Chrondek® Automated Racetrack Software (CARS)

Operation Manual

ED-4790

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DAKTRONICS

Table of Contents

Section 1: Introduction

1.1   How to Use This Manual

This manual is designed to aid the user of the CARS program. Illustrations of menus are given to familiarize the user with the screens seen in operation.

1.2   Software Overview

The Chrondek Automated Racetrack Software (CARS) is designed to be used with the C33 or C44 timer to enhance, automate, and streamline the tower operation. The CARS program has the following features:

- Times can be accepted for up to eight qualifying runs.

- Times are accepted automatically from the C33 or C44 timing system. Times can also be entered manually.

- Information can be entered for several different categories and several different classes within each category.

- Points can be awarded for attendance, qualifying position, top speed, low E/T and elimination round completion. Different point values can be chosen for each category.

- Announcer information such as times and current racer information can be displayed on the system monitor and the optional announcers monitor.

- The following information can be printed: entry list, qualifying order, pairings, round winners, round losers, ladder, time slip, final results, all results, points standings, registration, mailing list, category list and vehicle list.

- Driver name and dial-ins for the current vehicles can be sent to the timer.

- Qualifying order can be displayed on the system monitor and optional announcer's monitor.

- CIC adjustments to the racer's dial-in can be made automatically.

1.3   Hardware Overview

The CARS program minimum computer hardware requirements are as follows:

- IBM PC/AT compatible 386SX PC with clock speed of 16MHZ or greater
- 2MB of RAM
- One serial port (Two serial ports are needed if optional announcer monitor is used)
- One parallel port
- Hard disk of 40MB or more
- One floppy disk drive (3 $^1/_2$") running as A:\
- 600 K or more of DOS memory

The PC should be equipped with DOS version 5.0 or higher. We also recommend the use of some type of disk caching software (i.e. DOS version 5.0 SMARTDRV.SYS). The CARS program cannot run from a floppy disk. The program SHARE.EXE must not be loaded when running CARS. Computers running Windows or network functions normally use this program. Refer to **Appendix D** for sample AUTOEXEC.BAT and CONFIG.SYS files.

The software protection key provided with the CARS kit must be connected to the parallel port of the PC.

A parallel printer may be connected to the parallel port through the software protection key. In general, Epson, IBM, or C. Itoh printers will work. Consult Chrondek on printer compatibility issues.

Although a monochrome monitor may be used, a color VGA, EGA, or null flicker CGA monitor is recommended.

Connect the specially provided communications cable between the timer "Results" port and the PC's serial port COM1. If the PC has a serial port with a 9-pin connector, a 9 to 25 "D" connector converter will be required.

To install the optional announcer's monitor, connect the "null modem" cable to the "modem" connector of the Wyse terminal and the COM2 port of the PC. If the COM2 port has a 9-pin connector, a 9 to 25 "D" connector converter will be required. Configure the Wyse terminal as shown in **Appendix C.**

1.4   Installing the Program

The CARS program comes on 720KB 3 $^1/_2$ inch diskettes. Follow the directions listed below to install CARS on the hard disk:

1. Power on your computer.

2. Backup your current CARS version:

WARNING: The data format for CARS changed starting with Version 2.7. If your current CARS version is older then 2.7, your current category and driver registration data will not work with the new version.

ALWAYS backup your current CARS software before installing new software.

To make a backup, use the DOS COPY command to copy the files in your CARS directory onto a floppy disk or to another directory on the C: drive.

3. Place the CARS diskette in drive A or B.

4. Change the current drive to the drive selected by typing the one of the following commands at the prompt: **A: or B:**

5. Run the installation script by typing the following command at the prompt: **INSTALL**

WARNING: The installation program will delete the qualifying and elimination data for the current event. Do not install this software when an event has been started but not finished.

6. Follow the directions on the screen to complete the installation.

7. When the installation is complete, the script will print the message "installation complete" followed by instructions to reset the printer type, track, and event names. Do this from CARS.

8. **Note:** With version 5.0, the file format for the SYSTEM.DAT file has changed. The installation program will delete the existing SYSTEM.DAT field and the CARS software will create a new one when it starts up. You will have to select your printer and enter the event name, track name, ad sponsors, and IHRA track and division IDs

Section 2: Running an Event

2.1   Prior to Event

1. Configure all categories using the <Configure/Categories> option.
    a. Configure all category information (ladder type, etc.).
    b. Configure the field size considering if buy-backs will be used.
    c. Configure points.

2. Configure all the classes within the categories using the <Configure/Classes> option.
    a. Configure the class records and index.

3. Configure the teams using the <Configure/Teams> option.

4. Select the <Configure/Event> option to verify that all the information is accurate.

5. Select the <Configure/System/Select Printer> option to make sure you are set to the correct printer.

6. Select the <Configure/Event/Automatic Entry> option to set this feature to either Yes/No.

7. Select the <Configure/System/Track Points Default> option to set this feature to Enter New Racers/Do Not Enter New Racers.

8. Select the <Edit/Registration> option to either enter new competitors or edit existing competitors in the registration database. The registration database is the master list of competitors for the CARS software.

9. Once this information is all entered, the user can select the <Control/Start Event> option. The system will ask for which category to start with and then it will initialize the system files for the start of the event.

10. If Automatic Entry was set to "No", select the <Edit/Entry> option to enter drivers in the race. The system will ask for a category and then display a list of the vehicles registered in that category.

At the start of the event, the printouts that would be applicable are:

- "Points Standings" – points standings prior to the event
- "Registration" –list of names for a category(s)
- "Category List" –list of all the configured categories and how they are configured
- "Vehicle List" –list of all the vehicle numbers in the registration database
- "Entry List" –list of all of the vehicles' numbers entered in this race if the automatic entry option is not being used.

If an announcer's monitor is being used, verify that the monitor is working correctly. If it is not working correctly, check the cable going from the Wyse monitor "Modem" port to the CARS computer "COM2" port to make sure it is connected. If it is connected and the monitor is still not working properly, exit the CARS software and re-start it. The CARS software only looks for and initializes the announcer monitor at start-up.

Verify that the CARS computer is communicating with the C33/44 timer. If the CARS software is not communicating with the timer, a red block with the words "COM" is located at the bottom right part of the screen. If there is no red block in this location, then communication between computers is good.

2.2   During Event

1. After the race has started using the <Control/Start Event> option, the next step is to use the <Control/Round> to set the current round that is being timed. By setting a round to active, the user is allowing the software to receive and store timing information coming from the C33/44 timer. For example, if the current category does not have an active round, the CARS software will not store any of the information coming from the timer.

2. As the race continues, there are only two necessary steps that must be configured on the CARS software. The steps are simply setting the current category using the <Control/Category> option and setting the current active round using the <Control/Round> option. These two things must be maintained throughout a race to make sure the timing data goes into the correct category and round.

3. During the race, the CARS operator can use the <Control/View> option to monitor the timing information being received from the timer. This option can also be used by an announcer since it is identical to the information being shown on the dedicated announcer monitor. However, since the CARS operator will probably need to be generating printouts and other race related tasks, the announcer will not be able to have access to this information screen at all times.

4. The <Edit/Entry> option is designed to allow the operator to view the vehicles currently in the event. The option will present a list of vehicles in a selected category along with a status of whether they are in the event or not. The operator has the ability to manually enter vehicles into the event using this option. If the <Configure/System/Automatic Entry> option is set to OFF, then the operator must enter all the vehicles into the event using this option. This may be the case for tracks that have problems with competitors trying to "slip" into the event and race without paying fees.

5. The <Edit/Qualifying> option allows the operator to View/Edit qualifying information by vehicle number. After the information has been edited, the CARS software will rebuild the entire event using the new data to make sure everything is correct.

6. The <Edit/Eliminations> option allows the operator to View/Edit eliminations information by vehicle number. After the information has been edited, the CARS software will rebuild the entire event using the new data to make sure everything is correct.

7. The <Edit/Pairings> option allows the operator to View/Edit the parings for a specific elimination round. In bracket racing, the pairings are not set ahead of time. In ladder type races, this option will show the pairing prior to the vehicles racing.

8. In the case of a driver being "bumped" from an elimination field, use the <Edit/Bump Driver> option. This will allow the operator to bump one vehicle from the elimination pairings and replace the vehicle with a different one.

9. Printouts that would be valid during the event would be "Qualifying Order," "Pairings", "Round Winners", "Round Losers", "Ladders", and "Time Slip". Refer to the operator's manual for sample printouts of these different formats.

10. The <Utilities/Closest to Dial-In> option was designed for bracket racing in that it will present a list of which vehicles raced closest to their dial-in. The list is used for determining byes for later rounds.

11. The <Utilities/By Reaction Time> option is similar to the closest to Dial-In option. It will present a list of which vehicles had the lowest reaction times. The list is used for determining byes for a later round.

12. The <Utilities/Clear Times> option can be used to clear either qualifying or eliminations data for a particular round or all rounds by vehicle or by category when necessary.

13. The <Utilities/Copy Vehicle Times> option can be used to copy qualifying or elimination times for all rounds or a specific round from one vehicle number to another, in the same category.

14. The <Utilities/Backup Data Files> and the <Utilities/Restore Data Files> were designed to keep a backup copy of the current event and configuration being used by the CARS software. These options can be useful for backing up the event files to either a diskette or the hard drive for obvious reasons. Perform this task at the end of each day for multiple day events.

2.3   After Event

- After the race is completed, simply generate the appropriate printouts, and use the <Control/Finish Event> option to end the event. Make a backup of the event when prompted to do so in the case of a problem. Daktronics will generally want a copy of the event for troubleshooting situations, and generating a backup of the event is a great help. The next questions that will appear when finishing the event are whether to update the registration database with the event points and generate an IHRA data file. Simply make the appropriate selections for these questions.

Section 3: Menu Options

The CARS program uses "Pull-Down Menus." To select an item shown in a menu, move the scroll bar to the desired option using the up and down cursor keys and press the **<ENTER>** KEY. The CARS main screen appears below.

Throughout the program a consistent set of keystrokes are used for commonly used functions. In most menus, the **<ESC>** key will return to the previous menu, and the control **<CTRL>** and the **<ENTER>** key are pressed together to accept new information that has been entered into a menu.

The STATUS WINDOW below the menus displays program relevant information. For example, a printer error message "PRINT" (in red) will appear in the lower right corner of the window if the printer is not responding. An error message "COM" will appear (in red) in the lower right corner of the window if CARS cannot communicate with the timer.

The active CATEGORY name will appear in the status window if an event has been started. The SESSION (Time Trials, Qualifying or Eliminations) and current round number will be shown in the right half of the window.
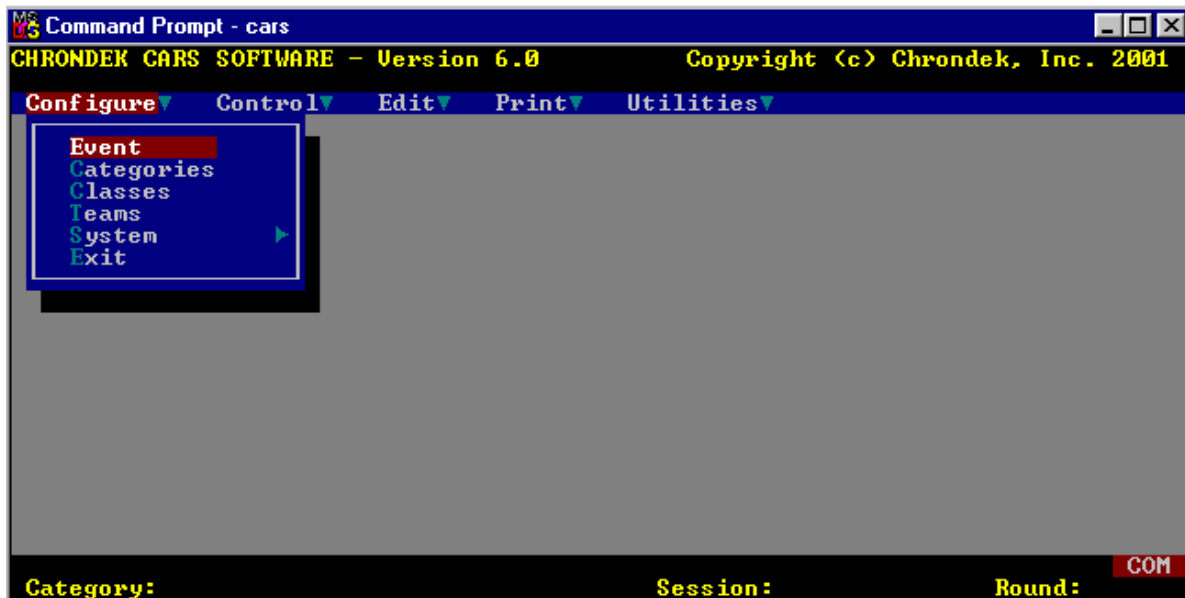
3.1   Configure Menu

The configure menu sets up the system according to the operators specifications for the particular track, sponsors, category, class, teams and printer type. The information in this section normally only has to be entered once, unless changes are required. Thereafter, the system stores all the information that has been entered. To select an option on this menu, move the scroll bar to the desired option using the cursor keys and press **<ENTER>**.

3.2 Event

This option allows the operator to set the event name, track name and sponsors, and IHRA track and division IDs in CARS.

Type in the event name and press **<ENTER>** or use the cursor key to move the scroll bar to the next line. Type in the track name and press **<ENTER>**. Type in the event sponsors and press **<ENTER>**. The sponsor information will show up in the header of each printout. Type in your IHRA track and division IDs and press <**ENTER**>. These items are written with the eliminations data in the CARSIHRA txt file. The new information is not saved until **<CTRL><ENTER>** is pressed. The event name, track name, and sponsors are now configured. This information will appear on printouts for this particular event and will be stored between events in the CARS database.

3.3 Categories

The category menu allows the operator to set the options used by CARS for each category. To set the category options, move the scroll bar to "Categories" using the cursor keys. Then press **<ENTER>**.
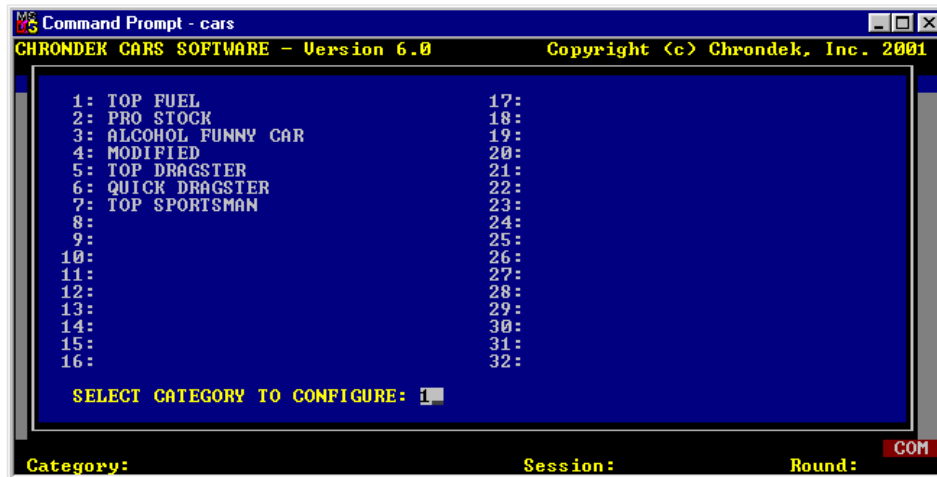
The system will respond with the following menu:

Thirty-two separate categories can be set up in CARS. The category number is displayed beside the category name and is used to select a particular category.

To change the category name or options, type the appropriate category number, then press **<ENTER>**.

To enter a new category, type a category number that has no name, then press **<ENTER>**. In either case, CARS will display the following menu:

```
<ESC>=Abort,<CNTRL-ENTER>=Accept,<ALT-D>=Delete
           Category Name: ET BRACKET_
   Category Abbreviation:
           Ladder Round: 1 (8=None)
        Qualifying Order: Ranked on lowest ET.
            Eliminations: Win based on ET.
         CIC used? (Y/N): N
                  Ladder: Sportsman Ladder
   Perfect Reaction Time:  0.000
              Field size: 16
                             TRACK   PRIZE   TEAM
              Attendance:    0       0       0
  Per Qualifying Position:   0       0       0
               Top Speed:    0       0       0
                  Low ET:    0       0       0
           Round 1 Loser:    0       0       0
           Round 2 Loser:    0       0       0
           Round 3 Loser:    0       0       0
           Round 4 Loser:    0       0       0
           Round 5 Loser:    0       0       0
           Round 6 Loser:    0       0       0
           Round 7 Loser:    0       0       0
               Runner Up:    0       0       0
                  Winner:    0       0       0
```

If an existing category is selected, the current options and category name will be displayed. Use the cursor keys to move to the options to be changed, and follow the instructions below to change them. When all necessary changes have been made, press **<CTRL><ENTER>**. The category is now configured. Follow the same procedure to configure other categories. The new values are not stored until **<CTRL><ENTER>** is pressed.

If **<CTRL><ENTER>** is selected while an event is in progress, CARS will automatically rebuild the pairings and qualifying order using the new options.

3.4   Category Name and Abbreviation

Type in the Category Name (Example: TOP FUEL) and the Category Abbreviation. (Example: TF)

3.5   Ladder Round

After the heading "Ladder Round," enter the round number that pairings are to be made in. This number will normally be one when qualifying rounds are run. However, when rounds of eliminations are also used for qualification, this number must be changed. For example, if no qualifying rounds are being run in a particular category and the first round of eliminations is being used for qualifying pairings, set the ladder round to two. If no qualifying rounds are to be run in a particular category and a ladder is not used for any of the rounds, i.e. racers are paired randomly in each round, set the ladder round to 8.

Select the option that will order the drivers in the way that you want for this category. Each selection is described below:
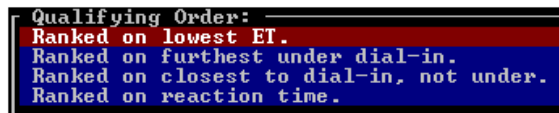
Ranked on lowest ET
Drivers are ranked based on ET only, from lowest to highest. Dial-Ins are not used.

Ranked on furthest under dial-in
Drivers are ranked based on the difference between the ET and the Dial-In. The driver furthest under his/her Dial-In is ranked first and the one furthest over is ranked last. Breakout is not used.

Ranked on closest to dial-in, not under
Drivers are ranked based on the difference between the ET and the Dial-In. Drivers with ET's that are less than their Dial-In are placed at the end of the qualifying order. Remaining drivers are ranked from closest to dial-in to furthest from Dial-In.

Ranked on reaction time
Drivers are ranked based on RT only, from lowest to highest.

3.7   Eliminations

Select the option that will calculate the race winner in the way that you want for this category. During an event, the race winner will be read from the C-33 or C-44 timer. The setting that you choose in this menu will be used to calculate the race winner if race times are edited with the edit eliminations option described in the "Edit Menu" section of this manual. Each menu selection is described below:

Win Based on ET
The race winner is the first driver to the finish line with a heads-up start. Dial-ins are not used.

Win Based on Handicap with Breakout
The race winner is the first driver to the finish line with a handicapped start. Dial-ins are used to determine the starting handicap. The breakout rule is in effect. Drivers racing under their dial-ins will receive a breakout foul.

Win Based on Handicap, Without Breakout
The race winner is the first driver to the finish line with a handicapped start. Dial-ins are used to determine the starting handicap. The breakout rule is not in effect. Drivers may run under their dial-ins.

3.8   CIC

Select (**Y**)es to use CIC for this category, select (**N**)o to operate CARS without CIC adjustments for this category.

If CIC is selected, the dial-in will be adjusted when the ET for an elimination run is more than 0.50 seconds under the dial-in for that run.

The adjustment will only be made for elimination rounds when the CIC option is set to "Y." The adjusted dial in will apply to the dial-in sent to the timer for the next round.

3.9   Ladder

Select Pro-Ladder to use professional pairings for the ladder. Select Sportsman Ladder to use sportsman pairings.

For example:
In a 16 car field using a pro-ladder, the #1 qualifier will race the #16 qualifier, #2 will race #15 and so on.
In a 16 car field using a sportsman ladder, the #1 qualifier will race the #9 qualifier, #2 will race #10 and so on.

The Pro/Sportsman ladder setting also determines the method used to break ties. If Pro-Ladder is selected, the driver with the highest speed is ranked higher. If Sportsman Ladder is selected, the driver who earned the time first is ranked higher.

3.10   Perfect Reaction Time

This option can be used to configure CARS for a Tree-Based reaction time. Enter the time that it takes the tree to countdown. This value will be the perfect reaction time. Values less than this will be displayed as negative.

3.11   Field Size

Enter the field size (number of racers in the first round of eliminations) and press **<ENTER>**. The field must be a multiple of two and cannot be greater than 256. Sometimes the field size may not be known until the first round of eliminations is completed. In such cases, start with a field size of, say 256, and then reset it to the correct size before closing the round. If the round is closed already, adjust the field size. CARS will apply the new setting to the data when **<CTRL><ENTER>** is pressed to confirm the changes. The field size must be set correctly in order for CARS to print the event printouts correctly.

3.12   Points

The points and prize money section works in this way: For example, if a driver is eliminated in round 4, how many points or how much prize money will that driver receive? That value is entered in the space across from "Round 4 Loser." Take care when entering points to be sure that the cursor is in the correct column, track points, prize money, or team points.

3.13   Classes

This option allows classes to be entered into the system for each category. Before a class can be configured, a main category must be selected. Move the scroll bar to "Classes" using the cursor keys, then **<ENTER>**. A menu like the one on **Section 3.3** will appear.

Type the number of the category that you want and press **<ENTER>**. After the category is selected, a menu like the following will appear:

Select "ADD NEW" to enter a new class. To change the configuration of an existing class, use the cursor keys to move to the class that you want. Press **[ENTER]** and the system will respond with the following menu. If you have selected an existing class, the current values will be displayed.

Enter all class information and then press **[CTRL][ENTER]** to store the new values.

```
<ESC>=Abort,<CNTRL-ENTER>=Accept
            Class Name: _____
      Class Abbreviation:
       National ET Record: 0.0000
    National Speed Record: 0.0000
         Track ET Record: 0.0000
      Track Speed Record: 0.0000
             Class Index: 0.000
```
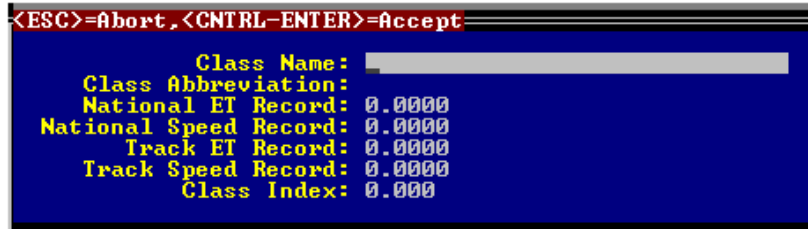
The class is now configured. Follow the same process for other classes.

The Class Index is the dial-in that will be sent to the timer when it requests dial-ins during qualifications and eliminations up to round one. After round one of eliminations, CARS sends the previously used dial-in upon request. If no class index is used, the previously entered dial-in will be sent upon request.

Each driver can be entered into a specific category and class using the registration menu.

3.14   Teams

This option allows teams to be entered into the system for each category. Before a team can be configured, a main category must be selected. Move the scroll bar to "Teams" using the cursor keys, then press the **<ENTER>** key. A menu like the one on **Section 3.3** will appear.

Type the number of the category that you want and press **<ENTER>**. After the category is selected, a menu like the following will appear:

```
Edit Teams - <ALT-D>=Delete
*** ADD NEW ***
```

Select "Add New" to enter a new team. To change the configuration of an existing team, use the cursor keys to move to the team that you want. Press **<ENTER>** and the system will respond with the following menu:

```
<ESC>=Abort,<CNTRL-ENTER>=Accept
          Teamname: _____
   Team Abbreviation:
       Team Address:
```

If you have selected an existing team, the current values will be displayed.

Enter all team information and then press **<CTRL><ENTER>** to store the new values. The team is now configured. Follow the same process for other teams.

Teams can be assigned by adding a team abbreviation at the end of the vehicles for each category. For example: 114S, 120S, 7S would all be on the team with "S" as the team abbreviation.

Note: Abbreviated team names should be the same number of characters. For example, "D" and "E" or "DA" and "DB" are legal abbreviations, but "D" and "DA" are not.

3.15   System

The System option allows CARS system operations to be performed. When this option is selected, the system options window appears as shown.

```
Select Printer          ▶
Initialize Points
Automatic Entry
Track Points Default
```

3.16   Select Printer Type

The select printer option allows the printer type to be selected. After choosing this option, the program displays a list of compatible printers:

```
Epson/IBM Compatible
C.Itoh Compatible
Citizen
Epson w/o Graphics
```
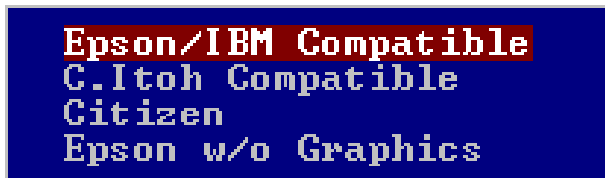
Select a printer with the scroll bar and press **<ENTER>**. The program is now configured to print with that printer.

3.17   Initialize Points

The initialize points option is used at the beginning of the season to clear out everyone's points from last season. To perform this procedure, move the scroll bar to "Initialize Points" and press **<ENTER>**. The system will present a warning message before initializing the points. If previously, a driver was removed from the point program by setting the track points to -1, the value will remain -1.

3.18   Automatic Entry

The automatic entry option can be set to yes or no. If it is set to yes, vehicles do not need to be added to the event using the "Entry" option. The vehicles will be added automatically when they race. If it is set to no, vehicles will not be entered automatically.

This option was developed for tracks that only want cars that have been entered into the event to race, thus prohibiting vehicles from trying to "slip" into the event without entering. If automatic entry is set to no and the vehicle races, the data for the vehicle will have to be entered by hand into CARS from the timer log printout.

3.19   Track Point Default

This option can be used to change the default setting for the Track Points in the registration record of a new driver. Move the cursor to "Track Points Default" and press the ENTER key. Select "Enter New Racers" and the track points field will be initialized to zero. Select "Do Not Enter New Racers" and the track points field will be initialized to -1. When this field contains a value of -1, track points are not accumulated for the driver.

3.20   Exit

Use the EXIT command to stop the CARS program and return to DOS. The EXIT command does not close an event; the event that had been started will still be current when CARS is executed again. However, information cannot be accepted from the timer when CARS is not operating.

3.21   Control

The control menu is the menu that will be used most during racing. From this menu, you can view announcer information, change the round number, change the category, and start or finish the event.

3.22   View

This command displays the "View" screen on the monitor. With the view screen, you can view the most recently received data from the C-33 or C-44 timer. During an event, CARS will pull up information on the two current racers and display the information in the following format. This screen is usually displayed during races.

```
┌LEFT LANE─────────────────────────┐ ┌RIGHT LANE────────────────────────┐
│                    Qual:         │ │                     Qual:        │
│                                  │ │                                  │
│                    Age:          │ │                     Age:         │
│                                  │ │                                  │
│  Body:             Engn:         │ │   Body:             Engn:        │
│  Owner:                          │ │   Owner:                         │
│  Spon:                           │ │   Spon:                          │
│  INT1:          DI:              │ │   INT1:          DI:             │
│  INT2:          RT:              │ │   INT2:          RT:             │
│  INT3:          ET:              │ │   INT3:          ET:             │
│  SPD1:          SP:              │ │   SPD1:          SP:             │
│  INT4:         +-DI:             │ │   INT4:         +-DI:            │
│                                  │ │                                  │
├LAST RACE RESULTS─────────────────┤ ├LAST RACE RESULTS─────────────────┤
│                 DI:              │ │                  DI:             │
│                 RT:              │ │                  RT:             │
│  QUAL:          ET:              │ │   QUAL:          ET:             │
│  +-DI:          SP:              │ │   +-DI:          SP:             │
└──────────────────────────────────┘ └──────────────────────────────────┘
<Esc> - Return to Menu.      F3 - Left Driver Info.   F4 - Right Driver Info.
F1 - Change Round/Category  F2 - View Qualifying Order               COM
Category:                             Session:              Round:
```

Before the race, CARS receives the two vehicle numbers from the timer and displays the corresponding driver registration information in the top two boxes of the view screen.

The times are displayed as they occur on the track for the vehicles that are racing. During elimination rounds and after the first qualifying round is completed, the announcer can determine the qualifying position of the vehicles racing from the QUAL field. The qualifying ET/SPEED for the qualifying position is displayed directly under it.

When the C33 or C44 timer sends the vehicle numbers of the next racers, CARS will transfer the current race information from the top sections of the view screen to the sections labeled "Last Race Results." Then CARS will display the new vehicle numbers and corresponding driver registration information in the top section of the view screen. The new qualifying positions of the previous vehicles will be displayed in the QUAL fields at the bottom of the screen.

If the racer breaks the National or Track ET record in their class, an "N" and/or "T" respectively will be displayed next to the ET in the last race section of the view screen. Similarly, if a speed record is broken, an "N" and/or "T" will be placed next to the speed in the last race section of the view screen. The user configures these records in the class menu. The operator must update the records because they do no update automatically.

Please note that the CARS system uses dial-ins sent from the C33 or C44 for calculating results and not the class index entered in the class menu.

3.23   View Screen Function Keys

Four special function keys can be used from the view screen. The function of these keys is described below:

F1
Press the **<F1>** key on your keyboard to change the round status and active category from the view screen. There are three steps to this process:

1. Use the "Round" screen to set the status of the current round for the current category to "R," which means, "has been run."

2. Use the "category" screen to change the current category.

3. Use the "Round" screen to set the status of the next round for the new category to "A" for Active.

When you press the **<F1>** key, the "Round" screen will be displayed. Use the cursor keys and the "R" key to change the status of the current round, and then press the **<ESC>** key.

The "Category" screen will be displayed when you select "Escape." Enter the number of the new category and then press the Escape key. The "Round" screen will be displayed with the round status for the new category. Use the curser keys and the "A" key to set the status of the new category to Active. Press **<ESC>** again to return to the view screen.

The round status and category can also be changed from the Control menu, as described below. The **<F1>** key allows these changes to be made more quickly, while a race is being run.

F2
Press **<F2>** from the view screen to display the qualifying order on the monitor. Press **<ESC>** to return to the view screen. This feature can be used to check the qualifying order without printing it out.

F3

Press **<F3>** to view free format information on the competitor in the left lane. The information displayed is the memo field of the driver registration. It is entered in the Edit - registration menu.

F4

Press **<F4>** to view free format information on the competitor in the right lane. The information displayed is the memo field of the driver registration. It is entered in the Edit - registration menu.

3.24 Round

When the event has been started, the user must enter the status of the rounds that are being run. When the Round option is chosen, the following screen will appear:


```
 Select Round - <ESC>=Exit
 CATEGORY                        QUALIFYING     ELIMINATIONS
                                 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8
 TOP FUEL                        R               A

     A - Active  I - Inactive  R - Has Been Run  C - Cancel
           Use Left and Right Arrow Keys to Move Cursor.
```
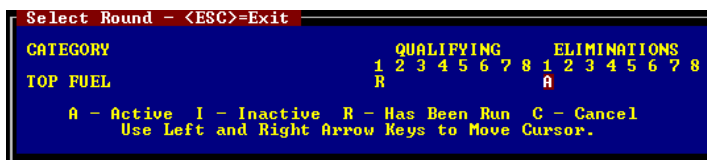
Move the highlighted cursor to the desired round and enter the appropriate letter. The letters available are described below:

- **A - Active** - This round is currently being raced.

- **I - Inactive** - This round is temporarily suspended. Sometimes when a round is active, it may be necessary to temporarily inactivate the round to allow a trial run or for another reason. Inactivating the round prevents spurious times from being taken into consideration. Re-activate the round when racing begins.

- **R - Has Been Run** - This round has been finished.

- **C - Cancel** - Cancel a qualifying round that has been run or is currently active.

A round must be set to active when the round is about to be raced. After the round is finished, it must be set to (R) Has Been Run. If a qualifying run is not to be considered for qualifying orders, for whatever reasons, simply cancel it by entering a "C".

No blanks can be left between rounds. Once elimination round has become active and been run, qualification rounds cannot become active.

An "*" is displayed under the letter when CARS has stored race data in that particular round. This "*" is to aid the operator in selecting the correct active round. Another "*" will appear in the lower right corner of the operator's monitor when CARS is saving race data from the timer in the CARS database. This "*" is to let the operator know when the data has been saved and the round status can be set to "R".

3.25   Category

Before a round is started, the user must enter the category that is going to be raced at this time. To choose a category to race, select the CATEGORY option with the scroll bar and a menu similar to the one on **Section 3.3** will appear.

A list of previously configured categories will appear in the menu. Enter the number of the category that is to be raced. The category name will appear in the lower left side of the STATUS WINDOW at the bottom of the screen. This space will always show the category that is being raced. CARS stores race data received from the timer in the active round of the category that is being raced.

3.26   Start Event

CARS must be informed of the start of an event in order to start receiving information from the C-33 or C-44 timer. Select the Start Event option. A menu similar to the one on **Section 3.3** will appear.

Enter the number of the category that you want to start with. CARS will display the "Initializing Database … Please wait" message:

When the message is erased, the system is ready for the event to begin.

3.27   Finish Event

After all the races for an event are finished, the finish event option must be used to close the event. When you select the finish event option, CARS will display this red warning screen:

```
You are about to close the event.
All event data will be lost.
Are you sure? (Y/N)
```

To close the event press "Y." CARS will then remind you that backup procedures should be used to protect race data with the following message:
To make a backup of the race data, press "Y."

```
Do you want to make a backup before
closing the event? (Y)
```

If you press "N", the system will respond with the following menu:

```
Do you want to skip updating points? (Y)
```

If you select "Y", the system will display the next screen. If you select "N," the system will update points and then display the next screen.

If the Finish Event option is chosen before an event has been started, the program will prompt with a red warning screen:

<div align="center">Event is not in progress.</div>

Press any key to finish the event.

3.28   Edit

The EDIT menu allows you to: enter drivers into the current event, create or update registration data for a driver, change the qualifying or eliminations time data for a driver, change the pairings for eliminations rounds, or bump a driver in/out of the first eliminations round.

3.29   Entry

NOTE: You must start the event before entering drivers in a race.

To enter a driver into a race, select the Entry option of the edit menu. A menu similar to the one on **Section 3.3** appears. Select the category in which you want to enter driver. CARS will display a list of the drivers in the category and their status as shown below:

```
┌ Vehicle # ──────────── Driver Name ──────────── Status ┐    ┌───── Entry Keys: ──────┐
│ 1000                   BARRY GAAP                       │    │                        │
│ 10D                    JOHN NOBILE                      │    │       ADD = <ENTER>    │
│ 114S                   STEVE WILLIFORD                  │    │    REMOVE = <F1>       │
│ 119R                   TERRY ADAMS                      │    │                        │
│ 14S                    ED DIXON                         │    │        UP = ↑,<PGUP>   │
│ 1A                     KEN CURLEY                       │    │      DOWN = ↓,<PGDN>   │
│ 2R                     DOUG KIRK                        │    │       TOP = <HOME>     │
│ 3D                     TIM NABORS                       │    │    BOTTOM = <END>      │
│ 5S                     BILLY EWING                      │    │      EXIT = <ESC>      │
│ 6R                     CARLTON PHILLIPS                 │    │                        │
│ 7D                     RICKIE SMITH                     │    └────────────────────────┘
└────────────────────────────────────────────────────────┘
```

Highlight the driver's name with the cursor keys and press **<ENTER>** to place them in an event. Use **<F1>** to delete a highlighted driver from an event. After all drivers are entered, press **<ESC>**. Drivers can only be entered into an event during Qualification rounds and in the first round of eliminations, if it is not the ladder round.

Only drivers that have been previously registered into the database for a particular category can be entered into an event using the Entry option. However, the program is capable of automatically entering a driver into an event. This is possible only during active qualifying rounds and the first round of eliminations, if it is not the ladder round. In this case, when times for a driver are received from the timer, the driver is automatically registered if not registered already, and entered into the event, if not entered already. Use the "Configure/System/Automatic Entry" option to turn automatic entry on or off.

3.30   Registration

The Registration option allows you to store driver information in the CARS database. This information can be entered before the race is run and is not cleared when the event is finished, but is stored for use in future events. Drivers must be registered into the registration file before they can be entered into races with the Entry option.

To register a driver, select the registration option and CARS will prompt you for the drivers' category as shown in **Section 3.3**.

Enter the number of the category that you want to register the driver into. CARS will display a menu similar to the following:

If the driver has already been registered in this category, use the "Select Vehicle" or "Select Driver" option to retrieve the information for the driver.

With the select vehicle option, a partial vehicle number or blank can be entered to obtain a list of vehicles that have been registered in the category. A blank displays a complete list, a partial number displays vehicle starting with the numbers entered.

This registration information can be changed and resaved as described below. If this is a new driver, select the "Add New" option to register them. If the driver has been entered in a different category, select "Add New," and then use the copy option described below to copy the driver's registration information from another category.

If a vehicle number or drivers' name is entered and they have not been previously registered, CARS displays the following red warning message:

After one of these options is chosen, the following registration menu appears. This menu can be updated using the keyboard. The cursor keys and return key move between items.
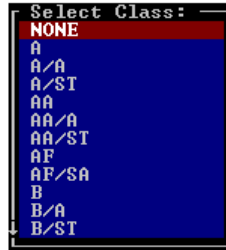

Fill in the information about the driver and press **<CTRL><ENTER>** to save the information.

3.31   Class

The class is entered in the class field of the driver registration menu. The class selected must have been configured previously with the configure - classes menu. To obtain a list of previously configured classes, move to the class field of the registration menu and press return. If the field is blank, a list of classes will be displayed as shown below:

```
┌─ Select Class: ─┐
│ NONE            │
│ A               │
│ A/A             │
│ A/ST            │
│ AA              │
│ AA/A            │
│ AA/ST           │
│ AF              │
│ AF/SA           │
│ B               │
│ B/A             │
│ B/ST            │
└─────────────────┘
```

Use the cursor keys to highlight the desired class and press **<ENTER>** to select it. The class abbreviation will be placed in the class field of the registration menu.

If only one class has been configured for the category selected, that class will be chosen as the default for all drivers registered in the category. If more than one class is available, no default will be chosen.

If no classes have been configured for this category, the following red warning message will be displayed:

```
No classes configured.
```

If the class field is not blank when **<ENTER>** is pressed, CARS will check to see that the characters in the field match one of the class abbreviations that have been configured for this category. If no match is found, the list of configured classes will be displayed. One of these class abbreviations or "None" must be selected before going on.

3.32   Track Points

The number of points earned is displayed. To take this driver out of the track points program, enter a (-1) in the track points location. Points will not be saved or printed for drivers with a value of (-1). This field will default to a value of either zero or -1 for new drivers, depending on the setting of the Track Points Default option. See **Section 2.1**.

3.33 Memo

Free format information (a memo) can be entered for each driver. This information is displayed when **<F3>** or **<F4>** is pressed from the view screen. To store information about this driver, press the **<F1>** key. The following memo will be displayed:

Enter free-format information in the box provided using the keyboard characters. When the information has been entered, press **<ESC>** to exit the box. Press **<CTRL><ENTER>** at the main registration menu to save the new menu information.

The information box will be displayed on the View Screen exactly as it appears in this menu. The announcer may use this feature to record general information about each driver.

3.34 Delete

To delete the registration record that is displayed, press the **<F2>** key. Entries may only be deleted when an event is not in progress. If no event is in progress when **<F2>** is selected, the following red warning message is displayed:

Select "Y" to delete the registration data for this driver in this category. Select "N" to abort the delete operation. This data cannot be retrieved after it has been deleted. It must be re-entered if it is needed again.

3.35 Copy

To copy registration information for a driver from one category to another, use the copy option and the following procedure:

1. Select the Registration menu and select the Category that the driver is to be copied to. Choose the "Add New" option. CARS will display a blank registration record in the requested category.
2. Press the **<F3>** key to copy the driver information from a different category. CARS will display the category selection menu. Select the category that currently has the driver's information. CARS will prompt for the vehicle number as shown.

3. Enter the vehicle number that the driver's data is currently stored under. CARS will display the name of the driver that will be copied into the blank record in a red warning box as shown below:

```
Do you wish to copy BARRY GAAP into this record?
Are you sure? (Y/N)
```

Press "Y" if this is the correct driver and you wish to proceed with the copy operation. Press "N" to abort the copy operation.

3.36   Qualifying

This option allows you to change qualifying information that has already been processed by CARS or enter qualifying information manually. This is needed in case of a late disqualification or mistake in scoring, etc. To edit qualifying information, select this option and choose the category to edit from those that are listed on the category screen.

Then the program will prompt:

```
Enter Vehicle Number:
```

Type the number of the vehicle whose times need to be changed. Then press Enter. CARS will display the following edit screen:

```
=<ESC>=Abort,<CNTRL-ENTER>=Accept=
    Driver Name: JOHN NOBILE
Vehicle Number: 10D

ROUND DIAL-IN REACTN  E.T.   SPEED  DNF FL LINE DQ RUN#
  1    13.00  0.432 14.562 104.67                     1
  2     0.00  0.000  0.000   0.00                     0
  3     0.00  0.000  0.000   0.00                     0
  4     0.00  0.000  0.000   0.00                     0
  5     0.00  0.000  0.000   0.00                     0
  6     0.00  0.000  0.000   0.00                     0
  7     0.00  0.000  0.000   0.00                     0
  8     0.00  0.000  0.000   0.00                     0

Use ↑, ↓, TAB, <SHIFT-TAB>, PGUP/DN and ENTER keys.
```

The driver's times in each qualifying round as well as any infractions are displayed in the edit menu. The non-time information (DNF, FL, LINE, DQ) is entered as "Y" for yes or "N" for no. The Run Number field is used to resolve tie conditions for non-proladders categories. A lower run number will place that driver ahead of another driver with the same ET, but a larger run number. Edit the incorrect information, and press **<CTRL><ENTER>** to save your changes. CARS will automatically rebuild the qualifying order and/or pairings if necessary.

3.37   Eliminations

This option allows you to change elimination round information that has already been processed or to enter the information manually. To edit elimination information, select this option, and then choose the category to edit from those that are listed on the category screen, and enter the number of the vehicle whose times need to be changed. CARS will display the following edit screen:

```
<ESC>=Abort,<CNTRL-ENTER>=Accept
       Driver Name: BARRY GAAP
Vehicle Number: 1000

ROUND DIAL-IN REACTN   E.T.   SPEED   DNF FL LINE DQ WIN
  1     11.95   2.547  4.934 124.50                     Y
  2     11.95   0.000  5.995 123.48        Y
  3     11.95   0.000  0.000   0.00
  4      0.00   0.000  0.000   0.00
  5      0.00   0.000  0.000   0.00
  6      0.00   0.000  0.000   0.00
  7      0.00   0.000  0.000   0.00
  8      0.00   0.000  0.000   0.00

Use ↑, ↓, TAB, <SHIFT-TAB>, PGUP/DN and ENTER keys.
```

The driver's times in each elimination's round, as well as any infractions, are displayed in the edit menu. The non-time information (DNF, FL, LINE, DQ) is entered as "Y" for yes or "N" for no. The win field value cannot be edited, but will be recalculated when **<CTRL><ENTER>** is selected. Edit the incorrect information, and press **<CTRL><ENTER>** to save your changes. CARS will automatically redo the pairings if necessary.

3.38   Pairings

The Edit Pairings option can be used to change the pairings made by the CARS program. To change the pairings, select this option, and then choose the category to edit from the category screen.

CARS will display a list of pairings for the currently active elimination round as shown. If no elimination rounds are active for the category, then an error message to that effect is displayed on the screen.

```
Pair Vehicle #        Driver
  1  1000             BARRY GAAP
  1  14S              ED DIXON

  2  BYE
  2  BYE

  3  114S             STEVE WILLIFORD
  3  119R             TERRY ADAMS

  4  1A               KEN CURLEY
  4  10D              JOHN NOBILE
```

```
== Edit Keys: ==

SELECT = <ENTER>
  EXIT = <ESC>

    UP = <PGUP>,↑
  DOWN = <PGDN>,↓
   TOP = <HOME>
BOTTOM = <END>
```

Move the scroll bar to the line that needs to be changed and press **<ENTER>**. The following prompt appears on the screen:

```
Select:
 Select Vehicle
 BYE
```

Select BYE if a driver is to be replaced with a "BYE," otherwise select "Select Vehicle" at which point the following prompt appears:

```
Enter Elimination Round Number:
```

Enter the vehicle number that will replace the current vehicle on the selected line. After the first round of eliminations, only vehicles that were in the previous round will be allowed in the current round. Press **<ENTER>** to save your changes. Press **<ESC>** to abort the change process.

3.39   Bump Driver

The Bump Driver option can be used to take a driver out of the field of drivers used to create pairings for elimination rounds. To bump a driver, select this option, and then choose the driver's category from the category screen. The following will appear:

```
Enter Vehicle Number:
                    ── Help Window: ──
          Enter vehicle number to bump/unbump from pairings.
```

Enter the vehicle number of the driver to be bumped. CARS will respond with the following red warning message:

```
Vehicle Number: 10D
Do not consider vehicle in forming round 1 pairings.
Are you sure? (Y/N)
```

If "Y" is entered, the program takes the selected driver out of the pairings list and asks for the number of the vehicle that will replace the bumped vehicle. An alternate driver may also be inserted using the Edit Pairings menu selection (See **Section 3.38**).

```
Enter Vehicle Number:
                    ── Help Window: ──
          Enter vehicle number to replace bumped vehicle.
          Press <ESC> to skip entering a replacement vehicle.
```

If for some reason, the bumped driver needs to be entered back into the pairing list, this option is used again and the bumped vehicle number is re-entered.

Answering "yes" to this prompt will put the selected driver back in the list for forming elimination round pairings.

3.40   Print

This option can be used to obtain a variety of printouts as listed below. To choose a print option, move the scroll bar to the desired option and press **<ENTER>**. A sample printout for each of the options is shown in **Appendix A**.

Entry List
The "Entry List" option provides a printout of all of the competitors entered into the current event in the selected category. Upon choosing this option, the "Select Category" menu is displayed.

Type the number of the category that you want, then press **<ENTER>**. The competitors entered into the event for this category will be printed. Note that the event must have been started to print entry lists. Refer to **Appendix A** for sample printouts.

Qualifying Order

The "Qualifying Order" option provides a printout of the qualifying order for a selected category. Upon choosing this option, the "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. The qualifying order will now be printed. Refer to **Appendix A** for sample printouts.

Pairings

The "Pairings" option provides a printout of the pairings for a selected round of a selected category. Upon choosing this option, the "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. A menu like the following will appear:

If the round number shown is the one you want, press **<ENTER>**, otherwise, enter the round number that you want, then press **<ENTER>**. The pairings will now be printed. Refer to **Appendix A** for sample printouts.

Round Winners

The "Round Winners" option provides a printout of the winners for a selected round of a selected category. Upon choosing this option, the "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. A menu like the following will appear:

If the round number shown is the one you want, press **<ENTER>**, otherwise, enter the round number that you want, then press **<ENTER>**. The winners will now be printed. The times shown on the round winners printout are the times for the round selected. Use this option to obtain a list of the drivers that will be in the next round for a bracket race. (When ladder round=8). Refer to **Appendix A** for sample printouts.

Round Losers

The "Round Losers" option provides a payout sheet of the losers for a selected round of a selected category. It also prints the payout for the winner and runner up for the final round. Upon choosing this option, the "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. A menu like the following will appear:

```
Enter Elimination Round Number:
```

If the round number shown is the one you want, press **<ENTER>**, otherwise, enter the round number that you want, then press **<ENTER>**. The losers will now be printed. Refer to **Appendix A** for sample printouts.

Ladder

The "Ladder" option provides a printout of the ladder for a selected category. Upon choosing this option, the "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. The ladder will now be printed. Refer to **Appendix A** for sample printouts. The ladder for a field size of 128 will be printed on two pages, which may be taped together for display.

Time Slip

The "Time Slip" option provides a printout of a competitor's qualifying and elimination runs in a selected category. Upon choosing this option, the "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. A menu like the following will appear:

```
Enter Vehicle Number:
```

Enter the vehicle number and press **<ENTER>**. The time slip will now be printed. Refer to **Appendix A** for sample printouts.

Final Results

The "Final Results" option provides a printout of the winner and runner-up in each category for all the categories in the event. The #1 qualifier, top speed, and low ET values are printed for categories that use dial-ins.

Upon choosing this option and pressing **<ENTER>**, this printout is printed. Refer to **Appendix A** for sample printouts.

All Results

The "All Results" option provides a printout of all of the elimination round results, round by round for a selected category. Upon choosing this option, the "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. The results will now be printed. Refer to **Appendix A** for sample printouts.

Points Standings

The "Points Standings" option provides a printout of track points, prize money, or team points for a selected category. Upon choosing this option, the following menu appears on the screen:
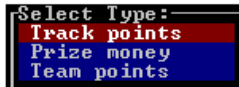
Move the scroll bar to the printout type that you want and press **<ENTER>**. The "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. The points printout will now be printed. Refer to **Appendix A** for sample printouts.

Registration

The "Registration" option provides a printout of all of the competitors in the registration file for a selected category. Upon choosing this option, the "Select Category" menu is displayed.

Type the number of the category that you want, then press **<ENTER>**. The registration printout will now be printed. Refer to **Appendix A** for sample printouts.

Mailing Labels

The "Mailing List" option provides a printout of the mailing address for every driver in the registration file or for a selected category. Upon choosing this option, the following menu appears:

If "1" is selected, the labels used should be 3-1/2x 15/16 with 5,000 labels per sheet. If "3" is selected, the labels should be 1x2-3/4 with 33 labels per sheet. After selecting "1" or "3", the following menu will appear:
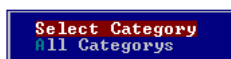
After selecting how you want the labels sorted, the following menu will appear:

Move the scroll bar to your selection, then press **<ENTER>**. If you select "All Categories," every competitor in the registration file of each category will be printed. If you select "Select Categories," the "Select Category" menu is displayed. Type the number of the category that you want, then press **<ENTER>**. A mailing list for the selected category will now be printed. Refer to **Appendix A** for sample printouts.

Category List

The Category List option provides a printout of all the available categories and their settings. Upon choosing this option and pressing **<ENTER>**, this printout is printed. Refer to **Appendix A** for sample printouts.

Vehicle List

The Vehicle List option provides a printout listing the vehicle number, driver name, and category. The operator can specify the starting vehicle number and the ending vehicle number. This printout will prove useful when trying to locate a particular vehicle number and you do not know which category it is in. Refer to **Appendix A** for sample printouts.

Abort

The Abort option will stop the printing of any report that is being printed. To abort a printout, choose this option. The word "Abort" will be displayed in the lower right corner of the monitor and the printout will be aborted. If your printer has an internal buffer, it will continue to print until the buffer is empty and then stop.

3.41   Utilities

The Utilities option allows you to backup and restore data files, clear race times, view which drivers came closest to their dial-in times, view drivers by reaction times, copy vehicle times and; increment the ages of the registered drivers.

3.42   Backup Data Files

The backup data files option allows the operator to backup the database files to either the hard disk or a diskette. If backing up to the hard drive, the data files will be copied to a C:\CARS\BACKUP directory. If backing up to a diskette, the data files will be copied to the A:\ root directory. A typical backup procedure would use two diskettes and be as follows:

After a successful event, backup the data files to the hard drive and to diskette A.
After the next event, backup the data files to the hard drive again, but use diskette B this time.
After the next event, backup the data files to the hard drive and keep alternating the diskettes. By alternating diskettes, you are assured of keeping a "good" copy of the data files. If a person only uses one diskette, you might overwrite your good data files with "bad" files.

3.43   Restore Data Files

The restore data files option allows the operator to restore the database files from either the hard disk or a diskette. If restoring from the hard drive, the data files will be copied from the C:\CARS\BACKUP directory. If restoring from a diskette, the data files will be copied from the A:\ root directory.

3.44   Clear Times

The clear time option allows the operator to clear times for either qualifying or eliminations. The operator can clear times for a particular vehicle or a whole category for any round or all rounds within either qualifying or eliminations.

3.45   Closest to Dial-In

The closest to the dial-in option allows the operator to pull up a list of winners in an elimination round and view who ran closest to their dial-in. The option asks the operator which elimination round they wish to view and then presents the list. This list is useful for awarding byes in bracket racing.

3.46   By Reaction Time

The "By Reaction Time" option allows the operator to pull up a list of winners in an elimination round and view who got the quickest reaction time. Move the cursor to "By Reaction Time" and press **<ENTER>**. Select the appropriate category and enter the elimination round number that you wish to view. A list similar to the one shown below will be displayed. This list is useful for awarding Byes during a bracket race.

3.47   Copy Vehicle Times

Use this option to copy qualifying or eliminations times for all rounds or a specific round from one vehicle to another. The vehicle numbers used must be in the same category.

Move the cursor to "Copy Vehicle Times" and press **<ENTER>**. Select the appropriate category then choose "Qualifying" or "Eliminations."

Now enter the number of the vehicle that has the times, followed by the number of the vehicle that should have the times.

Then select "All Rounds" to copy the times for all rounds, or "Select Round" to choose a specific round.

Finally, enter "Y" to erase the times from their previous location, or "N" to keep them.

A message will be displayed. If all of the information shown is correct, press "Y" to transfer the times. If there is an error, press "N" to return to the category selection screen without moving the times.

3.48   Increment Driver's Age

Use this option at the start of a new racing season. It will add one to the number stored in the age field of each driver that is currently registered. Move the cursor to "Increment Driver's Age" then press the ENTER key. Enter a "Y" to increment the ages for all drivers or "N" to return to the utilities menu.

Two options appear with this selection: "Generate Race File" and "Copy File to Diskette." Select "Generate Race File" to update the CARSIHRA.txt file with the data from the current event. CARS will ask if you want to update the file. The program will then display a message while the file is updating and another message when the update is finished.

Select "Copy File to Diskette" to copy the current CARSIHRA.txt file to the a: drive before choosing this option.

Once the file has been copied to a diskette, send it to IHRA via e-mail to swc@ihra.com by noon on the Monday following each event.

Appendix A: Sample Printouts

The following pages are examples of various printouts.

**DAKOTA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.**

TOP DRAGSTER - ENTRY LIST

NO.	DRIVER	VEHICLE #	HOMETOWN	ENGINE	BODY
1	ARNOLD BADGETT	2089	OVERLAND MO	355 CHEVY	68 DRAGSTER
2	DAVE ELROD	2134	HARROD OH	CHEV	89 SPTZR
3	STEVE NORBURY	2016	TROY IL	500 CHEVY	
4	STEVE BEHNEN	2139	WHITE HALL IL	454 CHEVY	90 DRAGSTR
5	BRITT CUMMINGS	2238	HAMMOND LA	35 CHEVY	90 DRAGSTR
6	TOM CALLAHAN	2001	MIDDLETON OH	498 PONTIC	90 SPRITZR
7	JOE LEACH	2458	HAMILTON OH	585 PONT	91 SPTZR
8	DOUG HERZOG	2589	ST LOUIS MO	427 CHEVY	86 S & W
9	RON MILLER	2303	LEBANON OH	345 BUICK	91 SPTZR
10	RON BOYD	2362	HILLSBORO IL	500 CHEVY	91 SPTZR

**DAKOTA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.**

TOP DRAGSTER - QUALIFYING ORDER AFTER ROUND 1

RANK	VEHICLE #	CLASS	DRIVER	HOMETOWN	DIAL-IN	ET	SPEED
1	2089		ARNOLD BADGETT	OVERLAND MO	0.00	6.348	120.83
2	2134		DAVE ELROD	HARROD OH	0.00	6.394	108.58
3	2016		STEVE NORBURY	TROY IL	0.00	7.783	139.00
4	2139		STEVE BEHNEN	WHITE HALL IL	0.00	7.803	135.69
5	2238		BRITT CUMMINGS	HAMMOND LA	0.00	8.144	127.83
6	2001		TOM CALLAHAN	MIDDLETON OH	0.00	8.168	124.84
7	2458		JOE LEACH	HAMILTON OH	0.00	8.866	57.45
8	2589		DOUG HERZOG	ST LOUIS MO	0.00	8.877	57.28

ALTERNATES:

RANK	VEHICLE #	CLASS	DRIVER	HOMETOWN	DIAL-IN	ET	SPEED
9	2303		RON MILLER	LEBANON OH	0.00	10.425	122.36
10	2362		RON BOYD	HILLSBORO IL	0.00	10.439	117.46

LOW ET: 6.348   TOP SPEED: 139.00

DAKOTA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.

TOP DRAGSTER - ELIMINATION PAIRINGS FOR ROUND 1

RANK	DRIVER	VEHICLE #	CLASS	P-DAIL	P-REAC	P-ET	P-SPEED	DNF	FL	OB	DSQ	BO
1	ARNOLD BADGETT	2089	0.00	0.484	8.129	122.92						
8	DOUG HERZOG	2589	0.00	0.488	8.127	123.20						
4	STEVE BEHNEN	2139	0.00	0.746	6.862	109.94						
5	BRITT CUMMINGS	2238	0.00	0.746	6.863	144.59						
2	DAVE ELROD	2134	0.00	0.430	7.907	121.59						
7	JOE LEACH	2458	0.00	0.454	7.880	125.95						
3	STEVE NORBURY	2016	0.00	-0.189	12.457	122.64						
6	TOM CALLAHAN	2001	0.00	0.327	11.934	124.20						

DAKOTA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.

TOP DRAGSTER - ELIMINATION WINNERS FOR ROUND 1

RANK	DRIVER	VEHICLE #	CLASS	P-DAIL	P-REAC	P-ET	P-SPEED	DNF	FL	OB	DSQ	BO
1	ARNOLD BADGETT	2089	0.00	0.484	8.129	122.92						
4	STEVE BEHNEN	2139	0.00	0.746	6.862	109.94						
7	JOE LEACH	2458	0.00	0.454	7.880	125.95						
6	TOM CALLAHAN	2001	0.00	0.327	11.934	124.20						

DAKOTA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.

SUPER STOCK - ELIMINATION LOSERS FOR ROUND 2

VEHICLE	DRIVER NAME	OWNER NAME	PRIZE	SIGNATURE
8005	MATT STICKLER		$ 25	_____
8013	TIM MICHAELS		$ 25	_____

TOP DRAGSTER - PRO LADDER

1 ARNOLD BADGETT	2089	
8 DOUG HERZOG	2589	2089
4 STEVE BEHNEN	2139	
5 BRITT CUMMINGS	2238	2139
2 DAVE ELROD	2134	
7 JOE LEACH	2458	2458
3 STEVE NORBURY	2016	
6 TOM CALLAHAN	2001	2001

2089

2001
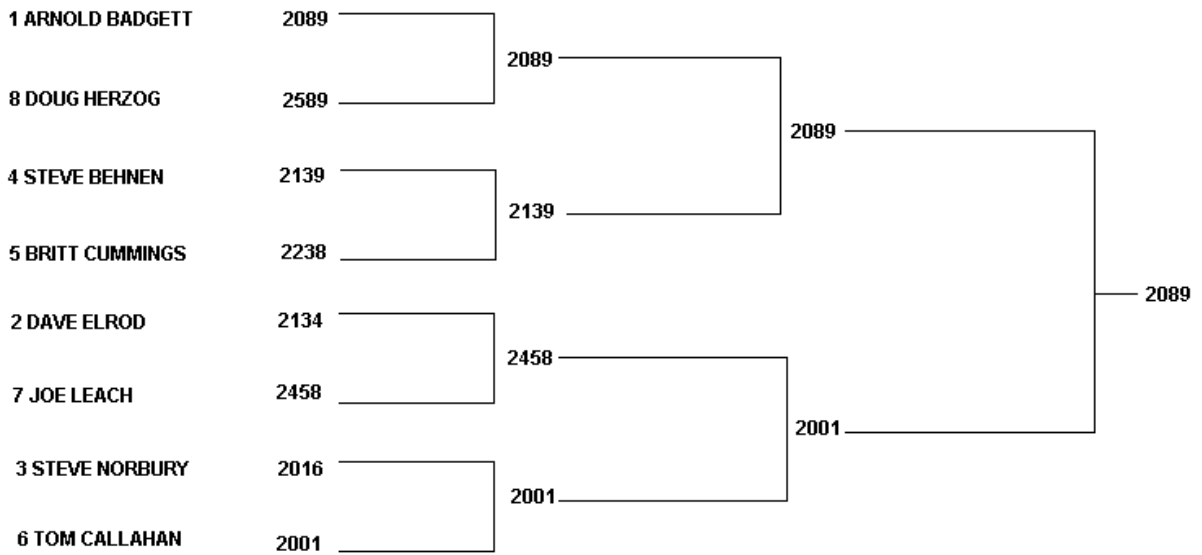
2089

TOP DRAGSTER - COMPETITOR TIME SLIP

Name: ARNOLD BADGETT   Veh #: 2089
Hometown: OVERLAND MO
Engine: 355 CHEVY   Body: 68 DRAGSTR
Owner: SAME   Sponsor:

QUALIFYING (ROUNDS):

NO	DIAL-IN	RT	ET	SPEED	DNF	FL	OB	DSQ	BO
1	0.00	0.361	6.348	120.83					

ELIMINATIONS (ROUNDS):

NO	DIAL-IN	RT	ET	SPEED	DNF	FL	OB	DSQ	BO
1	0.00	0.484	8.129	122.92					
2	0.00	1.3127	10.367	67.03					
3	0.00	0.330	6.832	136.03					

DNF=Did Not Finish FL=Foul OB=Out of Bounds DSQ=Disqualified BO=Breakout

DAKOTA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.

FINAL ROUND RESULTS

# CLASS SPEED	DRIVER	HOMETOWN	ENGINE	BODY	DIAL	REACT	ET
SUPER STOCK							
Win.......8050 A/A 110.96	JOEL BROGMAN	MITCHELL SD	427 CHEVY	69 CAMARO	9.80	0.728	9.972
R/U.......8076 A/A 109.96	DAN TRAPP	LUVERNE MN	745 CHEVY	90 RELLS	9.80	0.737	9.977
Semi/F...8011 A/A 122.21	MIKE CARNE	PIPESTONE MN	455 BUICK	72 BUICK	9.80	0.616	10.615
TOP DRAGSTER							
Win.......2089 136.03	ARNOLD BADGETT	OVERLAND MO	355 CHEVY	68 DRAFSTR	--------	0.330	6.832
R/U.......2001 137.10	TOM CALLAHAN	MIDDLETON OH	498 PONTIC	90 SPRITZR	--------	0.333	6.836
Semi/F...2139 65.85	STEVE BAHNEN	WHITE HALL IL	454 CHEVY	90 DRAFSTR	--------	1.344	10.347
Semi/F...2458 134.58	JOE LEACH	HAMILTON OH	585 PONT	91 SPTZR	--------	0.065	6.431
#1 Qual.2089 120.83	ARNOLD BADGETT	OVERLAND MO	355 CHEVY	68 DRAGSTR	--------	0.361	6.348
Low ET.2089 -----	ARNOLD BADGETT	OVERLAND MO	355 CHEVY	68 DRAGSTR	--------	----------	6.348 ----
Top Spd.2016 139.00	STEVE NORBURY	TROY IL	500 CHEVY		--------	----------	-------

DAKOTA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.

TOP DRAGSTER - ALL RESULTS

#	CLASS	QFY	DRIVER	HOMETOWN	ENGINE	BODY	DIAL	REACT	ET	SPEED	DFLQB

----ROUND 1----

#	CLASS	QFY	DRIVER	HOMETOWN	ENGINE	BODY	DIAL	REACT	ET	SPEED	DFLQB
W-2089		1	ARNOLD BADGETT	OVERLAND MO	355 CHEVY	68 DRAGSTR	0.00	0.484	8.129	122.92	
L-2589		8	DOUG HERZOG	ST LOUIS MO	427 CHEVY	86 S & W	0.00	0.488	8.127	123.20	
W-2139		4	STEVE BEHNEN	WHITE HALL IL	454 CHEVY	90 DRAGSTR	0.00	0.746	6.862	109.94	
L-2238		5	BRITT CUMMINGS	HAMMOND LA	35 CHEVY	90 DRAGSTR	0.00	0.746	6.863	114.59	
W-2458		7	JOE LEACH	HAMILTON OH	585 PONT	91 SPTZR	0.00	0.454	7.880	125.95	
L-2134		2	DAVE ELROD	HARROD OH	CHEV	89 SPTZR	0.00	0.430	7.907	121.59	
W-2001		6	TOM CALLAHAN	MIDDLETON OH	498 PONTIC	90 SPRITZR	0.00	0.327	11.934	124.20	
L-2016		3	STEVE NORBURY	TROY IL	500 CHEVY		0.00	-0.189	12.457	122.64	

----ROUND 2----

#	CLASS	QFY	DRIVER	HOMETOWN	ENGINE	BODY	DIAL	REACT	ET	SPEED	DFLQB
W-2089		1	ARNOLD BADGETT	OVERLAND MO	355 CHEVY	68 DRAGSTR	0.00	1.312	10.367	67.03	
L-2139		4	STEVE BEHNEN	WHITE HALL IL	454 CHEVY	90 DRAGSTR	0.00	1.344	10.347	65.85	
W-2001		6	TOM CALLAHAN	MIDDLETON OH	498 PONTIC	90 SPRTIZR	0.00	0.078	6.409	137.18	
L-2458		7	JOE LEACH	HAMILTON OH	585 PONT	91 SPTZR	0.00	0.065	6.431	134.58	

----FINALS----

#	CLASS	QFY	DRIVER	HOMETOWN	ENGINE	BODY	DIAL	REACT	ET	SPEED	DFLQB
W-2089		1	ARNOLD BADGETT	OVERLAND MO	355 CHEVY	68 DRAGSTR	0.00	0.330	6.832	136.03	
L-2001		6	TOM CALLAHAN	MIDDLETON OH	498 PONTIC	90 SPRITZR	0.00	0.333	6.836	137.10	

DAKTOA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.

SUPER STOCK - PRIZE MONEY

NO.	DRIVER	VEHICLE #	CLASS	EVENT	TOTAL
1	JOEL BROGMAN	8050	A/A	200	200
2	DAN TRAPP	8076	A/A	100	100
3	BILL WILLIAMS	8008	A/A	50	50
4	MIKE CARNE	8011	A/A	50	50
5	MATT STICKLER	8005	A/A	25	25
6	TIM MICHAELS	8013	A/A	25	25

DAKOTA FINALS
CHRONDEK TEST TRACK
DAKTRONICS INC.

SUPER STOCK - PRIZE MONEY

VEH#	NAME	SS#	AGE	SEX	OWNER	SPONSOR	CLASS	ENGINE	BODY
2089	ARNOLD BADGETT	438-29-8374	38	M	SAME		355	CHEVY	68 DRAGSTR
	HOME BUILDER	283-928-7483	12 TIMBER LANE		OVERLAND MO 49302				
2238	BRITT CUMMINGS	504-73-8294	32	M	SAME		35	CHEVY	90 DRAGSTR
	MECHANICAL ENG	205-978-6594	903 68TH AVE E		HAMMOND LA 50394				
2134	DAVE ELROD	594-03-9485	32	M	SAME	DAVE'S AUTOMOTIVE		CHEV	89 SPTZR
	SERV STAT OWNER	293-930-4983	849 RUSTON WAY		HARROD OH 93920				
2589	DOUG HERZOG	392-84-9392	35	M	SAME		427	CHEVY	86 S & W
	MECHANIC	493-029-5849	835- 91ST ST SW		ST LOUIS MO 49305				
2458	JOE LEACH	384-72-9387	25	M	SAME		585	PONT	91 SPTZR
	DAIRY FARMER	384-920-9584	342 LAKE WILSON RD		HAMILTON OH 49385				
2362 SPTZR	RON BOYD	394-82-0394	39	M	MIKE BOYD	BOYD'S TRUCKING	500	CHEVY	91
	FARMER	589-403-9489	243 S 56TH AVENUE		HILLSBORO IL 48385				
2303 SPTZR	RON MILLER	201-93-8493	43	M	SAME	SAM'S AUTOMOTIVE		BUICK	91
	MECHANIC	857-463-7473	290 WINDSONG LANE		LEBANON OH 85948				
2139	STEVE BEHNEN	392-08-4939	36	M	WILD WILLY'S		454	CHEVY	90 DRAGSTR
	SUPERVISOR	102-938-1029	102 2ND ST NW		WHITE HALL IL 82635				
2016	STEVE NORBURY	509-48-3959	29	M	SAME	THEILSEN'S ALIGNMENT	500		CHEVY
	TRUCK DRIVER	493-029-3845	901 S 35TH AVE		TROY IL 40392				
2001 SPRITZR	TOM CALLAHAN	102-84-9392	35	M	SAME	BILL'S AUTO	498	PONTIC	90
	MECHANIC	506-495-8395	824 65TH ST NE		MIDDLETON OH 45734				

ARNOLD BADGETT
12 TIMBER LANE
OVERLAND, MO 49302

BRITT CUMMINGS
903 68TH AVE E.
HAMMOND, LA 50394

DAVE ELROD
849 RUSTON WAY
HARROD, OH 93920

DOUG HERZOG
835 91TH ST SW
ST LOUIS, MO 49305

JOE LEACH
342 LAKE WILSON RD
HAMILTON, OH 49385

RON BOYD
243 S 56TH AVE
HILLSBORO, IL 48385

RON MILLER
290 WINDSONG LANE
LEBANON, OH 58948

STEVE BEHNEN
102 2ND ST NW
WHITE HALL, IL 82635

STEVE NORBURY
901 S 35TH AVE
TROY, IL 40392

TOM CALLAHAN
824 65TH ST NE
MIDDLETON, OH 45734

STEVE NORBURY	TOM CALLAHAN	RON BOYD
901 S 35TH AVE	824 65TH ST NE	243 S 56TH AVE
TORY, IL 40392	MIDDLETON, OH 45734	HILLSBORO, IL 48385

ARNOLD BADGETT   DOUG HERZOG   JOE LEACH
12 TIMBER LANE   835 91ST ST SW   342 LAKE WILSON RD
OVERLAND, MO 49302   ST LOUIS, MO 49305   HAMILTON, OH 49385

BRITT CUMMINGS   STEVE BEHNEN   RON MILLER
903 68TH AVE E.   102 2ND ST NW290   WINDSONG LANE
HAMMOND, LA 50394   WHITE HALL, IL 82635 LEBANON, OH 85948

DAVE ELROD   STEVE BEHNEN   RON MILLER
849 RUSTON WAY   102 2ND ST NW   290 WIDSONG LANE
HARROD, OH 93920   WHITE HALL, IL 82635 LEBANON, OH 85948

CHRONDEK TEST TRACK
Time: 22:36:02   Date: 12-04-1997

CATEGORY LIST

Category: SUPER STOCK   Abbrev: SS

Ladder Round: 8   Field Size: 16

CIC Used? N   Perfect Reaction Time: 0.000

Ladder: Sportsman Ladder

Qualifying: Ranked on lowest ET

Eliminations: Win based on handicap, with breakout

Class	Abbr	Index	Nat ET	Nat Speed	Trk ET	Trk Speed
A/A	A/A 9.80	0.000	0.00	9.875	129.54	

Category: TOP DRAGSTER   Abbrev: TD

Ladder Round: 1   Field Size: 8

CIC Used? N   Perfect Reaction Time: 0.000

Ladder: Pro Ladder

Qualifying: Ranked on lowest ET

Eliminations: Win based on ET

VEHICLE	DRIVER	CATEGORY
8005	MATT STICKLER	SUPER STOCK
8008	BILL WILLIAMS	SUPER STOCK
8010	TODD BURNS	SUPER STOCK
8011	MIKE CARNE	SUPER STOCK
8013	TIM MICHAELS	SUPER STOCK
8024	JIM SCHMIDT	SUPER STOCK
8050	JOEL BROGMAN	SUPER STOCK
8075	SAM PARKER	SUPER STOCK
8076	DAN TRAPP	SUPER STOCK
8091	SCOTT SMITH	SUPER STOCK

Appendix B: Exchange/Replacement

Chrondek's unique exchange program was designed with client's needs in mind. This is the quickest and most economical way available for product repair. If a component has failed, Chrondek will send the customer a replacement. The customer, in turn, sends the failed components to Chrondek. This not only save money but also decreases the amount of time that the display is inoperable. In urgent situations, every attempt is made to ship by the fastest transit method available.

1. Packaging for Return: Package and pad the item sell so that it will not be damaged in shipment. Electronic components such as printed circuit boards either should be installed in an enclosure or should be put in an anti-static bag before boxing.

    Please enclose your name and address with all of the symptoms listed as best you can describe them.

2. Where to Send: To return parts for service assistance, contact your local representative or mail to:

    Mail: Chrondek, Customer Service
    PO Box 5128
               331 32nd Avenue
               Brookings, SD 57006

    Phone: Toll Free: 800-843-9879
               or 605-697-4400
               Fax: 605-697-4444
               E-mail helpdesk@daktronics.com

Appendix C: Announcer's Monitor

An optional announcer's monitor is available for use with CARS Version 2.7 or later. If an announcer's monitor is connected to your system, as described on the last two pages of this section, the following screen will be displayed on power-up. Driver information and times will be added as the vehicle numbers and race data are received from the C-33 or C-44 timer as described in the control-view section of this manual.

```
LEFT LANE                              RIGHT LANE
   9007              QUAL: 1              903               QUAL: 3
 *RAY GRICE       7.152/104.64         *J T ALLEN        7.203/102.3
  AIKEN, SC          Age: 32            LONDON, TX           Age:43
  CABINET MAKER                         BODY MAN
  Body:90 FORD    ENGN:302 FORD         Body:81 CHEVY   Engn:267 CHEVY
  Owner: SAME                           Owner:SAME
  SPON:                                 SPON:
  INT1: 1.351       D1:    .00          INT1: 1.426       DI:    .00
  INT2: 3.365       RT:    .183         INT2: 3.204       RT    .142
  INT3: 6.728       ET:   9.430         INT3: 6.784       ET:  9.472
  SPD1: 89.46       SP:  96.84          SPD1: 81.77       SP   89.69
  INT4:  8.142     +-DI:  9.430         INT4:  8.536     +-DI:  9.472
                   1ST:     *WIN*
LAST RACE RESULTS                      LAST RACE RESULTS
  2016              DI:    .00           2139              DI:    .00
  STEVE NORBURY     RT:    .328          STEVE BEHNEN      RT:    .152
  QUAL: 1           ET: 10.965           QUAL: 6           ET: 11.146
  10.965/114.24     SP:114.24            9.847/118.54      SP:113.97
  INT1: 2.013      +-DI: 10.965          INT1: 2.263      +-DI: 11.146
                   1ST:     *WIN*
F1-Restore    F2-Fuel Order    F.-Lt Info    F4-Rt Info    UP-Pg Up    DOWN-Pg Down
```

Before the race, CARS receives the two vehicle numbers from the timer and displays the corresponding driver registration information in the top two boxes of the announcer's monitor.

The times are displayed as they occur on the track for the vehicles that are racing. During elimination rounds and after the first qualifying round is completed, the announcer can determine the qualifying position of the vehicles racing from the QUAL field. The qualifying ET/SPEED for the qualifying position is displayed directly under it.

When the vehicle numbers of the next racers are sent by the C33 or C44 timer, CARS will transfer the current race information from the top sections of the view screen to the sections labeled "Last Race Results." Then CARS will display the new vehicle numbers and corresponding driver registration information in the top section of the view screen. The new qualifying positions of the previous vehicles will be displayed in the QUAL fields at the bottom of the screen. The qualifying ET/SPEED for this position is displayed directly under it.

If the racer breaks the National or Track ET record in their class, an "N" and/or "T" respectively will be displayed next to the ET in the last race section of the view screen. Similarly, if a speed record is broken, an "N" and/or "T" will be placed next to the speed in the last race section of the view screen. These records are configured in the class menu by the user. The records are not updated automatically, but must be changed by the operator.
Please note that the CARS system uses dial-ins sent from the C33 or C44 for calculating results and not the class index entered in the class menu.

ANNOUNCER'S MONITOR FUNCTION KEYS

F1

Press the **<F1>** key on your announcer's monitor keyboard to re-draw the driver time/data display on the monitor. This key is used to redisplay the driver times/data after the keys described below have been used to display the qualifying order or driver memos.

F2

Press the **<F2>** key on your announcer's monitor keyboard to display the current qualifying order for the active category. When this key is pressed, the message "Building Qualifying Order" will be displayed in the center of the announcer's monitor screen. When the qualifying order has been built, it will be displayed on the screen. Use the cursor keys to page up and down through the qualifying order if several pages are available. The down arrow will page down and up arrow will page up. Press **<F1>** at any time to return to the driver times/data screen.

F3

Press **<F3>** to display free format information about the competitor in the left lane. The information displayed is the memo field from the driver registration menu. It is entered in the Edit-Registration menu. Press **<F1>** at any time to return to the driver times/data screen.

F4

Press **<F4>** to display free format information about the competitor in the right lane. The information displayed is the memo field from the driver registration menu. It is entered in the Edit-Registration menu. Press **<F1>** at any time to return to the driver times/data screen.

Hardware for CARS Announcers Monitor

The CARS software will work without an announcer's monitor. The following equipment is only required if you want an announcer's monitor on your system.

You need to purchase the following hardware to use the announcer's monitor with CARS Version 2.7 or later.

1. A Wyse-30 or Wyse-30+ terminal. These monitors can be purchased from Chrondek, or from a private vendor. Older models may work but have not been tested. We recommend using a 30 or 30+ model.

2. A "Null Modem" RS 232 cable. This cable must connect the "COM 2" port on your computer with the "modem" connector on the Wyse terminal. Check the connector on your "COM 2" port to see which connector you will need for your particular computer. The Wyse terminal requires a male 25-pin connector. These cables can be purchased from Chrondek, or most commercial computer supply companies. A cable can also be made using the pin connections described below.

CARS – Announcer's Monitor Cabling Chart

9 PIN TO 25 PIN			
CARS - COM 2		MONITOR	
	DB 9	DB 25	
Rx	Pin 2	Pin 2	Tx
Tx	Pin 3	Pin 3	Rx
Gnd	Pin 5	Pin 7	Gnd

25PIN TO 25 PIN			
CARS - COM 2		MONITOR	
	DB 25	DB 25	
Rx	Pin 3	Pin 2	Tx
Tx	Pin 2	Pin 3	Rx
Gnd	Pin 7	Pin 7	Gnd

3. You also need to make sure that your computer has a "COM 2" port. If it doesn't, a personal computer supplier can usually install one for you.

An IBM PC or compatible computer running a terminal emulation program such as "Procomm" (Version 2.1) can also be used as an announcer's monitor. To use this option, an IBM PC or compatible computer with at least one comm port may be used. Older PC models will usually fill this requirement. A terminal emulation program such as "Procomm" (Version 2.1) must also be purchased and installed on the computer. This program must have a Wyse emulation mode.

If "Procomm" is used, set it for "Wyse 50" emulation mode and configure the communications options to match the Wyse terminal setup on the following page. Set Procomm to use com1 or com2 and connect the "null modem" cable to the appropriate port. CARS will access the PC in the same way as a Wyse terminal, as described at the start of this Appendix.

WY30 Terminal Setup

Use the following Wyse 30 setup when using the Wyse terminal as an announcer's monitor with CARS.

To enter the setup mode on the WYSE30 terminal, plug in a WYSE keyboard and while holding down the **<SHIFT>** key, type **<SETUP>**. A line of boxes should appear on the top and bottom of the screen. The setup information is located in the bottom row of boxes. To move around in the setup levels, use the cursor keys. To switch choices for a particular item, use the space bar. When completed, type **<SHIFT><SETUP>** one more time.

A) First Setup Level:	HANDSHAKE	= DTR
	SCREEN	= DARK
	CURSOR	= BLOCK
	BLINK	= ON
	MODE	= FDX
B) Second Setup Level:	DATA BITS	= 8
	STOP BITS	= 1
	PARITY	= NONE
C) Third Setup Level:	BAUD RATE	= 9600
	KEYS	= US
D) Fourth Setup Level:	BLK END	= US/CR
	AUTO NL	= OFF
	CR	= CR
	AUTOSCRL	= OFF
	LOCK	= CAPS
	REPEAT	= ON
E) Fifth Setup Level:	CRT SAVER	= OFF
	PROTECT	= DIM
	ATTRIBUTE	= PAGE
F) Sixth Level Setup	COMPATIBLE MODE	= WY30
	ENHANCE	= OFF
	KEYPAD	= NUMERIC
	FREYS	= REMOTE
	TEST	= OFF

Appendix D: Sample Setup Files

The following are examples of an autoexec.bat file and a config.sys file.

Autoexec.bat

```
@ECHO OFF
PROMPT $p$g

PATH=C:\DOS
SET TEMP=C:\DOS
SET DIRCMD=/O:GED

CD\CARS
```

Config.sys

```
FILES=30
BUFFERS=30

rem --- Setup DOS to use upper memory
DEVICE=C:\DOS\HIMEM.SYS
DOS=HIGH,UMB
DEVICE=C:\DOS\EMM386.EXE 2048

DEVICEHIGH=C:\DOS\SMARTDRV.EXE 512
```

Appendix E: Revision History

VERSION 3.1

 Bug Fixes
- Final Results Printout: Fixed bug that occurred when using an Epson w/o graphics printer where the header line "CLASS DRIVER HOMETOWN..." at the top wrapped around the end of the line.
- Check memo field for garbage data.
- Fixed bug with printing the qualifying order and viewing it at the same time.
- If a vehicle breaks after winning an elimination round in bracket racing, give the vehicle the next round loser points.
- Fixed bug so CARS truncates 1/1000 of a second when using CIC.
- Foxed bug on Category List printout that switched "Win based on handicap, with breakout" and "Win based on handicap, without breakout."

Enhancements
- Send class name with driver name to timer for display on log printout.
- Allow backing up and restoring the CARS data files to/from diskette as well as the hard drive.
- Added a utility to clear times for a vehicle/category for a single round or all rounds.
- Added the ability to do team points. Enter teams into the system and simply, enter team designation (alphanumeric character) for drivers in registration record. The team points are configured in the category configuration screen.
- Validate vehicle numbers coming from the C33 timer. Vehicle numbers must be either 0-9, A-Z, or a space.
- Added the ability to pull up a list of who got closest to their dial-in to keep track of BYES for eliminations.
- Allow configuring whether automatic entry of vehicles should be done by the comm_task().
- When bumping a vehicle, ask for who should replace the bumped vehicle.
- Added the ability to use a Wyse 35/35+ as announcer monitor.
- Added the ability to keep current category information in memory.
- In bracket racing(ladder round = 8), CARS will now check to make sure a vehicle number requested by the C33/C44 has lost in a previous round and is trying to slip back into the event. If the vehicle has lost, CARS will beep three times and send the message "*LOST PREVIOUSLY*" for the driver name to the timer. Thus, the timer operator can be alerted that the vehicle entered should not be allowed to race.

VERSION 5.0
Manual Changes
- Add a system diagram to the CARS manual for connections. Make sure the announcer's monitor is in diagram.
- Add information that warns operators that SHARE.EXE must not be installed on the CARS computer. This will cause file opening and closing problems in the CARS software. SHARE.EXE is commonly installed on computers running Window.
- Suggest using disk cache software such as SMARTDRV.EXE to increase software performance.
- Note in manual that for team points, cannot use "DA" and "D" as abbreviations.
Printout Changes
- Added ability to print 32 car ladder on one page.
- Added ability to print 64 car ladder on one page.

- Added ability to enter sponsor information and have sponsor information show up on the header of all printouts.
- Added ability to print mailing labels either one or three labels across paper. Also added the ability to sort a category by zip code as well as by driver name.
- Removed the status fields from the qualifying printout.
- Added ability to print elimination round losers for payouts.
- Do not print vehicle on points printout if total points are zero.
- Made headers consistent on all printouts and added a footer to all the printouts.

Announcer Monitor Changes
- Made viewing the qualifying order faster, also use SMARTDRV.EXE on CARS computer.
- Made 16 cars fit on the F2 screen instead of 14 cars.

Compiling and Library Changes
- Update the GreenLeaf Data Windows 3.0 menu system.
- Update to the MicroSoft c 7.0 compiler.

VERSION 5.01
- Added the vehicle owner's name to the round losers printout since it was suggested that at some tracks the owner signs for the payout, not the driver. Both names will appear on the printout so that either one can sign for the payout.
- Removed the words "EVENT SPONSORS:" from the print headers so that if no sponsors were being used, there would only be an empty line on the header.
- CARS will now check if a vehicle has lost in a previous round when running bracket racing(ladder round = 8). If the vehicle lost and is trying to race again, CARS will send the message "* LOST PREVIOUSLY *" to the timer in place of the driver name so the timer operator can be alerted of the situation.

VERSION 5.02
- Bug Fix on C33 or C44 communication with CARS: Related to the "Lost Previously" enhancement that was added in version 5.03.

VERSION 5.03
- Bug Fix on category printout. Increased the size of pbuf to avoid buffer overruns.

VERSION 5.04

- Bug Fix on vehicle list printout concerning vehicle numbers starting in zeros or letters.
- Bug Fix in "Closest to Dial-In" list that allows other tasks to operate while operator is viewing the list.

VERSION 5.1
Enhancements
- CARS will now print a 128-car ladder. The ladder is printed on two consecutive pages, which can be taped together for display.
- The utilities menu option "Closest to Dial-In" now shows the run number as well as ET and Dial-In information. In addition, an asterisk"*" is displayed next to the number of vehicles that have already received a "BYE".

- The utilities menu now contains an option "By Reaction Time" that lists the round winners by reaction time. This list can be used to award byes.
- The utilities menu now contains an option "Copy Vehicle Times" that will copy qualifying or eliminations times for all rounds or a specific round from one vehicle number to another, in the same category.
- The utilities menu now contains an option "Increment Driver's Age" that will add 1 to the age of each driver that is registered. This can be used to speed up the registration process at the start of a new season for drivers that participated the previous year.
- The category menu in CARS now contains an option "Perfect Reaction Time." This option allows you to enter the value that CARS will consider a perfect reaction time. Use this option when the C44 is configured for tree-based Reaction Times.
- The wording of the "Ladder" option in the category menu of CARS has been revised. Pick "Sportsman Ladder" if you want CARS to pair the top half of the field with the bottom half. Ex. 1-9, 2-10, etc. in a 16 car field. Pick "Pro Ladder" if you want CARS to use the professional pairings. Ex. 1-16, 2-15, etc. in a 16 car field. The "Pro Ladder" setting is only valid for 1-16 car ladders.
- Don't automatically display "EVENT SPONSOR" on the third line of the header for printouts. This line can be used for the event sponsor or for other text.
- The Configure/System menu now contains an option titled "Track Points Default," that will change the default value for the track points field of the registration record. Choose "Enter New Racers" to use a default value of zero for new drivers. Choose "Do Not Enter New Racers" to use a default value of -1 for new drivers. When this field is -1, the driver is not in the track points program.
- Also, when the points are cleared, only clear the track points if the driver was in the points program (the track points value was not -1). This should reduce the number of registration records that need to be edited for the purpose of adding or removing the driver from the track points program.

Bug Fixes
- The address line on the View Screen and Announcer's Monitor still contained a comma when cleared.
- A database error occurred while editing elimination data.
- Closest to Dial-In: CARS only displayed winners who were over their Dial-Ins.
- Qualifying by Reaction Time: Cars who do not finish should still qualify by Reaction Time.
- Team Points: The team points would not print.
- The last line on ladder printouts contained a dummy field.
- When the ladder round is set to 3, set the qualifying order based on round 2 data only and print the ladders correctly.
- Final results would not print with only two entries in a category.

VERSION 5.11
Enhancements:

- Cars will now print a 128-car ladder. The ladder is printed on two consecutive pages, which can be taped together for display.

- The utilities menu option "Closest to Dial-In" now shows the run number as well as ET and Dial-In information. In addition, an asterisk "*" is displayed next to the number of vehicles that have already received a 'BYE'.

- The utilities menu now contains an option "By Reaction Time" that lists the round winners by reaction time. This list can be used to award byes.

- The utilities menu now contains an option "Copy Vehicle Times" that will copy qualifying or eliminations times for all rounds or a specific round from one vehicle number to another, in the same category.

- The utilities menu now contains an option "Increment Driver's Age" that will add 1 to the age of each driver that is registered. Use this to speed up the registration process at the start of a new season for drivers that participated the previous year.

- The category menu in CARS now contains an option "Perfect Reaction Time." This option allows you to enter the value that CARS will consider a perfect reaction time. Use this option when the C44 is configured for tree-based Reaction Times.

- The wording of the "Ladder" option in the category menu of CARS has been revised. Pick "Sportsman Ladder" if you want CARS to pair the top half of the field with the bottom half. Ex. 1-9, 2-10, etc. in a 16 car field. Pick "Pro Ladder" if you want CARS to use the professional pairings. Ex. 1-16, 2-15, etc. in a 16-car field. The "Pro Ladder" setting is only valid for 1-16 car ladders.

- Don't automatically display "EVENT SPONSOR" on the third line of the header for printouts. Use this line for the event sponsor or for other text.

- The Configure / System menu now contains an option titled "Track Points Default", that will change the default value for the track points field of the registration record. Choose "Enter New Racers" to use a default value of zero for new drivers. Choose "Do Not Enter New Racers" to use a default value of -1 for new drivers. When this field is -1, the driver is not in the track points program.

- Also, when the points are cleared, only clear the track points if the driver was in the points program (the track points value was not -1). This should reduce the number of registration records that must be edited for the purpose of adding or removing the driver from the track points program.

- Add Semi-Finalists to the Final Results printout.

VERSION 5.14

Enhancements:

- Cars will now print a 128-car ladder. The ladder is printed on two consecutive pages, which can be taped together for display.

- The utilities menu option "Closest to Dial-In" now shows the run number as well as ET and Dial-In information. In addition, an asterisk "*" is displayed next to the number of vehicles that have already received a "BYE."

- The utilities menu now contains an option "By Reaction Time" that lists the round winners by reaction time. This list can be used to award byes.

- The utilities menu now contains an option "Copy Vehicle Times" that will copy qualifying or eliminations times for all rounds or a specific round from one vehicle number to another, in the same category.

- The utilities menu now contains an option "Increment Driver's Age" that will add one to the age of each driver that is registered. Use this to speed up the registration process at the start of a new season for drivers that participated the previous year.

- The category menu in CARS now contains an option "Perfect Reaction Time." This option allows you to enter the value that CARS will consider a perfect reaction time. Use this option when the C44 is configured for tree-based Reaction Times.

- The wording of the "Ladder" option in the category menu of CARS has been revised. Pick "Sportsman Ladder" if you want CARS to pair the top half of the field with the bottom half. Ex. 1-9, 2-10, etc. in a 16 car field. Pick "Pro Ladder" if you want CARS to use the professional pairings. Ex. 1-16, 2-15, etc. in a 16-car field. The "Pro Ladder" setting is only valid for 1-16 car ladders.

- Don't automatically display "EVENT SPONSOR" on the third line of the header for printouts. Use this line for the event sponsor or for other text.

- The Configure/System menu now contains an option titled "Track Points Default," that will change the default value for the track points field of the registration record. Choose "Enter New Racers' to use a default value of zero for new drivers. Choose "Do Not Enter New Racers" to use a default value of -1 for new drivers. When this field is -1, the driver is not in the track points program.

- Also, when the points are cleared, only clear the track points if the driver was in the points program (the track points value was not -1). This should reduce the number of registration records that need to be edited for the purpose of adding or removing the driver from the track points program.

- Add Semi-Finalists to the Final Results printout.

Bug Fixes:

- Bug Fixed: The address line on the view screen and announcer's monitor still contained a comma when cleared.
- Bug Fixed: A database error occurred while editing elimination data.
- Bug Fixed: Closest to Dial-in - CARS only displayed winners who were over their dial-in's.
- Bug Fixed: Qualifying by Reaction Time – Cars who do not finish should still qualify by reaction time.
- Bug Fixed: The team points would not print.

VERSION 5.15
Bug Fixes:

- Bug fix for final results printout when there were only two competitors.

VERSION 5.16
Enhancements:

- Cleaned up memo window on announcers monitor.

Bug Fixes:

- Bug fix for category list printout.

VERSION 5.17
Enhancements:

- Added ability to do 128 pro ladders.

VERSION 6.0
Enhancements:

- Added ability to print a CARSIHRA.TXT file. File contains comma-separated data for each eliminations run in an event.

Bug Fixes:

- Bug fix for Category Configuration. Only allow Pro-Ladders up to size 128.
- Bug fix for 52-car ladder. Had two slots for #23. Change right-hand #23 to #32.