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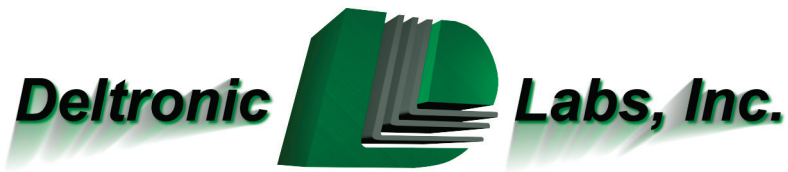
**Deltronic**

**Labs, Inc.**

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





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A B O U T

# Deltronic Labs

I N C O R P O R A T E D

Deltronic Labs, Inc. is a small family owned and operated company started by Stephen Horniak Sr. in the early sixties. During the first years of the company's existence, the focus was mainly design and production of various electronic and electro-mechanical devices ranging from simple timing devices to ultra-sensitive meters and gauges. We incorporated in 1968 and began our journey into the coin-operated amusement and family entertainment industry. One of Deltronic Labs' first endeavors in this industry involved designing and producing the first solid state electronics for the already popular electro-mechanical Skee Ball™ alleys. Soon after, a modular, cost effective, electronically controlled ticket dispenser was developed to replace bulky, mechanical dispensers in existing popular "Redemption" games from companies like Bob's Space Racers™. As redemption continued to grow, the need for tools to help streamline the process and convert non-redemption games was evident. Interface solutions and the industry workhorse Ticket Eater™ were developed to help. Although, our main focus is on the amusement industry, we have designed and manufactured many types of electro-mechanical components, microprocessor controlled mechanisms, hardware and software for various industries.

Today, the popularity of Ticket Redemption amusement games remains constant. In our forty years in one business, we have earned an excellent reputation for reliable products and exceptional customer service. We appreciate the confidence and trust our customers, both old and new, place in us and look forward to continuing to build on these relationships.

**Deltronic Labs, Inc.**

# The "Quick Release" Ticket Dispenser

**Choose the "Industry Standard" for your ticket handling needs. A superior quality and reliability that can only be redeemed by Deltronic Labs, Inc.**

## 1. "Quick Release" face plate

Dynamic, design allows the ticket dispenser to "quickly release" from it's face plate on your cabinet or ticket door, no tools needed. Gives you complete access to front of rollers and ticket guides. In addition, you can "snap out" one ticket dispenser and immediately replace it with another in just seconds. No tools necessary! The face plate retrofits any existing Deltronic Labs machine.

## 2. Bottom METAL ticket guide

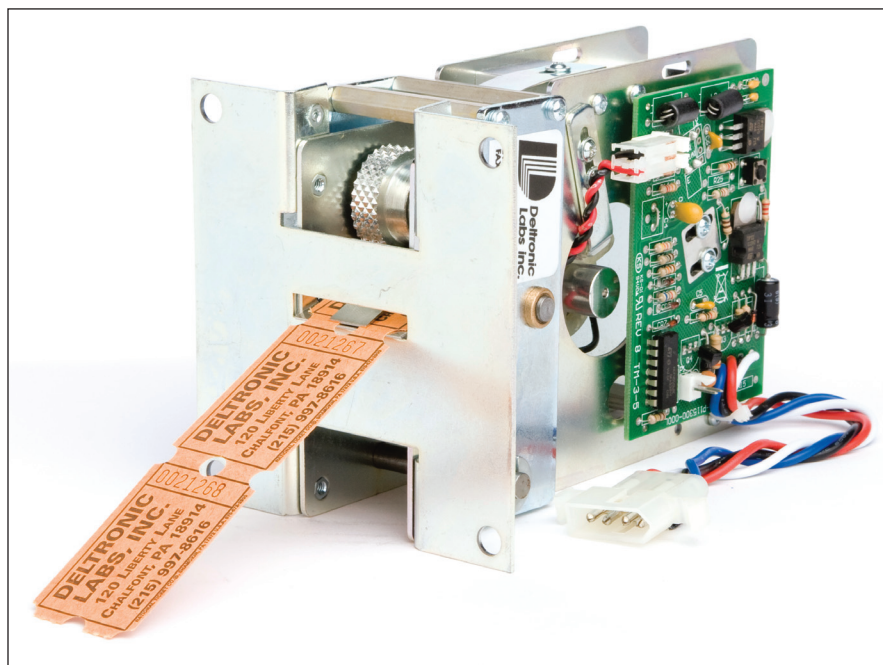
The longer, more durable ticket guide extends through the face plate allowing for better guidance. A larger opening in the face plate prevents curled tickets from catching.

## 3. Foolproof braking system

Our impressive braking system eliminates brake slippage, allowing foolproof, accurate dispensing. This design also reduces wear and tear on the dispenser caused by misuse. Brake is easily accessible and can be adjusted.

## 4. Optical sensor dust cover

Now the chance of ticket-dust accumulating on the optical sensor is virtually eliminated. This increases the accuracy of the ticket count, again reducing maintenance.



MANUFACTURED WITH PRIDE BY DELTRONIC LABS IN THE USA.  
U.S. PATENT 5833104. ADDITIONAL PATENTS PENDING.

## PLUS...these features and specifications

- Low voltage operations: only 12V D.C.
- Solid state output enables interfacing with electronic games
- Compact and lightweight - only 3"W x 4"H x 5½" and 2½ lbs.
- Validation "Diamond" mark identifies tickets that have been dispensed
- Adjustable ticket stop
- Ticket advance switch for easy loading & cleaning

## ONE PULSE TICKET DISPENSER

### The DL-4-S-S Switch input

This is a one pulse-one ticket dispenser. For each switch closure one ticket is dispensed.

### Logic Input Option:

The DL-4-P-S uses a logic input rather than a switch to activate.

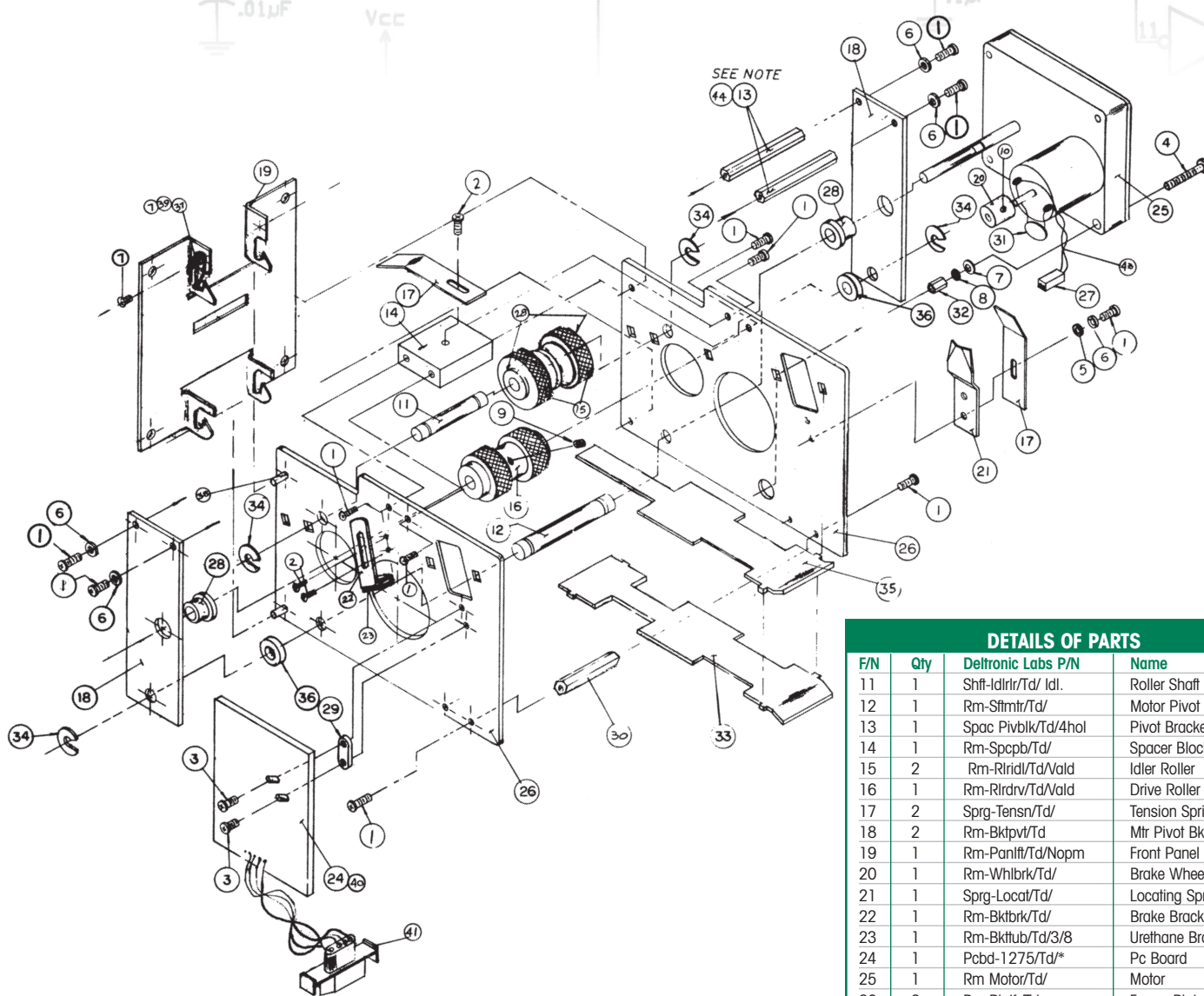
### Optical Coupler Option:

The DL-4-O-S uses an optical coupler input instead of a switch or logic to pulse. **NOTE:** DL-4-S-S and P-S dispensers have 12V ticket meter output. See schematics for details.

**Quality Products from the Industry Leader in Ticket Dispensers**

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**Deltronic****Labs, Inc.****DETAILS OF PARTS**

F/N	Qty	Deltronic Labs P/N	Name
11	1	Shft-IdlrIr/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-RlrIdr/Td/Vald	Idler Roller
16	1	Rm-Rlrdrv/Td/Vald	Drive Roller
17	2	Sprg-Tensn/Td/	Tension Spring
18	2	Rm-Bktptvt/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-Bktlub/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/20g	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 1/2	Hex Spacer 1 1/2"
31	1	Rm .1m/Tt/50v	.1mfd 50v
32	1	Spac-Hex/Td/1/2	Stand Off
33	1	Guid-Bottom/Td/Met	Lower Guide Met.
34	4	Ring-E25r/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-H21 a/Td/Opto	Dust Cover
41	1	Conn Molex/Td/4pm	4 Wire Molex Ma.
42	1	Rm-Label/Td/Alum.	Label Aluminum
43		Wire-Redblk/Td/Motor	
44	2	Spac-Pivbrk/Td/Hex***	Spacer 1/2" Hex.

**MATERIAL LIST FOR SCREWS**

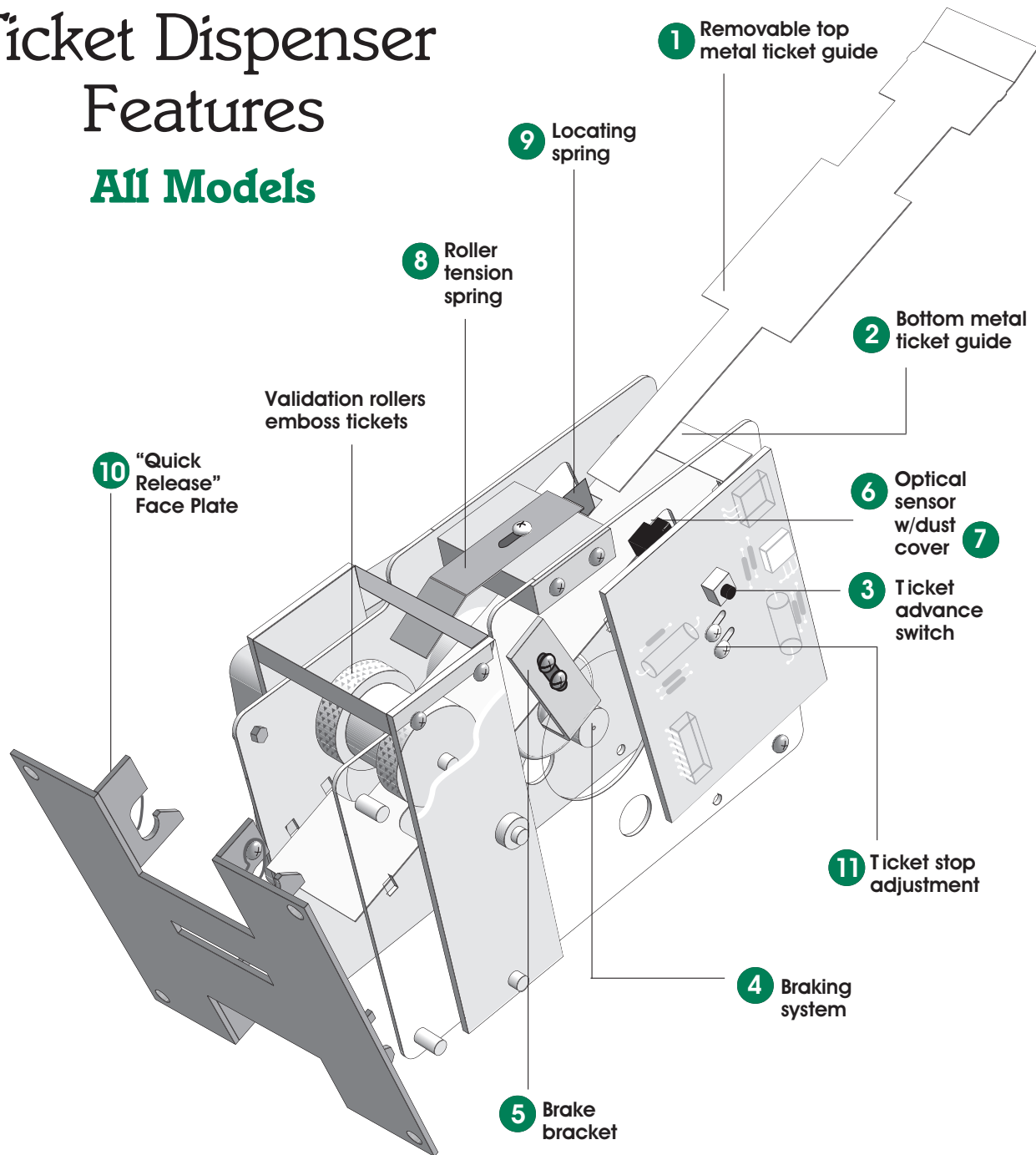
F/N	Qty	Part Number	Description
1	11	Rm-#4-40s/Td/1/4	4-40x1/4" Screw
2	3	Rm-#4-40r/Td/1/4	4-40 X 1/4" Washer Head
3	2	Rm-#4-40r/Td/1/2	4-40 X 1/2" Washer Head
4	1	Rm-#8scrw/Td/	8-32 X 1 1/2"
5	1	Rm-#4fltw/Tt/	#4 Flat Washer
6	5	Rm-#4spsw/Tt/	#4 Split Loc. Washer
7	2	Rm-#4-40t/Td/1/8	Phillips Trusshead
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 1/2" Set Screw

\* Order By Model Number

\*\* **NOTE:** F/N #36  
Replaces .032 And  
.093 Spacer Washers.\*\*\* **NOTE:** F/N #44  
Replaces Large  
Spacer Block.\*\*\*\* **NOTE:** Parts vary for  
2" wide dispensers.

**Deltronic****Labs, Inc.**

# The "Quick Release" Ticket Dispenser Features All Models



Quality Products from the Industry Leader in Ticket Dispensers

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### 1. Top Metal Ticket Guide

For servicing, the top metal ticket guide can be removed and replaced. With unit facing you, gently spread side plates with thumb and index finger. Tilt guide to right at 45° angle and snap left side tab out and pull straight back. When replacing, simply reverse these steps. Note there is no need to spread side plates while replacing guide. Tilt to right and insert right tab first. Note: When PCB has opto-sensor cover, guide is inserted over sensor then directed down to right. Be sure guide is BELOW brake bracket screws when replaced.

### 2. Bottom Metal Ticket Guide

The longer, more durable ticket guide extends through the face plate allowing for better guidance plus a larger opening in the face plate prevents curled tickets from catching.

### 3. Loading of tickets with ticket advance switch

Tickets are inserted in the rear of machine between the top and bottom ticket guides and pushed forward to the rollers. If needed, gently push the locating spring (9) away from the ticket guides. Then push the ticket advance switch until you see the edge of first ticket.

### 4. Braking system

Our impressive braking system eliminates brake slippage allowing foolproof, accurate dispensing. The design also reduces wear and tear on the dispenser.

### 5. Brake bracket

The brake is easily accessible and can be adjusted to engage immediately when ticket is pulled. (Minimum of 1/8" from brake wheel.)

### 6. Opto-Sensor

Included as part of the controller is an opto-electronic beam sensor which detects the notch between tickets. The output of the ticket sensing circuitry is an open collector transistor.

### 7. Opto-Sensor Dust Cover

In addition, an optical sensor dust cover is also included to eliminate the possibility of ticket dust accumulating on the optical sensor. This increases the accuracy of the ticket count and reduces maintenance.

### 8. Roller Tension Spring

The roller tension springs keep constant tension on tickets which insures proper delivery and prevents the tickets from being "pulled through" when the dispenser is idle. To increase the tension, loosen the screw and move the spring forward. Tension is correctly adjusted when tickets cannot be pulled from the dispenser and validation rollers lightly emboss the tickets.

### 9. Locating Spring

The ticket guide spring insures that the notches in the tickets pass through the opto-sensor. To decrease tension, loosen the screw and move the outer tension spring up. This changes the tension on the inner spring. The tickets should be snug between the spring and the side plate but not deformed by the excess tension. The spring is adjusted at the factory for 1-5/32" wide tickets and positioned 1/8" from ticket guides.

### 10. "Quick Release" Face Plate

The dynamic design allows the ticket dispenser to "quickly release" from its face plate on your cabinet or ticket door. This can be done manually and no tools are needed. This gives you complete access to the front

of the rollers and to the ticket guides. Plus you can "snap out" one ticket dispenser and immediately replace it with another in just seconds.

### 11. Ticket Stop Adjustment

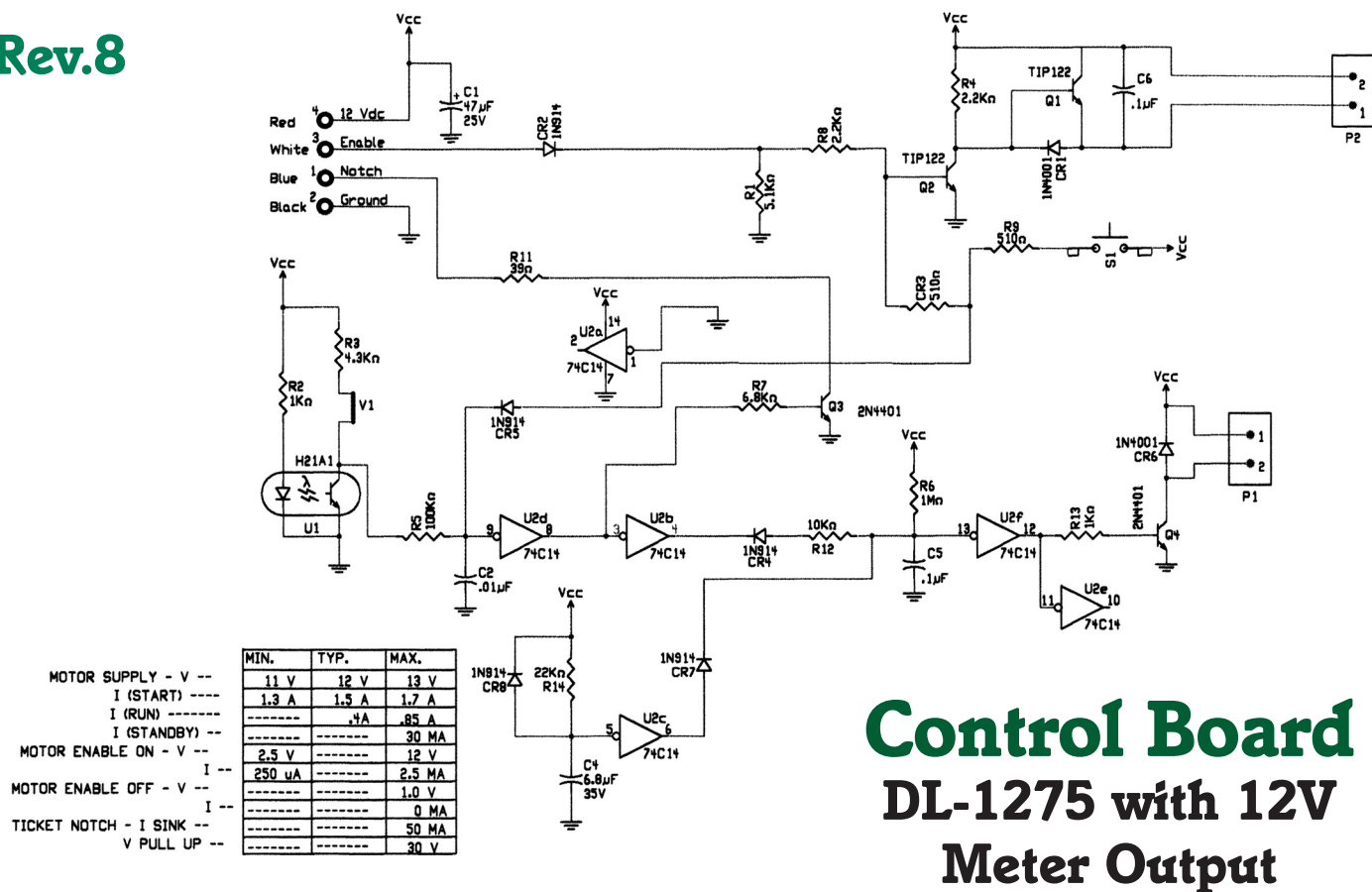
The ticket stop adjustment allows you to position the tickets while the machine is off. The tickets should protrude through the slot at least 1/16". The ticket dispenser PC board is mounted on spacer with two screws with washers in two slotted holes. Loosening the screws and moving the board forward will allow the tickets to stop further out beyond the edge of the slot.

### Standard Dispenser Specifications

The quick release face plate greatly improves serviceability and reduces maintenance. Now standard on all Deltronic Labs Ticket Dispensers.



- Low voltage operations, only 12V DC
- Solid state output allows interfacing with electronic games
- Compact size, only 3 1/8" W x 4" H x 5 1/2" L
- Weight: 2 1/4 lbs.
- Validation "diamond" mark identifies tickets that have been dispensed.
- Adjustable ticket stop
- Dispenses 2"L x 1 1/2"W tickets
- 4"L x 2"W ticket
- 4"L x 1 1/2"W ticket
- 2"L x 2"W duplex ticket
- One year warranty
- Standard face plate: 4"H x 3 3/4"W
- Narrow face plate: 4"H x 3 1/8"W
- 12V meter output
- CE
- Rohs compliant

**Rev.8**

## Control Board 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

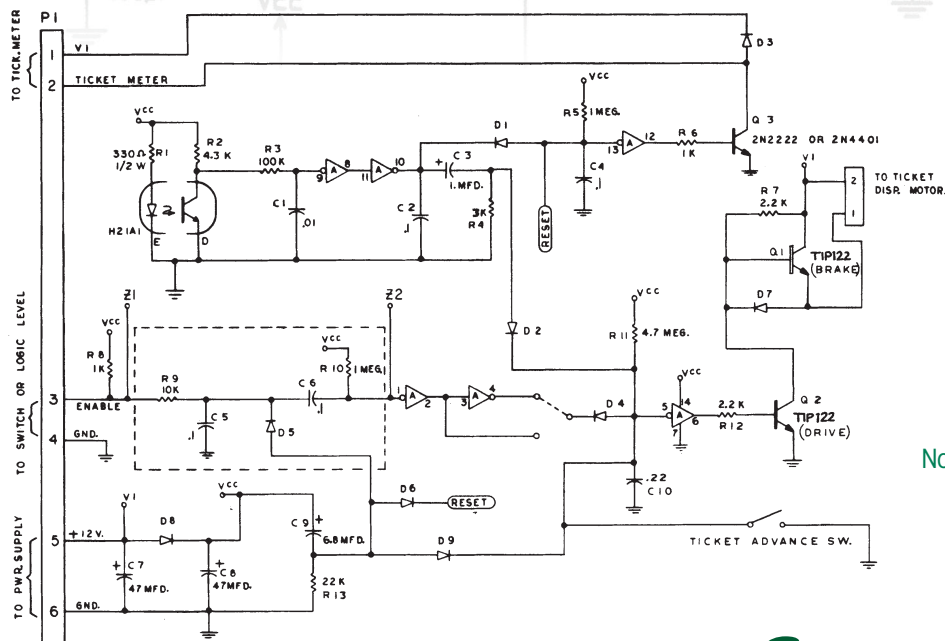
1. Resistor RS and diode CR3 and the jumper going to pin 1 of the IC are changed for this revision. This was done to limit the current going through the switch and then to pins 1 & 9 of the IC. This resolves problems that occurred with units that used unregulated power supplies. Deltronic Labs still recommends that regulated supplies be used. Changes closely reflecting these changes were made in the previous revision. (Rev. 7)

- Resistors R10, R15, and R25 were deleted from this schematic. The Rev. 7 schematic shows these resistors, but they were never actually inserted on the board.
- The unit as shipped from the factory (as per this 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.
- 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 ALL CE version, and the unit will be shipped with the necessary components.

- This 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.
- If tickets are highly translucent, the 4.3 Kohm 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 4.3 Kohm resistor (R3) changed to 1 Kohm.



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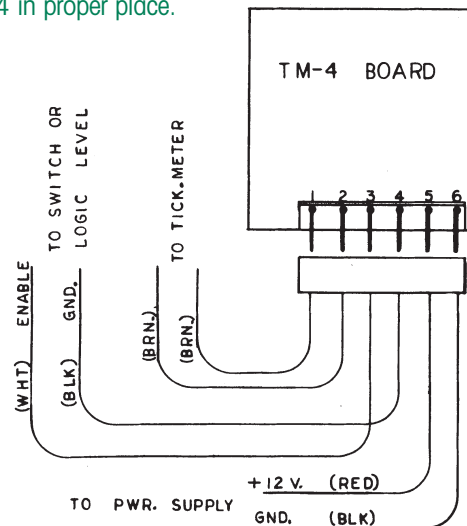
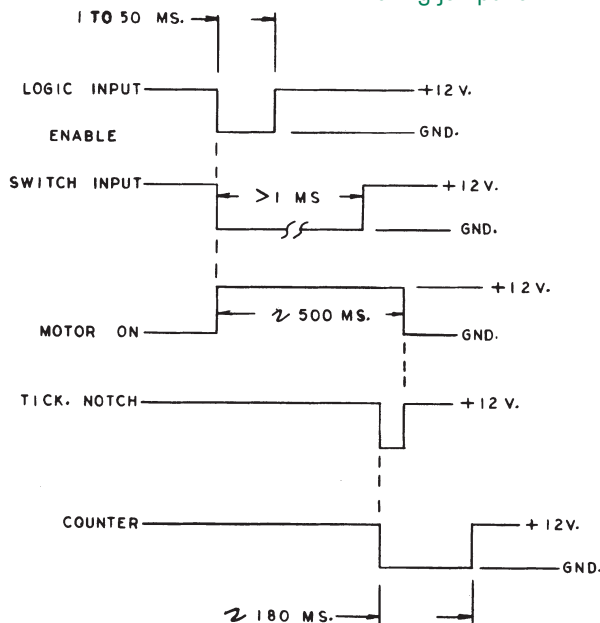
1. A, 74C14
2. D3, D7 & D8 are IN4001, others are IN457A or 914

Model #DL-4-S-S, SW Input  
Model #DL-4-P-S, Logic Input

Note: With logic input components  
and dotted lines are omitted and  
Z1 is jumpered to Z2.

## Control Board DL-4-S-S & DL-4-P-S

Note: Enable pulse may be positive or negative by  
having jumper on TM-4 in proper place.

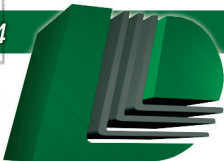


Note: On PCB TM-4, Rev. 1&2,  
Q1 and Q2 transistors are  
D40K1 or equivalent

Model #DL-4-S-S  
Model #DL-4-P-S

[illegible][illegible]



**Deltronic****Labs, Inc.**

## Service

### Technical Support

Questions? Problems? Please call our Service Department at

**215-997-8616** or go to [www.deltroniclabs.com](http://www.deltroniclabs.com) and we'll do our best to get you up and running.

### 24-hour repair available

Upon customer request, all warranty and non-warranty items returned to Deltronic Labs can be serviced and shipped back to the customer the same day they arrive. Be sure to include your shipping requirements and return address.

### Fast parts service

We provide quick shipping from our manufacturing inventory.

### Fast repair service.

Most repairs are done within 24 hours.

### On time delivery

Our reputation is second to none.

### Warranty Information

Deltronic Labs offers the following one year warranty on all ticket dispenser models from the date of purchase:

## One Year Warranty

Deltronic Labs will replace or repair any mechanical or electronic parts damaged as a result of component or circuit failure. We will also repair or replace defects in parts or assembly caused by normal operations. Deltronic Labs will not, however, be responsible for damage caused by or due to misuse of operation or power requirements, including system overloads or modification and burn out of electronic boards. Nor will Deltronic Labs be responsible for visible damage or broken or missing parts caused by tampering with the units or unauthorized servicing.

## Interface Time Saving Solutions

### Yogi II

- Operator adjustable
- Jackpot prevention
- Drop or return pulse
- Ticket return memory

### Adjuster

- Converts any game to DL-1275
- Program custom payouts
- Power diversion feature
- Mercy ticket at coin op

### NC-100 No Cheat

- Eliminates jackpoting
- Eliminates theft
- Power diversion feature
- Simple & cost effective

### Slot 500

- Dispense – coins in – coins bet
- On board programming
- Time out – reset option
- Interface with player tracking card

### TD Bench Tester

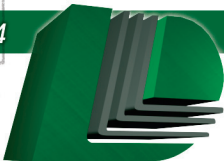
- Test any DL TD location
- Portable
- Troubleshooting guide
- Saves time & money

### RS232 TD Controller

- Control from 1 to 8 Dispensers
- Serial port connection
- Five simple commands
- Ticket Audit Report

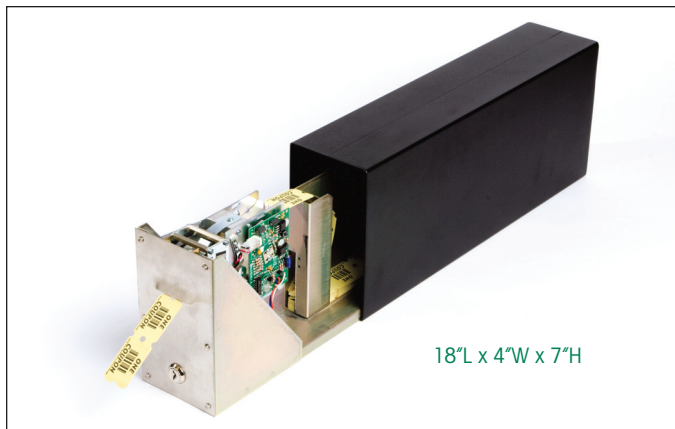
### Custom Programming Available

Please call for additional information and prices.

**Deltronic****Labs, Inc.**

# Parts and Accessories

## Outside Mount Case



### For use with

- Pinballs • Videos • Slots
- Countertop videos • Admissions
- Parking Control • Recycling Applications

### Mounting Plate 5\"/>

A stainless steel plate that mounts to the front of our ticket dispenser and allows for direct mounting to your cabinet (includes hardware).

### Ticket Bin

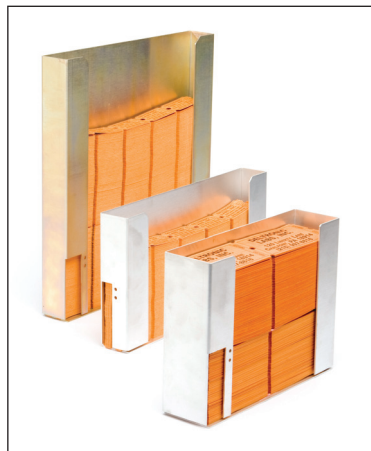
**DIMS - 2500 capacity**

10 $\frac{3}{4}$ "L x 1 $\frac{1}{2}$ "W x 6"H

**4000 capacity**

10 $\frac{3}{4}$ "L x 1 $\frac{1}{2}$ "W x 12"H

- Optional ticket low switch



## DL 111 Ticket Dispenser- Front Load - Cash In - Tickets Out

### Product Features:

Validator accepts: \$1, \$5, \$10, \$20

Stacker Capacity: 450 bills

Holds 4000 tickets

Front Load Access

"Out of Service" light

### Available Options:

1. Illuminated Marquee  
8 $\frac{1}{2}$ "W x 9 $\frac{1}{2}$ "H x 10"D
2. Floor Base  
8 $\frac{1}{2}$ "W x 40"H x 13"D
3. Wall Mount

### Warranty:

One Year Parts & Labor

### Dimensions:

8 $\frac{1}{2}$ "W x 18 $\frac{3}{4}$ "H x 13"D

### Weight:

35 Lbs.





**Deltronic****Labs, Inc.**

# The Ticket Dispenser ADMISSION SYSTEM

## Pedestal & Keypad Station

### NO MORE FUMBLING WITH STACKS OF TICKETS AND CASH

The Keypad Ticket Dispenser controls multiple dispensers from one keypad. Just enter any number of tickets from 1 to 99 and press the button to dispense the correct number of tickets from the chosen dispenser #.

**Make life easier with the Keypad Ticket Dispenser**

#### Features Include

- Up to four unique tickets can be dispensed from four dispensers
- Programmable default settings for ticket quantities issued
- Uses standard redemption size ticket 1½" x 2"
- Optional 2" x 4" tickets or 1½" x 4" or 2" x 2" duplex
- All ticket sizes require notches
- Individual non-resettable counters for each dispenser
- Quantity numbers entered in error can be cancelled before dispensing
- Signal sounds if error is made or problem is detected
- Locking pedestal cabinet (Optional) 35" H X 28" W X 15" D
- Custom cabinets available for additional dispensers & colors

**NEW**  
High Speed  
Dispenser  
**5+/sec.**



## Portable & Keypad Station

#### Features Include

- Two unique tickets can be dispensed from two dispensers (standard)
- Programmable default settings for ticket quantities issued
- Uses standard redemption size ticket 1½" x 2"
- Optional 2" x 4" tickets or 1½" x 4" or 2" x 2" duplex
- Individual non-resettable counters for each dispenser
- Quantity numbers entered in error can be cancelled before dispensing
- Signal sounds if error is made or problem is detected
- Locking portable cabinet (Optional) 15½" H x 18½" W x 14½" D
- Custom cabinets available for additional dispensers & colors

**Deltronic Labs, Inc.**

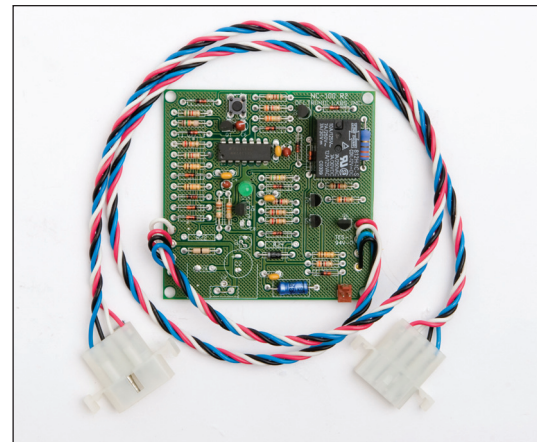
# The NC-100 "No Cheat" Board

## SIMPLE AND COST EFFECTIVE-ELIMINATE JACKPOTTING AND CHEATING

The NC-100 board plugs in between the game and the DL-1275 ticket dispenser without requiring any special arrangements or changes to the existing game.

### Features Include

- Prevents dispensing of extra tickets due to unlawful tampering
- Removes power from dispenser when game is idle
- Easy to install
- One year limited warranty



**NOTE:** Will not prevent ticket payout due to game board failure

## Custom Designed Software & Application Engineering

### Custom Designed Software

There are many different types of payouts, restrictions and functions that may be unique to your location or area. Deltronic Labs can provide custom software, and or hardware to accommodate all your needs. Our engineering department has produced a wide variety of unique programs to allow you to operate your location according to your applications, requirements or restrictions. Have an idea? Give us a call.

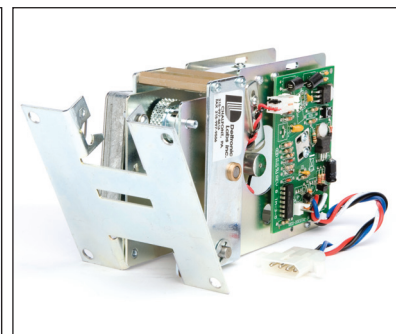
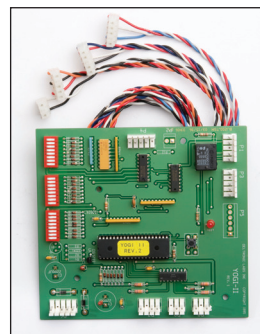
### Features Include

- Custom payout for redemption
- Coin in—Ticket out
- Slot machine integration
- Non-redemption conversions
- Custom—Coin in—Coin out
- Card system integration with Ticket Eater's
- Redemption 8-Liner configurations
- Streamline redemption process

## THE YOGI II TICKET DISPENSER INTERFACE

### Features Include

- Fully operator adjustable
- Only 5½" x 6"
- Drop or return pulse operation
- Jackpot prevention
- Low voltage protection
- Watchdog timer
- Reverse voltage protection
- Under voltage protection
- Ticket return memory
- TD power diversion feature
- Pulse timing



### ASK FOR THE YOGI II KIT

#### KIT INCLUDES

- Yogi II PCB
- DL-1275 Ticket Dispenser,
- SS Face Plate with hardware
- Wiring harness
- Ticket Bin
- "Tickets" Label



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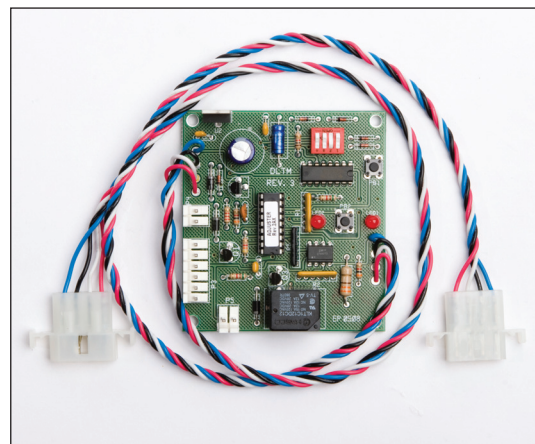
# The Adjuster Board

## ADJUST TICKET PAYOUT INSTANTLY

The adjuster board provides customized ticket payout - High or Low - Or Zero Ticket Payout Option - Without affecting the performance of the game!

### Features Include

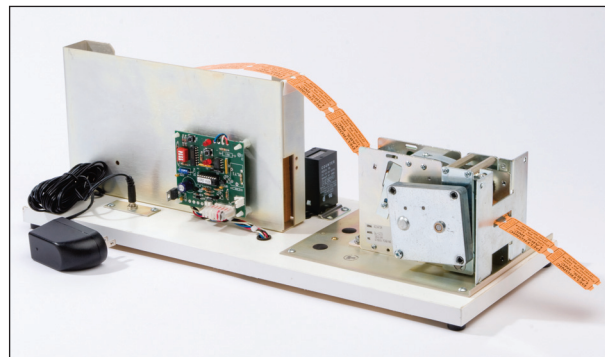
- Multiply or Divide for custom payout
- Dispense a *Mercy Ticket* based on Coin In
- Adds security-removes power from TD when game is idle
- One year limited warranty
- Easy to install
- Standardize your location to ONE dispencer
- Converts ANY game to the DL-1275



# The Ticket Dispenser Bench Tester

### Features Include

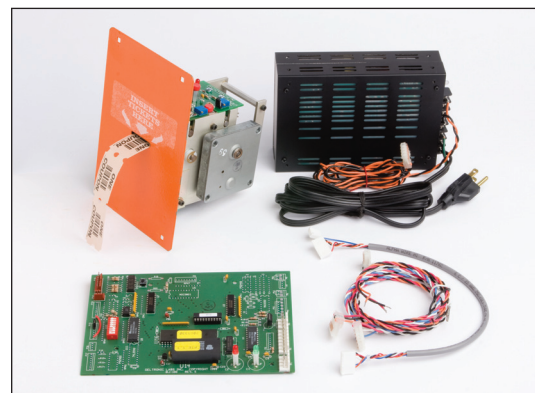
- Tests all Deltronic Labs' Ticket Dispensers DL-1275, DL-4PS, DL-4SS
- Saves time and money by trouble shooting both mechanical and electronic components of your Ticket Dispensers in-house!
- Easy set up. Simply plug unit into standard outlet and unit is ready
- Unit is portable...Test dispensers at any location
- Trouble shooting guide will help you determine any problems in minutes
- Full One year warranty
- Call for further details



# VP-100 Ticket Acceptor

### Features Include

- Instantly redeem tickets for game play and replays
- Accepts 1½" w x 2" L tickets
- For security, scans only your unique bar-coded ticket
- Returns credits to screen for replays
- Optional mounting faceplate
- 12 volts DC - EMI protection
- Includes logic PCB, software and harnesses
- Optional cutter to destroy redeemed tickets



# The **Slot-500** Ticket Dispenser

## The Ultimate Promotional Add On to Slot Machines

A fully automated and programmable add on to Ticket Dispenser to provide a unique ingredient to your Slot Department marketing plan...All you add is the creativity!

**Only 13 1/2" L x 4 1/4" w x 11 1/4" H**

A valuable tool to add redemption to the gaming industry. The customers enjoy receiving additional incentive to play - **Makes Everyone A Winner!**

U.S. Patent 5833104  
Other Patents Pending



### Features Include

- Dispense tickets based on Coins In or Coins Bet
- Programmable for random or fixed number of coins  
Random Set Min and Max from 0-999  
Fixed 0-999 Coins in for dispensing
- Time out option to reset the count
- On board programming with total count display
- Low tickets indicator light
- Trouble warning light
- Accepts 2" x 4" tickets - standard or perforated (1,000 tickets per stack)
- Accepts 1 1/2" x 2" tickets - standard tickets (2,000 tickets per stack)
- Set number of tickets to dispense from 1 to 9
- Option to interface with Player Tracking Card