

# "PC" Central Revenue Control



## Instruction Manual

"PC" Central Software, RCS Revenue Control System,  
and RCSMM Revenue Control System Management  
Module copyright 1979-1995 by: Toye Corporation  
All Rights Reserved

Toye Corporation  
P.O. Box 3997  
Chatsworth, CA 91311-3997  
Phone: (818) 882-4000 Fax: (818)  
8825325

# Quick Start

## Introduction

The "PC" Central Revenue Control Module features high level Machine and Man Readable Ticket cashiering with Touch Screen Technology. Although it is designed for Touch Screens, it can also be controlled by a keyboard or a mouse.

## If You Don't Have A Mouse

The 20 non-numbered Touch Screen Buttons may be accessed on the keyboard by using Function Keys F1-F-10. The top row left to right uses Shift F1-F5. The second row uses Shift F6-F10. The third row uses Ctrl F1-F5, and the fourth row uses Ctrl F6-F10.

## Loading The Software

There are two software modules, RCS.EXE which is the Exit Lane Cashiering program, and RCSMM.EXE which is the Management Program needed to define all system parameters and to run reports. The SETUP programs for both use subdirectory C:\RCS. Either or both may be installed in the Lane Computers and Management Computers.

In order to enable the lane computer for machine readable ticket reading and Touch Screen operation, you will need to modify your system configuration files as shown in the back of this manual. You may also need to perform a special setup required to enable the particular Touch Monitor you are using.

Once the RCS software is loaded into the Lane Computer, and your configuration files have been properly modified, the Revenue Control program should load automatically upon boot-up. If not, you may have a hardware configuration problem. If you do not have a cash drawer, printer, or fee

display for example, you will need to edit the TRCS.INI file and change the setting to -1 for any device you do not have.

To load the RCSMM Management software, exit RCS, and type: RCSMM.

A sample system configuration has already been defined, but you will need to use the Management Module to create your own rate tables, and ticket design. If both RCS and RCSMM are contained in the Lane computer, you can use RCSMM to define your system. If you define your system in a management computer, you will need to use the built-in transfer utility to copy the pertinent files to a floppy, and bring them to the Lane Computers.

## **Exit Lane Computer Software**

### **Cashier Sign On**

Press the START SHIFT button, and enter the Cashier number and password.

The system is now ready for a transaction by swiping a ticket or manually entering a ticket number, or date and time in.

### **Cashier Sign Off**

Cashier touches END SHIFT key. Confirm Shift End window appears, cashier touches YES or NO key, if the YES key is chosen the cash drawer opens and the screen returns to a shift start mode if the NO key is chosen cashier functions continue as normal. Sample Key touches for the function CASHIER SIGN OFF END SHIFT-YES

### **Processing Machine Readable Tickets**

Parking patron vehicle is present over fee computer arming

loop, patron presents ticket to cashier. Cashier swipes ticket through bar code reader. Ticket Number, Arrival Date and Time, and Fee Due appear on the screen. Fee Due is also displayed to the customer on the optional Customer Fee Display. The cashier collects the fee from the patron and enters the amount tendered via the numeric keys, and presses ENTER, or if a receipt is required the cashier touches the RECEIPT key. At this time the cash drawer opens and the receipt begins to print, and the amount of change due is displayed to both the cashier and the customer on the monitor and fee display. The cashier gives the customer the correct amount of change and closes the cash drawer which activates the ticket validator mechanism. The cashier inserts the ticket in the validator and it prints the transaction data on the ticket, the cashier then removes the ticket and stores it as required by management. Opening of the exit barrier gate can be programmed to occur on either the opening or closing of the cash drawer. Closing the cash drawer also causes the transaction data to clear off the screen so the system is ready for the next transaction. Sample Key touches for the function NORMAL TRANSACTION 00.00(amount tendered-ENTER or RECEIPT).

### **Ticket Number Transactions (Man Readable)**

If the bar code cannot be read by the bar code reader the ticket can be processed by manually entering the bar code ticket number into the system. Patron presents ticket to cashier. Cashier touches ENTER TICKET # key causing the cursor to appear in the Ticket Number field on the monitor. Cashier uses the numeric keys to enter the 6 digit ticket number. Arrival Date and Time, and Fee Due appear on the screen. Fee Due is also displayed for the customer on the Customer Fee Display. The cashier collects the fee from the patron and enters the amount tendered via the numeric keys, and presses ENTER or if a receipt is required the cashier touches the

RECEIPT key. At this time the cash drawer opens and the receipt begins to print, and the amount of change due is displayed to both the cashier and the customer. The cashier gives the customer the correct amount of change and closes the cash drawer which activates the ticket validator mechanism. The cashier inserts the ticket in the validator and it prints the transaction data on the ticket. The cashier then removes the ticket and stores it as required by management. Opening of the exit barrier gate can be programmed to occur on either the opening or closing of the cash drawer. Closing the cash drawer also causes the transaction data to clear off the screen so the system is ready for the next transaction Sample Key touches for this function TICKET NUMBER ENTER TICKET #-000000(ticket number)-00.00(amount tendered-ENTER or RECEIPT

### **Date And Time Transactions (Man-Readable)**

In the event the ticket number is not found in inventory the ticket can be processed using the man-readable date and time printed on the ticket issue machine. Parking patron vehicle is present over fee computer arming loop. Patron presents ticket to cashier. Cashier touches the DATE/TIME IN key causing the cursor to appear in the Arrival Date field. Cashier uses the numeric keys to enter the arrival date (all 4 characters, MM/DD must be used) cursor moves to Arrival Time field, cashier uses the numeric keys to enter the arrival time (all 4 characters, HH/MM must be used). Cashier touches AM or PM key. Fee due is displayed on the monitor. Fee due is also displayed to the customer on the Customer Fee Display. The cashier collects the fee from the patron and enters the amount tendered via the numeric keys, and presses ENTER, or if a receipt is required the cashier touches the RECEIPT key. At this time the cash drawer opens and the receipt begins to print, and the amount of change due is displayed. The cashier gives the customer the correct amount of change and closes the

cash drawer which activates the ticket validator mechanism. The cashier inserts the ticket in the validator and it prints the transaction data on the ticket, the cashier then removes the ticket and stores it as required by management. Opening of the exit barrier gate can be programmed to occur on either the opening or closing of the cash drawer. Closing the cash drawer also causes the transaction data to clear off the screen so the system is ready for the next transaction. Sample Key touches for this function DATE/TIME DATE/TIME IN-00 00 (mm dd)-AM or PM-00.00(amount tendered-ENTER or RECEIPT

### **Lost Ticket Transactions**

If the customer has lost the parking ticket, the cashier can process the transaction in the following manner. Parking patron vehicle is present over fee computer arming loop. Cashier touches LOST TICKET key and the current date and pre-programmed arrival time appear on the monitor. If the patron entered on a previous date, the cashier uses the numeric keys to enter that date (MM/DD) and touches the ENTER key. Fee due is displayed. The cashier collects the fee from the patron and enters the amount tendered via the numeric keys and presses ENTER or if a receipt is required the cashier touches the RECEIPT key. At this time the cash drawer opens and the receipt begins to print and the amount of change due is displayed to both the cashier and the customer on the monitor and fee display. The cashier gives the customer the correct amount of change and closes the cash drawer which activates the ticket validator mechanism. The cashier inserts a lost ticket form in the validator and it prints the transaction data on the ticket. The cashier then removes the ticket and stores it as required by management. Opening of the exit barrier gate can be programmed to occur on either the opening or closing of the cash drawer. Closing the cash drawer also causes the transaction data to clear off the screen so the system is ready for the next transaction. Sample Key touches for

this function LOST TICKET LOST TICKET-ENTER000.00(amount tendered-ENTER or RECEIPT.

### **Alternate Rate Transactions**

Transactions which use a rate structure different than the default rate are considered Alternate Rate transactions. You may want to create rate structures for Early Birds, Late Birds, Weekends, Holidays, and Special Events. The procedure is as follows:

Parking patron vehicle is present over fee computer arming loop. Patron presents ticket to cashier. Cashier swipes ticket through bar code reader, Ticket Number, Arrival Date and Time, and Fee Due appear on the screen cashier touches the ALT RATE key. Alternate Rate listing appears and the cashier touches the appropriate alternate rate and touches the OK key. The alternate rate structure chosen is applied to the fee and this new fee is displayed to both cashier and the customer. The cashier collects the fee from the patron and enters the amount tendered via the numeric keys and presses ENTER, or if a receipt is required the cashier touches the RECEIPT key. At this time the cash drawer opens and the receipt begins to print, and the amount of change due is displayed to both the cashier and the customer on the monitor and fee display. The cashier gives the customer the correct amount of change and closes the cash drawer which activates the ticket validator mechanism. The cashier inserts the ticket in the validator and it prints the transaction data on the ticket. The cashier then removes the ticket and stores it as required by management. Opening of the exit barrier gate can be programmed to occur on either the opening or closing of the cash drawer. Closing the cash drawer also causes the transaction data to clear off the screen so the system is ready for the next transaction. Sample Key touches for this function ALTER-

NATE RATE ALT RATE-00(proper rate)-OK-00.00(amount tendered-ENTER or RECEIPT

### **Validations**

At the point in the transaction when FEE DUE is displayed to the cashier, MERCHANT VALIDATION can be applied if stamped on the ticket. The cashier would touch the VAL # key causing the cursor to appear in the Validation Number field. The cashier uses the numeric keys to enter the validation number in the field (1 thru 1000). If the validation number entered is valid, the fee is discounted the correct amount, and the transaction continues as normal.

NOTE: Validations CANNOT be applied to LOST TICKETS, and only one validation may be applied to any given transaction. By touching the VAL # key twice, a listing of all active validations appears on the cashiers monitor. The cashier can then touch and drag to the desired validation highlighting it, and touch the OK key which enters that validation into the transaction. Sample Key touches for this function MERCHANT VALIDATION VAL #-00(validation number)-ENTER-00.00(amount tendered-ENTER or RECEIPT

## **Host Management Software Module**

This program is used for customizing the system configuration, rate structure definitions, receipt layout, validation layout, reports, downloads, uploads, and file maintenance.

To load the Management Module, type: C:\RCS\RCSMM

### **Keyboard or Mouse Operation**

Pressing the "Alt Key" highlights the Hot Key letter for each Menu Function .The "Alt Key" also operates as an escape from within in the menus.

Once in a program the “Tab Key” is used to move from field to field.

A space bar strike will enter and “X” into or out of a field.

The Arrow key will move “\*” selectors for the various fields.

Once a menu has been selected, any highlighted item is active and may be selected. Un-highlighted items are not supported in this software.

Do not hit enter once in a program until you are in a box which contains a command such as: OK, Cancel, End, Add, Change, Delete, Etc.

## **SYSTEM**

A. Configuration is inactive at this time.

### **B. RECEIPT LAYOUT**

This program allows the user to custom design receipts. During setup, a sample receipt layout named RECIEPT.SMP was used to create RECEIPT.DTA which you can now modify to reflect the design of your choice. The items you can include on your receipt are in the left column, and the layout is in the right column. Place the cursor where you want the data to appear on the ticket, and double click the item on the left to place it there. You can move it with the space bar or delete key.

### **C. VALIDATOR LAYOUT**

This program allows the user to custom design the information to be validated on the ticket. Use the same procedure as described above for receipt layout.

## **D. ENTRY/EXIT MODULES**

This function defines the entry and exit lane numbers and corresponding module codes. Module codes are determined by the command module ID for on-line systems, and once set will not have to be modified. See the hardware section in the back for configuration information.

## **TABLES**

### **A. ALL TO LANE**

This program will automatically download the tables, receipt layout and validator layout to the disk drive identified in the MM.INI.FILE. The information can then be taken to a lane computer and copied into the RCS subdirectory.

NOTE: When RCSMM is utilized on a lane computer the new or changed information automatically updates the RCS program.

### **B. CASHIER**

This program is where cashiers and supervisors are added, deleted or changed. The system is capable of handling 99 cashiers. Cashier number 98 is used to activate the gate key on the cashier screen. When the gate key is pressed the cashier number "98" is automatically entered, and the operator needs only to enter a password. Each operator will need to decide if cashiers can open the gate via the gate key. If you decide to allow this feature, we recommend a single digit password for speed of operation. There are three levels of authority 1) Allow shift-which allows the individual to process parking transactions 2) Supervisor status-which allows access to a supervisors screen were reports are generated.

### **TO ADD A CASHIER**

Tab to the add button and press enter.

Enter the cashier number

Tab to status, use the arrow keys to mark active or inactive

Tab to name, type cashier or supervisors name

Tab to password, enter password from 1 to 4 digits

Tab to shift adjustment, this field is for 24 hour operations.

This allows a cashier to sign in prior to their actual shift start time, and the computer will report their shift in the proper day. Leave blank for non 24 hour operations.

Tab to authority, use the space bar to place an "X" in supervisor, cashier (allow shift) or both.

Tab to "OK"-Press enter.

The new person has been added and you are prepared to enter another person. When you are finished tab to cancel and hit enter.

#### TO DELETE OR CHANGE:

The first thing you need to do is select the cashier to be deleted or changed by using the arrow key once the cursor is flashing in the first position. Then follow the computer prompts.

#### C. EXTRA SERVICES

The system is capable of handling 99 extra services accounts which can be "fixed amount "OR" input amount. These are used for such things as car washes, gas, valet parking, etc and are all user defined. The adding, deleting and changing of these accounts are very similar to cashiers and are self explanatory.

#### D. VALIDATIONS

The system is capable of handling 99 validation accounts which can be "Full", "Maximum amount "or "Maximum time". A "full" validation will reduce the entire parking fee to \$0.00 unless there are Extra Services involved. The "maxi-

mum amount” validation will reduce the parking fee by the dollar amount entered as the maximum amount. If the fee is less than the maximum, the validation will function as a full validation, however if the fee is greater it will reduce the amount owed by the maximum dollar. The “Maximum Time” validation will reduce the parking fee by deducting the validation time from the time of entry.

#### E: Rates

You may completely define Default and Alternate rate schedules using multiple time window scenarios. You may set maximum daily and 24 hour rates, and you may define rate sequence iterations to apply differing amounts depending upon the length of the stay. To get the feel for rate schedule definitions, study the rate definitions contained in the demo software.

#### F: Credit Cards

You may enter a list of acceptable credit cards so that transaction reports indicate the method of payment.

#### G: Tax Names (Not currently supported)

### **Activities**

#### Receive Transactions

This utility allows you to import Lane Computer data into the Management Module for consolidated reports. When invoked, the software by default, expects to find the data in the A:\ drive, so be sure to have a disk loaded (with or without data) before selecting this option. If no disk is present, a program error will occur.

#### **History Purge**

As more and more data is received from the lane computer(s),

the history file will continue to grow. Unneeded data can be purged from the file periodically.

### **Print Reports**

The RCSMM program generates consolidated printed reports based on data imported from the Lane Computers. Sample reports are available on request.

### **Hardware**

#### **Lane Computer Requirements:**

- IBM PC or Compatible Min 486/66 500 MB
- 1.4 MB floppy
- 2 Parallel printer ports
- Relay board: Computer Board CIO-PDIS08
- I/O board: Boca AT 66
- Touch Screen: Microtouch

#### **Entry Lane Ticket Reader/Command Module**

Module Firmware Code: A6110BTS.IBF

Firmware: 6 digit Code 39 bar codes transmits as:

FCmm mmmm where mmmmmm=6 digit ticket number

Module address are restricted to 01-1F

Alarm Inputs XX71 and XX72 are available for alarms or counts

Ticket Count-Back settings

Use Dip switches 9, 2, and 1 as follows:

<b>To Count-Back</b>	<b>9</b>	<b>2</b>	<b>1</b>
No count-back	off	off	off
1 Ticket	off	off	on
2 Tickets	off	on	off
3 Tickets	off	on	on
4 Tickets	on	off	off
5 Tickets	on	off	on

6 Tickets	on	on	off
7 Tickets	on	on	on

## **Lane Computer Exit Command Module Configuration**

Module Firmware Code: A6110FEE.IBF

Firmware: 6 digit Code 39 bar codes transmits as:

FCmm mmmm where mmmmm=ticket 6 digit number

Module addresses 01-7F may be selected

Alarm inputs are unavailable for alarm monitoring

Firmware: 6 digit Code 39 bar codes

Input XX71 Enables Module when 17 & 18 are shorted

Input XX72 Retransmits last ticket number when 20 & 21 are momentarily shorted. This transmits ticket number to other Lane Computers when the ticket has been processed. The format is FDmm mmmm where mmmmm=6 digit ticket number.

## APPENDIX

### Lane Computer Setup Configuration

Lane Computers should contain the following information in their “CONFIG.SYS” and “AUTOEXEC.BAT” files.

#### CONFIG.SYS

```
DEVICE=C:\DOS\HIMEM.SYS
DOS=HIGH
DOS=UMB
FILES=30
STACKS=9,256
DEVICE=C:\DOS\EMM386.EXE NOEMS novepi HIGHSCAN I=e800-ffff
DEVICEHIGH=C:\DOS\ANSI.SYS
BUFFERS=10,0
FCBS=1,0
```

#### AUTOEXEC.BAT

```
@ECHO OFF
PROMPT $p$g
PATH=C:\DOS
SET TEMP=C:\DOS
C:\SMARTDRV.EXE /X
C:\mts\touch\dostouch /COM2, 9600      (For Micro Touch monitors only)
SET GARAGE=01                          (Must be set)
SET LANE=01                             (Must be set)
CD\RCS
LOADHIGH SR
RCS
```

#### Tables Created By RCSMM

```
TRCSF01.DTA ..... CASHIER LIST AND PASSWORDS
TRCSF02.DTA ..... ENTRY/EXIT MODULES
TRCSF03.DTA ..... RATE STRUCTURES
TRCSF04.DTA ..... VALIDATION LIST
TRCSF05.DTA ..... CREDIT CARD LIST
TRCSF06.DTA ..... EXTRA SERVICES
TRCSF07.DTA ..... TAX TABLE
RECEIPT.DTA ..... RECEIPT LAYOUT
VALIDATR.DTA ..... VALIDATOR LAYOUT
```

# APPENDIX

## TRCS.INI

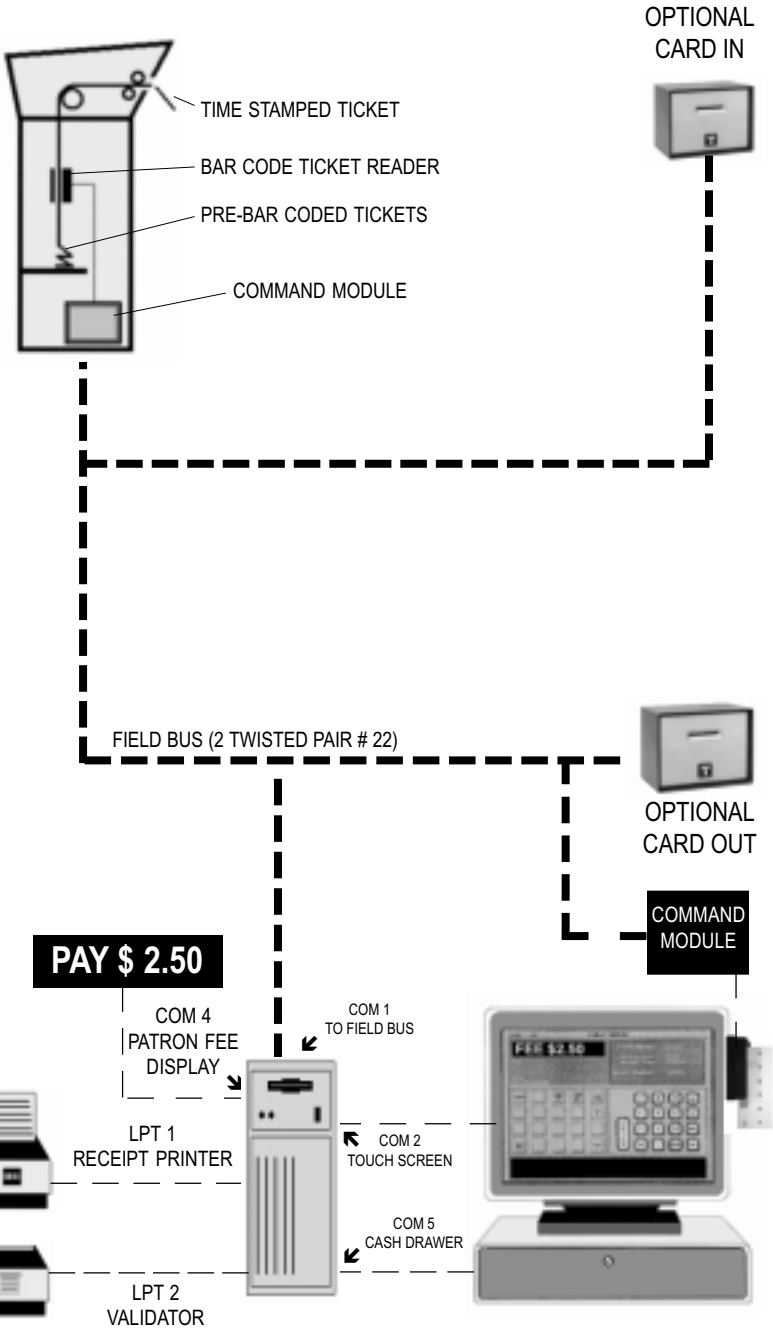
```

*-> keyword           , value           ,comments
KeyPadBeepFreq, 075           ,numeric keypad tone freq in Hz
KeyPadBeepLgth, 3             ,numeric keypad tone duration in 1/18's of a sec
ButtonBeepFreq, 100          ,function buttons tone freq in Hz
ButtonBeepLgth, 4            ,function buttons tone duration in 1/18's of a sec
AutoClearExitTransWait, 91    ,18.2 per sec; time to wait before reset of exit screen
WatchDogTimeOutValue, 2184    ,18.2 per sec; time to wait for any operator response
TxnHistoryCount, 500          ,maximum number of revenue transactions kept
MaintainTCLog, Yes           ,Yes/No
LogFileEntries, 100          ,set number of logfile entries (size of TCLOG)
GateRelay, 0                 ,Number (0-7) of relay to drive gate
GateRelayFireTime, 3         ,18.2 per sec; range 1-18; default 3; time to hold gate relay
RcptPrntr—Spacing1, 0         ,Number of lines to space printer at end of printing (before cut)
RcptPrntr—Spacing2, 0         ,Number of lines to space printer at end of printing (after cut)
RcptPrntr—Cut ,x             ,Printer Command Code. Format: \2 digit Hex Code
RcptPrntr—Red ,x             ,Printer Command Code. Format: \2 digit Hex Code
RcptPrntr—Enlarge ,x         ,Printer Command Code. Format: \2 digit Hex Code
RcptPrntr—EnlargeOff ,x     ,Printer Command Code. Format: \2 digit Hex Code
TktValdtr—Release ,x        ,Esc "@", Esc "q"
TktValdtr—Setup ,x          ,Esc "c4" &H30
TktValdtr—Eject ,x          ,Esc "@", Esc "F" &H01, FF
TktValdtrPromptDelay ,36    ,18.2 per sec
CashDrawerPort, -1           ,Std. Serial Port Number, -1 to disable Cash Drawer, 0 to use Addr and IRQ
CashDrawerAddr, 2E8          ,Hex addr of serial port for cash drawer
CashDrawerIRQ, 11            ,IRQ (decimal) of serial port for cash drawer
FeeDisplayPort, -1           ,Std. Serial Port Number, -1 to disable Fee Display, 0 to use Addr and IRQ
FeeDisplayAddr, 3E0          ,Hex addr of serial port for Fee Display
FeeDisplayIRQ, 12            ,IRQ (decimal) of serial port for Fee Display
*FeeDsply—ID , <ID01>        ,fee display id
*FeeDsply—CmdPrefix1, <FD><CF> ,fee display cmd (before text)
*FeeDsply—TxtPrefix1, <CE>    ,fee display text
*FeeDsply—CmdSuffix1,         ,fee display cmd (after text)
*FeeDsply—CmdPrefix2, <FD><CN> ,chg display cmd (before text)
*FeeDsply—TxtPrefix2, <CHG><CL> ,chg display text
*FeeDsply—CmdSuffix2,         ,chg display cmd (after text)
*OutBox, A:\RLC??L??L.dta    ,destination for revfile data offload to mm
AutoPrintShiftRpt, 0         ,0=no; 1=yes; at end of shift; 2=ask oper
AutoPrintReceipt, 0          ,0=no; 1=yes
24HrTimeFormat, 0           ,0=no; 1=yes
AmtTenderedFlag, &H2F ,127 ,0=required; 1=allow zero validation; 2=allow enter for zero; 3=both; +4 for chk; +8 for CC; +16/+32 require enter on chk/cc to confirm; +64 allow enter for fee

ScreenSaverTimeout, 15       ,minutes (-timerticks), 0 to disable
*-> test options <-----
MouseCursor, on              ,on = display mouse cursor
SRInterfaceOption, 16        ,0=required/1=optional/16=not called
MaxTktNbr, 9999              ,normally omitted or 9999999; maximum tkt value
TruncateTktNbr, 1            ,1 to use last LEN(MaxTktNbr) digits of TktNbr
CashDrawerFlag, 1            ,0 required / 1 for optional
FeeDisplayFlag, 8            ,0 required / 1 use even if not confirmed / 8 ignore fee display if not avail
DemoExit, 1                  ,1 to set demo exit mode, where entry time is randomized
*DemoExitTktNbr, 1           ,select a specific tkt number to randomize entry time
PRN, LPT1:                   ,reroute print output
TVALPRN, nul                 ,reroute validator print output
* notes:
* use ctrl-alt to simulate tktscan
* set DemoExitTktNbr to 1 to randomize time on simulated tktscan

```

# Field Layout



# Index

## A

Activities 13  
ADD A CASHIER 11  
Alternate Rate Transactions 8  
APPENDIX 16, 17  
AUTOEXEC.BAT 16

## C

Cash drawer 3  
CASHIER DEFINITIONS 11  
Cashier Sign Off 4  
Cashier Sign On 4  
CONFIG.SYS 16  
Count-Back feature 14  
Credit Cards 13

## D

Date And Time Transactions 6  
DELETE A CASHIER 12

## E

Entry Lane Ticket Reader 14  
ENTRY/EXIT MODULES 11  
EXTRA SERVICES 12

## F

Fee display 3  
Field Layout 18

## H

Hardware 14  
History Purge 13  
Host Management Software 9

## I

Introduction 3

## K

Keyboard 3  
Keyboard or Mouse Operation 9

## L

Lane Computer Exit Module 15  
Lane Computer Requirements 14  
Lane Computer Setup 16  
Lost Ticket Transactions 7

## M

Machine Readable Tickets 4  
Man Readable Tickets 5  
Mouse 3

## P

Print Reports 14  
Printer 3

## R

Rate Definitions 13  
RECEIPT LAYOUT 10

## S

Software Installation 3  
Software Instructions 4

## T

TABLES 11  
Tables 16  
Touch Screen 14  
TRCS.INI 4

## V

VALIDATIONS 12  
Validations 9  
VALIDATOR LAYOUT 10