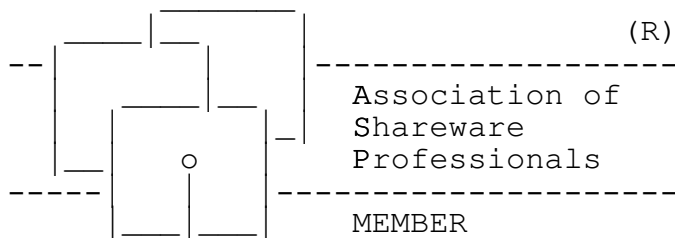


Chris's Automobile Recorder

Version 13.0

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Chapter 1 - General Information

How to Use This Manual

This manual is designed to be copied to your printer, and referred to as you use C.A.R. It is designed to produce underlined and bold text on almost all printers. It is not designed to be read on your computer screen. If you want to read documentation on your screen, push [F1] while using the program for the on-line help.

General Description of C.A.R.

C.A.R. is an operation and usage logger & reminder for vehicles and machines. It is quick & easy to use, 100% comprehensive, and has context-sensitive pop-up help and an extensive manual. Its reminders & reports will help you operate reliably and economically. The detailed, printed logs will add value at resale time. It is superior to all other programs like it, regardless of cost.

Program Features

C.A.R. supports U.S. users (miles, gallons, MPG) and metric users (kilometers, Liters, L/100km). It supports U.S. (MM/DD/YY) and European (DD/MM/YY) dates. It supports both US and foreign currencies.

C.A.R. will keep logs for special equipment and machines, with hours instead of miles, and maintenance scheduled by days instead of months.

This manual is generally written from the perspective of a U.S. vehicle user. The program on-line help will change itself to support U.S., metric, and machine users.

The program is very quick to use. Most menus are single keystroke and self-customizing for each vehicle. A full set of defaults as to fuel supplier, fuel type, repair provider, etc. are provided for quick entry. You can add a fuel purchase, backup the files, and exit with 16 keystrokes, no dozens of fancy menus to wade through. Parts of the program that are used on a daily basis, such as adding an entry, have been carefully optimized.

On-line, screen-sensitive help is provided with the [F1] key. If you aren't sure what to do, push [F1].

Shareware Registration

C.A.R. is Shareware. You must register with C.A.T. if you use the software more than 30 days. The good news is registration is FREE! Please print the file REGISTER.TXT that came with C.A.R. for more information.

Please register and give us your comments and suggestions!

Please give copies to all your friends! Be sure and give them the original CAR13 file that you received.

Cooney Applied Technology is a member of the Association of Shareware Professionals (ASP). ASP wants to make sure that the shareware principle works for you. If you are unable to resolve a shareware-related problem with an ASP member by contacting the member directly, ASP may be able to help. The ASP Ombudsman can help you resolve a dispute or problem with an ASP member, but does not provide technical support for members' products. Please write to the ASP Ombudsman at 545 Grover Road, Muskegon, MI 49442-9427 or send a Compuserve message via easyplex to ASP Ombudsman 70007,3536

Further Information

Timely problem diagnosis and repair will be provided via Compuserve EMAIL to Chris at [71001,1370], Prodigy EMAIL to [TVJM07A], or via the address below.

Bug reports, comments and suggestions are always welcome! Please drop us a note and tell us of your experience, good, bad, or boring with this program. What features would you like? Like removed?

The most current release can be obtained on Compuserve, from the Annex BBS at (513)274-0821, or from the address below for a media and shipping charge.

This program, all related files, and manual are Copyright (c) 1990, 1991, 1992 by:

Cooney Applied Technology
P.O. Box 2039
Kettering, OH 45429-0039.

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Prodigy EMAIL [TVJM07A]
Compuserve EMAIL [71001,1370]

C.A.R. is written using the Microsoft Complied BASIC 7.0 Professional Development System. Portions are Copyright (c) 1985-1989 Microsoft Corporation and are used under license.

Unless this software is marked β or Beta Test, you are granted a license to use C.A.R. provided you register as a user within 30 days of starting your use. You may freely distribute it as long as no charge other than a physical or telecommunications media and distribution charge is made not exceeding \$5.00 US, and the program and files are not modified and are the original and complete set, without addition, in the form of the original CAR13 file. This program cannot be included as part of a commercial package or distributed through the sale of another program without the written permission of C.A.T.

C.A.R. is not warranted in any way, and is distributed "as-is" and without charge. The user is responsible for determining its suitability for any application. No liability for damages, direct, indirect, or consequential, from the use of this program is assumed by Cooney Applied Technology or its agents.

Chapter 2 - Installing C.A.R. on Your Computer

Hardware Requirements

C.A.R. requires a 100% compatible IBM PC computer running MS-DOS Version 3.3 or higher.

The program makes good use of color monitors, but also identifies and runs well on monochrome monitors. For reasons known only to Microsoft, this program runs much slower when used with MDA monochrome displays than when used with color displays.

A hard disk is highly recommended, but not required. A high density floppy disk may be used to hold all the files, but the log display update will be considerably slower. Just the Usage Log files may be kept on floppies, but this will also slow the speed.

About 300K of free memory is required. It will run at a fairly acceptable rate on 8088 based systems, but an 80286 system or better is recommended. It uses any floating point processor it might find. An 80286 optimized version is available at a nominal charge through C.A.T.

The program will work with almost any printer. Fancier printouts are available for printers that are 100% IBM compatible (line drawing character set). Color-coded printouts are available for color printers that are 100% Epson compatible.

Installing C.A.R.

When you ran CAR13 it created all of the needed files, including this manual, in a disk directory of your selection. They should all be in a separate disk directory; a directory called "CAR" is recommended. If these files are not where you want them, move them at this time. You may also run CAR13 to install them again somewhere else.

Print the READ.ME file that was included, and make sure you have received exactly the files listed, no more and no less, all the same size listed. If not, please write C.A.T., including where you obtained your copy. We will send you an undamaged copy at no charge.

If you will only have a few Usage Logs, you might as well keep them in the same directory that the rest of the C.A.R. files were copied to. In this case you are all set. Try this way first.

If you will have many Usage Logs, you may want to organize them into groups, and keep each group in a different disk directory. Or, you may keep each log or group of logs on a floppy disk (very slow to use). Any disk directory or floppy disk used to keep logs in must have the CAR.HLP and the three .FON font files copied into it. (A way of avoiding this is explained under Environmental Variables in Chapter 7).

Starting C.A.R.

For Novice & Experienced Users

The simplest way to run C.A.R. is to make the directory with all the C.A.R. files in it the current directory on the current disk, example:

```
C> CD \CAR
```

Then enter "CAR" at the DOS prompt and hit [Enter]. A menu of all the Usage Logs in the current directory (up to 32) will be presented, along with the option to create a new log. Select the log you want by the number or letter preceding it, and the Log Screen will be displayed.

You may also skip the step of selecting the log you want by entering the log name after "CAR" at the DOS prompt. C.A.R. will go straight to the Log Screen for that log.

Examples:

```
CAR Pinto  
CAR MX-6  
CAR Truck4
```

For Experienced Users

C.A.R. may also be started regardless of current disk or current directory (such as during boot-up) by supplying paths, both for C.A.R. and the log files. Examples:

```
C:\CAR\CAR C:\CAR\Pinto  
C:\CAR\CAR C:\CAR\Jaguar  
C:\CAR\CAR A:\MX-6
```

Ending with a "\" tells C.A.R. it is a directory name that C.A.R. should look for log files in, and display a list for selection.

Examples:

```
C:\CAR\CAR C:\CAR\  
C:\CAR\CAR C:\VEHICLES\  
C:\CAR\CAR A:\
```


Configuring C.A.R.

The first time this C.A.R. Version is run, it will pop up a screen and ask you to set up how you want the program to operate.

This is a rather frightening looking screen, but it has already been setup in a way that will most likely work for you. If you are a USA user with a 100% Epson compatible printer, just push [F10] to accept the setup already entered. If not, you can push [F1] for help, or read Change How the C.A.R. Program Works in Chapter 7 of this manual for full information.

(This is the first mention of the [F10] key. It is normally pushed to accept everything when all the entries on a screen are what you want.)

Chapter 3 - The Usage Log

The Usage Log

C.A.R. creates something called a Usage Log for each vehicle or machine you want to track the operation and maintenance of. This log is like a list you might keep in a little notebook, listing each important thing that happens. These things that happen, such as buying fuel, repairs, inspections, etc., are called Log Entries. They are listed in order by date or odometer. So, a Usage Log is a list of Log Entries that are in order of date or odometer. The Usage Log will be called log for short, and Log Entries called entries or entry.

You make Log Entries into C.A.R.'s log by filling out a full screen form automatically customized for your vehicle. The entry is then condensed to a one line entry to be displayed on the Log Screen. You can move up and down the log at will, and the full screen of information that was originally entered for each entry can be easily displayed. Log entries may be added, inserted, edited, or deleted.

The Log Screen

The Log Screen is the heart of C.A.R. When you start C.A.R. and select a vehicle or machine, the Log Screen will be displayed.

The Log Screen shows one line for each entry you have entered into the log. The entries are shown in different colors on color monitors, and in different intensities on mono monitors to help you differentiate between entry types.

A list of the functions or commands that can be performed appears at the bottom of the screen. The first letter of each function is intensified. Push the letter on the keyboard and the function will be executed. When done, the Log Screen will be returned to.

One log entry will always be "highlighted" or shown in reverse video. This is the log entry that will be used for functions that do something to one entry, such as the View, Edit and Delete functions.

To move the highlight up and down through the log, use these keys:

- [up arrow] » To move the highlight down one entry
- [down arrow] » To move the highlight up one entry
- Home » To move the highlight to the first entry on the screen
- End » To move the highlight to the last entry on the screen
- PgUp » To display the previous page of log entries
- PgDn » To display the next page of log entries
- Ctrl+Home » To move to the very first entry in the log
- Ctrl+End » To move to the very last entry in the log

More on using the Log Screen later.

Log Types

General Log Usage

C.A.R. can be used with almost any type of maintenance schedule. It has been successfully used with cars, trucks, motorcycles, planes, boats, construction equipment, machine tools, lawnmowers, farm equipment, manufacturing and material processing equipment, laboratory equipment, computers, home appliances, and even rental housing. If it gets used, and needs maintenance & repair, you can manage it with C.A.R.

In all applications, usage can be logged and costs tracked. Also, maintenance and inspections that are scheduled by the calendar can be used in all applications.

For applications such as planes, boats, or machines, a reading of an hour-meter giving total hours of operation can be used, and C.A.R. can be asked to use hours instead of odometer readings. Maintenance and inspections can be scheduled by hours of operation and/or days passed. The program will estimate current hours of operation, and costs per hour will be calculated.

If no odometer or hourmeter is available, maintenance can be scheduled by the calendar only.

Five Log Types

C.A.R. has five basic log types. One of these types must be selected for each Usage Log:

Gallons of fuel - Miles of usage (USA Vehicle)

This type of log is used with any type of vehicle or machine that has an odometer showing usage in Miles, and has fuel purchased for it measured in Gallons.

Liters of fuel - Miles of usage (USA Vehicle/Metric Country)

This type of log is used with any type of vehicle or machine that has an odometer showing usage in Miles, and has fuel purchased for it measured in Liters. An example would be a car built for the USA with an odometer reading Miles, but being used in Canada where fuel is sold by the Liter.

Liters of fuel - Kilometers of usage (Metric Vehicle)

This type of log is used with any type of vehicle or machine that has an odometer showing usage in Kilometers, and has fuel purchased for it measured in Liters.

Gallons of fuel - Hours of usage (USA Machine)

This type of log is used with anything that does not have an odometer. If an Hour Meter is available, it can be used to track usage and schedule maintenance. If not, this type of log is still selected, and all references to Hours and the Hourmeter are ignored when using C.A.R.

This log type expects fuel usage in Gallons. If no fuel will be used, this type of log is still selected, and all references to fuel are ignored when using C.A.R.

Liters of fuel - Hours of usage (Metric Machine)

This is the same as the previous type, except fuel usage (if any) is measured in Liters.

Chapter 4 - Setting Up Usage Logs for Vehicles & Machines

What are Inspection and Preventative Maintenance Items?

Inspections are things you look at on a vehicle ever so-often to see if any repair, replacement, replenishment, or adjustment is needed. Unless some problem is found, no material or work is needed. Examples might be:

- Check Oil Level
- Check Engine Coolant Level
- Inspect Brakes
- Check Windshield Wiper Blade Conditions
- Check Tire Pressures

Preventative Maintenance is a replacement or repair or adjustment that you always do every so often. The replacement or service is performed regardless of condition. Materials may or not be needed. Examples might be:

- Align Front End
- Rotate Tires
- Change Oil & Filter
- Change Coolant

The distinction between the two will be important later, so be sure you understand.

Inspection Groups

You will want to organize your Inspections into Groups of those performed at the same time. Examples might be all those items inspected every 15,000 miles or 12 months, those inspected every Spring, etc. A title will be picked for each group such as "15,000 Mile Inspection" or "Monthly Inspection". Something that is performed every 15,000 miles need only be in the "every 15,000" group and not repeated in the 30,000 mile or 60,000 mile groups.

Unlike Inspections, Preventative Maintenance Items are normally not combined into groups. Some, such as oil change and oil filter change, can be combined into one item with no problem as there is little chance one will be changed without the other. But even if you determine that both the fuel filter and air filter should be changed at the same time, say every 15,000 miles, don't combine them into a single item. If only one is replaced due to a failure, C.A.R. will not be able to track them separately. The same warning applies to combining tire rotation with tire balancing, etc.

The Inspection and Preventative Maintenance Schedule

You will want to set up a schedule of Inspection and Preventative Maintenance for each log you set up. When you load this schedule into C.A.R., it will remind you when anything is due.

Both a first reminder and a second reminder are provided, along with an overdue warning. The days in advance each reminder will occur can be set, and will even work for things scheduled by mileage only.

Preventive Maintenance items and Inspections Entries are all independently tracked, and reminders for each are based on actual due dates and/or milages, which are based on the last time each was done. Each of up to 20 different P.M. items and up to 5 Inspection Groups (up to 7 Inspection Items each) may have a different milage and/or time interval set up for it.

Creating Your Schedule

You will need to find or develop a list of all the Inspections and Preventative Maintenance procedures that you want to perform for you vehicle or machine. A good source of this is your Vehicle's Owner Handbook or Equipment Maintenance Manual. Other sources:

Contact a dealer of your vehicle's or machine's make to get a replacement handbook.

Buy a maintenance book at an auto store for your make & model.

Ask your dealer for an Inspection and Preventative Maintenance schedule, or their reccomendations.

Make up a list of those items THAT YOU REALLY INTEND TO DO. Putting "measure tire tread depth every 30 days" on the list will not measure anything, it will just cause the C.A.R. program to bug you until you do it or lie that you did it. This is not a time for New Year's resolutions.

You may copy file "PMSCHED.TXT" to a printer to produce a blank form that can be used to gather the needed information.

You can always change the schedule later if it does not fully meet your needs, but try to get as close as possible now.

Scheduling

Each PM Item or Inspection Group is scheduled by you to occur every-so-often. They can be scheduled for vehicles to occur every so-many months, or to occur every so-many miles (or km) of use, or both (which ever occurs first). They can be scheduled for machines to occur every so-many days, or to occur every so-many hours of use, or both (which ever occurs first).

The time intervals between inspections is specified in months or days, depending on what type of log type you are creating. If you want something to occur every Spring, set an interval of twelve months. If you want something to occur every Spring and Fall, set an interval of six months. For a machine inspection every Monday, set a seven day interval.

You might want to schedule some things, such as oil changes, more often than your vehicle manufacturer specifies.

You can always do things more often than they are scheduled in C.A.R., so set up the maximum interval that you want to allow.

Example Schedule

The following illustrates an ambitious example schedule for a 1989 Ford Probe GT:

INSPECTIONS

MONTHLY INSPECTION (every month)

- Inspect Clutch, Brake & ABS Fluid Levels
- Inspect Power Steering Fluid Level
- Inspect Coolant Level
- Inspect Tire Pressures (32 F/26 R)
- Inspect Tire Wear
- Inspect Oil Level
- Inspect Battery & Lighting System

SPRING/FALL INSPECTION (every 12 months)

- Inspect Wheel Lug Nuts
- Inspect Pressure in Spare Tire
- Inspect Headlamp Alignment
- Inspect Coolant Condition
- Inspect Air Conditioning System Operation

7,500 MI INSPECTION (every 7,500 miles)

- Inspect Engine Belts & Hoses
- Inspect Wiper Blades & Washer

15,000 MI INSPECTION (every 15,000 miles)

- Inspect Brake Lines and Connections
- Inspect Front Disc Brakes
- Inspect Plug Wires, Rotor & Cap

Example Schedule Contd.

30,000 MI INSPECTION (every 30,000 miles)
 Inspect Rear Disc Brakes
 Inspect Steering Operation & Gear Linkage
 Inspect Front Suspension Ball Joints
 Inspect Driveshaft Dust Boots
 Inspect Exhaust System Heat Shields
 Inspect Fuel Lines
 Inspect Manual Transmission Fluid Level

PREVENTATIVE MAINTENANCE

Item Name -----	Every Miles -----	Every Months -----
Oil & Filter Change	5,000	6
Rotate Tires	15,000	
Balance Tires	15,000	
Sparkplugs Change	15,000	
Wheel Alignment	15,000	12
Wiper Blades		18
Coolant Change	18,000	12
Fuel Filter Change	30,000	
Air Filter Change	24,000	
Replace Belts & Tension	30,000	
Replace Timing Belt	60,000	
Lubricate All Hinges and Locks		6
Silicone on Weatherstrips		6
Clean Drain Holes & Undercarr.		3
Clean Battery Connections		6
Wax Car		3

Vehicle History

You need to know or estimate when each Inspection or P.M. item was last performed. If you have no idea, the program will assume it has never been done since the vehicle was built. If this makes it now due or overdue, then it is now due or overdue, get it done! If you don't want to do it, why are you putting it on the schedule? If you plan to do it in 2 months, and it is due every 6 months, pretend it was done 4 months ago (6 minus 2) and make a fake log entry for then.

You will need to know or estimate the date everthing was last performed for those things that are performed every so-many days. You will need to know or estimate the odometer reading when everything was last done for those things performed every so-many miles or km. If you don't know one, you might estimate it from the other.

This information will not be asked during the new log creation, but will be needed the first time you use C.A.R. with the new log. You will need to record the last time everthing was done with log entries so that the program will know when they are next due.

Creating a New Log

To create a new log, you will need to know the following information:

Vehicle' VIN Number (look on dashboard thru windshield on driver's side) or your machine's Serial Number

Date of Purchase

Odometer or Hourmeter at Time of Purchase

Current Odometer or Hourmeter Reading

Date it was Built, or First Sold as New (you may estimate)

Vehicle's Inspection and Preventative Maintenance Schedule (explained in detail in the previous sections)

The information should be accurate, but you may estimate if you must. The information supplied by to you by C.A.R. will be only as good as the information you supply to it.

To start the new log creation, run C.A.R. without specifying a vehicle name, and select "Add new vehicle" off of the Vehicle Selection Menu. Then follow along as you fill out the following entry forms.

Enter Log Name

Enter a short name for the new log, such as `PROBE' or `LATHE' or `TRUCK(3)'. Do not use the name `CAR'.

This is the name that will be shown on the menu of logs when you start C.A.R. It is also the name used for the disk files, so it must be a legal MS-DOS file name. This means it can be up to 8 characters long, and can only the characters shown on the next line:

ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789(){}@#\$\$%^&!-_-~

Select Log Type

Enter the number corresponding to the log type you want to create. See Log Type in Chapter 4 for more information.

Examples of how log entries might look will be displayed each time you enter a log type number.

Copy Configuration from Another Log?

If this vehicle or machine is the same or similar to another you already have a log for, you may want to copy the Inspection Schedule and Preventative Maintenance Schedule you have set up for it. You can edit it later to match this new vehicle or machine exactly. Just enter [Y] and a list of the Log Files in the current directory will be shown. Pick the one you want to copy the schedules from.

General Information

Enter the information you have collected, as explained in the beginning of this section.

Enter Preventative Maintenance Items

Enter the P.M. items off the list you have created for this vehicle or machine. Enter items starting at the top, and do not leave any blank lines in the middle of your list.

The right and left arrow keys move the cursor inside an entry blank. The up and down arrow keys move the cursor from blank to blank. Press the [F10] key when done, or press [Esc] to quit and not create a new log.

Enter Inspection Groups

Now forms for up to 5 Inspection Groups will be displayed for you to fill out. For each group enter a name for the group, plus either every how-many miles it should be done, or every how-many months, or both. Then enter up to seven Inspection Items for the group. Press [F10] when the group is correct.

Leave the Group Name blank and press [F10] when you don't want to add any more groups.

New File Creation

C.A.R. will now be ready to create the files for the new log. Enter "Y" and the files will be created. Enter "N" and the new log creation will be aborted.

If you do create the new log, a screen of customized helpful information will be printed.

C.A.R. will also offer to add a line to your AUTOEXEC.BAT file. If you enter "Y", a quick check of any P.M. or Inspections due will be made everytime you start your computer.

Chapter 5 - Basic Use of C.A.R.

Keys Used on All Screens

Some keys will always have the same function, no matter what screen, form, or menu you are on.

The [F10] key is pushed to accept everything - when all the entries on a screen are what you want. This is normally the last step in filling out an entry form.

The [Esc] key is pushed to cancel or abort. It can send you back to a previous menu, discard all the entries on an entry form, or not make changes if editing.

The [F1] key can almost always be pushed for help.

Log Screen Functions

Many functions are available from the Log Screen, and are described on the following pages. They are listed across the bottom of the Log Screen. Push the letter shown next to the function name to perform it:

A - Add New Log Entry at End of Log

Press the [A] key to add a new log entry at the end of the log. Do this when you want to add a new entry to the log, something that you just did - something that happened after everything else already in the log.

If you want to add an entry to the log that belongs somewhere in the middle and not on the end, press [I] for the Insert function instead. You can use the Add function and then Sort the log, but this may be time consuming.

See Adding, Inserting, or Editing an Entry in the Log for more details.

I - Insert New Log Entry

Press the [I] key to insert a new entry in the log just before the highlighted entry. This is used when you want to add an "old" entry to the log, something that happened a while back and belongs somewhere in the middle or beginning of the log. Move the highlight to where the entry you are inserting belongs and push [I].

If you want to add a brand new entry to the log, one that belongs at the end, use the Add function instead.

See Adding, Inserting, or Editing an Entry in the Log for more details.

V or <—| - View a Log Entry

Press the [V] or [<—|] (Enter) key to display the details of the entry currently highlighted in the log.

The entry can only be viewed and cannot be changed in any way.

E - Edit a Log Entry

Press the [E] key to edit the entry currently highlighted in the log. The entry will be displayed on the original entry form and can be changed at will.

When done, push the [F10] key to save the changed entry. If you do not want the changes you have made, and wish the entry back as it was, push the [Esc] key instead.

When you edit a Fuel, Inspection or P.M. entry, next due dates & mileages or MPG's may become incorrect. The Sort function should be used to correct any possible problems. A reminder will be given by the program.

See Adding, Inserting, or Editing an Entry in the Log for more details.

D - Delete Log Entry

To delete a log entry and permanently remove it from the log, move the highlight to the entry and push the [D] key. The entry will be flashed and you will be asked if you want to delete it. When asked if you are sure, press the [Y] key and press [Enter] and the entry will be discarded.

When you delete a Fuel, Inspection or P.M. entry, next due dates & mileages or MPG's may become incorrect. The Sort function should be used to correct any possible problems. A reminder will be given by the program.

S - Sort Log and Recalculate

Press the [S] key to start the Sort Function. It will execute in three phases or parts:

Sort: The entries in the log will be sorted using dates if supplied; if not, by odometers if supplied; if not, by estimated dates. If an entry exists with an impossible combination of date & odometer, the program might not ever stop sorting. Press [Esc] to stop the sort without harm at any time. The sort might take some time, be patient or push [Esc] to check progress.

Statistics Scan & M.P.G. Recalculation: The entries are scanned to determine when P.M. and Inspections are next due. The Miles-Per-Gallon for each fuel fill-up entry will be recalculated. A percentage of completion will be displayed.

Statistics Screen: Operational statistics for the vehicle will be displayed based on the scans just made. They are detailed later in the Statistics section.

P - Preventative Maintenance and Inspections Next Due Report

Press the [P] key to display a list of the date and/or mileage when each Preventative Maintenance item or Inspection Group is next due.

This screen shows a list of all of the Preventative Maintenance items and Inspections that are scheduled for your vehicle, along with how often they are due and when they are next due.

If you have a color display the items will be colored based on when they are next due, and based on how many days in advance you have asked C.A.R. to remind you. This is normally 14 days in advance for 1st Reminder, 7 days in advance for 2nd Reminder. See Program Options menu on Misc. Functions menu to set them to different values. 1st Reminders will be bright white, 2nd Reminders yellow, and Overdue will be red. A first reminder is not given for things done once a month. Monochrome displays will show soon due and overdue entries as intensified.

If an item is scheduled only by mileage, estimated future odometer readings will be used to determine when a reminder is due.

The next due date and/or mileage is based on the last time something was performed. If it never has been, it is based on when the vehicle was built.

R - Reports

Press the [R] key to enter the Reports Menu. It is described in a later section.

F - Print Inspection or P.M. Form on Printer

Press the [F] key to print a copy of a blank form for an Inspection or Preventative Maintenance item on your printer. The form will remind you of exactly what to do, or can be given to an Automotive Service Center to indicate what you want done. Blanks are provided for needed information, and the information can be easily transferred from the form to the C.A.R. program.

A list of forms will be displayed when you push [F]. Select the form you want to print a copy of by pushing the number in front of it.

One of the form selections will be "Preventative Maintenance." If you select this, a list of all of the P.M. Items for your vehicle will be presented. Select all of the P.M. items you wish to appear on the form by pushing the number or letter in front of each of them. An asterisk in front of an item indicates that it is selected. Push the number or letter again to un-select an item. The entries on this list will be marked using color or intensity to show how soon they are due. They will be marked in the same way as described for the P.M. Report Screen.

M - Miscellaneous Functions Menu

Press the [M] key to enter the Miscellaneous Functions Menu.

This menu of miscellaneous functions will be described in the Misc. Functions Menu section of this manual.

H - Help Screen

Press the [H] or [F1] key to display help for the Log Display.

X - Switch to a Different Vehicle

Press the [X] key to switch from the current log to a different one in the same subdirectory.

You will be presented with a list of all the logs in the subdirectory containing the current log. You may select any of them, or the creation of a new one.

Q or Ctrl + Q - Quit Program

Press the [Q] key or [Ctrl] + [Q] keys to terminate the C.A.R. program and return to the operating system.

Pressing the [Q] key will immediately exit the program.

Pressing the [Ctrl] + [Q] keys will cause C.A.R. to copy the C.A.R. files for the current vehicle to another disk directory. If the Backup Directory entry on the Defaults Menu is not blank, that directory will be used. If it is blank, a directory name will be asked for.

Adding, Inserting, or Editing an Entry in the Log

When either the Add or Insert function is selected you will be presented with a menu listing all the different types of entries that make up the log. This list is customized for the vehicle selected. Select the type of entry from the list by pushing the letter or number listed before it.

If you select "PREVENTATIVE MAINTENANCE", you will be asked to select a specific Preventative Maintenance item from a second list. You will also be offered a "MISC (Not Scheduled)" entry. This is used for Preventative Maintenance that is not on your schedule. Examples might be cleaning your cassette player, or cleaning the engine. Do not confuse these with the Repair of something broken.

A customized entry form will be displayed to be filled out. When done, push the [F10] key to save the new Entry. If you do not want the new entry and wish to discard it, push the [Esc] key instead.

If the New Odometer Adder entry of the Defaults Menu is nonzero, the entry will be added to the odometer reading you entered (with a low beep).

Filling Out the Form

A form that is customized for the type of entry you have selected will be displayed. When filling out or editing the form you may move from blank to blank by using these keys:

(down arrow)	or	Tab	or	Enter	to move to the next blank
(up arrow)	or	Shift+Tab			to move to the previous blank

To edit the entry in a blank use these keys:

<- (left arrow)	to move the cursor to the left
<- (right-arrow)	to move the cursor to the right
<-- (backspace)	to delete the character left of the cursor
Del	to delete the character at the cursor
Ins	to switch between Insert and Overwrite modes

In Insert mode, characters you type will be inserted where the cursor is. In Overwrite mode, characters you type will replace what is already there.

The date field of the entry can be changed using the [+] and [-] keys.

When everything is correct, push [F10] to store the entry in the log. If you don't want to put the entry in the log, or you don't want the changes you have made editing an entry, push [Esc].

Restrictions

Most items are optional and may be left blank, except:

- An entry must have at least a date or an odometer reading.
- Certain items must have an odometer reading, such as a P.M. item that is scheduled by milage.
- Certain items must have a date, such as a P.M. item that is scheduled by months.
- Dates must be entered in MM/DD/YY format, example: 12/25/91
The "European" date format, DD/MM/YY, may also be selected. See Change How the C.A.R. Program Works in Chapter 7 of this manual.
- Do not put a dollar sign (\$) in front of dollar amounts.

Fuel Purchase Entries

When making an entry for a Fuel Purchase, there are two special blanks to be filled out (or ignored). These are:

Enter [Y] for Fill-up - Always enter a "Y" if you filled the tank up.

Enter [Y] to Skip Calculation - Enter a "Y" if you missed logging some previous fuel purchases and an MPG calculation would generate a bogus number.

Chapter 6 - Reports, Statistics, & Data Export

Reports Menu

This menu produces reports about your vehicle or machine to your screen or printer. You can also export log data to a text (ASCII) file for import by other programs such as Databases or Spreadsheets.

Display or Print Statistics Report

This will display overall statistics for this vehicle. This is the same report generated at the end of the Scan function of the Log Screen, but without waiting for the sorting. The exact meaning of the statistics is detailed in the section Statistics of this manual.

You can produce a printed report of the statistics by pressing the [R] key. The [G], [A], and [F] keys may be pushed for graphic reports. See the section Graphics of this manual for details.

Print Log On Printer

This will print a report of all or selected Log entries on your printer in one of two formats. The Compact format is similar to the log screen display, with one line per log entry. The Full format is similar to the screen produced by the View function for each entry.

Options of Color or Black & White will be given. If you have an Epson compatible color printer and you wish the log to be color coded, select Color. This can add considerable time to printing the Compact listing.

You may have all entries between a pair of dates printed, or select any combination of Entry types to be printed.

Print Fuel Consumption Report On Printer

This will print a report of all of the data, both entered and calculated, for fuel consumption.

Print PM & Inspection Due Report On Printer

This will print a report of all the PM and Inspection items, their intervals, when last done, and when next due.

Export Log To File

This will list all or selected Log entries to a disk file, in one of two fixed-field formats. A field delimiter can also be specified, making the file suitable for import as fixed field ASCII or delimited ASCII. This file can then be imported into a database or spreadsheet program, such as Lotus 123. The following entries are made:

Starting Date: Enter the date of the first log entry you wish to export printed, such as 7/4/90. Just press [Enter] to use the date already shown, which is the very first entry.

Ending Date: Enter the date of the last log entry you wish to export, such as 7/4/90. Just press [Enter] to use the date already shown, which is the very last entry.

Select (F)ull or (C)ompact: Two formats are offered. Press [C] for a Compact format similar to the log screen display, with one line per log entry. Press [F] for a Full format similar to the screen produced by the View function for each entry.

File Name to write report to: Enter a legal disk file name that you want the data written to.

Enter Field Delimiter Character, Press [Enter] for a blank:
If you enter a blank, the file output will be of a "fixed-field-length" format. See File Export Format in Chapter 8 for details. If you would prefer a "delimited ASCII" format, enter the character you want used as a delimiter. Be careful not to use a character used in any of the log entries.

Press [Enter] for all entries, Press [S] to select entry types:
You may press [S] if you want to be given a list from which to select the types of Entries to be exported. Press [Enter] to export all entry types.

Export MPG Information To File

This will list all of the data, both entered and calculated, for Fuel Consumption calculations to a disk file in a fixed-field format. This file can then be imported into a database or spreadsheet program.

Statistics

At the end of the Sort function of the Log Screen, or when a Statistics Report is asked for, a screen of statistics for the vehicle will be displayed:

Statistics Starting Date & Odometer: This is the date and odometer from when you bought the vehicle, or what you entered for the Expense Calculation Starting point on the Misc. Functions menu.

Miles Traveled: This is (Today's estimated odometer) minus the (Statistics Starting Odometer).

Years: The number of years since the Statistics Starting Date.

Miles Per Year Average: (Miles Traveled) / (Years)

Miles Per Day Average: (Miles Per Year) / 365

Gallons of Fuel Used: Total of all fuel purchases since Statistics Starting Odometer.

Overall MPG Average: (Gallons of Fuel Used) divided by (Odometer at Last Fuel Purchase - Starting Statistics Odometer). Today's estimated odometer is not used since you have yet to buy the fuel used since the last purchase. The last purchase odometer will be estimated if not supplied.

Last 3 Fill-up Average: This is (the total of all fuel purchase gallons from 3 fuel fill-ups ago until the last fill-up) divided by (the total miles between the odometer 4 fill-ups ago and the last fill-up). This gives a better indication of your vehicle's current economy than the MPG calculated for each purchase because it is less affected by "filling up" your tank to random levels. If you don't tend to fill your tank when purchasing fuel, this may not have any valid meaning.

Total Fuel Cost: Total of all fuel purchase costs since the Statistics Starting Odometer.

Fuel Cents/Mile: (Total Fuel Cost) / (Miles Traveled)

Quarts of Oil Used: Total of all oil top-offs since Statistics Starting odometer. This is a measure of oil consumption, and does not include oil changes.

Miles per Quart Overall: Miles Traveled / Quarts of Oil Used

MPQ Last 90 Days: (Quarts of Oil Used in the last 90 Days) / (Mi. Per Day * 90), after Statistics Starting Date.

Oil Consumption Total Cost: Total cost of all oil top-offs since Statistics Starting Date and Cents Per Mile.

Other Cost Totals: The total cost of each of these entry types and the Cents Per Mile average for each.

Total Operating Cost: Total of all Costs since Statistics Starting Odometer.

Total Cents Per Mile: (Total Operating Cost) / (Miles Traveled)
Other displayed CPM's are rounded to 1/10 cent and may not add up to this total.

Fuel Consumption Statistics

Every time you fill-up with fuel and give an odometer, the program will calculate your Miles-Per-Gallon since the last fill-up. Intermediate fuel purchases that were not fill-ups are included in the calculations. The program will also display a last 4 fill-up average MPG and an overall average MPG. Comparing the two can give an indication of any excessive fuel consumption problems. Averages are true averages, i.e.:

100 miles on 5 gallons = 20 MPG 210 miles on 7 gallons = 30 MPG

WRONG: Overall average = $(20 + 30) / 2 = 25$

CORRECT: Overall average = $(100 + 210) / (5 + 7) = 25.8$

When you purchase fuel for your vehicle but do not fill-up the tank, there is really no information on MPG than can be calculated. C.A.R. keeps a total of the amount of fuel purchased between fill-ups and adds them to the fuel amount for the next fill-up when calculating.

When you fill-up your tank, you are replacing the fuel you just used to drive the miles since the last fill-up. As you drive around after the fill-up and use the fuel just purchased, you do not have any way of telling what the MPG is for these new miles. When you fill-up again, you will then see how much fuel was consumed for the miles you drove.

Your vehicle probably had a full tank of fuel when you purchased it, and it will not have an empty tank when you sell it (hopefully!). It is best to think of your fuel tank as a "bank" from which you borrow fuel as you drive, and then replace when you fill-up. C.A.R. assumes that the fuel tank was full on the day you purchased it. It is not necessary to record this fill-up - if you do, enter "0.0" for the number of gallons, as you did not "use" this fuel, either the previous owner did (used purchase) or you are setting up the "bank" (new purchase).

When calculating overall MPG averages, it is important to use the odometer reading at the last fill-up, not the current odometer. Let's see what happens if we use the current odometer to check our MPG between fill-ups:

	Odometer	Total Miles Driven	Total Gallons Purchased	Overall MPG
Fill-up at purchase	1000	0	0	-----
Fill-up of 10 gallons	1200	200	10.0	20.0
Check of MPG	1300	300	10.0	30.0
Check of MPG	1400	400	10.0	40.0
Fill-up of 15 gallons	1500	500	25.0	20.0

The simplest way to put all of this; you can calculate your MPG right after a fill-up, and then not till you fill-up again.

When asked to calculate the overall average MPG, C.A.R. calculates the total miles driven using the odometer from your last fuel purchase. It would be more correct to use the odometer reading of the last fill-up, not purchase, and ignore all fuel purchases since the last fill-up. However, if a user rarely filled-up his/her tank, the overall MPG up till the last fill-up of 9 months ago would not be very helpful. Since this is an overall average, little harm is done in using the last purchase. Those who always fill-up are not affected, and those who do not will get the best estimate available.

If the last fuel purchase was not a fill-up, and an odometer was not entered, C.A.R. will estimate what the odometer reading was based on the date entered.

Graphics

When the Statistics Report is being displayed, several keys may be pushed to display graphic reports. The program will automatically detect a VGA, EGA, CGA, or Hercules graphics card and adapt accordingly. The graph will be automatically scale itself to you log's data.

Hercules users must run the program MSHERC (included) before running C.A.R. in order to use graphics.

Here are the graphs provided by this version. More will be added in the future. However, the best way to get any fancy graph you want is to export the log (see Export Log To File), import it into a program like Harvard Graphics or Lotus 123, and graph the data there.

[G] - Fuel Consumption Graph

Press the [G] key, and you will see your fuel economy graphed for each fill-up. The graph will end at your last fill-up, and will show as many prior fill-ups as it can fit.

[A] - Average Fuel Consumption Graph

This is the same as the previous, except that a blue line showing the running average will be added to the graph.

[F] - Fuel Cost Graph

Press the [F] key, and you will see the unit cost of fuel economy graphed for each fill-up. The graph will end at your last fill-up, and will show as many prior fill-ups as it can fit.

Chapter 7 - Using Advanced Features of C.A.R.

Misc. Functions Menu

This menu can be called up by pushing "M" on the Log Screen. From this menu you may select one of several different miscellaneous functions of this program. They really don't have anything to do with each other; they are gathered here so as to not clutter up the Log Screen:

Change The Setup For The Current Vehicle

This menu selection is fully described in it own section later.

Change How The C.A.R. Program Works

This menu selection is fully described in it own section later.

Change Your Address & Telephone for Forms

This menu selection will display a form upon which you can enter your name, address, and telephone numbers. This information will be printed on maintenance & inspection request forms.

Compress Log Files

Most of the time, you will only add items to a log, and the log file (.CAR file) will grow with each new entry.

When you delete an entry from the log, the size of the log file does not automatically shrink. This is not normally a problem, as the space will be used by the next entry added.

If you should delete a large number of log entries and want the log file to be as small as it can be, select this entry from the Misc. Functions menu.

DOS Shell

This menu selection will give you an MS-DOS prompt without leaving the C.A.R. program. When done entering MS-DOS commands, entering EXIT will return to the C.A.R. Log Screen.

Change The Setup For The Current Vehicle

This menu is selected off of the Misc. Functions Menu. The entries on this menu allow you to change the setup for the current vehicle or machine. These things can be set differently for each vehicle or machine.

Change How Your Odometer is Estimated

The current odometer reading for your vehicle is estimated based on today's date. This program looks back and averages how many miles you drove each day since a certain date, and then calculates what today's odometer reading is likely to be.

This function sets the date and mileage used as the starting point for the calculation of the estimated current mileage for each day. You will want to use this if a change in your driving habits significantly changes the rate at which you accumulate miles on your vehicle. For example, you may change jobs and drive much further each day. Just set the odometer reading and date of when your usage habits changed.

This will not effect other statistics, such as cost per mile.

Change the Date When Expense Calculations Begin

This function sets the date and mileage used as the starting point for the calculation of the overall fuel economy and costs per mile. The totals of all the expenses and fuel amounts you report after the date selected are divided by the number of miles you have driven since the mileage specified to get cost per mile and overall MPG.

When this program was set up for your vehicle, it set this date and mileage to the date and mileage when you purchased the vehicle.

You may want to change the date and mileage if you do not have complete cost or maintenance records from the date when you purchased the vehicle. Just set the odometer reading and date of when your records start.

Set Default Values for Entry Blanks

If you wish, you can have certain items pre-entered for you on new Log Entry forms, things that are often the same time after time. This is called a default. For example, if you always buy the same type of fuel, you could have this type already entered on the fuel entry form. You are not forced to use it, however, and can always change it to what you want. Different defaults can be set for each log.

If you make this selection off of the Change The Setup For The Current Vehicle menu, you will be given a form upon which you can enter defaults for most entry form blanks.

If you put a [Y] next to Use Today's Date, the current date will appear as the date entry on new log entry forms.

If you make an entry for Backup Directory then both C.A.R. files for the current vehicle will be copied to that directory when the program is exited using the [Ctrl] + [Q] keys.

If you make an entry for New Odometer Adder Entry, the value you enter will be added to the odometer value entered on all NEW entries. Odometer entries on edited entries are left unchanged. This has two uses. One, if your odometer is replaced with a new one reading zero, just enter the mileage at which it was replaced. Two, if your odometer turned over at 100,000, enter 100000 and then just enter the actual odometer reading when making entries.

Change PM Schedule or Vehicle Information

With this selection off of the Change The Setup For The Current Vehicle menu, you can change most of the information you provided when you set up this vehicle. You may change General Information you have entered. You may add or delete PM Items, add or delete Inspection Groups.

If you delete a PM item or Inspection Group, your log will have all remaining entries of that type automatically deleted.

If you change the name of a PM item or Inspection Group, your log will have the names of corresponding entries automatically changed.

Be sure to make at least one backup copy of your log files before editing its configuration. It is easy to make a mistake and accidentally delete a bunch of log entries.

If you want to delete a PM item and also to add one, blank out the name of the one to be deleted, and add the new one at the bottom of the list. If you just type the new one in where the deleted one was, C.A.R. will think you are renaming the old one and not deleting it.

Setup Custom Log Entries For This Vehicle

C.A.R. has a powerful feature called Custom Log Entries. In addition to the log entry types supplied with C.A.R. (Fuel, Tires, Repairs, Inspections, etc.) you may add up to four more types of log entries of your choosing. Examples might be: Parking, Tolls, Tickets, Insurance, Cleaning & Detailing, Towing.

Be careful. If you want to compare your operating costs, in cents per mile, to other vehicles, or to those tested on TV, you don't want to include any types of costs they don't.

It is a particularly bad idea to add the purchase cost of the vehicle or machine to the log. This would really mess up your operating cost statistics. You could calculate and log monthly depreciation, but heed the warning in the previous paragraph.

Adding a Custom Entry

Push the [F10] key until a blank form is displayed.

Enter a name in the Entry Name blank, and a shorter or abbreviated version in the Short Name blank. This short name will be used where space is limited.

You may enter up to 7 labels for Entry Blanks that you will fill out when you make this new type of log entry. When you make a log entry, the contents of the first blank will be shown in the single line log entry on the Log Screen, so use it carefully.

All blanks that you mark "Y" for Cost will expect costs to be entered in them. They will all be added up and entered into the log as the cost for the log entry.

If all the blanks are marked "N", then a single cost for the log entry will be entered at the top of the entry form in the usual way.

Editing a Custom Entry

To change the name of a Custom Entry, or the labels for the entry blanks, first push [F10] until the entry you want to change is displayed. Then just change them on the screen and push [F10].

Deleting a Custom Entry

To delete a Custom Entry, first push [F10] until the entry you want to remove is displayed. Then blank out the Entry Name and push [F10].

Set How Many Days-In-Advance Warnings Will Be Given

1st Reminder Entry: You may set how many days-in-advance reminders are to be given for a P.M. item. An entry of "0" days will disable a reminder. The 1st reminder causes an item to appear in bold white on the P.M. report. No beep or warning message will be given, and CAR called for just a P.M. check will not list it or display it. A suggested number of days is 14. You will not be given a 1st reminder for things due less than every 60 days.

2nd Reminder Entry: The 2nd Reminder causes an item to appear in bold yellow on the P.M. report. A beep and warning message will be given, and CAR called for just a P.M. check will list it and pause. A suggested number is 7 days.

Change How the C.A.R. Program Works

This selection is made off of the Misc. Functions Menu. It displays a form upon which you can make changes in how the program operates. These affect the overall operation of C.A.R., and all log files used with it. The options are grouped and detailed below:

Display Options

Force Mono Display (Y/N): If "Y" is entered the program will make itself viewable on a Monochrome monitor even if a color card (CGA, EGA, or VGA) is sensed.

Don't Use Blue Text (Y/N): If "Y" is entered the program will not use blue text for headings and other uses. This is useful for those users whose monitors do not produce readable blue text, and to eliminate underlined text on Mono Displays.

Printer Options

Epson Compatible Printer (Y/N): If "Y" is entered the program will send commands like bold print that only Epson compatible printers understand. Set this to "N" if you get messed up printouts and don't own an Epson.

Line Drawing Characters (Y/N): If "Y" is entered the program will print forms and logs using the "┌───┬───┐" characters. Set this to "N" if italic characters appear on printed reports.

Lines Per Page: Enter the number of lines you want to appear on printouts and reports.

Printer Port: Enter the Printer Port you want printed output to go to: LPT1, LPT2, or PRN.

Date Style Options

European Dates (Y/N): If "Y" is entered the program will display and accept dates only in the DD/MM/YY (Day/Month/Year) format. Otherwise, the USA MM/DD/YY format is used.

European Values (Y/N): If "Y" is entered the program will display and accept numbers in the "European" format, example:

1.234.567,89 vs. 1,234,567.89

Date Separator (/ or .): Enter either "/" or "." depending on how you want to enter and display dates, 11/12/91 or 11.12.91.

Currency Options

C.A.R. can be modified with the Change How the C.A.R. Program Works selection of the Misc. Functions menu to use the currency of most countries.

All of the following is based on my best information in hand. It is hard to make these instructions general enough to cover all countries and still be clear. If C.A.R. doesn't quite "fit" your currency system, please drop a note to C.A.T. and tell us what would be required. Thanks very much.

Which Type of Currency System Do You Use?

The currency system that your country uses may or may not be a Decimal System. Look at the following examples, and decide which system you use. Then pick the corresponding section that follows:

In the USA we do use a Decimal System. Our expenditures are shown as Dollars and are always shown with a decimal point and 2 decimal places.

Example: \$45.12

The same is true of Canada, United Kingdom, Australia, and others.

Japan does not use a Decimal System. Their costs are shown as a whole number of Yen without any decimal point or places.

Example: ¥1200

The same is true of Italy, Greece, Mexico, and others.

You may push these keys for these symbols: [F5] "¢" [F6] "£"
[F7] "¥" [F8] "₣"

Setting up C.A.R. for Decimal Systems

The Change How the C.A.R. Program Works screen has three entries for currency:

Currency Symbol - First, pick the one or two characters you want shown in front of money amounts you enter. This should be an abbreviation or a special symbol for your country's unit of money.

Examples: \$ DM Fr £ ¥ ₣

Fractional Currency Symbol - Your country should also have a smaller unit of money. This would be the name for the fractional part of money amounts. In the USA we use "cents", each cent is .01 dollar. \$12.34 is 12 dollars and 34 cents. Pick a one or two character abbreviation or a special symbol for this smaller unit. Examples : ¢ C A¢ p.

Currency Divider - Enter how many of the fractional units make up the whole one. In most cases this will be 100. For example, in the USA 100 cents equals 1 dollar. This setting also sets how many decimal places will be displayed. 100 will show 2 decimal places, 1000 will show 3, etc.

Setting up C.A.R. for Non-Decimal Systems

The Change How the C.A.R. Program Works screen has three entries for currency:

Currency Symbol - Pick the one or two characters you want shown in front of expenses you enter. This should be an abbreviation or a special symbol for your country's unit of money.

Examples: \$ DM Fr A\$ £ ¥ ₪

Fractional Currency Symbol - Leave this entry blank.

Currency Divider - Leave this entry blank, or enter "1". This will cause all money amounts to be displayed without a decimal point

Command Line Options

As was explained in an earlier section, the Log File name, or the name of a directory containing Log Files can be specified on the command line when starting C.A.R. Other options can also be specified:

P.M. Scan Only Mode

If you run C.A.R. and supply a vehicle file name and "/PM", a scan will be made of that vehicle to see if anything is due to be performed.

Examples:

CAR Pinto /PM

CAR A:Truck12 /PM

C:\CAR\CAR C:\CAR\Yugo /PM

The last example assumes that both the C.A.R. program files and your vehicle files are located in a directory called "CAR" on your C: disk drive. The last example is also an excellent addition to your AUTOEXEC.BAT file, and will check for maintenance due every time you turn on your computer.

When C.A.R. is run in this fashion, a very quick check of what things reminders are due on will be made. If no reminders or only first reminders should be given, the program will not pause and will end displaying only "No PM Due". If any Second reminders are due, or some things are overdue, a list of only those items will be displayed, a whoop given, and the program will pause for acknowledgement.

Batch File Input

C.A.R. can process multiple requests by reading a batch input file. This is useful for purposes such as scanning for PM due on multiple vehicles, recording the fueling or inspection of a fleet of vehicles or machines, etc.

Create an ASCII file using EDIT or a word processor (be sure to store as an ASCII file). On each line of this file, put the parameters that you would normally put after "CAR" to run the program. For example, a file to scan if PM is due on four trucks might contain:

```
C:\car\truck1 /PM
C:\car\truck2 /PM
C:\car\truck3 /PM
C:\car\truck4 /PM
```

Then run C.A.R. by typing "CAR" and the batch file name with any needed path, followed by "/B". If the above listed file was named PMTRUCKS, you would type:

```
CAR PMTRUCKS /B
```

If PMTRUCKS was not in the current directory, you might type:

```
CAR D:\FLEET\PMTRUCKS /B
```

The /B tells C.A.R. that it is a batch file, not a vehicle name.

Do not specify the /PM option when also specifying a batch file. Instead put it on each line of the batch file as shown in the example above.

Environmental Variables

C.A.R. normally expects the CAR.HLP and the three .FON files to be in the same disk directory that the log files are kept in. Instead, you may wish to tell C.A.R. where the files can be found by putting the following line in you AUTOEXEC.BAT file:

```
SET CARDIR=<path>           where <path> is the location of the files
```

In this way only one set of files is required for multiple log file directories or disks.

Chapter 8 - Miscellaneous

Recent Revision History

Version 13.0:

NEW: 4 Custom Entry Types
New Report Menu with MPG Graphing and Enhanced Data Export
Commas Now Accepted and Displayed for Values
Independent Log Types for Each Log File
Ability to Cope With Missing Fuel Purchases
Improved Sorting Speed
Universal Currency Type Capability
European Style Dates and Values

3/28/91 Version 12.2:

Bug fix of conversion of files previous to 11.0.

3/16/91 Version 12.1:

Revised for A.S.P. membership plus minor bug fix.

1/5/91 Version 12.0:

Added ability to switch vehicle files and batch file multi-vehicle processing. Now can select Entry types to be included in log listing. Full log listing is more compact. Final non-IBM compatible printer support bug fixed, even supports Panasonic printers with specious compatibility claims. Added ability to edit vehicle configuration and modify log entries to match (a major task) and to compress log files. Added date field inc./dec. via +/- keys.

Important Note for Users of Versions Prior to 9.2

The Backup File entry on the Defaults menu has been changed to Backup Directory. Both C.A.R. files will now be copied to this directory. Example entries for this field:

A:\\

B:\\

C:\\CARBACK\2

If you don't know about this optional entry and did not make one, this does not concern you.

Important Note for Users of Versions Prior to 11.0

Files for vehicles created by versions of C.A.R. prior to Version 11.0 must be converted before use with Versions 11.0 and later. To do this, run the program as you normally would. C.A.R. will notice that the file needs conversion, and will ask you if you wish to do so. If you reply "Y" then the vehicle files will be converted.

C.A.R. will not delete your old vehicle files, they will be renamed to vehicle.OLD and vehicle.SAV. They may be deleted once you are sure the conversion has been successful.

File Export Formats

Full Log Listing

The first three lines:

Log Listing

C.A.R. 13.0

<Full vehicle or machine name>

<VIN or Serial Number>

The remainder of the file consists of ASCII records, one per log entry. Each record is terminated by an ASCII carriage return. They have the fields listed in the following table. Whatever character was selected as the "Field Delimiter", if any, will appear between fields.

Field Name	Width	From Column - To Column
Record Type	31	1-31
Brief Entry	50	33-82
Odometer	7	84-90
Date	8	92-99
Provider	40	101-140
Cost	9	142-150
Item #1 Name	41	152-192
Item #1 Value	30	194-223
Item #2 Name	41	225-265
Item #2 Value	30	267-296
Item #3 Name	41	298-338
Item #3 Value	30	340-369
Item #4 Name	41	371-411
Item #4 Value	30	413-442
Item #5 Name	41	444-484
Item #5 Value	30	486-515
Item #6 Name	41	517-557
Item #6 Value	30	559-588
Item #7 Name	41	590-630
Item #7 Value	30	632-661
Notes	80	663-742

Compact Log Listing

The first three lines:

Log Listing C.A.R. 13.0
<Full vehicle or machine name>
<VIN or Serial Number>

The remainder of the file consists of ASCII records, one per log entry. Each record is terminated by an ASCII carriage return. They have the fields listed in the following table.

Field Name	Width	From Column - To Column
Date	8	1-8
Odometer	7	10-16
Brief Entry	50	19-68
Cost	11	70-80

Fuel Usage Report

The first seven lines:

C.A.R. 13.0
<Full vehicle or machine name>
<VIN or Serial Number>

Purchase Date	Odometer	Fill-up?	Purchased Gallons	Total Gallons	Total Miles	MPG
---------------	----------	----------	-------------------	---------------	-------------	-----

The remainder of the file consists of ASCII records, one per log entry. Each record is terminated by an ASCII carriage return. They have the fields listed in the following table.

Field Name	Width	From Column - To Column
Purchase Date	8	1-8
Purchase Odometer	8	10-17
Fill-up?	1	23
Purchased Gallons	9	30-38
Total Gallons	9	41-49
Total Miles	8	51-58
MPG	11	60-70

Total Gallons & Total Miles will list the miles and gallons accumulated between fill-ups.

Common Questions About C.A.R.

Q: Why are all my CPM's zero or too low?

A: Costs per mile (or KM, or hour) are calculated starting at a certain date & odometer reading. These are called the Statistics Starting Date and Statistics Starting Odometer.

They should be set to the day the records you have entered into C.A.R. start. If they are set before your records begin, your CPM's will be too low. If you set them too high, you will miss expenses.

C.A.R. set them to the purchase date & odometer when it set up the log. You may change them by selecting "Change the Setup for xxxxx" off of the Misc. Functions Menu.

Q: Why do my printouts look strange?

A: If you didn't change any of the "Change How the C.A.R. Program Operates" entries when you first ran C.A.R., the program set itself up to use a 100% IBM compatible and 100% Epson compatible printer. Yours might not be. See "Change How the C.A.R. Program Works - Printer Options" in this manual.

Q: Why are the MPG calculations wrong?

A: Read the manual section "How are MPG's Calculated?"

Q: Why is my "Today's Estimated Odometer" so far off?

A: If your log was started only a few weeks ago, relax and give the program a change to learn your driving habits. This is especially true if the past few weeks were not your typical driving weeks - you took the new van on a trip, etc.

If the log has been used for some time, and your Estimated Odometer becomes way off, you must have changed your driving habits - a longer trip to work in the morning for a new job, etc. See "Change How C.A.R. Estimates Your Odometer" in this manual.

Q: Why can't I change the color of everything?

A: C.A.R.'s use of color is complex, and full custom colors would be difficult. The next version may include this.

Right now, the "Change How the C.A.R. Program Operates" menu will allow you to kill off blue text if you can't see it on your monitor.

Q: Why can't I use "-" in dates instead of "/" and "."?

A: I decided it was more helpful to use the "+" and "-" keys for a quick date change function.

Q: Why won't you send free copies of C.A.R. to ASP vendors?

A: This is zero-fee shareware. C.A.T. makes \$0.00. You can make your up-to-\$5 fee from each user.

Q: Why don't you have a log entry for Insurance or Parking or ????

A: You can set one up! See "Set Up Custom Events" in the manual.

Q: Why do I have to reenter the PM schedule each time for identical vehicles?

A: You don't anymore! You are now given the option to copy another schedule when starting a log.

Q: Must I sort the log just to see statistics? It takes so long.

A: Yes, it used to. Two changes have been made to help:
First, the sorting and scanning has been sped up.
Second, if you select the Reports menu from the Log Screen, and select Statistics from there, the sort will be skipped. Only the scan will take place.

Q: Why don't you have overall statistics for a Fleet of vehicles?

A: I hope to soon. What would you want to see? How would you want to group your vehicles for reports?

Q: Why can't I record milage for business trips & other usage?

A: This also may be a future feature. What would you want? How would it work? What entries would you make? What reports would you get?

Q: Why don't you have a way to remind me of when my License Plates are due, or my Driver's License, or some special maintenance due one time only in two months, etc.?

A: These things are best handle by a "tickler" or "reminder" type program. Such a program can remind you of all these things, plus birthdays, anniversaries, etc. I recommend Dr. Memory (DRM), also from C.A.T. It can be found on Compuserve's IBMSYS forum, or directly from C.A.T.

