PrecisionCounter™ 500

Owner's Manual

Revision 1.12117

ARROW

CAPITAL GAME

www.arrowinternational.com

Table of Contents

PrecisionCounter 500™ Limited Warranty

This Limited Warranty (the "Warranty") is made by Arrow International, Inc. ("Arrow') to the original purchaser of the Equipment ("Purchaser") in connection with the PrecisionCounter 500™ (the "Equipment").

1. Limited Warranty

Arrow warrants that the Equipment will, for a period of ONE (1) YEAR from the date of original purchase from an authorized Arrow dealer, be free from defects in material and workmanship. Purchaser represents to Arrow that no employee, agent, or representative of Arrow (or of an Arrow dealer) has made any representation or warranty regarding the Equipment except as set out herein. This Warranty applies to normal commercial use and does not cover failures or damage which (a) occur in shipment; (b) is caused by products not supplied by Arrow; (c) result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, set-up adjustments or (d) alterations, servicing, repairs or modifications performed to or on the Equipment by anyone other than Arrow or an Arrow-authorized dealer. This Warranty also does not cover any damage to the Equipment resulting from failure to install, or use, in strict conformity with the installation or operation instructions set forth in the Owner's or Service Manuals provided by Arrow. This Warranty and the rights hereunder are not transferable and inure solely to the benefit of the original Purchaser.

2. Disclaimer of Warranties

ARROW MAKES NO REPRESENTATIONS, WARRANTIES OR COVENANTS, EITHER EXPRESS OR IMPLIED (INCLUDING WITHOUT LIMITATION, ANY EXPRESS OR IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, MERCHANTABILITY, DURABILITY OR TITLE) AS TO THE PERFORMANCE OF THE EQUIPMENT.

3. Limitation of Remedies

If the Equipment does not conform to the Warranty above, Arrow will, at its option, either (a) repair or replace the Equipment, or part thereof, which is defective or (b) refund so much of the purchase price as Purchaser has paid for the defective Equipment, less 1/12th of the purchase price for each month between the date of the purchase and the date of the discovery of the defect; provided that written notice of the defect and its nature is given to Arrow as soon as practical after discovery of the defect, but in no event later than 90 days from the date of the discovery of the defect.

4. Limitation of Liability

The remedy above is Purchaser's sole and exclusive remedy and will satisfy all of Arrow's liabilities, whether based on contract, negligence, tort, product liability, strict liability, or otherwise. IN NO EVENT IS ARROW LIABLE FOR INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF YOUR USE OF THE EQUIPMENT OR OWNER'S OR SERVICE MANUAL. IN NO EVENT WILL ARROW'S LIABILITY IN CONNECTION WITH THE EQUIPMENT EXCEED THE SALES PRICE PAID FOR THE EQUIPMENT.

5. Proof of Purchase

Purchaser must, upon Arrow's request, submit proof of original purchase (satisfactory to Arrow) of the Equipment. The Warranty above shall not apply to, nor cover, any Equipment for which Purchaser is unable to supply such proof of purchase.

6. Limitation of Actions

Any legal action against Arrow for a default of its obligations under this Warranty must be commenced within 2 years from the date the Equipment was sold by an authorized dealer of the Equipment. The sale of the Equipment and this Warranty are governed by the laws of the State of Ohio without regard to conflict of laws principles. Purchaser irrevocably submits to the exclusive jurisdiction of the United States District Court for the Northern District of Ohio (or, if subject matter jurisdiction in that court is not available, in any state court located within the Cuyahoga County, Ohio) over any dispute arising out of or relating to the purchase of the Equipment or this Warranty. Purchaser irrevocably waives, to the fullest extent permitted by applicable law, any objection which it may now or hereafter have to the laying of venue of any such dispute brought in such court or any defense of inconvenient forum in connection therewith.

7. How to Obtain Service

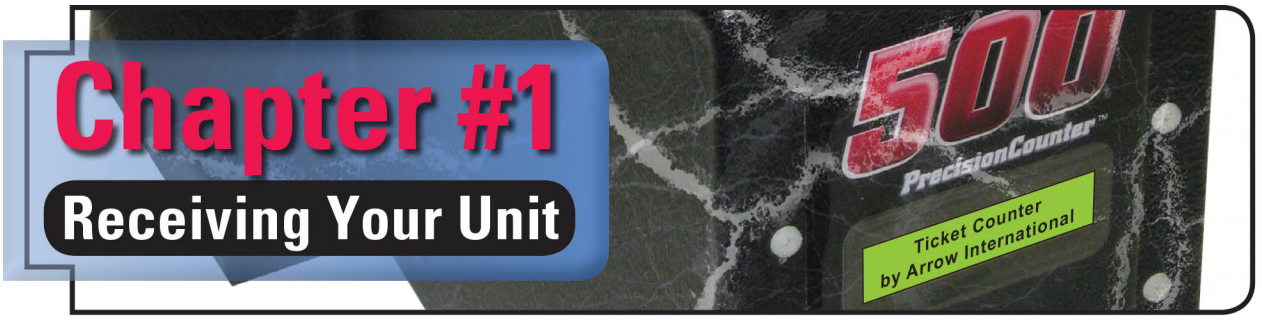
Please contact Arrow at the phone number or e-mail address listed in the Equipment's Service Manual, or at 800-277-6214, with any questions or service issues. The cost of any service call for an Equipment problem which is not covered by this Warranty is the responsibility of the Purchaser.

LEGAL NOTICE

This document is provided “AS IS” and Arrow International, Inc. and its affiliated companies (collectively, “Arrow”) assume no responsibility for any typographical, technical, or other inaccuracies in this document. In order to protect Arrow proprietary and confidential information and/or trade secrets, this document may describe some aspects of Arrow technology in generalized terms. Arrow reserves the right to periodically change information that is contained in this document; however, Arrow makes no commitment to provide any such changes, updates, enhancements, or other additions to this document to you in a timely manner or at all.

Part number: 46731-MNL
Revision 1.12117
April 2012

9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214



Damage action process

The PrecisionCounter 500™ contains delicate electronic equipment. It is imperative that you thoroughly inspect the contents of the package before accepting product delivery from the carrier

In case of severe damage, refuse the equipment from the carrier. Contact your local Arrow International equipment distributor for immediate replacement

If the product is damaged but acceptable, make a note on the bill of lading before accepting. Take a photo of the damage before and after unpacking as a record of claim against the carrier. Contact the carrier's agent immediately for inspection. Be sure to obtain a copy of the inspection report for your records

Unpacking

Arrow International designed your new PrecisionCounter 500 to have a distinctively attractive appearance, and we used careful manufacturing and assembly techniques to preserve this appearance. Each PrecisionCounter 500 is inspected for scratches, bumps or abrasions during packing, and is warranted to be free from defects

Please take great care when unpacking the PrecisionCounter 500 from the packing material. Cutting the packing material too aggressively may lead to damage of the ticket counter. Before opening, closely inspect the carton for evidence of shipping damage such as puncture holes, tears, and crushed edges or corners. Damage to the carton may mean damage to the PrecisionCounter 500. If damage is detected refer to the Damage Action Process above

9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214

Chapter #2

Introduction

Thank you for choosing Arrow International as your supplier of charitable gaming equipment and supplies

The PrecisionCounter 500 was designed and manufactured to the highest standards. It has the following features

- Counting speed of 14 tickets per second
- 500 ticket capacity
- Open-column design that can be quickly refilled while the machine is counting
- Customizable automatic and manual batch modes
- Reset-able counter of total tickets dispensed
- Support for a wide variety of tickets
- Small footprint for tabletop operation: easily transported and stored
- Proven reliability: utilizes a hybrid version of the feeding mechanism that has been so successful in the Nevada Gold™

Column

Ticket Gate

Ticket Guide

Main Plastic Body

LCD Assembly (display)

Keypad

Square Pushbutton Switch

Thumb Nut

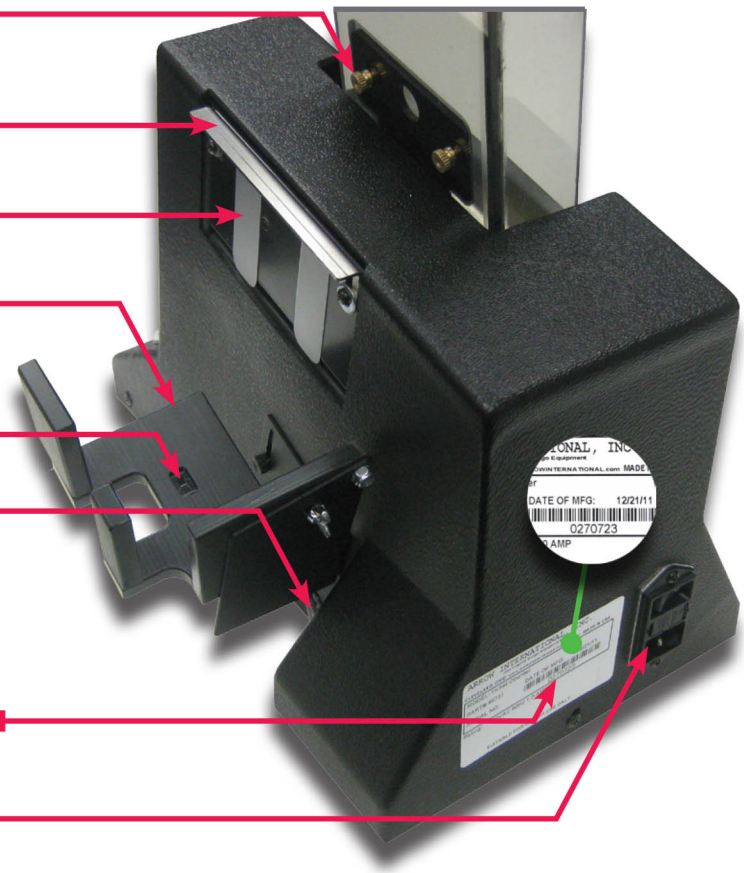
Film Retainer

Ticket Deflector

Ticket Catcher Assembly (hopper)

Ticket Catcher Optical Sensor

Wire Harness for the Ticket Catcher Optical Sensor



Serial number of the ticket counter: Have available when calling your local distributor, or Arrow International's Technical Assistance Center

Power Entry Module (the fuse is located in this component)

9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214

Overview of physical operation

- Up to 500 tickets are loaded in the column as depicted in the picture to the right - the tickets are fed sideways to the dispensing mechanism, *not* vertically
- The operator uses the keypad and square pushbutton switch to start operation
- The bottom ticket is grabbed by the rollers and fed through the dispensing mechanism
- The ticket deflector directs each ticket downward into the ticket catcher assembly
- The ticket catcher optical sensor checks to see if any tickets are in the hopper
- While tickets are being dispensed, more tickets are loaded at the top of column and neatly arranged against the back of the column

If the ticket catcher assembly is disconnected, refer to page 11 for how to connect and calibrate it

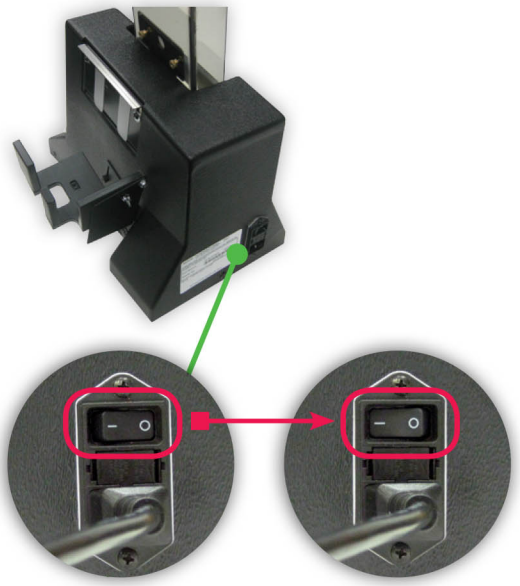
Chapter #3
Operation

The PrecisionCounter 500™ has 3 configurable values

- The number of tickets to dispense each batch: between 1 and 50
- The dispense mode for each batch: manual or automatic (1 to 9 second delay)
- The number of tickets dispensed so far: this value increments automatically and can only be reset

Quick dispense

1 Turn on the PrecisionCounter 500™



2 When you see the *Main Menu* ...

Batch-1 Totals-2
Set Auto Batch-3

PRESS 1

3 This is the *Batch Menu*

40 Press #
Acc. Total 24102

To change the number of tickets to dispense, enter a value between 1 and 50

(This value can be changed at any point when the *Batch Menu* is visible on the display)

4 To dispense the first batch of tickets ...

PRESS # (or the square pushbutton switch)

5 If the display returns to the *Batch Menu*, the machine is configured for manual operation. You must press #, or the square pushbutton switch, in order to dispense each batch of tickets

9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214

6 If, however , the ticket counter displays this screen ...

```
Remove Tickets
Acc. Total 24142
```

... the ticket counter is configured for automatic batching; after you remove the 1st batch of tickets, the next batch of tickets will automatically dispense

7 To return to the *Main Menu* ...

PRESS * (until you see the *Main Menu*)

Choose between automatic or manual dispense

1 When you see the *Main Menu* ...

```
Batch-1  Totals-2
Set Auto Batch-3
```

2 **PRESS** 3 to see ...

```
Auto Batch Delay
5 Sec. Press #
```

3 If you want to dispense each batch of tickets manually ...

PRESS 0

4 If you want automatic batching, enter a value between 1 and 9 ... this is how many seconds the ticket counter will wait (once the previous batch is removed from the hopper) before dispensing the next batch

5 To return to the *Main Menu* ...

PRESS #

View, or reset, the Totals

1 When you see the *Main Menu* ...

```
Batch-1  Totals-2
Set Auto Batch-3
```

2 **PRESS** 2 to see ...

```
24142
* - Reset  # - Cont
```

3 If you would like to reset the total count of tickets dispensed ...

PRESS * 1

4 To return to the *Main Menu* ...

PRESS #

If there are not enough tickets in the column to complete a batch

1 ... the following message will flash for 2 seconds

Warning ! ! !
Dispense Failed

2 The next message gives the operator a choice

Continue Batch - #
New Batch - *

(or the square pushbutton switch) - the ticket counter will attempt to immediately dispense the remaining number of tickets from the incomplete batch

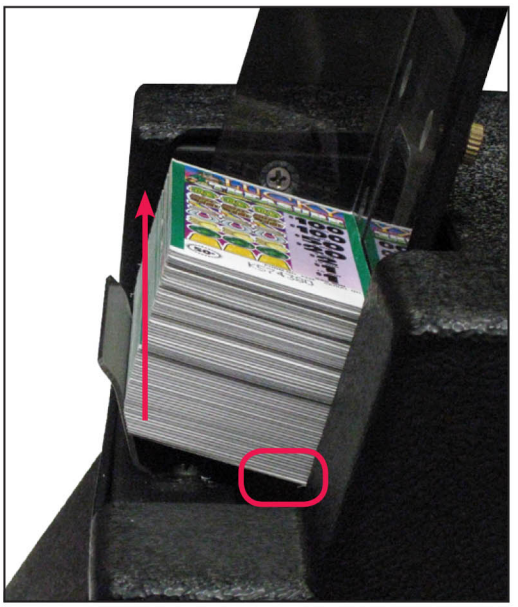
*** - the ticket counter will return to the *Batch Menu* and add the number of tickets that *were* dispensed, to the counter of dispensed tickets

3 If *Warning!!! Dispense Failed*, appears, but there *are* tickets in the column, the bottom ticket might not be touching the rollers

Lift the tickets, as pictured in the Figure below: this should cause the bottom ticket to rest on the rollers

After you let go of the tickets ...

PRESS # (or the square pushbutton switch)



9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214

Chapter #4
Calibration & Maintenance

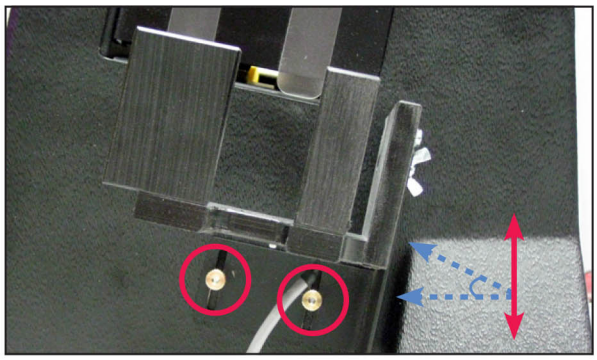
Adjusting the ticket catcher assembly

To account for the various conditions that can affect the stacking of dispensed tickets, the PrecisionCounter 500 has 4 customizable settings which allow the machine to be configured for the needs of any particular customer

3 of these configurations are performed on the ticket catcher assembly and the 4th is performed on the ticket deflector (the latter configuration is described on the next page)

We recommend the following approach to adjusting the ticket catcher assembly: set each of the 3 configurable options to the middle of the possible ranges, and then, while dispensing several columns of tickets, make minor adjustments to the original setup. *Once an acceptable configuration is reached, it will rarely need to be modified*

The height of the ticket catcher assembly - and its angle to the ticket exit chute - can both be modified from the two thumb nuts which attach the assembly to the ticket counter: the thumb nuts adjust how the tickets stack



This wingnut allows the ticket catcher assembly to swing into, or away from, the main body of the PrecisionCounter 500: it adjusts the angle at which the tickets land

Dispense several columns of tickets to complete this procedure and to verify that the results are acceptable

Adjusting the ticket deflector

In most cases, the ticket deflector should just reach the metal of the ticket chute so that every ticket is lightly grazed as it exits the dispensing mechanism. The ticket deflector ensures that the tickets do not flip upwards as they exit the chute. If, after adjusting the ticket deflector, you notice that the tickets have a tendency to flip upwards, this deflector will need to be lowered a bit further

This is the 4th easily accessible adjustment which can be configured to affect the stacking of dispensed tickets. The recommended setting, however, is the one described above and any alteration will usually result in a greater change than expected. *If,* some configuration is necessary to affect the stacking of dispensed tickets, it will - in most cases - need to be performed on the ticket catcher assembly and not on the ticket deflector

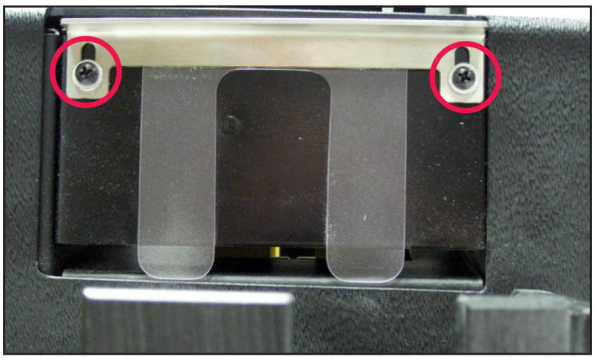
Just as for the previous procedure, any changes to this component should be thoroughly tested to ensure that tickets stack properly

Loosen the two screws

Move the film retainer upward, or downward, until the ticket deflector is at the desired height

Re-tighten the two screws and verify that the torque from tightening the screws did not alter the height

Note: having washers present helps alleviate the torque from tightening the screws



Adjusting the ticket guide

The PrecisionCounter 500 does not need to be adjusted for tickets of different lengths, but it may need to be adjusted for tickets of different widths. Tickets are supported against the rollers, on one side by the column, and on the other side by the ticket guide: since the column is immobile, the ticket guide is adjusted for tickets of varying widths to ensure that the tickets are properly fed to the rollers

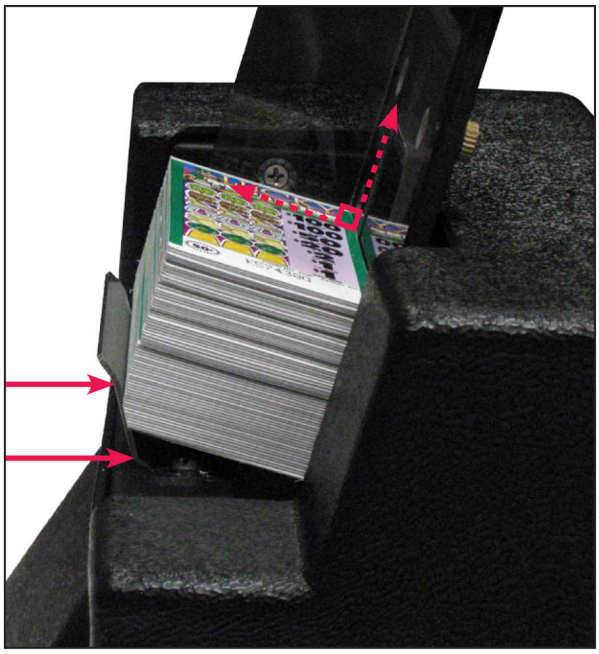
9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214

Adjusting the ticket guide can rely, in large part, on trial and error, but the time involved can be lessened considerably if the following principle is adhered to:

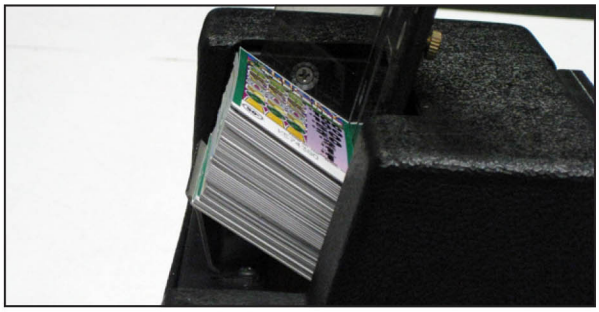
When a stack of about 50 tickets is loaded into the column, the top ticket should form an angle of about 90° with the column

As an extra indicator, the bottom ticket should touch the ticket guide somewhere close to the middle of the range specified by the two arrows ...

... this is, however, only a helpful approximation: after every configuration, dispense at least an entire column to ensure proper functionality



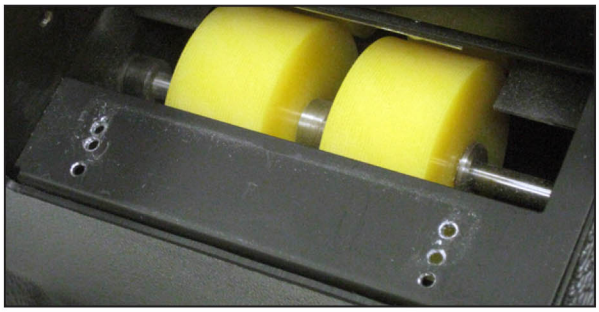
The tickets in the Figure at right are less likely to dispense properly



The 'large' adjustment to the ticket guide can be made by switching its location between 1 of 3 pre-drilled positions

Most tickets will dispense properly when the ticket guide is in the middle position

Pay particular attention to not drop a screw inside the ticket counter



Once the previous step is complete, a more precise adjustment can be performed by partially unscrewing each screw (to avoid dropping a screw inside the ticket counter) and moving the ticket guide back and forth within the range that the screw will allow

Adjusting the ticket gate

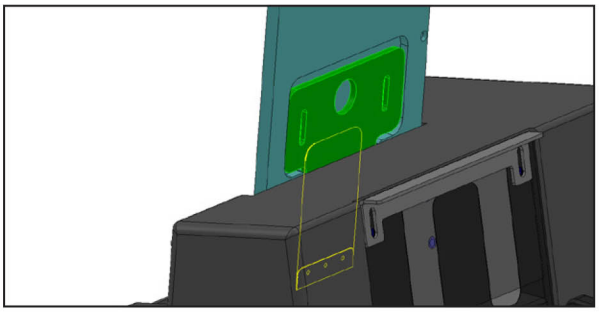
The ticket gate only permits one ticket at a time to pass through the dispensing mechanism. This is accomplished by positioning the ticket gate such that the distance between the metal ticket gate edge and the rollers is greater than the thickness of 1 ticket *but less than the thickness of 2*

There are 2 main techniques for setting this up. The 1st consists of placing 1 ticket underneath the metal ticket gate edge and loosely pressing down on the ticket gate (just to make sure it doesn't move) as the ticket gate is tightened into position. This results in a precise fit, but it can be configured to be *too* restricting (if there is too much pressure on the ticket as the ticket gate is tightened into position)

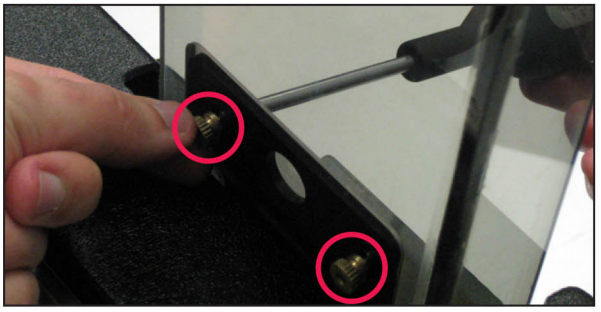
The 2nd method consists of placing 2 tickets underneath the gate edge and pressing with moderate force (not *too* hard) on the tickets with the ticket gate as the ticket gate is tightened into position. This will definitely leave enough room for 1 ticket to pass underneath the gate, and it should be too tight for 2 tickets (because the kind of pressure exerted on the 2 tickets does not occur naturally). With this method, the possible issues that can arise consist of, possibly being too forceful with the machine, or, of having trouble tightening the tickets gate into position while simultaneously pressing down on it

This procedure will demonstrate the 1st method, but both should be experimented with to see which gives the best results for an individual user

The ticket gate is housed in a recessed groove on the back side of the column ... its range of motion is restricted to that groove



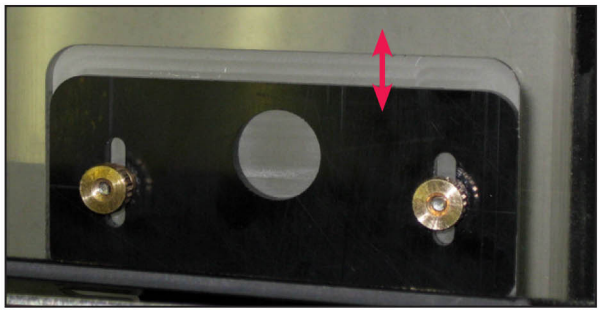
Loosen (but do not remove) the 2 thumb nuts which hold the ticket gate in place



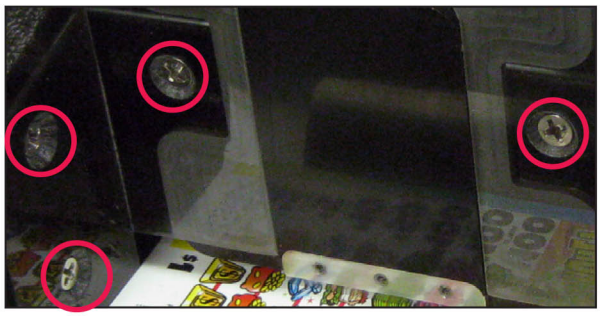
9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214

Verify that the ticket gate can move within the full range of the groove within which it is enclosed

If it cannot, loosen the 2 thumb nuts a little more and try again ... if it will still not move within the full range of the groove ...

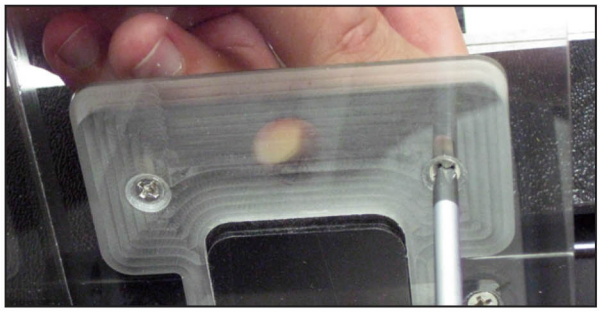


... on rare occasions, it may be necessary to slightly loosen the 4 screws which mount the column to the body of the ticket counter



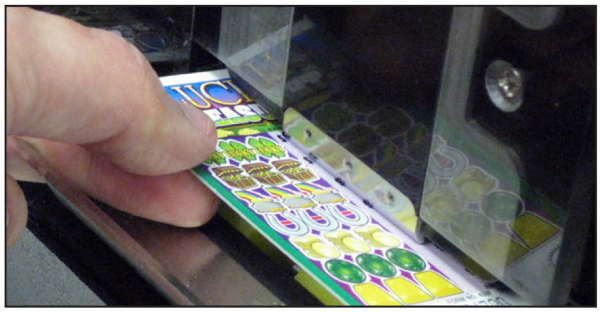
Place a ticket underneath the ticket gate

Tighten the thumb nuts for the ticket gate to about 80% of final torque. Keep a finger in the adjusting hole of the ticket gate to make sure that the ticket gate does not move up as you're tightening it in place



Verify that a ticket can move easily underneath the ticket gate

Firmly tighten the ticket gate thumb nuts, but do not use *too* much force



CAUTION: To prevent the risk of electrocution, unplug the unit prior to performing the following 2 cleaning procedures. Failure to disconnect power could result in injury and/or death, and possible damage to the PrecisionCounter 500

Do not turn the unit back on until certain that all the liquids used in the cleaning process have evaporated

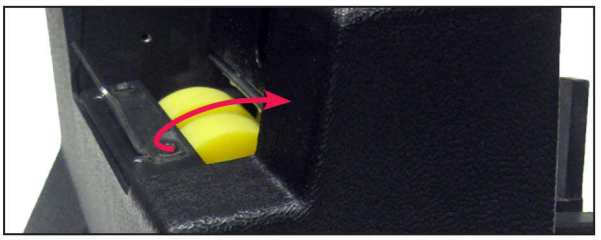
Cleaning the rollers

The rollers maneuver the ticket from the bottom of the column to the dispensing chute. They need friction - the ability to 'grab' the ticket - in order to be able to reliably perform their job. This friction is achieved by the rough coating applied to the rollers

This coating is very resilient: it hardly ever gets damaged. What does happen, however, is that waxy glazing from the tickets, over time, deposits *on top* of the coating. Cleaning the rollers of this waxy residue is one of the more important maintenance routines to be performed: it is recommended that this procedure be performed every few months on busy machines

There are 4 rollers in the PrecisionCounter 500: cleaning the 2 rollers on the inside requires that a technician disassemble the machine. The 2 rollers that are visible, however, can be cleaned in the following manner

Turn the rollers by hand and scrub the visible part of the rollers as necessary: use a lint-free cloth and rubbing alcohol: rubbing alcohol is recommended because it does a good job of cleaning the waxy residue and because it evaporates quickly



Cleaning the plastic body

Use a lint-free cloth and mild soap and water. Be especially careful to not drip any liquids into the inside of the machine, either directly through the visible gaps in the machine, or by using a cloth that is not properly rinsed near the miniscule gaps that exist between the plastic body and components

Do not use any abrasive cleaning materials or solvents to clean the PrecisionCounter 500

9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214

Chapter #5
Troubleshooting

My machine is not coming on

Check that the ticket counter is plugged into an outlet and turned on. If necessary, verify that the outlet is operational by plugging another appliance into the exact same outlet used by the ticket counter. Check the fuse (be sure to first disconnect the power cable): the fuse is located in the power entry module (see p. 6). The ticket counter uses one 1AMP 250V fuse (fast acting, not slo-blo)

The tickets are not stacking properly

Adjust the ticket catcher assembly and/or the ticket deflector (see p. 11-12)

The tickets are not feeding properly/consistently

Check to see if the tickets are excessively warped: straighten them out if necessary, by bending them against the warp, as needed. If the tickets are relatively straight to begin with, adjust the ticket guide and/or the ticket gate (see p. 12-15)

The wrong number of tickets are dispensing

Adjust the ticket gate (see p. 14-15)

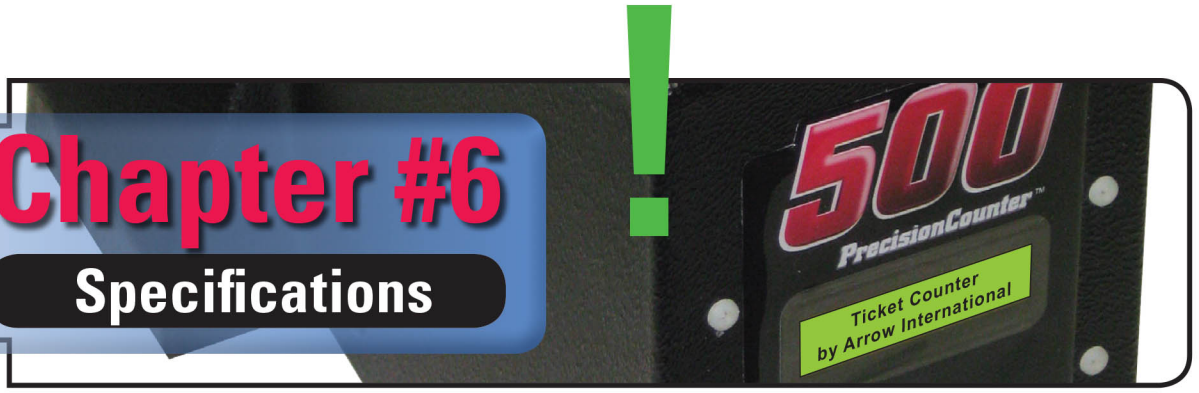
I need to count a new type of ticket: is there anything I should do differently?

If the new ticket is of a different thickness than your previous tickets, you may need to adjust the ticket gate (see p. 14-15). If the new ticket is of a different width than your previous tickets, you may need to adjust the ticket guide (see p.12-13). Try dispensing the ticket first, however: the PrecisionCounter 500 can usually accommodate a varied range of tickets using the same settings

If the recommended solutions do not fix the problem, please contact your local distributor for service, or the Arrow International Technical Assistance Center for phone support

Chapter #6

Specifications



Weight:	13 lbs
Width:	12"
Depth:	16"
Height:	22"

Power Supply Input:	110-120 VAC
Power Supply Output:	The transformer is rated at 16V (with a full load) ... if tested independent of a load, the reading will be about 18 to 19 VAC
Power Consumption:	The device draws about 50 VA when dispensing and 110 VA max. The max power occurs when the motor is stalled. The software shuts the motor off after a couple of seconds if the sensor does not detect tickets
Operating Temperature:	40 to 95° F (5 to 35° C)
Operating Conditions:	Indoor use only

Please contact the Technical Assistance Center for any further technical questions about the PrecisionCounter 500

800.277.6214

If you have any comments, or suggestions, specifically related to this manual - or its future revisions - please contact the Technical Writing Team directly

TWT@arrowinternational.com

9900 Clinton Rd. Cleveland, OH 44144 • Toll Free: 800.321.0757
Technical Assistance Center (8 AM - 12AM EST): 800.277.6214

- Notes -