



PARTS: (561) 253-3311

888-538-1000  
TEL (561) 588-5200  
FAX (561) 493-2999  
SERVICE: (561) 253-3310

51 Hypoluxo Rd.  
Hypoluxo, FL 33462-4501  
www.benchmarkgames.com

# TICKET STATION



PLEASE READ FIRST BEFORE  
PLUGGING IN MACHINE  
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054MAN001 E



## Table of Contents

<b>General Operation</b>	<b>5</b>
<b>Air Blast Cleaning System</b>	<b>5</b>
<b>Setup</b>	<b>4</b>
<b>Changing Ticket Bags</b>	<b>5</b>
<b>Loading Printer Paper</b>	<b>6</b>
<b>Tower Light Status</b>	<b>7</b>
<b>Ticket Taker General</b>	<b>7</b>
Ticket Taker Overview	7-8
Ticket Taker Operation	9
Clearing a Ticket Jam	9
<b>Troubleshooting Guide</b>	<b>10-13</b>
<b>Programming</b>	<b>14-17</b>
<b>Error Codes</b>	<b>17</b>
<b>Parts List</b>	<b>19</b>
<b>Schematics</b>	<b>20-21</b>

## **Built for Reliability**

The Benchmark Ticket Station is a compact ticket cash in machine that was engineered for reliability. Here are some of the key features you should be aware of:

### **1. Self Cleaning**

- All of the opto sensors and barcode scanners are automatically cleaned with an air blast regularly

### **2. Independent Systems**

- Each door contains a ticket taker system independent from one another. If there is a problem with one of the systems, the remaining systems will still operate

### **3. Redundant Power Supplies**

- There are two power supplies in each ticket station.

### **4. Status Tower Light**

- The ticket station features a tower light that will signal a printer problem (out of paper etc.), a ticket taker problem, and will let you know when the ticket bags are full

### **5. Low Dust Cutting**

- The cutters in the Ticket Station are designed to cut the tickets like a pair of scissors for low dust creation, contributing to clean optos and barcode scanners.

## **1 to 4 Stations Field Expandable**

Standard unit is complete and ready to add another station at any time. Just bolt the door on and plug it in.

### **Important Note:**

Each of the access doors uses a power lockout switch. When the door is open, the ticket taker will not operate unless you manually pull the switch to turn it on. If you must activate the power while the door is open, use caution around the moving parts and belts in the ticket taker.

**For more information and service details, please visit [www.benchmarkgames.com](http://www.benchmarkgames.com).**

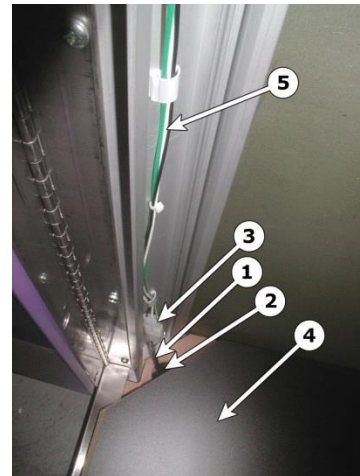
# Setup

## 1. Install Power Cord

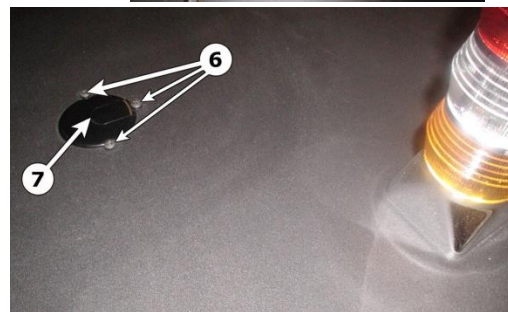
The power cord can be run down and out the bottom of the machine or up and out the top of the machine.

- To run the cord out the bottom of the machine:
  1. Feed the power cord① through the lower power cord hole② in the bottom of the machine.
  2. Connect power cord to the power connector③ at the main harness.  
-Be sure to secure the wires tight along the inside corner away from the scale floor④

View inside looking down



3. Plug power cord into a power receptacle. If a floor receptacle is used, position machine over the top of it.
- To run the cord up and out the top of the machine:

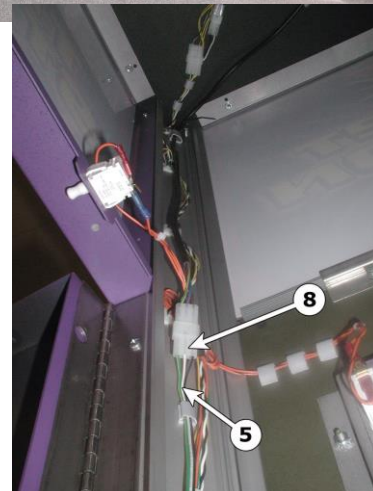


1. Detach the power wires⑤ from the wire clips on the inside left corner of machine
2. Run power wires up inside corner attaching into wire clips
3. Remove wire plate screws⑥ and wire plate⑦
4. Connect power cord to power connector⑧ on the main harness.
5. Run the power cord up and out the top of the machine securing with wire clips.
6. Replace wire plate and reattach with screws.



2. Install ticket bags (see “Changing Ticket Bags” section of this manual).
3. Program barcode, machine number, etc. as desired (see “Programming section of this manual”).

View inside looking up



## General Operation

1. Insert tickets into the ticket taker using the easy load ticket ramp①. The LED display② will indicate the number of tickets counted and the Print Receipt Button③ will flash.
2. When all of the tickets have been fed into the machine, press the Print receipt button and wait for the printer to completely print the receipt. The receipt will feed to the front of the printer bezel④ and stop.
3. Pull the receipt straight out.



## Air Blast Cleaning System

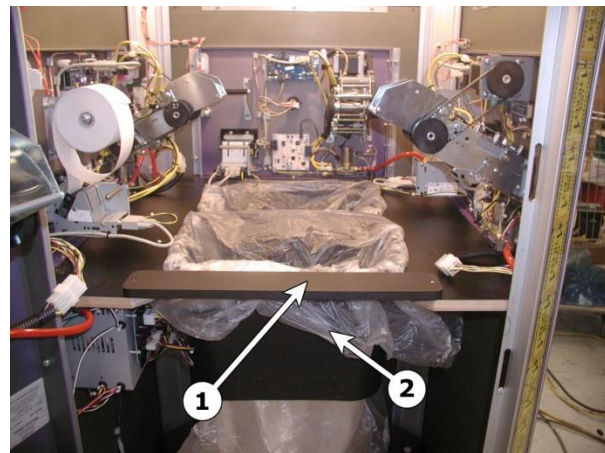
The Air blast cleaning system in the Ticket Station is comprised of an air pump, a relay, the main air hose plumbing, one air valve per ticket taker, and the local air hose plumbing that is distributed from a manifold after the air valve.

The cleaning cycle starts whenever any one of the ticket takers has taken 1,000-1,100 tickets. It restarts every 1,000-1,100 tickets thereafter.

At the beginning of the cleaning cycle, the pump runs for about 10 seconds to build pressure in the system. The air solenoid corresponding to the ticket taker that has taken the 1,000-1,100 tickets is then activated, releasing an air blast over the barcode scanners and opto sensors.

## Changing Ticket Bags

1. Open front door.
2. Remove basket containment rail①.
3. Remove front ticket basket②, pull ticket bag through the bottom of the basket, and remove ticket bag.
4. Repeat step 3 for the rear ticket bag.
5. Replace ticket bags and basket containment rail.



## Loading Printer Paper

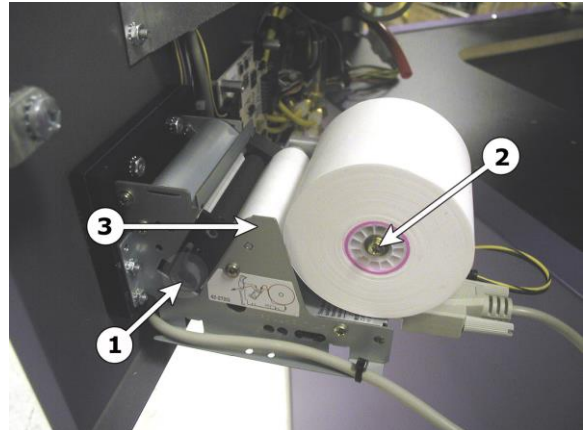


The printer will take different paper roll sizes. Small paper rolls (usually 7/16" diameter core) should be loaded on the small spindle② located on the printer assembly. The largest paper roll that can be used on the small spindle is 2-3/4" diameter. Large paper rolls (1 1/16" diameter core) are loaded on the large spindle④ located above the printer assembly on the door. The largest paper roll that can be used on the large spindle is 6".

**Note:** *The printer will only print on one side of the paper. Pay attention to the orientation of the paper roll when installing.*

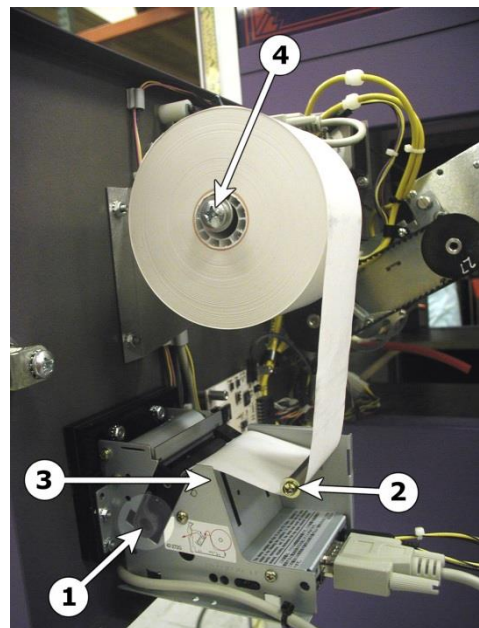
### Loading Small Rolls

1. Turn the roller release handle① counter clockwise ¼ turn so that the paper will be allowed to feed into the printer.
2. Load the paper onto the small spindle② so that the free end is fed from the bottom of the roll and over the guide rail③.
3. Feed paper as shown in the picture on the side of the printer.
4. Turn the roller release handle① clockwise ¼ turn into the ready position. The printer will automatically feed.
5. Tear excess from bezel.



### Loading Large Rolls

1. Turn the roller release handle① counter clockwise ¼ turn so that the paper will be allowed to feed into the printer.
2. Load the paper onto the large spindle④ with the free end of the paper facing down and away from the door.
3. Feed the paper under the small spindle②, over the ticket guide rail③ and into the printer.
4. Turn the roller release handle① clockwise ¼ turn into the ready position. The printer will automatically feed.
5. Tear excess from bezel.



## Tower Light Status

The tower light located on the top of the Ticket Station will let you know from across the room if something in the machine needs attention. You can further narrow the location of the problem from outside the machine by looking at the LCD display on each door. The door with the problem will have an error code on it. Here is what the lights indicate:

**White or Green Light Flashing** indicates power and is used as an attraction so customers can easily locate the machine

**White or Green Light Solid** indicates that it is time to change the bag containing discarded tickets.

**Red Light Solid** indicates that there is a ticket taker problem. Refer to troubleshooting section of this manual.

**Yellow Light Solid** indicates that there is a problem with the printer. This is most often seen when a printer need paper. If the printers do not need paper, refer to the troubleshooting section of this manual.

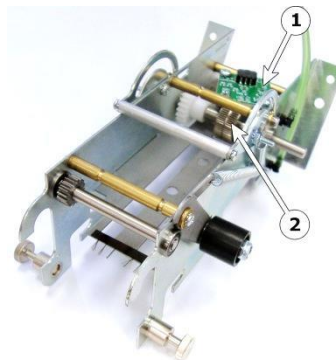
## Ticket Taker General

Note: When a door is open for service, the lockout switch kills the 24V to the corresponding door. This keeps the ticket taker from operating for safety. If you must activate the power at the lockout switch for troubleshooting or programming, use caution around the ticket taker belts and cutters. **ALWAYS STAY CLEAR OF THE TICKET CUTTERS.**

## Ticket Taker Overview

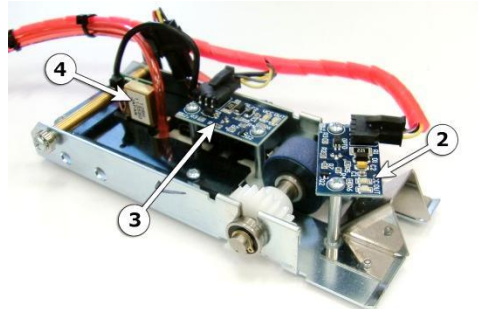
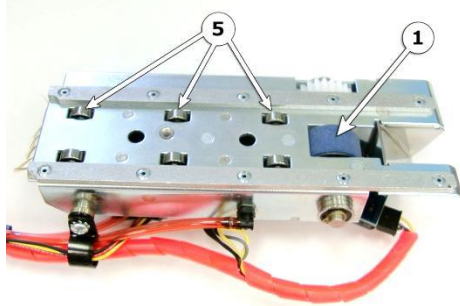
The ticket takers are comprised of 4 main parts plus the drive motor:

1. Ticket taker main body includes:
  - a. Ticket sense transmitter①
  - b. Lower steel roller②

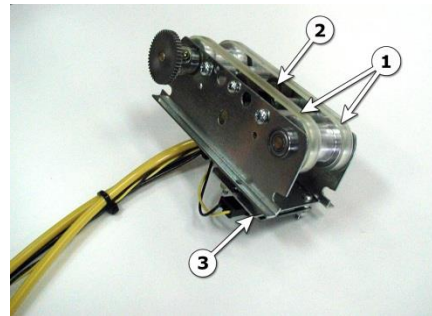


- 
2. Ticket taker top assembly includes:

- a. Upper roller shaft assy.①
- b. Ticket sense opto receiver②
- c. Notch sense opto receiver③
- d. Upper barcode scanner④
- e. Rollers⑤



3. Ticket taker belt assembly includes:
- a. Ticket transport belts①
  - b. Lower barcode scanner②
  - c. Notch opto transmitter③

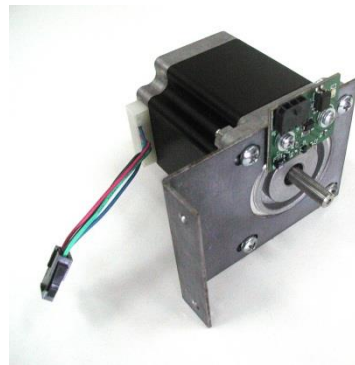


4. Ticket taker cutter assembly





5. Drive motor assembly includes:
  - a. Stepper motor①
  - b. Hall effect sensor②

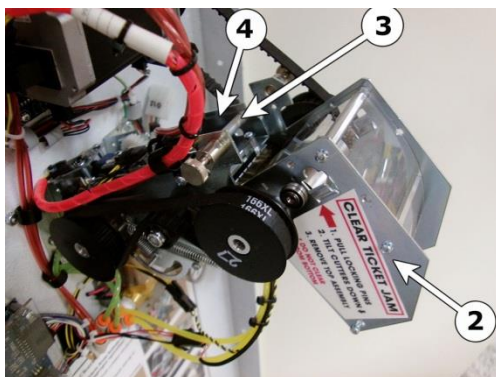
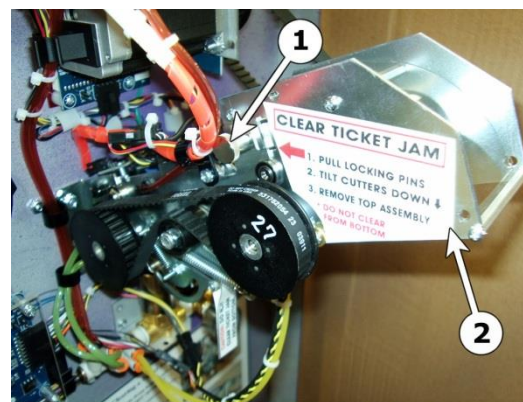


### Ticket Taker Operation

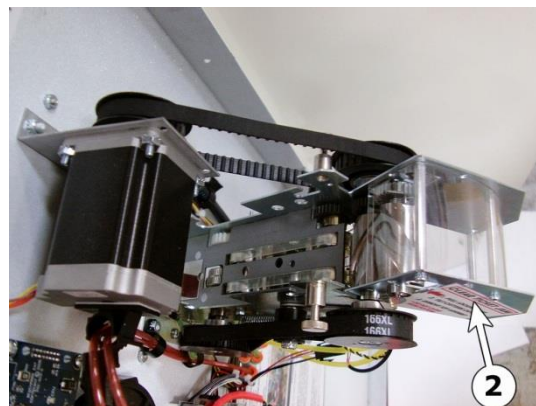
When ticket is inserted the ticket taker, the ticket sense opto is interrupted which starts the ticket taker drive motor. The upper and lower rollers take the ticket(s) to the transport belts which carry the ticket(s) to the cutters. There are blue flat springs in the top assembly that push down on the 6 steel rollers in the top assembly keeping the ticket down on the transport belts. During the ticket travel over the transport belts, the notch opto senses the center notch of the tickets and the upper and lower side of the ticket is scanned for a barcode. We sense that the motor is turning with a hall effect sensor which is activated by a magnet located in the motor pulley passing over the circuit board. If there is no signal pulsing from the hall effect sensor when the motor is supposed to be running, the power to the motor will be turned off.

### Clearing a Ticket Jam

1. Pull Captive Pins① to unlock cutter assembly(1 each side)
  - a. Pins can be secured in the retracted position by turning them counterclockwise while pulling
2. Tilt cutter assembly② down
3. Use handle③ to pull top assembly④ back and up to remove.
4. Remove jammed tickets.
5. Carefully replace top assembly.
6. Tilt cutter assembly up and re-secure captive pins.



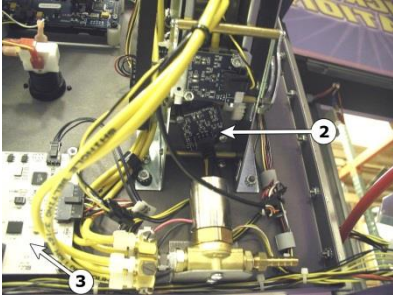
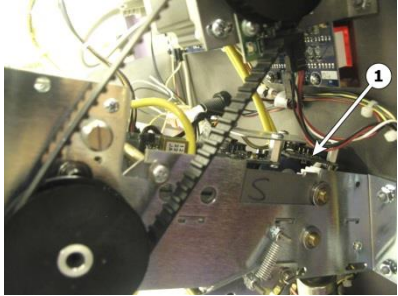
Cutter Assembly Shown Tilted Down



Top Assembly Shown Removed

## **Troubleshooting Guide**

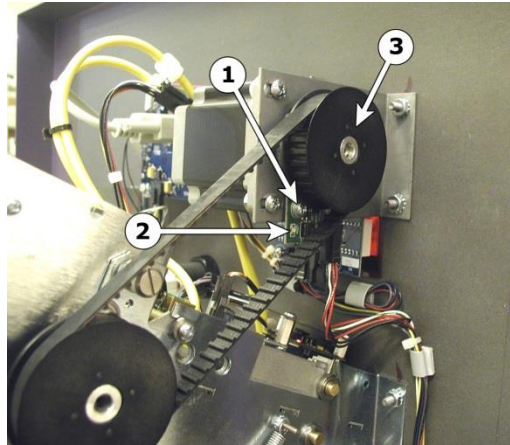
Note: There are (2) power distribution circuit boards mounted to the power supply housing. Each board holds (3) 5 Amp Mini Blade fuses, one 5V & two 12V. If there is a DC power problem, check these fuses.

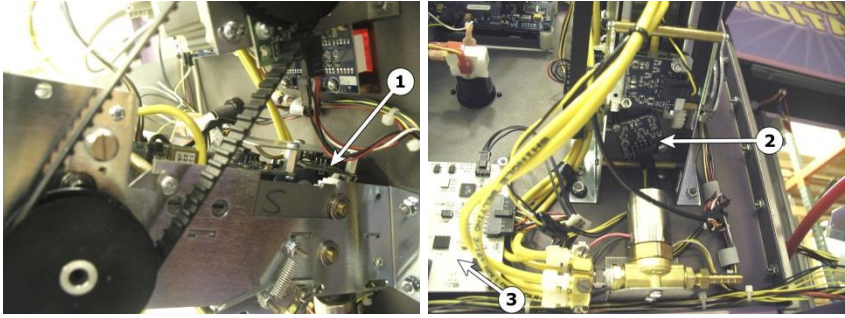
<p><b>Ticket Taker will not start</b></p>	<ol style="list-style-type: none"> <li>1. Check ticket sense opto pair. The red <u>LED</u> should come on and power output should pull to ground on <u>the ticket sense opto receiver</u>① when opto is blocked by ticket. Check for good power and ground to <u>ticket sense opto transmitter</u>② and <u>ticket sense opto receiver</u>①.</li> <li>2. Check for good signal <u>to ticket eater pcb</u>③ input (J1 pin 1) from <u>ticket sense opto receiver</u>①</li> <li>3. Check all ticket eater motor connections</li> </ol> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>
<p><b>Ticket Taker runs continuously</b></p>	<ol style="list-style-type: none"> <li>1. Ticket sense opto path is blocked; check for ticket or debris.</li> <li>2. Bad ticket sense opto receiver or transmitter.</li> </ol>

**Ticket Taker  
runs slowly  
then stops**

Hall effect pcb① output not getting to the ticket eater board.

1. Check that when the motor is running, the LED② on the hall effect pcb① is flashing at least one time per motor revolution. If the red LED does not flash:
    - a. Check to see if the motor pulley③ is tight on the motor shaft.
    - b. Check the distance of the motor pulley from the hall effect sensor pcb. There is a magnet on the inside of the motor pulley that activates the sensor every revolution. If the pulley is located too far from the sensor pcb, the magnetic strength will be too weak to activate the sensor.
    - c. Check voltage to the hall effect pcb (5V DC)
- If the red LED does flash, check the output of the hall effect sensor pcb all the way to the ticket eater pcb (J1 pin 3)

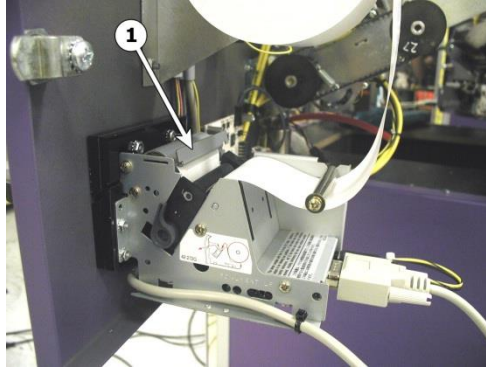


<p><b>Ticket Taker will not count with Ticket inserted in any direction</b></p>	<ol style="list-style-type: none"> <li>1. Check notch count opto pair. The red <u>LED on notch opto receiver</u>① should flash as tickets are fed into ticket taker. <ol style="list-style-type: none"> <li>a. If the red LED does not flash, check power (12V DC) to the <u>notch opto transmitter</u>② and notch opto receiver①.</li> <li>b. If LED is always on, something is blocking the opto path or the opto is dirty.</li> </ol> </li> <li>2. If the red LED does flash, check output of notch count opto all the way to the ticket eater pcb (J1 pin 2).</li> <li>3. Check power to barcode pcb's and output all the way back to ticket eater pcb③.</li> </ol> 
<p><b>Ticket Taker counts accurately with barcode only up or only down</b></p>	<ol style="list-style-type: none"> <li>1. Check power to and output from barcode scanner pcb corresponding to the side that does not work.</li> </ol>
<p><b>Ticket count is intermittent</b></p>	<p>To help diagnose the problem, you can, through programming options, change the ticket verification to notch from barcode. If the ticket count becomes accurate, the problem is related to the barcode. If the count is still intermittent, the problem is probably related to the notch opto sensors.</p> <ol style="list-style-type: none"> <li>1. Bad tickets with poor printing or out of spec barcode.</li> <li>2. Clean barcode scanner pcb's and opto notch transmitter and receivers (if this works check pump operation and pneumatic cleaning system for leaks).</li> <li>3. Check for loose wire connections to barcode scanners or opto notch optos</li> </ol>
<p><b>Single tickets do not count accurately</b></p>	<p>Check that tickets travel through the ticket taker at a consistent rate without stopping or slowing dramatically.</p> <ol style="list-style-type: none"> <li>1. Check for debris in ticket eater</li> <li>2. Check for equal spring pressure from the flat springs, make sure they are not bent</li> <li>3. Check ticket transport belts for tracking, breakage, stretch or extreme wear</li> </ol>



**Printer does not print**

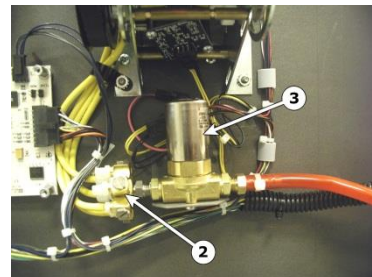
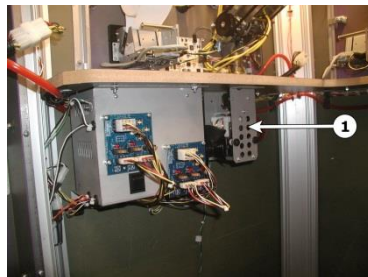
1. Out of paper
2. Paper installed backwards. The printer will only print on one side of the paper. See “Installing Printer Paper” section of this manual to verify correct installation.
3. Paper guide plate① pushed up. This plate needs to be all the way in the down position in order for the printer to print. If you find this in the up position, check to be sure receipt path is clear and that paper can be fed freely through the door.



**Sensors need cleaning often**

1. Make sure the air pump① comes on every 1,000-1,100 tickets.
2. Make sure there are no leaks in the main air plumbing
3. Make sure there are no leaks in the local air plumbing at the doors. Check air hose connections at the air valve manifolds②.

Note: If the problem is most often with one particular ticket taker, it is most likely a leak in the air plumbing system local to the door with the problem after the air valve③.



Shown with ticket baskets removed

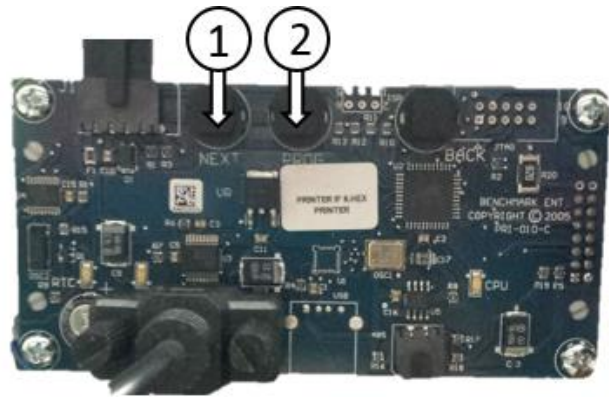
## Programming

**PLEASE NOTE:** The lockout switch must be activated for all programming functions to work. Be sure to pull the plunger out to activate power to the ticket taker board before programming. Use caution as the ticket taker now has power.

If at any time the message “COMM. ERROR” is displayed, there is a problem with communications between the boards, and programming is not possible. If this condition occurs, check to be sure lockout switch is activated, or turn off the machine, check all harness connections, and turn on the machine.

### 1.) Entering Programming Mode

To enter program mode, press and hold the PROGRAM button② located on the back of the Printer Interface Board (the board with the LCD display). After 2 seconds, “PROGRAM MODE” will appear on the LCD Display. At this time, release the button. Momentarily, “PLEASE WAIT” will appear while the Totals are retrieved. At this time “TOTAL TICKETS” with the number of tickets taken in will be displayed.



### 2.) TOTAL TICKETS

The total tickets taken in are displayed. The total will rollover to zero when it reaches 10,000,000. Depressing the PROGRAM button will reset the count to zero, and depressing the NEXT button① will display “LAST RECEIPT NUMBER”.

### 3.) LAST RECEIPT NUMBER

The last receipt number printed is displayed. This number automatically increments on every print, and rolls over to 1 after Receipt Number 9999. Depress the PROGRAM button to reset the receipt number, and depress the NEXT button to display “ENTER PROGRAM MODE?”

### 4.) “ENTER PROGRAM MODE?”

Depressing the PROGRAM button at this time will enter the area of Program Mode where parameters may be changed. Depressing the NEXT button will return the machine to Run Mode.

### 5.) “DATE/TIME”

If Program Mode has been entered, the first setting is the Date and Time. The cursor will be flashing and at the Month position. Depressing the PROGRAM button will step through the month from 01 to 12. Depressing the NEXT button will move the cursor to the Day position. Enter the Day using the PROGRAM button. Depressing the NEXT button will move the cursor to the Year position. Depressing the PROGRAM button will increment the Year from 00 to 99. Depressing the NEXT button will move the Cursor the Hour position. The time is

set in 24-Hour format. Depressing the PROGRAM button will increment the Hour from 00 to 24 Hours. Depressing the NEXT button will move the cursor to the Minutes position. Depressing the PROGRAM button at this time will increment the minutes from 00 to 59. Depressing the NEXT button will go to the next option, “ENTER MACHINE NUMBER”  
\*Note: Time & Date are critical for proper record keeping

#### **6.) “ENTER MACHINE NUMBER”**

The machine number for each unit can be set from 0 to 99. Depressing the PROGRAM button will increment this value, and depressing the NEXT button will move to the next option, BarCode entry.

#### **7.) “ENTER BARCODE?”**

Depressing the PROGRAM button will allow for entry/editing of the 4-Digit Interleaved 2 of 5 barcode present on the ticket for ticket validation. Depressing the NEXT button will skip this step. This will be necessary for securely counting only your company’s tickets.

#### **8.) “BARCODE: 0000”**

This option sets the 4-Digit ticket barcode. The flashing cursor will be over the first digit. Depressing the PROGRAM button will change the value of this digit from 0 to 9 then back to 0. Depressing the NEXT button will move the cursor to the next digit. Continue in this manner until the last digit is entered, then depressing the NEXT button will move to the next option, “TICKET SECURITY”.

#### **9.) TICKET SECURITY**

This option sets the Level of ticket barcode validation used. The PROGRAM button will change the value from 0 to 2, then back to 0, and the NEXT button will move to the next option, “SAFETY MODE”. The Three security levels are as follows:

- LEVEL 0 – Notch Only Validation, no Barcode required
- LEVEL 1 - Barcode Validation, Standard (Recommended)
- LEVEL 2 – Barcode Validation, HIGH Security

#### **10.) SAFETY MODE**

This option sets the Safety Level of the ticket eaters. Off is the normal mode and is recommended. ON lessens the speed of the ticket eaters. Depressing the PROGRAM button changes the setting, and depressing the NEXT button moves to the next option, “TICKET VALUE”

#### **11.) TICKET VALUE**

This option sets the value of each ticket. The PROGRAM button will change the value from 1 to 5, then back to 1, and depressing the NEXT button moves to the next option, “RECEIPT CHECKDIGIT”

#### **12.) RECEIPT CHECKDIGIT**

This option turns the checkdigit added to the receipt barcode on or off. The PROGRAM button will change the setting, and depressing the NEXT button moves to the next option, “CARDSWIPE ENABLE”

### **13.) CARDSWIPE ENABLE**

This option is selected if one of the many available cardswipe systems is interfaced with the Ticket Station. Depressing the PROGRAM button scrolls through the three options which are OFF (Normal Operation), PULSE, and SERIAL. Contact your cardswipe system supplier for more information. Depressing the NEXT button moves to the next option, “EDIT DISPLAY?”

### **14.) “EDIT DISPLAY?”**

Depressing the PROGRAM button will allow for customization of the “WELCOME TO” message that is displayed on the machine. Depressing the NEXT button will skip this step and go to “EDIT RECEIPT?” If the PROGRAM button is depressed, the display will show the current “WELCOME TO” message, and a flashing cursor will be at the beginning of the second line of the display, which is the only line that may be edited.

#### **Editing the Display**

Depressing the PROGRAM button will change the character at the flashing cursor. Every time the PROGRAM button is depressed, the next character in the list will be displayed. If the end of the list of characters is reached, the first in the list is displayed (refer to List of Characters at the end of this section). The line will appear exactly as it is edited, including leading and trailing spaces.

Depressing the NEXT button will move to the next character. If the flashing cursor is not at the beginning of the line and the BACK button is depressed, the flashing cursor will move to the previous character. Depressing the NEXT button when the flashing cursor is over the last character will save the displayed Welcome Message, and go to the next option, which is “EDIT RECEIPT?”

### **15.) “EDIT RECEIPT?”**

Depressing the PROGRAM button will allow for editing of the first four lines of the receipt, as well as the line found after the ticket quantity is printed. Each of the five lines can be a maximum of 32 characters long, including spaces and punctuation.

Depressing the NEXT button will skip this step and go to “RE-ENTER PROGRAM MODE?”. If the PROGRAM button is depressed, the display will show the current first line of the receipt, and a flashing cursor will be at the beginning. The first twenty characters will be on the first line of the display, and the last twelve characters will be on the second line of the display. A black square will be displayed past the end of the 32 character line.

**NOTE: If this option is selected, all 32 characters on all five lines must be stepped through to leave this option!**

#### **Editing the Receipt**

All five lines on the receipt are edited in the same way. It is recommended that the information that is desired for the five lines be written out in advance to insure that the 32

character limit isn't exceeded. The lines should be edited with NO leading spaces. Each line will be automatically centered on the receipt when it is printed.

Depressing the PROGRAM button will change the character at the flashing cursor. Every time the PROGRAM button is depressed, the next character in the list will be displayed. If the end of the list of characters is reached, the first in the list is displayed (refer to List of Characters at the end of this section).

Depressing the NEXT button will move to the next character. If the flashing cursor is not at the beginning of the line and the BACK button is depressed, the flashing cursor will move to the previous character. Depressing the NEXT button when the flashing cursor is to the left of the black square will save the line and the next line will be displayed for editing. If it is the fifth line, the next option will be shown, "RE-ENTER PROGRAM MODE?"

## **16.) RE-ENTER PROGRAM MODE?**

This option gives you the opportunity to go through the programming settings again.

Depressing the PROGRAM button will re-enter the Program Mode at the beginning, and depressing the NEXT button will leave Program Mode, and return to Run Mode.

### **CHARACTER LIST for DISPLAY and RECEIPT EDITING**

[SPACE] ! " # \$ % & ' ( ) \* + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < > ? @  
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \* ] ^  
\_ \ a b c d e f g h i j k l m n o p q r s t u v w x y z

## **ERROR CODES**

The LCD Display on the Ticket Station will show common error codes to help in troubleshooting. There are two Types of errors; those associated with the Ticket Eater and those associated with the Printer. The LCD Display will show which type of error it is, "TICKET ERROR" or "PRINTER ERROR" along with the associated error number.

The Errors are as follows:

### 1.) Ticket Errors:

ERROR 1: Ticket Jam

### 2.) Printer Errors:

ERROR 1: Printer Platen Open

ERROR 2: Printer Out Of Paper

ERROR 3: Printer Head Temperature Abnormal

ERROR 4: Printer Cutter Cover Open (usually indicates a Paper Jam)

ERROR 5: Printer Communications Failure


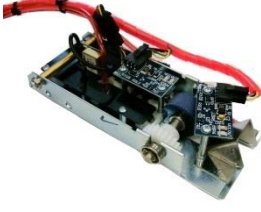





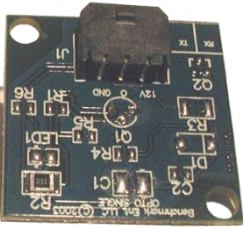


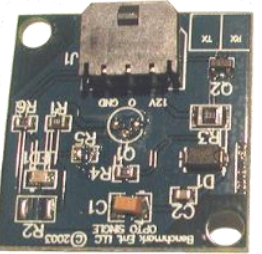

### **NOTE:**




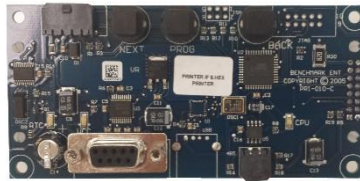


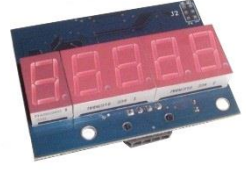


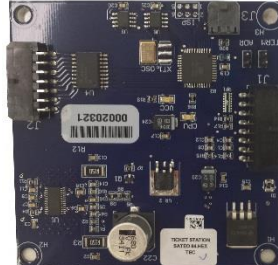
If one of Errors 1 through 4 occur in the middle of a receipt print, the Printer may default to ERROR 5. Ensure that all of the possible errors are checked before assuming a communications failure.



If the Printer is in the middle of printing the receipt and runs out of paper, it will retain the information for that receipt AS LONG AS POWER IS NOT TURNED OFF TO THE PRINTER. Reload the paper without turning the printer off and it will complete the printing of the last receipt.

### Major Parts List

<p>087ASM024 Ticket Taker</p> 	<p>087ASM025 Ticket Taker Top Assy.</p> 
<p>087ASM026 Ticket Taker Belt Assy.</p> 	<p>087ASM027 Ticket Taker Body Assy.</p> 
<p>087ASM028 Ticket Cutter</p> 	<p>087ASM045 Ticket Taker Stepper Motor Assy.</p> 
<p>087ASM046 Solenoid Valve Assy. (with Gauge)</p> 	<p>PCB00029 Opto Transmitter Single</p> 
<p>054ASM006 Solenoid Valve Assy. (With Out Gauge)</p> 	<p>087PCB004 Barcode Reader (Short Harness)</p> 
<p>PCB00046 Opto Receiver Single</p> 	<p>087PCB005 Barcode Reader (Long Harness)</p> 

<p>PCB00020 Hall Effect Sensor</p>		<p>054PCB007 Printer Driver Board ("7" Series)</p>	
<p>087ASM012 Air Pump Assy.</p>		<p>054PCB004 Printer Driver Board ("8" Series)</p>	
<p>ELM00021 Lockout Switch</p>		<p>054ASM017 Tower Light, 3 color</p>	
<p>PCB00008 5 digit led display</p>		<p>ELM00023 Printer, Thermal</p>	
<p>054PCB002 Stepper driver single ("7" Series)</p>		<p>054PCB014 Stepper driver Single("8" Series)</p>	

12 PIN CONNECTOR DOOR 1

- 12 12 VOLTS COMMON 22 GA YELLOW
- 11 GND SIGNAL 22 GA BLACK
- 10 12 VOLTS 18 GA YELLOW
- 9 ✗ 22 GA YELLOW/GREEN
- 8 GREEN/WHITE
- 7 WHITE/BLACK/RED
- 6 GND 18 GA BLACK
- 5
- 4 22 GA RED 5 VOLTS
- 3 GND 18 GA BLACK
- 2 WHITE/BLK/GREEN
- 1

24 VOLTS 18 GA ORANGE/BLK  
S1  
SW -SPST

12 PIN CONNECTOR DOOR 2

- 12 12 VOLTS COMMON 22 GA YELLOW
- 11 22 GA SIGNAL GND BLACK
- 10 12 VOLTS 18 GA YELLOW
- 9 ✗ 22 GA YELLOW/GREEN
- 8
- 7 ✗ WHITE/BLACK/RED
- 6 GND 18 GA BLACK
- 5 24 VOLTS 18 GA ORANGE/WHITE
- 4 22 GA RED
- 3 GND 18 GA BLACK
- 2 WHITE/BLK/GREEN
- 1

24 VOLTS 18 GA ORANGE/BLK  
S2  
SW -SPST

12 PIN CONNECTOR DOOR 3

- 12 12 VOLTS COMMON 22 GA YELLOW/WHITE
- 11 GND SIGNAL 22 GA BLACK/WHITE
- 10 12 VOLTS 18 GA YELLOW/WHITE
- 9 ✗ 12 VOLTS COMMON 22 GA YELLOW/WHITE
- 8
- 7 ✗ WHITE/BLACK/RED
- 6 GND 18 GA BLACK/WHITE
- 5
- 4 22 GA 5 VOLTS RED/WHITE
- 3 GND 18 GA BLACK/WHITE
- 2 WHITE/BLK/GREEN
- 1

24 VOLTS 18 GA ORANGE/BLK  
S3  
SW -SPST

12 PIN CONNECTOR DOOR 4

- 12 12 VOLTS COMMON 22 GA YELLOW/WHITE
- 11 22 GA SIGNAL GND BLACK/WHITE
- 10 12 VOLTS 18 GA YELLOW/WHITE
- 9 ✗ 12 VOLTS COMMON 22 GA YELLOW/WHITE
- 8
- 7 ✗ WHITE/BLACK/RED
- 6 GND 18 GA BLACK/WHITE
- 5 24 VOLTS 18 GA ORANGE/WHITE
- 4 22 GA RED/WHITE
- 3 GND 18 GA BLACK/WHITE
- 2 WHITE/BLK/GREEN
- 1

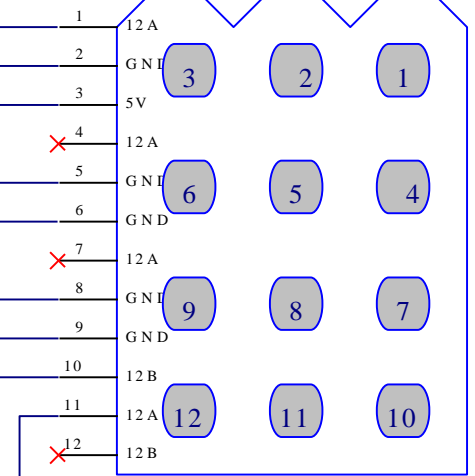
24 VOLTS 18 GA ORANGE/BLK  
S4  
SW -SPST

ORANGE/WHITE

FULL TICKET BAG

SW -SPST

P1



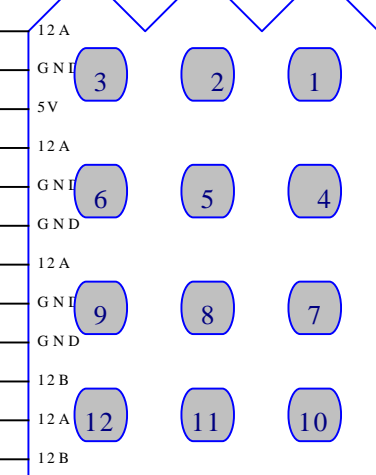
4 PIN MOLEX FEMALE

YELLOW

24 VOLT POWER 1

4 PIN MOLEX MALE MICRO\_FIT

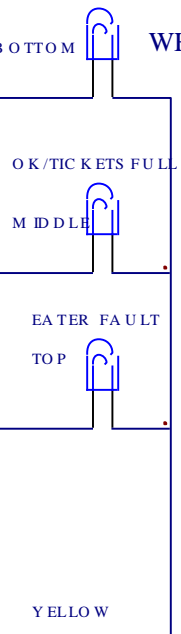
P2

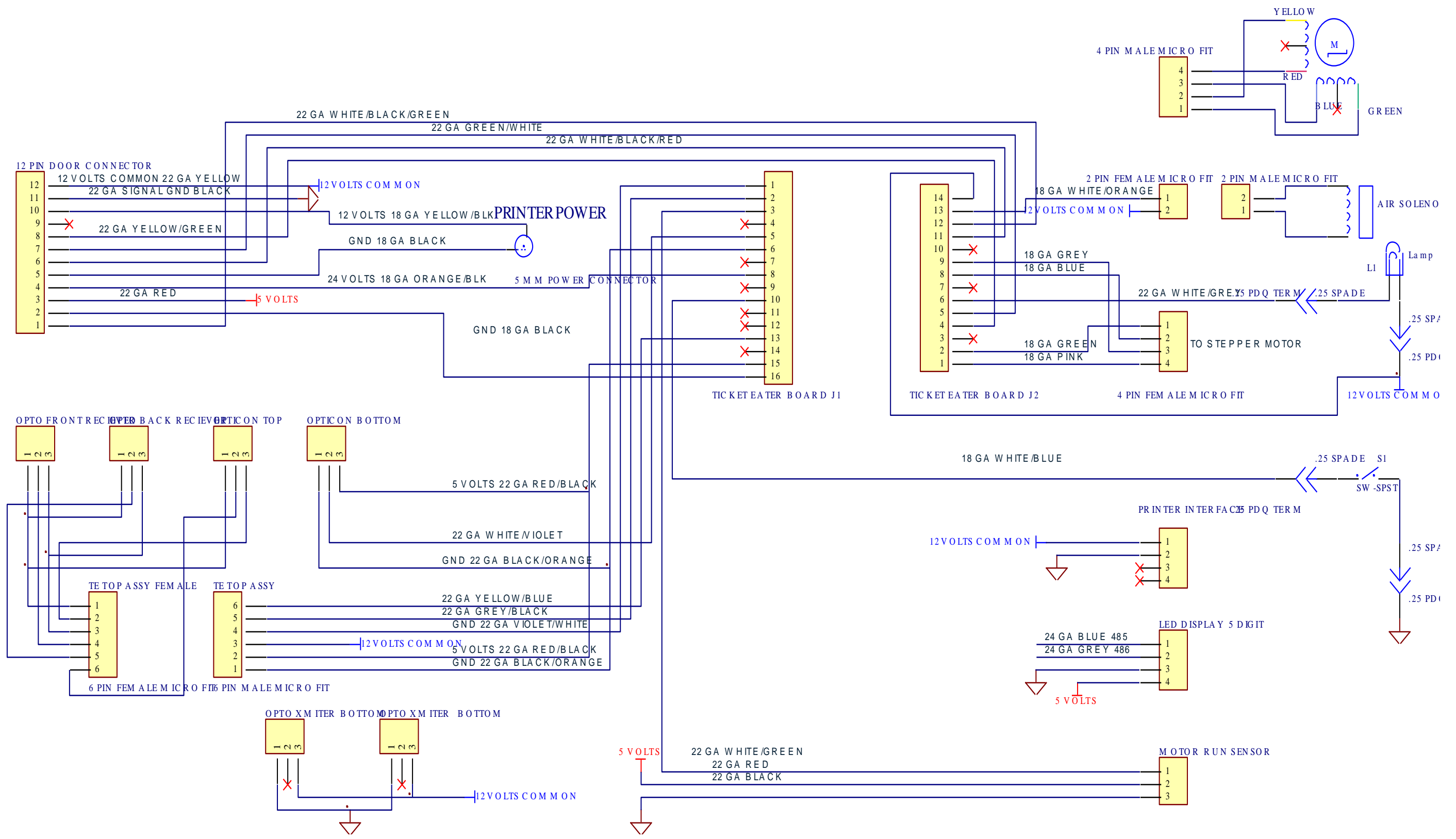


WHITE/BLACK/GREEN

GREEN/WHITE

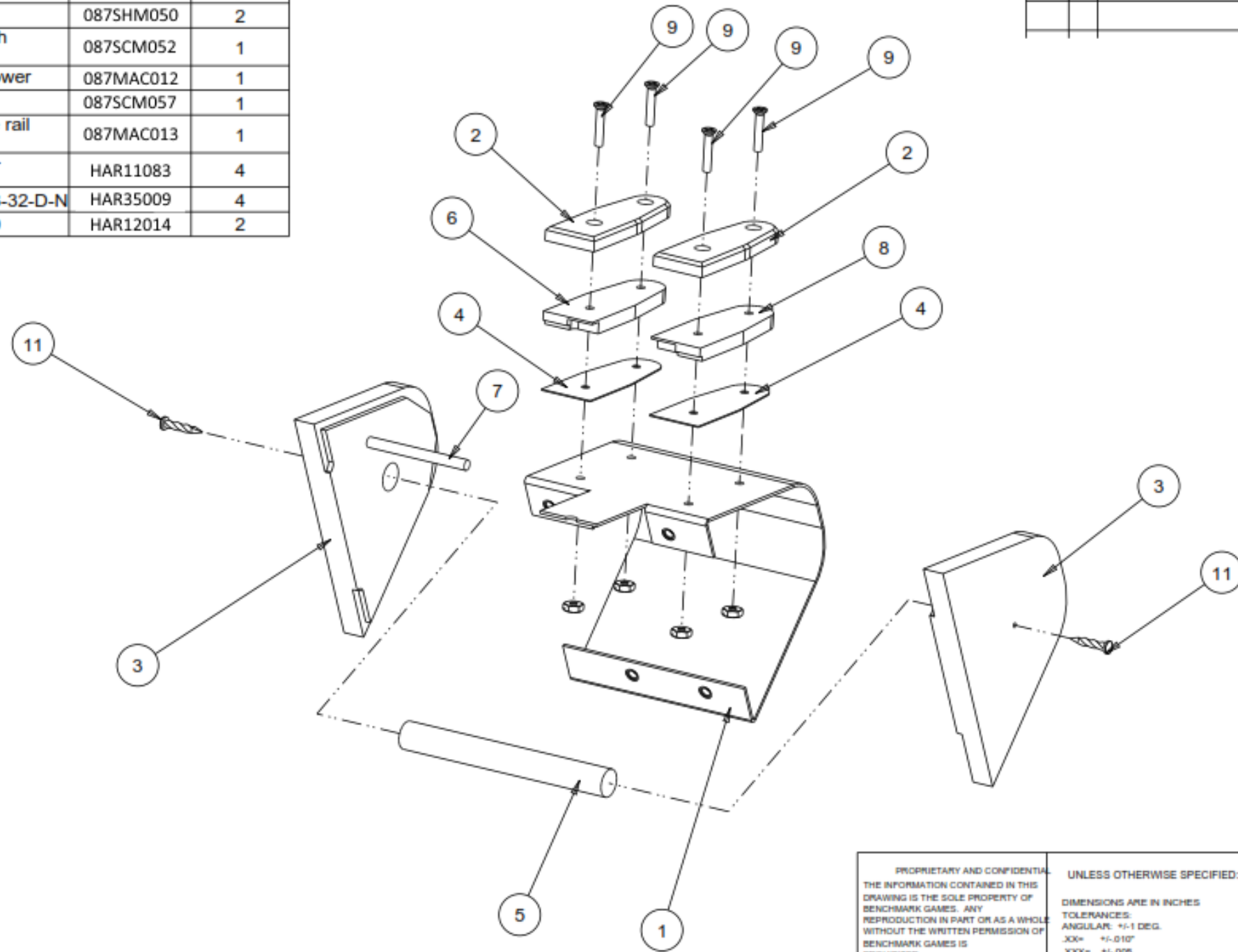
WHITE/BLACK/RED





ITEM NO.	Description	Part Number	QTY.
1	ticket guide bracket	087SHM025	1
2	ticket guide rail	087MAC004	2
3	ticket guide end plate	087MAC003	2
4	ticket guide shim	087SHM050	2
5	ticket guide attach rod	087SCM052	1
6	ticket guide rail lower	087MAC012	1
7	ticket guide rod	087SCM057	1
8	Mirrorticket guide rail lower	087MAC013	1
9	CR-FHMS 0.138-32x0.75x0.75-N	HAR11083	4
10	MSHXNUT 0.138-32-D-N	HAR35009	4
11	screwnail 13x750	HAR12014	2

REVISIONS			
ZONE	REV	DESCRIPTION	DATE
	A	Release to Production	07/28/07

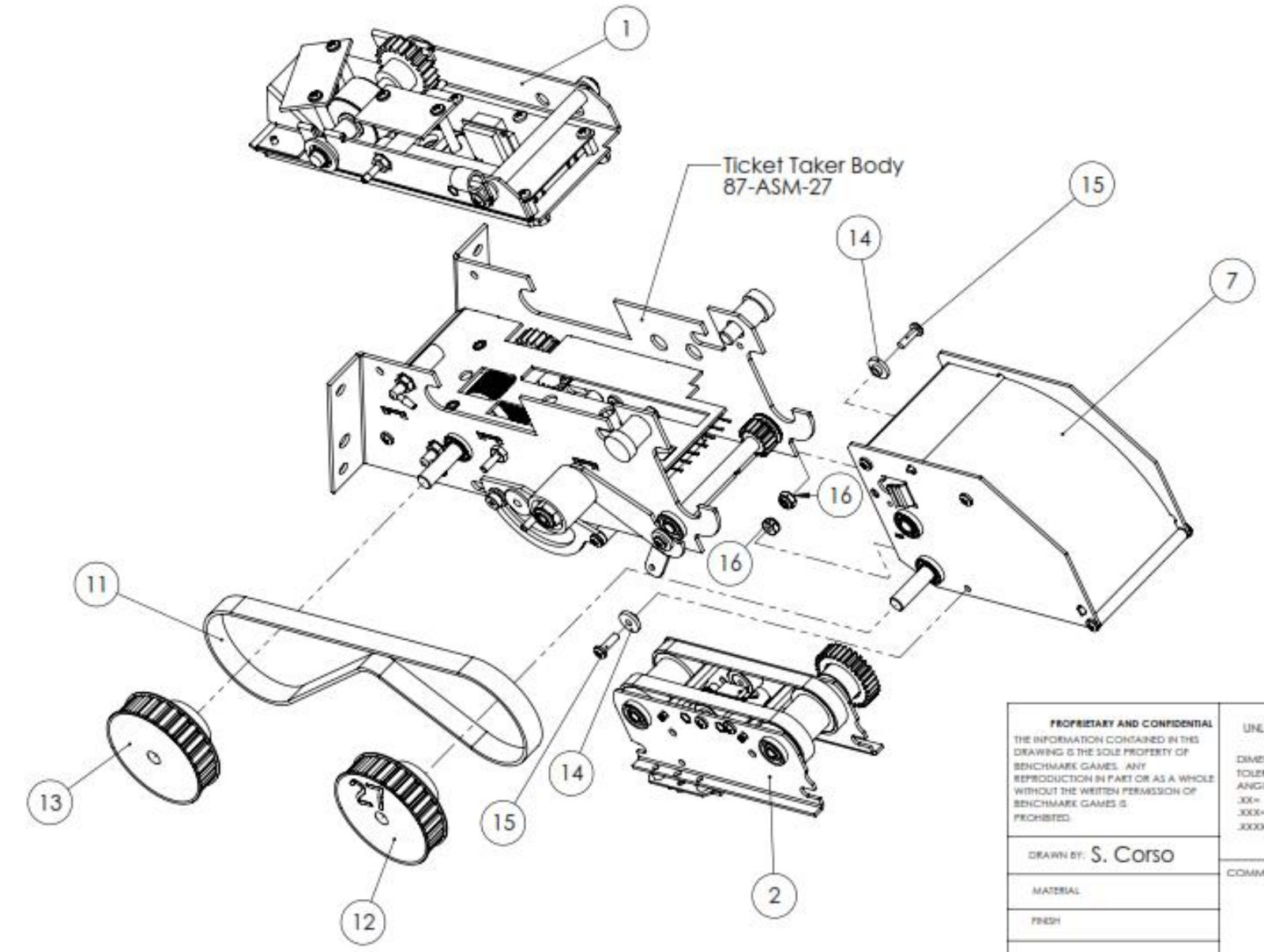


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DRAWN BY: <b>S. Corso</b>		COMMENTS:		<b>TITLE:</b> ticket guide assembly	
MATERIAL		SIZE <b>B</b>	DWG. NO. 054ASM004	REV	
FINISH		SCALE: 1:2	WEIGHT:	SHEET 1 OF 1	



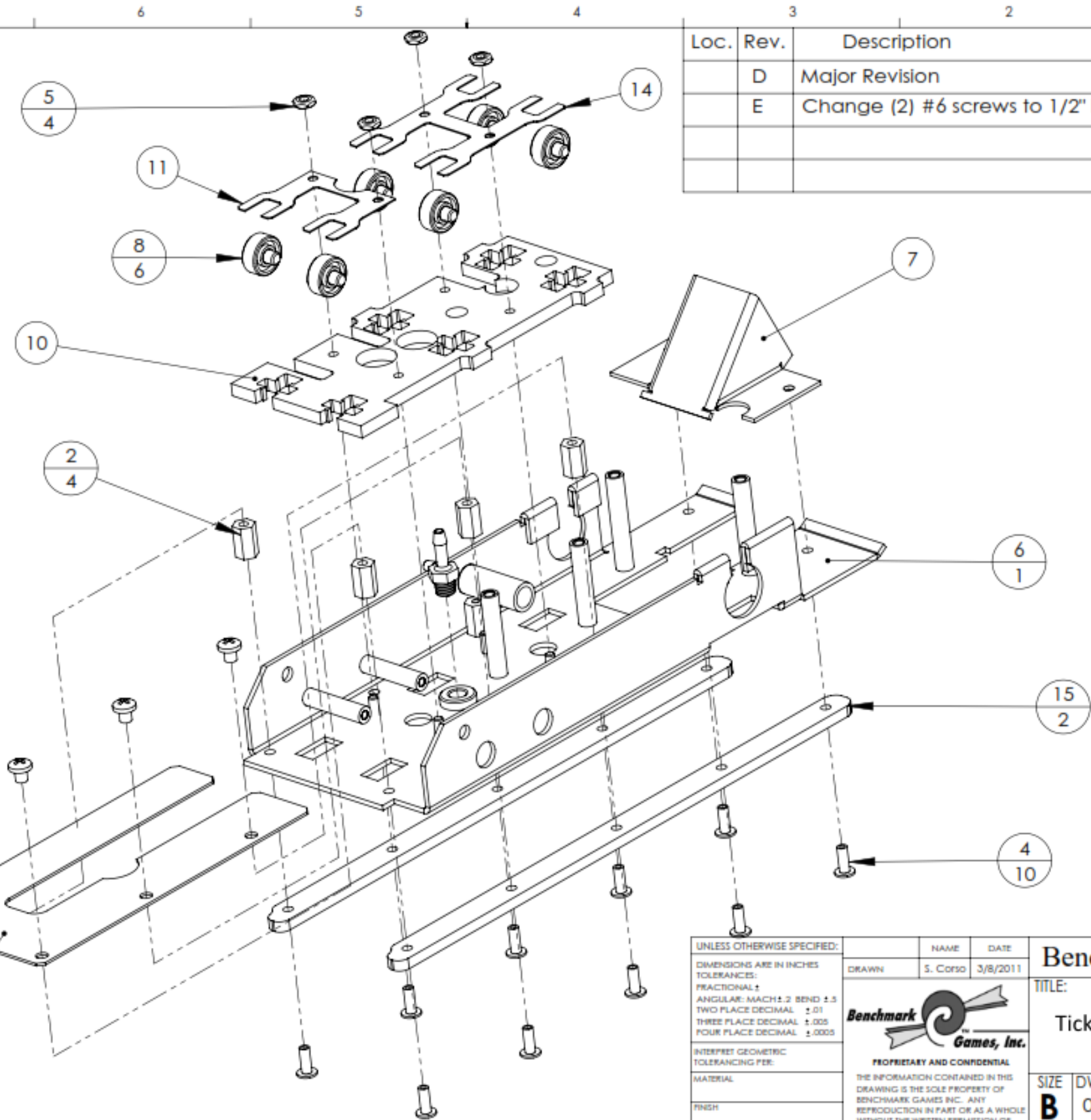
ITEM NO.	Description	Part Number	QTY.
1	ticket eater top	087ASM025	1
2	belt assembly ticket taker	087ASM026	1
7	cutter steep pitch	087ASM028	1
12	27XL .375 wide timing belt	GER00015	1
13	29XL .375 wide timing belt	GER00014	1
14	shoulder washer #4idx185x375	087SCM059	2
15	CR-PHMS 0.112-40x0.375x0.375-N	HAR11059	2
16	nut fiberlock 440	HAR36006	2

REVISIONS			
ZONE	REV.	DESCRIPTION	DATE
	A	Release	07/26/07
	B	Update parts	07/27/07
	C	Change receiver to transmitter on belt assembly page	02/25/12



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	DRAWN BY: S. CORSO MATERIAL: FINISH:	COMMENTS:	<b>TITLE:</b> ticket eater belt Complete
SIZE <b>B</b>	DWG. NO. 087ASM024	REV	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 6	

ITEM NO.	PART NUMBER	DESCRIPTION	explode 1/QTY.
2	SPA20068	Hex Spacer_FF	4
3	HAR11173	4-40 x .125 PPMS	4
4	HAR61002	Rivet 094 x 250	10
5	HAR35011	#2 Hex Nut	4
6	087SHM011	ticket eater top cover shm roller	1
7	087SHM054	ticket eater tunnel block	1
8	087ASM074	bearing assy ticket eater top	6
9	087MAC042	ticket taker roller containment plate roller	1
10	087MAC039	alignment plate	1
11	087SHM103	flat spring ticket eater top roller half	1
12	GEN010	air fitting, 1/8" barbed to #10-32M	2
13	SPA20072	Hex Spacer_FF	1
14	087SHM102	flat spring ticket eater top roller track 3 plastic	1
15	087PLA002	track 3 plastic	2

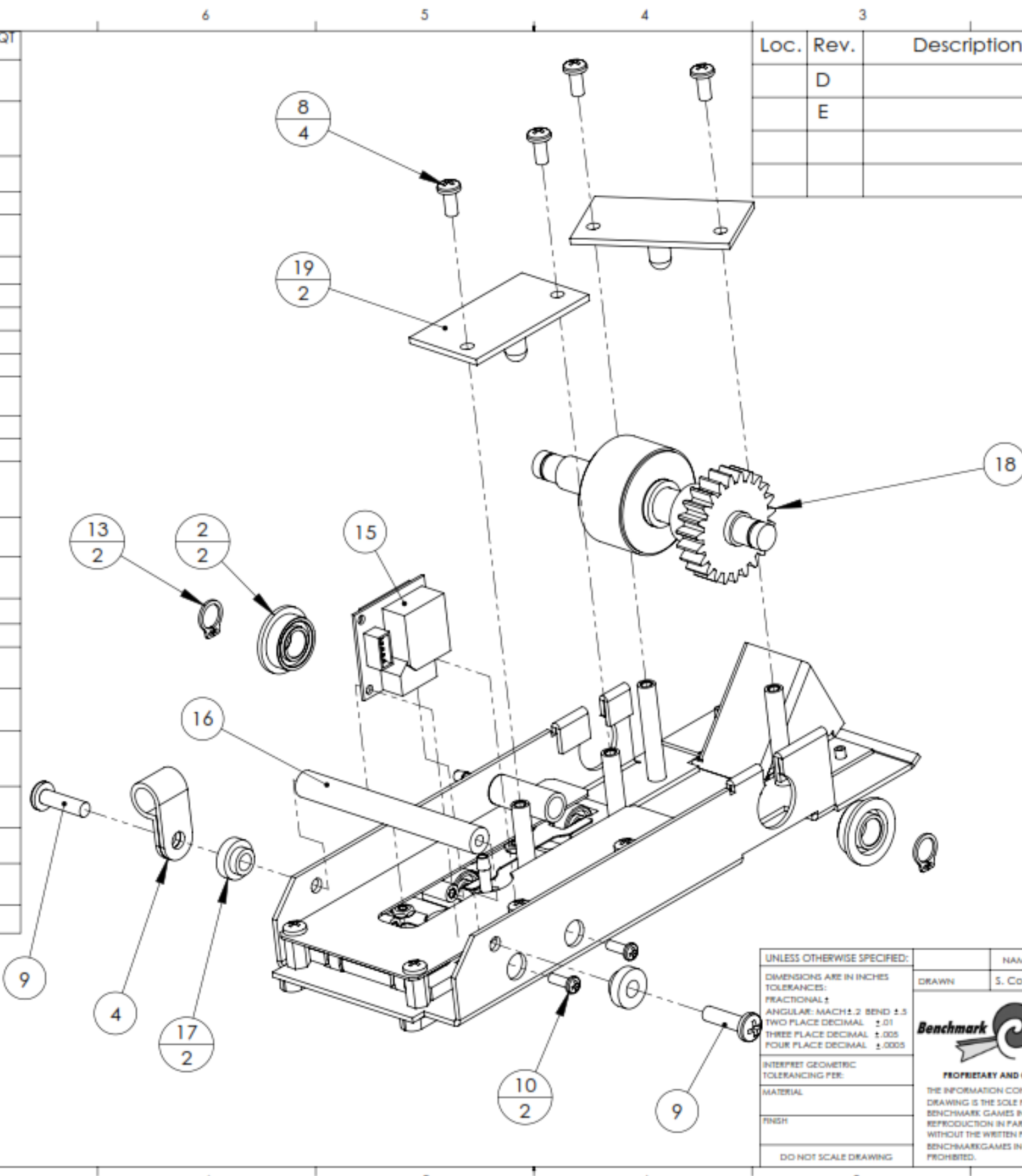


Loc.	Rev.	Description	Date
	D	Major Revision	03/09/11
	E	Change (2) #6 screws to 1/2" long	02/25/12

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Benchmark Games, Inc.		
DIMENSIONS ARE IN INCHES		DRAWN	S. Corso	3/8/2011	TITLE:	
TOLERANCES:		 <b>PROPRIETARY AND CONFIDENTIAL</b> THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENCHMARK GAMES INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENCHMARK GAMES INC. IS PROHIBITED.			Ticket Eater Top Top Assy	
FRACTIONAL ±					SIZE	DWG. NO.
ANGULAR: MACH ±.2 BEND ±.5					<b>B</b>	087ASM025
TWO PLACE DECIMAL ±.01					SCALE: 1:1	WEIGHT:
THREE PLACE DECIMAL ±.005		SHEET 1 OF 2				
FOUR PLACE DECIMAL ±.0005						
INTERPRET GEOMETRIC TOLERANCING PER:						
MATERIAL:						
FINISH:						
DO NOT SCALE DRAWING						



ITEM NO.	PART NUMBER	DESCRIPTION	explode2/QT Y.
1	087SHM011	ticket eater top cover shm roller	1
2	BRG00010	Bearing 250 ID 500 OD	2
3	087SHM054	ticket eater funnel block	1
4	GEN72008	Cable Clamp .250	1
5	087ASM074	bearing assy ticket eater top	6
6	SPA20068	Hex Spacer_FF	4
7	HAR11173	4-40 x .125 PPMS	4
8	HAR11054	4-40 x .250 PPMS	4
9	HAR11073	6-32 x .500 PPMS	2
10	HAR11037	2-56 x .250 PPMS	2
11	HAR61002	Rivet 094 x 250	10
12	HAR34004	#2 Hex Nut	4
13	HAR00021	B27.1 - NA1 -25	2
14	087MAC042	ticket taker roller containment plate	1
15	PCB022	barcode scan LBSAM12	1
16	087SCM015	ticket eater top cover spacer	1
17	0887SCM022	shoulder washer #6	2
18	087ASM030	roller top	1
19	PCB036	opto receiver small roller	2
20	087MAC039	alignment plate	1
21	087SHM103	flat spring ticket eater top roller half	1
22	GEN010	air fitting, 1/8" barbed to #10-32M	2
23	SPA20072	Hex Spacer_FF	1
24	087SHM102	flat spring ticket eater top roller track 3	1
25	087PLA002	plastic	2



Loc.	Rev.	Description	Date
	D		03/08/11
	E		02/25/12

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 FRACTIONAL ±  
 ANGULAR: MACH ±.2 BEND ±.3  
 TWO PLACE DECIMAL ±.01  
 THREE PLACE DECIMAL ±.005  
 FOUR PLACE DECIMAL ±.0005  
 INTERPRET GEOMETRIC TOLERANCING PER:  
 MATERIAL:  
 FINISH:  
 DO NOT SCALE DRAWING

NAME	DATE
S. Corso	3/8/2011

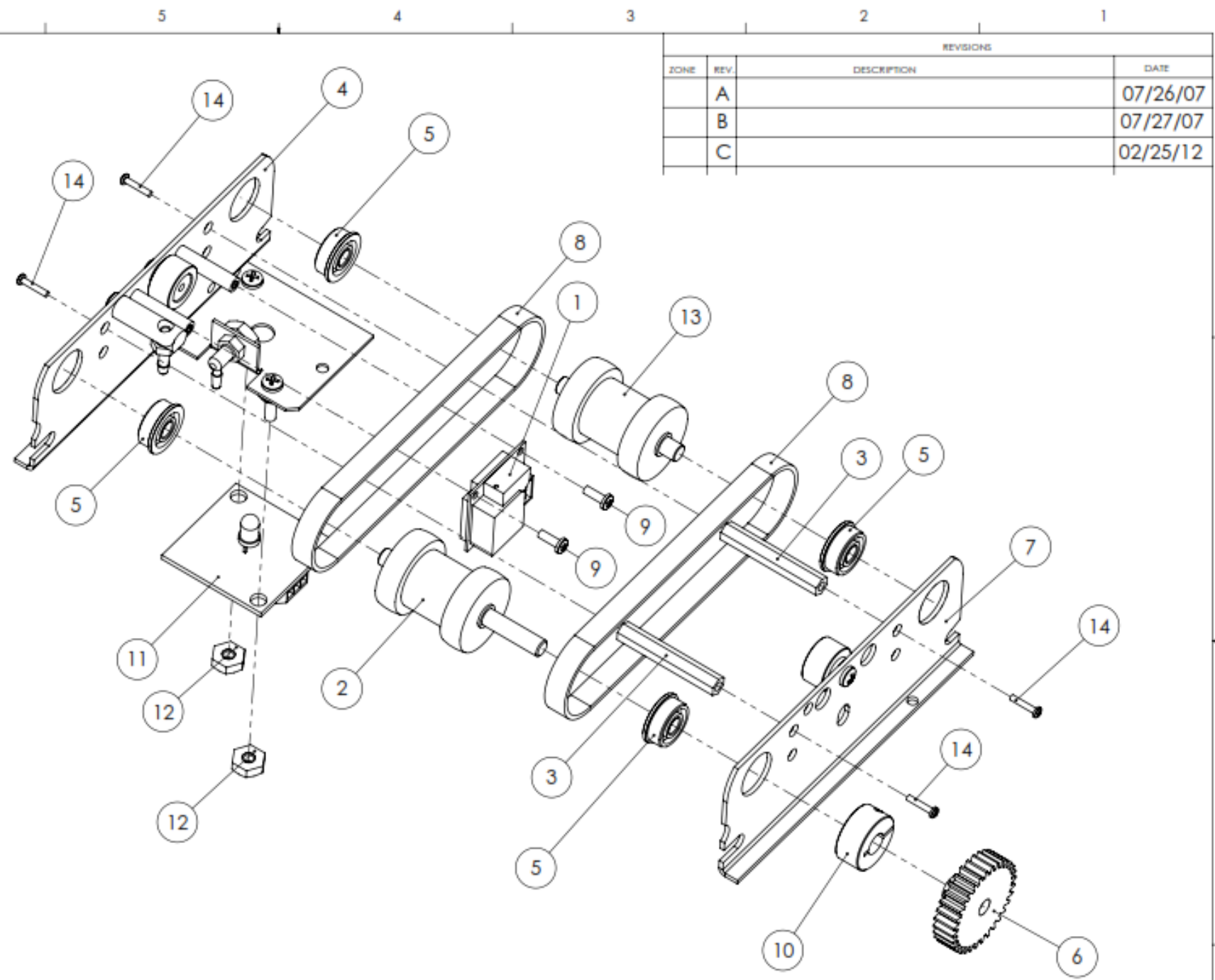
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**Ticket Eater Top Top Assy**

SIZE	DWG. NO.
<b>B</b>	087ASM025

SCALE: 1:1 WEIGHT: SHEET 2 OF 2

ITEM NO.	Description	Part Number	QTY.
1	Barcode Reader	087PCB004	1
2	belt pulley assy long	087ASM047	1
3	spacer ticket belt assembly	087SCM025	2
4	belt assembly cover left	087SHM002	1
5	Bearing, Flanged 3/16"ID x 1/2"OD x 3/16" T	BRG00001	4
6	1/2" - Spur gear 32DP 32T 14.5PA .1875FW --- S32N.75H.75L0.1875N	087GER002	1
7	belt assembly cover	087ASM061	1
8	urethan belt	087BLT001	2
9	CR-PHMS 0.086- 56x0.25x0.25-N	HAR11037	2
10	collar shaft 250	HAR90004	1
11	opto transmitter square	PCB00029	1
12	MSHXNUT 0.138-32-S-C	HAR35007	2
13	belt pulley assy short	087ASM048	1
14	CR-PHMS 0.06- 80x0.3125x0.3125-N	HAR11074	4

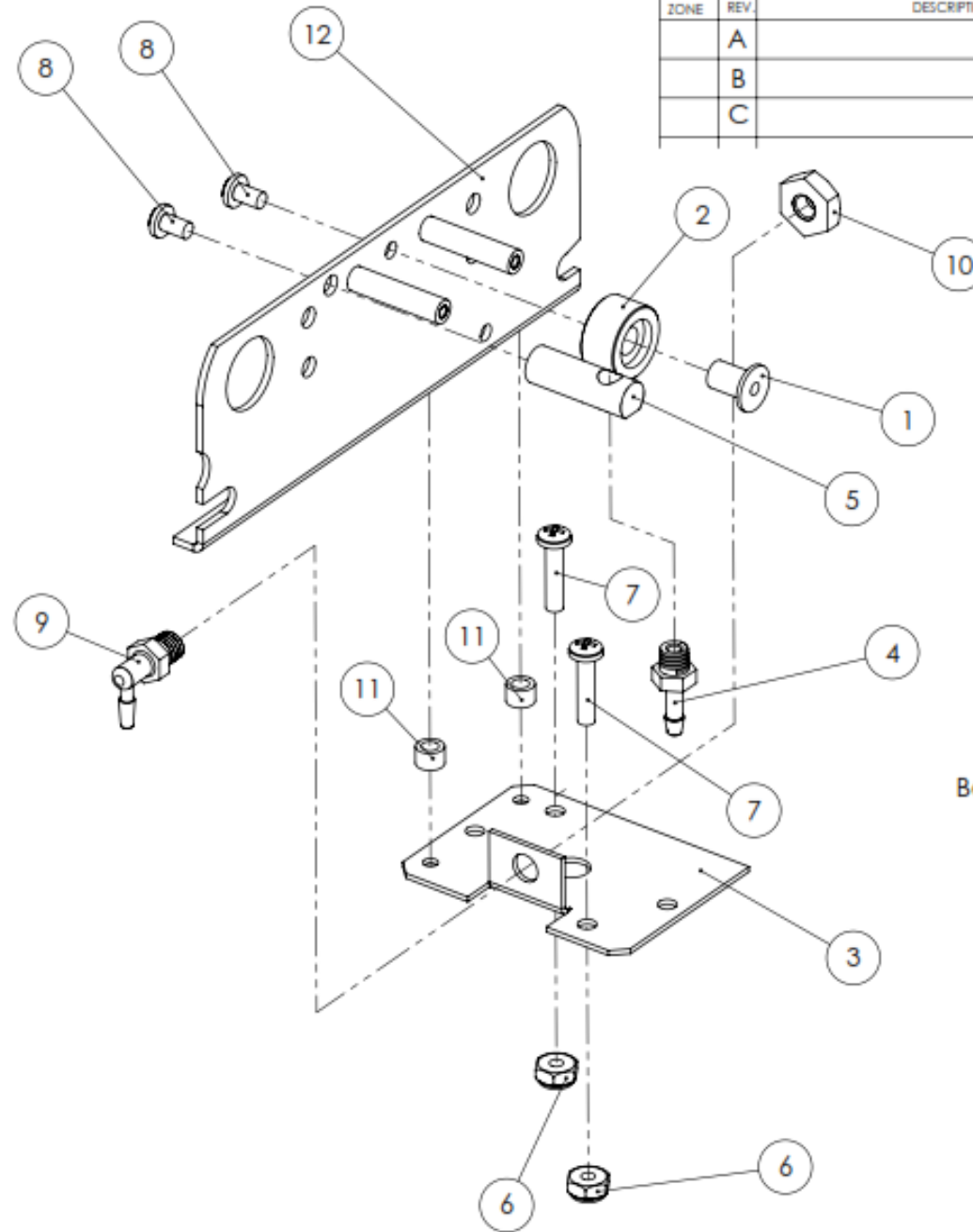


REVISIONS			
ZONE	REV	DESCRIPTION	DATE
	A		07/26/07
	B		07/27/07
	C		02/25/12

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		<p><b>TITLE:</b> ticket eater belt Belt Assembly</p>		
<p>DRAWN BY: S. Corso</p>	<p>COMMENTS:</p>	<p>SIZE <b>B</b></p>	<p>DWG. NO. <b>087ASM026</b></p>	<p>REV</p>
<p>MATERIAL</p>		<p>SCALE: 1:1.2</p>	<p>WEIGHT:</p>	<p>SHEET 3 OF 6</p>

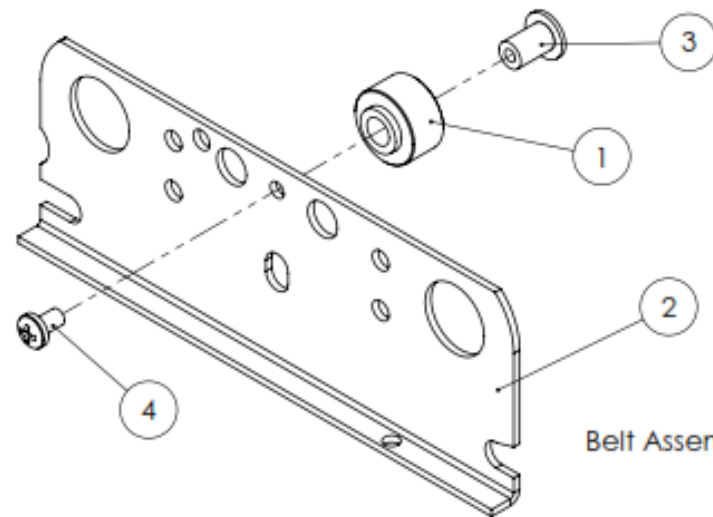
ITEM NO.	DESCRIPTION	Part Number	QTY.
1	idler pulley pin	087SCM002	1
2	idler pulleywo flanges	087SCM001	1
3	count opto mount plate	087SHM019	1
4	Straight fitting 062	GEN00010	1
5	spacer belt assembly jet	087SCM024	1
6	nut fiberlock 440	HAR36008	2
7	CR-PHMS 0.112-40x0.5x0.5-N	HAR11047	2
8	CR-PHMS 0.112-40x0.188x0.188-N	HAR11056	2
9	90 deg fitting 062	GEN00014	1
10	MSHXNUT 0.190-24-S-C spacer #4 x 1880d x 125L	HAR34002	1
11		SPA10018	2
12	belt assembly cover right shm	087SHM001	1

HAR34002



Belt Assembly Cover Left

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	idler pulleywo flanges	087SCM001	1
2	belt assembly cover	087SHM001	1
3	idler pulley pin	087SCM002	1
4	CR-PHMS 0.112-40x0.188x0.188-N	HAR11173	1



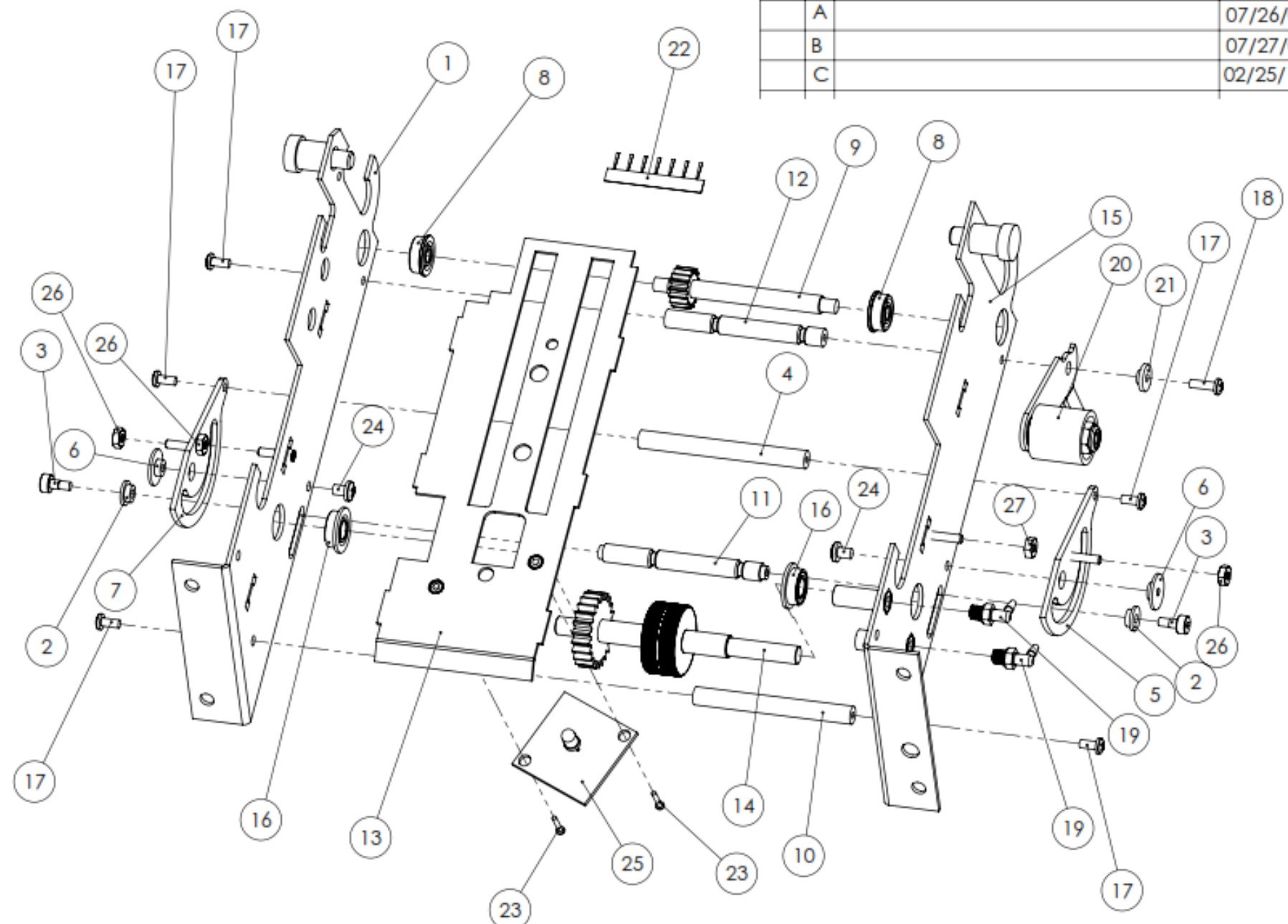
Belt Assembly Cover

REVISIONS			
ZONE	REV.	DESCRIPTION	DATE
	A		07/26/07
	B		07/27/07
	C		02/25/12

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	DRAWN BY: <b>S. Corso</b>	<b>TITLE:</b> ticket eater belt Belt Assembly Cover (87-ASM-61) Belt Assembly Cover Left (87-ASM-62)		
MATERIAL FINISH	COMMENTS:	SIZE <b>B</b>	DWG. NO.	REV
SCALE: 1:1		WEIGHT:	SHEET 4 OF 6	



ITEM NO.	Description	Part Number	QTY.
1	ticket eater top side shm	087SHM012	1
2	belt assembly release cam roller	087SCM051	2
3	shoulder bolt 125 x 125 x 440	SPA20024	2
4	belt assembly release handle	087SCM030	1
5	belt assembly release cam shm	087SHM045	1
6	shoulder washer #6x250x625	087SCM050	2
7	belt assembly release cam right	087SHM078	1
8	Bearing, 3/16" ID x 1/2" OD x 3/16" T	BRG00001	2
9	idler shaft assy	087ASM032	1
10	spacer top assembly	087SCM008	1
11	spacer belt assembly latch	087SCM006	1
12	spacer belt assembly mount	087SCM007	1
13	ticket eater bottom cover	087SHM007	1
14	roller shaft lower assy	087ASM031	1
15	ticket eater top side left	087SHM010	1
16	AFBMA 12.2 - 0.2500 - 0.5000 - 0.1250 - 12.SI.NC.12	BRG00010	2
17	CR-PHMS 0.112-40x0.25x0.25-N	HAR11054	5
18	CR-PHMS 0.112-40x0.375x0.375-N	HAR11062	1
19	90 degree fitting 10-32 to 094 hose	HAR00097	180
20	idler arm side belt	087ASM049	1
21	shoulder washer #4idx185x375	087SCM059	1
22	static brush	GEN00031	1
23	CR-PHMS 0.06-80x0.375x0.375-C	HAR11087	2
24	CR-PHMS 0.138-32x0.188x0.188-N	HAR11082	2
25	opto transmitter square	PCB00029	1
26	MSHXNUT 0.112-40-D-S	HAR35009	3
27	MSHXNUT 0.112-40-S-C	HAR35009	1



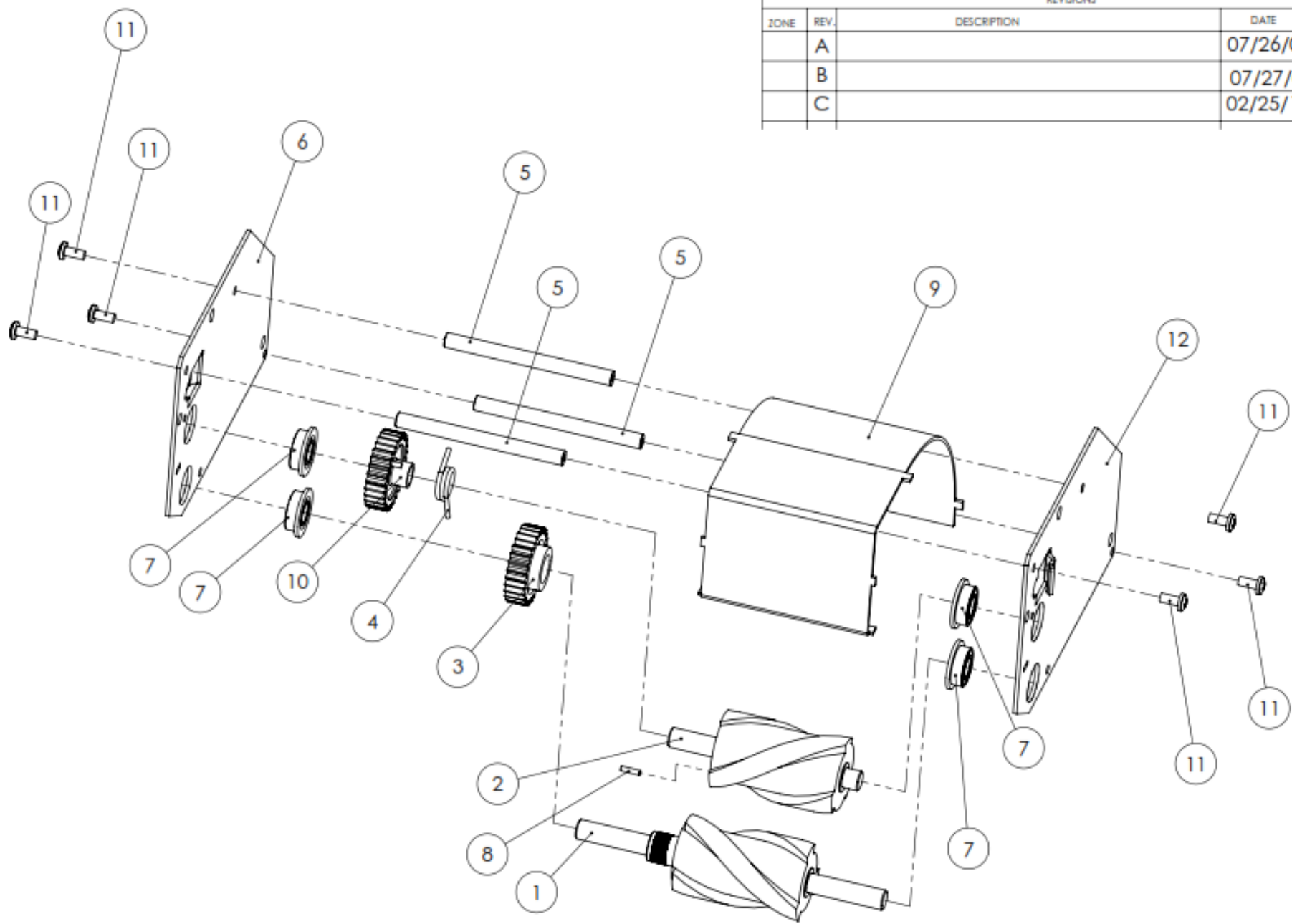
REVISIONS			
ZONE	REV.	DESCRIPTION	DATE
	A		07/26/07
	B		07/27/07
	C		02/25/12

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	<p>DRAWN BY: S. Corso</p> <p>MATERIAL</p> <p>FINISH</p>	<p>COMMENTS:</p>	<p><b>TITLE:</b></p> <p>ticket eater belt Body Assembly</p>	
<p>SCALE: 1:1.65</p>		<p>SIZE <b>B</b></p>	<p>DWG. NO. <b>087ASM027</b></p>	<p>REV</p>
<p>WEIGHT:</p>			<p>SHEET 5 OF 6</p>	



ITEM NO.	Description	Part Number	QTY.
1	spiral crosscut steep pitch	087SCM026	1
2	spiral crosscut steep pitch top	087SCM027	1
3	Gear Cutter Lower	087GER003	1
4	torsion spring	SPR00013	1
5	cutter spacer	087SCM014	3
6	cutter plate right	087SHM033	1
7	AFBMA 12.2 - 0.2500 - 0.5000 - 0.1250 - 12.SI.NC.12	BRG00010	4
8	roll_pin_063x250	HAR60005	1
9	cutter cover	087SHM051	1
10	Gear Cutter Upper	087GER051	1
11	CR-PHMS 0.112-40x0.25x0.25-N	HAR11054	6
12	cutter plate left	087SHM032	1

REVISIONS			
ZONE	REV.	DESCRIPTION	DATE
	A		07/26/07
	B		07/27/07
	C		02/25/12



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	<p>TITLE: ticket eater belt Cutter Assembly</p>	<p>SIZE <b>B</b></p>	<p>DWG. NO. <b>087ASM024</b></p>
<p>SCALE: 1:1.5</p>		<p>WEIGHT:</p>	<p>SHEET 6 OF 6</p>