Kohm resistor (R3) changed to 1Kohm.
MOTOR SUPPLY - V --
I (START) ----
I (RUN) -------
I (STANDBY) --
MOTOR ENABLE ON - V --
I --
MOTOR ENABLE OFF - V --
I --
TICKET NOTCH - I SINK --
V PULL UP --
MOTOR ENABLE
TICKET NOTCH
(Open collector output)
Red
White
Blue
Black
12 Vdc
Enable
Notch
Ground
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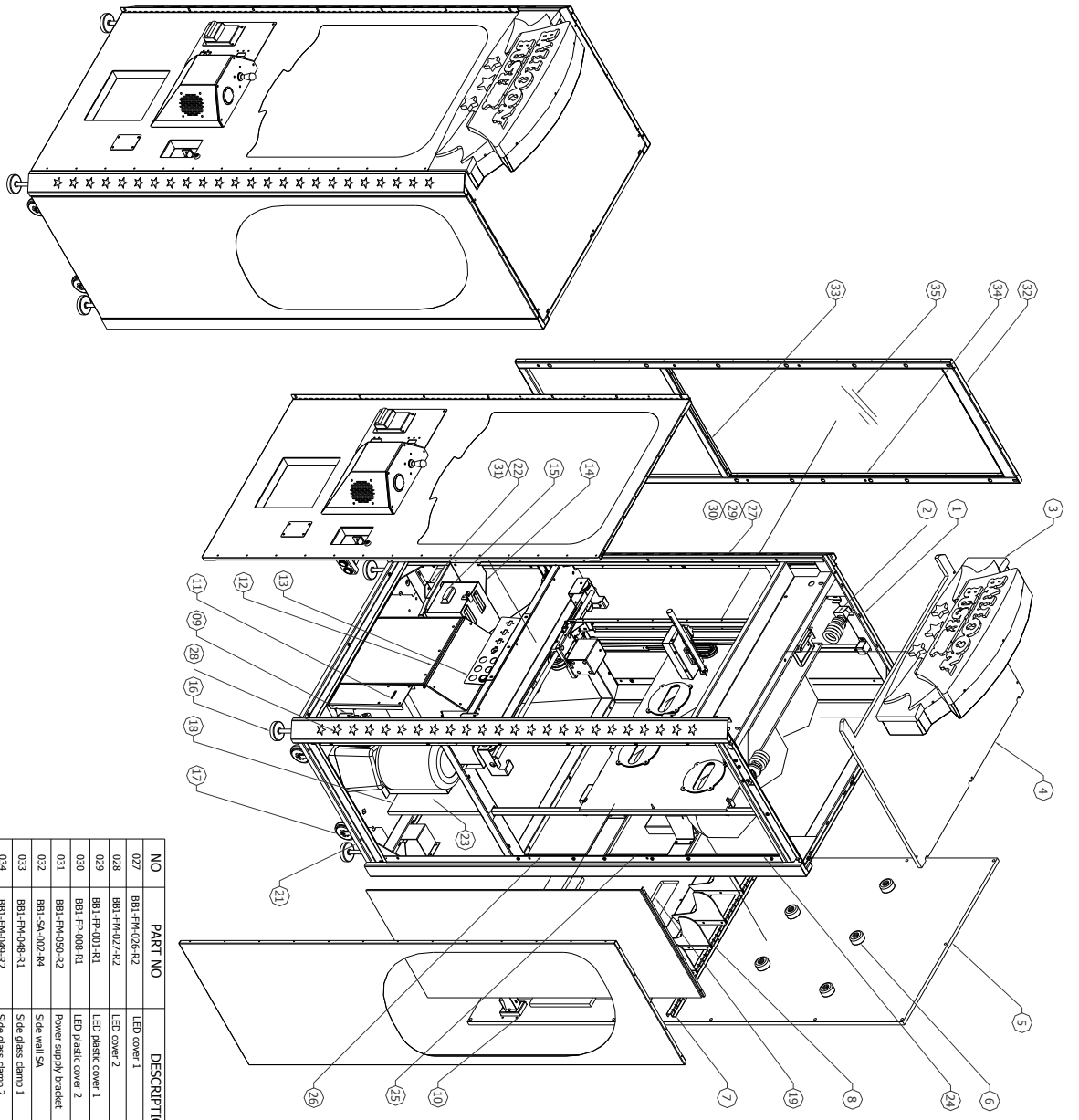
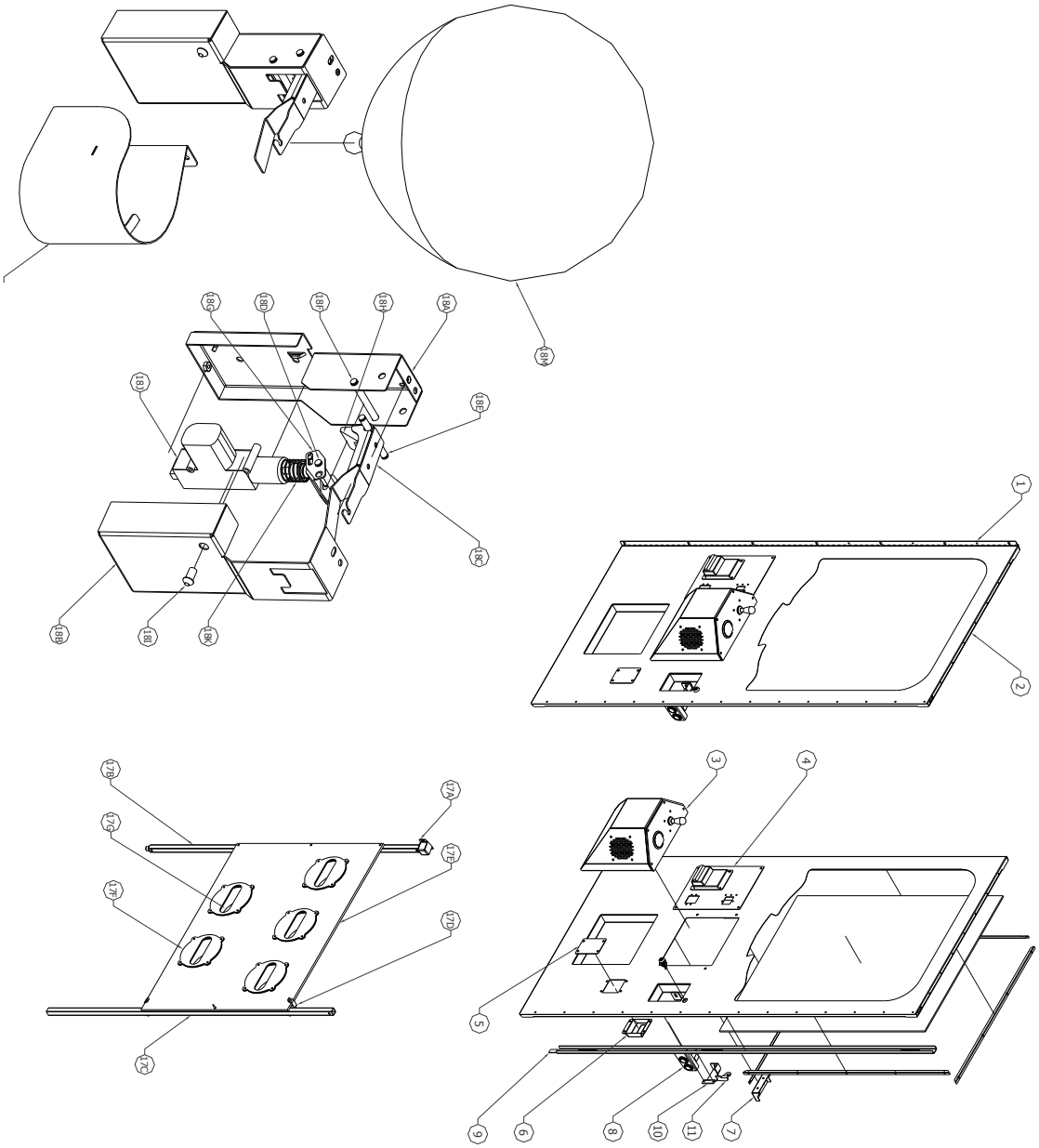
BALLOON BUSTER 3D EXPLODED VIEW



NO	PART NO	DESCRIPTION	QTY
001	BB1-SA-001-R4	Frame SA	1
002	BB1-Assy-001-R0	Lamp assy	1
002A	BB1-FM-030-R1	Neon bracket 2	2
ITEM			
02B	EP 0425	Fitting lamp	2
02C	EP 0280	Tornado daylight	2
003	BB1-Assy-002-R0	Header Assy	1
03A	BB1-SA-016-R1	Header bracket SA	1
ITEM			
03B	BB1-FP-009-R1	Header	1
03C	EA 0593	LED strip	1
004	BB1-FW-003-R2	Top wall	1
005	BB1-FW-002-R3	Back wall	1
006	BB1-FP-035-R0	Balloon bumper	5
007	BB1-FM-077-R1	Divider bracket 1	2
008	BB1-Assy-003-R0	Divider assy	4
ITEM			
08A	BB1-FM-079-R1	Divider bracket 3	4
08B	BB1-FP-007-R1	Divider	4
009	BB1-FM-099-R2	Front door hook	1
010	BB1-Assy-004-R0	DB box assy	1
10A	BB1-FM-042-R0	DB box front	1
10B	BB1-FM-043-R0	DB box housing	1
10C	EA 1356	Binding post	1
10D	BB1-FP-034-R0	DB box cover	1
011	BB1-Assy-005-R0	Ticket assy	1
11A	BB1-FM-125-R1	tickett realeser bracket	1
11B	BB1-M-002-R0	Ticket hinge	1
ITEM			
11C	-	Ticket releaser	1
11D	BB1-FM-083-R0	Ticket holder	1
012	BB1-Assy-006-R0	Prize box assy	1
12A	BB1-SA-003-R4	Prize chute SA	1
12B	BB1-FW-051-R5	Prize box	1
ITEM			
12C	BB1-SA-012-R1	Prize door SA	1
12D	BB1-FP-019-R3	Prize door	1
013	BB1-Assy-007-R0	Counter bracket assy	1
13A	BB1-SA-015-R2	Counter bracket SA	1
13B	EA0519	Switch small round red button	2
13C	EA0520	Switch small round green button	2
13D	EA0522	Switch small round yellow button	1
13E	EA1252	Coin counter 12V rear mounting	3
13F	EE0689 & EP0602	Potensio carbon & knop volume	1
13G	EA0521	Switch small round white button	1
014	BB1-Assy-008-R0	Cash box set	1
015	BB1-FM-044-R4	Cash box lifter	1
016	HM0002	Foot mounting	4
017	HM 0092	Castor 3inch swivel	4
018	BB1-FW-005-R4	PCB base	1
019	BB1-Assy-009-R0	Back door assy	1
19A	BB1-FW-004-R2	Back door	1
ITEM			
19B	HM 0004	Lock angle	1
19C	BB1-FM-035-R0	Back door perforated	2
19D	BB1-FM-031-R0	Back door cam	1
020	BB1-FW-001-R2	Base	1
021	BB1-FM-028-R0	Mounting bracket	4
022	BB1-FM-093-R1	Connector bracket 2	1
023	BB1-FM-094-R1	Connector bracket 3	1
024	BB1-FM-023-R2	Back cover 1	2
025	BB1-FM-024-R1	Back cover 2	2
026	BB1-FM-025-R1	Back cover 3	2

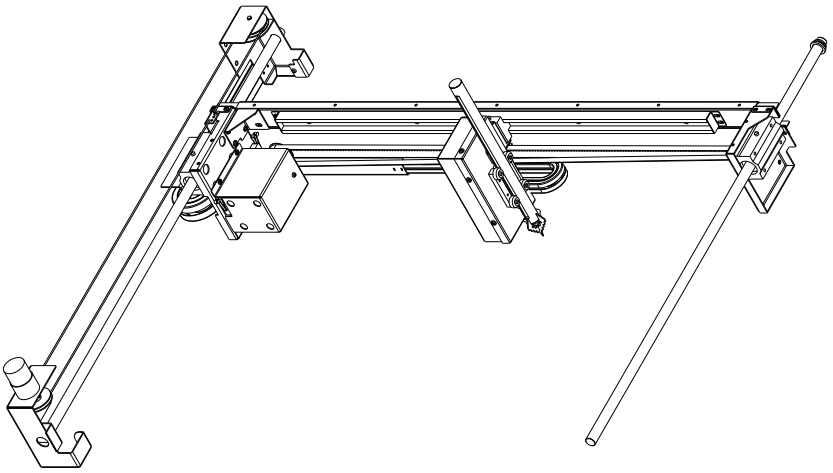
NO	PART NO	DESCRIPTION	QTY
027	BB1-FM-026-R2	LED cover 1	2
028	BB1-FM-027-R2	LED cover 2	2
029	BB1-FP-001-R1	LED plastic cover 1	4
030	BB1-FP-008-R1	LED plastic cover 2	4
031	BB1-FM-050-R2	Power supply bracket	1
032	BB1-SA-002-R4	Side wall SA	2
033	BB1-FM-048-R1	Side glass clamp 1	4
034	BB1-FM-049-R2	Side glass clamp 2	4
035	BB1-FG-002-R2	Side wall glass	2

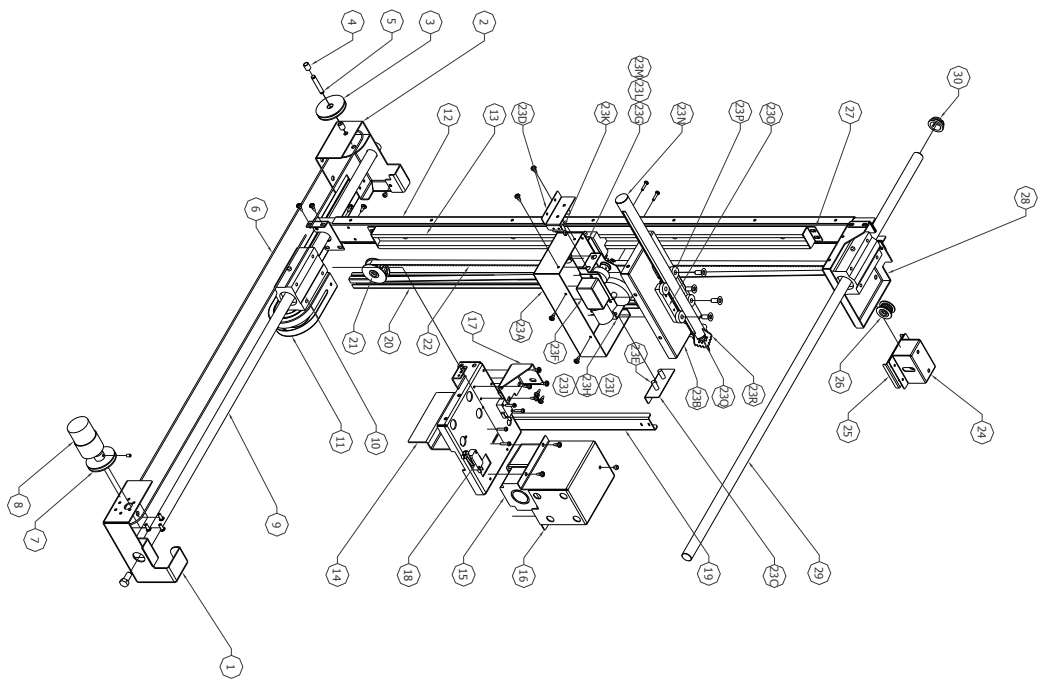
BALLOON BUSTER 3D EXPLODED VIEW 1



NO	PART NO	DESCRIPTION	QTY
01	BB1-M-001-R2	Front door hinge	1
02	BB1-SA-011-R5	Front door SA	1
03	BB1-Assy-010-R0	Control panel assy	1
03A	BB1-FM-040-R1	Control panel plate	1
03B	BB1-FP-010-R1	Joystick base	1
03C	BB1-FW-007-R0	Speaker base	2
03D	EA 1206	Speaker	2
03E	-	Push button red - medium	1
03F	EA 0591A	Joystick	1
03G	BA 2601	Credit display	1
04	BB1-Assy-011-R0	Coin & DBA assy	1
04A	BB1-FM-041-R0	Coin & DBA bracket	1
04B	BB1-FM-057-R0	DBA cover	1
04C	-	Dollar bill acceptor	1
04D	HM 0014	Coin mechanic	1
05	BB1-FM-068-R0	Ticket cover	1
06	BB1-FM-124-R0	Ticket releaser chute	1
07	BB1-FM-061-R1	Connector bracket	1
08	BB1-Assy-012-R0	Service bracket assy	1
08A	BB1-FM-081-R2	Lock cam cover	1
08B	BB1-FM-057-R0	DBA cover	1
08C	EA0519	Switch small round red button	1
08D	EA0520	Switch small round green button	1
09	BB1-FM-095-R2	Hook bar	1
10	BB1-FM-096-R0	Handle	1
11	BB1-FM-098-R0	Front door cam	1
12	BB1-FM-136-R0	Ground connector	1
13	HM 0004	Lock angle	1
14	BB1-FM-046-R1	Front glass clamp 1	2
15	BB1-FM-047-R3	Front glass clamp 2	2
16	BB1-FG-001-R3	Front door glass	1
017	BB1-Assy-013-R0	Balloon cover assy	1
17A	BB1-FM-055-R1	BCS guide upper L	1
17B	BB1-FM-06A-R2	Balloon cover support 3	1
17C	BB1-SA-005-R4	Balloon cover support R SA	1
17D	BB1-FM-089-R2	Balloon cover lock	2
17E	BB1-FP-005-R4	Balloon cover	1
17F	BB1-FP-029-R3	Target plate 3	5
17G	BB1-FP-006-R1	Balloon guide	5
018	BB1-Assy-014-R0	Prize holder	5
18A	BB1-FM-106-R2	Balloon guide bracket	5
18B	BB1-FM-107-R2	Balloon guide cover	5
18C	BB1-SA-105-R0	Prize holder SA	5
18D	BB1-FM-108-R0	Balloon holder shaft 1	5
18E	BB1-FM-109-R0	Balloon holder shaft 2	10
18F	BB1-FM-110-R0	Balloon holder shaft 3	5
18G	BB1-FM-104-R2	Balloon clamp stopper	5
18H	BB1-FP-027-R0	Balloon holder stopper	5
18I	EA 0592	Led	5
18J	-	Motor clamp	5
18K	-	Coil spring	5
18L	BB1-SA-103-R1	Prize plate and SA	5
18M	CN 1000	Balloon	5

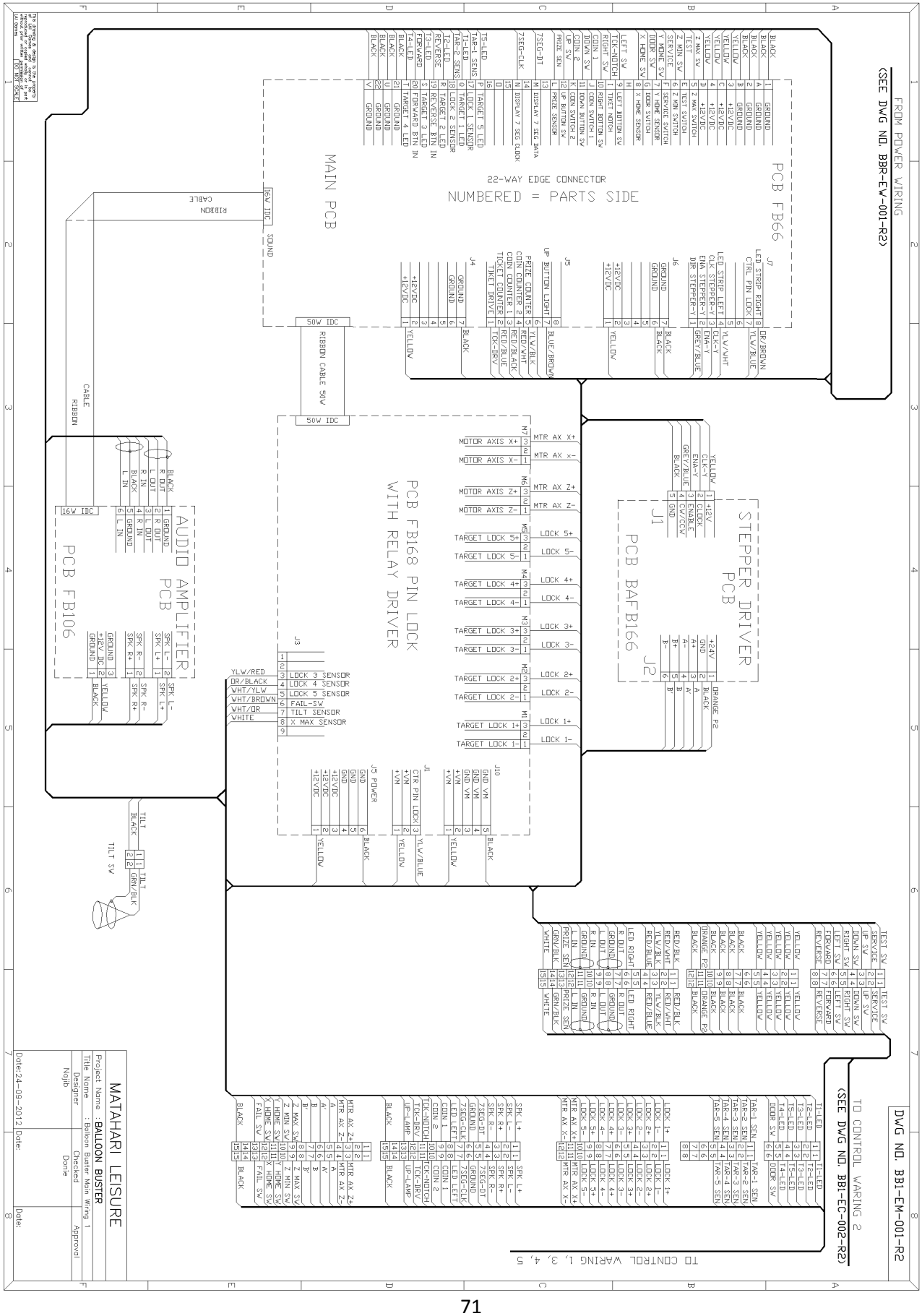
BALLOON BUSTER 3D EXPLODED VIEW 2



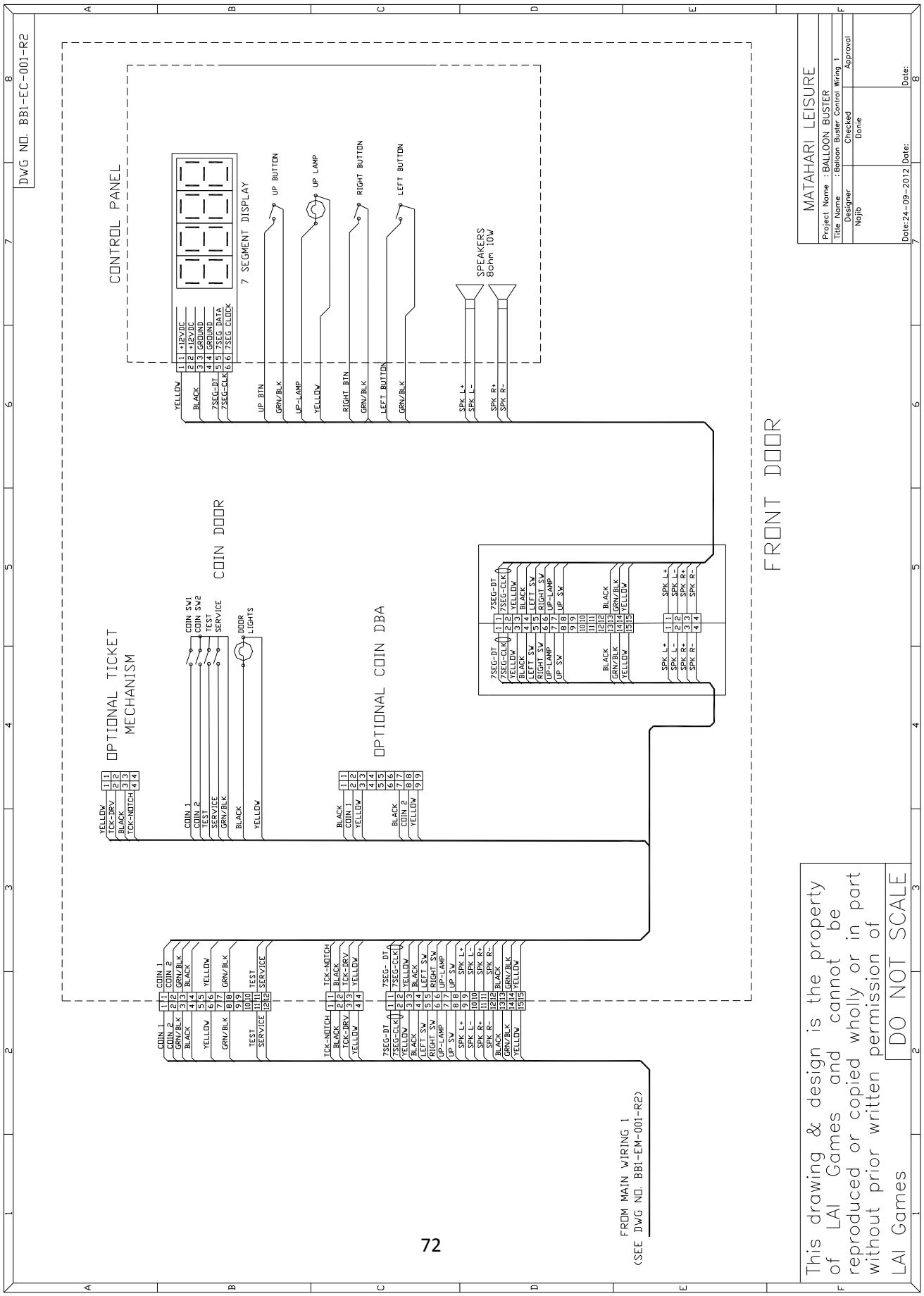


NO	PART NO	DESCRIPTION	QTY
01	BB1-SA-111-R1	Lower R bracket 2	1
02	BB1-SA-112-R1	Lower L bracket 2	1
03	HM 4119	Left pulley	1
04	BB1-FM-100-R0	Pulley spacer	2
05	BB1-FM-101-R0	Pulley shaft	1
06	-	String & spring	1
07	HM 4120	Right pulley	1
08	HM 4117	Horizontal motor	1
09	BB1-FM-054-R0	Horizontal shaft lower	1
10	-	Linear block bushing	2
11	-	Horizontal cable track	1
12	BB1-SA-137-R0	Slider bar guide SA	1
13	HM 4104	Vertical block bushing & shaft	1
14	BB1-SA-113-R0	Horizontal bushing base SA	1
15	HM 4105	Vertical motor	1
16	BB1-FM-114-R1	Motor cover	1
17	BB1-FM-120-R1	Vertical rail support	1
18	EA 0413	Roller switch	3
19	BB1-FM-121-R1	Cable housing support 2	1
20	-	Vertical cable track	1
21	-	Timing pulley big	1
22	HM 4106	Timing belt	1
23	BB1-Assy-015-R0	Dart box assy	1
23A	BB1-FM-127-R0	Dart box lower	1
23B	BB1-SA-128-R0	Upper dart box SA	1
23C	BB1-FM-138-R0	Dart mechanism 1a	1
23D	BB1-FM-139-R0	Dart mechanism 1b	1
23E	HM 4116	Spring guide	4
23F	HM 4107	Dart motor	1
23G	BB1-FM-129-R1	Dart box holder	1
23H	BB1-FM-140-R1	Dart mechanism 2	1
23I	HM 4127	Nylon gear big & shaft	1
23J	HM 4128	Nylon gear small & bearing	1
23K	EA 0412	Microswitch	3
23L	BB1-FM-130-R0	Belt holder 1	1
23M	BB1-FM-131-R0	Belt holder 2	1
23N	-	Dart & rack gear	1
23O	HM 4114	Bearing base	2
23P	HM 4112	Bearing 626zz	4
23Q	BB1-FP-030-R0	Needle guide	1
23R	BB1-SA-118-R0	Needle plate	1
24	BB1-FM-134-R0	Tensioner 1	1
25	BB1-SA-133-R0	Tensioner 2	1
26	-	Timing pulley small & bearing	1
27	BB1-FM-135-R0	Vertical bushing stopper	2
28	BB1-SA-132-R0	Top bushing base SA	1
29	BB1-FM-053-R1	Horizontal shaft upper	1
30	BB1-FP-033-R1	Upper shaft bushing	1

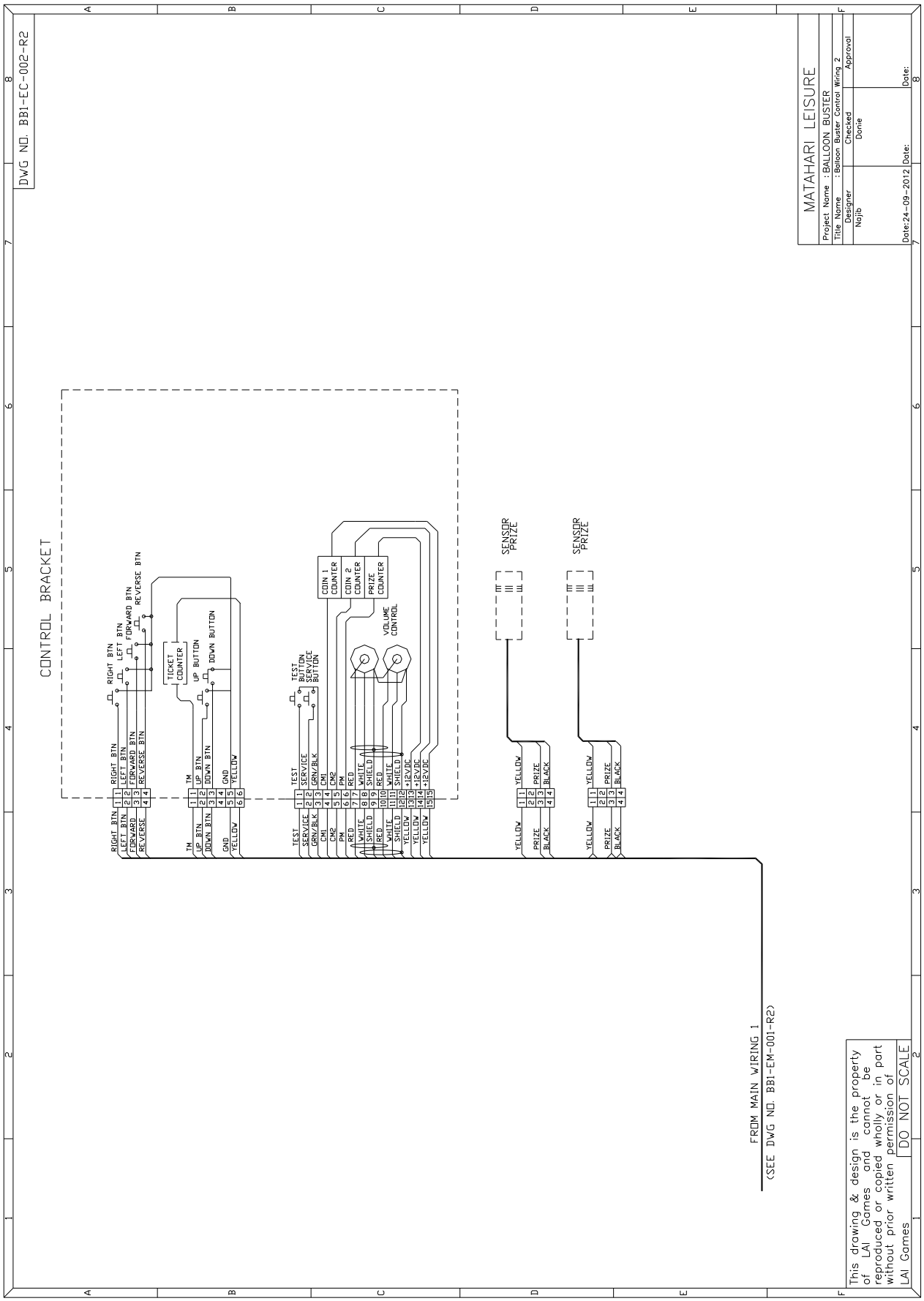
BALLOON BUSTER MAIN WIRING



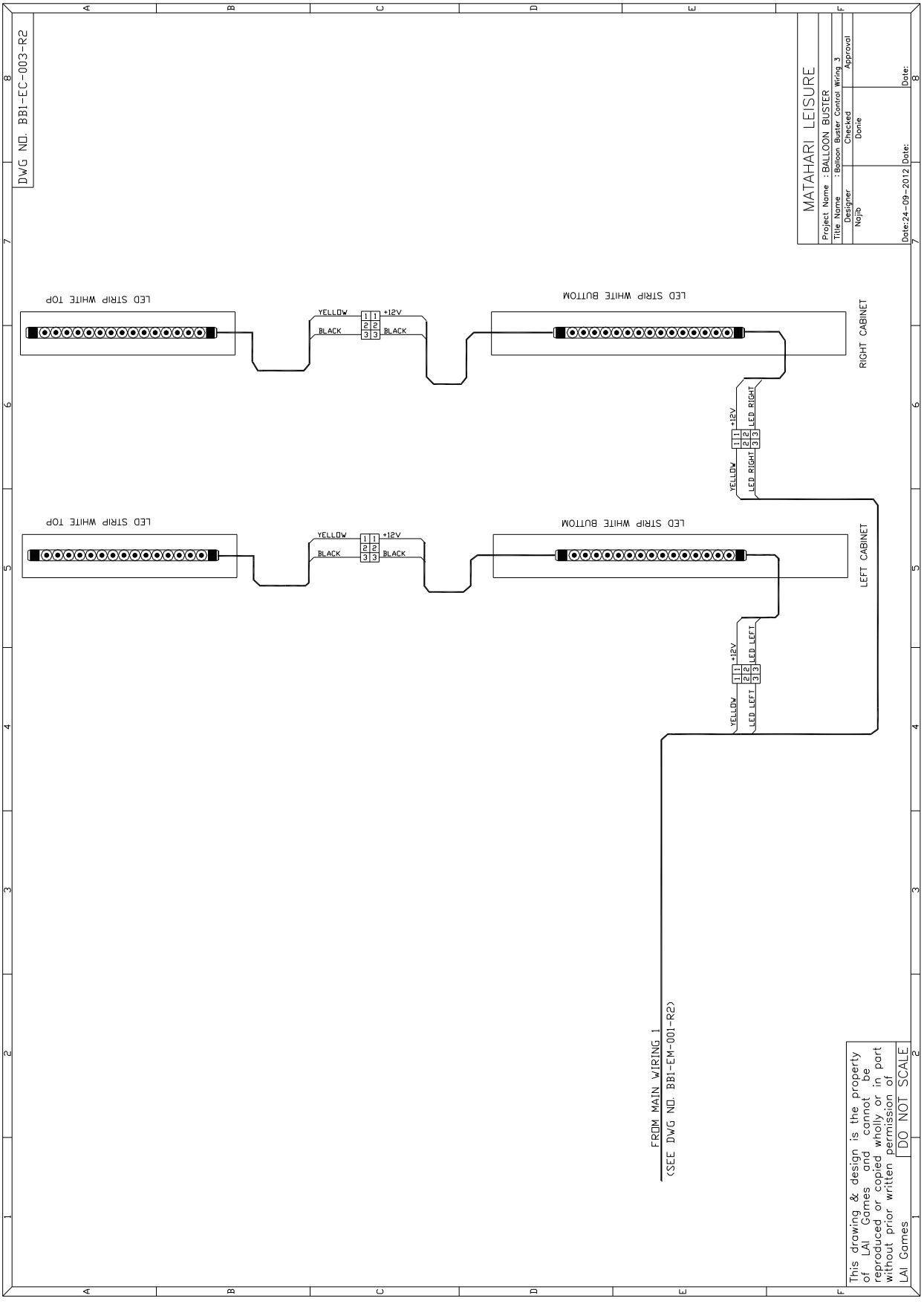
BALLOON BUSTER CONTROL WIRING



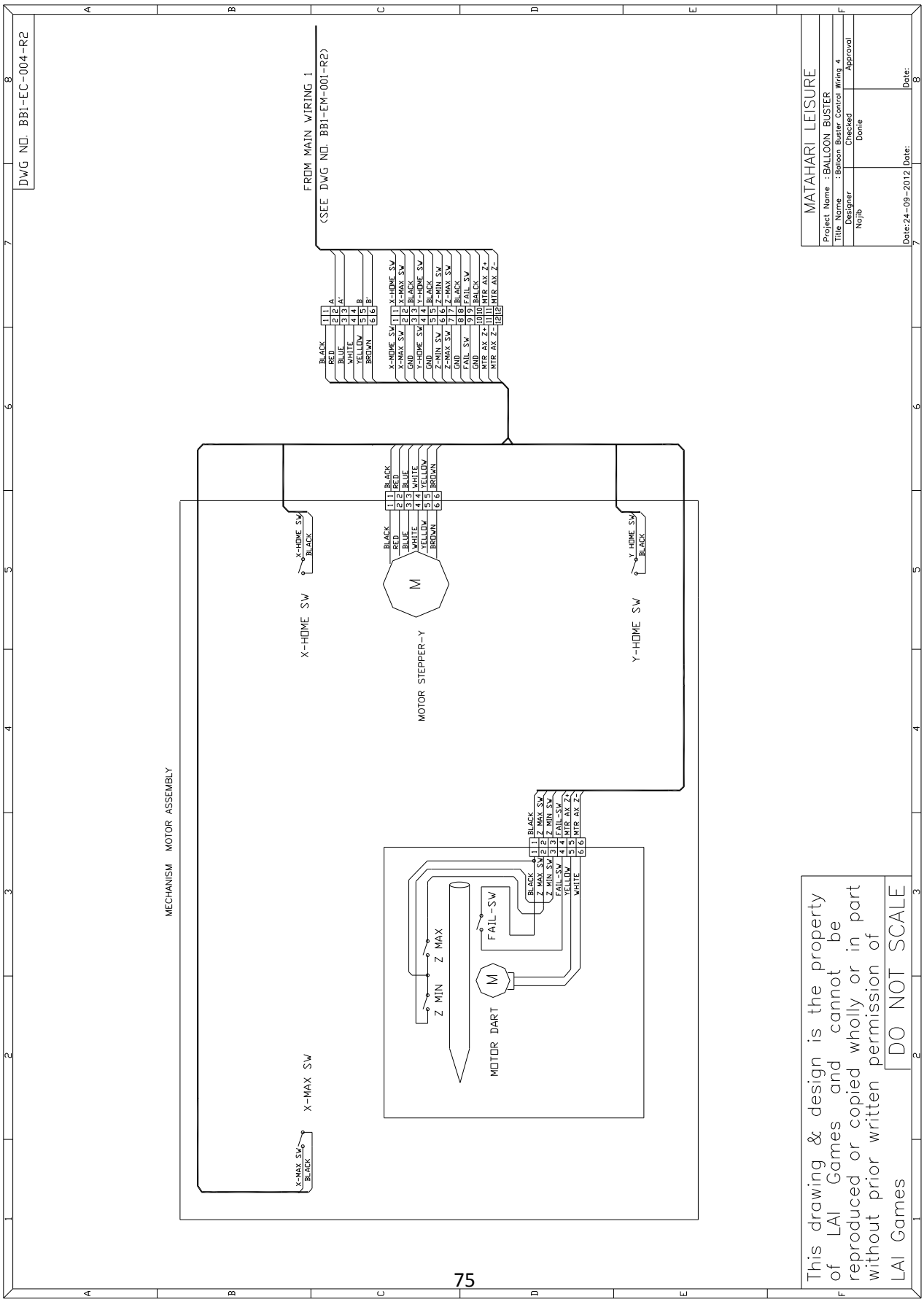
BALLOON BUSTER CONTROL WIRING 1



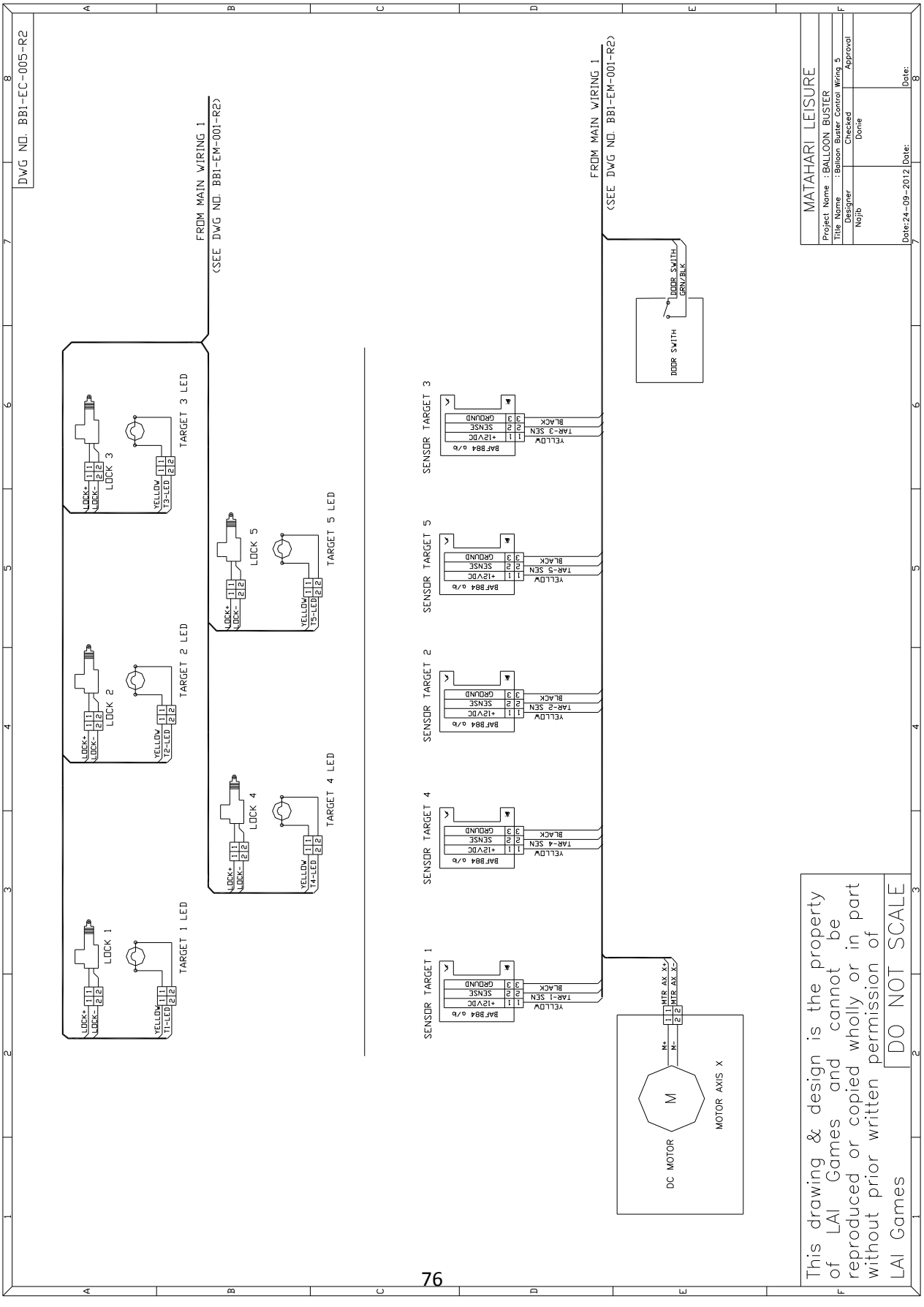
BALLOON BUSTER CONTROL WIRING 2



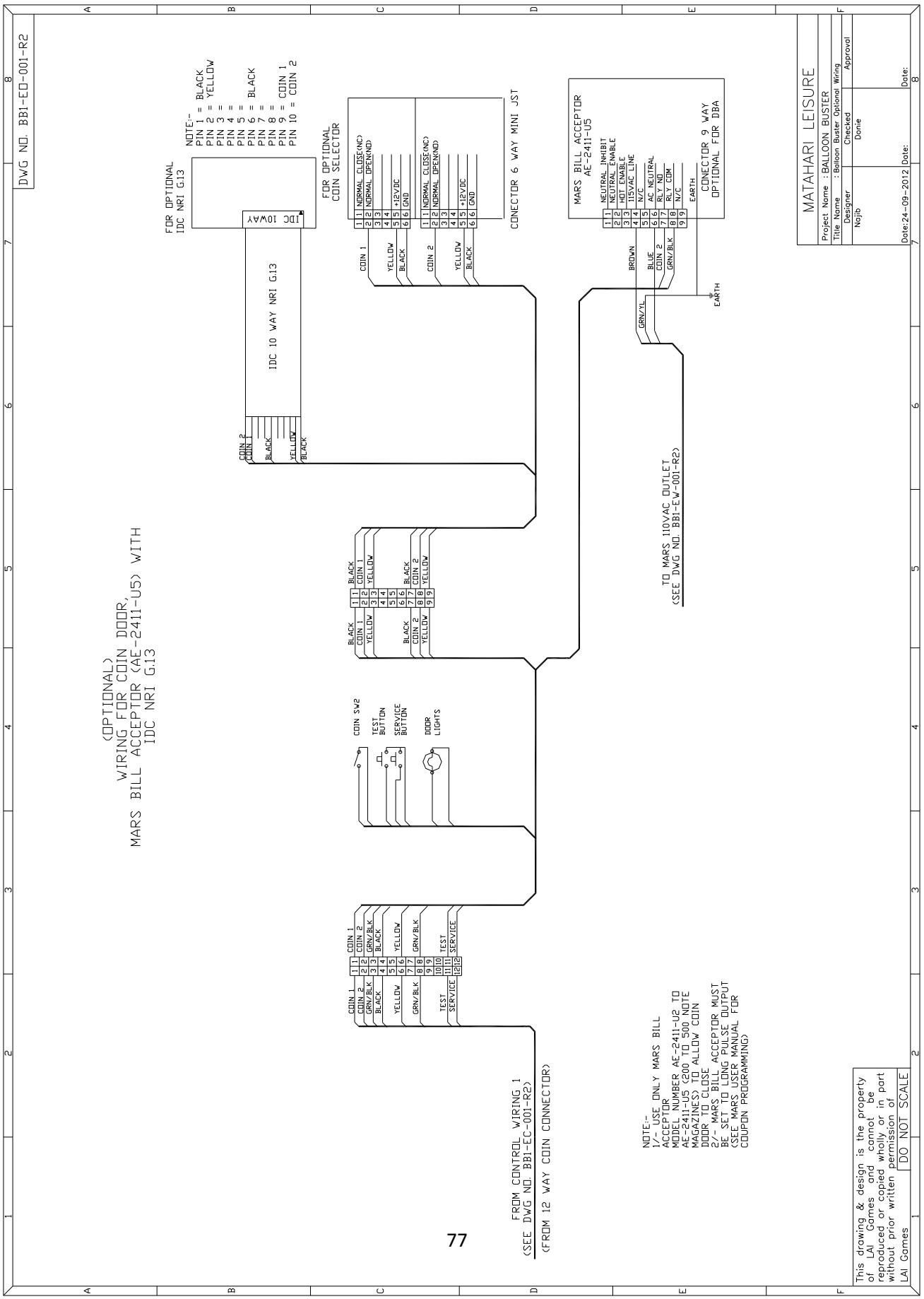
BALLOON BUSTER CONTROL WIRING 3



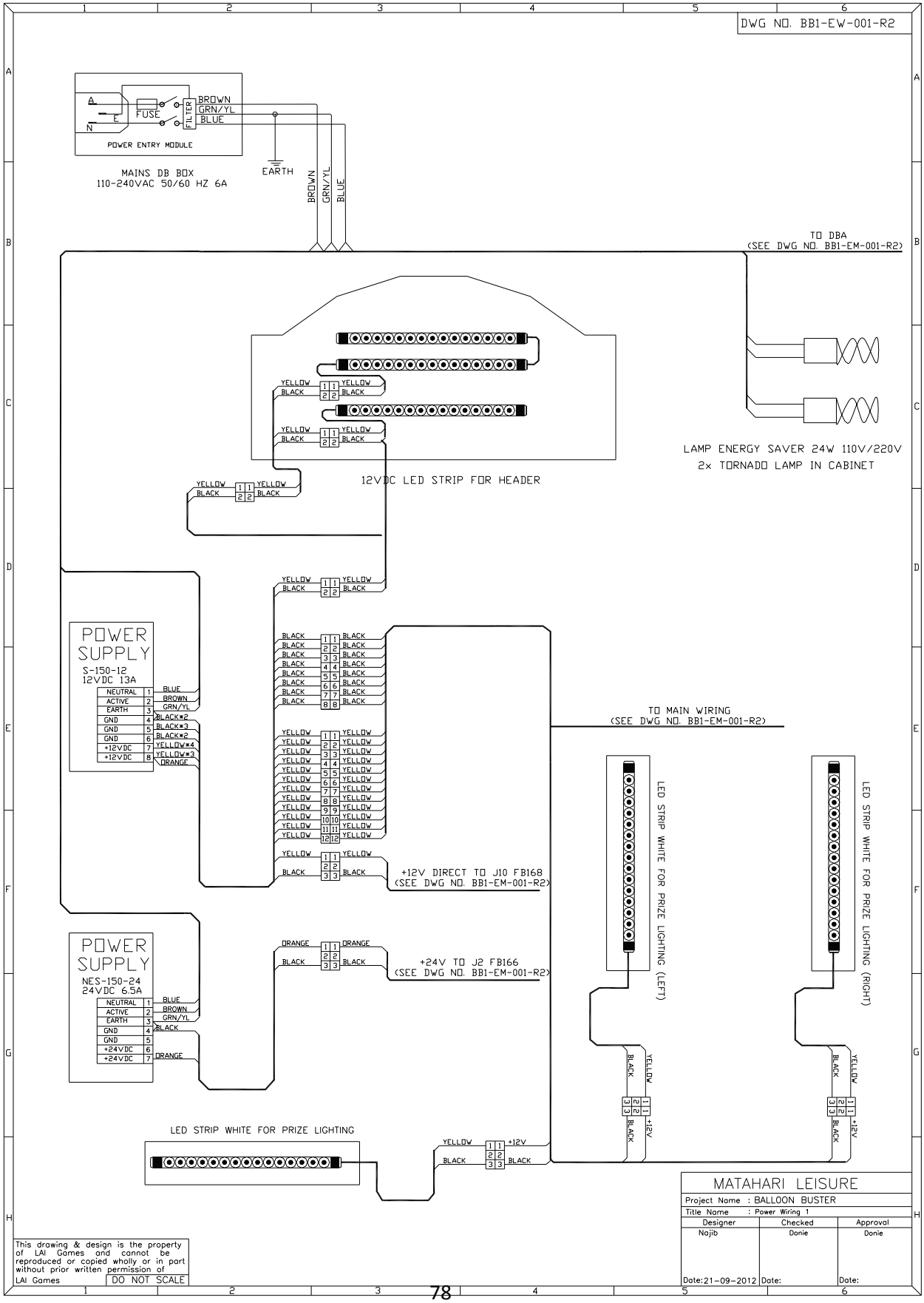
BALLOON BUSTER CONTROL WIRING 4



BALLOON BUSTER OPTIONAL WIRING



BALLOON BUSTER POWER WIRING



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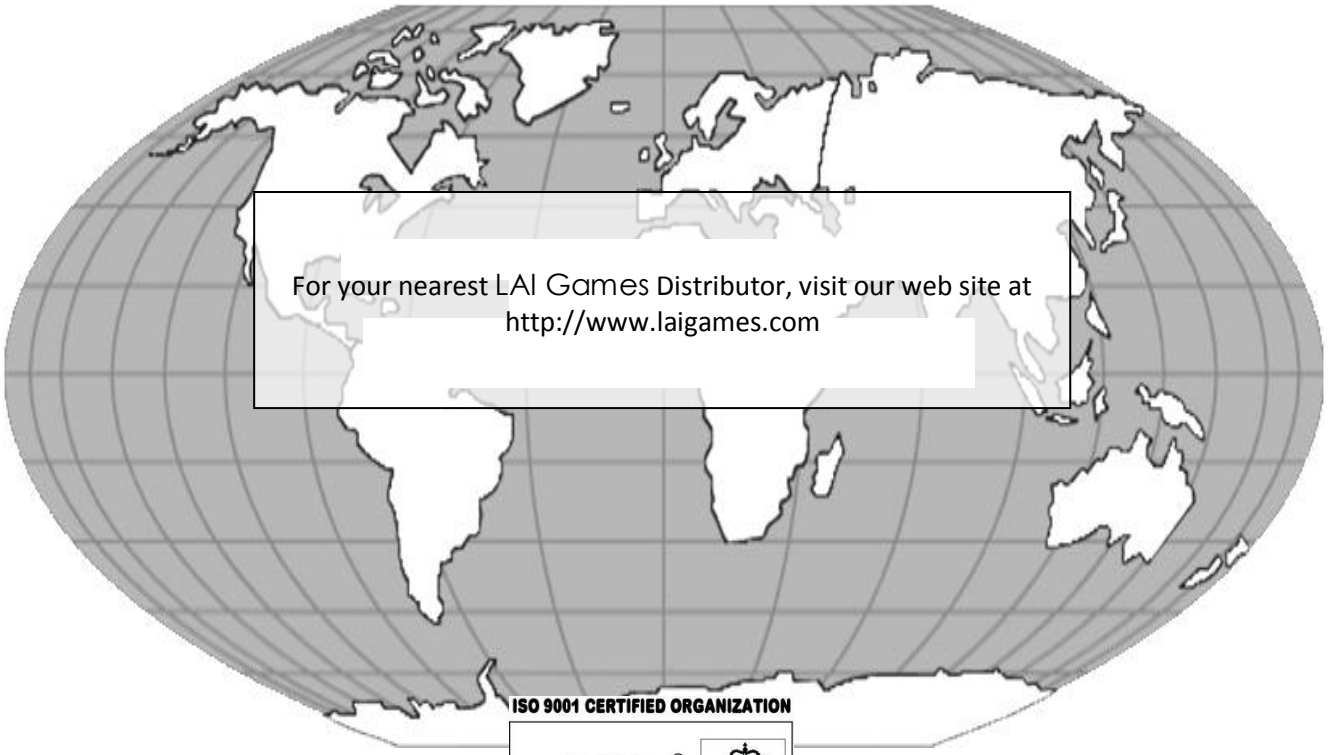

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