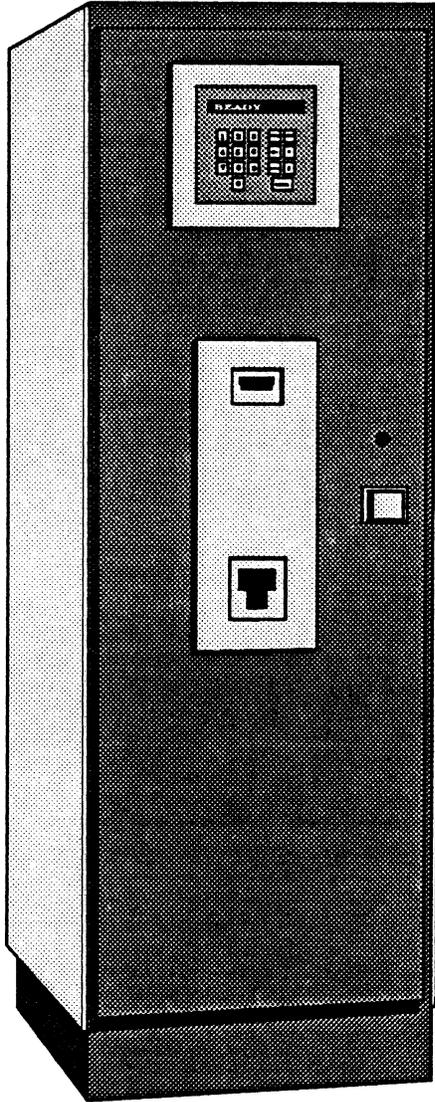


Key Systems

Users Guide



Installed 5-8-92 192 WARRINGTON

CD 2000

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**First Edition, April 1989
Second Edition, November 1991**

Key Access System Patent Number 4,812,985

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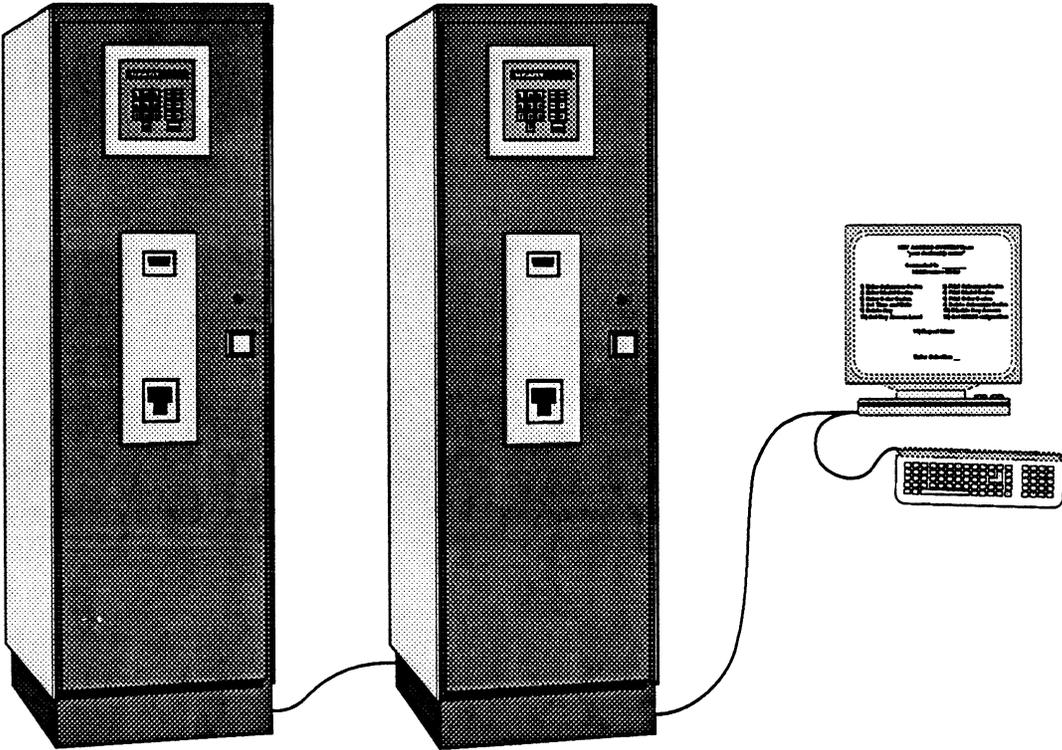
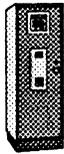


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Chapter 1 - System Overview

Introduction

The CD 2000 Key Control System consists of four basic components; a Key Access Machine, a video display terminal, a printer, and a number of Key Boxes. The Key Access Machine (KAM) is the Robotic Central Storage Cabinet where the keys to your vehicle inventory are stored. The vehicle keys are fastened into Key Boxes which have Bar Code Labels attached to them. The Bar Code Labels contain information about the specifics of the vehicle such as stock number, model and color. The KAM has a Bar Code Scanner which it uses to scan each Key Box it receives. The KAM stores the information from the Bar Code Label in it's on-board micro-computer and begins to track all uses of the key. Authorized users of the CD 2000 System are assigned ID Codes which allow them to check out keys from the KAM. Each access is recorded along with the date and the time. The KAM also records the date and the time of the return of the key. In this way the KAM tracks all key activity and maintains reports for management's use.

Features of the CD 2000 System

- Manages up to 406 sets of keys in each secured KAM cabinet
- Supports multiple KAMs in each system
- Automatic key retrieval and return
- Easy-to-use Key Access Keypad
- Key access protected by user identification codes
- Restricted access to individual keys
- Operating System is password protected
- Disk backup of all data
- Salesman activity reporting by group or individual
- Stock number activity reporting
- Inventory usage data accumulated
- Key Aging reports for user selected time frames
- Immediate Key Out reporting
- Immediate Key Inquiry by stock number showing recent user activity

Operations

The CD 2000 System Manager enters the name and an ID code for each person that can access keys from a KAM. Model codes and color codes are assigned to each vehicle and bar code labels are printed. The bar code labels are affixed to Key Boxes and the keys are fastened inside. The CD 2000 System gets its information about the keys from the bar code label. The Key Box is fed into a KAM cabinet, the system scans the bar code, and the Key Box is stored until an authorized user requests it.

Salesman Access to Keys

When a salesman wants to receive a key, he enters the stock number and his ID code on the Key Access Keypad located on the front of the KAM cabinet. Messages appear on the Display Line to prompt the salesman through this procedure.

If the salesman's ID code and the stock number are valid, and the salesman has an access level that will allow him to access the stock number, then the key is retrieved and placed in the output slot.

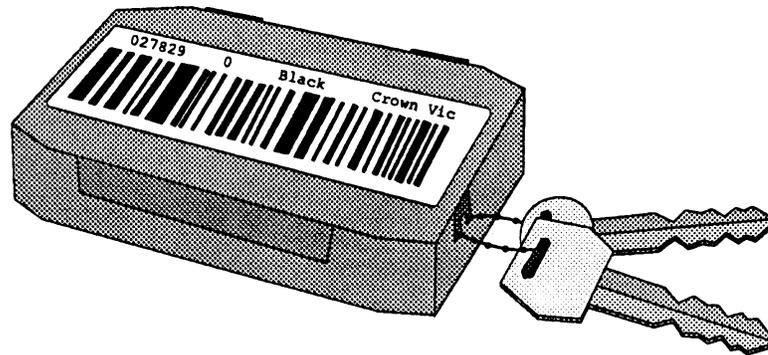
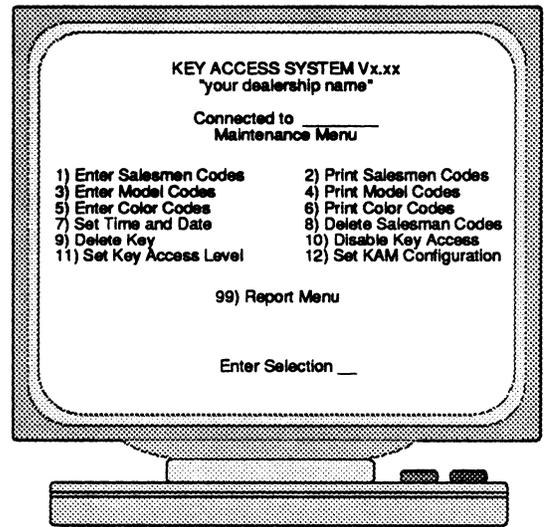
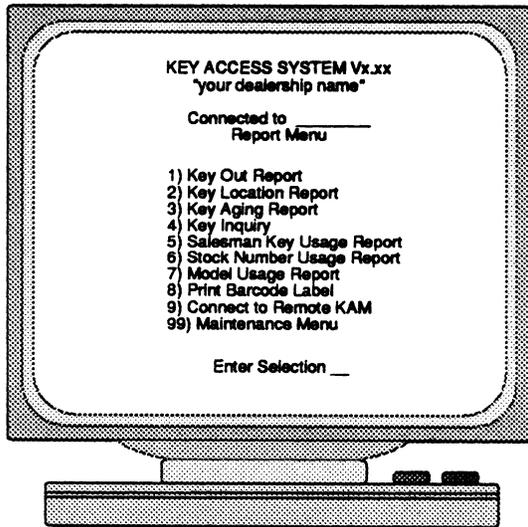
If the information is not valid, or the access level is not acceptable, then an appropriate message is displayed and the key is not accessed.

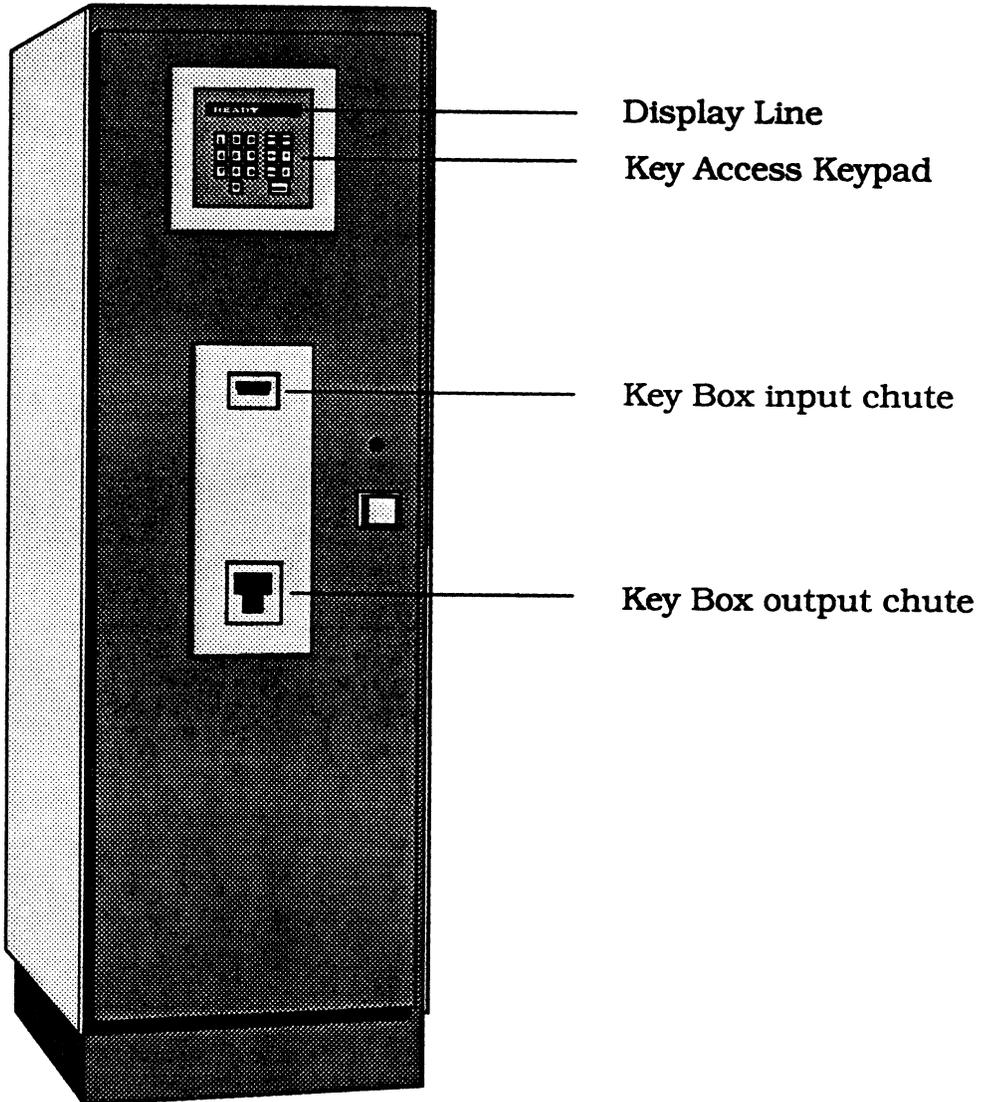
If the key is not in the cabinet, the KAM will display who currently has the key.

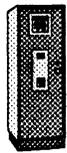
Management Reports

At any time the CD 2000 System Manager can print any of the usage reports or key information reports. The available reports include:

- Key Out Report
- Key Location Report
- Key Aging Report
- Key Inquiry Report
- Salesman Key Usage Report
- Stock Number Usage Report
- Model Usage Report







Chapter 2 - Using the Key Access System

General

The basic CD 2000 System consists of a Key Access Machine, a video display terminal, a printer, and a number of Key Boxes. The CD 2000 System can have multiple Key Access Machines in one system configuration, but will normally have only one terminal and one printer.

Key Access Machine

The Key Access Machine (KAM) is the Robotic Central Storage Cabinet where the keys to your vehicle inventory are stored. Inside each KAM cabinet there is a Carrousel with 406 Bins. The individual Key Boxes are stored in these bins. The storage and retrieval process is controlled automatically by the CD 2000 System.

When more than one KAM is configured, the first KAM is called the Master and the others are called Remote KAMs or Slaves. Each KAM is a stand-alone security center that maintains it's own records concerning the keys that it controls.

A configuration usually has one terminal and one printer, together these may access any one of the KAM cabinets at any given time. Through a menu selection on the terminal, the operator switches from one KAM to another for reporting or maintenance purposes. No changes in physical connections are required.

A request to access a key is entered on the Keypad located on the front of each KAM cabinet. Messages and prompts appear on the display located above the Keypad.

A Key Access Micro-Computer is located inside each KAM cabinet and controls all the functions and the reporting for the CD 2000 System.

Video Display Terminal

The video display terminal (CRT) is a slave terminal controlled by the CD 2000 System. This means that the Key Access Software is the only program that will be run on this terminal. The CD 2000 System Manager uses the terminal to enter set-up information such as Model Codes, Color Codes, ID Codes, Access Levels, etc., and to run reports. Reports can either be viewed on the display terminal or sent to the printer.

The CRT and the printer are usually in a different location than the KAM cabinet. The CRT is usually in the System Manager's office to provide security and convenience.

For more detailed information regarding the CRT and its operation, see Appendix A or the manufacturer's instruction manual.

Printer

The printer is a dot matrix type and is typical of those found with most other computing systems. It can print on pin-feed paper, standard paper or label stock.

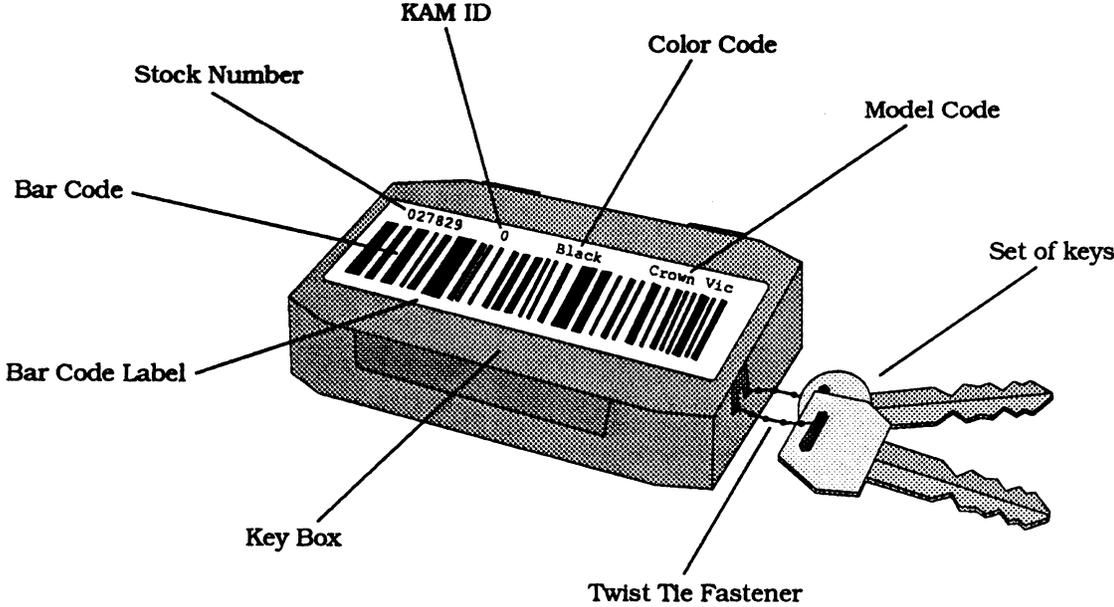
The printer is used to print the bar code labels that the CD 2000 System scans when it accepts a Key Box. The printer is also used to print the various Key Access reports.

For more detailed information regarding the printer, see Appendix B or the manufacturer's instruction manual.

Key Box

The Key Box is the container that holds each set of keys. The keys are identified by the information contained on the bar code label which is printed by the CD 2000 System and attached to the top of the Key Box.

An illustration of the Key Box is shown at right.



Key Access Keypad

The Keypad is located on the front of the KAM cabinet. Salesmen use the keypad to request keys managed by the KAM. The display line above the keypad prompts users for the information the KAM needs, such as the vehicle stock number, and their ID code. The various keys on the keypad and their uses are described below. The various messages that appear on the display line are listed in Appendix C.



<u>Key</u>	<u>Description</u>
0 through 9	Numeric keypad.
SHOW	The SHOW key is used when a key is requested for a Sales Demonstration.
MOVE	The MOVE key is used when a key is needed for any reason other than a Sales Demonstration.
<-	This is the backspace key for correcting entry errors.
*	Not currently implemented.
CLEAR	Erases the display line and returns to the READY prompt.
#	Not currently implemented.
ENTER	The Enter key is used to complete entries made on the keypad.



Retrieving Keys

The KAM cabinet is normally located inside the automobile showroom, or in any other secure place, such as near the manager's office. The cabinet should be kept locked with the A/C power left on at all times. The display will normally show the **READY** prompt unless it is **OFFLINE** for system maintenance, or **DISABLED** for security reasons.

The following procedure is used to retrieve keys:

1. When a KAM is ready for operation, the display line will show :
 - **READY**.
2. Press one of the following keys on the keypad:
 - **SHOW** to retrieve a key for a sales demonstration,
 - **MOVE** to retrieve a key for any other reason.
3. The display line will show: **ENTER STOCK NBR**.
4. Enter the vehicle stock number and press **ENTER**. If the stock number is not entered correctly, or the key is not managed by the KAM, the system will display: **#### NOT IN SYSTEM**. Check the number and the KAM ID carefully and retry. If you get the same message, contact the CD 2000 System manager.
5. After the stock number has been entered, the prompt:
 - **ENTER ID CODE** is displayed.
6. Enter the ID code you have been assigned, and press **ENTER**.

If the ID Code is entered incorrectly or is invalid, the system will display: **BAD ID CODE**. After about three seconds the prompt: **ENTER ID CODE** will be displayed again. Retry your ID Code. If the system displays **BAD ID CODE** again, contact the CD 2000 System Manager.
7. If the ID Code entered is valid, one of the following actions will occur:

If the key is in the cabinet, the KAM will retrieve it and display:

 - **ACCESSING KEY**,

If the key is not in the cabinet because someone else currently has the key, the KAM will display: "name HAS KEY".
8. If the key is available, it is retrieved and placed in the key output slot, and the KAM will display: **GOOD LUCK "name"**.

Returning Keys

Use the following procedure to return a key to the KAM cabinet:

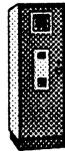
1. Make sure the key is inside the Key Box, and that the Key Box closes tightly. If the Key Box will not close properly, or if the bar code label is torn or dirty, please return the box to the System Manager.
2. Place the Key Box, bar code label up, into the Input Slot.
3. If the bar code label is extremely dirty or torn, the KAM will reject the Key Box and display: BAD BAR CODE READ. If this happens, please give the Key Box to the CD 2000 System manager so that another label may be printed.
5. If the Key Box is not assigned to this KAM, the system will display: BAD MACHINE ID. Please check the bar code description and locate the correct cabinet for the key.
4. If everything is in order, the KAM will accept the key, clear the users account, and return to the READY prompt.

Adding New Keys to a KAM

As vehicles are added to your inventory, their keys are fastened into Key Boxes and bar code labels are printed with the identifying information that the KAM needs. This routine function is sometimes performed by the dealership's make ready department.

The following procedure is used when adding keys:

1. Fasten the vehicle's keys into the Key Boxes using the twist ties obtained from Key Systems. One key should be fastened to each side of the Key Box. All tags and metal rings must be removed from the keys before they are fastened into the Key Box. Cut off the portion of the fastener that is not used to hold the keys. The fastener should hold the keys but not prevent their easy flipping in and out of the Key Box. The Key Box must close easily with both keys flipped inside.
2. Create and print the bar code label using the procedure described on page 22.
3. Verify that the stock number on the bar code label is correct and that the bar code is centered on the label.
4. Place the bar code label on the top of the Key Box. The label must be centered on the Key Box.
5. Feed the Key Box, bar code label up, into the Input Slot. The KAM will take the key and scan the bar code label.



6. Depending on the various conditions (i.e. correct label, adequate storage space, correct KAM, etc.), one of the following functions will be performed:
 - a. If the bar code information is valid, and the KAM ID is correct, the KAM places the Key Box in the first empty bin.
 - b. If the stock number on the label is already in use (a key in the KAM has the same stock number), the Key Box is placed in the key output slot, and the following message is displayed: **STOCK NBR IN USE**.
 - c. If your CD 2000 has multiple KAM cabinets, and the KAM ID number on the label is not for this KAM cabinet, the key is placed in the output key slot and the following message is displayed: **BAD MACHINE ID**.
 - d. If the label is damaged or otherwise not readable, the following message is displayed: **BAD BAR CODE READ**. Please reprint the label and repeat the process.
 - e. If the KAM has no more storage space available, the key is placed in the key output slot and the following message is displayed: **NO FREE SLOTS**. There may actually be space available if your inventory has not been purged recently. Check the Key Out Report for vehicles which have been sold but not yet deleted from the system.

Deleting Keys

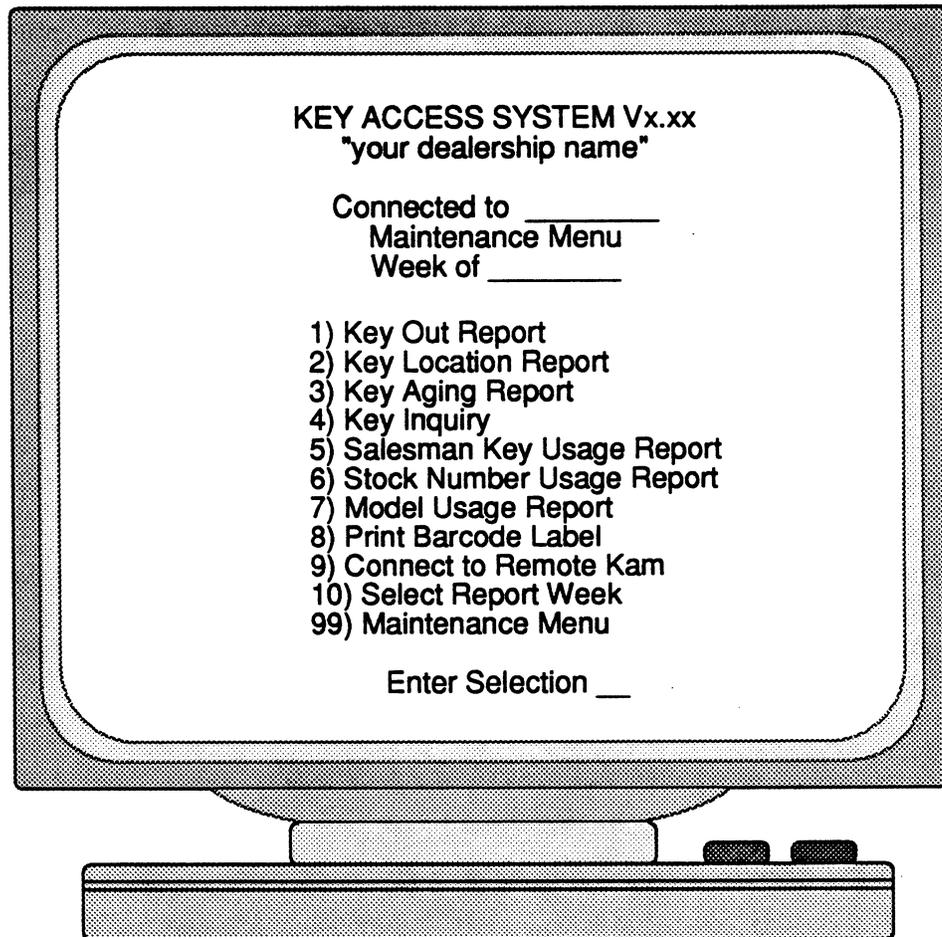
When a vehicle is sold, it's key will continue to be shown as checked out by the person who last accessed the Key Box (typically the salesman who sold the car). In order to clear the salesman's account and free up the bin that the KAM has reserved for the Key Box, the key must be deleted from the system. Sometimes this function is performed weekly by comparing the Key Location Report to the dealership's inventory listing.

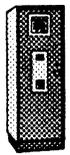
Use the following procedure to delete keys:

1. From the Maintenance Menu enter 9 for Delete Key.
2. The terminal will prompt you with "Enter Stock Number". Enter the stock number and hit Return.
3. The terminal will ask "Delete This Key (Y) ?". Type a capital Y and hit Return.
4. The System deletes the key and displays "Key Deleted - Press Any Key to Continue".

If you typed anything other than a capital Y, the terminal will display "Key Not Deleted".

5. Hit any key to return to the Enter Stock Number prompt.





Chapter 3 - Report Menu

General

When the CD 2000 System is powered on, the terminal will display certain system set-up information, display the Report Menu, and then wait for a selection to be made. After 10 minutes of no activity, the display will go blank automatically and wait for any key to be pressed before it redisplay the menu.

It is not necessary to turn the terminal off at any time. However, if the terminal is turned off from some reason, the Report Menu can be redisplayed by holding down the key marked "Ctrl" and typing the letter "O", as in over.

Each of the Report Menu selections are discussed individually in this chapter. Please turn to Chapter 4 for a discussion of the Maintenance Menu functions.

Key Out Report

Stock Num	Model	Color	Salesman	Time Out
8899001	CRX DX 5SPD	RED,MED	JOHNSON,B	10-19-88 04:48P
7385647	COR 4DR SD A	BLUE,MET	SMITH,G	11-01-88 09:22A
1234456	HYUNDAI GL	BLACK	JONES,W	11-08-88 09:01A
2314678	HYUNDAI GL	RED,MED	JONES,W	11-08-88 09:05A
1256647	MR2 CP A	GREY	WILSON,D	11-08-88 09:32A
4567894	COR 4DR SD A	WHITE	SMITH,B	11-08-88 09:42A

The Key Out Report provides a list of all the keys which have been taken out of the CD 2000 System. The keys are identified by their stock number as well as the model and color of the vehicle they represent. The salesman's name and the time and the date of the access are listed to help locate any keys which may be needed. This report is sorted by the date the key was taken out of the system with the most recent access printed last.

How to Print a Key Out Report

1. From the Report Menu type a 1 and hit Return.
2. The following prompt will appear on your screen: "Output on CRT (C) or Printer (P) ? ___".
3. Enter a C to view the report one page at a time on the CRT.

If you wish to print the report, check the printer to ensure that power is on, that paper has been loaded, and that the on-line indicator is lit. Enter a P to begin printing.

The message "Sorting in Progress" may appear briefly on the last line of your screen, followed by the message: "Printing in Progress - Press ESC to Stop".

4. Upon completion of printing the display will return to the Report Menu.



Key Location Report

Stock Num	Model	Color	Level	Bin
0002189	SENTRA 4SPD	BLUE, 2 TONE	11	01
0007446	HYUNDAI GL	RED, MED	10	02
0010001	CRX DX 5SPD	BLACK	10	06
0012654	CRX DX 5SPD	BLUE, DK	09	06
0022778	COR 4DR SD A	WHITE	10	14

The Key Location Report is designed to allow the CD 2000 System Manager to manually locate any key stored in the system. This report is primarily for use during a power failure and should be run at least weekly. The key locations are identified by their Bin and Level in the KAM cabinet. The bins and levels are identified by labels on the Carrousel that is located inside the KAM cabinet. The uppermost level is 1 and the lowermost is 29. Each level has 14 bins around it. The bin directly in front of the input chute is Level 10, Bin 7. When a stock number is assigned to a KAM cabinet it is given a bin where it will be stored as long as the key is managed by the System. Any time the key is in the cabinet it will be in that bin.

How to Print a Key Location Report

Caution : This report is designed exclusively as a printed report because of its use during power failures. The report will begin printing as soon as you make it your selection.

1. Check the printer to ensure that power is on, that paper has been loaded and that the on-line indicator is lit.
2. From the Report Menu type a 2 and hit Return. The message "Sorting in Progress" may appear briefly on the last line of your screen, followed by the message: "Printing in Progress - Press ESC to Stop".
3. Upon completion of printing the report the display will return to the Report Menu.

Key Aging Report

Stock Num	Model	Color	Date
0023446	TEMPO 2DR LX	WHITE	01-05-88
4562773	COR 4D SD A	BLUE,DKMET	03-06-88
8899001	CRX DX 5SPD	RED,MED	04-08-88
1234456	HYUNDAI GL	BLACK	05-15-88
1256647	MR2 CP A	GREY,2TONE	06-12-88
6300344	CRX DX 5SPD	BLUE/SILVER	07-20-88

The Key Aging Report is designed to identify the keys which have been in the System the longest period of time. The System Manager selects a cut-off date for the report and the System lists all the keys managed by the KAM which were originally entered into the System prior to that date. The keys are listed in descending order starting with the oldest key. This report is useful for updating the system for sold units and for identifying slow moving items.

How to Print an Aging Report

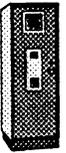
1. From the Report Menu type a 3 and hit Return.
2. The following prompt will appear on your screen: "Enter Cutoff Date (MMDDYY) : _".
3. Enter the 6 digits representing the numeric month, followed by the day and the year (do not enter slashes or hyphens) for the date you have selected as the cut-off date.

Example: If you would like a list of all the keys currently managed by the KAM which were originally placed in the system prior to July 31, 1988. You would enter 073188.

4. The following prompt will appear on your screen: "Output on CRT (C) or Printer (P) ? _".
5. Enter a C to view the report one page at a time on the CRT. If you wish to print the report, check the printer to ensure that power is on, that paper has been loaded, and that the on-line indicator is lit. Enter a P to begin printing.

The message "Sorting in Progress" may appear briefly on the last line of your screen, followed by the message: "Printing in Progress - Press ESC to Stop".

6. Upon completion of printing the display will return to the Report Menu.



Key Inquiry Report

Enter Stock Number: 123456

Level	Bin	Date Installed
11	3	11-01-88

Key is Currently in System

Last Transactions

Name	Time Out	Time In
JOHNSON, B.	11-26-88 09:52A	11-26-88 11:03A
SMITH, G	11-25-88 07:08P	11-25-88 09:15P
JONES, W.	11-25-88 02:10P	11-25-88 03:48P
WILSON, D.	11-24-88 05:16P	11-24-88 07:27P
SMITH, G.	11-24-88 11:09A	11-24-88 12:15P

The Key Inquiry Report allows you to access summary information for any key in a particular KAM. If the key is in the KAM, the bin location and the date installed will be displayed along with the most recent transaction information. If the key has been checked out of the KAM, the person who has it will also be displayed.

How to Print a Key Inquiry Report

1. From the Report Menu type a 4 and hit Return.
2. The following prompt will appear on your screen: "Enter Stock Number ___".
3. Enter the stock number of the desired key.
4. After you have reviewed the information, press any key to return to 2. above.
5. Press the ESC key when you are finished to return to the Report Menu.

Salesman Key Usage Report

Salesman: Johnson, B.

	SUN	MON	TUE	WED	THU	FRI	SAT
SHOWS	0	0	8	5	9	12	16
MOVES	0	0	1	0	3	2	1

Shows:

Stock Num	Model	Color	Time Out	Time In
0456728	TEMPO 2DR LX	BLUE,MET	11-26-88 09:30A	11-26-88 09:42A
9903459	CORVETTE	BLACK	11-26-88 10:15A	11-26-88 10:59A
8899001	CRX DX 5SPD	RED, MED	11-26-88 01:18P	11-26-88 01:49P
7385647	COR 4DR SD A	BLUE, MET	11-26-88 01:49P	11-26-88 01:51P
2314678	HYUNDAI GL	RED, MED	11-26-88 02:08P	11-26-88 02:54P

The Salesman Key Usage Report provides information regarding the number of cars used for sales demonstrations by a particular salesman or a group of salesmen. Keys removed from the CD 2000 to Move a car are shown separately since this activity is not directly related to selling. The Salesman Key Usage Reports are compiled for the most recent weeks activity.



How to Print a Salesman Key Usage Report

1. From the Report Menu type a 5 and hit Return.
2. The following prompt will appear on your screen: "By Individual Salesman (I), By Group (G)? ___".
3. For an Individual Salesman's Report, type I, hit return, and proceed to step 4.

For a Group Salesman's Report, skip to step 7.

4. The following prompt will appear on your screen: "Output on CRT (C) or Printer (P) ? ___".

Enter a C to view the report one page at a time on the CRT, or

Enter a P to print the report. You should first check the printer to ensure that power is on, that paper has been loaded and that the on-line indicator is lit.

5. The following prompt will appear on your screen: "Enter Salesman ID Code ___".
6. Enter the 4 digits of the salesman's ID code and hit Return. If you are viewing the report on the CRT, press any key to view additional pages of the report.

When you are finished viewing the report you should hit any key to return to the "Enter Salesman ID Code ___" prompt. If you are finished entering ID codes, hit the ESC key to return to the Report Menu.

If you requested a printed report, the display will return to the Report Menu upon completion of printing.

7. For a Group Salesmen's Report, type G and hit Return. The following prompt will appear on your screen, after the CRT or Print prompt: "Enter Group Number (Zero for All) ___".
8. Select the appropriate sales group (1-9) or enter 0 for all.
9. The report will print as described in 4. above.

Stock Number Usage Report

Enter Stock Number: 78999

Name	Time Out	Time In
Kelly, M.	11-26-88 01:52P	11-26-88 04:11P
Davidson, G.	11-25-88 10:01A	11-25-88 11:07A
Hill, B.	11-22-88 09:32A	11-22-88 10:06A
Bailey, V.	11-22-88 02:58P	11-22-88 03:24P
Warren, C.	11-18-88 04:52P	11-18-88 06:07P

The Stock Number Usage Report provides information regarding the number of times a particular car is shown, which salesmen have shown the car, and when. The Stock Number Usage Report is printed in descending order starting with the most recent activity.

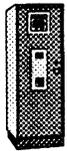
How to Print a Stock Number Usage Report

1. From the Report Menu type a 6 and hit Return.
2. The following prompt will appear on your screen: "Enter Stock Number ___".
3. Enter the Stock Number for the key you wish to check.
4. The following prompt will appear on your screen: "Output on CRT (C) or Printer (P) ? ___".
5. Enter a C to view the report one page at a time on the CRT.

If you wish to print the report, check the printer to ensure that power is on, that paper has been loaded, and that the on-line indicator is lit. Enter a P to begin printing.

The message "Sorting in Progress" may appear briefly on the last line of your screen, followed by the message: "Printing in Progress - Press ESC to Stop".

6. Upon completion of printing the display will return to the Report Menu.



Model Usage Report

Model: 20 Corvette

Stock Num	Color	Salesman	Time Out	Time In
0004555	BLACK	Smith, J.	11-26-88 06:24P	11-26-88 07:08P
0007897	RED,CANDY	Kelly, M.	11-25-88 08:47P	11-25-88 09:43P
0003456	WHITE	Smith, J.	11-25-88 06:23P	11-25-88 07:21P
0007666	BLUE, MET	Moore, B.	11-24-88 10:01A	11-24-88 12:25P
0003456	WHITE	Smith, J.	11-24-88 06:23P	11-24-88 07:21P
9903459	RED,CANDY	Johnson, B.	11-24-88 08:45P	11-24-88 09:21P

The Model Usage Report provides information regarding the number of times a particular model is shown, which colors are being shown the most, and which salesmen are showing this model. This report is printed in descending order starting with the most recent activity.

How to Print or Display a Model Usage Report

1. From the Report Menu type a 7 and hit Return.
2. The following prompt will appear on your screen: "Enter Model Number or Return for All ___".
3. Enter the Model Number for a specific car type or press return to view all model types.
4. The following prompt will appear on your screen: "Output on CRT (C) or Printer (P) ? ___".

Enter a C to view the report one page at a time on the CRT, or

Enter a P to print the report. You should first check the printer to ensure that power is on, that paper has been loaded and that the on-line indicator is lit.

5. If you are viewing the report on the CRT, press any key to view additional pages and then to return to the Report Menu.

If you requested a printed report, the display will return to the Report Menu upon completion of printing.

Print Bar Code Labels

Enter Stock Number __
 Enter Model Code
 Enter Color Code
 Enter Machine ID

01 CENTURY	11 PATH XE AUTO	01 RED, CANDY	11 SILVER, MET
02 MAXIMA SPT	12 EX CAB 4X4	02 RED, MED	12 GREEN, LT
03 HYUNDAI	14 SUPRA TRS A	03 RED, WINE	13 GREEN, MED
04 CRX DX 5SPD	15 CAMARO IROC	04 BLUE, LT	14 GREEN, DK
05 COR 4D SD A	16 TEMPO 2DR LX	05 BLUE, MED	15 GREEN, MET
06 SENTRA 4SPD	17 6000 LE SD	06 BLUE, DK	16 GREY
07 COROLLA 4SPD	18 MUSTANG GT	07 BLUE, MET	17 YELLOW, MED
08 HYUNDAI 3DR	19 S 10 BLZ 4X4	08 BLACK	18 GREY, 2TONE
09 MAX GXE AUTO	20 CORVETTE	09 WHITE	19 RED, 2TONE
10 MR2 CP A	22 HYUNDAI GL	10 SILVER	20 BLUE, 2TONE

Bar code labels must be printed for all keys placed in a KAM. The printing of a bar code label is required for every vehicle you add to your inventory. Before you begin entering information for bar code labels, set-up the printer with label stock as described in Appendix B. Also, review the initial installation procedures in Chapter 5.

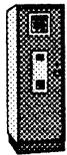
Note: The bar code label is one of the most important items in your Key Access System. Please take care to insure that the labels are centered correctly, printed properly, and contain no typographical errors. It is also very important that the label stick properly to the Key Box; if the edges of the label pull up, then you should reprint and reapply the label.

How to Print Bar Code Labels

1. From the Report Menu type an 8 and hit Return.
2. Your CRT screen will display the prompt: "Enter Stock Number __" and will display up to 20 model codes and color codes.

The actual Model and Color codes that will be displayed depend upon how you have set-up your CD 2000 System. See pages 28 and 30 for more information on entering Model Codes and Color Codes.

3. Enter the vehicle Stock Number for the car you are adding and hit Return. Stock numbers may have from 1 to 7 numeric digits and must fall within the range 1 to 9999999.
4. The following prompt will appear on your screen: " Enter Model Code __".



5. Enter the 2 digit model code.
Note: The model code may be other than those displayed on the screen. Valid entries would be any assigned model code from 01 to 99.
6. The following prompt will appear on your screen: " Enter Color Code ___".
7. Enter the 2 digit color code.
Note: The color code may be other than those displayed on the screen. Valid entries would be any assigned color code from 01 to 99.
8. The following prompt will appear on your screen: "Enter Machine ID ___".
9. Enter the 1 digit Machine ID for the KAM you wish to use for managing this particular vehicle.
10. The CRT will now display the information you have just entered in the format Stock Number - KAM ID - Model Code - Color Code.
For example: "0200028-1-11-21 Is this Correct ? (Y) ___".
Please carefully review this information to insure that no mistakes have been made.
11. If any of the information is incorrect, enter N to return to Step 2 above and re-enter the correct information.
12. If the information is correct, enter Y and the bar code label will be printed. The display will then return to 2. above.
When you are done printing bar code labels, press ESC to return to the Report Menu.

Connect to Remote KAM

1. From the Report Menu type a 9 and hit Return.
2. The following prompt will appear on your screen: "Enter KAM ID (1-4) ___".
3. Enter the Machine ID for the KAM you desire to access.
4. If the KAM requested is not in operation or does not exist on your System, the message "Remote Does Not Respond" will be displayed on your screen. Press any key to continue.
5. Otherwise, you are now connected to the KAM requested and it should be so identified in your CRT's screen headings.

Select Report Week

Support for 12 weeks of data.

i.e. 0 - 11

Current week = 0

Last week = 1

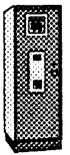
Previous week = 2

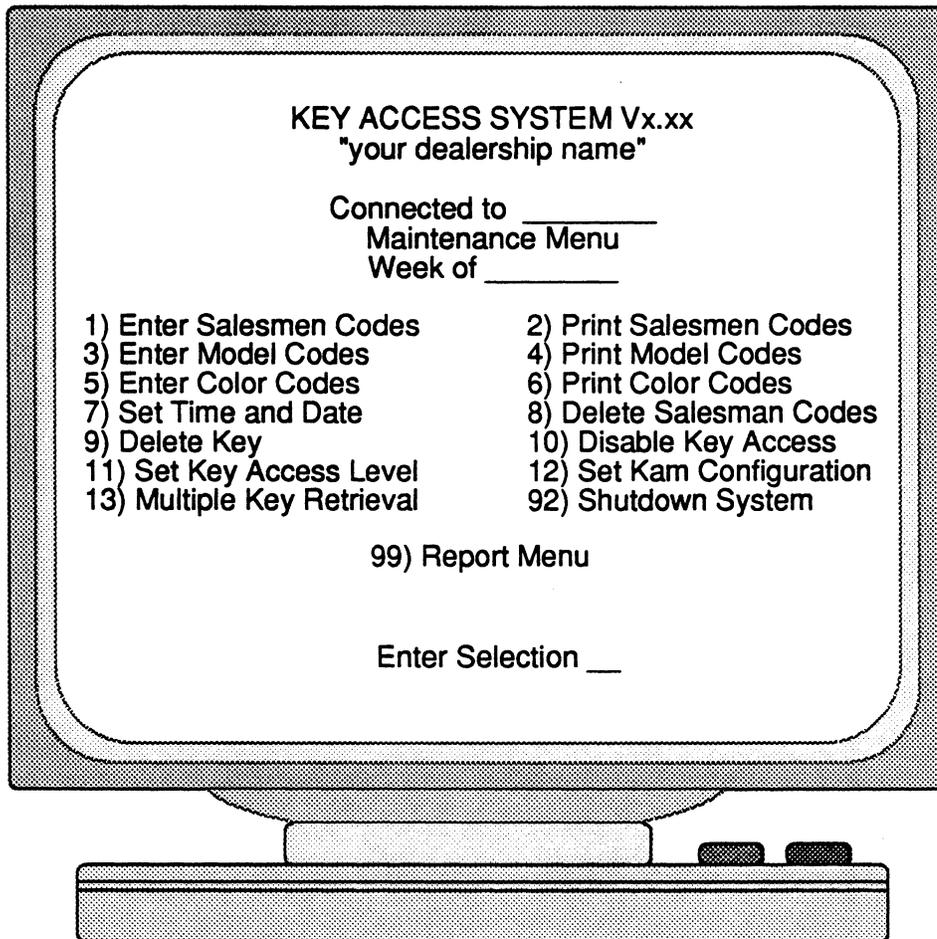
Enter Week Number __

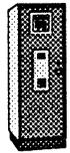
Enter a "1" and hit Return to load previous weeks' data. All reports run will now use that weeks' data until the current week is re-selected or there is no activity for 15 minutes.

Twelve weeks of data are collected on the system diskette. The oldest week is replaced each week as new data is added.

The day your report week begins is normally set to Wednesday. This can be changed to any day of the week, please call our service department.







Chapter 4 - Maintenance Menu

General

This chapter describes the procedures used to perform the various system maintenance functions of the CD 2000 Key Access System. Several of these functions are used during the initial system set-up and are also used on a regular basis, such as the assignment of salesman ID codes.

The deletion of salesman ID codes and the deletion of keys from the Key Access System are covered in this chapter.

Security controls through the assignment of key access levels and system passwords are discussed in detail.

Enter Salesmen Codes

Each salesman (or any other user of the CD 2000 System) must be assigned an ID code. This code will allow the salesman to access keys, and will identify him for key usage reporting purposes. A description of up to 12 digits should be entered for each salesman's ID code. This description will be used on the various reports and on the keypad display line to identify the user.

1. From the Maintenance Menu type a 1 and hit Return.
2. The following prompt will appear on your screen: "Enter Salesman Code ___".
3. Enter the 4 digit number you wish to assign to this salesman and hit Return.

If this Salesman Code is already assigned to a salesman, his name will appear on your screen. To make changes, use the backspace key to erase or modify the current entry.

Hit Return when done editing to accept your changes, or hit ESC to reject your changes and return to 2. above.

4. If this Salesman Code is not already assigned to a salesman, the following prompt will appear on your screen: "Enter Salesman Name ___".
5. Enter the Salesman's name and hit Return.
6. Enter the Group Code, from 0 to 9 (a zero meaning no group code is assigned) and hit Return.
7. Enter the Access Level, from 0 to 9 (a zero meaning no access level is assigned and a 9 meaning an access level of at least 9 is required to access the key) and hit Return.
8. The display will return to step 2. above so that you may continue entering salesman ID codes.
9. Hit ESC to return to the Maintenance Menu when finished.



Print Salesmen Codes

ID	Name	Grp	Acc	ID	Name	Grp	Acc
0001	Smith, J.	1	9	0002	Davidson, G.	2	9
0003	Johnson, B.	3	9	0004	Kelly, M.	4	9
0005	Murphy, C.	1	7	0006	Hollow, N.	2	8
0007	Jones, J.	3	6	0008	Dodd, V.	4	7
0009	Bell, B.	4	8	0010	Howard, G.	1	5
0011	Smith, F.	2	5	0012	Jones, B.	2	7

This is a confidential report that must be controlled in order to preserve the security of your Key Access System. This function should be assigned a System Password Level of 3. Please see page 36 for more information on System Passwords.

1. From the Maintenance Menu type a 2 and hit Return.
2. The following prompt will appear on your screen: "Sort by Code (C) or by Name (N) ? __".
3. If you would like the report sorted in descending order by salesman ID code, enter a C, If you would like the report sorted alphabetically by salesman name, enter an N.
4. The following prompt will appear on your screen: "Output on CRT (C) or Printer (P) ? __".
5. Enter a C to view the report one page at a time on the CRT.

If you wish to print the report, check the printer to ensure that power is on, that paper has been loaded, and that the on-line indicator is lit. Enter a P to begin printing.

The message "Sorting in Progress" may appear briefly on the last line of your screen, followed by the message: "Printing in Progress - Press ESC to Stop".

6. Upon completion of printing the display will return to the Report Menu.

Enter Model Codes

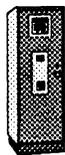
Each type of vehicle that you wish to track must be assigned a unique 2 digit code in the range 01 to 99. A single model may have multiple model codes such as a Mustang GT and a Mustang LX. You can get as detailed as you like in your assignment of model codes. Any changes you make to your model code assignment system will not be fully effective as long as there are Key Boxes with bar code labels that were printed using a prior assignment system.

1. From the Maintenance Menu type a 3 and hit Return.
2. The following prompt will appear on your screen: "Enter Model Code ___".
3. Enter the 2 digit number you wish to assign to this model and hit Return.

If this model code is already assigned, the description will appear on your screen. To make changes, use the backspace key to erase or modify the current entry.

Hit Return when done editing or hit ESC to reject your changes.

4. If this model code is not already assigned, the following prompt will appear on your screen: "Model Description ___".
5. Enter a 12 digit Model Description and hit Return.
6. The following prompt will appear on your screen: "Mark For Display When Printing Bar Codes ? (Y) ___".
7. Enter Y if you wish to have this model code displayed on the screen when bar code labels are being printed. A maximum of 20 Model Codes and Descriptions can be displayed.
8. The display will return to step 2 above, hit ESC to return to the Maintenance Menu.



Print Model Codes

Code	Description	Code	Description	Code	Description
01	CENTURY	02	MAXIMA SPT	03	HYUNDAI
04	CRX DX 5SPD	05	COR 4D SD A	06	SENTRA 4SPD
07	COROLLA 4SPD	08	HYUNDAI 3DR	09	MAX GXE AUTO
10	MR2 CP A	11	PATH XE AUTO	12	EX CAB 4X4
14	SUPRA TRS A	15	CAMARO IROC	16	TEMPO 2DR LX
17	6000 LE SD	18	MUSTANG GT	19	S 10 BLZ 4X4

This report should be printed after the initial installation and after any changes are made to the Model Codes. This report will serve as a reference for printing bar code labels and could be needed in case of certain system maintenance and repair procedures.

1. From the Maintenance Menu type a 4 and hit Return.
2. The following prompt will appear on your screen: "Sort by Code (C) or by Name (N) ? ___".
3. If you would like the report in descending order by model code , enter a C, If you would like the report sorted alphabetically by Model Description, enter an N.
4. The following prompt will appear on your screen: "Output on CRT (C) or Printer (P) ? ___".
5. Enter a C to view the report one page at a time on the CRT.

If you wish to print the report, check the printer to ensure that power is on, that paper has been loaded, and that the on-line indicator is lit. Enter a P to begin printing.

The message "Sorting in Progress" may appear briefly on the last line of your screen, followed by the message: "Printing in Progress - Press ESC to Stop".

6. Upon completion of printing the display will return to the Report Menu.

Enter Color Codes

Each color of vehicle that you wish to track must be assigned a unique 2 digit code in the range 01 to 99. Typically you would use the manufacturer's color guide as a basis for your Color Code set-up. Any changes you make to your Color Code assignment system will not be fully effective as long as there are Key Boxes with bar code labels that were printed using a prior assignment system.

1. From the Maintenance Menu type a 5 and hit Return.
2. The following prompt will appear on your screen: "Enter Color Code ___".
3. Enter the 2 digit number you wish to assign to this color and hit Return.

If this color code is already assigned, the description will appear on your screen. To make changes use the backspace key to erase or modify the current entry.

Hit return when done editing or hit ESC to reject your changes.

4. If this color code is not already assigned, the following prompt will appear on your screen: "Color Description ___".
5. Enter a 12 digit Color Description and hit Return.
6. The following prompt will appear on your screen: "Mark For Display When Printing Bar Codes ? (Y) ___".
7. Enter Y if you wish to have this color code displayed on the screen when bar code labels are being printed. A maximum of 20 color codes and descriptions can be displayed.
8. The display will return to step 2 above, hit ESC to return to the Maintenance Menu.



Print Color Codes

Code	Description	Code	Description	Code	Description
01	RED, CANDY	02	RED, MED	03	RED, WINE
04	BLUE, LT.PD	05	BLUE, MED	06	BLUE, DK
07	BLUE, MET	08	BLACK	09	WHITE
10	SILVER	11	SILVER, MET	12	GREEN, LT
13	GREEN,MED	14	GREEN, DK	15	GREEN, MET
16	GREY	17	YELLOW,MED	18	GREY, 2TONE

This report should be printed after the initial installation and after any changes are made to the Color Codes. This report will serve as a reference for printing bar code labels and could be needed in case of certain system maintenance and repair procedures.

1. From the Maintenance Menu type a 6 and hit Return.
2. The following prompt will appear on your screen: "Sort by Code (C) or by Name (N) ? ___".
3. If you would like the report in descending order by color code, enter a C, If you would like the report sorted alphabetically by Color Description, enter an N.
4. The following prompt will appear on your screen: "Output on CRT (C) or Printer (P) ? ___".
5. Enter a C to view the report one page at a time on the CRT.

If you wish to print the report, check the printer to ensure that power is on, that paper has been loaded, and that the on-line indicator is lit. Enter a P to begin printing.

The message "Sorting in Progress" may appear briefly on the last line of your screen, followed by the message: "Printing in Progress - Press ESC to Stop".

6. Upon completion of printing the display will return to the Report Menu.

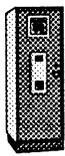
Set Time and Date

Once the time and date are set, it should not be necessary to reset them except for daylight savings time changes or in the case of certain system maintenance and repair procedures.

1. From the Maintenance Menu type a 7 and hit Return.
2. The following prompt will appear on your screen: "Enter Date (MMDDYY) : _".
3. Enter the 6 digits representing the numeric month, followed by the day and the year (do not enter slashes or hyphens) and hit Return.

For example: On January 6, 1989 the entry would be 010689

4. The following prompt will appear on your screen: "Enter Time (HHMMX) : ____". HH= Hours, MM= Minutes, X= AM or PM.
5. Enter the correct time and hit Return.



Delete Salesman Codes

Whenever someone's access privileges are terminated, their ID code must be deleted from current use in order to maintain system security. Codes may be reassigned after some period of time has elapsed.

1. From the Maintenance Menu type an 8 and hit Return.
2. The following prompt will appear on your screen: "Enter Salesman Code ___".
3. Enter the 4 digit salesman code for the salesman you wish to delete.
4. If the code entered is not currently assigned to a salesman, the following prompt will appear on your screen: "Salesman Code Not Found - Press Any Key to Continue", hitting return will take you back to 2. above.
5. If the code entered is currently assigned to a salesman, the salesman's name will be displayed and the following prompt will appear on your screen: "Delete this Salesman (Y) ? ___".
6. If this is the correct salesman to delete, enter a capital Y and hit return. The following message will appear on your screen: "Salesman Deleted - Press Any Key to Continue".

If not, hit Return and this Salesman Code will remain in the system.

7. If this salesman has keys out, the following message will appear on your screen: "Salesman Has Keys Out ___".

You may not delete a salesman until his account has been cleared. You must clear his account by either returning the keys he has checked out, or deleting the keys because they represent vehicles to be deleted from the System. Hit any key to return to 2. above.

8. Press ESC to return to the Maintenance Menu.

Delete Keys

After a vehicle has been sold, or otherwise removed from your inventory, you must notify the KAM so that it will stop tracking the key. In order to delete a key it must be physically out of the KAM.

1. From the Maintenance Menu type a 9 and hit Return.
2. The following prompt will appear on your screen: "Enter Stock Code ___".
3. Enter the Stock Number for the key you wish to delete and hit Return.
4. If the key you have selected is still in the KAM, the following message will be displayed: "Key Has Not Been Removed".

You must remove the key from the KAM before deleting it.

5. If the key you have selected is checked out of the KAM, the following message will be displayed: "Delete This Key (Y) ? ___".
6. Type a capital Y and hit Return. The following message will be displayed: "Key Deleted - Press Any Key to Continue". The display will return to 2. above.
7. Press ESC to return to the Maintenance Menu.

Disable Key Access

It is sometimes desirable to prevent anyone from accessing keys from a KAM. Typically this would be over a weekend or when certain system maintenance procedures are being performed. When a KAM is disabled it will neither accept nor dispense keys.

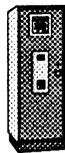
1. From the Maintenance Menu type 10 and hit Return.
2. If the KAM is currently on-line, the following prompt will appear on your screen: "Disable System (Y) ? ___".

Type a Y and hit Return to disable the KAM and prevent any Key Access.

3. If the KAM is currently disabled, the following prompt will appear on your screen: "System is Currently Disabled, Do You Want to Enable it (Y) ? ___".

Type a Y and hit Return to enable the KAM and allow Key Access.

4. The display will return to the Maintenance Menu.



Set Key Access Levels

The access to any particular key may be restricted with up to 9 levels of access privileges. Typically this feature would be used to restrict access to the high priced, or high performance items in your inventory

1. From the Maintenance Menu type 11 and hit Return.
2. The following prompt will appear on your screen: "Enter Stock Code ___".
3. Enter the Stock Number for the vehicle you wish to change the access level on and hit Return.
4. If the stock number that you have selected is not a key that is managed by the KAM, then the following message will be displayed: "Stock Number Not Found".

Hit any key to return to 2. above.

5. If the stock number that you have selected is controlled by the KAM, the following prompt will appear on your screen: "Enter Level ___".
6. Enter the Access Level you desire (9 is the highest level and 1 is the lowest, zero means no access level is assigned. A key with a 3 access level can be accessed by someone with a 7 level but not by someone with a 2 access level), and hit Return.
7. The display will return to 2. above. Enter another stock number, or press ESC to return to the Maintenance Menu.

Set KAM Configuration

The KAM Configuration Menu is displayed by typing a 12 from the Maintenance Menu:



- 1) Enter Title 1
- 2) Enter Title 2
- 3) Enter Passwords
- 4) Enable Passwords
- 92) Shutdown - Save Files
- 99) Maintenance Menu

Enter Selection __

Enter Titles

Titles appear at the top of the CRT screen and on all printed reports.

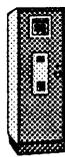
1. From the KAM Configuration Menu enter 1 and hit Return.
2. The prompt "Title 1" will be displayed along with the current title.
3. Hit return to keep the existing title, or backspace through the current name and enter up to 30 characters for the title that you wish to have displayed, (such as your company name, and hit Return.
4. The cursor will return to the "Enter Selection" prompt.

Follow the same procedure for entering a Title 2.

Enter Passwords

Passwords are used to protect access to the various system reports. Password 3 is for the CD 2000 System Manager and can access any report or function.

1. From the KAM Configuration Menu enter 3 and hit Return.
2. The following prompt will be appear on your screen:
"Password 1 __ Password 2 __ Password 3__"
3. Enter the three passwords you wish to assign, each of which can have up to three characters.
4. After Password 3 is entered the cursor will return to the "Enter Selection" prompt. Note: You must enable the passwords before they become effective.



Enable Passwords

After System Passwords have been entered, the reports to be protected must be password enabled in order to prevent access. A password 2 can access reports enabled for 1 or 2, but not reports enabled with for 3.

1. From the KAM Configuration Menu enter 4 and hit Return.
2. The following table will be appear on your screen:

Key Out	0 __
Key Location	0
Key Aging	0
Key Inquiry	0
Salesman Key Usage	0
Stock Number Usage	0
Model Usage	0
Print Bar code	0
Ent & Prt Salesman Codes	0
Ent & Prt Mod/Col Codes	0
Set Date and Time	0
Delete Salesman Codes	0
Delete Key	0
Disable Key Access	0
Set Key Access Level	0
Set KAM Configurations	0

Password 1 __ Password 2 __ Password 3 __

3. Enter the password level for each report or function you wish to protect, or hit return to leave the current level unchanged.
4. When you have gone through the entire table you will be returned to the configuration menu.

The following page references are provided to assist you in determining your need for password protection:

Key Out	Page 14	Ent & Prt Salesman Codes *	Page 26
Key Location	Page 15	Ent & Prt Mod/Col Codes	Page 28
Key Aging	Page 16	Set Date and Time	Page 32
Key Inquiry	Page 17	Delete Salesman Codes *	Page 33
Salesman Key Usage	Page 18	Delete Keys *	Page 34
Stock Number Usage	Page 20	Disable Key Access	Page 34
Model Usage	Page 21	Set Key Access Level *	Page 35
Print Bar Code Labels	Page 22	Set KAM Configuration *	Page 36

* We suggest a password level of 3 for these functions.

Multiple Key Retrieval

The multiple key retrieval feature allows you to retrieve a large number of keys by entering all the stock numbers at once in a list, or allows you to retrieve all the keys for a certain model and color, or allows you to retrieve all the keys in the Key Machine.

1. From the Maintenance Menu type 13 and hit Return.
2. The following prompt will appear on your screen:
 - 1) Enter Keys to Retrieve
 - 2) Retrieve All Keys
 - 3) Select Keys to Retrieve from List
 - 4) Select Model and Color for Retrieval

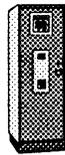
ESC) Return to Maintenance Menu

Current Model = All

Current Color = All

Enter Selection ____

3. For each selection you will be asked first for your salesman ID code and then whether the keys should be marked as "Shows" or "Moves".
4. A list of keys can be manually entered for retrieval under selection "1", or color and model can be designated using selection "4", and then the System will list each car that meets your criteria by using selection "3".
5. When entering a model and color using selection "4", typing Return will keep the current model or color and entering "0" selects all codes.
6. When choosing cars using selection "3", each stock number will be displayed and you will be asked "Remove? (Y/N) ____". Enter a "Y" or type Return to have the key retrieved.
7. Selection "2" will retrieve all the keys that match the criteria set using selection "4".



Shutdown System

The shutdown command is used to safely power off the Key Machine without the risk of losing any data. All files are checked and written to disk before a message is displayed telling you it is safe to power off your system.

1. From the Maintenance Menu or the Kam Configuration Menu type 92 and hit Return.
2. The following prompt will appear on your screen:
Shutdown Machine? Are You Sure? (YES/NO)
3. Type YES in all capital letters and hit Return.
4. The following prompt will appear on your screen:
Enter Password ____
Enter the version number of your Key Access System software as shown at the top of you screen, leaving out the period, and hit Return.
i.e. Key Access System V2.31 would be entered as "231"
5. The System will respond with "Saving Current Kam Configuration, checking files, saving files".
6. When all the files have been checked and saved, the System will respond with:
Key Machine Shutdown.
Turn Machine Off.
7. You may now safely turn the power off to the Key Machine. Turning the power back on will restore normal operation.

Model Codes

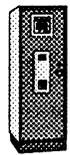
Code	Description	Code	Description	Code	Description
01	CENTURY	02	MAXIMA SPT	03	HYUNDAI
04	CRX DX 5SPD	05	COR 4D SD A	06	SENTRA 4SPD
07	COROLLA 4SPD	08	HYUNDAI 3DR	09	MAX GXE AUTO
10	MR2 CP A	11	PATH XE AUTO	12	EX CAB 4X4
14	SUPRA TRS A	15	CAMARO IROC	16	TEMPO 2DR LX
17	6000 LE SD	18	MUSTANG GT	19	S 10 BLZ 4X4

Color Codes

Code	Description	Code	Description	Code	Description
01	RED, CANDY	02	RED, MED	03	RED, WINE
04	BLUE, LT.PD	05	BLUE, MED	06	BLUE, DK
07	BLUE, MET	08	BLACK	09	WHITE
10	SILVER	11	SILVER, MET	12	GREEN, LT
13	GREEN, MED	14	GREEN, DK	15	GREEN, MET
16	GREY	17	YELLOW, MED	18	GREY, 2TONE

Salesmen Codes

ID	Name	Grp	Acc	ID	Name	Grp	Acc
0001	Smith, J.	1	9	0002	Davidson, G.	2	9
0003	Johnson, B.	3	9	0004	Kelly, M.	4	9
0005	Murphy, C.	1	7	0006	Hollow, N.	2	8
0007	Jones, J.	3	6	0008	Dodd, V.	4	7
0009	Bell, B.	4	8	0010	Howard, G.	1	5
0011	Smith, F.	2	5	0012	Jones, B.	2	7



Chapter 5 - Initial Installation Procedures

Overview

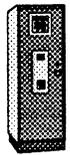
This process is normally completed by the installation people from the Key Systems Distributor in your area. We have included this section for your information and for your use in adding cars to your inventory on a regular basis.

Procedure

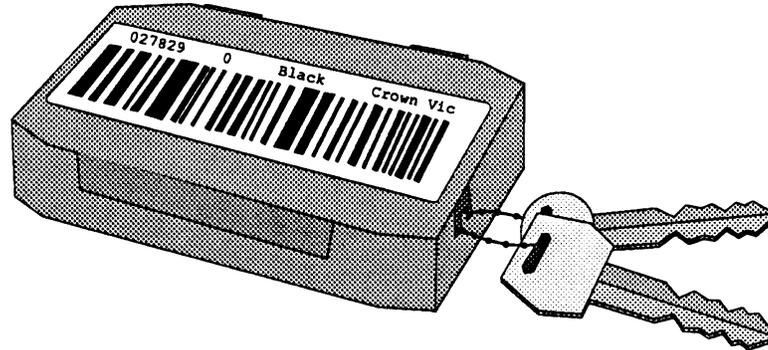
1. Enter the Model Codes as described on page 28. There are several things you should consider before beginning:
 - a. Abbreviations should be as consistent as possible.
 - b. General descriptions should be entered first in the description field to provide a more logical grouping when reports are sorted by model name (i.e. Maxima 2DR and Maxima Auto).
 - c. Model Code descriptions are limited to 12 characters.
 - d. Since only 20 of the 99 possible model codes can be shown on the CRT screen at the time bar code labels are printed, careful consideration should be given to which model codes to display. Those displayed may be changed at anytime. As an example, initially you may wish to display the most commonly used model codes. At a later date you may find the operator has memorized these and desires to display the less commonly used, or more specific codes.
2. Print the Model Codes after you have finished entering them and verify that the information is correct.
3. Enter the Color Codes as described on page 30. There are several things you should consider before beginning:
 - a. Abbreviations should be as consistent as possible.
 - b. The primary color should be entered first in the description field to provide a more logical grouping when reports are sorted by color name (i.e. Red,Light and Red,Wine).
 - c. Model Code descriptions are limited to 12 characters.
 - d. Since only 20 of the 99 possible model codes can be shown on the CRT screen at the time bar code labels are printed, careful consideration should be given to which model codes to display. Those displayed may be changed at any time. As an example, initially you may wish to

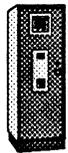
display the most commonly used model codes. At a later date you may find the operator has memorized these and desires to display the less commonly used, or more specific codes.

4. Print the Color Codes and verify that the information is correct.
5. Determine the inventory numbering system to be used. There are several things you should consider before beginning:
 - a. Normally, the same stock number is used for the CD 2000 as is used by the dealership's business office. If some other system is to be used, it should be a logical system and easily understood by those accessing the keys.
 - b. The stock number is the most frequently used number with the CD 2000 System and should be familiar to those using the Key Access System.
 - c. The Stock Numbers must be unique.
6. Create bar code labels as described on page 22. There are several things you should consider before beginning:
 - a. Monitor the printer closely. The bar code needs to be printed completely on the label and as close to the center as possible. If a bar code is printed incorrectly or skewed, print another and mark through the first to avoid confusion later in the installation process.
 - b. The bar code labels may be printed prior to the day the system is put into full use, although this time should be minimized since cars will be sold and new cars may come in during the installation.
 - c. Print the majority of the bar code labels prior to affixing any to the Key Boxes. This step better utilizes your time and effort.
7. Affix the bar code labels to empty Key Boxes.
8. Fasten the vehicle's keys into the Key Boxes using the twist tie fasteners obtained from Key Systems. One key should be fastened to each side of the Key Box. All tags and metal rings must be removed from the keys before they are fastened into the Key Box. Cut off the portion of the fastener that is not used to hold the keys. The fastener should hold the keys but not prevent their easy flipping in and out of the Key Box.
9. Close the Key Boxes and feed them into the KAM cabinet.
10. Print Key Location Reports as described on page 15 and verify that all of the inventory has been assigned to a KAM.



11. Enter Key Access Levels if desired by the dealership . Considerations:
 - a. Evaluate the inconvenience of limiting the salesman's ability to get keys. If a manager is required to access the keys of expensive cars, consider the availability of managers and the effect of interruptions to the managers on a daily basis.
 - b. Evaluate the risk of general access to the keys of expensive cars.
 - c. Whatever criteria is set for Key Access policies, be sure they are consistent. This allows the activity reporting of the CD 2000 System to be meaningful to sales management.
12. Enter the Salesmen ID Codes.
13. Enter the System Passwords.
14. Explain the System Operations to the CD 2000 System Manager, lock the KAM, and turn the keys over to him.





Appendix A - Terminal Operations

General

The CD 2000 System includes a standard video display terminal typical of those found with most computing systems. There are several manufacturer's terminals that may be used with the CD 2000 system, so the manual shipped with the terminal should be consulted for exact operating instructions.

Features of the Terminal

The video display screen is usually ball mounted to allow easy rotation of the screen for your convenience. The keyboard is designed to allow various elevations to be used by rotating two recessed feet outward from the base. Turn the keyboard face down to adjust these feet.

The power ON/OFF switch and the Brightness Control switch are located on the front of the terminal. The ON/OFF Switch usually has a 1 and a 0 in front of it. This is the international symbol for on and off. Turn the switch to 1 to power on the terminal. The Brightness of the screen can be controlled by adjusting the Brightness Control Switch.

Most terminals utilize a screen blank feature to maximize the life of the display. When no keys have been pressed for a period of time, the screen goes blank. Pressing any key will return the program information to your screen.

If the terminal has been powered off for some reason, the report menu can be redisplayed by holding down the "Ctrl" key and typing the letter "O", as in over.

Important Keys

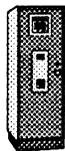
Return - This is the most frequently used key on the keyboard. Almost every entry or response must be followed by typing, or "hitting" Return. The return key is sometimes identified by a "down and left" arrow symbol. It is located to the right of the typewriter keys and is an oversized key.

The **Enter** Key performs the same function as the Return key and is located at the lower right of the ten-key pad.

Back Space (or Delete) - This key allows you to erase your entry or the current data in a field. The back space key is usually located in the upper right of the typewriter keys section.

ESC - The ESC or escape key is used by the CD 2000 software to back-up-to the previous menu and to exit certain report functions. This key is located in the upper left of the keyboard.

Typewriter Keys - The middle section of the keyboard is very much like a typewriter and functions in the same manner. Any numeric data which is entered may be entered from this section of the keyboard or from the **Ten-Key** pad on the right of the keyboard.



Appendix B - Printer Operations

General

The CD 2000 System includes a standard dot matrix printer typical of those found with most computing systems. There are several manufacturer's printers that may be used with the CD 2000 system, so the manual shipped with the printer should be consulted for exact operating instructions.

Site Requirements

The printer can be installed in any normal office environment. No special power or cooling is required. The printer should be placed on a flat horizontal surface with good ventilation. The operating requirements for the printer are listed below:

Line Voltage	AC 120V
Frequency	60Hz
Temperature	50°F - 95°F
Humidity	30% - 80%

Replacing Printer Ribbons

In order for the CD 2000 system to be able to properly read the bar code labels, it is important that the printer ribbon be in optimum condition. Too light or too dark a print can cause misreads of the Key Box information. Some ribbons have a hole that can be punched to increase the darkness of the print. **DO NOT USE THIS HOLE**, it causes too dark a print on the bar codes. Additional printer ribbons can be ordered from Key Systems.

Before replacing the ribbon, make sure the printer is turned off. Remove the top cover by pulling it forward and up carefully. Gently slide the print head toward the center of the unit. Carefully lift the old ribbon cartridge and pop it out of its holder by pressing the side tabs outward.

Prior to installing the new cartridge, remove any slack in the ribbon by rotating the tension knob located on top of the ribbon cartridge. Position the cartridge over the print head and visually insure that the ribbon slips between the ribbon cover and the print head. Gently but firmly press down on the cartridge until the two wing tabs snap into place. If the snap is not felt, rotate the tension knob slightly and try again.

Loading Paper

The printer is tractor fed and can handle single sheets of paper, fanfold pin-feed computer paper, or label stock. For the reports generated by the CD 2000 System you will use the fanfold computer paper.

To install fanfold computer paper follow these steps:

1. Remove the top and rear covers from the printer.
2. Open the covers on the pin-feed tractors.
3. Place the Paper Feed selector in the Tractor position.
4. Raise the tear bar that is located in the front of the roller.
5. Feed the paper into the printer so that the pin-feed holes engage the tractor and the paper goes around the roller and up under the tear bar.
6. Close the tractor covers and lower the tear bar into place.
7. Center the paper-holding tractors horizontally using the scale on the tear bar as a guide. The printer will print between zero and eighty on the scale. Lock the tractor clamping levers into place using their side levers.

Note: To insure smooth paper flow when using fanfold paper, be sure that the paper is neither stacked too high nor binds when it is fed into the printer. The paper should be directly behind the printer (not off to one side).

8. Align the top of form by positioning the top of a page of paper slightly above the top of the tear bar. The printer has a line counter which keeps track of the vertical position of the print head. Each time the power is turned on the line counter is reset and the current position of the head is designated as TOP OF FORM. When the Form Feed (FF) button is pressed, the paper will advance the length of a page.

Loading Label Stock for Bar Code Labels.

When printing bar code labels, use the same procedures as described above, except unlock and pull the right tractor feed to the right side of the label stock. The CD 2000 System is designed to print labels on standard single label stock.

Print a bar code label after positioning the top of the first blank label even with the back tension plate. Check the label to see if the bar code has been printed in the center of the label. If it is not centered, adjust the vertical and horizontal position as needed. Reprint a label until it is printing correctly.



Note: It is worth considerable attention to ensure that the labels are printed correctly. All the reporting capabilities and security of the CD 2000 depend on the ability to accurately read the bar code labels.

Switches and Indicators

Power Switch - The power switch is usually located on the right side or in the rear of the printer. It is used to turn ON or OFF the AC power. When the power is ON the power indicator light will be lit.

On-Line Switch - The ON-LINE switch is an on/off switch which opens and closes the communications line with the computer. When the power switch is turned on, the printer will power-up in the ON-LINE mode. If the paper is not installed when the printer is powered on, the printer will be in the OFF-LINE mode or show PAPER OUT. After paper has been installed press the on-line button to communicate with the computer and generate the required output.

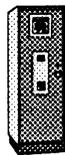
To get to an OFF-LINE state, press the on-line switch.

Form Feed (FF) Switch - This switch is typically active in the OFF-LINE mode. Pressing the FF switch will advance the paper to the top of the next page.

Line Feed Switch - This switch is typically active in the OFF-LINE mode. Pressing the Line Feed button will advance the paper one line at a time, holding it down will advance the paper multiple lines.

Print Mode Selector Switch - The print mode is typically set in the Draft Mode or Std. Pgm. mode. Please call us for the specific settings for you printer.

Paper Out Indicator - The paper out indicator light is lit when there are fewer than 1.5 inches remaining on the paper, or when no paper is inserted.



Appendix C - Display Line Messages

<u>Message</u>	<u>Explanation</u>
Accessing Key	The requested key is being retrieved.
Bad Bar Code Read	The bar code label is dirty or worn. Retry or see the System Manager.
Bad Entry, Retry	Incorrect data entry, please retry.
Bad ID Code	ID Code entered is not valid.
Bad Machine ID	The Key Box is not assigned to this KAM.
Bad Stock NBR	Stock number entered is not in this KAM cabinet.
Enter ID Code	The KAM is ready to process the request and is waiting for the user's ID Code.
Enter Stock NBR	The KAM is ready for a vehicle stock number after the SHOW or MOVE key has been pressed.
Entry Timeout	The user has taken too much time to complete his request. Please retry.
Good Luck "name"	The KAM has retrieved the key and placed it in the output chute.
"name" Has Key	The requested key is checked out to the person indicated.
No Free Slots	This KAM has the maximum number of keys assigned to it. Please see the System Manager.
Ready	The KAM is waiting for a request.
Stock NBR In Use	The KAM is already managing a key with that stock number. Please see the System Manager.
#### Not In System	The requested key is not managed by this KAM.



Appendix D - Glossary

Access Level - To ensure the security of certain keys, a vehicle may be assigned an Access Level from 1 to 9. The highest level of security is 9, with 1 being the lowest level. Typically this feature would be used to restrict access to the high priced, or high performance items in your inventory. In order to use this feature, each salesman ID code must be assigned an Access level.

Bar Code Label - The printed label that contains the description of the vehicle whose keys are stored inside the Key Box.

Bar Code - An international identification system which consists of a number of black and white bars on a white background. The pattern is read by the Key Access Computer and it's information interpreted.

Bin - A single key box location on the carrousel inside the KAM cabinet.

CD 2000 System Manager - The person given responsibility for the overall usage of the Key Machine. Typically this is a manager level person in the automobile dealership.

CD 2000 System - The Key Access Machine, Key Boxes, a terminal, a printer, and the Key Access Software that maintains and controls access to your keys.

Color Code - The 2 digit codes identifying the colors of the cars being controlled by the CD 2000 System. Valid entries are 01 through 99.

Color Description - The 12 character description associated with the Color Code.

Ctrl O - The key combination used to refresh the terminal display after the terminal has been powered off. Hold down the key marked "Ctrl" and type the letter "O".

Date Installed - A field used on various reports to show when a key was installed in a KAM.

Group Code - The salesmen may be divided into from 1 to 9 groups. These groups may be based on any categorization that is meaningful to the user. Some examples would be; sales teams, all the salesmen that work for one manager, or all the salesmen on one shift.

Group - The field used on reports to identify the Group Code.

Hit ESC - The act of typing the ESC key.

Hit Return - The act of typing the Return key.

ID Code - The unique 4 digit code assigned to each user of the Key Access System.

KAM ID - The single digit identifier located on the bar code label which designates the KAM to which the key has been assigned.

Key Access Keypad - The multi-function keypad located on the front of each KAM cabinet.

Key Access Level - To ensure the security of certain keys, a vehicle may be assigned an Access Level from 1 to 9. The highest level of security is 9, with 1 being the lowest level. Typically this feature would be used to restrict access to the high priced, or high performance items in your inventory. In order to use this feature, each salesman ID code must be assigned an Access level.

Key Access Machine - The Robotic Central Storage Cabinet where the keys to your vehicle inventory are stored. Inside each KAM cabinet there is a Carrousel with 406 Bins, the individual Key Boxes are stored in these bins. The storage and retrieval process is controlled automatically by the CD 2000 System.

Key Box - The plastic container which holds each set of keys.

Keys - Normally a set of keys, ignition and trunk for example.

Level - The circular plates or trays which make up the carrousel. The uppermost level is numer 1 and the lowermost is 29.

Machine ID - The numeric number assigned to each KAM in a multiple KAM CD 2000 System.

Mark for Display - When Printing Barcodes the screen can display up to 20 each of the Model and Color Codes and their descriptions. This display is to assist the operator creating barcodes by providing a quick reference guide to the frequently used codes.

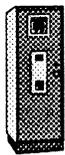
Model Code - The 2 digit codes identifying the models of the cars being controlled by the CD 2000 System. Valid entries are 01 through 99.

Model Description - The 12 character description associated with the Model Code.

Move - The function used to request a key for any reason other than a sales demonstration, such as use by the wash rack.

Remote KAM - Any KAM other than the designated Master KAM in a multiple KAM configuration.

Salesman ID Code - Each salesman, or other user, that will be accessing keys from the CD 2000 System will need to be assigned a salesman code. They will use this code each time they wish to retrieve a key. The code can be any unique 4 digit number. Sales activities are monitored and statistics are accumulated based on this code.



Salesman Name - The 12 character description associated with the Salesman ID Code. If you wish to maintain the ability to sort your sales reports by salesman's name, you should enter the last name first, or use the last name only with the first initial.

Show - The function used to request a key for a sales demonstration.

Stock Number - The number used in your inventory identification system.

System Passwords - Up to three levels of passwords may be assigned to the various CRT functions that are available. For example, typically a password would be assigned to the Print Salesmans Codes report to prevent someone from learning other user's ID Codes.

Time In - The date and time of day that an accessed key is returned to it's KAM cabinet.

Time Out - The date and time of day that a key was accessed from it's KAM cabinet.

Titles - The headings that appear at the top of the CRT screen for all reports.

Twist Tie Fastener - The beaded plastic fasteners that are used to fasten the vehicle keys in the Key Box. The keys cannot be removed without cutting the fastener.

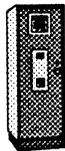


Troubleshooting

Symptom	Possible Cause	Probable Solution
Bad Barcode Reads	<p>Label is printed too dark</p> <p>Barcode is smeared on label</p> <p>Printer setting is incorrect</p> <p>Printer cartridge is old or not correct type</p>	<p>Adjust printhead lever away from paper.</p> <p>Let the ink dry on labels before applying them to keyboxes, or only press around the edges of the label when applying.</p> <p>Set printer to standard print on Panasonic printers or draft print on an Epson.</p> <p>Buy a new printer cartridge from Key Systems, a special ink is required.</p>
CRT Screen is blank and the power indicator is on	<p>System has blanked the screen due to inactivity</p> <p>The CRT has experienced a time-out</p> <p>The cable has come loose</p>	<p>Press the ESC key or press the CTRL key and the letter "O".</p> <p>Make sure brightness control is turned up.</p> <p>Power the CRT off for 30 seconds and then retry the ESC or CTRL O command.</p> <p>Reset the Key Machine by pressing the blue reset button on the main circuit board.</p> <p>Check cable connections from Key Machine to CRT. Cable should connect to the "EIA" port on the back of the CRT.</p>
CRT Screen is blank and there is <u>No</u> power indicator	<p>No power to CRT</p> <p>Blown Fuse</p>	<p>Check the A/C outlet and power cord.</p> <p>Replace fuse with 250V 3A slow blow type.</p>

Troubleshooting

Symptom	Possible Cause	Probable Solution
Stripped Printer Knob	Printer Knob is being turned while power is on	Turn off printer before turning printer knob.
Description on label too large	Printer not on correct setting	Press the draft and/or condensed print button.
Barcode labels stuck in printer	Rolling barcode paper backwards through printer Advancing labels too quickly	Be very careful rolling barcode paper backwards through the printer. It is better to tear the paper off behind the printer and roll the remainder through the right way. Do not use the load/eject button on the printer to advance label paper.



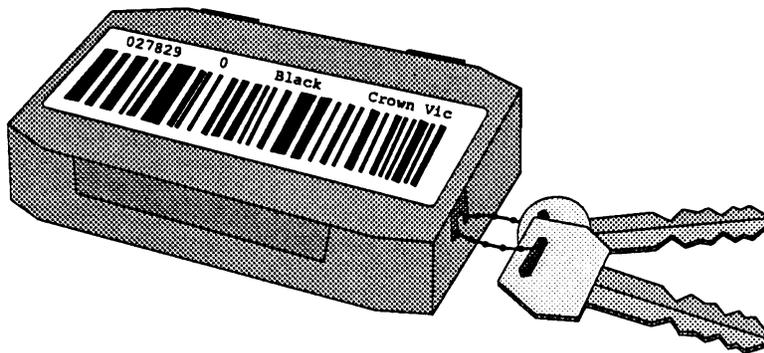
Questions & Comments

If you have any questions, please give us a call.

If you need to order supplies, you can call us at our sales office during normal business hours, Central Time Zone.

We are continually striving to improve our Key Access System in order that it may completely eliminate your key problems and allow you to concentrate on your business, without having to worry about where your vehicle keys are, or who has access to them.

If you have any comments on the CD 2000, or have any features you would like to see in future updates, please call or write to us.



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