

Trade Data ManagerTM
User Manual
Version 1.5

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What is Trade Data Manager™?



Trade Data Manager™ is a complete trading database management system, developed exclusively for the Macintosh® family of personal computers. It features complete charting and data management facilities, plus the ability to automatically update the trading database every day from Commodity Systems Incorporated (“CSI”) through a standard modem.

Trade Data Manager is a Commodity Systems Incorporated product, licensed from the developer of the program, James McClure; a recognized expert in trading system design, computer systems development, and Macintosh programming.

Charting facilities include the ability to view one or more commodity or stock bar charts simultaneously, with or without volume and open interest information, and the ability to rapidly scroll through the chart using standard Macintosh user interface controls. Scaling of price, volume, and open interest data within the chart window can be automatic or manually set. Data for any given day for each commodity or stock can be edited *in-place* by simply pointing to the price bar or volume bar of interest and clicking the mouse. You can even display your current open positions and open orders graphically on each chart.

Daily updating of your database can be accomplished through an automatic modem update from your account on the host computer at Commodity Systems Incorporated. In addition to updating all of your commodity or stock data files, a complete printed report is generated summarizing the day’s open, high, low, and closing prices, estimated volume, total volume, and total open interest, along with the net change in price from the previous day’s closing price. Access to CSI’s host is provided through either long distance direct dialing, or through standard computer networks such as Telenet® (now called SprintNetsm) or Tymnet®. Daily updates are always checked for accuracy, including full check-sum control on each record of data transmitted from CSI to your database, and each daily update is checked to insure that your database has no missing days of data, or any duplicated entries. Historical information can also be ordered and collected from CSI during a daily update modem session or in a separate session, and posted to files that you specify.

Trade Data Manager can run in the background while performing daily update or historical data collection functions, allowing you to use your Macintosh to perform other tasks during these sessions. Unlike other applications, Trade Data Manager provides a very responsive user interface to the foreground application while Trade Data Manager is running in the background.

For users who have automated trading systems, Trade Data Manager includes the ability to read or write simple ASCII text file format for each data file, which supports the interface required in most computerized trading systems. Several different ASCII text file formats are supported. In addition, stock and commodity data can be optionally maintained in a continuous contract format, providing ease of use in contract roll-over management and simplicity in testing trading systems over multiple years of data.

CompuTrac/M™ users can use Trade Data Manager to create, read, or write CompuTrac/M format data file directly. Trade Data Manager 1.5 is a fully functional “*Data Retrieval Application*” (“DRA”), as defined by CompuTrac/M. This means that Trade Data Manager can be selected as the data service application from within CompuTrac/M’s portfolio tool subsystem, using the *Set Service* button within the portfolio *Get Info* dialog. This facility provides completely automatic, unattended data collection and updating of the CompuTrac/M portfolio. Users can also schedule data collection and portfolio updating to occur at specific times of the day and/or week through the use of the optional *CT Timer* application.

All of the functions in Trade Data Manager are linked through a set of support files, known as the *Roster*, *Commodity Fact*, *Account Status*, and *Account History* files. The Roster file maintains the list of current commodity contract symbols, delivery months, and delivery years for each contract that you are maintaining in your database as your collection portfolio. The Roster also maintains the correspondence between each commodity or stock symbol, delivery month, and delivery year and the data file that contains the actual data for that commodity or stock. The Commodity Fact file contains all of the commodity-specific quote format information for all of the most active commodities. It also includes information on the commodity name, exchange, tick size, point value, day and overnight commission rates, and other useful data. The Account Status file maintains all of your open and day-orders, positions, and account equity information. The Account History file maintains an audit trail of each day's trading activity, including a record of each position opened, each closed trade, and changes to account equity.

Trade Data Manager is your automated trade timing system's companion; Trade Data Manager is *NOT* an automated *trading system*. Trade Data Manager is designed to work with or alongside an automated system that you have either purchased separately or developed yourself, or it can be used simply as a charting and database management system for those users who trade by the charts, or for those who just want to see their charts and keep them up to date.

What you need

Trade Data Manager requires at least 512 KB (kilobytes) of main memory (RAM) for itself. When configured to the minimum size, Trade Data Manager can open and display charts for about 32 contracts, each containing 6 months of data, simultaneously on the screen. If you have much more memory than this available for your applications, you can take advantage of the additional memory by re-sizing Trade Data Manager to be a larger size when it is first started-up from the *Finder*. The size of the main memory partition that Trade Data Manager occupies affects the number of simultaneously open chart windows that you can have on the screen, as well as the maximum size of a commodity or stock data file. See the Reference section in section 15 for details on this subject and for information on the procedure to resize the program.

You can run Trade Data Manager on almost any Macintosh computer model, including very old models such as the Mac Plus, and newer models such as the Mac Classic, Classic II, Mac SE, Mac SE/30, Mac LC, LC II, or any of the Macintosh II, Centris, PowerBook, DuoDock, or Quadra series models. If you are fortunate enough to have a Macintosh equipped with the 68020, 68030, or 68040 processor and a floating-point co-processor, you can install a faster version of Trade Data Manager that can be obtained from CSI Customer Service, which takes advantage of the hardware floating-point co-processor for additional responsiveness. If you have a PowerMac, Trade Data Manager can be run on the emulator, using the 68000 (non-FPU) version of the program. Consult your Macintosh system documentation if you are unsure of which processor and floating point facilities your Macintosh is equipped with. If you have a Macintosh equipped with a color or gray scale display, many of the dialogs and other user interface features will appear in color or gray scale. Your Macintosh will require Apple *System* version 4.1 or later. Trade Data Manager is compatible with Apple *System* version 4.1 through 7.1, and is "32-bit clean". If you have upgraded to *System 7*, you can take advantage of *balloon help* to learn how to use Trade Data Manager. Trade Data Manager is *System 7 savvy*, which means that it can take advantage of *System 7* features such as: *drag and drop* of files onto the Trade Data Manager application icon, *Apple Events*, *Backgrounding*, and *Balloon Help*.

Trade Data Manager requires very little disk space, and can be run on a floppy-drive based system. The program and its supporting files will occupy about 700 KB of disk space after installation, so you will be able to put several commodity or stock data files on the same high-density floppy diskette as the program. A hard disk drive is recommended for better performance, of course.

If you plan to take advantage of the daily data or history collection features, you will of course need a Hayes® compatible modem. Many internal modems, and nearly all external modems, can be driven by the built-in serial port driver within Trade Data Manager. The modem does not have to be very strict about Hayes modem protocol compatibility. The documentation that came with your modem will very prominently say it is Hayes compatible if this is the case. International users will require CCITT compatible modems. Consult the documentation for your modem to determine if it is CCITT compatible.

PowerBook or DuoDock users will generally use an internal modem to access CSI. Many internal modems require use of Apple's *Communications ToolBox* and its associated *Connection Tools*. A copy of the *Communications ToolBox* Installer and the *Connection Tools* is included with your distribution diskettes. The *Communication Tools* must be installed in your *System* folder, if you are using *System 6*, or in the *Extensions* folder, if you are using *System 7*. If you are running *System 6*, you must also run the *Installer* to install the *Communications ToolBox* itself. The *Communications ToolBox* is built-in to *System 7*, and you should therefore **not** run the *Installer* if you are running *System 7*.

If you are using the database maintained by Trade Data Manager for actual trading, with real money at stake, it is highly recommended that you back up your database every day onto floppy diskettes, or with a tape drive. The cost of a single hard disk failure, although more rare in the last few years than in the past, will probably exceed the cost of a high quality tape drive system by a very large factor if the resulting loss of data causes you to incur a trading error. There is an old saying in the computer industry that there are two types of users; 1) those who have experienced a disk drive crash and, 2) those who are about to!

What is in the package

Your Trade Data Manager package contains three double-sided floppies (780 KB size), and an on-line copy of this manual. The **Program** floppy diskette contains a copy of the Trade Data Manager program that runs on any Macintosh. (If you have a more advanced Macintosh with either a 68020, 68030, or 68040 processor and a hardware floating point unit, you should contact CSI Customer Service to obtain the *fast* version of Trade Data Manager, which takes full advantage of these platforms. You will need to provide your CSI-assigned user number, then Customer Service will personalize a copy of the program for you with this information.) In addition the **Program** floppy diskette contains supporting files, including the *Roster*, *Commodity Fact*, *Account Status*, and *Account History* files. The **Data** floppy diskette contains a small sample set of contract data files as well as a complete copy of this User Manual, stored in a compressed format. The **Communications ToolBox** diskette contains the *Communications ToolBox* installer script and the Apple *Installer* program, as well as a set of *Connection Tools*.

What you should already know

This manual assumes that you know the basic terminology and concepts of trading, including the concept of a price bar chart, the meaning of open, high, low, and closing prices, and the concept of delivery months in commodity contracts. If you are new to trading altogether, a good introductory book on technical or fundamental analysis is in order. In any case, the Trade Data Manager program is ideal for either the entry-level user, or the most experienced trader. A consistent, easy to use interface, coupled with powerful data management tools, facilitates nearly any trader's requirements.

You should also be familiar with the Macintosh user interface, including item selection techniques, clicking the mouse, double-clicking, scrolling windows, pull-down menus, the use of dialog boxes, and using the Macintosh *Finder*. You should also be familiar with equipment attached to your Macintosh, including the selection and operation of your printer and the operation of your modem. If you are not comfortable with your knowledge of your Macintosh, consult the Macintosh User Manual that came with your system, and practice the basic exercises included in the Macintosh User Manual that cover the use of the *Finder*, the *Chooser*, and printing.

Installation

Installation of Trade Data Manager is fairly straightforward. You will find installation is a bit more involved than installation of other Macintosh software. This is due to some safety interlocks built into the program that attempt to make sure that all of the supporting files (the *Roster* and *Commodity Fact* files in particular) are the right files and the right version, in case you have multiple support files lying around in various places on your disk. Before actually starting the installation, the following overview of the various support files is helpful:

Support file overview

The *Roster* file is a special support file that maintains the current list of commodity or stock contract data files whose locations in your disk folder hierarchy are known to the program, and their associated delivery month, delivery year, and commodity or stock symbol. The Roster file is used in many places in the program for contract file selection, daily updating, and other uses. In essence, the Roster file defines the “working set” or *portfolio* of contract data files that you will be updating each day during the daily update process, when you collect data by modem from CSI’s computer. You will be updating this file during the installation process. CSI maintains an equivalent *portfolio* file on its host computer, containing a list of each of the commodities and stocks for which you wish to receive daily data. One of the first concepts that you must become familiar with is the difference between your local *Roster* file and the CSI-host based *portfolio* file. The *portfolio* file on CSI’s computer is used during the daily data collection process to tell CSI’s computer which stock and commodity data items to transmit to your modem. This approach avoids having to transmit individual orders from your computer to CSI’s computer for each item that you wish to receive data for, minimizing the total connect time and your associated telephone costs. You must be very careful to maintain your local *Roster* file so that it accurately reflects what is contained in CSI’s *portfolio* file for your account.

The *Commodity Fact* file is another special support file that contains factual data about each commodity or stock symbol known to the program. This data includes information about the full contract name, the minimum tick size, point value in dollars, quotation format, margin required, commission rates, and other useful information. The Commodity Fact file that is shipped on the *Program* diskette is pre-configured with data for all of the more popular commodities on major exchanges. If you wish to receive a special Commodity Fact file with data for every stock in CSI’s database, contact CSI Customer Service. You won’t need to update the Commodity Fact file during installation, but you will need to occasionally edit the file anytime you add new commodity symbols to the database that aren’t already in the pre-configured file, or when you want to update margin or commission cost information.

The *Account Status* file is used to store your current open and day-orders that you have placed with your broker, and to store a record of the current open positions you have in each commodity or stock. Trade Data Manager uses this file to perform accounting during the daily data collection and database posting session, giving you an instant update of your current positions, open trade equity, closed trade gains and losses, and your overall account balance. You can also display your current open positions and orders on the associated chart window. Please take the time necessary to learn to use the accounting system in Trade Data Manager – it is perhaps the most useful feature of the program, according to experienced users! The *Account Status* file located on the *Program* diskette is initially empty.

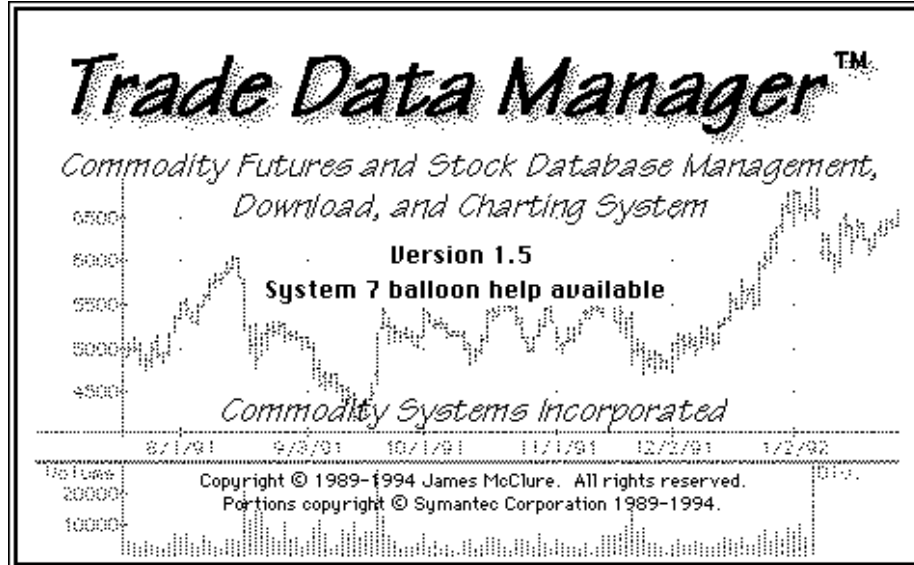
The *Account History* file is an “audit trail” of all stock or commodity orders that are filled, and the resulting trade gains and losses and changes to the total account balance. This file is a simple tab-delimited ASCII file that can be directly read by the *Microsoft Excel*[®] spreadsheet program (any version). This file cannot be edited or read by Trade Data Manager (the *Account History* file is write-only to Trade Data Manager), but you can edit this file using *Excel* if desired. If you wish to use this file to perform trading system performance analysis, tax accounting, or other post processing of your account (which is why it exists), consult the section titled: “Trading System Interface”.

Step by step installation procedure

If you wish to operate exclusively on floppy diskettes, make a copy of each floppy diskette for backup purposes, then make another copy as your working copy. Name each floppy diskette with exactly the same name as the original floppy.

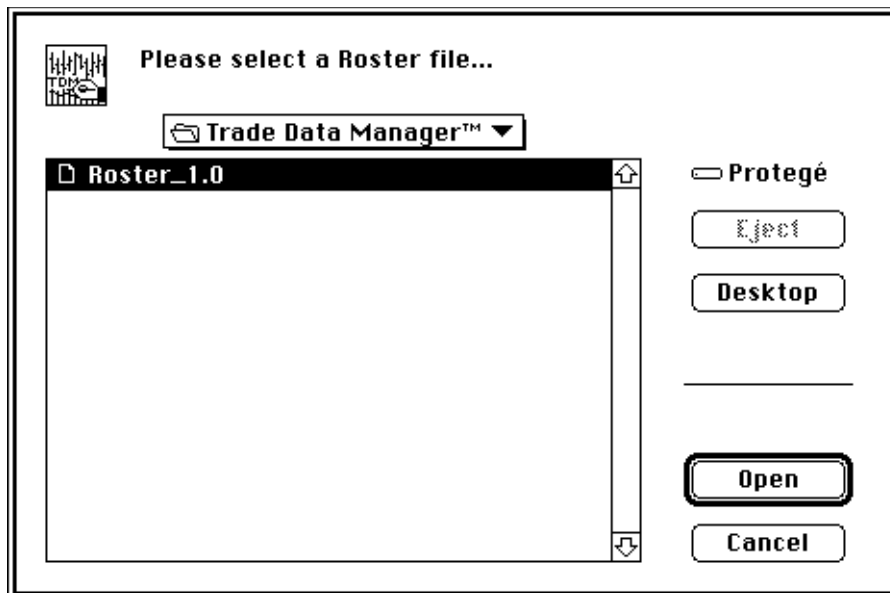
- 1) If you have a hard disk, it is suggested that you create two new, empty folders *anywhere you like* in your disk’s folder hierarchy (you may put everything into one folder if you like, however the remainder of these instructions will assume two folders). Name the first folder “Trade Data ManagerTM” and name the second folder “TDM Files” (or whatever names you prefer). (Create a new folder by selecting the “New Folder” command in the Macintosh *Finder*’s “File” menu. With the folder still highlighted, type the name “Trade Data ManagerTM”, using the keystroke combination of the *option* key and the number 2 to produce the “TM” symbol, then repeat this process for the second folder)
- 2) Insert the *Program* floppy diskette into your floppy disk drive. If you are a **new** user of Trade Data Manager, select **all** of the files on the *Program* floppy diskette and drag them to the “Trade Data ManagerTM” folder that you just created. If you are a **current user** of Trade Data Manager, and you are upgrading from a previous version of Trade Data Manager, select **only** the “Trade Data ManagerTM 1.5” file from the *Program* diskette and drag it to the “Trade Data ManagerTM” folder that you just created – your existing *Roster*, *Commodity Fact*, *Account Status*, and *Account History* files will be used, and are completely compatible with this version of the program. Wait while the copying process is executed.
- 3) Insert the *Data* floppy diskette into your floppy disk drive. Select all of the files on the *Data* floppy diskette and drag them to the “TDM Files” folder that you just created. If you are a current user of Trade Data Manager and you already have an established database, you can copy just the compressed user manual. Wait again for the copying process to complete.
- 4) You should now have all the contract data files and the compressed user manual in the “TDM Files” folder, and the Trade Data Manager program itself, along with all of the supporting files, in the folder named “Trade Data ManagerTM”.
- 5) Eject the *Data* floppy diskette from the floppy drive now. Eject the floppy diskette from the floppy drive by dragging the floppy diskette icon to the *Trash*.

- 6) Double-click the *Trade Data Manager 1.5* icon to start the program. As Trade Data Manager starts-up and initializes, you will see the following “splash screen” dialog for about 1.5 seconds, then the splash screen dialog will be removed. You will only see the “System 7 balloon help available” message displayed inside the splash screen dialog if you are running *System 7*:



Splash Screen Introductory Dialog

- 7) After displaying the introductory “splash screen” dialog, you should immediately get a standard Macintosh “File Selection” dialog asking you to select the *Roster* file, as shown below (the exact name of the Roster file may be different than this example):

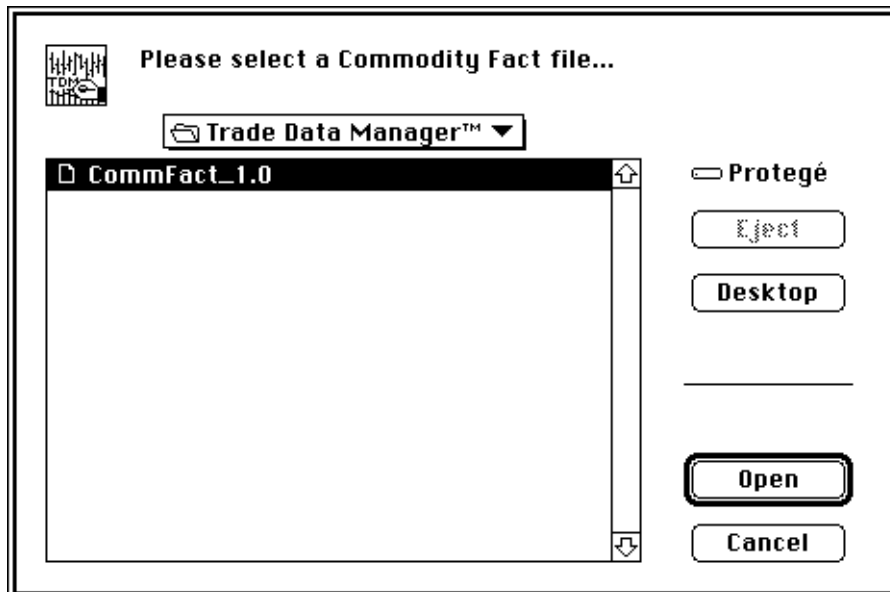


File Selection Dialog – Roster File Selection

This dialog is telling you that Trade Data Manager could not start-up because the Roster file, which is required, had been defined previously to be located on a different disk drive, and that disk cannot be found.

Trade Data Manager stores the disk drive name and directory information for each of the support files within the program itself internally. Since you have just moved the location of the Trade Data Manager program to a new disk drive (your hard drive), it cannot find the previously selected Roster file when it attempted to begin executing. Trade Data Manager is asking you to browse through your folder hierarchy and select a Roster file. By default, Trade Data Manager will display all candidate files (files whose Macintosh file type matches the required file type for a Roster file) in the folder where the program is located in the File Selection dialog's scrolling list, along with any folders that are located inside this folder. Select the Roster file in this folder by clicking on it, if it is not already selected, then click on the *Open* button, or type the *Return* or *Enter* key on the keyboard. Alternatively, you can double-click the Roster file entry to select the file. If you wish to have the Roster file or any of the other required support files for Trade Data Manager located in a different folder or disk drive than the folder containing the Trade Data Manager program itself, this is OK. Simply navigate through your disk and folder hierarchy in the usual way until the desired folder's files are displayed in the scrolling file list, then select the desired Roster file. (Consult your Macintosh system documentation if you are unfamiliar with File Selection dialogs).

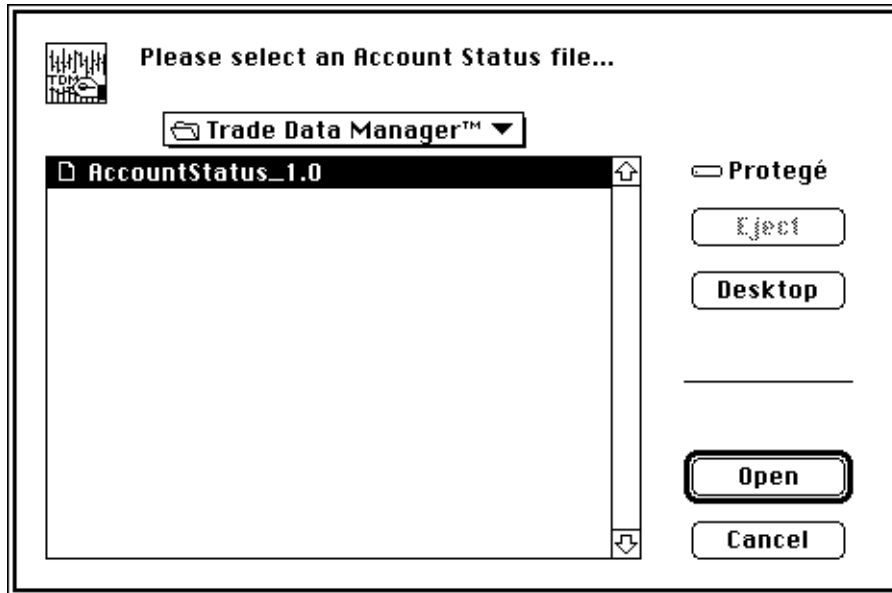
- 8) You should immediately get another "File Selection" dialog asking you to select the *Commodity Fact* file, as shown below (the exact name of the Commodity Fact file may be different than this example):



File Selection Dialog – Commodity Fact File Selection

This dialog is telling you that Trade Data Manager still could not start-up because the Commodity Fact file, which is also required, had been defined previously to be located on another drive, and that drive cannot be found. Select the Commodity Fact file and confirm the dialog by clicking the *Open* button, or by hitting the *Return* or *Enter* key. Again, you can choose to locate any of the support files in a different folder or disk drive, and Trade Data Manager will remember their location once they have been chosen.

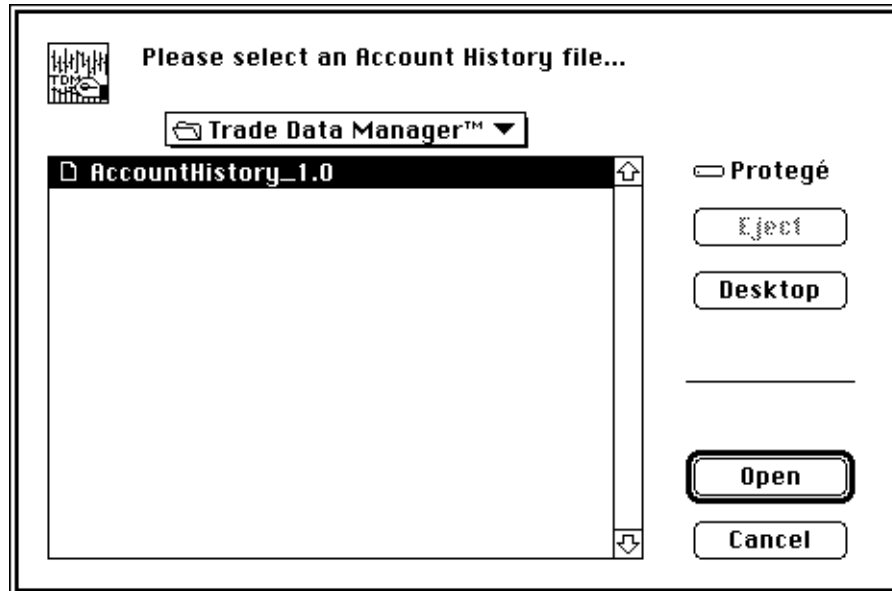
- 9) You should immediately get another “File Selection” dialog asking you to select the *Account Status* file, as shown below (the exact name of the Account Status file may be different than this example):



File Selection Dialog – Account Status File Selection

Select the Account Status file and confirm the dialog by clicking the *Open* button, or by hitting the *Return* or *Enter* key.

- 10) You should immediately get another “File Selection” dialog asking you to select the *Account History* file, as shown below (the exact name of the Account History file may be different than this example):



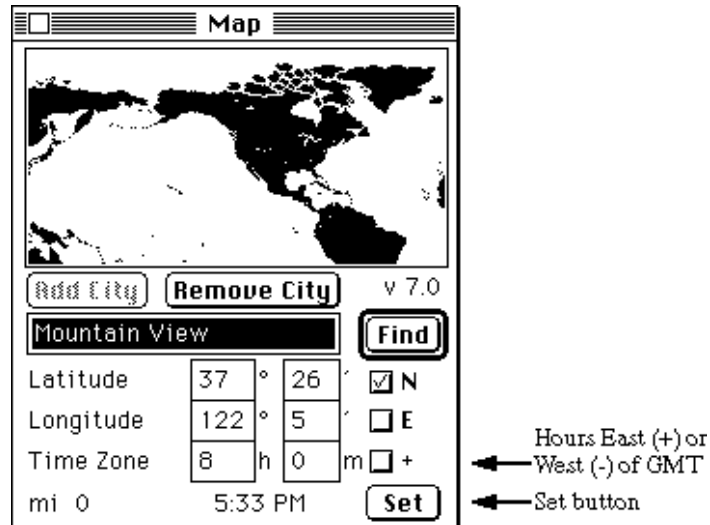
File Selection Dialog – Account History File Selection

Select the Account History file and confirm the dialog by clicking the *Open* button, or by hitting the *Return* or *Enter* key.

- 11) If all has gone well so far, the Trade Data Manager program will now “remember” the location, in terms of the drive name (volume name) and directory (folder) in which the Roster, Commodity Fact, Account Status, and Account History files reside. When you start up the program in the future, you should not get any warnings about either of these files being undefined or not found.

If at any time you wish to select a different support file, or you wish to move one or more of the support files to a different folder, use the commands in Trade Data Manager’s *Service* menu to re-define the currently selected support file. There is one command for each of the support file types, of the form: *Define xxxxxx file...*, each of which bring up an alert describing the currently selected file name and location, asking you to confirm if you really want to change the current selection. If confirmed, a File Selection browser will be displayed, listing only those files whose file type matches the required type, and you can navigate through your folder hierarchy to find and select the desired support file.

- 12) If you have a Macintosh II family model, Macintosh SE, Classic, LC, Si, or a Powerbook, DuoDock, Centris, or Quadra family model, run the “Map” control panel in order to define the location of your machine relative to Greenwich Standard Time. To run the Map control panel from *System 6*, select the *Control Panel* command from the *Finder’s Apple* menu, scroll down to the icon that looks like a map of the world, and click the icon to activate the Map control panel, which is shown below:



Map Control Panel

Click on the map that is displayed on a point that is at or near the location of your Macintosh. You should see the *Time Zone* text box displaying the number of hours East (with a plus indication checked) or West (with a minus indication – check-box unchecked) of GMT updated to show the time difference for your location. Click the *Set* button to establish this location as the location of your Macintosh.

If you are running *System 7*, select the *Control Panels* command from the *Finder’s Apple* menu, then double-click the Map control panel icon to launch the Map control panel, and perform the same steps.

It is very important that you perform this step! Trade Data Manager uses the time zone information established by the Map control panel to determine the current time in the Eastern Time Zone, where CSI is located, relative to the time kept on your Macintosh clock. This information is essential in determining the default day for data collection during daily updates, and in formatting some of the commands that are sent to CSI’s computer (some of which use syntax that is a function of the current time in the Eastern time zone), so be sure not to skip this step!

- 13) If you are running *System 7* on your Macintosh, you can optionally use the *System 7* folder icons included on the *Program* diskette to enhance the display of folders on the desktop that are associated with Trade Data Manager. Two empty folders are included on the *Program* diskette that have custom icons that you may use to decorate a folder on your disk that have the Trade Data Manager application itself as well as a folder that might contain contract data files. Use the *Get Info* command in the *Finder’s “File”* menu to cut and paste the icons from the *Program* diskette onto the folders where you want the custom icons to appear on your hard disk. Consult your Macintosh *System 7* reference manuals for information on how to cut and paste custom icons if you are not already familiar with this feature.

- 14) From the *Finder*, open the “TDM Files” folder that you created earlier. Double-click the “*UserManual(CompactPro)*” icon to begin decompression of the on-line user manual. You will see a dialog that looks like a standard File Selection dialog, with some additional buttons added. Select a folder where you want the decompressed user manual to be stored, then click the *Extract* button in the dialog that appears to start the decompression operation. Extracting the user manual will take anywhere from 30 seconds to several minutes depending on what model of Macintosh you have. The user manual is in *Microsoft Word*[®] 5.0 format, and you will therefore need to have a copy of *Word* (or a word processor or translator that knows how to read *Word 5.0* format files) to open this document. You can use the on-line user manual to rapidly search for reference material using the search capabilities within *Microsoft Word*, which is much more productive than using an index.
- 15) If you are running *System 7* on your Macintosh, you can use *System 7 Balloon Help* to get information on any menu, menu command, dialog, or dialog item in the program. To enable balloon help, click and drag on the help menu (the one with the question mark inside a little balloon) in the upper right hand corner of your menu bar after starting Trade Data Manager. Balloon help will display informative notes next to each menu command or dialog box item in Trade Data Manager, which will help you learn more about the program as you get started. Note that it takes a few seconds to get balloon help loaded and started on most systems, and there is usually a significant delay before the *second* balloon is displayed – this is normal.

Communication ToolBox and Connection Tools installation

If you are using a PowerBook or DuoDock with an internal modem, or if you are using a very specialized modem that requires unusual initialization commands (such as various network modems, add-on NuBus board serial ports, etc.), you will probably need to install the *Connection Tools* (and the *Communications ToolBox* itself if you are running *System 6*). You need to use the *Apple Modem Tool* (one of the *Connection Tools*) in order to access most PowerBook or DuoDock internal modems in particular, as they appear different to Trade Data Manager architecturally.

You **must** be running *System 6.0.4* or *System 7.x* or later to use the Connection Tools! If you have an older version of the *System* file, you must contact your authorized Apple dealer to obtain an updated copy of *System 6* or *System 7*. Apple dealers will provide a copy of the latest version of *System 6* free of charge if you bring several blank floppy diskettes with you to the dealership. *System 7* must generally be purchased, however it is recommended in order to take advantage of the *System 7 savvy* features of Trade Data Manager.

- 1) Insert the *Communications ToolBox* floppy diskette in your floppy drive. Open the diskette’s topmost window, then double-click the *Basic Connectivity* folder to open the folder.
- 2) Select the *Apple Modem Tool* icon by clicking on it once, then drag the selected icon to your hard disk’s *System* folder by releasing the mouse button over the *System* folder icon. If you are running *System 7*, you will get an alert asking you if you wish to place the *Apple Modem Tool* into the *Extensions* folder – click the *OK* button to confirm this alert.
- 3) If you are running *System 6.0.4* (or a later version of *System 6.x*), double-click the *Installer* icon on the *Communications ToolBox* diskette window. **Do not run the Installer if you are running System 7 or later – the Communication ToolBox is already installed in System 7, and running the Installer will damage your System file!!! If you are running System 7 or later, you are already done with installation of the Connection Tools!**
- 4) (*System 6.0.4* or later only) The *Installer* will display a dialog asking you if you wish to perform the “Easy Install” or a customized installation of the *Communications ToolBox*. Click the *Easy Install* button to start the installation process. Follow the instructions that the *Installer* gives you to complete the installation.

Defining Roster entries

Before you can use Trade Data Manager to perform daily data collection, you must add entries to the Roster file that define the contracts that you wish to collect by modem from CSI's host computer. You add entries to the Roster automatically, as part of a daily update modem session (explained below), or you can add entries manually, using the *Edit Roster file* dialog.

If you have been using a previous version of Trade Data Manager, you can use your existing Roster file. If you accidentally copied the empty Roster file from the *Program* diskette, simply delete the empty Roster file and replace it with your old Roster file. Use the *Define Roster...* command from the *Service* menu to select your old Roster file as the active Roster.

The Roster file is normally automatically updated whenever new contracts or stocks are added to your portfolio through the *Change Portfolio* dialog, which is described in section 8 of this manual, "Remote Portfolio Management" In other words, if you use Trade Data Manager to add new futures contracts or stocks to your portfolio file on CSI's host computer through the *Change Portfolio* dialog, Trade Data Manager will automatically add the new entries into your local Roster file at the conclusion of the modem session where portfolio changes are transmitted to CSI. You can also automatically add entries to the Roster whenever you order historical data, if you wish.

In the event that you wish to add a new item to your remote portfolio file by verbally requesting it from CSI's customer service department, or if a new item will be automatically added by CSI as part of CSI's "Automatic Roll-forward" system, or if an item is to be added in order to access the test account, then you should introduce the new item into the Roster file manually by following the steps outlined in the section titled "Viewing and editing the Roster file," inside section 4.

Several sample contract data files have been included with the *Data* floppy diskette that is shipped to you with this manual. You can add these files to the Roster at this time if you wish, or you can skip this step and use the daily update session, in conjunction with the *Change Portfolio* dialog, to add entries to your Roster automatically. If you enter the sample data files in the Roster now, you can experiment with some of Trade Data Manager's features, including charting and contract data file editing, without first having to conduct a modem session successfully (hint hint!).

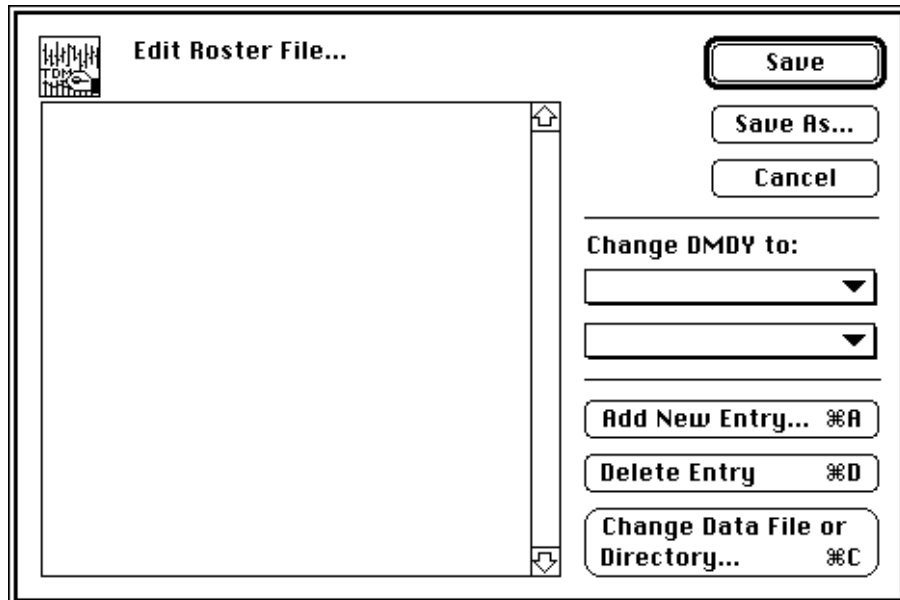
Adding sample data files to the Roster

In the steps that follow, you will be adding the sample contract data files that were included with your *Data* distribution diskette to the Roster file, using the Roster file editor. You do not have to perform the steps in this section, but if you do you can experiment with some of Trade Data Manager's features prior to conducting data collection sessions with your modem.

Please do not confuse this section with the section titled "Test account access and usage", located at the end of section 1, which deals with accessing historical and daily data directly from CSI's host computer, using the test account.

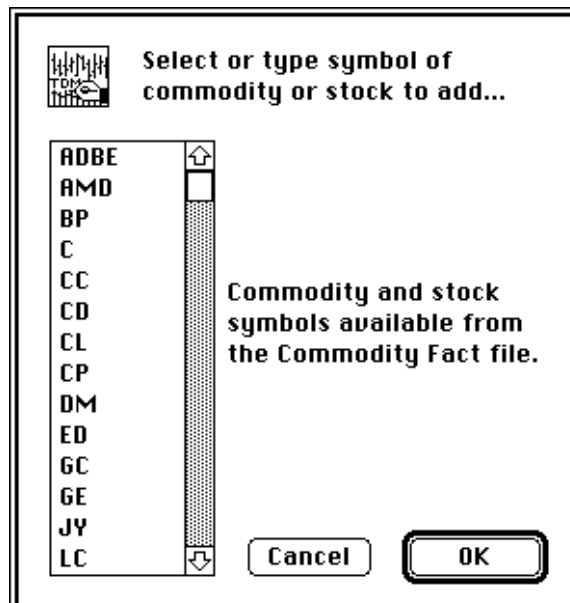
- 1) Each entry in the Roster defines a commodity or stock symbol, delivery month and delivery year, and the associated contract file name and its location in the disk folder hierarchy. Start by pulling down the *File* menu and selecting the *Open Roster...* menu item.

2) The *Edit Roster file* dialog will appear, as shown below:



Edit Roster File Dialog

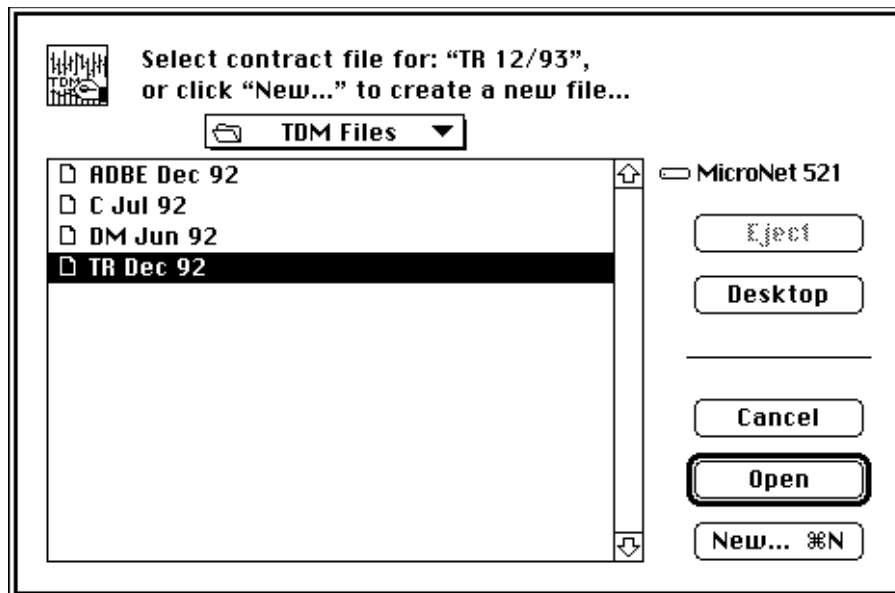
The sample Roster file from the *Program* diskette is initially empty, since the first thing you have done is to move the contract files to a new disk location, and any previous Roster file entries would thus be invalidated and useless. Click the *Add New Entry...* button, or hit the *Command-A* keyboard short-cut indicated on this button, which will display the *Commodity Symbol Browser*, as shown below:



Commodity Symbol Browser

The *Commodity Symbol Browser* contains an alphabetical listing of all commodity futures contract and stock symbols in the Commodity Fact file. The Commodity Fact file contains data for all of the most active commodities in CSI's database. This browser is used here and in many other places within Trade Data Manager to select symbols as a short cut to typing them from the keyboard, and to insure that symbols that are selected are defined in the Commodity Fact file.

- 3) You will be selecting, in order, the "TR", "DM", "C", and "ADBE" symbols. Start by selecting the "TR" (Treasury Bond) symbol (you will need to scroll the list to get to the TR symbol, which you can do rapidly by simply typing the symbol TR from the keyboard). Confirm the dialog by hitting the *Return* or *Enter* key, or clicking the *OK* button, or double-click on the TR symbol itself. Note that there are usually multiple ways of selecting scrolling list entries in Trade Data Manager, and for confirming the entry selection, for each dialog within the program.
- 4) A File Selection dialog will appear, displaying only those files in the current folder that are a valid contract data file type. Navigate to your "TDM Files" folder using this dialog until you see the display shown below. The valid data file types include simple text files, Trade Data Manager contract data files, and CompuTrac/M data files. Select the file called "TR Dec 92" from the File Selection dialog, as shown below, and confirm the selection by either hitting the *Return* or *Enter* key, clicking the *Open* button, or double-clicking the *TR Dec 92* entry itself:

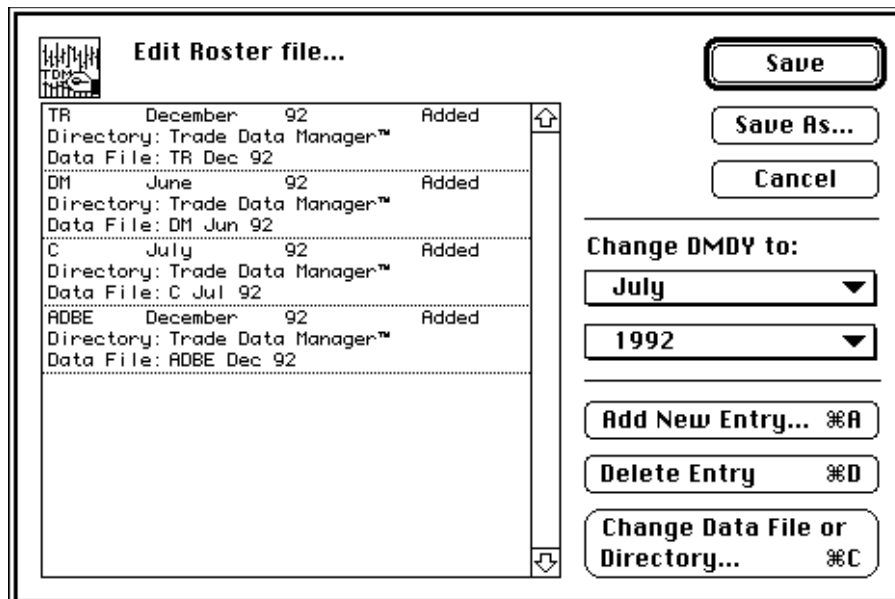


File Selection Dialog

- 5) The *Edit Roster file* dialog shown in step# 2 should now reappear, with one entry in the list, containing the symbol you selected, and a default delivery month and year of December of the current year.
- 6) Click the *Add New Entry...* button again, and select the next symbol in the *Commodity Symbol Browser* that was listed in step# 3 above, which is "DM" (D-mark). When the File Selection dialog appears, select and confirm the "DM Jun 92" entry.
- 7) The *Edit Roster file* dialog will appear again. **Note that the delivery month and year are initially set to default to December of the current year. While this default is convenient for stocks, you will almost always need to *change* the delivery month and year for any**

futures contracts that are manually added to the Roster. For the “DM” entry, move the cursor to the delivery month pop-up menu, and select the delivery month of *June*, or type the *Command-M* keyboard short-cut. You should see the Roster entry update to reflect a change in delivery month and year to June of the current year. If the current delivery year is not *1992*, move the cursor to the delivery year pop-up menu, and select the delivery year of *1992*, or type the *Command-2* keyboard short-cut.

- 8) Repeat steps# 6 and # 7 for each commodity symbol listed in step# 3. Select delivery months of July for “C” (Corn) and December for “ADBE” (Adobe Systems Inc.). Because of the nature of the file management system at CSI, all non-commodities **must** have a delivery month of December. Trade Data Manager will not allow you to specify any delivery month other than December for stock entries in this dialog or any other dialog in the program. When you are finished, the *Edit Roster file* dialog window will have the following contents:



Edit Roster File Dialog

- 9) If you have made any mistakes when selecting commodity symbols, or when selecting the data files to associate with any symbol in the Roster, you can correct these mistakes now by deleting entries in the Roster, using the *Delete Entry* button, or by clicking the *Change Data File or Directory...* button to redefine the data file name, or their associated keyboard command-key short-cuts. You can change the delivery month or year information for any entry by clicking the entry to select it, then use the pop-up menus or their keyboard short-cuts to make the change.
- 10) Click the *Save* button, or hit the *Return* or *Enter* key, to close and confirm the dialog and save the Roster file edits to disk. The Roster is automatically sorted and stored in alphabetical ascending order, by commodity symbol, then by delivery month and year, whenever the Roster file is updated or saved.
- 11) Installation is now complete, and you are ready to test some of the features of Trade Data Manager. Along the way, you have already learned how to edit the Roster file, adding new commodities or stocks, and changing the current delivery month or year information. You may wish to open one of the contract files and display a bar chart on the screen at this time – see the section titled “Charts and Contract File Editing” to perform this operation.

I don't read manuals!! / Introduction to Trade Data Manager

OK, you don't want to read this manual, you just want to collect your daily data from CSI and get on with your trading. This section is for you!!

If you are a somewhat experienced Macintosh user (i.e., you understand how to use the mouse, click on buttons, use the pull-down menus, and interact with standard Macintosh dialogs), and you want to quickly set up your portfolio and try out the data collection features of Trade Data Manager, you can follow the steps in this section to get started. Once you feel that you have a basic familiarity with Trade Data Manager, you can go back and read the relevant sections of this manual to obtain a greater understanding of how the program works, or how to accomplish a particular function.

The following steps will walk you through setting up your account and your local database, and a typical data collection and down-load session, assuming that you are a new user of CSI's services:

- 1) Install Trade Data Manager as defined in the previous section titled "Installation", if you have not already done so. Be sure to follow the installation instructions in every detail, including setting up your Macintosh's location using the *Map* control panel. Double-click the Trade Data Manager application icon to start the program.
- 2) If you do not have an account with CSI, either set one up now, by calling CSI Marketing at 1-800-274-4727, or read the section titled "Test account access and usage," immediately following this section, to temporarily use the special test account. If you will be setting up a personal account with CSI, be sure to specify that you are using Trade Data Manager, and that you need your daily files posted in the "**KK format**". *This is critical!*
- 3) Insure that there is a corresponding commodity or stock symbol entry in the Commodity Fact file for each of the commodities and stocks that you have set up in your initial portfolio in your account with CSI. Select the *Open Commodity Fact File...* command from the *File* menu to access the editor for this file. You can type the commodity symbol once you are in the dialog to rapidly get the list to scroll to the entry you have typed. Add new entries or edit existing entries in this file as required, obtaining all of the information required from the *CSI Commodity Data Fact Sheets* to fill in the fields of the *Add or Edit Commodity Fact file record* dialog. Save the results by clicking the *Save* button when you are finished. See the section titled "Viewing and editing the Commodity Fact file" for details on the operation of this dialog. You should read this section if you need to edit existing or add any entries to the Commodity Fact file. The Commodity Fact file that is shipped on your Data diskette includes data for every commodity futures contract that CSI carries in the database that is actively traded. If you will be primarily using stocks, contact CSI Customer Service to obtain a pre-configured Commodity Fact file that contains data for the entire CSI stock database.
- 4) For each commodity or stock in your initial portfolio, create a new entry in the Roster file. Select the *Open Roster...* command in the *File* menu to begin this process. As you add new entries to the Roster file with the Roster file editor, you will need to select which contract data files will be associated with each commodity or stock, or you can create new contract data files for each commodity or stock within this dialog. Save the results by clicking the *Save* button when you are finished. Remember to set the delivery month and year information for each commodity entry!

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- 5) Select the *Service / Comm. Settings...* command from the *Service* menu. This activates the *Service / Communication settings* dialog, which allows you to specify your modem parameters (baud rate, stop bits, parity, start bits, telephone number, etc.) The only parameters you need to change are:
 - a) Your *User ID*, assigned to you by CSI, or you can use the test account *User ID*, which is “TST”. As shipped, the program defaults to “TST”. If you have a promotional copy of Trade Data Manager, you can call CSI Marketing at 1-800-274-4727 to receive a personal *User ID*, *User Number*, and an *Authorization Code* which will allow you to personalize your copy of Trade Data Manager with these numbers. See the section titled “Changing your CSI User Number” for details on how to set up Trade Data Manager with your own *User ID* and *User Number*. You can set up your own personal portfolio once you have established an account with CSI.
 - b) If you are using the *Apple Modem Tool* (and the *Communications ToolBox*), click the *Communications Tools* radio button, then click the *Modem Configuration...* button to activate the *Connection Settings* dialog. Enter the telephone number, baud rate, number of start and stop bits, etc. as instructed in the rest of this list in the *Connection Settings* dialog instead.
 - c) The telephone number of the modem you will be calling, which you must obtain from the CSI data access fact sheets. This can be either a network or a long distance call. The program is shipped with CSI’s direct-dial, long distance 2400 baud modem phone number already entered. For 9600 baud access, enter 1-407-368-5306.
 - d) Select the data access channel, which is either Long Distance, Tymnet, Telenet, or Tymnet USA, according to the phone number you entered above. As shipped, the program defaults to Long Distance, direct-dial access.
 - e) Select either tone or pulse dialing, as appropriate for your modem and telephone system in your area. Tone dialing is the default.
 - f) If you need to change the baud rate to something other than 2400 baud, use the pop-up menu to select the appropriate baud rate for your modem and the phone number you will be calling. If you select 1200 baud, you will also need to select between Bell 212A and CCITT v.22 signaling standards. If in doubt, the US generally uses Bell 212A, while CCITT v.22 is more common in Europe.
 - g) If you are using the *Connection Settings* dialog to access the *Apple Modem Tool*, select the *Apple Modem Tool* using the *Method:* popup menu, then select the modem type you are using from the *Modem:* popup menu. Set the baud rate to 2400 (or whatever is appropriate for your modem), parity to *None*, data bits to 8, stop bits to 1, and handshake to *RTS/CTS and DTR*, using the popup menus provided. Note that you should be using a modem cable that supports hardware handshaking – this is the default for Macintosh. Select the modem port required from the scrolling *Current port* icons on the lower right side of the dialog. Click the *OK* button to save the current settings.

Click the *Save* button in the *Service / Communication settings* dialog to save the changes to the communications settings.

- 6) Connect your modem to the modem port of your Macintosh, and turn the power on. Insure that your printer is selected in the Macintosh *Chooser*, that the printer power is on, and that the printer is attached and on-line. Some error messages that can occur will only appear on the printed report, so be sure to have your printer ready. If you don't know what the *Chooser* desk accessory is all about, read you Macintosh User Manual first, or consult the section titled “Printing charts” within the section titled “Charts and Contract File Editing,” for a brief summary.

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- 7) Select the *Daily Update...* command in the *Service* menu. Click the *Auto-run daily accounting after update* check-box to un-select this option, since you have not yet defined any orders or positions in the Account Status file for your account. Click the *Collect Now* button to start the daily data collection session.
- 8) The standard Macintosh “print style” and “print job” dialogs will appear on the screen. You will need to establish the printer page setup for the printed report the first time. Set up the page in the normal portrait mode (the icon of the man should be standing up normally), at 100% reduction (if you have a LaserWriter), which is the normal default setting. If you have an ImageWriter, you should select the “Faster” or “Best” quality level radio button (“Draft” mode on the ImageWriter does not attempt to preserve character metrics, so text will not line up with graphics correctly, and you will get a mess). Leave the *Font Substitution* check-box checked in either case (so that text reports will be printed using the monospaced Courier font, and will have properly aligned columns). Confirm each of these dialogs by clicking the *OK* button.
- 9) You will see a *Progress* dialog displayed on the screen, which displays the relative progress in the session in rough percentage terms. The bottom line of text in the dialog will update to display what is happening in each step of the session, in case anything goes wrong. Note that you can reposition this dialog anywhere on the screen by clicking and dragging the title bar, and you can perform other tasks using other applications on your Mac while the progress dialog is displayed on screen.
- 10) Trade Data Manager will instruct the modem to dial the telephone number that you previously entered, then it will wait for the network computer or CSI’s computer to issue a log-on prompt. To log-on to CSI’s computer, your *User ID* and *User Number* will be sent in a “Logon” command. If CSI’s computer recognizes the user ID and number as a valid combination, a “Ready” prompt will be sent back. If you are going to have any problems with your modem, phone line, or configuration, this is the point where you will most likely see a problem. Refer to the section titled “Communications and transmission reliability” within the section titled “Data Collection by Modem” if you have a data communications problem. Most first-time users experience a problem right at this point, so don’t feel embarrassed to call CSI Customer Service to get help.
- 11) Trade Data Manager will issue an “Edit File” command, which instructs CSI’s computer to find and prepare the daily data file for your portfolio of commodities and stocks (or the test account portfolio, if you used the TST user ID). If successful, the first line of data in the daily data file will be sent back over the modem in response. If you have a large portfolio, the first line of data may not be sent for a minute or more, while the file is being prepared by CSI’s computer.
- 12) Once the first line of data in the daily data file has been received, Trade Data Manager will issue a “List File” command to CSI’s computer that instructs CSI’s computer to down-load the entire contents of the file over the modem. The data is actually sent in bursts of 20 records at a time, so that any data errors due to transmission noise can be recovered by retrying the transmission shortly thereafter. As each line is sent, you will see the progress bar in the dialog update to show the relative progress, while the bottom line of text in the progress dialog will count the number of data lines that have been received successfully. You will also see another “List File” command indicated for each burst of data records.

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- 13) After all daily data has been received, Trade Data Manager will issue the “Logoff” command to CSI’s computer, then the modem will be instructed to hang-up the phone. All of the data records received have been check-summed record by record for data integrity as they were received. Each record is written after it is check-summed to a temporary file, called the *Daily Update Journal* file, for use later in posting the data to the database. This file gets created automatically in the same folder as the Trade Data Manager program itself. Any errors that persist after multiple retries are reported to you in the form of an alert.
- 14) Trade Data Manager will then read your Roster file to determine which commodity and stock data records in the daily data file that was just received should be written to which contract data files. The daily data records in the Daily Update Journal file are then written to the appropriate files. This is called “posting” the database. If data was received for every file defined in the Roster, and no extra data was received for which there was no corresponding file in the Roster, Trade Data Manager will proceed to print a report of the data collected on the currently selected printer. If any errors occurred, you will get an alert indicating that something went wrong. This alert will tell you that the detailed error report will appear in the printed daily update report. You must examine the daily update report in order to diagnose the actual problem, if any. The error codes that appear in the daily update report are explained in the section titled: “Data Collection by Modem.”
- 15) After printing the daily update report, Trade Data Manager would normally perform the daily accounting operation, where all of your open positions would be checked against the day’s closing prices, changes to your account open trade equity would be computed, and all orders would be checked for possible order fills. Since you un-checked the automatic accounting run feature back in step# 7, this process will not occur. If you forgot to un-check the check-box, whatever orders or positions were defined in the Account Status file will be processed, and you may get error alerts. If this happens, click the *Abort* or *Abort this operation* button that will be provided in these alerts.
- 16) Daily data collection and posting are now complete! To view the results of the daily data collection session in your contract data files, select the *Open Contract w/Roster...* command in the *File* menu. Select the contract that you wish to display in the *Roster Browser* dialog that subsequently appears, and Trade Data Manager will draw a price bar chart with volume and open interest on the screen. You can open as many as 64 contracts on the screen simultaneously, and you can navigate between windows by clicking on them directly, or by selecting the contract names from the *Windows* menu. You can reposition, shrink or grow, or close any window in the usual way you would with any Macintosh application.

This completes the quick introduction to Trade Data Manager. If you are interested in collecting historical data by modem in order to build your initial database, read the section titled “Historical Data Orders”.

If you are running *System 7* on your Macintosh, you can use *System 7 Balloon Help* to get information on any menu, menu command, dialog, or dialog item in the program. To enable balloon help, click and drag on the help menu (the one with the question mark inside a little balloon) in the upper right hand corner of your menu bar after starting Trade Data Manager. Balloon help will display informative notes next to each menu command or dialog box item in Trade Data Manager, which will help you learn more about the program as you get started.

Be sure to set the location of your Macintosh using the “Map Control Panel” when you get a chance, so that Trade Data Manager can use the information established by this control panel to determine the relative time zone difference between your location in the world and Eastern Standard Time. The procedure for setting your time zone is described in the “Installation” section, in step# 17.

As you get time to become more familiar with Trade Data Manager, read the rest of this manual, then set up your account information in the Account Status file so that Trade Data Manager can automate your daily order processing and account equity calculations. As you become familiar with this facility, you will truly appreciate the time savings in your daily work.

Test account access and usage

If you do not already have an account with CSI, you can still test Trade Data Manager's daily update process and history collection process by using the test account at CSI. The purpose of this account is to let new users gain familiarity with data access procedures before trying them out on a live database. The test account facilitates daily data collection testing. You cannot change the portfolio in this account; it is permanently set by CSI.

- 1) To use the daily data collection test account, select the *Service / Comm. Settings...* command under the *Service* menu. In the *Service / Communications settings* dialog, enter the information shown below. Note that network data access is not permitted when using the test account – you must use direct dial access:

<u>Item</u>	<u>Enter this information</u>	-
User ID	TST	
Data Service Phone	1-407-368-5306 (9600 baud) or 1-407-392-0572 (2400 baud) or 1-407-392-1332 (1200 baud)	
Data Access Method	Long Distance	
Baud Rate	9600, 2400, or 1200 as appropriate	
Parity	None	
Data Bits	8	
Stop Bits	1	

- 2) Edit the Roster file to correspond with CSI's current selection of commodities and stocks in the TST account portfolio file. The TST account contains a fixed set of commodity and stock data files whose delivery month and year change according to the current date as shown below. Note that the TST account portfolio is changed from time to time, so the information here may not be current:

<u>Symbol</u>	<u>Description</u>	<u>Delivery month</u>	-
GE	General Electric Corp.	December of current year	
SF	Swiss Franc	March or December	
S	Soybeans	March or November	
HG	High Grade Copper	March or December	

The commodity test files contain either the March contract or the December contract (November for Soybeans) depending on the date of access. CSI delivers the current contract and automatically rolls forward to the newer contract on the first day of the current contract's delivery month. For example, if you access the test account in June 1992, the delivery month for SF, S, and HG will be December, November, and December 1992 respectively. If you access the test account on November 1, 1992, the delivery month for S will change to the March 1993 contract. If you access the test account in December 1992, the delivery months for all three commodities will change to the March 1993 contract.

- 3) Once the Roster is correct, perform the daily update process as described in the previous section. If you get the commodities or the delivery months wrong, you will see what the correct delivery months are on the printed report, and there will be an indicator of: "NoFile" in the status column, indicating that data was received for the item in question but no file with a matching delivery month existed in the Roster. If this happens, edit the Roster to match the commodities and delivery months that were transmitted and try the daily data collection session again.

CompuTrac/M™ Data Retrieval Application

Trade Data Manager is a full featured “*Data Retrieval Application*” (“DRA”), as defined by CompuTrac, and can be used directly with the CompuTrac/M (“CT/M”) portfolio tool. You can also use the *CT Timer* application that is supplied with the CompuTrac/M system to perform unattended daily data collection and updating of your CT/M database. You must be running Apple *System 7* or later in order to use these features of CT/M.

Trade Data Manager will perform automatic, unattended data collection and updating, and will check and set any portfolio member alarms that were set, as required by CT/M.

Selecting Trade Data Manger as a CT/M DRA

To use Trade Data Manager as a DRA, start-up the CT/M application, then perform the following steps:

- 1) Select the *Portfolio* sub-menu under the *Tools* menu, and select the *Open* command.
- 2) A File Selection browser will appear for you to select a portfolio file. Select a portfolio file that you have previously constructed and confirm the File Selection browser. The portfolio will be opened and displayed.
- 3) With the portfolio file open, select the *Get Info...* command from the *Portfolio* sub-menu within the *Tools* menu.
- 4) The portfolio preferences dialog will appear. Click the *Set Service* button.
- 5) A standard File Selection browser will appear for you to select a DRA application. Navigate through your folder hierarchy to the folder where Trade Data Manager has been installed. Select the Trade Data Manager application and confirm the File Selection browser.
- 6) Set the *Update Preferences* to *Next Days Data* by clicking the *Next Days Data* radio button.
- 7) Set the *Global Alarm*, *Pretty Print*, and *Timer* preferences as desired – see your CT/M user manual for information on these settings.
- 8) Confirm the portfolio preferences dialog by clicking the *Set* button.
- 9) Edit the portfolio to correspond with Trade Data Manager’s Roster file in every detail, or edit the Roster file to correspond to the portfolio file. These files must always match, otherwise you will get an error when you attempt to perform daily data collection. Every file in the CT/M portfolio must appear in the Roster, with a matching file name, delivery month, and delivery year. Every file in the Roster must also appear in the CT/M portfolio file, with a matching file name, delivery month, and delivery year.
- 10) Save the portfolio file by selecting the *Save* command from the *Portfolio* sub-menu of the *Tools* menu.

You are now ready to use the CT Timer application or CT/M itself to perform a daily data collection session. A good place to start testing is with the use of CSI’s test account, described in the previous section. Set up a Roster file and a CT/M portfolio file that match each other exactly, and which contain the current selection of commodities and stocks in the TST account.

DRA usage and assumptions

There are a few restrictions and operational assumptions relative to how Trade Data Manager operates as a CT/M DRA that you must become aware of:

- 1) Trade Data Manager will always retrieve the **entire** portfolio, as defined by the portfolio file on CSI's host computer, on every daily data collection session. You cannot pick and choose which files will be collected. If your CT/M portfolio file differs from CSI's host computer portfolio file, you will get errors during the daily update session, and the portfolio file on CSI's computer will determine what stocks and commodities are downloaded.
- 2) CSI always provides the previous day's actual volume and open interest on every commodity that is collected. For this reason, Trade Data Manager will always collect data as if the CT/M portfolio update preferences dialog's *Next Days Data* radio button is active, even if you explicitly press the *Last Days Data* radio button. There is never any need to re-collect and update data for the previous day, since Trade Data Manager will update the previous days volume and open interest automatically.
- 3) When collecting data for a range of dates (such as when using the *Fixed Dates* option in the CT/M portfolio preferences dialog or the individual contract update preferences dialog), the earliest date and the latest date found for **any** entry in the portfolio will be used as the date range for the **entire** portfolio. Individual contracts may specify different date ranges in their individual update preferences dialogs, however these will be ignored – the earliest and latest date found will be used for the range.
- 4) Data for your portfolio can only be accessed for up to nine weeks previous to the current system date when using the daily update session. Historical data older than nine weeks past **must** be ordered and collected through Trade Data Manager's historical data ordering and collection facilities instead. CT/M does not distinguish between daily and historical data, whereas most data services do, including CSI.

2 Database Overview

You should take some time to become familiar with Trade Data Manager's database organization before using the program so that you understand the ramifications of the actions you take with the program.

The Trade Data Manager database consists of the currently selected *Roster* file, *Commodity Fact* file, *Account Status* file, *Account History* file, and one or more *Contract Data* files. The individual contract data files contain daily open, high, low, and close price data, volume, and open interest for a single stock or a single delivery month and year of a commodity. Each of the contract data files may be stored on your disk in either a simple ASCII text file format or in CompuTrac/M binary format, so that other applications can directly access these files.

The Roster file



The *Roster* file is an essential file that maintains relationships between each commodity or stock data file, the associated delivery month and delivery year information, and the commodity or stock symbol for every commodity or stock you may download daily from CSI. In essence, the Roster is the database master file, specifying which contract data files are to be included in your database, and giving identifying information for each file. Throughout Trade Data Manager, the Roster is used as a short cut in selecting contracts to open, update, or edit, providing a symbolic reference to each file. This way, you will only need to remember the commodity or stock symbols to find or display a given contract, instead of having to remember the file name and its location. The Roster also maintains the exact locations of each contract data file in your file folder hierarchy, so you can keep contract data files in different folders of drives than the folder in which either Trade Data Manager or the Roster file is located. Any of the Roster file's data fields may be directly edited using the *Edit Roster file* dialog.

The location of the Roster file itself in your disk folder hierarchy can also be different from the location of the Trade Data Manager program itself, or the location of the contract data files. Trade Data Manager keeps track of the location of the Roster file within the program's resource fork, so that it can remember the location of the Roster between sessions. This is why you had to select the location of the Roster when you installed Trade Data Manager. Keep in mind that if you physically move the Roster file or any contract data file which is specified in the Roster to another folder or drive, Trade Data Manager will no longer be able to find that file until you redefine the Roster location or the contract data file location, respectively. The current Roster file location can be viewed or redefined using the *Define Roster File...* command in the *Service* menu

Multiple Roster files

You may keep several Roster files on your disk simultaneously, but only one may be in use at a time. This is useful, for example, in maintaining a separate database for contracts that you are no longer actively updating by modem, or for keeping an archive database of older contracts. If you elect to use multiple Rosters, remember that you will have to select the *Define Roster...* command in the *Service* menu each time you want to change the currently active Roster, and that the last definition of the Roster file defined when you exit Trade Data Manager will be the one used at the start of the next session.

The Roster file format is defined in the section "Trading System Interface," and can be used by other applications to access the delivery month, year, and commodity symbol information associated with each of your contract data files. For ease of use, the Roster is formatted as a

simple fixed-field, ASCII text file. You may have up to a maximum of 256 commodities and/or stocks defined in each Roster file in your system.

The Commodity Fact file



The *Commodity Fact* file is the second essential file used by Trade Data Manager to maintain information about your database. The Commodity Fact file contains relatively fixed information about each commodity or stock symbol that is known to Trade Data Manager, and the associated contract information about that symbol. The information maintained includes the full description of the contract, the exchange on which it is traded, the point value, minimum tick size, quotation format, margin information, and commission information. Not all fields of this file are used by this version of Trade Data Manager, but these fields may be used in future versions, so you should maintain them. Any of the Commodity Fact file data fields may be directly edited through the *Commodity Fact file edit* dialog.

Only symbols defined in the Commodity Fact file may be added to the Roster, so you must first define a symbol in the Commodity Fact file before you can use it elsewhere in the system. The Commodity Fact file shipped with your distribution diskette contains all of the commodity contract symbols and their associated information that CSI currently carries in the database, for commodities that are actively traded. The symbols in this file use the naming convention established by CSI. If you will be using the automatic daily update feature of Trade Data Manager, it is a good idea to continue to follow this convention when adding new symbols to the Commodity Fact file. If you also wish to use Trade Data Manager to maintain stock data files, you will need to define your own stock symbols in the Commodity Fact file for each stock that you wish to maintain data for. You should define these symbols to be the same as the “Ticker” symbol listed in the *CSI securities fact sheets* that were sent to you when you opened an account. If you will be collecting data primarily for stocks, call CSI Customer Service to receive the pre-configured Commodity Fact file that contains all of the data in CSI’s stock database.

The location of the Commodity Fact file itself in your disk folder hierarchy can be different from the location of the Trade Data Manager program, the location of the Roster file, or the location of the contract data files. Trade Data Manager keeps track of the location of the Commodity Fact file within the program’s resource fork, so that it can remember the location between sessions. This is why you also had to select the location of the Commodity Fact file when you installed Trade Data Manager. Keep in mind that if you physically move the Commodity Fact file to another folder or drive, Trade Data Manager will no longer be able to find the Commodity Fact file until you redefine the Commodity Fact file location, using the *Define Commodity Fact File...* command in the *Service* menu.

The Commodity Fact file format is fully defined in the section “Trading System Interface.” The information in this file may be used by other applications, such as trading systems or financial management systems, to provide a common file in which this information is stored. For ease of use, the Commodity Fact file is formatted as a simple fixed-field, ASCII text file. You may have up to 16384 commodity and/or stock symbols defined in the Commodity Fact file, along with the associated data for each symbol.

If you add a significant number of entries to the Commodity Fact file (more than 1000), or if you will be using the pre-configured stock Commodity Fact file, you will need to resize Trade Data Manager to be larger than the default 512 KBytes, or you can delete unused entries, otherwise you may get an error alert at some point telling you that there is insufficient memory to open charts or perform daily updates. Consult the section titled “Re-Sizing Trade Data Manager“ in the “Reference” section to resize the program.

The Account Status file



The *Account Status* file keeps track of your current account equity, orders, and positions. Trade Data Manager uses the Account Status file during a daily update session to check each day's contract prices against any open or day-orders you have entered in the file, prompting you for any order fills that may have occurred. The Account Status file is posted each day at the end of daily data collection if you have selected to run the accounting system at the end of the data collection process (you can also run the accounting process manually from the *Service* menu). As orders are processed, Trade Data Manager computes changes to your account's closed trade equity, then it prints a report that displays orders that were filled, positions that were closed, new positions that were created, and changes to your account equity.

Trade Data Manager also uses the orders and positions in the Account Status file to display order and position marks on chart windows, if this view option is selected. This feature allows you to see your positions and orders graphically, on top of the price bar chart, so you can more easily decide what new orders should be placed.

You can edit the Account Status file to add, delete, or change the orders you have on file, or to add, delete, or change any open positions you have on file. At any time, you can print the contents of the Account Status file to keep a record of your orders, positions, or account equity.

The location of the Account Status file itself in your disk folder hierarchy can be different from the location of the Trade Data Manager program, the location of the Roster file, the location of the Commodity Fact file, or the location of the contract data files. Trade Data Manager keeps track of the location of the Account Status file within the program's resource fork, so that it can remember the location between sessions. Keep in mind that if you physically move the Account Status file to another folder or drive, Trade Data Manager will no longer be able to find the Account Status file until you redefine the Account Status file location, using the *Define Account Status File...* command in the *Service* menu.

The Account Status file format is fully defined in the section "Trading System Interface." The information in this file may be used by other applications, such as trading systems or financial management systems, to provide a common file in which this information is stored. For ease of use, the Account Status file is formatted as a simple fixed-field, ASCII text file. You may have up to 744 orders **or** up to 744 open positions defined in the Account Status file, such that there are no more than 744 orders and positions combined. Why 744, you ask? This is a limitation imposed by the Macintosh system's list manager, which manages information in scrolling lists within all application dialogs. The list manager has been sentenced to life in a 32 KByte, 1984 world.

The Account History file



The *Account History* file is used by Trade Data Manager to maintain an "audit trail" of all orders filled, positions entered or exited, and changes to your account equity. The Account History file is posted each day at the end of daily data collection session if you have selected to run the accounting system at the end of the data collection session. This file may not be displayed, edited, or printed directly by Trade Data Manager, but is useful in conjunction with other programs, such as spreadsheet applications, to perform account and trading system performance analysis. This file can be directly read by *Microsoft Excel*. In addition to performing analysis of your trading account using *Excel*, you can edit the Account History file using *Excel* to make corrections or additions. See the section titled "Account History file format" for details on how to use this file.

The location of the Account History file itself in your disk folder hierarchy can be different from the location of the Trade Data Manager program, the location of the Roster file, the location of the Commodity Fact file, or the location of the contract data files. Trade Data Manager keeps track of the location of the Account History file within the program's resource fork, so that it can remember the location between sessions. Keep in mind that if you physically move the Account History file to another folder or drive, Trade Data Manager will no longer be able to find the Account History file until you redefine the Account History file location., using the *Define Account History File...* command in the *Service* menu

The Account History file format is fully defined in the section "Trading System Interface." The information in this file is *intended* to be used by *other* applications, such as trading systems or financial management systems, to provide a common file in which this information is stored. For ease of use, the Account History file is formatted as a simple, fixed-field ASCII text file, using tab characters as field delimiters. There is effectively no limit to the size of the Account History file.

Commodity and stock data files

Each of the individual contract data files in your database contains daily data for a single commodity or stock. Although stock data is not technically "contract" data, this manual will use the term "Contract Data file" to mean a data file for either a stock or commodity. Also, Trade Data Manager maintains a delivery month and year for stock data files, even though there really is no delivery month or year. This convention is maintained to provide compatibility with daily data collection conventions used by CSI.

Several different contract data file formats are supported by Trade Data Manager, including CompuTrac/M binary format, and several ASCII text file formats. You can have *any combination* of file formats *simultaneously active* in the currently defined Roster file. Trade Data Manager automatically determines how to read and write each file by the file type and the format of the data inside the file.

CompuTrac/M™ data files

Users of the CompuTrac/M ("CT/M") technical trading tool-set for the Macintosh can create, read, or write CT/M format files directly using Trade Data Manager. You **must** use CT/M version 2.0 or later for compatibility with Trade Data Manager.

CT/M files are stored in a binary format, with the commodity symbol, delivery month, and formatting information stored in the resource fork of each data file. Since the formatting and delivery month information stored in these files is somewhat redundant with similar information stored in Trade Data Manager's Roster and Commodity Fact files, the potential exists for the information to be different between the two. For example, the CT/M program may be used to define a Treasury Bond data file with price data that is formatted with only three digits of decimal information to the right of the decimal point. Since the decimal representation of T-Bond data normally requires five decimal digits of significance to precisely represent $\frac{1}{32}$ nd point intervals, Trade Data Manager normally saves five digits of data to the right of the decimal point for T-Bonds whenever it writes data in decimal format. To resolve this conflict, Trade Data Manager always honors the formatting information defined in the CT/M file whenever an existing CT/M file is being read or written. Trade Data Manager does not check to see if the delivery month or commodity symbol information in a CT/M file is the same as the associated data in the Roster, so it is up to you to keep your Roster file data consistent with the internal data stored in your CT/M files. When creating **new** CT/M contract data files from within Trade Data Manager, data from the Commodity Fact file is used to write the formatting information stored in the CT/M data file's resource fork. This can confuse you if you use different formatting conventions within CT/M versus Trade Data Manager, so be forewarned.

For optimum compatibility, you should set the formatting, commodity symbol, delivery month, and field definitions for each CT/M file in your database to be exactly the same as the corresponding information in Trade Data Manager's Roster and Commodity Fact files. The fields of the CT/M data files **must** include a date field, open, high, low, and close price fields, volume, and open interest fields, in exactly that order. All of these fields must be defined for commodity files, while the open interest field may be "unused" in the case of stock files only. You cannot use CT/M files that have a periodicity other than daily (i.e., you cannot use weekly, quarterly, or tick by tick formats).

If you create a **new** CT/M file using Trade Data Manager, the file information that is stored in the CT/M data file's resource fork will be created using data from the Commodity Fact file. This means that the commodity symbol, delivery month and year, and price formatting information will be determined by Trade Data Manager's conventions, **not** CT/M's conventions. You should be aware that every data service vendor uses different price quotation conventions, and many of CSI's conventions are not the same as those used by CompuTrac. For example, the quotation format used for currencies places four decimal digits to the right of the decimal point in CSI's convention (to correctly represent the price in dollars, per Wall Street Journal conventions), whereas CompuTrac users are generally using two digits to the right of the decimal point. You can either adopt CSI's conventions, or you can edit the Commodity Fact file before creating any new CT/M files to whatever convention you like. The main issue is to **avoid mixing** the two conventions. If you have an existing Swiss Franc file, for example, that uses two decimal digits, and you start collecting data from CSI for Swiss Franc for a different delivery month (creating a new CT/M file for that delivery month), you will suddenly see prices quoted with four digits of fraction. You can confuse yourself quickly in this situation.

ASCII data files

ASCII text files can also be used by Trade Data Manager, with several options for the file type and format. Each ASCII contract data file contains a sequence of ASCII text records, where each record contains the trading date for that record, and the open, high, low, and closing price on that day. The total volume and open interest for the commodity or stock is also maintained for each record. Individual fields within each record are separated by a "delimiter" character, which you can define to be a blank space, comma, or tab character by default. The specification of the delimiter character **only** affects the format used when **writing** or updating a data file. Trade Data Manager can **read** ASCII files with **any combination** of delimiter characters simultaneously. The choice of a default delimiter should be made based on what other programs will be reading or writing your data files. Choosing a tab-delimited format allows your database files to be read into spreadsheet applications directly. You can also import tab-delimited ASCII files into the CompuTrac/M system, although the preferred way to work with CT/M is to use CT/M binary format files directly within Trade Data Manager. More details on the exact internal format of the data files are in the section titled "Trading System Interface."

Since each ASCII contract data file is intended to be a simple text file, with the same format used for each daily record in the file, there isn't any place to store identifying information about what commodity or stock is being represented by the file, or what the current delivery month or year is for the file. This is why the Roster file exists; to provide a correspondence between each data file and this identifying information. A significant advantage of this approach is that you don't have to become a Macintosh programmer to write simple applications that use your contract data files. You can instead write applications using the macro facilities within a spreadsheet program, such as *Excel*.

Note that stock *options* and commodity *options* are *not* supported in release 1.5 of Trade Data Manager. All contract data files must be real commodities or stocks, or special contracts such as CSI's Perpetual Contracts[®], Cash contracts, and various indices.

Contract data file size

In principle, each contract data file may contain up to 32767 records in each file. Since each record represents one day's data, this corresponds to a capacity of 131 *years* of data for each contract. In practice, however, the amount of memory available on your Macintosh (and hence the maximum size that you can set the Trade Data Manager application to) will limit the size of the largest contract data file that can be opened to a smaller limit, since the entire file must be kept in memory in order to display the chart for the file, or to perform editing operations. For example, a two-megabyte Macintosh would generally limit Trade Data Manager to its default size of 512 KBytes, such that individual contract data files would be limited to around 20 years worth of data in a single file. Likewise, if you were to open ten charts simultaneously on the screen, the average size of each contract file would be limited to 2 years for a 512 KBytes sizing of the program. If, for example, you had 5 MBytes of memory on your Macintosh, you would probably want to resize Trade Data Manager to be 2 MBytes, which would allow up to 120 "contract-years" worth of data to be simultaneously displayed.

When performing daily updates of the database or when performing daily accounting operations, Trade Data Manager does *not* read in the entire file for any of the files being posted. Only the last few weeks of data from each file is read, one file at a time, so you can have very large contract data files and many contract data files in your Roster and still successfully post each file during the daily update process.

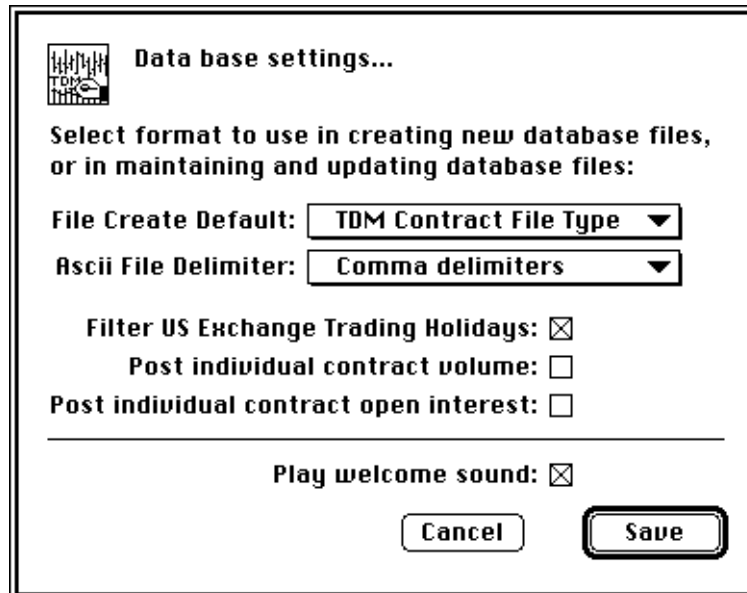
Facilities are provided in Trade Data Manager to extract sections of existing files and create new files from these extracted segments, so that very large archive files can be managed by splitting them into smaller files.

Database settings

At various times you will use Trade Data Manager to create new contract data files, or to update or write existing files. Whenever Trade Data Manager **creates** a new contract data file, you will generally be given the opportunity to specify the file type that you wish to create using radio buttons within the *File Save* dialog, as shown in later sections of this manual. Each time that a *File Save* dialog is presented, the default file type that will be initially selected will be the default file type selected in the *Data base settings* dialog shown below. You can click any of the file type radio buttons to change from this default at any time.

When writing or updating an existing contract data file, Trade Data Manager will format data according to the file type in question. For CompuTrac/M data files, the format is pre-defined and fixed. For ASCII file types, Trade Data Manager will write data in ASCII decimal format, using a delimiter character between each date, price, volume, or open interest field. The delimiter character that is used during write operations is taken from the *Data base settings* dialog.

To access the *Data base settings* dialog, select the *Data Base Settings...* command from the *Service* menu:



Data Base Settings dialog

Select the default file type that you wish to use whenever new contract data files are created from the *File Create Default:* pop-up menu. If you are interested in having your contract data files in a form where you can import them directly into a spreadsheet, select the *TEXT File Type* from the pop-up menu. If you want to keep your files in an ASCII format but you do not wish to have the files appear in the File Selection dialogs of other applications that can read text files, select the *TDM Contract File Type* from the pop-up menu. The internal format of TEXT and TDM Contract File files is identical – only the file types differ. If you are using CompuTrac/M, select the *CompuTrac/M File Type* from the pop-up menu.

Select the delimiter character that you want Trade Data Manager to insert between each field within ASCII file type data records from the *Ascii File Delimiter:* pop-up menu. You may choose between a blank character, the tab character, or a comma. Remember that Trade Data Manager can still *read* any ASCII file with any arbitrary combination of these delimiters at any time regardless of what choice you have made in this dialog. The choice of delimiter only affects what is *written* during contract data file updates, edits, or saves. The delimiter character is ignored, of course, when dealing with CT/M files – it only applies to any ASCII files that you are writing to. The delimiter choice is used when writing ASCII files even if your *File Create Default* choice is the *CompuTrac/M File Type*.

The *Data base settings* dialog also contains a check-box that allows you to select between automatically using standard US exchange holidays versus using weekends only in determining what days are trading holidays. If checked, Trade Data Manager will automatically assume that standard US exchange holidays apply whenever the program computes valid trading days. If un-checked, only Saturdays and Sundays are treated as non-trading days. This affects the way trading dates are computed in daily data collection and order editing. Throughout most of this manual, the *Filter US Exchange Trading Holidays* check-box is assumed to be checked.

If you will be collecting data from US exchanges only, you should leave this check-box checked, as you will find this feature extremely useful and convenient. If you are collecting data from non-US exchanges, you will definitely need to un-check this check-box, and thereby disable this feature.

The effect of enabling the *Filter US Exchange Trading Holidays* check-box is to automatically exclude these holidays when Trade Data Manager determines the default date for daily data collection each day. This feature reduces the chance of accidentally attempting to collect data for a holiday, and is merely a convenience. When posting collected data to the database, this feature is used to check the date of the previous record on file for each contract file against the date of the daily update collection file, to insure that you have not skipped any days in your daily update process. You may get a lot of false alarms if this check-box is not set in accordance with the trading schedule of the associated commodity or stock.

Two check-boxes are provided to allow you to select between posting individual contract volume and open interest or total contract volume and open interest to your data base files during each daily update. If either the *Post individual contract volume* or the *Post individual contract open interest* check-box is checked, individual data for the delivery month that applies will be posted to each commodity contract data file. If either check-box is unchecked, total figures for all delivery months currently being traded on the collection date in question will be posted instead.

For lack of a better place to put it, the *Data base settings* dialog contains a check-box to enable or disable playing the welcome sound through the Macintosh speaker at start-up time. Click on the check box to disable this feature if you don't want to hear the welcome message. The welcome sound is a recording of an advanced human interface device that was popular about 30 years ago.

Confirm the dialog by clicking the *Save* button, or by typing the *Return* or *Enter* key. You can cancel the dialog without making any changes to the default settings shown by clicking the *Cancel* button, or by typing the *Escape* or *Tilde* (“~”) key.

Continuous versus discrete contract paradigms

You can choose to maintain contract data files in your database using one of two philosophies, or “paradigms”, according to your trading system's needs or your personal preference. Contract data files can be viewed as being “actual” contracts with specific delivery months (or as CSI Perpetual, cash, or nearest future contracts), or you can choose to view a given contract data file as a “continuous” contract, which never expires. You should decide which paradigm is required for your situation and set up your database and Roster accordingly before you begin daily data collection sessions. These paradigms are discussed in detail in the following sections.

Discrete contract paradigm

Most users want to maintain their database as a set of actual, discrete commodity and stock data files, with each file representing a single delivery month and year. You don't have to do anything explicit to use Trade Data Manager in this fashion, as the Roster file already identifies each file by its delivery month and year. You do need to pay attention to how portfolio changes are done in the *Change Portfolio* dialog, which is discussed in the section titled “Remote Portfolio Management,” and you will need to perform transmission of portfolio changes to CSI in a certain way whenever you are changing the specific delivery months that you wish to receive.

Continuous contract paradigm

You may choose to use Trade Data Manager to maintain contract data files using a “*continuous contract paradigm*”. Many automated trading systems also use this approach, where data from multiple consecutive contracts has been “glued together” end-to-end to create the illusion of a single, continuous contract, without any discontinuities in prices on the days where contract data was merged from two different delivery months.

If you are using a trading system simulator that requires multiple-year data as input, this type of data file paradigm will probably be the best choice for your database. In this case the various actual contracts that constitute the continuous contract are spliced together such that the closing price of each expiring contract is matched to the closing price on the same trading day for the next forward contract. If you are using a tool-box such as CompuTrac/M, you should use the discrete contract paradigm described earlier instead.

It is very important that you understand the continuous contract algorithm used in Trade Data Manager, as it will affect your use of an automated trading system, as well as your methodology in updating your files each day. Also, note that continuous contracts are not the same as CSI's Perpetual Contracts, which use a very different and far more sophisticated algorithm.

There are about as many ways to create continuous contracts as there are data service vendors, and each of the algorithms used exhibits various tradeoffs between ease of use, correspondence with the current delivery month/year contract data, and cost of maintaining the database when performing daily updating. Some continuous contract algorithms use multiple delivery month/year data each day to synthesize a price at a point in time that approximates a future date. This type of algorithm smoothes discontinuities in price at contract roll-over times, and is used by several popular trading systems. This type of contract is available as CSI's Perpetual Contract[®] data, and Trade Data Manager is equipped to process these files.

The built-in continuous contracting algorithm used by Trade Data Manager, in contrast, uses a very simple continuous contracting algorithm. In this algorithm, the contract data for the most recent period in each contract data file is exactly equal to the current contract data you are receiving from CSI. Any trading system that uses your contract data files will be using the prices from the same contract you are currently trading to set buy/sell stop prices, limit prices, or other types of trading signals, whenever the trading system is examining the most recent data on file to set these signals. Also, this algorithm never requires you to subscribe to more than one contract delivery month/year per commodity. Each time that you roll-over your contract to the next delivery month, the closing price data in the contract data file on the day of the roll-over is adjusted to correspond with the new contract's closing price on the same day. All previous day's data in the file are adjusted by the exact same price "delta."

To illustrate how Trade Data Manager rolls-over price data to create a continuous contract, let's say that you were subscribing to Japanese Yen data for December 1991 delivery, and had been doing so for two months. You have a current position in the December Yen, and have been setting stop orders along the way as you are making a fabulous profit. Assume that it is now getting to be early December, and the contract will expire in another two weeks. As you are naturally concerned about letting your profits ride, and you know that the liquidity of the December contract is diminishing, you want to roll-over your contract today to the March 1992 contract. Today the December Yen closed at 7650, and the March Yen closed at 7500. This evening, you will do your normal daily update, which will post your Yen file with December data from CSI, showing a closing price of 7650. At the same time, you send a portfolio change to CSI, using Trade Data Manager, which instructs CSI's computer to switch your portfolio to start subscribing to March Yen data the next day, and to delete the subscription to the December Yen at the same time. You determine from your quotation service that the March Yen close is 7500. Using Trade Data Manager, you instruct the program to roll-over the Yen data file to the new closing price of 7500 on today's date, using the *Rollover* menu's *Single Contract...* command. Trade Data Manager reads the Yen file and calculates that in order to set today's close at 7500 it must subtract 150 from the last closing price on file. Trade Data Manager then *subtracts* 150 from *each* open, high, low, and close price in the *entire* file. When you start receiving March Yen data the next day, all of the prices in the file that are relatively recent should be very close to the price action that has occurred in the actual March Yen during those days. There is never any discontinuity on the roll-over day itself, since the discontinuity that existed on the roll-over day between the actual contracts was subtracted.

Once you have rolled-over your contract data file to the March Yen contract, you will be rolling over your actual position to the March Yen as well, then you will be setting price stops and computing trading indicators and signals based on December data that has been arithmetically adjusted to simulate March Yen data, but it won't really be March Yen data. For a few trading days, the signals from your system will differ slightly from those which would be generated from actual history on the March Yen, however for most systems and most market conditions these differences will not affect trading system performance. Within a few days from the roll-over day, Trade Data Manager will have posted that many days of actual March Yen data into the file, and your price stops and signals will be very much based on actual March Yen data. This means that, for contracts that expire quarterly (for example), you will have a few days, four times each year, in which the contract data is somewhat synthetic.

Many trading systems compute indicators and signals for stop placement and order placement that are only looking at the last 5 to 15 days worth of data. In many cases, oscillators and indicators are based on a weighted average or an exponentially weighted average of the last 5 to 15 days worth of data, such that the last one to 5 days of data predominate in computing the value of the indicator. The inaccuracy of the simulated data doesn't affect the result significantly in these cases. In some systems the indicators, oscillators, and other signals (such as the Wilder ADX) are computed over a fairly long period, where the difference between the actual contract prices and the adjusted prices present in a continuous contract will have a measurable effect of the outcome.

Relative to your particular trading system, you should definitely perform some experiments on a calculator or computer to see how much of an effect would occur if you always used exact contract data for any given indicator versus continuous contract data. You should note that a well-designed trading system bases its calculations on price *differences* between successive days, not on the *absolute* price value. In such cases the price adjustments that have been made in the continuous contract data will not significantly effect the trading signals.

To validate your trading system's sensitivity to absolute price values, try simulating your trading system with continuous contract data where you have subtracted or added a very large offset in price throughout the file – for example, try subtracting 5000 from every price in your Yen file (so that, for example, an actual contract price of 7500 becomes 2500), then compare the simulated trading record with and without this offset. You should find that the entry and exit days are identical, and that the profits and losses on each trade are identical. If this does *not* occur, it is quite likely that your trading system is dependent on absolute price value. This experiment is a good way to test a system to be sure that it does not have this problem. If you see an absolute price dependency, you should maintain your database using the actual, or “discrete” contract paradigm.

If other applications you are using require that your contract data files represent actual contract data throughout, you should use the discrete contract paradigm described earlier. In this approach you will need to maintain a separate file for each delivery month and year for each contract in the database.

Stock and commodity symbols

All of the stock and commodity symbols known to the Trade Data Manager program are defined by the Commodity Fact file. Each commodity and each stock holds a one to six character symbol, and either can be composed of any alpha-numeric characters. You can define new symbols to be anything you like, however it is a good idea to use symbols that follow the convention established by CSI.

It is recommended that you use all capital letters for both stock and commodity symbols, so that you can type them in when the *Roster Browser* or other dialog is in use as a selection short cut.

All symbols must start with a valid alpha or numeric character, and can be optionally followed by space characters if the symbol is less than six characters long. Internally to Trade Data Manager, all symbols are stored as six character symbols, so Trade Data Manager will automatically pad any symbols that you enter with less than six characters with spaces if you do not enter them explicitly in any given dialog. Note that all stock or commodity symbols defined in the Commodity Fact file must be unique. No duplicate symbols are allowed, since the file is searched using the symbol in many areas of the program. Also, all CSI commodity numbers or stock numbers must be unique, since the CSI number is also used as a search key. In some cases stock and commodity symbols may conflict with each other, and in very rare cases stock symbols from one exchange may conflict with symbols on another exchange. In these cases you should make the symbols unique by adding an arbitrary character to one of the symbols. This will not affect the way Trade Data Manager operates in any way.

Database back-ups

It is important that you backup your database every day. If you perform regular back-ups, you will be able to recover quickly from any error that might occur by copying your backup files from a back-up folder to the folder where you are keeping your active contract data files and Trade Data Manager support files.

The easiest and safest way to back-up the database every day is to use the Macintosh *Finder*. This includes making a copy of all contract data files, the Account Status file, the Account History file, and the Roster.

The daily backup operation can be performed in just a few seconds from the Macintosh *Finder*. You should make a habit of performing this backup at the same point in your Trade Data Manager session each day, either just before the daily update data collection session, or just after the daily accounting operation. Here is a simple procedure for performing the database backup operation:

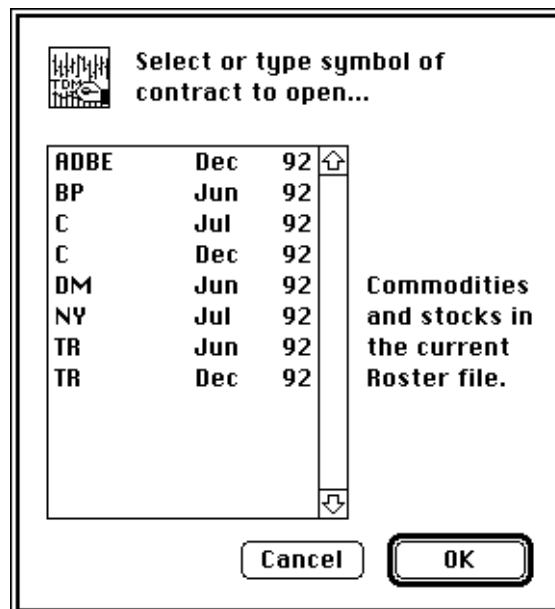
- 1) You should keep all the contract data file icons and the Account Status, Account History, and Roster file icons in one folder so that you can select all of them with a single click and drag of the mouse, by clicking above and to the left of the upper left icon, then dragging the mouse to the lower right icon.
- 2) Keep a folder within the folder that contains these files called "Backup database," or whatever you want to name it.
- 3) After selecting all the files that you wish to back-up with the mouse, depress and hold down the *option* key on the keyboard, then point to any of the selected icons in the group selection, then click the mouse and drag the selected group of icons to the "Backup database" folder while continuing to hold the *option* key down.
- 4) The *Finder* will make a copy of each of the files selected, placing the copy in the "Backup database" folder. This operation is similar to selecting the *Duplicate* command under the *Finder's File* menu, except that the copies of the files won't have the prefix "Copy of" (under *System 6*) or postfix "copy" (under *System 7*) added to each of the file names. During the copy operation, the *Finder* will display a progress dialog showing the file name being copied and the number of files left to copy. Even large databases can be copied this way in just a few seconds.

If you ever need to roll-back to the previous day's version of the database, you can simply open the "Backup database" folder, select all the files, then drag a copy of them back up to your active database folder (using the same technique of holding the option key down before clicking and dragging the selection). Since the file names are the same as the original file names, you won't have to rename each file. You will get a caution alert from the *Finder* telling you that some of the files have the same name, and the alert will ask if you wish to continue and overwrite the older copy of each file name that is duplicated. Instruct the *Finder* to over-write the original files by clicking the *OK* button in this alert. Once you have rolled-back to the previous day's database, you can run Trade Data Manager and correct the error or omission in whatever procedure you were performing.

Opening and charting a contract data file

(Open Contract w/Roster...)

To “open” a contract data file for display or editing, select the *Open Contract w/Roster...* command from the *File* menu, or hit the *Command-O* key combination as a short-cut. Whenever you want to open a contract data file in this way, Trade Data Manager displays the *Roster Browser* dialog, mentioned earlier, which provides a convenient way to select the commodity or stock you wish to display or edit. A typical *Roster Browser* looks like the example below:

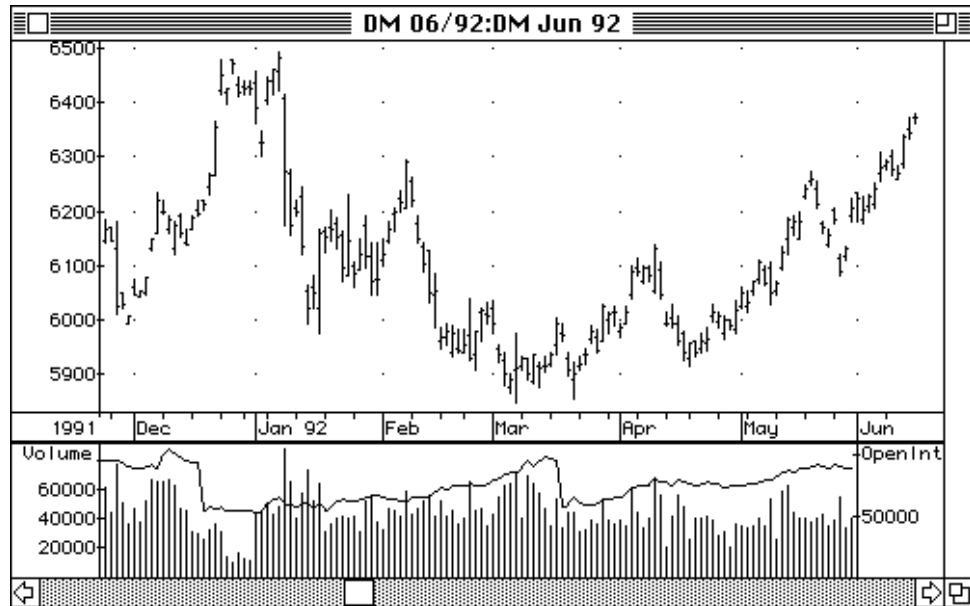


Roster Browser Dialog

Only symbols that are defined in your current Roster file are displayed in the browser. You can open contract data files that are not in the Roster by using the *Open Contract w/File...* command, which is described in the next section. To open any of the contract files defined in your Roster, click the mouse on one of the commodity or stock symbols in the list, or scroll the list until the symbol you want is displayed, then click that symbol. Click the *OK* button to open a price bar chart window, which will then be updated with the data from the file that is defined in the Roster to be associated with the symbol selected. There are many short cuts to selecting a symbol in the *Roster Browser* – see the section “Roster Browser Short-cuts” for details.

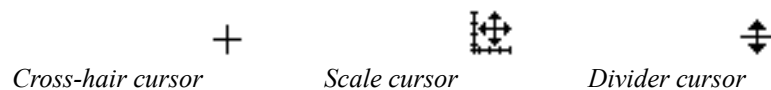
Trade Data Manager opens all contract data files in a price bar chart format for display on your screen. Once a chart is displayed, you can scroll around in the chart, or you can edit any of the price, volume, or open interest data in the file directly in-place by pointing to any of the price bars or volume bars and clicking the mouse. See the sections “Scrolling” and “Editing Contract Data Files” for details on these operations. The bar chart window will appear in color on Macintosh models that support color, with the various parts of the window colored according to the current settings in your system’s Control Panel.

The initial display of a contract price bar chart may look like the example below:



Contract Data File Chart Window

There are several regions defined within the chart window that behave differently if you click the mouse within them. Positioning the cursor over the price bar chart region will turn the cursor into a “cross-hair” cursor, which can then be used to select a price bar for display (in standard price quotation format) or editing. If you place the cursor over the horizontal date axis or the vertical price axis, the cursor changes to a “scale” cursor, which will cause a price and x-axis scaling dialog to be activated if you click in either of these regions. Placing the cursor very close to the heavy divider line that separates the price bar region from the volume bar region cause the cursor to change to a “divider” cursor, which allows you to click-and-drag the position of the heavy divider line interactively. All of these operations are described in greater detail in later sections of this manual. The various cursor shapes look like this:



The default view for Trade Data Manager chart windows, as shipped, is a daily view with vertical price axis scaling set to scale the vertical price axis automatically (to cause the price bars within the current window to fill the entire price bar region, with just a little space above and below the highest high and lowest low price respectively). The price labels are intelligently computed to provide as many labels as will fit without overlapping them on the screen, while picking a price interval that provides integral prices or convenient fractions. All charts are positioned in time so that the last day’s data will appear near the right edge of the price bar and volume bar regions, with enough white space to the right of the last data bar to manually plot up to five additional days of data on a printed chart. Price and volume bars are spaced so that the open tick of the next day’s bar is one pixel to the right of the close tick of the previous bar, to get the most data on-screen as possible. The date axis is automatically ticked and labeled such that the first trading day of each month is labeled and ticked, and the first trading day of each week is only ticked. You can change any of the viewing defaults through the *Chart Settings...* command in the *Windows* menu, or by selecting various commands in the *View* menu interactively. You will also note that the commodity or stock symbol that is associated with this file is placed, along with the delivery

month information and actual file name, in the window's title bar at the top. Additionally, the commodity symbol and delivery month information are placed in the *Windows* menu, at the last entry position, to provide another way to navigate between windows on your screen when you have many contract data file windows open simultaneously. The window title always has the form; "Symbol DM/DY:filename", where "Symbol" is the stock or commodity symbol, "DM/DY" is the delivery month and year, and "filename" is the contract data file name.

To close the chart window, you can either select *Close* from the *File* menu, or hit *Command-W* as a keyboard short-cut, or you can click the close box in the upper left hand corner of the window's title bar with the mouse, as you would in any Macintosh application.

Opening a file not in the Roster

(Open Contract w/File...)

Occasionally you will want to open or "import" a file that is not defined in the Roster file you are currently using. This facility can be used to display a contract data file which you are keeping in an archive, or for importing contract data into Trade Data Manager from another application, for storage as a normal Trade Data Manager contract data file.

When you are first building your database, you may be importing contract data from CSI using the history file collection facilities, or from another computer system. This data typically represents the historical trading data for a given commodity or stock, and in many cases is available in ASCII text format. The ASCII text file format which Trade Data Manager supports is very common, and is fully described in the section "Trading System Interface" in the "Data File Formats" section. You will find that this format is supported by CSI's "QuickTrieve[®]" program (which runs on either a PC-compatible, or on various PC emulators that run on the Macintosh, such as "Soft-PC", available from Insignia Solutions, Inc., in San Francisco). Many other trading systems and database managers that run on PC-compatibles also produce this format as one of their supported file formats.

To open a contract data file which is not in the Roster, select the *Open Contract w/File...* command from the *File* menu, or type the *Command-T* keyboard short-cut. Trade Data Manager will display a standard File Selection dialog, listing only folders and those files that are either of type 'TEXT', or those files whose file type is equal to Trade Data Manager's contract data file type, or CompuTrac/M file types in the scrolling list. Select the file name that you want to open, and type the *Return* or *Enter* key, or click the *Open* button, or double-click the entry, to open a price bar chart view of the file. You can navigate through your folder hierarchy in this dialog, and you can scroll the file list, or type the first letters of the file name to go right to the file you want, just as in all other Macintosh programs.

After confirming the File Selection dialog, you will usually immediately see the *Commodity Symbol Browser*, which displays all of the available commodity symbols in the Commodity Fact file. You will need to have previously defined the symbol for the contract data file you wish to open in the Commodity Fact file before attempting to open the file in this way. Select the symbol that defines the characteristics of the contract data file you are opening, and confirm the dialog in the usual way. Trade Data Manager will use the definitions contained in the Commodity Fact file to find the standard quotation formats for prices, and the preferred vertical price axis scaling rules. If the file that you are opening is a contract data file that is already defined in the current Roster, Trade Data Manager will detect this case and display the chart window immediately after file selection, without displaying the *Commodity Symbol Browser*. (This short cut permits a very useful way to open multiple contract files simultaneously for viewing or printing, by allowing you to select multiple files in the *Finder*, then selecting the *Open* or *Print* command from the *File* menu of the *Finder*, or double-clicking the group selection, instead of opening the files from within Trade Data Manager.)

After confirming the *Commodity Symbol Browser* dialog, Trade Data Manager opens the chart window for the file, and displays the chart with the same default viewing parameters as it would if you had opened a file from your Roster with the *Open Contract w/Roster...* command.

Roster Browser short cuts

Whenever the *Roster Browser* appears, you can quickly select the exact commodity or stock symbol you want by typing some or all of the symbol at the keyboard. Trade Data Manager will assume that the characters you type are to be treated as upper-case only, so you should generally define symbols in the Commodity Fact file which consist of upper-case letters and numbers only. In many cases, the first letter of the symbol will uniquely define which symbol you want, and you can immediately hit the *Return* key to confirm the selection. If you need to type more than one character of a symbol to get the correct symbol selected, you must type each character within one second of the previous character, otherwise the next character typed will be treated as the first character of a new symbol selection.

If a given symbol has been typed previously, you can hit the *tab* key on your keyboard to advance the selection to the *next* matching symbol in the list. This is useful in cases where you have multiple delivery months of a given commodity in the Roster simultaneously, or in cases where you have typed only one character of the symbol, and the symbol you want is further down the list. The *tab* key search starts wherever the current selection is, and wraps-around at the end of the list, continuing to search until the current selection is encountered again. If no symbol matches the search, you will hear a beep sound to alert you.

Double-clicking any symbol in the list will immediately select that symbol and confirm the dialog, as if you had clicked the *OK* button.

You can scroll through the *Roster Browser* dialog either by clicking the scroll bar up or down arrows to move one entry at a time, or in the scroll bar page-up or page-down regions, to move one list-window's worth of entries at a time. You can also use the up or down arrow keys (↑↓) on your keyboard, if you have an extended keyboard, to move up or down one entry at a time. If you have an extended keyboard, the *home* and *end* keys will take you to the start of the list and the end of the list respectively, and the *page up* and *page down* keys will move the list by one list-window's worth of entries up or down respectively. Any invalid keys, or character keys that do not match any of the symbols in the list will cause a short beep to be generated to remind you that no action was taken.

As in other Macintosh applications, the *Return* and *Enter* keys are both short cuts for clicking the *OK* button, and the *Escape* key or the *Tilde* ("~" on the keyboard) key are both short cuts for clicking the *Cancel* button.

Nearly all of these keyboard short cuts also work in all other Trade Data Manager dialogs. The only exceptions occur in dialogs that have editable text-boxes in them, which interpret the *tab* key to advance the insertion caret from one text-box to the next.

Scrolling

While a contract chart is displayed on your screen, you can navigate through the chart by clicking the horizontal scroll bar left or right arrows, which move the display one price bar at a time, or you can click the page-left and page-right regions of the scroll bars to move the chart one-half of the current window's worth of price bars to the left or right. If the entire file fits within the current window, no scroll bar is displayed, otherwise you will see a gray filled scroll bar and a current position indicator (the "thumb") within the scroll bar.

You can generally scroll around in the chart window more rapidly by learning some keyboard short-cuts. In addition to reducing the number of times you need to switch between the keyboard and the mouse with your hand, several additional scrolling controls are available on the keyboard that are not available in the graphical scroll bar controls. Keyboard short-cuts for scrolling either vertically or horizontally are as follows:

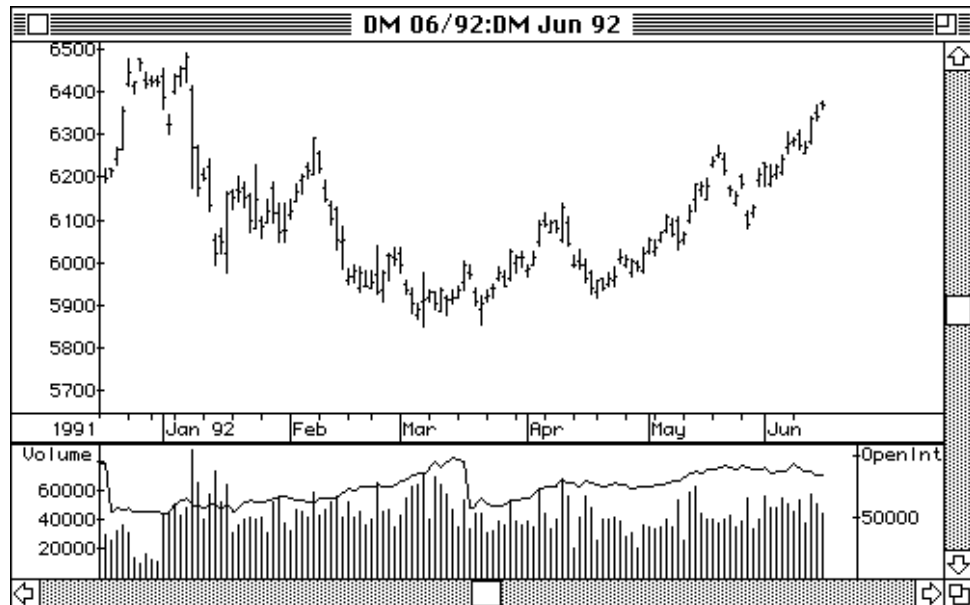
<u>Function</u>	<u>Keyboard equivalent</u>
Left scroll button	← (left arrow key)
Right scroll button	→ (right arrow key)
Left ten price bars	Shift-← (Shift & left arrow keys)
Right ten price bars	Shift-→ (Shift & right arrow keys)
Left one half page	page up key
Right one half page	page down key
Leftmost (earliest date) limit	home key
Rightmost (latest date) limit	end key
Up scroll button	↑ (up arrow key)
Down scroll button	↓ (down arrow key)
Up one half page	Shift-↑ (Shift & up arrow keys)
Down one half page	Shift-↓ (Shift & down arrow keys)

Note that you must have scaling set to scale by the entire file, instead of by window, in order for the up or down arrow or shift-up/down arrow keyboard short-cuts to have any effect.

If you press the mouse button in either of the arrow or page region areas and hold the button down, Trade Data Manager will continue to scroll through the chart after each display update at a new position. The leftmost position in the chart corresponds with the first day's price data being displayed at the left side of the price bar region. The rightmost position in the chart will position the last day's price data in the middle of the price bar region.

Charts can be displayed with the price data scaled according to either the highest high and lowest low price within the current window view, or by the highest high and lowest low of the entire data file. The default viewing mode can be specified in the *Chart settings* dialog, which is accessed under the *Chart Settings...* command in the *Windows* menu. When price data is scaled according to the window's highest high and lowest low, only the horizontal scroll bar will be visible, since vertical scrolling in this mode makes no sense. If price data is scaled according to the entire file, both the vertical and horizontal scroll bars will be visible and active.

The chart shown below has been displayed using scaling according to the entire file, and thus the vertical scroll bar is visible and active:



Contract Data File Chart Window – Scaled by Entire File

If you select price scaling to be performed according to the entire contract file instead of by window in the *View* menu, and if you click the price or date axis regions and display the *Chart scaling parameters* dialog, you can turn off the intelligent price scaling feature by clicking the check-box marked *Auto*. If intelligent price scaling is turned off and you are scaling prices by the entire contract, the top and bottom of the chart window's price bar region will be scaled to the maximum prices and minimum prices you enter into this dialog, and the number of price axis labels and tick-marks will be set to the number entered into this dialog. After confirming the dialog, you will see a vertical scroll bar displayed, which allows you to move up or down in price within the chart as you click the vertical scroll bar up or down arrows or page-up or page-down regions. Clicks in the up or down arrows of the vertical scroll bar move the chart by 10 pixels vertically, while clicks in the page-up or page-down regions move the chart by half the window price range vertically.

Window management

You can open and display many chart windows simultaneously with Trade Data Manager. Each chart window is opened in the same way, by selecting the *Open Contract w/Roster...* command or the *Open Contract w/File...* command from the *File* menu. The number of open windows that can exist simultaneously will depend on the amount of memory you have on your Macintosh, and on the size of each contract data file. A maximum of 64 simultaneously open chart windows can be opened in any case. As shipped, Trade Data Manager is configured to occupy a 512 kilobyte memory partition. This is small enough to run on virtually any Macintosh, but it is probably not the best configuration for your Macintosh. If you have 2 megabytes of main memory or more, you may wish to use the *Finder* to change the size of Trade Data Manager to be larger, so that you can open larger contract files, or more of them simultaneously. See the section titled "Re-Sizing Trade Data Manager" for this procedure.

As chart windows are opened on the screen, each window is "tiled" to the right and below the position of any previous windows. This allows a little margin around each window opened to show around the front-most window. By clicking on any exposed portion of another window, that

window is brought to the front and updated. You can change the tiling behavior through the *Chart Settings...* command in the *Windows* menu, described in the section “Default Window Preferences.”

As with any Macintosh application, you can drag a window to a new position on the screen by clicking and dragging the window’s “title bar”, and you can change the size of the window by clicking and dragging the “size box” on the window’s lower right hand corner. Windows can overlap each other in any way. The window’s “close box” and “zoom box” work exactly the way they do in all Macintosh applications.

If you pull the *Windows* menu down, you will see a list of all the open windows on the screen at the bottom, with numeric command-key short-cuts for the first ten open windows. You can select any of these window names as commands, which will bring that window to the front. Typing any of the numeric command-key short-cuts listed will also bring that window to the front. The sample *Windows* menu below shows the windows menu commands available along with entries for eight open windows on the screen:

Windows	
Clean Up	
Zoom	⌘/
Close All	
Send Behind	⌘B
.....	
Chart Settings...	
.....	
ADBE 12\92:ADBE Dec 92	⌘0
BP 03\93:BP Mar 1993	⌘1
C 07\92:C Jul 92	⌘2
CD 03\93:CD Mar 1993	⌘3
DM 06\92:DM Jun 92	⌘4
SF 03\93:SF Mar 1993	⌘5
TR 12\92:TR Dec 92	⌘6
YH 03\93:YH Mar 1993	⌘7

Windows Menu

The *Windows* menu shown above contains a *Zoom* command to zoom the front-most window in or out, which is equivalent to clicking the zoom box in the window title bar, at the right edge. The front-most window will toggle between the initial or modified window position and size setting and a full-screen window. You can also type the *Command-/* key short-cut to toggle between zoom states.

The *Clean Up* command causes all open windows to be re-tiled on the screen, using the default tiling parameters set in the *Chart settings* dialog, with each window relocated and resized as required. The current front-to-back layering of the windows is not changed by this command.

The *Close All* command will close all open windows on the screen. If any windows have been edited without saving the edits to disk, Trade Data Manager will prompt you in each case to ask if you wish to save or discard these edits. If you elect to *Cancel* this alert, the *Close All* command will terminate prematurely.

The *Send Behind* command (keyboard short-cut *Command-B*) will send the front-most window to the rear, causing the next window, if any, to become the new front-most window.

Chart scaling parameters

As new chart windows are opened, Trade Data Manager scales the vertical price axis of all price bar and volume bar charts automatically. The highest high and lowest low price of the price and volume bars visible within the window, or the highest high and lowest low price of the entire file are used to set the price and volume corresponding to the top and bottom of the window regions containing these charts. The choice between these two modes is based on the default setting for scaling prices in the *Chart settings* dialog. Once a chart has been opened and displayed on the screen, you can select the *Scale by Window* command (or type *Command-Y*) in the *View* menu to toggle between the scale by window mode and scaling by the highest high and lowest low in the entire contract data file. The chart is scaled by window if there is a check-mark next to the *Scale by Window* command in the *View* menu currently, otherwise the chart is being scaled by the entire contract file. Scaling by the entire contract is sometimes useful in getting the “feel” of where the current window’s prices are within a longer term historical record. You can change the default scaling mode in the *Chart settings* dialog by selecting the *Chart Settings...* command under the *Windows* menu.

If scaling by the entire contract is enabled, you can select the *Set Scale...* command in the view menu, to specify a custom price scale for the price axis. You can also request to set a custom price scale by clicking the mouse within either the price axis or date axis regions of the chart, when the cursor has changed to a “scale” cursor. Any of these actions displays the *Chart scaling parameters* dialog, which looks like this:

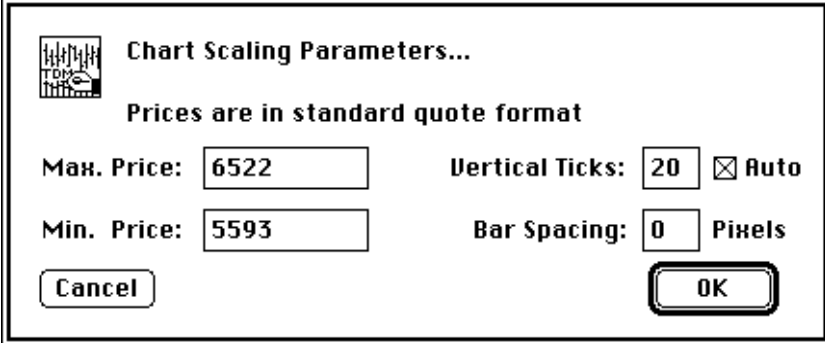


Chart Scaling Parameters...

Prices are in standard quote format

Max. Price: Vertical Ticks: Auto

Min. Price: Bar Spacing: Pixels

Chart Scaling Parameters Dialog

Initially, the *Chart scaling parameters* dialog will contain the highest high and lowest low of the contract file, plus and minus 3% of the difference between the highest high and lowest low price on file as extra margin for space, in the editable max. price and min. price boxes, respectively. You can type any other price to be used instead, as long as it is within these extremes. When the dialog is confirmed, the prices in these fields will be used to scale the chart window within the price bar region. Be sure to type any new prices into these fields in standard quotation format! For example, a Corn price of $231 \frac{3}{4}$ would normally be represented by 2316, (231 and $\frac{6}{8}$) *not* 231.75, and a treasury bond price of $96 \frac{1}{2}$ would be 9616 (96 and $\frac{16}{32}$ nds).

The *Vertical Ticks* field of the *Chart scaling parameters* dialog specifies the number of price labels and tick marks to use along the y-axis. This field is only active if the *Auto* check-box is currently un-checked, otherwise automatic price labels will be used. You probably will never need to turn off automatic price tick labeling, but it could be useful if you wanted to print a chart with a very large or very small number of price labels. Type in the integer number of price ticks that you want to evenly distribute along the price axis if you want to use this feature, then click the *Auto* check-box to disable automatic price labels. You must specify between zero and 99 ticks. The top

of the window is counted as one of the ticks, so you will only see the number of ticks requested minus one drawn and labeled.

The *Bar Spacing* field determines how many extra pixels are inserted between each bar's close tick and the next bar's open tick in the horizontal direction. This field is normally zero, allowing the greatest number of price bars to be displayed without overlap, however you may wish to increase the number to space out the price bars for better legibility in some cases. You must specify a number between zero and 99 pixels. The *Chart Settings...* command allows you to change the default number of this field on newly opened charts.

You can confirm the dialog by clicking the *OK* button, or by typing *Return* or *Enter*, and you can dismiss the dialog, without changing any settings, by clicking the *Cancel* button, or by typing the *Escape* or *Tilde* ("~") keys.

Changing chart views

The *View* menu contains several interactive commands, along with command-key short-cuts, which allow you to change the current view of the front-most chart window, or in some cases the view of all open chart windows. In addition to the *Set Scale...* and *Scale by Window* commands described in earlier sections, a number of other useful commands are available:

View	
<input checked="" type="checkbox"/> Scale By Window	⌘Y
Set Scale...	
Auto Scale	⌘[
Zoom In 2X	
Zoom Out 2X	

<input checked="" type="checkbox"/> Volume / Open Int. Chart	⌘I
<input checked="" type="checkbox"/> Dot Grid	⌘G

<input checked="" type="checkbox"/> View Account Positions	⌘M
<input checked="" type="checkbox"/> View Account Orders	⌘J
<input checked="" type="checkbox"/> View Position Tails	⌘.
<input checked="" type="checkbox"/> View Order Tails	⌘-
<input checked="" type="checkbox"/> View Order Types	

<input checked="" type="checkbox"/> Daily View	
Weekly View	
Monthly View	

Window Cross-hair Cursor	⌘H

View Menu

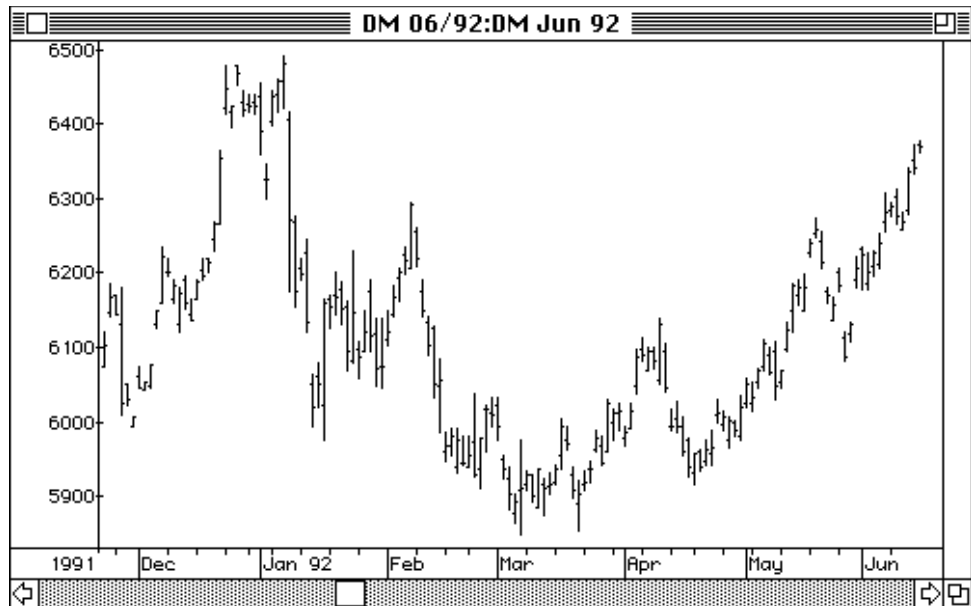
The *Auto Scale* command (*Command-[*) temporarily changes the current window scaling to be by the entire contract file, even if the current window scaling is set to be by window. Any scrolling or updating of the window subsequently returns the scaling mode to the setting as indicated by the check-mark next to the *Scale by Window* command. This command is useful to temporarily see the current window's price or volume action in relation to the entire file's prices and volumes, without changing the current default. Use this command also if you have set custom price scaling parameters in the *Chart scaling parameters* dialog, and you want to restore the maximum and minimum price fields to their original values.

The *Zoom In 2X* command (Command-↑ (up-arrow)) changes the current window scaling to be by the entire contract file, then the price axis scale is halved, centered around the current center point price. This causes the chart to appear to be zoomed-in by a factor of two. The vertical scroll bar will also appear in response to this command if it was not previously visible.

The *Zoom Out 2X* command (Command-↓ (down-arrow)) changes the current window scaling to be by the entire contract file, then the price axis scale is doubled, centered around the current center point price. This causes the chart to appear to be zoomed-out by a factor of two. The vertical scroll bar will also appear in response to this command if it was not previously visible.

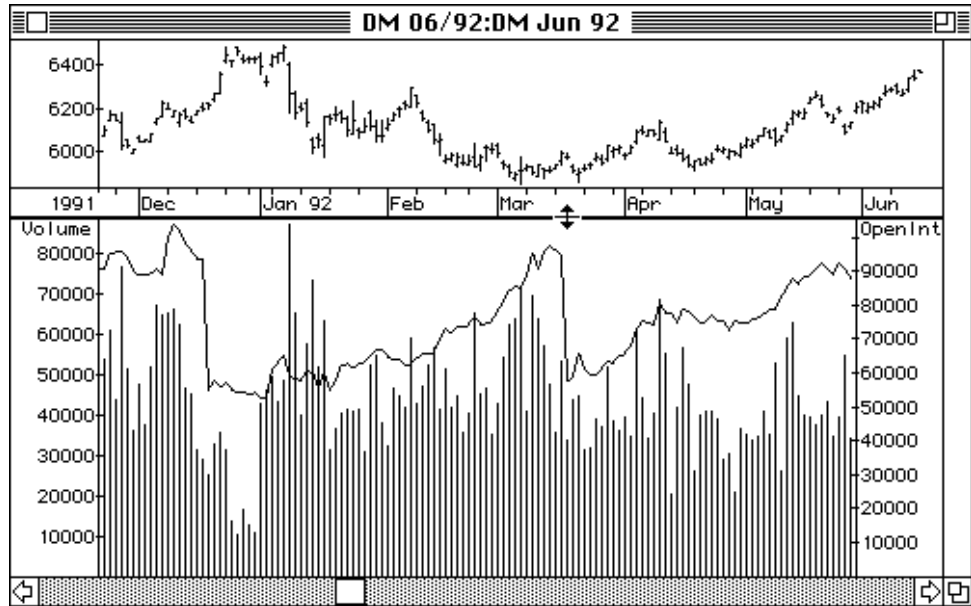
The *Dot Grid* command (Command-G) turns a dotted grid on or off within the front-most chart window. At each intersection of a price tick and a date tick, a single pixel dot is drawn. This grid lets you see where some of the price bars are in relation to the price axis a little better when they are further away from the price axis. You can change whether the grid is normally turned on or not in the *Chart Settings...* command. Updates of the chart on the screen run somewhat faster when the grid is off, and you will be less likely to confuse a grid dot with an open or close tick when the grid is off.

The *Volume / Open Int. Chart* command (Command-I) toggles the chart window display between a price bar (only) chart and a chart that includes both price bars and volume/open interest charts. (For stocks, the volume/open interest chart section becomes a volume/dividends chart.) The current state of this selection, which is indicated by a check-mark next to this menu item, controls the front-most window only. You can change whether the volume and open interest chart is normally turned on or not in the *Chart Settings...* command. The *Volume/Open Int. Chart* command is useful in providing better resolution when examining the price bar chart, by allowing the price bar chart to fill the window. You may also use this command if you don't normally like to look at volume or open interest data, and you want scrolling and window updates to be very fast. The example below shows the appearance of a chart with the volume/open interest chart section and the dot-grid turned off:



Contract Data File Chart Window – VOI Chart Disabled

Whenever the volume/open interest chart is enabled, you can change the relative size of the volume/open interest chart to the size of the price bar chart by clicking and dragging the heavy black line that separates these two charts. As you position the cursor near the divider line, the cursor shape changes to the “divider cursor” shape described earlier. Click the mouse button when this occurs, and hold the button down as you drag a phantom outline of the divider line to a new position in the window. After you release the mouse button, the chart will be re-drawn. The example shown below shows the divider line being dragged up so that the volume/open interest chart occupies most of the window:



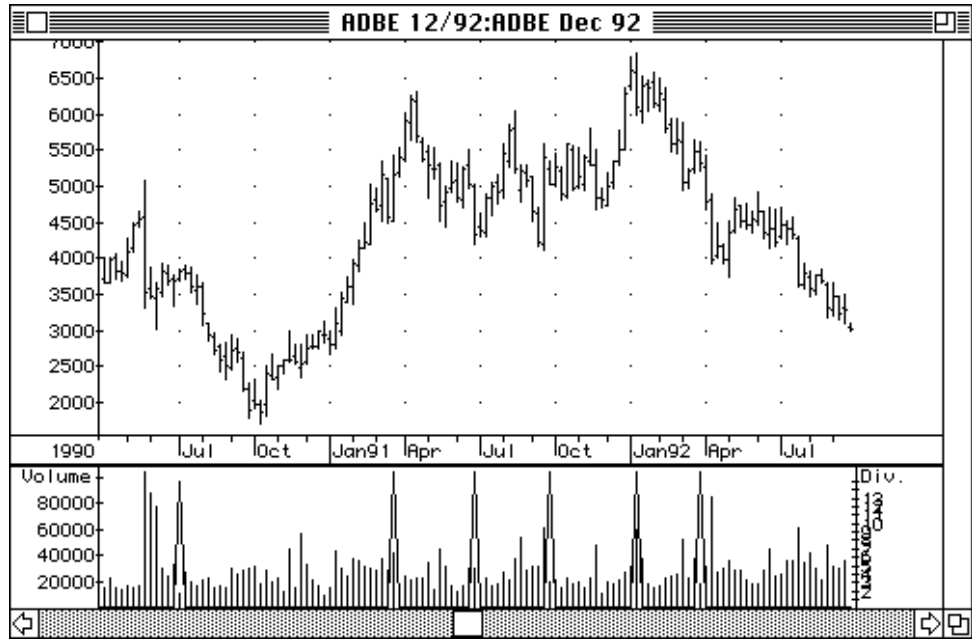
Contract Data File Chart Window – Dragging divider to expand VOI chart

Setting the dot grid off and turning off the volume/open interest chart provides much faster screen updates than if either of these options are on, particularly on older Macintosh models. You may find that this setting is a more useful default setting than the one that was configured when Trade Data Manager was first installed, after you gain familiarity with Trade Data Manager.

The *Daily View*, *Weekly View*, and *Monthly View* commands indicate, with a check mark, which view is currently in effect, and allow you to change the current view to any of the indicated views. Weekly and monthly views are useful in spotting long term trends, and in determining long term support and resistance levels.

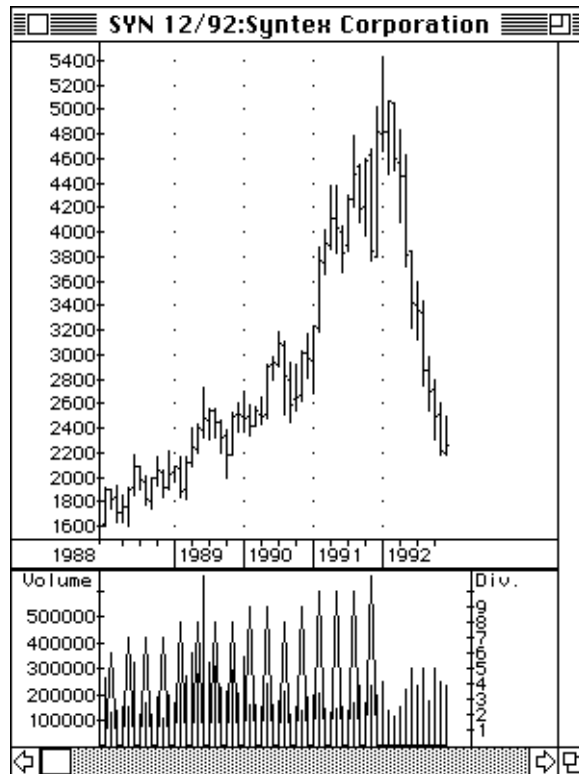
Whenever the current view is changed from one period to another, the chart window is re-drawn with the last price bar in the file positioned in the middle of the window. All scroll bar, scroll button, and keyboard scrolling short-cuts apply to the period of the price bar view in effect. In other words, clicking the right or left scroll bar buttons results in a single price bar movement, regardless of the current view mode, and clicking in the scroll bar page up or down regions causes the chart to move by one-half of the window.

The following example shows a weekly view chart. In weekly views the first trading day of each calendar quarter is ticked and labeled, and the first trading day of each month is ticked:



Contract Data File Chart Window – Weekly View

The following example shows a monthly view chart. In monthly views the first trading day of each calendar year is ticked and labeled, and the first trading day of each calendar quarter is ticked:



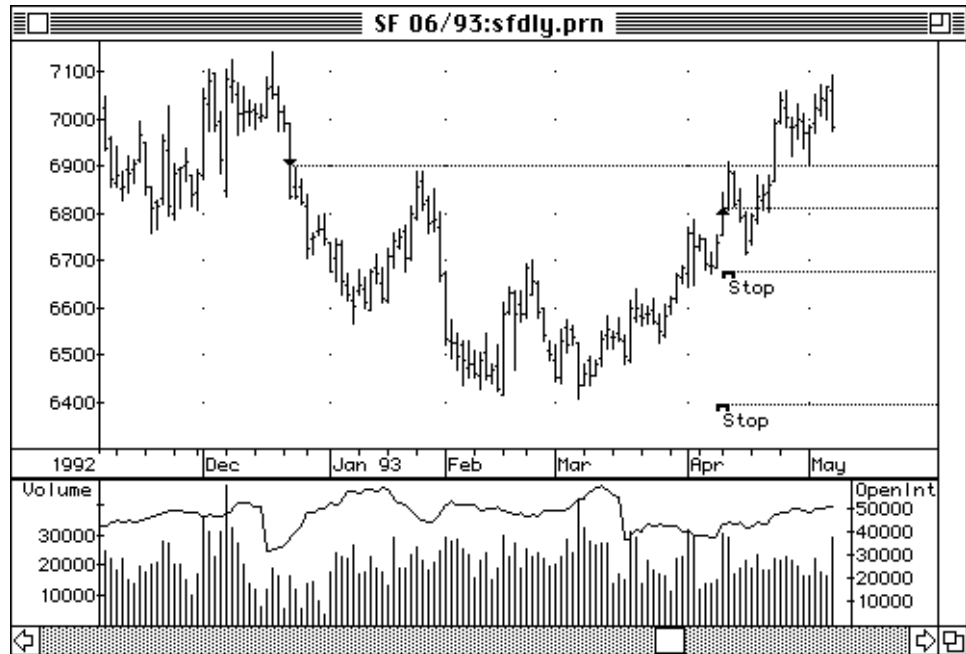
Contract Data File Chart Window – Monthly View

Current orders and positions stored within the Account Status file may be displayed graphically on top of a chart window. When enabled, orders and positions are drawn on a chart for all orders and positions matching the chart's commodity or stock symbol, delivery month, and delivery year. If you have a color or grayscale display, order and position marks will appear in color.

Open position marks are drawn in bright red, using an upward pointing triangle mark for long positions, and a downward pointing triangle mark for short positions. Order marks are drawn in bright blue, using a horizontal bracket mark that points down for sell orders and up for buy orders. Market orders are drawn in bright blue as a vertical line that spans the entire price range (since market orders have no associated price) for the order entry date.

Position and order marks are drawn at the date position indicated by the position entry date or order entry date, respectively, as indicated in the Account Status file record for each position or order. The price level for each position or order mark is taken from the Account Status file entry price or order price, respectively.

The following example shows a chart window with a short position, a long position, and two sell stop orders:



Contract Data File Chart Window – Positions and Orders View

The *View Account Positions* command (*Command-M*) indicates, with a check-mark, if Account Status file open positions are being displayed for the current chart window. The initial state of the chart window account positions display may be set with the *Chart Settings...* command.

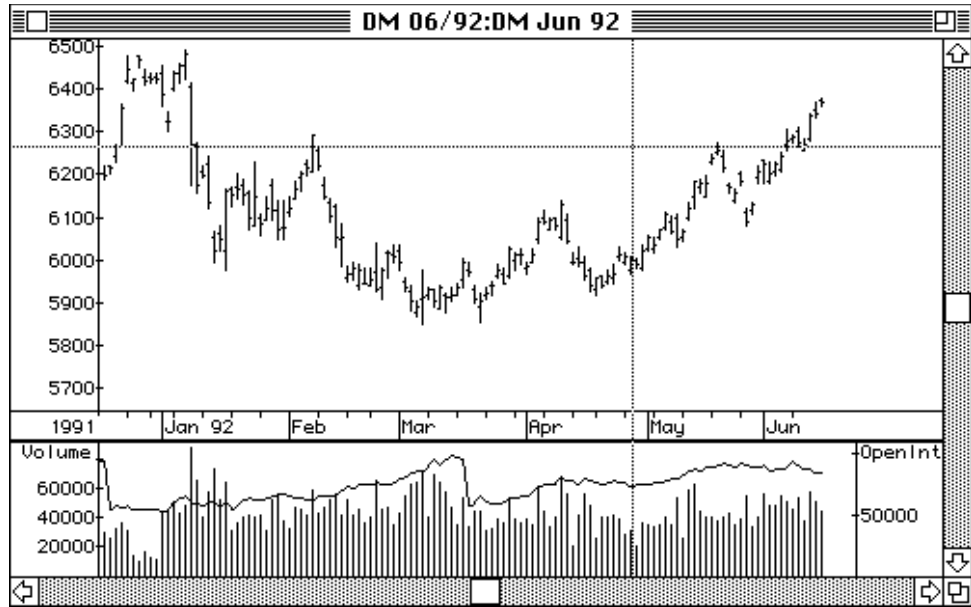
If the display of account positions is currently enabled, the *View Position Tails* command (*Command-* (*Command-period*)) indicates, with a check-mark, if horizontal lines will be drawn from each position mark to the right edge of the window. These lines are useful in projecting the entry price level from the position entry date towards later dates. The example above has position tails displayed. Tails are displayed only if the position symbol is currently within the visible bounds of the window, to reduce clutter.

The *View Account Orders* command (*Command-J*) indicates, with a check-mark, if Account Status file orders are being displayed for the current chart window. The initial state of the chart window account orders display may be set with the *Chart Settings...* command.

If the display of account orders is currently enabled, the *View Order Tails* command (*Command -* (*Command-minus sign*)) indicates, with a check-mark, if horizontal lines will be drawn from each order mark to the right edge of the window. These lines are useful in projecting the order price level from the order entry date towards later dates. The example above has order tails displayed.

If the display of account orders is currently enabled, the *View Order Types* command indicates, with a check-mark, if the order type abbreviation will be labeled next to each order mark. In the example above, the order type “Stop” is labeled next to each order mark.

The *Window Cross-Hair Cursor* command (*Command-H*) toggles the cursor display from the normal, small cross-hair cursor, to a cross-hair that fills the entire window. If the mouse is positioned so that the cursor is over either the price bar or volume bar chart regions, the cross-hair cursor that is currently selected will be displayed. The cursor changes to either the scale cursor, divider cursor, or arrow cursor in other parts of the window. The current setting of the cross-hair cursor is **global** to all the open chart windows on the screen, not just the front-most window. The whole window cross-hair is useful for interactively finding price support or resistance levels visually, or in determining the rough level of a given price bar's open, high, low, or close value. You can change whether the whole window cross-hair is normally turned on or not in the *Chart Settings...* command. The chart below shows the appearance of a chart with the whole window cross-hair cursor enabled:



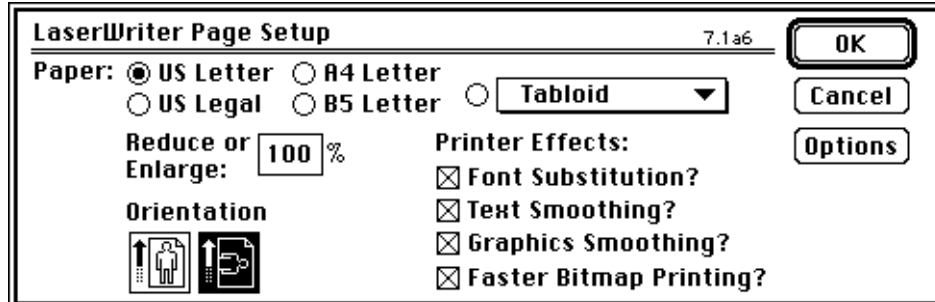
Contract Data File Chart Window – Whole Window Cross-Hair Cursor

Printing charts

Trade Data Manager is intentionally designed to work a little differently when it comes to printing than other Macintosh applications. Trade Data Manager is designed to minimize the time spent with redundant print style dialogs that rarely need to be changed, saving you time in the long run. For example, you can print every contract file in your current Roster with one command, without having to conduct a print job dialog for each chart. You can also start your daily update process, then walk away from your computer, and have all the steps take place unattended, including printing the report of the day's price action and the contract files that were updated at the end. These and other printing functions in Trade Data Manager allow unattended operation for time consuming tasks, so you won't have to sit in front of your computer waiting for print operations to complete.

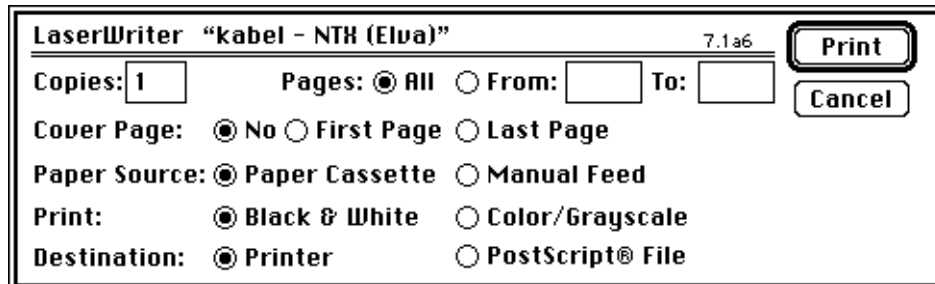
Any time that you change printers, or anytime that you want to change paper size or orientation (e.g., landscape versus portrait), you should select the appropriate *Page Setup...* command from the *File* menu. There are two page setups stored inside Trade Data Manager – one for charts, and one for text reports. When printing chart windows, Trade Data Manager uses the setup that was defined with the *Page Setup - Chart...* command. When printing text reports, such as the contents of the Roster, or the daily data collection report, Trade Data Manager uses the setup that was defined with the *Page Setup - Text...* command. Selecting either of the page setup commands will

usually cause Trade Data Manager to conduct both a “print style” dialog and a “print job” dialog. The print style dialog specifies paper size, orientation, reduction (on LaserWriter® printers) and other relatively static information. A typical print style dialog for a LaserWriter printer is shown below (print style dialogs for ImageWriter and StyleWriter printers differ in appearance):



LaserWriter Print Style Dialog

The print style dialog is the one you are used to seeing in every Macintosh application when you select the Page Setup command found in the File menu of almost every application. The print job dialog is the familiar dialog that you see whenever you are actually ready to print something in any other Macintosh application. The print job dialog specifies print quality (on ImageWriter® printers), number of copies, page number range, and other printer-specific options. Once you have specified these parameters, you won’t have to re-specify them on every print job in Trade Data Manager, as you would in other applications. The nature of Trade Data Manager’s reports is such that this approach has proven to give the most productive user interface. A typical print job dialog for LaserWriter printers is shown below (print job dialogs for ImageWriter and StyleWriter printers differ in appearance):



LaserWriter Print Job Dialog

To print the currently displayed chart to the currently selected printer, choose the *Print Contract...* command (*Command-P*) from the *File* menu. You will get a print job dialog, to specify the number of copies and page range, but you will not have to perform a print style dialog. The chart will fill the entire page, and will be labeled with the commodity or stock symbol, delivery month, and contract file name at the top of the chart. Price axis scaling will be re-optimized for the resolution of the printer and size of the paper you are using, so you may see more price labels than you saw on the screen. Only the chart data that will fit on one page will be printed – no multiple page charts are supported. The printed chart will start with price data from the same day as the starting day’s price data visible on the chart displayed on the screen. On some printers, the aspect ratio of the printer is very different from the screen, so you may find more price bars on the chart than were able to fit on the screen, or more white space at the end of the chart than was present on the screen. Although this is not a true “what you see is what you get” (WYSIWYG) approach to printing, the resulting chart is more useful and better utilizes the higher resolution capability of the printer (this approach is sometimes referred to as “WYGIWYG”, which stands for “what you get is what you got”).

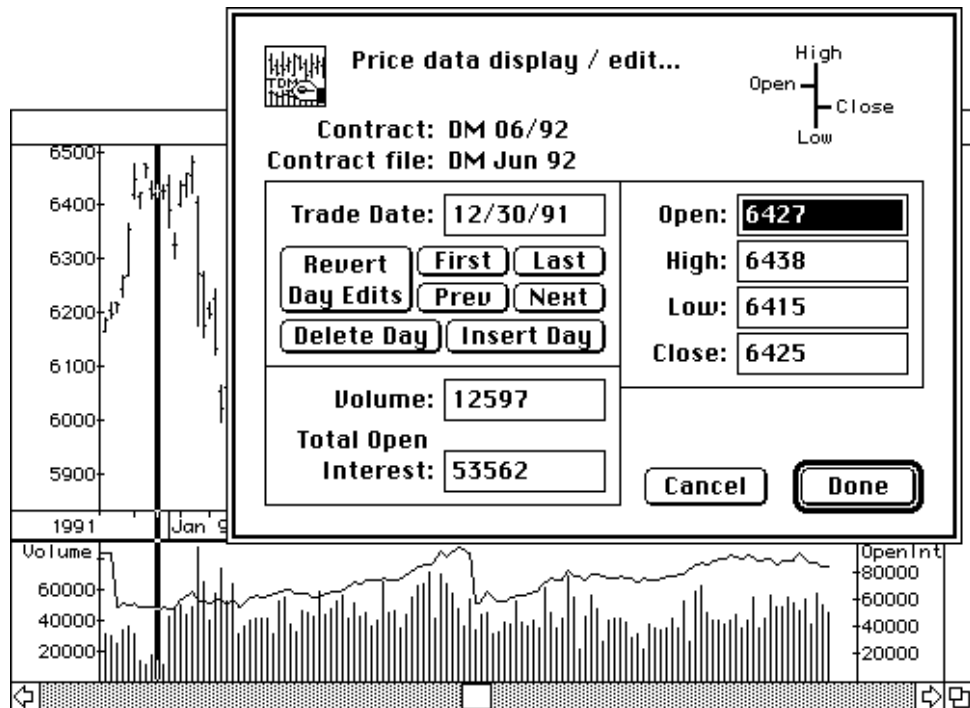
If you experience problems in printing, check the following:

- 1) Is the printer cabled to the printer port on the back of your Macintosh?
- 2) Is the printer power switch turned on?
- 3) Is the printer “on-line” switch set to on-line?
- 4) Are the appropriate port, printer driver, and printer selected in the *Chooser* Desk Accessory? (Pull down the Apple menu, which is the menu on the extreme upper left of your screen with the Apple icon, and select the “*Chooser*” desk accessory. Click on the appropriate printer driver icon within the *Chooser*; then click on the printer that you will be using in the scrolling list on the right side of the *Chooser* dialog. Click on either the modem icon or the printer icon, as appropriate, to indicate which port the printer is attached to.)
- 5) If you are connected to an AppleTalk[®] network, is the *AppleTalk Active* radio button in the *Chooser* set to the “on” position? If you are not using an AppleTalk network, is the *AppleTalk Inactive* radio button set to the “on” position?
- 6) If you are using an ImageWriter printer, is the *Best* or *Faster* radio button selected in the print style dialog? (Use the *Page Setup-Text...* command in Trade Data Manager’s *File* menu to display the print style dialog.)

If you have a LaserWriter printer or a PostScript[®] compatible language printer, you can set the *Reduce or Enlarge* text-box within the *Page Setup...* dialog (the “print style” dialog) to a number smaller than 100% to get more days of data plotted on the printer than you can see on the screen. By setting the reduction to 50%, for example, the number of price and volume bars printed on the printer becomes twice the number of bars displayed on the screen. You can print up to two years worth of data on a single printed chart by using this feature without losing the ability to resolve individual price bars.

Editing contract data files

Any time that a daily view chart window is displayed on the screen, you can display or edit the price, volume, or open interest data simply by pointing the cross-hair cursor at the price or volume bar that you want to display or edit and clicking on or near that bar. The chart window must be in daily view, not weekly or monthly view, in order to edit or display price data. The selected price and volume bar will be highlighted in your preferred highlight color (as determined by your Macintosh Control Panel settings), and the *Price data display / edit* dialog will appear, as shown below, accompanied by the chart window that was displayed before clicking on one of the price bars:

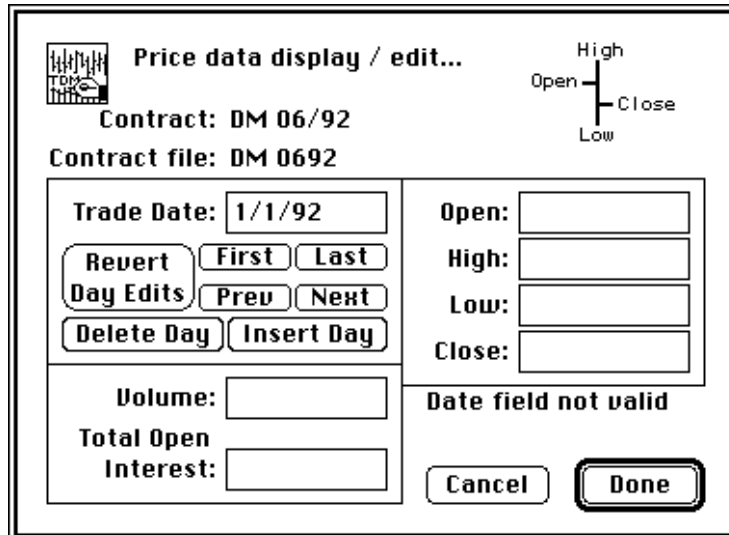


Price Data Display / Edit Dialog

The *Price data display / edit* dialog displays the commodity or stock symbol for this chart window, the delivery month and year, the full contract file name, the day's date for the selected price and volume bars, the open, high, low, and close prices for the selected day, and the total volume data for the day. For commodities, the total open interest is displayed, while stocks display any dividend data for the selected day on the day the stock was declared ex-dividend. Price data are always shown in standard quotation format.

Several buttons allow you to browse through the contract data, advancing to the next trading day by clicking the *Next* button, moving to the previous day by clicking the *Prev* button, or moving to either the first or last trading day on file or by clicking the *First* or *Last* buttons respectively. As you move through the file, the price and volume/open interest fields are updated to show the contract data for that day's entries.

You can type a new date into the *Trade Date* field directly from the keyboard, and the dialog will display data for that date in all the other fields. As you are typing, Trade Data Manager monitors the value in the *Trade Date* field and checks to see if it is a valid date specification, and if the date is a valid US exchange trading date (unless this feature is specifically disabled using the *Data base settings* dialog). You will see the message “Date Field not Valid” flash up on the dialog near the lower right hand corner anytime the current date is invalid. Trade Data Manager will blank-out all the price data and volume/open interest data fields anytime the *Trade Date* field is not currently valid, so you won’t get confused and think you are looking at real trading data for a fictitious date. As soon as you have typed a valid date, or clicked the *First, Last, Prev, or Next* buttons, Trade Data Manager will update all the fields for the date shown. The example below shows the appearance of this dialog when an invalid date is present in the date field:



Price Data Display / Edit Dialog

You can type new price data or new volume or open interest data directly into any of the editable fields of the dialog at any time. You can advance from one editable field to the next by typing the *tab* key, or by selecting the text in the field with the mouse, or by double-clicking the text in a given field. Once a given field is selected, you can type in new data. Be sure to type price data in standard quotation format! There are no “decimal points” required or allowed, and you should be aware of the quotation format used for each commodity or stock, which is defined in the Commodity Fact file.

The *Delete Day* button will delete all the price and volume/open interest data for the currently displayed day, by deleting the entire record for that day. You probably will never need this button, so if you find yourself thinking that you need to click this button, think again. Clicking this button or performing other editing action does not immediately update the file on disk – only the copy of the file in memory is being edited. In general, this is a dangerous button, and it is colored red on Macintosh systems that support color to warn you.

The *Insert Day* button is generally used to add a new day’s data to the *end* of a contract file, if you are performing manual daily updates, or to insert data for a day that somehow was never posted to the file, and is missing. Trade Data Manager will not allow you insert a day that is not a valid US trading day, such as a holiday, nor will it allow you insert a day that is already in the file, creating a second record for the same date. The primary use of this button is to support manual updates to the database, at the end of the file. You can also use this button to insert a day that you forgot to collect data for, however you will have to enter all of the data manually.

If you have typed new data into any of the price, volume, or open interest fields, and have subsequently changed the date being displayed, or if you have clicked either the *Delete Day* or *Insert Day* buttons, Trade Data Manager will display the message “Contract Modified” in the space at the lower right hand corner, as shown below:

Price data display / edit...

Contract: DM 06/92
Contract file: DM 0692

Trade Date: 1/31/92

Open: 6077
High: 6146
Low: 6043
Close: 6076

Volume: 54467
Total Open Interest: 66816

Contract Modified

Buttons: Revert, Day Edits, Delete Day, Insert Day, First, Last, Prev, Next, Cancel, Done

Price Data Display / Edit Dialog

This message alerts you to the fact that the contract data is now different from the data stored on disk. If you subsequently dismiss the dialog by clicking *Cancel*, or by typing the *Escape* or *Tilde* keys, Trade Data Manager will restore the contract data from the disk copy, reverting all edits. If you confirm the dialog by clicking the *Done* button, or by typing *Return* or *Enter* keys, Trade Data Manager will save the edits you have done in the copy on the contract data in memory, but these changes will *still not be saved to disk at that time*. Only later, when you select the *Save* command or the *Save As...* command from the *File* menu, Trade Data Manager will save these changes to the original contract data file. If you close a chart window that has been edited but not saved, or if you do a *Close All* command when some chart windows contain altered contract data, or if you try to exit Trade Data Manager, the program will prompt you for each of the modified contracts to ask you whether you wish to save or discard these edits.

If you open an empty contract data file for display on the screen and click anywhere within the bar chart or volume regions of the chart window, the *Price data display / edit* dialog will appear with only the *Trade Date* text-box and the *Insert Day* buttons visible, as shown below:

Price data display / edit...

Contract: ED 09/92
Contract file: ED Daily

Trade Date:

Insert Day

Open:
High:
Low:
Close:

Volume:
Total Open
Interest:

Date field not valid

Cancel **Done**

Price Data Display / Edit Dialog

The only valid operation that can be carried out on an empty contract data file is to insert a new day's entries, hence only the *Insert Day* button will be visible. You must first type a valid trading date into the *Trade Date* text-box, then you can click the *Insert Day* button to activate the open, high, low, close, volume, and open interest data fields for editing.

If at any time you delete all the data within a contract data file from within the *Price data display / edit* dialog, the dialog will revert to the appearance shown above as if you had clicked the mouse on an empty contract.

Editing contract data files with a text editor

You can directly edit the ASCII text representation of any contract data file using any editor capable of editing text files. You should never have to do this, however you may need to perform this operation if you are obtaining contract data in ASCII format from another application, and that application does not precisely meet Trade Data Manager's data format requirements. If you have a word processor application such as Microsoft Word[®], Claris MacWrite[®], WriteNow[®], or WordPerfect[®], or if you have a programming text editor, the contract data file can be directly edited if it uses the ASCII text file format.

If you wish to edit a contract data file that has been stored as either the TDM Contract File type or the CompuTrac/M file type, open the contract using the *Open Contract w/Roster...* or *Open Contract w/File...* commands under the *File* menu, then use the *Save As...* command under the *File* menu to save the file under a new name, selecting the *Text file type* radio button in the File Save dialog that appears. Use your word processor or programming editor to open the new file that you just created, and edit the file. If you are using a word processor, be sure to set the page margins wide enough so that the individual data records do not wrap-around at the end of the line. If you forget to do this, many word processors will insert extra carriage return characters in the middle of each line that has wrapped-around when the file is saved as a text file!

Once you have finished with any editing that you wish to perform using a word processor, you should save the file using the word processor as a TEXT file, which generally requires that you specify some option within the word processor's *Save As...* command.

If you wish to save the edited file as a TDM Contract File type, open the edited file using Trade Data Manager's *Open Contract w/File...* command, then use the *Save As...* command to save the file under either the same name or a new name, clicking the TDM Contract File type radio button before confirming the File Save dialog.

If you wish to save the edited file as a CompuTrac/M file type, open the edited file using Trade Data Manager's *Open Contract w/File...* command. Select the *Data Base Settings...* command under the *Service* menu, and select the *Tab delimiters* pop-up menu item for the default delimiter character. Use the *Save As...* command to save the file under either the same name or a new name, clicking the *Text file type* radio button before confirming the File Save dialog. Start up the CompuTrac/M application, select the *Open...* command from the *File* menu, then select the *TEXT* pop-up menu item from the *Look for:* pop-up menu in the File Selection dialog that appears. Click on the file that you wish to open, specify the commodity symbol, formatting information, and field labels in the file information dialog, then after the file has been read, use the *Save As...* command in the *File* menu to save the file in CompuTrac/M format.

If you use CSI's QuickTrieve software on an IBM PC-compatible to generate an ASCII text file from a contract in the QuickTrieve database, using the *Print file* command, you will find that the first record of data in the resulting file contains a print header that must be removed before Trade Data Manager can read the file correctly. Use the text file editing procedure described above to remove this header record.

Default chart settings

The *Chart Settings...* command in the *Windows* menu allows you to change the default chart view parameters whenever new chart windows are opened, as shown below:

Chart settings...

Number of windows before wrap-around:

Window offsets: Horizontal: Vertical:

View UOI chart UOI chart % height:

View dot grid Price bar spacing:

View positions

View orders

View position tails

View order tails

View order types

Scale by entire chart

Whole chart cross-hair cursor

Default view:

Daily

Weekly

Monthly

Chart Settings Dialog

The first three fields determine how new windows are “tiled” (overlapped and positioned) on the screen. The *Number of windows before wrap-around*: parameter determines how many chart windows will overlap each other with a small horizontal and vertical offset in the upper left corner of each new window, relative to the previous window, before the tiling process starts over at the upper left corner of the screen. A smaller number allows each window to be larger, while a large number causes each window to be small. A value of 4 to 32 windows works best for this field. The horizontal and vertical window offset fields specify the offset, in terms of pixels, that will be inserted in the starting position of each new window relative to the previous window, at the upper left corner of the window. Values of zero to 10 pixels work best for these fields. If you have a very large monitor, such as a two page display, you may wish to set the number of windows before wrap-around to the maximum value of 32, and set the horizontal and vertical offsets to 15 pixels. This combination of settings will keep the size of the chart windows to a reasonable size, so they won’t take up the whole screen.

You should experiment with these settings to get the tiling effect that works best in your use of Trade Data Manager for the particular display screen on your Macintosh. Your productivity in navigating between multiple open windows can be enhanced by optimizing these parameters.

The *VOI chart % height* field determines the initial size relationship between the price bar chart region and the volume/open interest chart region within the window. Expressed as a percentage, a value of 25%, for example, would cause Trade Data Manager to scale the volume/open interest chart to take up 25% of the total chart window height, leaving about 75% of the window for the price bar chart. Values entered into this field must be integers, in the range of 1 to 99 percent.

The *Price bar spacing* field sets the initial number of pixels in the *Chart scaling parameters* dialog, and is used to establish the space between the close tick of one bar to the open tick of the next bar in the horizontal direction. Usually you will want zero for this value. A value of zero to 99 pixels is allowed.

The *View VOI chart* check-box, if checked, enables the display of the volume/open interest chart region and the heavy divider line, otherwise only the price bar chart is displayed in the window for each new chart window opened.

The *View dot grid on* check-box, if checked, will turn on the dotted grid in all new chart windows that are opened.

The *View positions* check-box, if checked, will turn on the display of Account Status file open positions in all new chart windows that are opened. Position marks are drawn in bright red on color displays.

The *View orders* check-box, if checked, will turn on the display of Account Status file orders in all new chart windows that are opened. Order marks are drawn in bright blue on color displays.

The *View position tails* check-box, if checked, will turn on the display of horizontal lines that start at each position mark and end at the right edge of the window, in all new chart windows that are opened. The *View positions* mode must also be enabled in order to view position tails.

The *View order tails* check-box, if checked, will turn on the display of horizontal lines that start at each order mark and end at the right edge of the window, in all new chart windows that are opened. The *View orders* mode must also be enabled in order to view order tails.

The *View order types* check-box, if checked, will turn on the display of the order type label, such as “Stop”, “Limit”, or “MIT”, in all new chart windows that are opened. The *View orders* mode must also be enabled in order to view order types.

The *Scale by entire chart* check-box, when checked, causes new chart windows to scale the price and volume bars by the highest high and lowest low of the entire contract file, instead of scaling by the highest high and lowest low of the data visible within the current window.

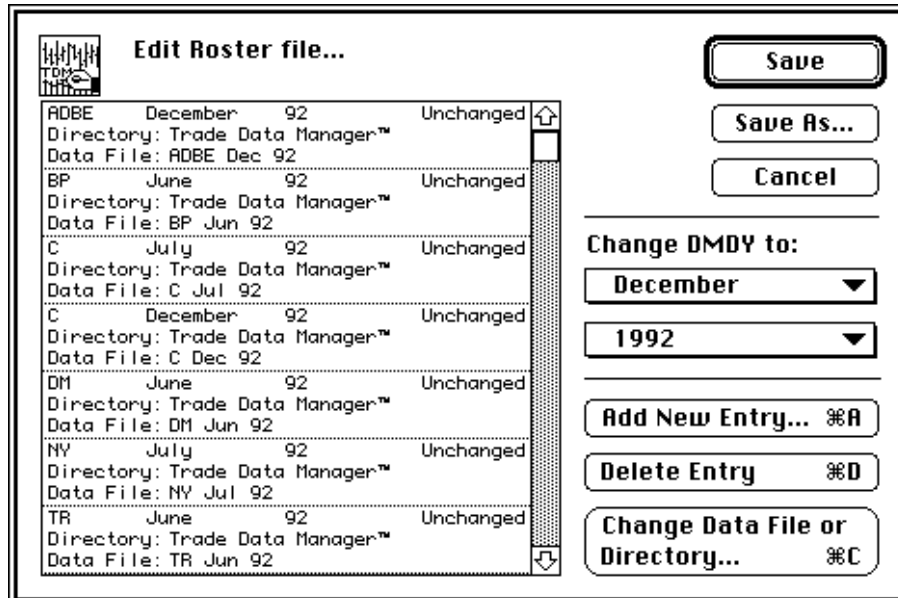
The *Whole-chart cross-hair cursor* check-box, if checked, will enable the whole-window cross-hair cursor whenever a new chart window is opened, otherwise the standard cross-hair cursor will be used.

The *Default view* radio button group allows you to specify the initial chart view as a daily, weekly, or monthly view.

Almost all of the parameters that you can set with the *Chart settings* dialog can be changed for any given chart window through use of *View* menu commands, when the chart is displayed. *View* menu commands generally apply to the front-most chart window only.

Viewing and editing the Roster file

The Roster file can be displayed on the screen by selecting the *Open Roster...* command in the *File* menu or by typing *Command-L*. This command displays the *Edit Roster file* dialog, which allows you to browse through the currently defined Roster to examine any of its entries, add new entries, delete entries, or to edit any entry:



Edit Roster File Dialog

For each entry in the Roster, Trade Data Manager displays the commodity or stock symbol, delivery month, delivery year, the associated data file name, and the folder name in which the data file is located. As each entry is selected, the delivery month and delivery year pop-up menus on the right side of the dialog are updated with the current values. The status of each entry is displayed on the right side of the top line of information for each entry. When the dialog first appears, the status information for each entry will read “Unchanged”.

Entries can be selected by clicking on them with the mouse, or by typing either the first character or any number of characters of the commodity symbol, or by typing the up or down arrows, *page up* or *page down* keys, or *home* or *end* keys on your keyboard. If you have typed a commodity symbol, the *tab* key will advance the selection from the current entry to the next entry that matches the commodity symbol that was previously typed.

Changing the delivery month or year

To change the current delivery month or year information, select an entry, then click and drag in the delivery year or delivery month pop-up menu, releasing the mouse at the delivery year or month desired. You can also use a keyboard short-cut whenever you want to select a delivery month by holding down the command key and typing the industry-standard delivery month symbol. For example, a *Command-N* selects a delivery month of July. You will see the delivery month and year information within the scrolling list immediately updated with the new values. Note that the Roster file on disk is not altered by these actions – only the copy of the Roster in memory is being edited.

The delivery year menu always displays the current system year plus five forward years and one year past. As with the delivery month pop-up menu, command-key combinations may be used as a keyboard short-cut, where the last digit of the year number is used to specify the year, as shown below:

1992	⌘2
1993	⌘3
1994	⌘4
1995	⌘5
1996	⌘6
1997	⌘7
1998	⌘8

Delivery Year Pop-up Menu

The delivery month pop-up menu is shown below. Each delivery month is listed along with the conventional delivery month letter used by most exchanges, in command-key format. You can also specify a special delivery month for CSI data products which are not actual commodity futures contracts:

January	⌘F
February	⌘G
March	⌘H
April	⌘J
May	⌘K
June	⌘M
July	⌘N
August	⌘Q
September	⌘U
October	⌘U
November	⌘H
✓December	⌘Z
.....	
Special DMonth...	⌘/

Delivery Month Pop-up Menu

Special delivery month specification

If you select the *Special DMonth...* command (or type *Command-/(Command-forward slash)*) within the delivery month pop-up menu, the *Special Delivery Month* dialog will appear, as shown below:

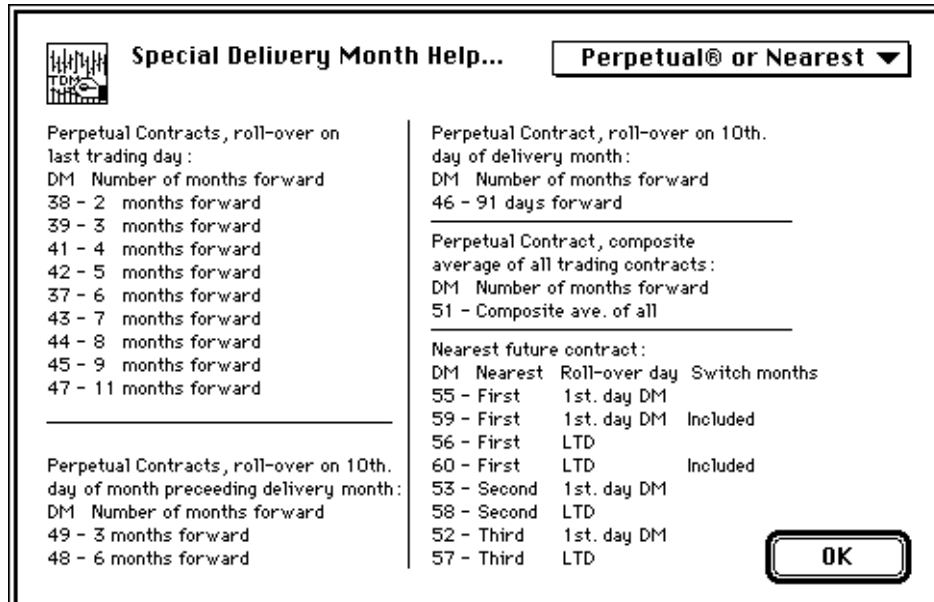


Special Delivery Month Dialog

The *Special Delivery Month* dialog provides a mechanism to specify various custom data products, such as CSI's Perpetual Contracts, or data products such as cash contracts, industry indices, and other financial data. Refer to the *CSI Commodity Data Fact Sheets* for information on special delivery month codes.

To specify a special delivery month in this dialog, simply type a number from the keyboard. This number must be between 39 and 99. To obtain information on the various special delivery month codes and their meanings, you can consult the *CSI Commodity Data Fact Sheets* that are provided with your account, or you can click the *Help...* button in the *Special Delivery Month* dialog.

The *Help...* button causes the *Special Delivery Month Help* dialog to be displayed. The first page of this dialog is shown below:

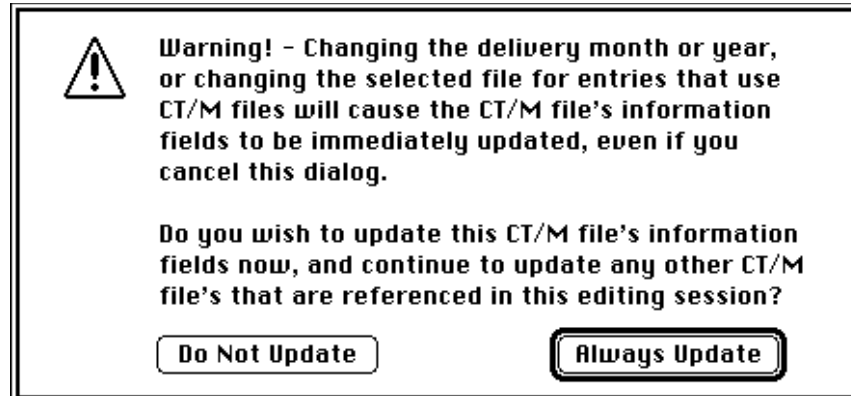


Special Delivery Month Help Dialog

You can select between any of the seven displays within this help dialog by clicking and dragging the mouse on the topic pop-up menu in the upper right hand corner of the dialog. Each display gives a short summary of the various special data products available and the associated delivery month codes. Some of the commodity codes listed are not present in the default Commodity Fact file that is shipped with the program. You will need to enter data for these items yourself using the *Commodity Fact file edit* dialog.

You will generally only want to change the delivery month or year immediately after adding new entries to the Roster. The only time it makes any sense to change the delivery month or year of an older entry in the Roster would be when you have performed contract roll-over and have chosen to maintain your database using the continuous contract paradigm, but have not elected to have the daily update process automatically change the Roster entries for you. See the section titled "Daily update data collection session" for details on this operation.

If you change the delivery month or year for a file which uses the CompuTrac/M file type, you will get an alert warning you that the delivery month information in the resource fork of the CT/M file should also be updated at this time, as shown below:



CT/M File Information Update Warning Alert

The *CT/M File Information Update Warning* alert will **only** appear the **first** time that you attempt to set the delivery month or year for a CT/M file, or when you change the selected file for the Roster entry in question. If you elect to confirm the alert, by clicking the *Always Update* button (which you should), the delivery month information for the file in question will be immediately updated. In addition to updating the delivery month and year, the file information will be updated to reflect the commodity or stock symbol and quotation format information from the selected Roster entry. The quotation format information is taken from the currently selected Commodity Fact file. Note that the quotation format information may not be the same as what you expect if you had earlier entered this information from within the CompuTrac/M application. Be very careful here if you are using different price format conventions within CT/M than the ones you are using within Trade Data Manager!

If you subsequently cancel the Roster file editing session, the file information for that CT/M file will still have been modified, even though the Roster entry will not be modified. You must be very careful to consider the effect that this will have on your database, and keep the file information in the CT/M file in synchronization with the information for that file in the Roster. A more detailed discussion of CT/M file synchronization appears in the section titled "data Management Utilities", under the subsection titled "Creating New Files."

If you click the *Do Not Update* button in the alert, the CT/M file information will not be updated.

Once you have selected one of the two buttons in the *CT/M File Information Update Warning* alert, the alert will not appear again during the same Roster file editing session. If you exit the *Edit Roster file* dialog and then re-enter the dialog, this alert will appear again the first time that you try to change the delivery month or year of any CT/M file.

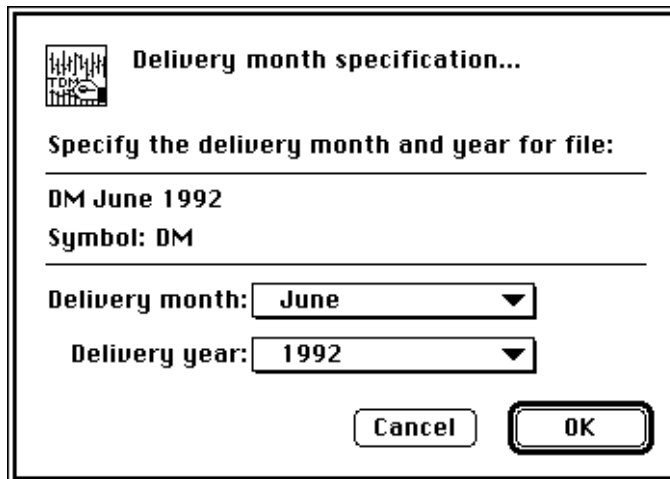
Deleting a Roster entry

To delete an entry from the Roster, select the entry and click the *Delete Entry* button, or type *Command-D*. The selected entry will immediately be removed from the list.

Adding a new Roster entry

To add a new entry to the Roster, click the *Add New Entry...* button, or type *Command-A*, which will cause the *Commodity Symbol Browser* to appear. Select the symbol that you wish to add, then confirm the dialog.

After confirming the *Commodity Symbol Browser*, the delivery month and year must be specified. The *Delivery month specification* dialog will appear next, as shown below:



Delivery month specification...

Specify the delivery month and year for file:

DM June 1992
Symbol: DM

Delivery month: June ▼
Delivery year: 1992 ▼

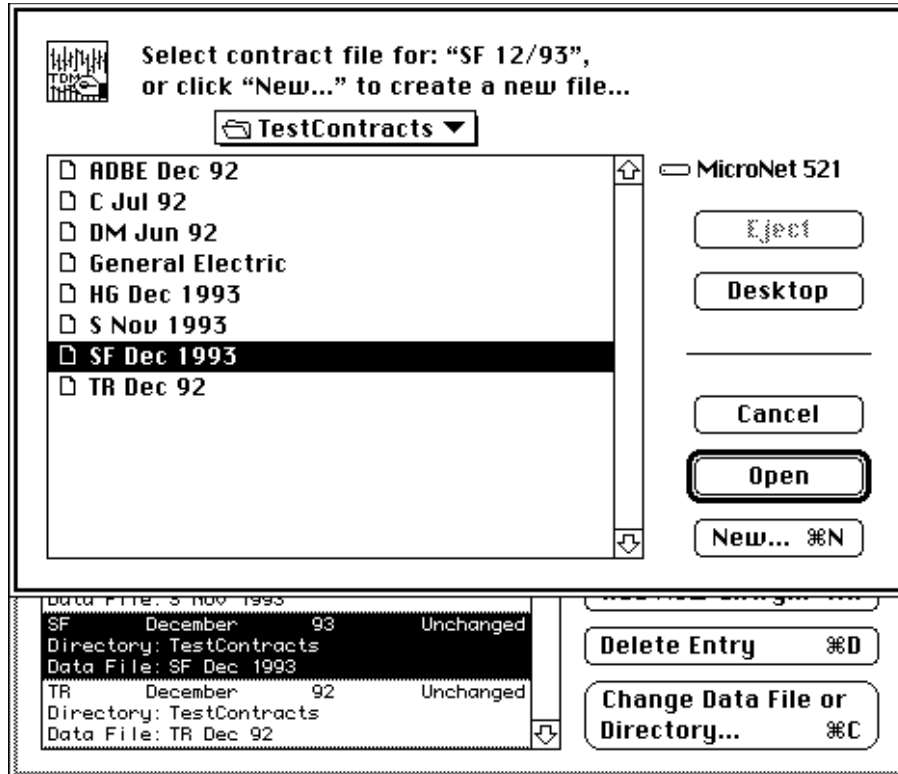
Cancel OK

Delivery Month Specification Dialog

The appearance of the *Delivery month specification* dialog will differ slightly from the above, in that the initial delivery month and year will be set to December of the current system year, and the file name field will be blank.

Select the desired delivery month and year for the new Roster entry, then confirm the dialog by clicking the *OK* button.

Immediately after the *Delivery month specification* dialog is confirmed, a File Selection dialog will appear on top of the *Edit Roster file* dialog, asking you to either select an existing contract data file that will be associated with the new Roster entry, or to click the *New...* button (or type *Command-N*) to create a new file, as shown below:

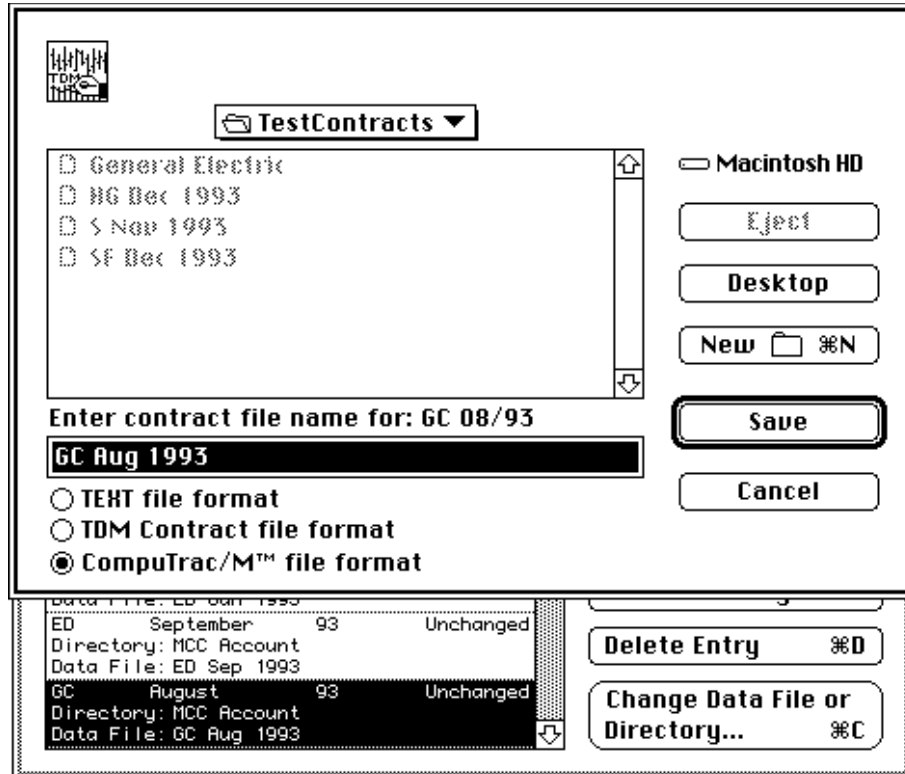


File Selection Dialog

The contract data file does **not** have to be located in the same folder as the Roster, or Trade Data Manager itself. Contract data files can be located anywhere you like in your folder hierarchy.

If you cancel the File Selection dialog by clicking the *Cancel* button, the new entry that was being added to the Roster will not be added.

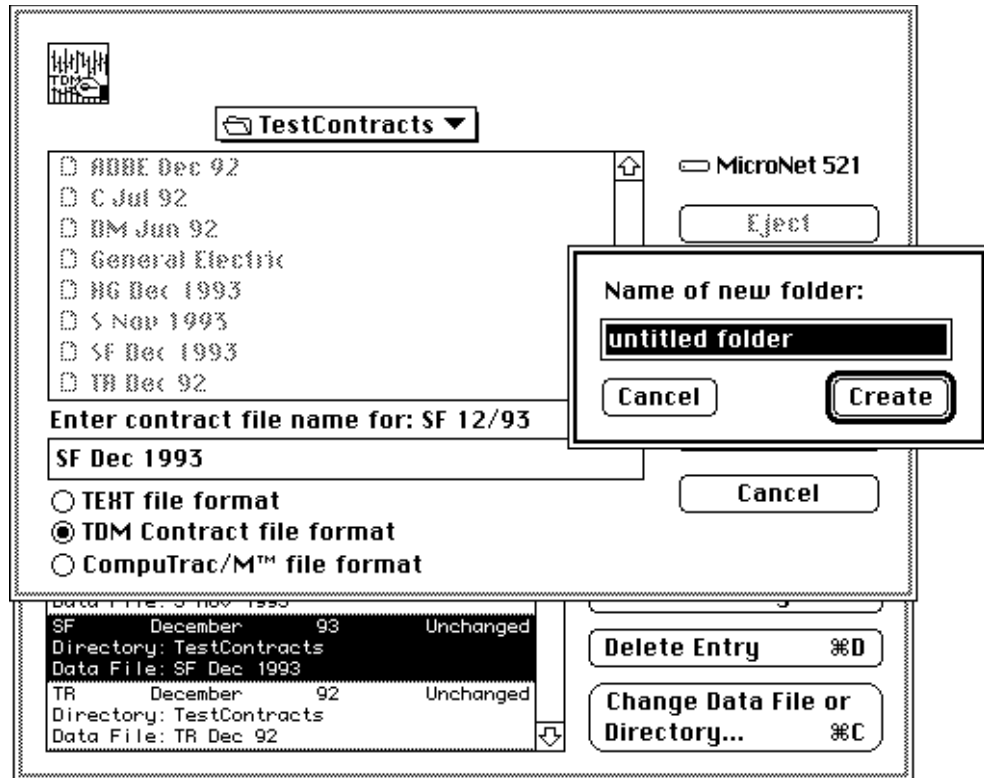
If you elect to create a new contract data file by clicking the *New...* button, the File Selection dialog will be removed and a File Save dialog will take its place, allowing you to create a new contract data file for the new Roster entry, as shown below:



File Save Dialog

When creating new contract data files, you have a choice as to the file type of the data file that will be created. The initial selection for the file type radio buttons in the File Save dialog will be equal to the default file type selected in the *Data base settings* dialog, which you can access by selecting the *Data Base Settings...* command under the *Service* menu. You can override the default file type selection by clicking the desired file type radio button in the File Save dialog.

If you want to create a new folder before creating the new contract data file, click the *New Folder* button, where “Folder” is actually a picture of a small folder, in the File Save dialog, or type *Command-N* as a keyboard short-cut. Clicking the New Folder button causes a small New Folder dialog to appear superimposed as shown below:



New Folder Dialog

After entering the name of the new folder, the File Save dialog will update to show the files inside the new folder, and you can then enter the name of the new file and confirm the File Save dialog.

After confirming either the original File Selection dialog or the File Save dialog, the *Edit Roster file* dialog will reappear with the specified file name entered into the scrolling list entry. You should immediately update the delivery month and year of this entry to correspond with what you want to have in the finished Roster, using the delivery month and delivery year pop-up menus. Keep in mind that there is a limit of 256 entries in the Roster file at any one time.

Changing the selected contract data file

If you wish to change the contract data file assigned to a particular Roster entry, select the entry, then click the *Change Data File or Directory...* button, or type *Command-C*, or double-click the entry, and the File Selection dialog will appear. Select the contract data file desired and confirm the dialog, or click the *New...* button in the dialog to get the File Save dialog, which will allow you to create a new contract data file.

If you change the contract data file associated with a given Roster entry to a CompuTrac/M type file, the *CT/M File Information Update Warning* alert described earlier in this section will appear, warning you that the CT/M file's information fields should be updated immediately. The file information will be updated to reflect the commodity or stock symbol, delivery month, delivery year, and quotation format information from the selected Roster entry. The quotation format information is taken from the currently selected Commodity Fact file. Note that the quotation format information may not be the same as what you expect if you had earlier entered this information from within the CompuTrac/M application.

If you subsequently cancel the Roster file editing session, the file information for that CT/M file will still have been modified, even though the Roster entry will not be modified. You must be very careful to consider the effect that this will have on your database, and keep the file information in the CT/M file in synchronization with the information for that file in the Roster. A more detailed discussion of CT/M file synchronization appears in the section titled "data Management Utilities", under the subsection titled "Creating New Files."

If you click the *Do Not Update* button in the *CT/M File Information Update Warning* alert, the CT/M file information will not be updated.

Once you have selected one of the two buttons in the *CT/M File Information Update Warning* alert, the alert will not appear again during the same Roster file editing session. If you exit the *Edit Roster file* dialog and then re-enter the dialog, this alert will appear again the first time that you try to change the selected contract data file of any Roster entry to a CT/M file.

After you have finished displaying the Roster, or editing its contents, you can either confirm the dialog by clicking the *Save* button, or by typing the *Return* or *Enter* keys. You can abort editing of the Roster by clicking the *Cancel* button, or by typing the *Escape* or *Tilde* keys.

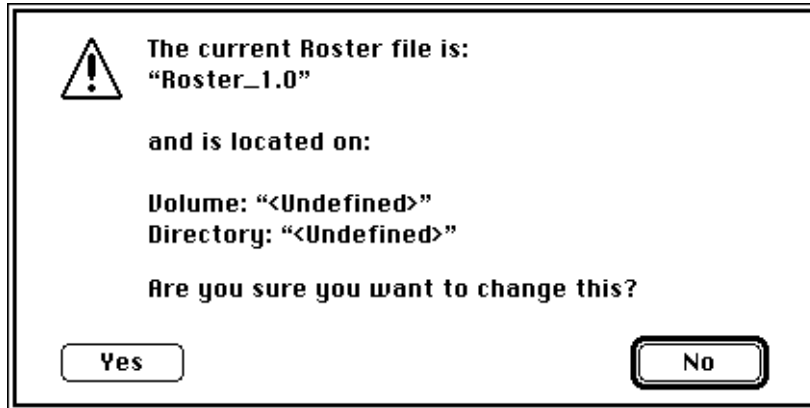
When the Roster is saved to disk, all entries are sorted and stored in an ascending alphabetical order. If you have a very large Roster, this may take a few seconds to complete.

You can create a new Roster file, with a different name, or in a different folder, by clicking the *Save As...* button to confirm the dialog. Trade Data Manager will display a File Save dialog, which allows you to type the name of the new Roster file, and to navigate your disk folder hierarchy to specify where to place the file. Saving the Roster under a new file name **does not** change the currently defined Roster that Trade Data Manager will use for *Roster Browser* or daily update functions! To make the new Roster file the active Roster, you must define it to be the active Roster by selecting the *Define Roster...* command under the *Service* menu.

Anytime that you edit the Roster and confirm the changes, Trade Data Manager will automatically update all open chart windows on the display. This is necessary because you may have made changes that invalidate the contents of a given chart window, such as the delivery month or year associated with a particular chart window.

Defining the current Roster file

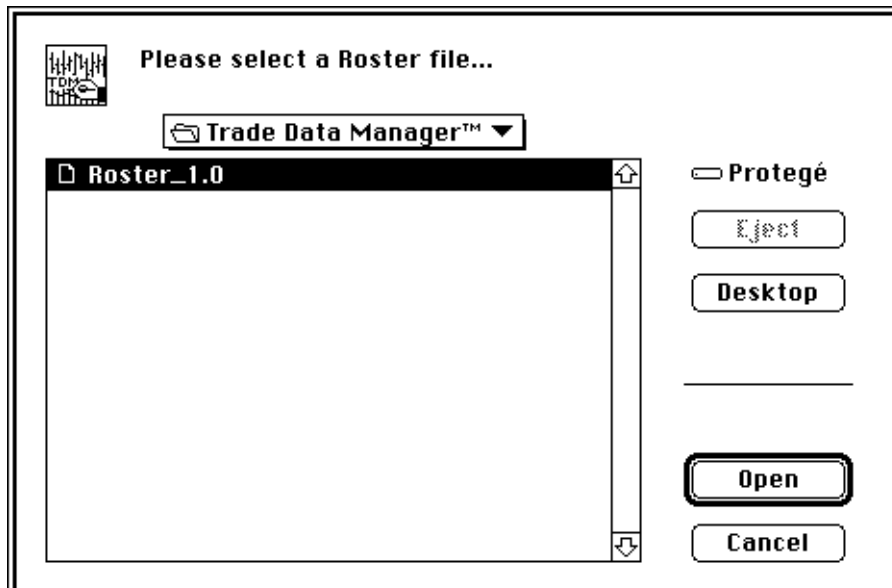
To select a new Roster file as the current Roster, activate the *Define Roster...* command from the *Service* menu. Trade Data Manager will bring up an alert which displays the name and location of the currently selected Roster file, and which asks you to confirm that you really want to change the current selection, as shown below:



Define Roster File Alert

If the current Roster file is located on a disk that was ejected, or if the Trade Data Manager application itself has been moved to a different computer system, the volume and directory indicating the current location of the Roster may appear as "<Undefined>", as shown above.

The default button in this alert dismisses the alert without selecting a new Roster file, for safety. Click the *Yes* button explicitly if you really want to select a different Roster file. Trade Data Manager will then display a standard File Selection browser, listing only those files which are of the Roster file type, plus any folders that are within the currently selected folder, as shown below:



File Selection Browser – Roster File Selection

To select a different Roster file, navigate through your folder hierarchy using the File Selection browser until you find the Roster file desired, then click on the desired entry, then click the *Open* button (or type *Return* or *Enter*). Alternatively, you can double-click on the desired Roster entry to select the file.

Whenever a new Roster file is selected, the new Roster file is read into memory, and all open chart windows are updated automatically (since the new Roster may define different delivery months for given files than the previously selected Roster, any open chart windows become invalidated and therefore must be updated). If you deleted entries from the Roster that were in use in a given chart window, that window will be closed automatically. You will be given the opportunity to save any changes to chart windows that are being closed before they are closed.

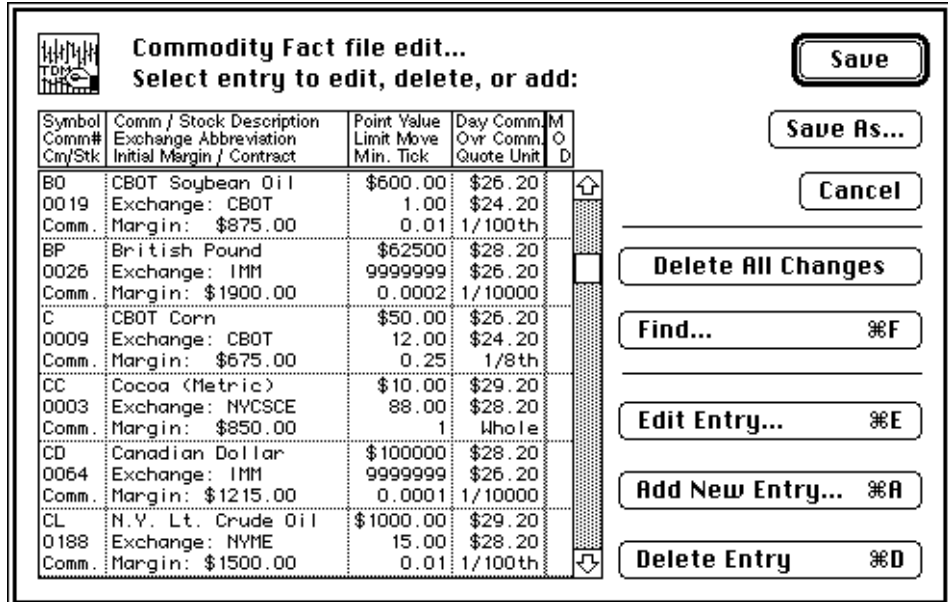
Printing the Roster file

To print the contents of the Roster file, select the *Print Roster...* command from the *File* menu. Trade Data Manager will conduct a print job dialog with you, then the Roster will be printed using the previously stored print setup parameters for text reports.

The printed report contains some detailed information not found in the *Edit Roster file* dialog, including the location of the Roster file in the disk folder hierarchy, and the parent directory of each contract data file in the Roster.

Viewing and editing the Commodity Fact file

The Commodity Fact file can be displayed on the screen by selecting the *Open Commodity Fact File* command (*Command-F*) in the File menu. This command displays the *Commodity Fact file edit* dialog, which allows you to browse through the currently defined Commodity Fact file to examine any of its entries, to add new entries, delete entries, or to edit any entry. A sample *Commodity Fact file edit* dialog is shown below:



Commodity Fact File Edit Dialog

All the fields within each Commodity Fact file record are completely displayed for each entry. Above the scrolling entry list is a legend that briefly describes what each field means, to jog your memory. You can select any entry for deletion, display, or editing by clicking the mouse on the entry. Scrolling of the list can be accomplished through the scroll bar's up or down arrows, dragging the scroll bar thumb, clicking the scroll bar page up or down regions, or by clicking and dragging the mouse beyond the top or bottom of the list region. You can also perform entry selection by typing the first character of the commodity symbol on the keyboard, or any number of the first few characters of the commodity symbol, or by typing the *tab* key to advance the selection to the next matching entry after typing either the first character or any number of the characters of a commodity symbol. On extended keyboards, the up or down arrow keys (\uparrow / \downarrow), *page up* or *page down* keys, *home*, and *end* keys function to advance the scrolling list one entry at a time, a list window at a time, or to the top or end of the list respectively. Only one entry can be selected at a time.

The leftmost column contains three rows of information. These are, in order from top to bottom, the commodity or stock symbol, the CSI-defined commodity or stock number, and a status field that indicates if the entry is for a stock ("Stock") or a commodity ("Comm.").

The second column from the left for each entry contains three rows of information, which are, in order from top to bottom, the full text description of the stock or commodity, the exchange on which the stock or commodity is traded, and the margin required, in dollars per contract, to trade the commodity. The margin field can be used to hold the percentage margin required to trade stocks, however the current release of Trade Data Manager does not make use of this entry.

The third column from the left for each entry contains three rows of information, which are, in order from top to bottom, the point value, in dollars per whole point, of the commodity contract, the limit move, in points, and the minimum tick size, in decimal, in which the commodity or stock “ticks”. The point value field is set to one dollar for stock entries.

The fourth column from the left contains three rows of information. These are, in order from top to bottom, the round-trip day-trade commission per contract, in dollars, the round-trip overnight commission per contract, in dollars, and the standard quotation format, expressed as a rational fraction of a point.

The rightmost column is used to place an indicator that indicates if the entry for that commodity or stock symbol will be edited or deleted when the Commodity Fact file is written with any changes made during an editing session. If this column is blank, the entry is unmodified. If this column has an “X” in it, as shown below for the Canadian Dollar entry, the entry will be deleted when the dialog is confirmed. If this column contains a diamond mark, as shown below for the CBOT Corn entry, the entry has been edited, and therefore modified.

Commodity Fact file edit...
 Select entry to edit, delete, or add:

Symbol Comm# Ctry/Stk	Comm / Stock Description Exchange Abbreviation Initial Margin / Contract	Point Value Limit Move Min. Tick	Day Comm Ovr Comm Quote Unit	M O D
BP 0026	British Pound Exchange: IMM Margin: \$1900.00	\$62500 9999999 0.0002	\$28.20 \$26.20 1/10000	
C 0009	CBOT Corn Exchange: CBOT Margin: \$675.00	\$50.00 12.00 0.25	\$26.20 \$24.20 1/8th	◇
CC 0003	Cocoa (Metric) Exchange: NYCSCE Margin: \$850.00	\$10.00 88.00 1	\$29.20 \$28.20 Whole	
CD 0064	Canadian Dollar Exchange: IMM Margin: \$1215.00	\$100000 9999999 0.0001	\$28.20 \$26.20 1/10000	X
CL 0188	N.Y. Lt. Crude Oil Exchange: NYME Margin: \$1500.00	\$1000.00 15.00 0.01	\$29.20 \$28.20 1/100th	
CT 0007	Cotton #2 Exchange: NYCTE Margin: \$1475.00	\$500.00 2.00 0.01	\$29.20 \$28.20 1/100th	

Buttons: Save, Save As..., Cancel, Delete All Changes, Find... ⌘F, Edit Entry... ⌘E, Add New Entry... ⌘A, Delete Entry ⌘D

Commodity Fact File Edit Dialog – Modified Entries

Deleting a Commodity Fact entry

The *Delete Entry* button, or a *Command-D* will immediately set the delete mark (the “X” mark) in the currently selected entry in the scrolling list. If you change your mind after deleting an entry, you can “un-delete” the entry by selecting that entry and clicking the *Delete Entry* button again, or by clicking the *Cancel* button (which will exit the dialog and cancel all changes), or by clicking the *Delete All Changes* button.

Deleting all changes to the Commodity Fact file

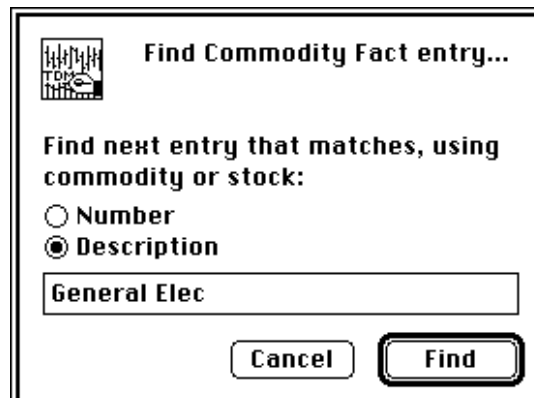
The *Delete All Changes* button immediately reverts the copy of the Commodity Fact file being edited in the dialog to its original, unmodified form. All new records that were added are deleted, all delete marks are removed, and all modified records are restored.

Saving the Commodity Fact file under a different name

You can click the *Save As...* button to save a copy of the Commodity Fact file, including any changes made during the editing session, under a different file name, and/or in a different folder. This button does not modify the original Commodity Fact file, and the new file created **does not** become the currently defined, active Commodity Fact file. You can make the new file the active file by selecting the *Define Commodity Fact File...* command under the *Service* menu.

Searching for Commodity Fact file entries

Since the Commodity Fact file can be quite large, finding a specific entry can be difficult if you don't already know the proper stock or commodity symbol to use as a keyboard short-cut. You can search for entries in the Commodity Fact file that match a specified subset of the *Description* field (defined in the next section), or you search for an entry by its *CSI commodity number*. Both of these search modes are initiated by clicking the *Find...* button (*Command-F*). After clicking the *Find...* button, the *Find Commodity Fact entry* dialog will appear, as shown below:



Find Commodity Fact Entry Dialog

Select whether you wish the search to be performed by commodity number or by the Description field by clicking one of the two radio buttons shown above. Type the commodity number or the description in the text box below, then click the *Find* button to start the search. The search will result in scrolling the *Commodity Fact File Edit* dialog's list to the first matching entry found, and the entry will appear selected.

You can specify a partial description in order to better insure success, if you are unsure of the exact description stored in the Commodity Fact file. In the example above, "General Elec" has been entered, which will match the stored description of this stock, "General Electric Co."

Any occurrence of the text in the text-box within a description field or commodity/stock number is a match. For example, "corn" will match the description "CBOT Corn", and "136" will match the commodity number "0136". All searches are non-case sensitive, so "gas" will match "GAS", for example.

Editing or adding new Commodity Fact file entries

To edit any entry, click the entry in the scrolling list to select it, then click the *Edit Entry...* button, or type *Command-E*. Alternatively, you can double-click the entry. Either action displays the *Edit Commodity Fact file record* dialog, which allows each individual field to be edited:

Edit Commodity Fact File Record...	
<input checked="" type="radio"/> Commodity	<input type="radio"/> Stock
Commodity Symbol: ED	Commodity Number: 141
Exchange Abbrev.: CME	Margin/Contract: 1200.0
Point Value: 2500.0	Limit Move: 2.5
Minimum Tick Size: 0.01	Day Comm: 25.24
Quote Unit: 1/100 (+2) ▼	Overnight Comm: 28.24
Description: Eurodollar	
Cancel Done	

Edit Commodity Fact File Record Dialog

In the example above, the Eurodollar record is being edited. At the upper left of the dialog, two radio buttons allow you to specify if the entry is for a commodity or a stock. Below the commodity or stock symbol field are the exchange abbreviation field, the point value field, and the minimum tick size field, followed by the quotation format pop-up menu, and the full text description field. The right side of the dialog contains, from top to bottom, the CSI commodity number field, the margin per contract field, the limit move field, the round-trip day trade commission field, and the round-trip overnight commission field.

Be very sure to select the appropriate radio button for stocks or commodities, as this selection affects how Trade Data Manager will interpret the daily update file that is sent from CSI over the modem. Stock data that is sent during a daily data collection session is formatted differently than commodity data, and Trade Data Manager will use the indicator in the Commodity Fact file for each entry to determine how to interpret each record sent during the daily data collection session. If you forget to set the radio buttons and you have a commodity number that indicates that the entry is a stock, you will get an error alert if you try to confirm the dialog, and you will need to click on the stock radio button.

The *Commodity Symbol* field should contain a one to six character long symbol. It is highly recommended that you follow the symbol conventions that CSI has defined, even if these are different from the symbols you are accustomed to. In general, the symbols should be all upper-case letters, though this is not required. The symbol must be composed of printable characters only in any case. If you do use upper case letters, you can type the symbol as a short cut to selecting symbols whenever the *Commodity Symbol Browser*, *Roster Browser*, or other dialogs are active. If the symbol to be entered is less than six characters long, just type the symbol, and Trade Data Manager will pad out the field with the required blanks for you. **Note that all symbols in the Commodity Fact file must be unique!**

The *Exchange Abbreviation* field can contain up to six character abbreviations. Trade Data Manager currently ignores the contents of this field, but you may use this field and many of the other fields within the Commodity Fact file as a source of additional information or documentation about a particular commodity or stock, which is especially useful if you interface the database to other application programs.

The *Point Value* field normally contains the value, expressed in dollars per **whole point**, of the underlying commodity contract. Trade Data Manager uses this field to compute changes in account equity, open trade equity, and closed trade gain or loss during the daily accounting operation. **Note that the definition of a “point” here is a whole point, not the size of a “tick”.** For example, the S&P 500 Index futures would have a value of \$500 in this field, Corn, Oats, Wheat, and Soybeans would have a value of \$50, the Swiss Franc would have \$125000, Cotton would be \$500, etc. Stocks should have a value of one dollar in this field. The point value must be between 0.0001 and 1 million inclusive. If you are trading some commodities which are quoted in units other than dollars and you wish to make use of the accounting system, you should enter a static, dollar equivalent value in this field. If all of the commodities that you are trading are quoted in units other than dollars, but are quoted in units that are the same for each commodity (such as Francs), you can ignore the fact the Trade Data Manager thinks that this field and other are dollar denominated, and have all accounting operations take place in consistent, non-dollar denominated units. It is anticipated that Trade Data Manager will be equipped to perform currency conversions in the accounting system in a future release of the program.

The *Minimum Tick Size* field should always be entered in decimal format, and should contain the size of the minimum tick interval, expressed as a fraction of a point. Many commodities have a minimum tick size that is a multiple of the standard quotation format. For example, most grains are quoted in eighths, while the minimum tick is in quarters, and all stocks are quoted (by CSI) in sixty-fourths, while the minimum tick size is an eighth of a point. Trade Data Manager uses this field to control the way prices are converted from their decimal format to a binary format, and back again to a decimal format, to maintain absolute accuracy in the database. Consult your broker’s contract information sheet to determine the minimum tick size for this field. The minimum tick size must be between 0.0001 and 10.0 inclusive.

If the commodity in question uses different tick sizes for different price ranges, or different delivery months (yes – there are some that do!), use the smallest common denominator for all the tick sizes that will be required.

The *Quote Unit* pop-up menu is used to select the appropriate quotation unit size. Trade Data Manager uses this field to control how prices are displayed on charts or on printed reports, to convert prices that are received during the daily data collection session, to convert prices that are received during a historical data collection session, and to control how prices are read into the program from input text-boxes within dialogs that require the user to type in a price. You should consult the *CSI Commodity Data Fact Sheets* to obtain the “conversion factor” for the commodity or stock in question, then select the appropriate quotation unit from the pop-up menu for this field. The pop-up menu indicates the CSI conversion factor next to the quote unit value for each entry in the pop-up. Note that stocks always use 1/64th for the quote unit value.

Be very sure that the quotation unit, minimum tick size, and point value fields are consistent with each other!

You can freely elect to change what quotation format you wish to use for a given commodity, but you must do so consistently. For example, if you wished to have all currency futures quoted with two decimal places of fraction, instead of the usual four (e.g., Swiss Franc quoted as 67.81 instead of .6781), you would change the quotation unit to be 1/100 instead of 1/10000 (conversion factor of +2 instead of +4), and the point value field would be changed to \$1250.00 per whole point from \$125000.00. The minimum tick size would then change from 0.0001 to 0.01 to make everything consistent. This example is particularly relevant to CompuTrac/M users, since CT/M is distributed with sample currency files that use two digits of decimal fraction in all quoted prices.

The *Description* field can contain any arbitrary string of characters, up to 20 characters long. Trade Data Manager currently ignores this field, although you will see it displayed in certain reports and in the daily accounting *Order Fill / Fill Price Confirmation* dialog. You will usually want to enter a more complete name of the commodity or stock than the commodity symbol alone would permit. You can also search for entries in the Commodity Fact file via this field's contents.

The *Commodity Number* field should contain the appropriate commodity number for the stock or commodity being edited, which can be obtained from the *CSI Commodity Data Fact Sheets*. CSI's conventions must be followed here, as Trade Data Manager uses this field to determine which records received during daily data collection sessions should be written to which contract data files. You can enter just the commodity number, without any leading zero digits, in this field. Commodity and stock numbers always lie between 1 and 9999 inclusive. **All commodity or stock numbers in the Commodity Fact file must be unique!**

The *Margin/Contract* field specifies the dollar amount required to trade one contract of the selected commodity. This is, of course, dependent on the commodity broker you are using, and this value will frequently change from month to month. Trade Data Manager currently ignores this field. You may wish to use this field if you have an application that computes financial performance information for your account that you have interfaced to the Commodity Fact file, and you want to perform margin analysis. For stock entries, this field should contain the percentage margin required to trade the stock. The margin per contract field must be between zero and 50000.0 inclusive.

The *Limit Move* field specifies the number of whole points for a limit move. This value may change, depending on market conditions, or depending on whether the contract you are trading is the current "spot" month. Trade Data Manager ignores this field, but you may wish to use this field as a "filter" within a trading system that has been interfaced to the Commodity Fact file to suppress orders from being printed that place stop or limit day-orders at a price that is more than the limit move away from the current closing price, for example. The limit move field must be between 0.0001 and 10 million.

The *Day Comm* and *Overnight Comm* fields are round-trip day and overnight commission fields. These fields should contain the cost, in dollars per contract, of your broker's commission and SEC fee for day-trades and overnight positions, respectively. Trade Data Manager uses these fields to perform daily accounting functions whenever a trade is closed. The round-trip commission fields must both be between zero and 500 dollars inclusive. The comments relative to non-dollar denominated commodities under the point value field description apply to these fields as well.

If you change any of the fields of a given commodity or stock record, and subsequently confirm the dialog by clicking the *Done* button, the *Commodity Fact File Edit* dialog will again be displayed, with the diamond mark under the "MOD" column to indicate that the record has been modified.

The *Add New Entry...* button within the *Commodity Fact File Edit* dialog also displays the same dialog as the *Edit Entry...* button, but with all the fields initially blank or set to default values. You add a new entry to the Commodity Fact file by entering information for all the fields in the same way as you would to edit an existing record. When you are finished entering data, confirm the dialog by clicking the *Done* button, and the new record will be displayed and selected in the *Commodity Fact File Edit* dialog.

Anytime that you edit the Commodity Fact file and confirm the changes by clicking the *Save* button, Trade Data Manager will update all open chart windows on the display. This is necessary because you may have made changes that invalidate the contents of a given chart window (e.g., you may have changed the quote format for a given commodity). As the file is saved, all entries are sorted according to the commodity symbol in an ascending alphabetical order before writing the file to disk.

Using a large Commodity Fact file

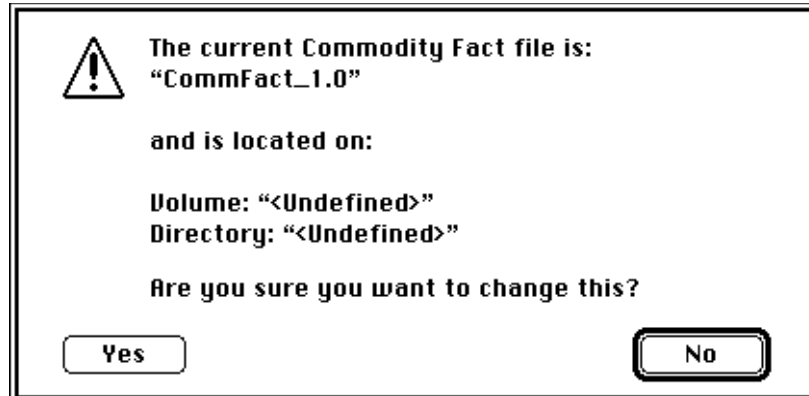
If you have more than 300 records in the Commodity Fact file, Trade Data Manager will require a significant amount of time to read the file at start-up time, or when performing a Save or Save As operation from the *Commodity Fact File Edit* dialog. The Commodity Fact file provided by CSI for all actively traded commodities is well below this limit, and will be read or saved very quickly.

The optional Commodity Fact file provided by CSI that includes data for all stocks in CSI's database is very large, consisting of over 6000 entries. This file is recommended only for those users who contemplate collection of data for several hundred or more stocks. If you will be collecting data for less than 100 stocks, you are better off entering the data for the stocks you need into your own Commodity Fact file yourself, using the *Commodity Fact File Edit* dialog. Alternatively, you can start with a copy of the CSI all-stock Commodity Fact file, then delete all the entries that you won't be needing.

If you elect to use the "all-stocks" Commodity Fact file (or any other large Commodity Fact file), Trade Data Manager will display a progress dialog anytime the file is read from disk, such as when the program is first launched. You will also get a caution alert when you attempt to save changes made in the *Commodity Fact File Edit* dialog. This alert will inform you that the alphabetical sort operation that is normally performed when saving the file may take a long time, and will give you the option to perform the sort or not. A rough estimate of the worst-case sorting time will be displayed in this alert. It is not really necessary for the file to be stored in alphabetical order – this is just a convenience when editing or viewing the file, or when using the Commodity Fact file browser. Progress dialogs will also be displayed during the sort operation (if chosen) as well as during the file save operation under these circumstances.

Defining the current Commodity Fact file

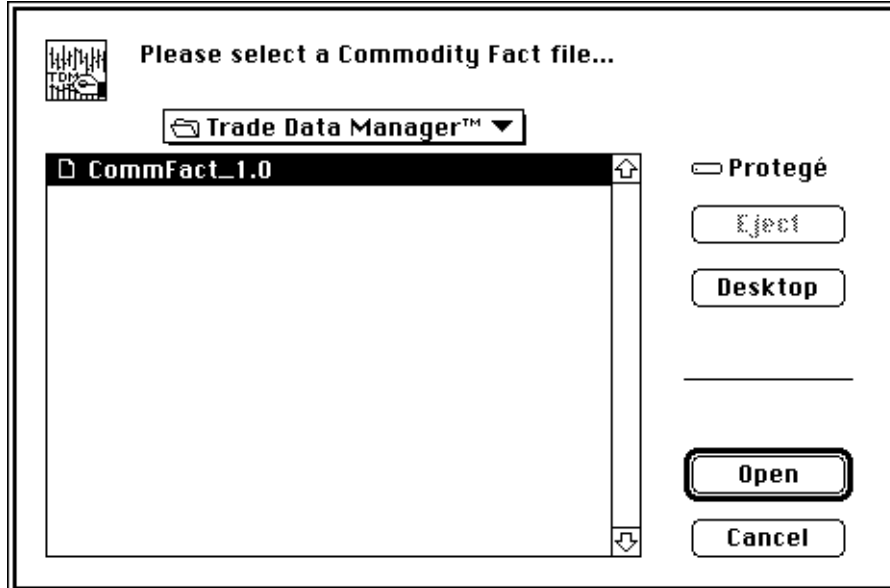
To select a new Commodity Fact file as the current Commodity Fact file, activate the *Define Commodity Fact File...* command from the *Service* menu. Trade Data Manager will bring up an alert which displays the name and location of the currently selected Commodity Fact file, and which asks you to confirm that you really want to change the current selection, as shown below:



Define Commodity Fact File Alert

If the current Commodity Fact file is located on a disk that was ejected, or if the Trade Data Manager application itself has been moved to a different computer system, the volume and directory indicating the current location of the Commodity Fact may appear as "<Undefined>", as shown above.

The default button in this alert dismisses the alert without selecting a new Commodity Fact file, for safety. Click the *Yes* button explicitly if you really want to select a different Commodity Fact file. Trade Data Manager will then display a standard File Selection browser, listing only those files which are of the Commodity Fact file type, plus any folders that are within the currently selected folder, as shown below:



File Selection Browser – Commodity Fact File Selection

To select a different Commodity Fact file, navigate through your folder hierarchy using the File Selection browser until you find the Commodity Fact file desired, then click on the desired entry, then click the *Open* button (or type *Return* or *Enter*). Alternatively, you can double-click on the desired Commodity Fact file entry to select the file.

Whenever a new Commodity Fact file is selected, the new Commodity Fact file is read into memory, and all open chart windows are updated automatically (since the new Commodity Fact file may define different quotation factors or other parameters than the previously selected Commodity Fact file, any open chart windows become invalidated and therefore must be updated). If you deleted entries that were in use for a given chart window, that window will be closed automatically. You will be given the opportunity to save any changes to chart windows that are being closed before they are closed.

Printing the Commodity Fact file

To print the contents of the Commodity Fact file, select the *Print Commodity Fact File...* command from the *File* menu. Trade Data Manager will conduct a print job dialog with you, then the Commodity Fact file will be printed using the previously saved print setup parameters for text reports.

The printed report contains some detailed information not found in the *Commodity Fact File Edit* dialog, including the location of the Commodity Fact file in the disk folder hierarchy (the “parent directory”).

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Daily updating of your database by modem requires that your modem be set up with the correct baud rate settings, number of data bits per “frame”, and other communication related settings. In addition, access to CSI’s computer requires that you have an account with CSI, which will be in the form of a *User ID* and a *User Number*. There are several options as to how you access the CSI host computer, including long distance direct dialing, and access through public packet-switching networks. All the information that Trade Data Manager needs to perform daily data collection is set through the *Service / Comm. Settings...* command under the *Service* menu. The *Service / Comm. Settings...* command will display the *Service / Communication settings* dialog, which is shown below. The dialog is divided into two major sections, one dealing with account information and the data access method (network or long distance), the other dealing with communication settings:

Service / Communication Settings Dialog – Internal Serial Driver View

The *Service / Communication Settings* dialog gives you two primary ways of selecting the kind of serial port and modem control functions that you wish to use. You can choose to use either a built-in serial port driver, internal to Trade Data Manager, or you can choose to use the new Apple *Communications ToolBox* and its associated *Connection Tools* (the *Apple Modem Tool* in particular). You must be running Apple *System 6.0.4* or later, or *System 7*, in order to be able to choose the *Communications Tools*. If you are running an older *System* file, you must use the built-in serial port driver, or you can upgrade your *System*.

Consult the section titled “Installation” for details on how to install the *Communications ToolBox* and its associated *Connection Tools*.

In the example above, the *Internal serial driver* radio button has been selected, causing the *Baud Rate*, *Parity*, *Data Bits*, and *Stop Bits* pop-up menus to be enabled, and causing the *Modem port*, *Printer port*, *Tone dialing*, and *Pulse dialing* radio buttons to be enabled. The *Modem Configuration...* button is disabled in this case.

In the example below, the *Communications Tools* radio button has been selected, causing the *Modem Configuration...* button to become enabled, and the internal serial driver controls to be disabled:

The screenshot shows a dialog box titled "Service / Communication settings...". It contains the following fields and controls:

- User ID:** TST (text box)
- User Number:** 11111 (text box) with an "Edit User Number..." button next to it.
- Data Access Method:** Long Distance (dropdown menu)
- Modem Control:** Communications Tools and Internal serial driver
- A separator line.
- Click "Modem Configuration..." to set comm. parameters...**
- Baud Rate:** 2400 (dropdown menu)
- Data Bits:** 8 Data Bits (dropdown menu)
- Parity:** No Parity (dropdown menu)
- Stop Bits:** 1 Stop Bit (dropdown menu)
- Modem port:** (selected)
- Printer port:**
- Tone dialing:** (selected)
- Pulse dialing:**
- A separator line.
- Buttons:** "Modem Configuration..." (enabled), "Cancel", and "Save" (highlighted).

Service / Communication Settings Dialog – Communications Tools View

See the discussion on "Communication settings" on the next page for detailed instructions on setting communications parameters with either choice.

Account information settings

Account information includes your CSI *User ID* and *User Number*. The user number assigned to your account is pre-stored into the copy of Trade Data Manager that is sent to you by CSI. You can freely change only the user ID in the editable text-box at the top of the dialog. The CSI user ID is always a three character entry, and is always in upper-case only. The CSI user number is a five digit numeric entry. Trade Data Manager uses these items in logging-on to CSI's host computer, to identify your account, in any modem session. Keep in mind that the copy of Trade Data Manager that has been licensed to you may not be used by others, and is keyed to your account. The purpose of making the user ID field editable is to allow you to access the special test account, or to allow certain users to have multiple accounts, with multiple associated CSI portfolios.

Trade Data Manager is shipped with a default value for the user ID field, "TST", which allows you to access the special test account. You do not need a personal account with CSI to access the test account, so you can try this user profile out as an experiment. In fairness to CSI and others, use this account very sparingly, just to gain familiarity with the daily update process. See the section "Test account access and usage" for details on the use of the test account.

Changing your CSI User Number

The *User Number* field in the *Service / Communication settings* dialog can be edited if you obtain a special authorization code from CSI Customer Service. The only situation where this is normally required is if you have a promotional copy of Trade Data Manager, where the CSI User Number has been initially set to “11111”. You can obtain an account from CSI by calling CSI Customer Service, then you will be given an authorization code that you can use to personalize your copy of Trade Data Manager with your personal User Number.

To edit the User Number field, click the *Edit User Number...* button in the dialog. This will bring up the *Edit user number* dialog, as shown here:



Edit user number...

Enter your new CSI user number and the corresponding authorization code:

User number:

Authorization code:

Edit User Number Dialog

Type your new CSI-assigned User Number in the text box provided, then enter the 16-digit authorization code that has been faxed or read to you over the phone in the text box provided for the authorization code. The CSI User Number is always five decimal digits long. The authorization code is always 16 digits long, and is composed of decimal digits and/or the letters “a” through “f”. In other words, the authorization code is in hexadecimal format. The authorization code is not case sensitive, so you can also use letters “A” through “F” as well.

The new User Number and authorization code must correspond, otherwise you will get an alert asking you to re-enter data in these fields.

Data access method settings

Trade Data Manager supports access to CSI through three public networks (Telenet, Tymnet, and Tymnet USA), as well as direct long distance dialing.

Select the data access method using the *Data Access Method* pop-up menu. Be sure that the channel you have chosen matches the phone number you have entered into the box below or in the selected connection tool – Trade Data Manager has no way of checking if these items are appropriately matched to each other!

Note that network access is **not** allowed if you are using the special test account (User ID “TST”).

Communication settings

Internal serial driver settings

Communication settings for the internal serial driver, when selected, such as baud rate, number of data bits, number of stop bits, and parity bit settings are accomplished through pop-up menus, in the middle section of the *Service / Communication settings* dialog. These settings must match the requirements for CSI and any network that you are accessing, as well as the particular phone number you are dialing. Some of the modems you can access support multiple baud rate settings, while others support only one. Be sure that you have selected the right combination for the phone number you are dialing.

For Commodity Systems Incorporated, the communications settings **must** be set to either 7 data bits, even parity, and one stop bit (7/E/1), or to 8 data bits, no parity, and one stop bit (8/N/1). You will get an error alert if you try to select any other combination for these parameters. Future CSI daily data and historical data transmission formats may use other communications formats, so these settings have been made variable in this dialog.

If you are using a high speed, v.32 or v.32bis modem (9600 or 14400 baud respectively), you should generally select a baud rate setting of 19200 baud, and a 8/N/1 frame format. These type of modems connect to the computer at one baud rate, and simultaneously to the phone line at another baud rate, while the modem’s internal processor buffers the data stream. Since many of these modems support data compression, the baud rate connection on the computer side of the modem should generally be higher than the connection to the line itself. Baud rate settings higher than 19200, however, are generally not reliable on any Macintosh model, due to software handling of the serial port within the Macintosh ROM.

If you are using a v.32 or greater modem, you must use a hardware handshaking cable to connect the modem to the Macintosh, otherwise data overruns will occur. These modems are generally shipped with hardware handshaking cables, but if you do not have one, consult your local computer store. The cable should be wired to support RTS/CTS and DTR handshaking.

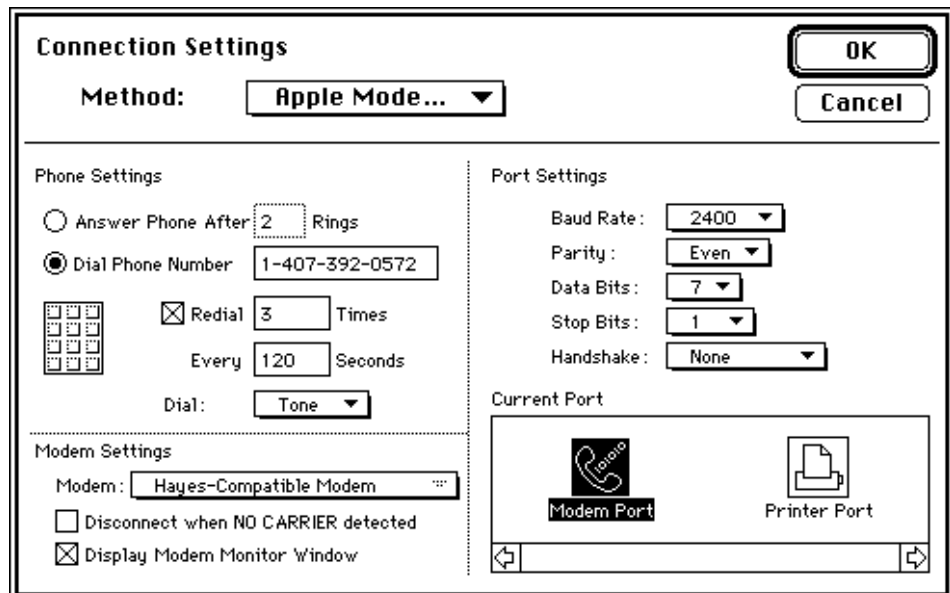
Your modem will probably be connected to the modem port in back of your Macintosh, as opposed to the printer port. The modem connector on the back of your Macintosh will usually have an icon of a telephone handset next to it, while the printer connector will usually have an icon of a printer next to it. Depending on which connector you modem is connected to, click either the *Modem port* or the *Printer port* radio button in the dialog.

You will generally want to select tone dialing, however if your local phone system supports only pulse dialing, click the *Modem pulse dialing* radio button.

In the US and in many other countries, the modem carrier and signaling standards that are most likely to be in use follow the convention of using Bell 103 for 300 baud transmission, Bell 212A for 1200 baud transmission, and CCITT v.22 for 2400 baud transmission. In some countries, particularly in Europe, CCITT v.22 is also used for 1200 baud instead of Bell 212A. If this is the case in your part of the world, click the *CCITT v.22* radio button. The *Bell 212A* and *CCITT v.22* radio buttons will only appear if you have selected 1200 baud, since this choice only applies to this baud rate setting. If you select the wrong signaling standard for a given modem that you will be calling, you will not be able to get a reliable “carrier detect” indication when you dial the modem, or you may experience an unreliable connection.

Communications Tools settings

When the *Communications Tools* radio button is selected, Trade Data Manager will use the *Apple Modem Tool* (part of the *Communications Toolbox* and its associated *Connection Tools*) to perform all modem communication. To configure the settings for the *Apple Modem Tool*, click the *Modem Configuration...* button. This will activate the *Apple Modem Tool* settings dialog, as shown below:



Apple Modem Tool Settings Dialog

If you have not installed the *Communications Toolbox* and the *Connection Tools* properly, you will get an error alert when the *Modem Configuration...* button is clicked. If this occurs please refer to the “Installation” section for details on how to install these products.

Be sure to select the *Apple Modem Tool* using the *Method:* pop-up menu. If the *Apple Modem Tool* is not available as a choice on this menu, check to insure that the *Apple Modem Tool* is installed in your *System* folder (for *System 6.x*) or the *Extensions* folder (for *System 7.x*). Once the *Apple Modem Tool* is selected, the dialog should look like the example above.

Under the *Phone Settings* section, click the *Dial Phone Number* radio button, then enter the phone number of the modem you will be using in the text box next to this radio button. This will be the phone number of your local Telenet, Tymnet, or Tymnet USA network host, or CSI's long distance direct-dial phone number. Consult the CSI network information data sheets to obtain local phone numbers for network access. Be sure that the phone number you enter agrees with the selection you made under the *Data Access Method* pop-up menu in the *Service / Communication settings* dialog.

You can optionally have the *Apple Modem Tool* perform multiple attempts to make a connection by checking the *Re-dial* check-box, then entering a number in the text box next to this check-box. Enter the interval to wait, in seconds, between re-dial attempts in the text box below this check-box. If you elect to use this feature, the *Apple Modem Tool* will re-dial this many times until it gets a carrier detection indication. This is particularly useful for unattended daily updating.

Select either *Tone*, *Pulse*, or *Mixed* dialing from the *Dial:* pop-up menu. In most locations you will want to use tone dialing, however in some areas dialing must still use rotary pulse dialing.

Under the *Modem Settings* section of the dialog, select the type of modem you are using from the *Modem:* pop-up menu. In many cases the generic *Hayes-Compatible Modem* entry will work fine. If you are using a PowerBook or DuoDock Macintosh with an internal modem board, select the entries on this pop-up menu for the modem you are using. This is the **only** way many of these internal modems can be accessed!

Leave the *Disconnect when NO CARRIER detected* check-box un-checked, since Trade Data Manager will handle all disconnect functions.

The *Display Modem Monitor Window* check-box can be checked or un-checked, the choice is yours. If checked, a window will appear when the modem is connecting and disconnecting with a listing of the commands that are being sent to the modem. This can be useful in diagnosing communication problems between the modem itself and the *Apple Modem Tool*.

Under the *Port Settings* section of the dialog, use the *Baud Rate:* pop-up menu to select the baud rate that is compatible with the type of modem you are using and its capabilities, and the capabilities of the modem you are dialing at the other end. For Commodity Systems Incorporated, the remaining communications settings **must** be set to either 7 data bits, even parity, and one stop bit (7/E/1), or 8 data bits, no parity, and one stop bit (8/N/1). Set the *Handshake:* popup menu to *RTS/CTS and DTR*, and be sure you are using a cable that supports hardware handshaking. There is **no checking** performed on these settings, so if you make a mistake here you will not be able to communicate with CSI's computer – you will get garbage instead.

Some of the modems you can access support multiple baud rate settings, while others support only one. Be sure that you have selected the right combination for the phone number you are dialing.

Under the *Current Port* section of the dialog, you will have a choice of indicating which port is being used by the modem. Your modem will probably be connected to the modem port in back of your Macintosh, as opposed to the printer port. The modem connector on the back of your Macintosh will usually have an icon of a telephone handset next to it, while the printer connector will usually have an icon of a printer next to it. Depending on which connector your modem is connected to, click either the *Modem port* or the *Printer port* icons in the scrolling list. Internal modems used by PowerBook and DuoDock computers will sometimes display a special icon in this list.

If you have a NuBus serial port extender card, such as the QuadraLink, you can select one of the serial ports on the extender card to drive your modem, using the scrolling *Current Port* list.

Telephone numbers

The phone number field specifies the phone number of the modem at the other end of the line, and can contain any valid phone number, including punctuation such as parenthesis, dashes, and intervening spaces. Parenthesis, dashes, and spaces have no effect on the modem whatsoever. For example, valid phone numbers include: “1-(407)-392-0572”, or “14073920572”, or “361-8701” (a local number). The phone number is limited to 63 characters maximum. Consult the CSI network information data sheets to obtain local phone numbers for network access.

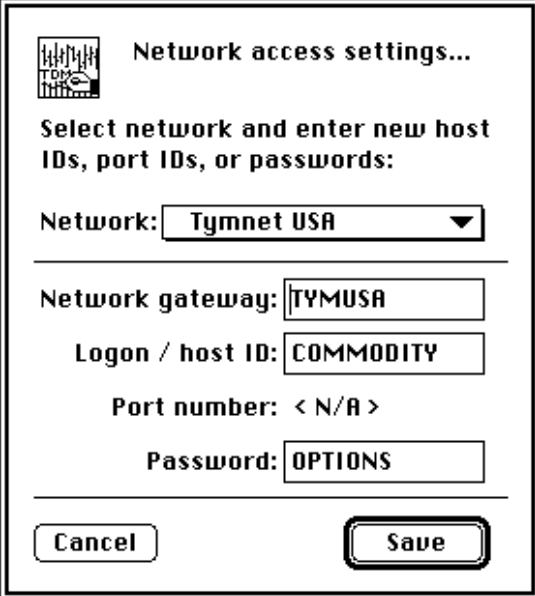
If you enter a phone number that is longer than 30 characters, you will get a warning alert, telling you that your modem may or may not support a dial string longer than 30 characters. Most modems have limited command buffers, so check the documentation that came with your modem. The major purpose of allowing greater than 30 characters is to allow you to enter a telephone credit card number in the dial string, or to perform elaborate escapes through some PBX equipment.

If you are connected to a local PBX system, you will generally need to insert a “9” or some other number to get an outside line, followed by one or more “,” (comma) characters, which causes the modem to pause for a predetermined time (usually two seconds per comma), so that the outside line dial tone can be received. There are a variety of other special character commands that can be given to the modem prior to the phone number itself to accomplish various unusual requirements, such as disabling call waiting. Consult the documentation that came with your modem for details.

Network access settings

Each of the packet-switching network services that Trade Data Manager supports uses different conventions for identifying the host computer that you wish to log-on to, and for verifying that you have been granted access to that host computer. Your copy of Trade Data Manager is pre-configured to provide access to Telenet, Tymnet, or Tymnet USA using pre-established “host ID”, “port ID”, and password information that is built into the program. CSI has made arrangements with these network services to provide toll-free access to CSI’s computer through particular host IDs, and by using passwords and/or port numbers in some instances. Although the network services rarely require that this information be changed, there are cases where changes have been made in the past, and may again be made in the future. To provide a facility for changing this information, Trade Data Manager allows you to edit this information through the *Network access settings* dialog.

The *Network access settings* dialog is activated by selecting the *Network Access Settings...* command under the *Service* menu. The example below shows how this dialog looks when the *Tymnet USA* network is selected in the pop-up menu contained in the dialog:



Network access settings...

Select network and enter new host IDs, port IDs, or passwords:

Network:

Network gateway:

Logon / host ID:

Port number:

Password:

Network Access Settings Dialog

When the *Network access settings* dialog first appears, the network that you have selected under the *Service / Communications settings* dialog will appear as the currently selected network in the *Network* pop-up menu. The default settings for that network will be displayed in editable text-boxes within the dialog. For each network, only some of the fields are applicable, while others are not and will be displayed as “<N/A>” for “Not Applicable.” For long distance access, none of these parameters are applicable.

The *Network gateway* parameter is only applicable to Tymnet USA. When calling Tymnet from outside the US, access to CSI’s computer is provided by a “gateway”, which is a term that describes the use of a network to pass information from one network to another network. CSI’s computer is connected to Tymnet in the US, thus you need to tell foreign Tymnet networks that you wish to access the Tymnet network in the US through the local Tymnet network in your country. This is accomplished by commanding the local network to act as a gateway to the Tymnet network in the US. Selecting Tymnet USA in the *Service / Communications settings*

dialog will automatically enable Trade Data Manager to send a gateway command to Tymnet once the local Tymnet connection is established. The *Network gateway* parameter is the actual text that will be transmitted by Trade Data Manager in response to the local Tymnet network's "Host ID" prompt, once the connection is established. If the name of the Tymnet network in the US is defined to be different in your country, change the default setting of "TYMUSA" to whatever is required in your country.

The *Logon / host ID* parameter is the actual name of the CSI host computer node on the network chosen. For each network, the name of CSI's host computer is different. The value of this parameter is transmitted by Trade Data Manager in response to the network's "Host ID" or "Log-in" prompt.

The *Port Number* parameter applies only to Telenet, and it identifies one of several potential ports that are connected to the chosen host computer. CSI is connected to only one port. The value of this parameter is transmitted by Trade Data Manager in response to Telenet's "Port number" prompt.

The *Password* parameter is used by each network to authenticate your access to the chosen host computer, and is transmitted by Trade Data Manager in response to a "Password" prompt from the network.

At the time this manual was published, the normal default values for all parameters in the *Network access settings* dialog for the network services supported are as follows:

<u>Network</u>	<u>Gateway</u>	<u>Logon/host ID</u>	<u>Port number</u>	<u>Password</u>
Telenet	<N/A>	CS001	305140	136076
Tymnet	<N/A>	COMMSYS	<N/A>	SUN SHINE
Tymnet USA	TYMUSA	COMMODITY	<N/A>	OPTIONS

Note that Telenet parameters are mostly numeric in nature, and that "CS001" contains zeros, not the letter O. There is a space between "SUN" and "SHINE" for the Tymnet password that must be present.

Network access error recovery

All commands and responses to these commands from the various network host computers are fully checked by Trade Data Manager for correctness. Errors that occur due to transmission noise or time-outs automatically cause Trade Data Manager to re-try the command in error up to three times before giving up. Errors that occur due to network outages or local congestion problems in the network cause an appropriate error alert to be posted to your screen. These alerts describe the particular error condition in detail. For example, Tymnet and Telenet will occasionally indicate that local network conditions prohibit further log-on attempts, or that the remote host computer that was requested (CSI's computer in this case) is temporarily unavailable on the network. In such cases, the local network hub computer sends a message to Trade Data Manager in response to a log-on command or a host ID command, indicating the nature of the problem. Trade Data Manager will immediately recognize such messages and post a corresponding error alert on your screen. No error re-tries are attempted in such cases, since these conditions do not warrant re-tries.

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Commodity Systems Incorporated is the recognized leader in commodity and stock data services, and is the largest supplier of daily update and historical data. Trade Data Manager is designed specifically to work with CSI's data file formats, conventions, and data access methods.

If you already have an account with CSI, you will need to **change** the daily update file format that is posted each day by CSI on your account to conform with Trade Data Manager's requirements – see the next section for details. If you do not yet have an account with CSI, you can get a feel for how Trade Data Manager interacts with CSI's computer by using the test account, along with a matching Roster file – see the section titled "Test account access and usage" section for details.

If you are not a current CSI customer and you require information from CSI on how to set up a personal account, along with pricing information, please call the marketing department at: 1-800-274-4727. Customers who wish to place an order for historical data or software may also use the toll free number. Overseas prospects and customers requiring Customer Service support should call CSI's main Customer Support number at: 1-407-392-8663.

Account and portfolio information

Trade Data Manager initiates an interaction with CSI's computer by dialing CSI's host computer, then logging-on with your personal *User ID* and *User Number*. After logging on, daily data for the day that you requested is retrieved through a simple command that specifies only the day of the week and the week that is desired. CSI's computer determines which commodities, stocks, and particular delivery months you will receive based on your customized *portfolio* file, which is located on CSI's computer. See the next section for details on the portfolio file.

Your initial portfolio at CSI must match the contents of the local Roster file on your computer in every detail. After Trade Data Manager retrieves your daily update file by modem, it will use the Roster to determine which commodities and stocks to extract from the file and to determine which contract data files to post with the information. Any mismatch between the Roster file contents and the portfolio maintained on CSI's computer will result in error messages during the posting operation. Edit your Roster file to match the initial portfolio in every way, including the delivery month and year selected for each commodity and stock. You can provide a new contract data file for each symbol in the Roster, or you can start by "seeding" the database with an existing contract file for any given commodity or stock that is imported from another source.

The portfolio file can be changed by the *Change Portfolio* dialog, which is described in the next section, or by calling CSI Customer Service and requesting changes verbally. You can also set up your account to use CSI's Automatic Contract Roll-forward system, which will automatically change the delivery month for contracts within your portfolio at predetermined times as contracts near their expiration date. See the next section for details on this facility.

If you are using CompuTrac/M and the portfolio tool to perform daily updates, you must also insure that the CT/M portfolio file and the Roster match each other in every detail. There should be no corresponding entries in either file with different files, delivery months, or delivery years, and there should not be any entries in either file that are not present in the other.

Note that Trade Data Manager release 1.5 supports *only* stocks, commodities, or CSI defined data products such as Perpetual Contracts, cash contracts, and industry indices, and does *not* support stock *options* or commodity *options*.

In setting up your account with CSI you will be telling CSI's staff which initial commodities and stocks you wish to subscribe to, and an initial portfolio file will then be created by CSI's staff on CSI's computer. You should also inform CSI at this time that you will be using the Macintosh based Trade Data Manager program for data collection, and that data should be posted to your account in the "*KK-format*".

Trade Data Manager uses a particular file format known as the "*KK-format*" file for daily updating. It is *important* that you specify to CSI that you want to receive data using the KK format, since this is *not* the usual default. CSI's PC-based software ("QuickTrieve") uses a very different format, and that format is what you will get if you don't specify otherwise. Specify that you are using the "Trade Data Manager" program instead of CSI's QuickTrieve program.

If you forget to specify that you are using KK-format and you subsequently attempt to perform daily data collection, every attempt to perform daily data collection will result in an error message.

When you first set up your CSI account, you will specify the initial commodities and stocks you wish to receive, along with the delivery month and year information for each commodity. This information is maintained by CSI in your *portfolio* file, located on CSI's host computer. CSI's computer uses this file each time you request a download of your daily data file to determine which commodities and their associated delivery months to select from the CSI database. Trade Data Manager can update the remote portfolio file when you want to change which stocks, commodities, or delivery months you want to receive, either automatically during the daily update process, or as a separate session. You must take responsibility for keeping your local Roster file in synchronization with CSI's portfolio file at all times. Trade Data Manager makes this job easy for you by handling Roster file updates at the same time that the portfolio changes are transmitted to CSI.

You can also elect to have CSI automatically change your portfolio file without any intervention from Trade Data Manager by using CSI's Automatic Contract Roll-forward service. This service can be established by calling CSI's Customer Service department, or through the *Send Message* dialog within Trade Data Manager. Under the Automatic Contract Roll-forward service the delivery months for each contract in your portfolio are changed at predetermined times by CSI, as each contract nears expiration. Details on the Automatic Contract Roll-forward service appear at the end of this section. If you elect to use the Automatic Contract Roll-forward service, you will need to manually edit the local Roster file on the days that delivery months are changed by CSI in your portfolio.

To change the remote portfolio file, Trade Data Manager sends commands to CSI's computer by modem. This process can be performed as part of the daily update session, or as a separate modem session. The information about which delivery month/year information should be changed, or which stocks or commodities should be added or deleted, is specified by selecting the *Change Portfolio...* command, or typing *Command=*, (*Command* key plus the "equals sign") under the *Service* menu. The *Change Portfolio...* command displays the *Change Portfolio* dialog, which looks like this:

Commodity Symbol	Current: Month	Year	Change to: Month	Year
ADBE	Dec	92		
BP	Jun	92		
C	Jul	92		
C	Dec	92		
CL	Dec	92		
DM	Jun	92		
GE	Dec	92		
NY	Jul	92		
OJ	Jul	92		
S	Nov	92		
SU	Nov	92		
SYN	Dec	92		
TR	Jun	92		

Change to: July 1992

Add New Entry... %A
Delete Entry %D
Delete All Changes

Change Portfolio Dialog

The *Change Portfolio* dialog looks somewhat like the *Edit Roster file* dialog. The essential difference to keep in mind is that, unlike the *Edit Roster file* dialog, the *Change Portfolio* dialog is **not** editing the **local** contents of the Roster file on **your** computer system, but rather will be used to send commands to CSI's computer to edit the **CSI portfolio file**, which parallels your Roster file on **CSI's computer**. Once the requested portfolio changes are successfully sent, CSI will normally implement the requested changes within a few minutes to, at most, a few hours.

In deciding which commodities and stocks to add, delete, or change, you must be careful to consider the effect auto-updating of your local Roster will have!

Discrete contract database changes

If you elect to maintain your database as a collection of actual contract files (the "discrete contract paradigm"), you should always *add* or *delete* entries in the *Change Portfolio* dialog, and you *must not* perform any delivery month *changes* in the dialog. In other words, you do *not* want to use the delivery month pop-up menus to change the delivery month of any of the *existing* entries in the dialog. After the portfolio changes have been transmitted to CSI's computer, Trade Data Manager will update your Roster to reflect the additions and deletions that were made. No delivery month information will be altered for any contract files in the Roster that were not added or deleted.

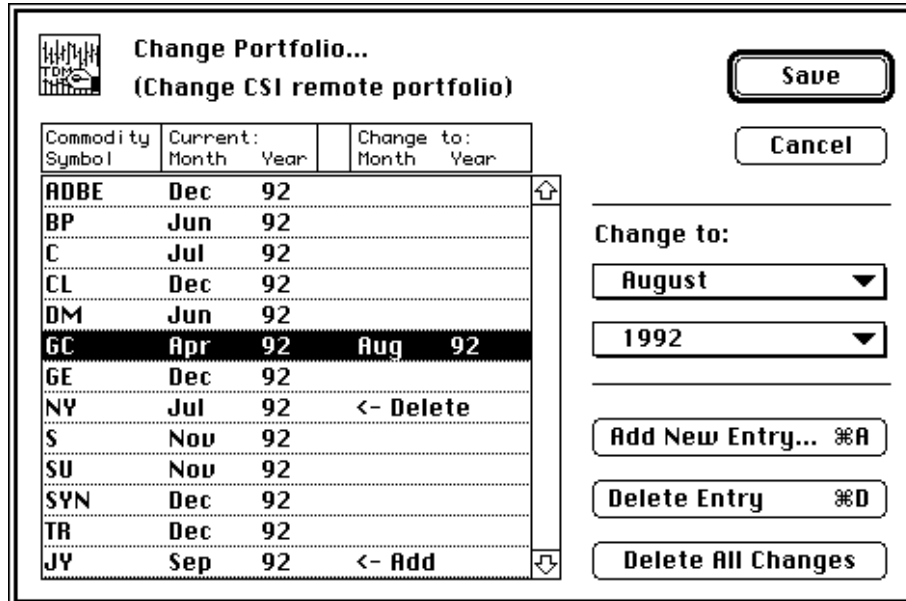
For contracts that are added to the portfolio, as a standing order you may choose to have CSI automatically create history for these files for collection by Trade Data Manager. Call CSI Customer Service for details on this service.

Continuous contract database changes

If you elect to maintain your database as a collection of continuous contracts (the "continuous contract paradigm"), you should *always* use the delivery month and year pop-up menus to change the delivery month for each commodity that you wish to roll-over. You will only add or delete entries in the *Change Portfolio* dialog if you really want to add a new commodity that you have not subscribed to before, for any delivery month, or if you really want to delete subscription to a commodity, respectively. After the portfolio changes have been transmitted to CSI's computer, Trade Data Manager will update your Roster to reflect the changes to the delivery months that were made by simply changing the delivery month field of the associated Roster entry.

As an example, assume you had been subscribing to March Yen data and were posting daily data for the March Yen to a file called "Yen daily." You want to roll-over to the June Yen contract, so you use the *Change Portfolio* dialog to change the delivery month information for the March Yen entry to read June, using the delivery month pop-up. After the changes have been transmitted to CSI, Trade Data Manager will change the entry in your Roster file for the "Yen daily" file to indicate that the entry is for June delivery. The next time you perform daily updating, June Yen data will be appended to the Yen daily file.

To change the delivery month or year of a particular commodity or stock within your portfolio file, click the mouse anywhere in the row for that commodity or stock symbol, then click and drag the delivery month or year pop-up menu to select the desired delivery month or year, or use the command-key keyboard short-cuts available for the delivery month and year pop-up menus. You will see the “Change to:” columns in the dialog update to display the new delivery month and year, as shown below for the April Comex Gold (symbol “GC”) entry:



Change Portfolio Dialog

You can use the *Special DMonth...* command in the delivery month pop-up menu to specify custom data products such as CSI’s Perpetual Contract data. See the subsection titled: “Special delivery month specification”, located under the section: “Roster File Management” for details on how to use this feature.

To delete a given commodity or stock from your portfolio file, select the row with the desired commodity or stock symbol, then click the *Delete Entry* button. The “Change to:” columns will update to indicate “<-Delete”, which indicates that the selected symbol will be deleted entirely. The example above indicates that the Cotton (symbol “NY”) entry will be deleted.

To add a new commodity or stock, click the *Add New Entry...* button, which will display the *Commodity Symbol Browser*, listing all the available symbols in the Commodity Fact file. Select a new symbol in the browser and confirm the browser. The *Change Portfolio* dialog will then update to show the new symbol at the bottom of the scrolling list, with an initial default delivery month of December of the current year. The “Change-to:” column will display “<-Add” to indicate that the entry will be added to your portfolio. Select the desired delivery month and year from the delivery month and year pop-ups. In the example above, the Japanese Yen (symbol “JY”) has just been added and the delivery month has been changed to September 1992 delivery.

Keep in mind that you may only have up to 256 entries in the local Roster file at any time, and that adding entries to the remote portfolio file will result in adding entries to the local Roster file after the changes have been transmitted.

If at any time you make an error and wish to correct a single item, you can use the delivery month and year pop-up menus to restore an item that was slated for deleting or changing by re-selecting the original delivery month and year. If the item was previously slated for deleting, or for changing the delivery month, Trade Data Manager will recognize that the newest change would result in no net change from the original portfolio file specification. If you want to delete an item that was added in the current dialog session with the *Add New Item...* button, select the item and click the *Delete Item* button to remove it from the list immediately.

To revert (reject) all changes made in the *Change Portfolio* dialog, click the *Delete All Changes* button, or click the *Cancel* button to dismiss the dialog completely.

When you are finished with all of your portfolio file changes, confirm the dialog by clicking the *Save* button, or by typing the *Return* or *Enter* key. Trade Data Manager will save the portfolio changes within Trade Data Manager's program file until the next modem session with CSI. The requested changes are *not* sent when you confirm the dialog, they are only saved on your local disk. Once the portfolio changes have been saved, you can send the changes to CSI immediately, either with or without conducting a daily update of your data files in the same session, by conducting a daily update modem session (see the section titled "Daily update data collection session" for details).

Automatic Contract Roll-forward and History Generation

An alternative method of portfolio management offered by CSI involves an automatic contract roll-forward capability. This service can be arranged with Trade Data Manager's *Send Message* dialog, or verbally with CSI's Customer Service department. In CSI's Automatic Contract Roll-forward system, you identify the commodities and the delivery months you will routinely follow throughout the current calendar year, the quantity of nearest contracts to collect at one time, and the date to replace the nearest contract with the next delivery month in the your routine candidate list.

With the Automatic Contract Roll-forward system, coupled with the discrete contract database paradigm, a predetermined file of historical data of a predetermined length can be automatically prepared for user access by CSI. Using the historical data collection facilities in Trade Data Manager, you can collect these files and distribute the data collected to your database.

If you anticipate a given roll-forward date, you can access the historical file(s) planned for addition to the portfolio on the roll-forward day. If you fail to remember the roll-forward date, you will be reminded during daily distribution of daily update data when any new contract appears in the daily update data file, since no file will be present in the local database for distribution of the new contract data. In this case the message "No File" will appear on the daily update printed report, next to the commodity or stock whose data file could not be found in the Roster. In either event, you should add any new files to the Roster using the *Edit Roster file* dialog, collect the historical data that was automatically produced by CSI, then access or re-access the current daily update data file. As a matter of convenience, you may wish to use the same roll-forward date for all commodities. This way, you can perform most of your file maintenance on the same day each month or quarter.

Historical data on commodity futures contracts and stocks may be ordered and collected from CSI over the modem during any daily update data collection session. Orders for historical data are transmitted just after the daily data update data collection phase of the modem session, and the history data for each order is collected and posted to the selected files in the same modem session. This feature is called *On-demand history*.

To place an order for one or more historical data series, select the *Order Historical Data...* command under the *Service* menu, or type *Command-*, (Command-comma). This will display the *Order historical data* dialog, shown below with several orders already entered into the dialog:

Commodity Symbol	Delivery Month	Starting Date	Ending Date	Volume Tot/Ind	Stock Split	Add to Portf.
ROBE	12/94	2/4/90	<Current>	Total	No Adj	No
SF	46/94	3/15/81	<Current>	Indiv.	-	No
GE	12/94	2/1/94	5/30/94	Total	Adjust	No
DM	06/93	2/1/93	<Current>	Total	-	Yes
SYN	12/94	1/1/93	<Current>	Total	Adjust	Yes

Buttons: Add Order... ⌘A, Edit Order... ⌘E, Delete Order ⌘D, Print Orders... ⌘P, Cancel, Save

Order Historical Data Dialog

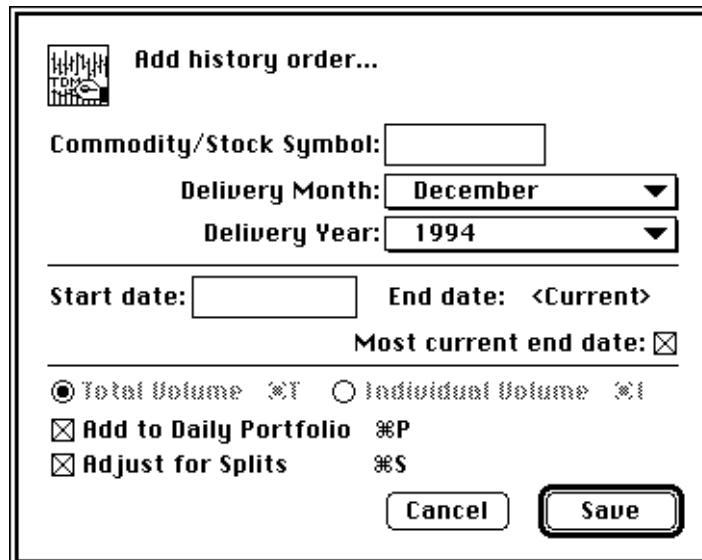
When the *Order historical data* dialog first appears, any orders that you have previously entered into the dialog and saved but that have not yet been transmitted to CSI are displayed in the dialog's scrolling list. You can edit existing history data orders, add new orders, or delete existing orders at any time using this dialog. Note that you are editing a copy of any orders that were previously saved in a prior session with this dialog, so any additions, deletions, or edits to the orders in the scrolling list will have no effect until you confirm the dialog by clicking the *Save* button, or by typing *Return* or *Enter*. If you click the *Cancel* button or type an *Escape* or *Tilde* (“~”) key, all changes to the order list will be discarded, and the previous contents of the order list on disk will not be modified.

You can perform selection of entries in the scrolling list within this dialog in the same way as any other Trade Data Manager dialog, by clicking the entry directly with the mouse, typing the first character or any number of the first few characters of the commodity symbol, or by using the keyboard up or down arrow keys (↑↓), *home* key, *end* key, or *page up* or *page down* keys. The *tab* key will cycle through selection of each entry that matches any commodity symbols that were typed.

To delete an existing order within the scrolling list, select the order entry and click the *Delete Order* button, or type *Command-D*. The selected order entry will be immediately deleted.

Adding a new history data order

To add a new history order to the scrolling list, click the *Add Order...* button, or type *Command-A*. This will display the *Add history order* dialog shown below:



Add history order...

Commodity/Stock Symbol:

Delivery Month: **December** ▼

Delivery Year: **1994** ▼

Start date: End date: **<Current>**

Most current end date:

Total Volume Individual Volume

Add to Daily Portfolio **%P**

Adjust for Splits **%S**

Add History Order Dialog

When the *Add history order* dialog first appears, the *Commodity/Stock Symbol* field will be empty, the *Start date* field will be empty, and the delivery month and year pop-up menus will default to December of the current system year. The ending date defaults to the most current date available, as shown in the check-box above.

To add a new order using the *Add history order* dialog, type the one to six character commodity or stock symbol that you wish to collect data for into the *Commodity/Stock Symbol* box. This symbol must already be defined in your Commodity Fact file. Click and drag the mouse on the *Delivery month* and *Delivery year* pop-up menus to select the desired delivery month and year, or use the command-key short-cuts for these menus. For stock orders, the delivery month and year must always be December of the current year, regardless of the historical period of time that you are ordering.

Type the starting date for the historical period that you wish to receive in the *Start date* box, using the convention of “MM/DD/YY” to enter the date. For example, a starting date of April 2, 1988, would be entered as 4/2/88.

If you wish to order data through a specific ending date, click the *Most current end date* check-box to un-check the box. Un-checking the check-box causes the *End date* field to change from displaying “<Current>” to displaying an editable text-box that allows you to type in an ending date. Use the same MM/DD/YY convention to enter an ending date in this field. If you change your mind and wish to order data through the most current date available, simply re-check the check-box, and the ending date field will be replaced with the “<Current>” designation again.

If you have entered a commodity symbol in the *Commodity/Stock Symbol* field, the *Total Volume* and *Individual Volume* radio buttons will be enabled. You can choose to collect history data for commodities with either total or individual contract volume contained in the collected file. Note that you should generally choose the volume option that is consistent with your daily update posting choice (your choice of posting either total or individual volume to each file in the Roster) in the *Data base settings* dialog. The *Total Volume* and *Individual Volume* radio buttons will be dimmed if you type a stock symbol in the *Commodity/Stock Symbol* field, since the total versus individual volume option does not apply to stocks. Use the keyboard short-cuts *Command-T* and *Command-I* to toggle the state of the radio buttons.

If you wish to automatically add the history data file to your daily update portfolio file on CSI's host computer, as well as to your local Roster file, leave the *Add to Daily Portfolio* check-box checked. After the order has been successfully collected during a daily update session, the requested history file will be added to your Roster file. On your next daily update session, data will be posted for this history file. If you do not wish to add the history file to your portfolio or to your Roster, un-check the *Add to Daily Portfolio* check-box. Use the keyboard short-cut *Command-P* to toggle the state of the check-box.

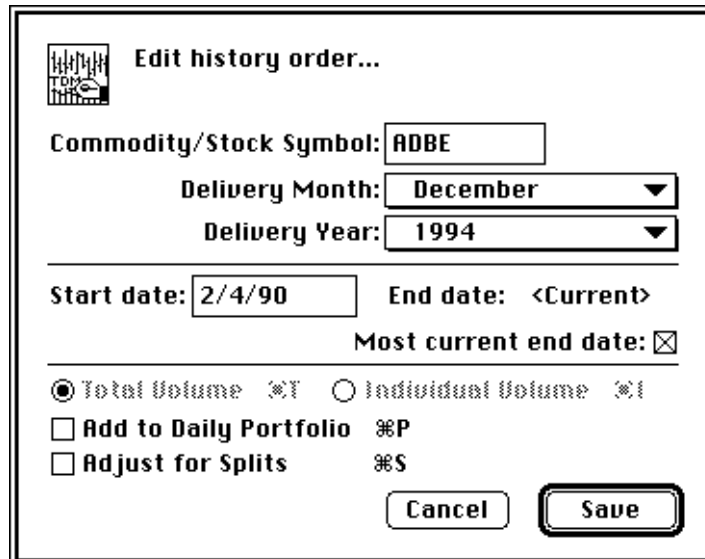
If you have entered a stock symbol in the *Commodity/Stock Symbol* field, the *Adjust for Splits* check-box will be enabled. You can leave this check-box checked to automatically have all stock prices adjusted for stock splits that may have occurred for the stock in question, or you can un-check the check-box to collect unadjusted stock data. The *Adjust for Splits* check-box will be dimmed if you type a commodity symbol in the *Commodity/Stock Symbol* field, since this option does not apply to commodities. Use the keyboard short-cut *Command-S* to toggle the state of the check-box.

Confirm the *Add history order* dialog by clicking the *Save* button. Trade Data Manager will immediately present a standard File Save dialog, asking you to specify a new file into which collected history data will be stored during the daily update modem session. The history file can be located anywhere you like in your disk folder hierarchy. **Note that the entire file will be written** – historical data is **not** merged with existing data in the selected file if you select a file that already exists!

After confirming or canceling the File Save dialog, Trade Data Manager will re-display the *Order historical data* dialog with the new entry displayed and selected in the scrolling list. If you cancel the File Save dialog, the new history order that you were editing will not appear in the list.

Editing an existing history data order

To edit an existing history order, double-click the order entry desired in the *Order historical data* dialog, or select the entry and click the *Edit Order...* button, or type *Command-E*. This will display the *Edit history order* dialog shown below:



Edit history order...

Commodity/Stock Symbol:

Delivery Month:

Delivery Year:

Start date: End date:

Most current end date:

Total Volume Individual Volume

Add to Daily Portfolio

Adjust for Splits

Edit History Order Dialog

In the example shown, the *Edit history order* dialog contains an order for Adobe Systems Incorporated stock data, with a starting date of February 4, 1990, through the most current date available. The user has specified that stock data be stated without adjusting prices for stock splits. The history file will not be added to either the Roster or the user's CSI portfolio file.

You can edit any of the fields by clicking on them with the mouse in the same way that you would enter a new order using the *Add history order* dialog. To select any of the text-boxes for editing, you can double-click the field to select the entire contents of the field, or type the *tab* key to advance from one editable text-box to another, in which case the entire contents of the next text-box field will be selected for editing each time you type the *tab* key. Subsequent typing will cause the selected contents to be replaced by the characters that you type.

Confirm the *Edit history order* dialog by clicking the *Save* button or by typing the *Return* or *Enter* key. Trade Data Manager will immediately present a standard File Save dialog, asking you to specify a new file into which collected history data will be stored during the daily update modem session. The history file can be located anywhere you like in your disk folder hierarchy. **Note that the entire file will be written** – historical data is **not** merged with existing data in the selected file if you select a file that already exists!

After confirming or canceling the File Save dialog, Trade Data Manager will re-display the *Order historical data* dialog with the modified order displayed and selected in the scrolling list. If you cancel the File Save dialog, the history order that you were editing will not be modified.

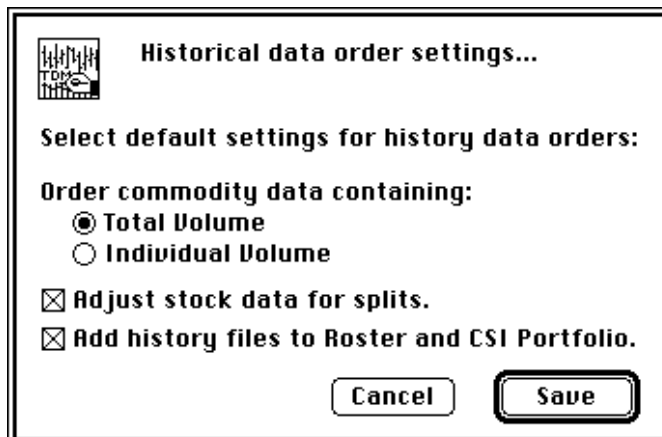
After you have added any new orders, deleted orders, or edited orders in the *Order historical data* dialog, confirm the dialog by clicking the *Save* button. Trade Data Manager will save the historical data orders list within the application file in response to this action. Later, when you conduct a daily data collection session, any pending history data orders will be transmitted to CSI and all the files will be collected during the same modem session.

If all history orders are transmitted and collected successfully, all entries in the *Order historical data* dialog will be cleared at the conclusion of the modem session. Any orders which could not be collected will remain in the list so that you can transmit them again in a subsequent modem session.

You may print the contents of the *Order historical data* dialog to the currently selected printer by clicking the *Print Orders...* button, or by typing *Command-P*. A standard print job dialog will follow, and a detailed report of each of the orders in the historical data orders list will be printed.

Historical data order settings

You can control the default initial state of the radio buttons and check-boxes in the *Add history order* dialog by specifying the default behavior in the *Historical data order settings* dialog. Select the *Historical Data Order Settings...* command from the *Service* menu to bring up this dialog:



Historical Data Order Settings Dialog

Select whether you wish to have the *Total volume* or the *Individual volume* radio button selected as the initial default. This option only affects commodity orders.

Select whether you wish to normally order history data for stocks with prices adjusted for any stock splits that may have occurred in the past, or select to have stock prices delivered without adjusting for splits.

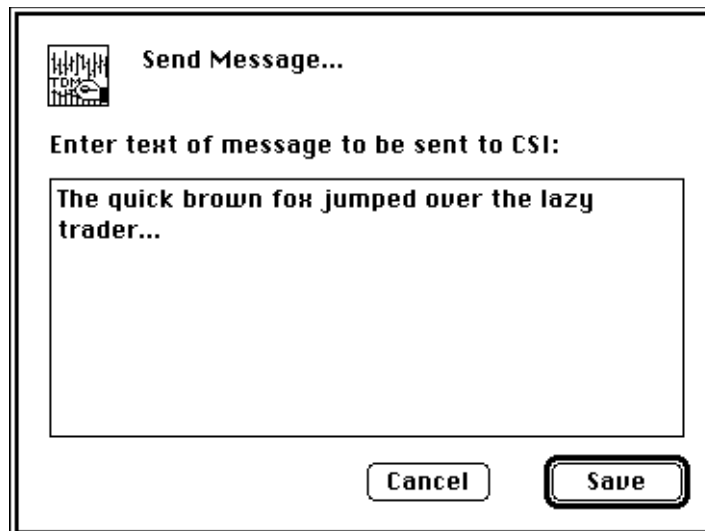
Select whether or not you wish to have history data files automatically added to your CSI portfolio file and your local Roster file.

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You may occasionally wish to send messages electronically to CSI's Customer Support staff during a daily update data collection session. Messages can be useful for communicating problems that you are seeing with data access, or for requesting special services, for example.

Trade Data Manager uses the message sending facility automatically anytime you have a non-null message in the *Send Message* dialog. The message is transmitted during a daily update modem session.

If you wish to send a message during a daily update session, select the *Send Message...* command under the *Service* menu. This command will display the *Send Message* dialog, as shown below with an important message entered into the dialog:



Send Message Dialog

When the *Send Message* dialog first appears, any message that you have previously entered into the dialog but have not yet sent to CSI will be retrieved and displayed, so that you can edit the message. If you have never sent a message, or if you have recently sent a message, the dialog will be empty.

To enter the message, simply type whatever text you wish in the large editable text-box. You may add carriage returns within the text of the message by typing the *Return* key at any time. In this dialog, *Return* will not be treated as an equivalent to clicking the *Save* button, since you may wish to include literal carriage returns in the message itself. Typing the *Enter* button is, however, equivalent to clicking the *Save* button.

You may type a message that is up to 255 characters long. If you try to type beyond this point, you will get a system alert sound and an error message will appear in the bottom of the dialog.

When the message is transmitted during the daily update session to CSI, the transmission protocol limits the length of each line of text to 60 characters. Trade Data Manager will automatically insert extra carriage returns if any line you have entered exceeds 60 characters, however this may cause words to “wrap-around” at the receiving end (at CSI) when they do not appear to wrap in the dialog box. To preserve the formatting that you wish CSI’s support staff to see, you may wish to manually type a carriage return near the end of any line of text that gets close to the right edge of the box. In the example above, a carriage return has been explicitly entered after the word “lazy.”

After you are satisfied with the contents of your message, click the *Save* button, and Trade Data Manager will save the message within the program file until it is required during the next daily update data collection session. If you wish to send the message to CSI immediately, without collecting data for you database or sending portfolio changes, etc., you can activate the daily update facility and select options such that only the message will be transmitted. This involves un-checking all the default options. See the section titled “Daily update data collection session” for details.

Trade Data Manager uses the *daily update session* for collection of daily data in your portfolio, transmission of any pending portfolio changes to CSI, transmission of any messages to CSI, and to transmit and collect any historical data orders. You may simultaneously transmit portfolio changes, messages, historical data orders, and perform daily updating of your database in a single modem phone call. You may choose *only* to transmit portfolio changes or to collect historical data orders in a given session, but you will be using the daily update session facilities to perform these tasks anyway, even if you do not collect daily data for your database in that session.

Daily update session

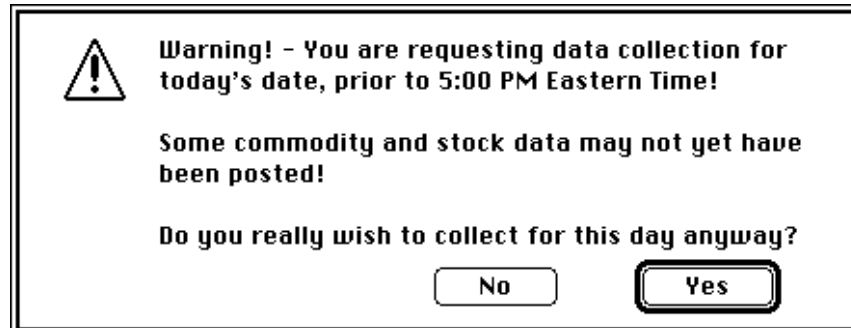
Trade Data Manager supports daily data collection and distribution (referred to as daily “updating” of the database), via modem, on a daily basis. Trade Data Manager will dial CSI’s host computer, log-on to your account, and retrieve a data file that you have specified to contain just the commodities and stocks that you want to subscribe to. After retrieving the data file, Trade Data Manager “posts” data (distributes and writes the data), to each of the files in your database, using the Roster as a guide, then a report is printed that summarizes the day’s prices and the update status for each commodity or stock. A separate report is printed for each day’s data that was collected and posted if multiple days of data were collected. You may direct the daily update report to a file instead of the printer, if desired.

All data retrieved over the modem is fully checked for data integrity, using check-sum coding standards established by CSI, so you won’t get bad data posted to your database. As each of your contract data files is posted with the day’s data, Trade Data Manager also checks to be sure that the previous trading day’s data is present in each file, to insure that you don’t accidentally have missing days in any file.

Each daily update session results in the collection and posting of data for one or more trading days. You may collect multiple days of data in a single session, up to nine weeks previous to the current date. Data collection sessions do **not** have to be in chronological order – you may collect data in an out-of-order fashion if desired. The normal use of Trade Data Manager, however, is to perform a daily update session each day, collecting data for just that day alone. It is recommended that you get into a habit of performing a daily update session at the same time every day, so that you don’t accidentally forget to collect data for a given day.

You should perform the daily update session after 5:00 PM Eastern Standard Time in order to insure that data for all of the commodities in your portfolio has been posted. If you are collecting data for stocks, you should perform the daily update session after 6:00 PM EST. Some exchanges that close earlier in the day, such as Pacific Rim exchanges, have data posted by 3:00 PM, but in general you should wait until later in the day to insure a complete collection session.

Trade Data Manager will automatically warn you if you attempt to access CSI's computer before 5:00 PM EST with a request for daily data for that date when you initiate the daily update session, with an alert as shown below:



Early Collection Time Warning Alert

You can elect to dismiss this alert at your own risk. Please refer to the data sheets that were sent to you when you opened an account with CSI to determine the best time of access and the applicable rates. If you are collecting data for a previous day, this alert will not appear, of course.

Trade Data Manager determines the corresponding time of day in the Eastern Time Zone by using the geographical and time zone information stored in the Macintosh *parameter RAM*, which is part of your computer's battery-backed up clock chip. Note that only Macintosh II, SE, Classic, LC, Si, PowerBook, DuoDock, Centris, and Quadra family models have this facility. This information is displayed or set by the *Map control panel*. The procedure for setting the *Map control panel* is described in the section titled: "Installation". It is important that you have the time zone information configured correctly. If you have an older Macintosh such as the Mac Plus, Trade Data Manager will assume that the time on your Macintosh clock is exactly equivalent to Eastern Time.

Preparing to perform the daily update session

The daily update of your database will be your most frequent use of Trade Data Manager. To begin a daily update session, first insure that any portfolio changes you wish to make in the session have been previously defined through the *Change Portfolio* dialog, described earlier. You should also insure that any historical data orders or messages that you wish to transmit to CSI have been defined in the *Order historical data* dialog and *Send Message* dialog, described earlier. **It is a very good idea to make a backup copy of your entire database at this time, using the procedure described in the section titled: "Database back-ups".**

You should verify that your printer and communication settings are also correct before attempting to start the daily update modem session. To verify your printer setup, check the following:

- 1) Is the printer cabled to the printer port on the back of your Macintosh?
- 2) Is the printer power switch turned on?
- 3) Is the printer "on-line" switch set to on-line?
- 4) Are the appropriate port, printer driver, and printer selected in the *Chooser* Desk Accessory? (Pull down the Apple menu, which is the menu on the extreme upper left of your screen with the Apple icon, and select the "*Chooser*" desk accessory. Click on the appropriate printer driver icon within the *Chooser*; then click on the printer that you will be using in the scrolling list on the right side of the *Chooser* dialog. Click on either the

modem icon or the printer icon, as appropriate, to indicate which port the printer is attached to.)

- 5) If you are connected to an AppleTalk network, is the *AppleTalk Active* radio button in the *Chooser* set to the “on” position? If you are not using an AppleTalk network, is the *AppleTalk Inactive* radio button set to the “on” position?
- 6) If you are using an ImageWriter printer, is the *Best* or *Faster* radio button selected in the print style dialog? (Use the *Page Setup-Text...* command in Trade Data Manager’s *File* menu to activate the print style dialog.)

If you have a LaserWriter printer or a PostScript® compatible language printer, you can set the *Reduce or Enlarge* text-box within the *Page Setup...* dialog (the “print style” dialog) to a number smaller than 100% to get more contract data and status information on each page of the printed report. By setting the reduction to 70%, for example, the number of contracts that will be reported on each page will be about 150% of the number of contracts that will fit at 100% reduction.

To verify your communication setup, select the *Service / Comm. Settings...* command under the *Service* menu, and check the following:

- 1) Is the *User ID* set to your CSI-assigned User ID?
- 2) Is the *Dial Phone Number* telephone number set to the correct phone number for the modem that you wish to connect to, or is the phone number entered in the *Apple Modem Tool* settings dialog correct?
- 3) If you are calling through a PBX, have you entered the appropriate outside line and pause prefix digits to the phone number? (Most PBX systems require a “9”, followed by a pause, to get an outside line. You can enter a 9 followed by one or more commas, just before the phone number, to achieve this.)
- 4) Is the *Baud Rate* pop-up menu set to the right baud rate for your modem and for the modem that you will be dialing? Is the number of data bits set to 7, the number of stop bits set to 1, and the parity set to even, or is the number of data bits set to 8, stops bits 1, and parity none? You must use one of these two combinations.
- 5) Is the *Data Access Method* pop-up menu set to “Long Distance” if you will be dialing CSI directly by long distance, or is the pop-up set to the appropriate network if you will be dialing a network modem?

Communications and transmission reliability

Data communication by modem is never totally reliable, and as a result many possible errors can occur during some phase of the daily update session. Trade Data Manager has been designed to extensively check each interaction over the modem, including checks for each message that is sent by either CSI’s host computer or the network’s computer to be sure that everything is proceeding normally. Trade Data Manager also measures the response time for each command that it sends, and will post an error alert describing any problem associated with a time-out to a given command. As the actual daily update or historical data file is received, Trade Data Manager performs a check-sum calculation on each record received to verify that no data is in error. CSI’s computer computes and transmits this check-sum for each record, thus Trade Data Manager can be absolutely sure that no erroneous data is posted to your database due to communications noise or other problems.

Any errors encountered when sending a command to CSI’s computer, or any errors in the check-sum for a given record in the daily update or historical data file will automatically cause Trade Data Manager to reissue the command in question, or reissue a command to re-transmit the record in error, as appropriate. Retries of any commands that are not received correctly are attempted up to three times (four times for the “Logon” command), and retries of any data records received in error are attempted up to three times. Some very rare error conditions are not re-tried. Any errors

that exceed these limits will cause an error alert to be posted to your screen after the modem has been placed on-hook, describing the problem. Error alerts will also be posted to your screen in cases where commands are sent to CSI's computer and no response whatsoever is received within an internally specified time-out period.

If an error condition occurs while the program is communicating with a network computer or CSI's computer, and that error condition requires that an error alert be displayed, the alert will be deferred until after the modem has been placed on-hook. After the modem is on-hook, the cause of the first error condition will be displayed. If you cancel the daily update session at some point by typing a *Command-* (*Command-period*), you will get an alert corresponding to the step that the program was currently executing when the *Command-* was issued. You should ignore any alerts that arise in response to the *Command-* user abort command.

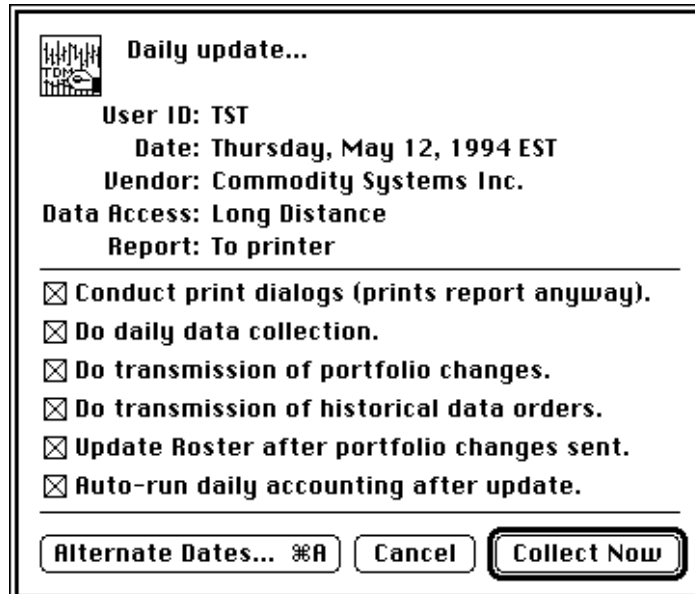
Trade Data Manager will only post your contract data files if all the data received from CSI is received correctly, no unrecoverable check-sum errors have occurred, and no time-outs occur. If any errors occur before the daily update file has been fully retrieved, and these errors could not be corrected through the automatic retry facility, Trade Data Manager will post an error alert, and will then abort the daily update or historical data collection process. You may then retry the daily update session by re-selecting the *Daily Update...* command from the *Service* menu. Many times the primary cause of transmission errors is a poor quality phone line, in which case simply retrying the phone call will frequently make a difference (due to the somewhat random nature of phone and trunk line selection in the various exchanges along the line).

If you experience repeated problems in getting reliable transmission to occur, the next most likely source of difficulty to a poor quality phone line is a problem with your modem. Although most modems on the market are very high quality devices, there are many modems that attempt to cut corners to save a few pennies in manufacturing cost. Also, many older modems do not measure up to today's digital modem technology, which is based on digital signal processing techniques, as opposed to older analog circuit techniques. If you suspect your modem may be giving you trouble, borrow another unit and see if the reliability is the same, or noticeably better or worse. You can also try dialing different network connections and long distance direct-dial to see if the particular modem that you connect with at the other end of the line makes any difference in the reliability of the connection. If you are using a local PBX to place an outside call, you may wish to experiment with different phone lines that connect to the PBX, and which are located on different "line-cards" within the PBX itself. Many times a defective line-card will generate noise on all the lines connected to that card. Sometimes communications noise is present in only one direction of the call. You may see reliable reception of data, but have problems in transmitting commands. Also, you may see reliable transmission of commands, but have a problem receiving data or responses to commands. Try moving your Macintosh and modem to another building, or take it home any try a completely different phone line. Try changing the baud rate to a lower setting, such as 1200 or even 300 baud (changing the corresponding phone number as required to match), and see if the problem goes away. Many noisy lines or poor modems do much better at lower baud rates, where the signaling standard used has inherently much higher noise margins. **The key is to change *one* variable at a time, until the problem is localized.**

Please note that due to CSI's highly reliable, redundant computer system, any data communication problems you experience are almost always due to phone line quality problems, modem problems, or other "cockpit-error" problems. CSI's computer is almost never down or out of service. Try to persevere until you find a configuration of modem, network access, and phone line that works, then stick with this configuration.

Performing the daily update session

Once you have verified your printer and communication setups, and once you have saved any portfolio changes or historical data orders in the corresponding dialogs, select the *Daily Update...* command from the *Service* menu, or type *Command-D* as a keyboard short cut. Trade Data Manager will then display the *Daily update* dialog, as shown below:



Daily Update Dialog

The *Daily update* dialog will initially appear with certain default settings, each of which are indicated with check-boxes. The initial state of each check-box, if enabled, is defined by the current settings in the *Daily update settings* dialog, described in the next section.

The *User ID* that will be used when logging on to CSI's host computer is displayed in the dialog. Do not proceed to confirm the dialog if the user ID is not the ID you want!

The default date for data collection is displayed in color (if you have a color monitor) and will blink on and off every one-half second. The blinking date display is intended to insure that you pay attention to the default collection date that will be used when you proceed.

If you have no pending portfolio changes, or if you have no pending history data orders, the corresponding check-boxes in the *Daily update* dialog for these items will appear dimmed, since there is no sense in making them available. Similarly, the *Update Roster after portfolio changes sent* check-box will appear dimmed if there are no portfolio changes to transmit, since there would not be any Roster changes.

If the *Do daily data collection* check-box is checked, Trade Data Manager will default to collecting data for your entire portfolio for the current system date (as set by the clock in your Macintosh control panel), or the previous valid trading date if the current system date is a US trading holiday (if US trading holiday checking has been enabled in the *Data base settings* dialog), or if the local time in the Eastern Time Zone is before 5:00 PM. Note that the current date displayed in the *Daily update* dialog is adjusted to the corresponding date in the Eastern Time

Zone. If you are calling from a location that is far away from CSI, the date shown may be different than the date in your locale – this is OK.

If the *Do transmission of portfolio changes* check-box is checked, Trade Data Manager will transmit any portfolio changes that were defined and saved earlier in the *Change Portfolio* dialog.

If the *Do transmission of portfolio changes* check-box **and** the *Update Roster after portfolio changes sent* check-box is checked, Trade Data Manager will update your Roster file for you automatically at the successful conclusion of the daily update modem session. The Roster will be updated only **after** all contract data files have been posted and all accounting has been completed. This includes adding or deleting commodities and stocks, or changing the delivery month and year for given contract data files in the Roster, according to the changes identified in the *Change Portfolio* dialog. This is a convenience factor that helps reduce the chance that you will forget to edit your Roster to reflect any changes made to the remote portfolio file.

If the *Do transmission of historical data orders* check-box is checked, Trade Data Manager will transmit any historical data orders that were defined earlier in the *Order historical data* dialog. History data will also be collected and posted to the selected files in the same session.

If the *Auto-run daily accounting after update* check-box is checked, Trade Data Manager will run a daily accounting update to check for order fills, new positions, closed trades, and to calculate changes in equity on open positions.

If a message has been entered in the *Send Message* dialog, Trade Data Manager will transmit the message automatically during the daily update session – there is no check-box to disable this function.

You will normally want to leave each of the check-boxes set to their default initial state, as specified in the *Daily update settings* dialog.

If you wish to transmit portfolio changes or historical data orders *only*, un-check the *Do daily data collection* check-box. If you wish to conduct daily accounting at a different time than the daily update, un-check the *Auto-run daily accounting after update* check-box.

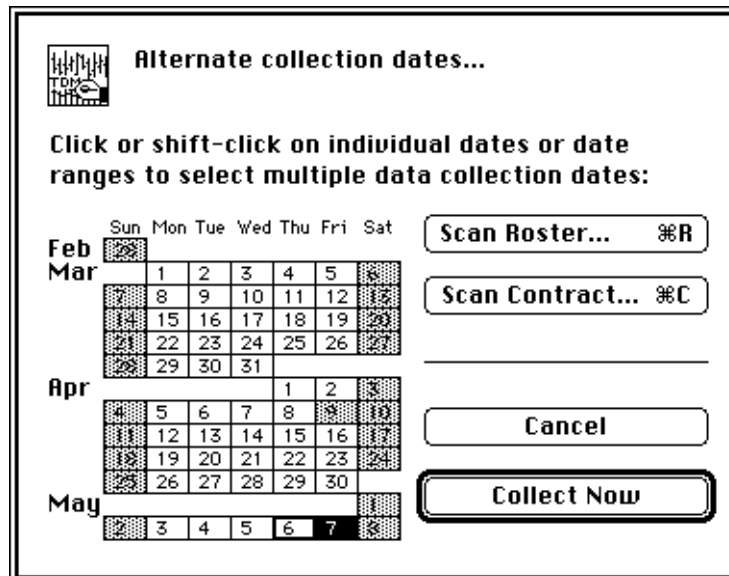
Trade Data Manager will normally print a detailed report to the currently selected printer after all daily update data has been received and posted to your contract data files. When this report is printed, Trade Data Manager will use the page setup that was defined earlier in the *Page Setup - Text...* command, under the *File* menu. Since you normally will use the same page setup without any changes, you should elect to normally **not** conduct any print dialogs when the time comes to print the report, by un-checking the *Conduct print dialogs* check-box. This allows you to start the daily update process and walk away from your Macintosh, leaving Trade Data Manager to conduct the entire session in an unattended fashion. If you wish to change the page setup or the number of copies printed, check the *Conduct print dialogs* check-box in the *Daily update* dialog before confirming the dialog. To have the *Conduct print dialogs* check-box appear initially un-checked by default, use the *Daily update settings* dialog.

If you want to have the daily update report and the daily accounting report sent to a text file instead of the printer, you must make this selection in the *Daily update settings* dialog. The current destination of the report files is displayed at the top of the *Daily update* dialog.

If you wish to change any of the default check-box settings, click the mouse in the check-box that you wish to change before confirming the dialog.

Performing a multiple day or alternate day data collection session

If you wish to change the date for which daily data will be collected, or if you wish to collect data for multiple days, click the *Alternate Dates...* button, which will display the *Alternate collection dates* dialog, as shown here:



Alternate Collection Dates Dialog

The calendar displayed within the *Alternate collection dates* dialog always displays the current week through nine weeks past. The current system date, adjusted to Eastern Standard Time, is indicated with a heavy black border (May 6th in the example above). All dates in the future, as well as all dates which are holidays are grayed-out, or dark red on color Macintosh displays.

CSI will allow you to collect data for any day of the week in any week up to nine weeks before the current week at any time. The main purpose of this facility is to allow you to update your database after a trip or vacation. Some users may use this facility to conduct update sessions on a weekly basis, if daily data updating is not required (for example, if you are just collecting data on long term stock or mutual fund investments). You should generally collect data for your database on consecutive days. In other words, you should not collect data for different days in an out-of-order fashion. It won't hurt if you do collect data out of order, but it is a lot easier to forget to collect a given day if you do.

Regardless of the dates selected for collection, Trade Data Manager will insert or append data as required in each contract data file according to the date contained in each record retrieved. If a given daily update file contains data for a stock or commodity that already has data for that date in the contract data file, Trade Data Manager will overwrite the previous record with the newly collected record.

Trade Data Manager checks to insure that data that is being posted to the database for each file is for the next trading day relative to the previous trading day's data on file, using a perpetual calendar that is built-in to the program. You will get an error alert if Trade Data Manager detects a missing date in any given data file. Valid trading dates are determined by the most common US exchange trading calendars (unless this option is un-checked in the *Data base settings* dialog, in which case only Saturdays and Sundays are treated as holidays).

If you need to collect data for a date further back in time than nine weeks ago, you must use the historical data order facility within Trade Data Manager instead.

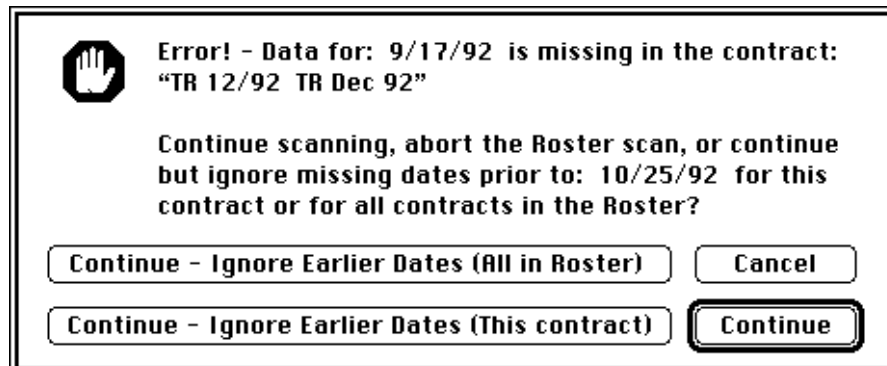
To select a different collection date, click the mouse on top of the particular day's number (anywhere within the rectangle that encloses it) in the calendar that is displayed in the *Alternate collection dates* dialog. If you wish to select multiple days for collection, click and drag the mouse over the day cells desired, or hold the *Shift* key down and click individual days. As each selection is made, the day's cell will be highlighted in the standard system highlight color. To de-select any given day cell, click or Shift-click in the cell and the highlight will be removed. To de-select all current selections, click on one of the holidays. When you are satisfied with your selections and the dialog is confirmed, Trade Data Manager will begin the daily update process.

You will get a warning alert if you try to collect data for the current system date prior to 5:00 PM EST. This alert can be dismissed, however you may not succeed in getting data for your entire portfolio. Consult the CSI information package that you received when you opened your account at CSI for recommended collection times and rates.

Automatic contract data file or Roster scanning

Within the *Alternate collection dates* dialog, two buttons are provided to allow a given contract data file or the entire Roster's contract data files to be scanned for missing dates. Any missing dates found within the range of dates contained in the *Alternate collection dates* dialog are then automatically selected for collection. This facility is intended to provide an easy way to insure that all of your files are up to date, and to insure that you don't inadvertently create missing days in any of your files.

Clicking the *Scan Contract...* button (*Command-C*) will cause the *Roster Browser* to be displayed, allowing you to specify which contract data file is to be scanned. Trade Data Manager will examine all records in the selected file to insure there are no missing days. The current setting of the *Filter US Exchange Trading Holidays* check-box in the *Data base settings* dialog is used to determine which days are holidays in performing this scan. The entire file is checked, including dates that may fall prior to the nine week limit provided in the *Alternate collection dates* dialog. If any missing dates are found prior to the nine week limit, an alert will appear indicating the missing date, and allowing you to select a number of options for continuing the scan, as shown below:



Optional Collection Date Scan Alert

This alert indicates that the data for the date specified in the alert is missing, and that this date is prior to the nine week collection limit. You can elect to continue scanning this contract, receiving an alert for each date that is prior to the nine week limit, or you can continue scanning without getting alerts. You can also cancel the scan from this alert. Some commodities, such as Coffee or Sugar, have unusual holidays that other commodities do not observe. In some of these cases

the number of “false alarms” that will therefore be indicated is excessive, and you may wish to continue scanning without any additional alerts.

Clicking the *Scan Roster...* button (*Command-R*) will cause the entire Roster’s database of contract data files to be scanned. After first receiving a warning alert that indicates that a Roster scan may take a while to perform, Trade Data Manager will examine all records in all files within the Roster to insure there are no missing days. The current setting of the *Filter US Exchange Trading Holidays* check-box in the *Data base settings* dialog is used to determine which days are holidays in performing this scan. The entire file is checked, including dates that may fall prior to the nine week limit provided in the *Alternate collection dates* dialog. If any missing dates are found prior to the nine week limit, the *Optional Collection Date Scan* alert shown above will appear indicating the missing date, and allowing you to select a number of options for continuing the scan. If this alert appears while scanning all files in the Roster, you can elect to continue scanning without receiving any alerts for any of the remaining files by clicking the *Continue - Ignore Earlier Dates (All In Roster)* button.

Daily update session process

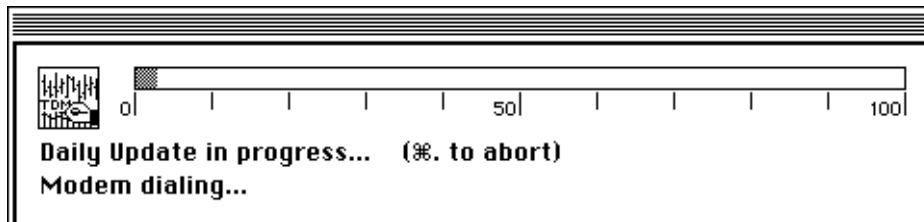
Before confirming either the *Daily update* dialog or the *Alternate collection dates* dialog, insure that your modem is connected to your Macintosh, and that power is turned on. Confirm either dialog by clicking the *Collect Now* button, or by typing the *Return* or *Enter* key.

If the current user name in the *Service / Comm. Settings* dialog is set to the test account name “TST”, Trade Data Manager will post a warning alert to remind you that you will be logging onto CSI’s computer with the test account name, not your personal account, name as shown below. This is just a friendly reminder in case you forgot to enter your personal account ID:



TST Account Warning Alert

After confirming the *Daily update* dialog or the *Alternate collection dates* dialog, Trade Data Manager will remove the dialog, and a *Progress* dialog will appear as shown below:



Progress Dialog

During the daily update session, Trade Data Manager will be sending commands to your modem, to CSI's host computer, and to the network's computer (if you are using network access). You will see a summary of the current status and some of the commands that are being sent in the second line of text within the *Progress* dialog. As the session proceeds, the progress bar will be filled with a rough indication of the percentage of the session's work that has been completed.

If you have transmitted any portfolio changes to CSI during the session, and if all portfolio changes were sent successfully, Trade Data Manager will delete the record of the portfolio changes that were saved by the *Change Portfolio* dialog in the program's file, so that they won't be re-sent on the next daily update session. If an error occurs before the portfolio changes were acknowledged by CSI's computer, Trade Data Manager will not delete the portfolio changes that were locally saved, and these changes will be re-transmitted on the next daily update session.

If you have transmitted any historical data orders or messages to CSI during the session, and if a given historical data order was sent and the history file was collected successfully, Trade Data Manager will delete the record of the historical data order from the *Order historical data* dialog, so that order won't be re-transmitted on the next daily update session. If an error occurs before a given historical data order was acknowledged by CSI's computer, or if an error occurs during collection of the history file, Trade Data Manager will *not* delete the historical data order from the *Order historical data* dialog, and the history order will be re-transmitted on the next daily update session.

After transmitting any pending portfolio changes and messages, Trade Data Manager sends an "Edit File" command to CSI's computer to retrieve the daily update file for the first collection date desired (if you enabled daily data collection for one or more dates). After receiving the first record's data in response to the "Edit File" command, Trade Data Manager sends a "List File" command to instruct CSI's computer to transmit 20 records of data (a "record burst") from the daily update file. As each record is transmitted, the check-sum calculation described earlier is performed. If any errors occur in any record within this 20 record burst Trade Data Manager will wait for the remaining records that might still be transmitted to be received, then the "List File" command is sent again, starting with the record number in error. This process repeats until the entire daily update file has been received successfully. If multiple day collection is being performed, the entire process repeats for every desired collection date, starting with an "Edit File" command for each collection date.

Each record received is written to a temporary file, located in the same folder as the Trade Data Manager application itself, which is called the *Daily Update Journal* file. By "journaling" data to a file as it is received, you can collect data for as many days as you wish, for any size of portfolio, in a single session without having to worry about running out of main memory.


After all data records have been received and the check-sums have been verified, Trade Data Manager begins to transmit any pending historical data orders. For each history data order, an "Edit Hist" command is sent to CSI's computer. Data records are received in record bursts and all records are check-summed in the same way that the daily data for your portfolio is received and checked. As history data is received and checked, data is written directly to the file that was originally specified for the history order in the *Order historical data* dialog.

Trade Data Manager will then enter a contract data file "posting" phase, where each of the files specified in the Roster are posted with the day's prices, volume, and open interest data, using data that was written to the *Daily Update Journal* file. Data received and stored in the *Daily Update Journal* file for each collection day is posted to the database before going on to the next collection day in the case of a multiple collection day session.

As data is posted to each contract file, Trade Data Manager uses the Roster to search for a matching commodity symbol, delivery month, and year for each commodity in the daily update file. Trade Data Manager will check for an exact match between the delivery month and year received and the associated delivery month and year indicated in the Roster for each commodity. For stocks, mutual funds, cash contracts, Perpetual Contracts, and other special delivery month products (delivery month codes of 37 or higher), the delivery year is ignored when performing this search. Only the stock symbol and delivery month must match for the posting to succeed. If Trade Data Manager cannot find a matching delivery month and commodity symbol, or if the file specified in the Roster cannot be opened or cannot be found, you will get an error indication on the daily update report, as explained in detail below. These errors will generally only occur if you forgot to keep your Roster in synchronization with your remote portfolio file at CSI.

Trade Data Manager scans each file to find a record with a matching date to the date in the record to be posted. If a previous record with a matching date exists in the file, the new data will over-write the previous record. If no matching date exists in the file, Trade Data Manager will insert the new record in the appropriate place in the file. If the date of the record to be posted is later than the last date on file in the contract data file in question, Trade Data Manager will append the new record to the end of the file.

During the contract file posting phase, Trade Data Manager checks to insure that the date of the data in each record being posted is exactly one trading day after the previous date on file. Trade Data Manager maintains a perpetual calendar internally that allows it to “know” which dates are valid US exchange trading days, and which dates are US exchange holidays or weekends. If a record to be posted contains a date that is more than one trading day after the previous date found in the file, Trade Data Manager will post an alert, shown below:



Warning! - The previous record on file in the contract file:
ADBE Dec 92
is dated: 9/16/92

The date above does NOT appear to be one trading day prior to the update date: 12/28/92
(This may be due to an exchange holiday)

The contract has been updated anyway.

You can choose to abort the entire daily update session now, or you may continue and update all other contracts which have the same kind of date problem, either with or without seeing this alert...

Daily Update Abort or Proceed Alert

If this alert appears during the posting phase, Trade Data Manager will give you the option of aborting the entire daily update session (including all days in a multiple day collection session), or you can continue with posting your other files. If you wish to continue, you can do so with or without additional alerts of this type appearing. Generally you should continue posting your database, with alerts enabled (the default choice). In either case, the record in question will be posted to the contract file indicated by the time you see the alert.

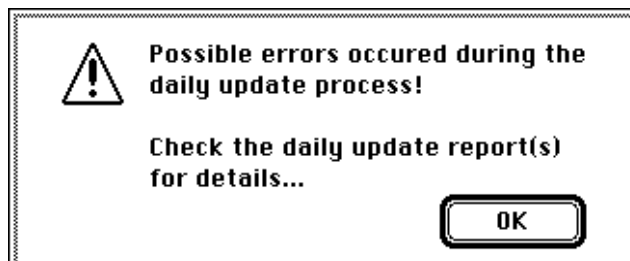
If you are posting a large database on the first trading day after some holidays or the trading day before some holidays, you may get so many of these alerts that you will want to continue without receiving additional alerts. This case occurs, for example, on the day after Thanksgiving, or a Friday before July 4th. or January 1st., when those holidays fall on a Saturday. In such cases several of the New York exchanges do not trade, while the Chicago exchanges do trade on those days. This results in data being collected on those days with a significant number of your commodities (the New York commodities in this example) having no data in the daily update file on that day. You would receive this alert for every New York commodity in your Roster on these days. Once you see that the dates indicated as missing in the alert are holidays for the commodities indicated, you can safely continue without receiving additional alerts by clicking the *Continue without alerts* button.

If you have disabled the US exchange holiday checking feature in the *Data base settings* dialog, you will get this alert during the daily update posting phase on **each** trading day that follows any exchange holiday (except weekends) for all contract data files.

There will also be occasions where a particular exchange closes for a holiday or work outage when other exchanges are open that day. Events which force exchange closure such as power outages, floods, and riots have occurred in the past and will probably occur again. On such occasions, you will also need to dismiss alerts such as the one above that warn you of a missing day in the contract data file for those files that were not posted on a previous day, due to the contract not being traded that day. As an example, the Chicago exchanges closed due to flooding during a bad storm in the spring of 1992.

Once all data from the Daily Update Journal file has been posted, Trade Data Manager checks to see that all the files in the Roster have been posted for that day from the Daily Update Journal file. If any files were not posted, indicating that the Daily Update Journal file did not contain data for that commodity and delivery month, you will get an error indication in the daily update report.

If **any** error conditions have occurred during the daily update, Trade Data Manager will alert you on your display by posting the error alert shown below:



Possible Errors Alert

This alert is intended to make sure that you examine the daily update report that follows for any errors that have occurred. A separate daily update report is generated for each day collected in the case of multiple day collection sessions. You must examine each daily update report for errors to find out what happened in detail.

At the end of the contract data file posting phase, Trade Data Manager will print a detailed report for each collection date on the currently selected printer, or to the *Daily Update Report Log* file, if you have selected this option in the *Daily update settings* dialog. The report lists each commodity symbol, CSI commodity number, delivery month and year, and the day's open, high, low, and close price. Total contract volume, open interest, and estimated volume are also indicated. The previous day's closing price in each file is also printed, and the net change in closing price between the previous day's close and the current day's close is indicated.

On the right hand side of the report, Trade Data Manager indicates which file was posted, by file name, and the posting status, in the column labeled "Status". The normal indication is "Posted", which indicated that data was successfully posted to the file. Other possible indications and their cause are as follows:

<i>Status indication</i>	<i>Problem description</i>
Posted	Data was received and posted to the file specified in the Roster OK. This is the normal indication when no errors have occurred.
No File	No data file specified in Roster for data received and saved in the Daily Update Journal file. This indicates a mismatch between the remote portfolio file and the local Roster file in terms of commodity symbol, delivery month, or delivery year. If you are using CSI's Automatic Contract Roll-forward service, you will get this error for any contracts that were rolled forward if you forgot to add them to your Roster.
No Data	No data received for file specified in Roster. This usually occurs when a given exchange is closed for a holiday when other exchanges are not closed. This can also indicate a mismatch between the remote portfolio file and the local Roster file in terms of commodity symbol, delivery month, or delivery year. You may have forgotten to delete an entry from the Roster on a roll-forward day if you are using CSI's Automatic Contract Roll-forward service.
FileErr	The data file specified in the Roster was not found, or an error occurred when opening or writing the file, or your disk is full. Can also indicate that the data file specified in the Roster is not a valid contract file. If you physically move a contract file to another folder without re-specifying it in the Edit Roster file dialog you will also get this error.
No Comf	There is no entry for the commodity number indicated on the report in the Commodity Fact file. Add information for this commodity using the Commodity Fact file editor dialog, then re-collect your data.
DateErr	The trading dates are not consecutive from the previous date currently on file in the file name specified on the report to the date of the received data in the Daily Update Journal file.

If you have selected to perform automatic daily accounting in the *Daily update* dialog, Trade Data Manager will enter the daily accounting phase after all daily update reports have been generated. Note that accounting is performed only once, after all data is posted, in the case of multiple day collection sessions – accounting is **not** performed after each day's data is posted.

During the accounting phase, the last day's prices for each file in the Roster are compared with open and day-orders that have been entered into the Account Status file, and any orders that might have been filled will be processed if you confirm that they were indeed filled. A detailed report is printed (or appended to the *Daily Update Report Log* file) at the conclusion of the daily accounting phase that itemizes all closed trades, new open positions that were created, current open trade equity, total account equity, and changes to total account equity. For details on how the accounting subsystem operates during the daily update session, see the section titled "Accounting".

After the daily accounting phase has completed, Trade Data Manager ends the daily update session and provides access to all the program's menus.

You should perform a database backup operation at this point in the session, following the procedure described in the section titled: "Database back-ups".

Running the daily update session in the background

During the daily update session, Trade Data Manager is capable of running in the "background". You are free to use your Macintosh to perform other tasks, such as working on a word processor, updating your trading records, or whatever. This feature is particularly convenient when performing very long data collection tasks, such as downloading a very large portfolio, performing multi-day collection, or downloading large historical data files.

Unlike other applications that claim to be "background-able", Trade Data Manager consumes very little processor time while running in the background, and Trade Data Manager is very careful to "give up" the processor to other foreground applications very frequently. As a result, you will have nearly 100% of your Macintosh available to do foreground application work, and you won't see "jerky cursor" problems that you have probably seen in other cases where you tried to run an application in the background. Don't worry about getting data overruns on your modem, even if you are operating at high baud rates – Trade Data Manager allocates modem buffers that are larger than an entire "record burst", so no data overruns can ever occur, no matter what application you run in the foreground. Trade Data Manager is a very cooperative multitasking application.

You should be a little careful about what applications or what functions within an application you perform while running Trade Data Manager in the background, to prevent any "time-outs" from occurring. You should not, for example, run a non-cooperative application, or perform a very compute intensive task within an application that might take 15 seconds or more to complete before it gives up the processor to background applications (e.g., spell-checking a large document). Most professionally written Macintosh applications will cooperatively multi-task well, however you may find that some applications or performing some tasks within some applications cannot be performed while Trade Data Manager is performing a daily update session.

To make Trade Data Manager run in the background, simply click anywhere in the desktop, or in another application's window (including windows belonging to the *Finder*), or click and drag to select a different application from the application menu in the upper right hand corner of the menu bar (in System 7). You can also select desk accessories or other objects from the Apple menu.

Note that you can also re-position the *Progress* dialog during a daily update session by clicking and dragging the title bar of the *Progress* dialog anywhere you want on your monitor. Trade Data Manager will store the location of the *Progress* dialog internally to the program, and will display the *Progress* dialog in the same location on your monitor the next time it appears.

Daily Update Report Log file

When either the daily update or daily accounting reports are generated, they can be sent to the Daily Update Report Log file specified in the *Daily update settings* dialog. The Daily Update Report Log file will be created in the folder in which Trade Data Manager resides if one does not already exist there by the same name.

The Daily Update Report Log file is a simple ASCII text file that can be read with any word processor such as TeachText, Microsoft Word, MacWrite, etc. It has a custom icon to distinguish it from Trade Data Manager's ASCII text contract data files.

Reports are always **appended** to the existing file – the existing contents of the file are never over-written. You should periodically drag the Daily Update Report Log file to the trash when it gets too large and cumbersome.

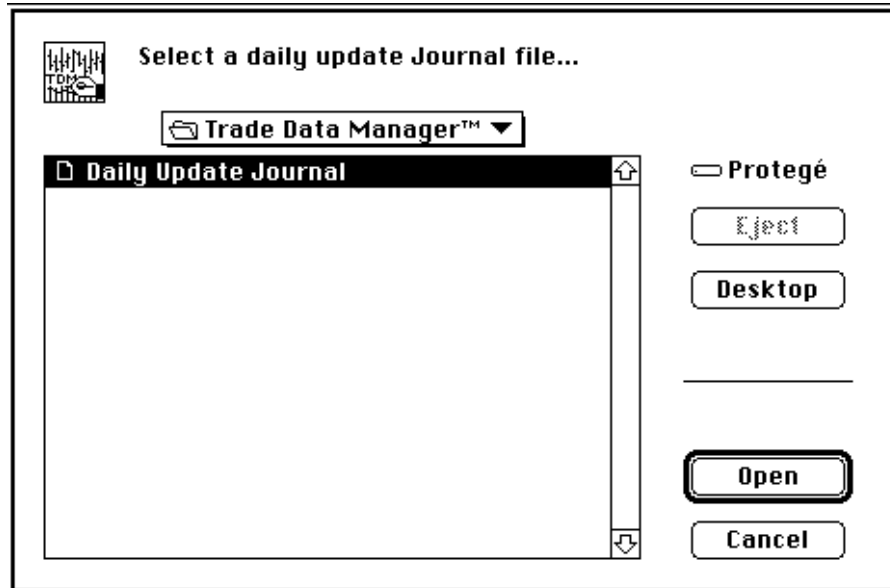
Posting from an existing Journal file

On certain occasions it may be useful to post your database from a previously collected Daily Update Journal file. Recall that the Daily Update Journal file is created whenever you conduct a daily update session, and it contains all of the data records received in that session. During multiple day collection sessions, the Daily Update Journal file contains data for every day collected.

Sometimes an error will occur during the daily update session contract posting phase, but the data collected and stored in the Daily Update Journal file is still the data you want to post to the database after correcting the cause of the error. In these cases, rather than spend the time and money to re-collect data over the modem, you can simply re-post the data in the Daily Update Journal file to the database. Examples of when this is very appropriate include the following:

- A printer paper jam occurred during the printing of the daily update report, so you couldn't see your collected data or any detailed posting error reports.
- You forgot to manually change the delivery month or year of a contract data file in the Roster, after transmitting portfolio changes with the automatic Roster updating feature turned off, which resulted in one or more files not being posted due to a mismatch between the delivery month and year for the associated commodity in the Roster and the same commodity in the Daily Update Journal file.
- You forgot to manually add a new entry in the Roster as a result of adding an entry in the remote portfolio file, after transmitting portfolio changes with the automatic Roster updating feature turned off.
- You moved the location of a contract data file to another folder using the *Finder*, and forgot to update the Roster so that Trade Data Manager could find the file during the posting phase.
- Your disk filled up during the posting phase, and the remainder of the posting phase aborted.

In each of these cases, as well as many more, you should use the *Update From Journal...* command in the *Service* menu to initiate posting of the database from the current Daily Update Journal file. Selection of this command will cause a File Selection browser to appear, displaying any files that match the file type assigned to the Daily Update Journal file, as well as any folders that you have inside the folder where Trade Data Manager is located, as shown below:



File Selection Browser – Update From Journal

You will generally want to select the default Daily Update Journal file in this dialog, but you can select any previously saved Journal file (with any given name) instead if this is useful. After confirming this dialog, Trade Data Manager will perform the contract file posting phase, just as if a daily update session were being conducted in full, and reports will be generated and printed for each date contained in the Journal file. Print job and print style dialogs will be presented when using the *Update From Journal...* command if your current *Daily update settings* indicate that printed reports should be sent to the printer.

Daily update settings

The default settings of the various check-boxes in the *Daily update* dialog can be set by the *Daily update settings* dialog, which is activated by selecting the *Daily Update Settings...* command under the *Service* menu:

Daily update settings...

Select default settings for daily update session:

Report to printer Report to log file

Always conduct print dialogs.

Always do daily data collection.

Always transmit pending portfolio changes.

Always transmit pending historical data orders.

Always update Roster after portfolio changes sent.

Default temporary file names:

Journal file:

Report log file:

Cancel Save

Daily Update Settings Dialog

The most common configuration of the daily update settings is shown in the example above. In this configuration the defaults are: to send the daily update report and the daily accounting report to a real printer, to conduct print job and style dialogs at the start of each daily update session, and to enable daily data collection, transmission of pending portfolio changes, history orders, and messages, and to automatically update the Roster with any portfolio changes that were made after they are successfully transmitted. Default names are provided for both the Daily Update Journal file and the Daily Update Report Log file.

You may wish to change some of these defaults, in which case the *Daily update* dialog will always display the items you checked in the *Daily update settings* dialog when the *Daily update* dialog first appears. If you change any of the check-boxes in the *Daily update* dialog during the daily update session, the default settings in the *Daily update settings* dialog are not changed, only the states of these settings during the daily update session itself are affected.

If you wish, you can change the default name that is given to either the Daily Update Journal file or the Daily Update Report Log file by selecting the name displayed in this dialog and typing a new name. This might be useful if you wished to save old Daily Update Journal files as an alternative method of backing up your database from a given checkpoint, for example.

After making any changes to the default daily update settings, click the *Save* button, or type *Return* or *Enter* to confirm the dialog.

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Trade Data Manager performs basic order and position tracking, accounting, and equity calculations to help you follow your trading account. You can also display any orders or positions on top of your chart windows graphically. The Account Status file is used to store any open or day-orders, open positions, and financial information about your trading account at your brokerage firm. To use the accounting features within Trade Data Manager, you must first enter your existing orders, positions, and account equity information into the Account Status file with the *Edit Account Status file* dialog. You may have up to 744 orders and positions (combined) simultaneously present in the Account Status file.

You can perform order processing and equity calculations at any time by selecting the *Daily Accounting...* command from the *Service* menu, or you can perform these automatically during the daily data update session. Note that all commodities and stocks must be quoted in consistent currency units, such as dollars, in order for the accounting operation to be accurate. Trade Data Manager does not currently support automatic currency conversion during the daily accounting process.

A detailed accounting report can be generated that lists each open or day-order on file and all open positions. The accounting report also details any trades that were closed, or any new positions that were entered, due to the day's price action, as well as the open trade equity on each open position

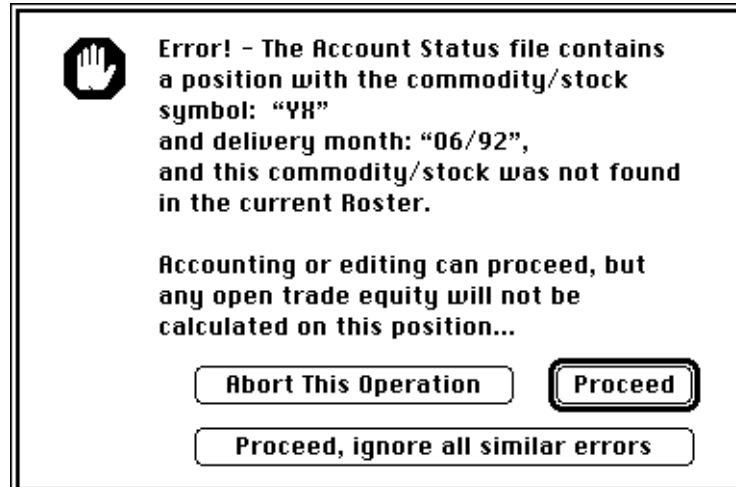
Account Status file editing

The *Edit Account Status file* dialog is the primary interface between you and Trade Data Manager for entering account information and displaying your current account status. To activate the editor, select the *Open Account Status File...* command (*Command-A*) under the *File* menu. This will invoke the *Edit Account Status file* dialog, as shown below with several order entries already present:

Commodity Symbol	Dmonth Dyear	Buy/Sell	Number Contr.	Order Price	Order Type	Time	Order Entry Date
GE	12/92	Buy	1	2332	SLim	GTC	7/12/92
ADBE	12/92	Buy	1	4400	LOC	GTC	7/16/92
C	07/92	Buy	1	2346	MIT	GTC	7/10/92
BP	12/92	Buy	1	<N/A>	Mkt.	D.O.	7/16/92
SF	09/92	Buy	1	<N/A>	Mkt.	D.O.	6/24/92
CL	09/92	Buy	1	<N/A>	MOC	D.O.	7/16/92
OJ	09/92	Buy	3	12750	Limit	GTC	7/16/92

Edit Account Status File Dialog – Orders View

When you select the *Open Account Status File...* command, Trade Data Manager will check each order and position entry in the Account Status file to insure that the corresponding contract data file (with a matching delivery month and year) is available in the Roster for each order or position entry. If there are any errors during this check, you will see an alert like the following one, or a similar alert for orders that do not have a matching contract data file available:



Account Status File Position Error Alert

If you get this alert, you will generally want to proceed anyway to edit the Account Status file. Click the *Proceed* button, or type *Return* or *Enter*. If you get several such alerts and you wish to ignore further alerts of this type, click the *Proceed, ignore all similar errors* button. If there are missing contract data files for orders *and* positions, you will have to perform this action twice – once for positions, and once for orders. Once you click the *Proceed, ignore all similar errors* button, the *Account Status file position alert* or the *Account Status file order alert* will not be presented again during the entire Trade Data Manager session. You can also elect to abort the operation in progress with this alert.

The *Edit Account Status file* dialog contains editable text-boxes for you to directly view or edit any of the account equity information. These include the amount of cash equity in the account, the value of any T-Bills or other security instruments that you may have in the account, and the current open trade equity. The open trade equity represents the dollar value of all your current open positions, as defined by the positions that are currently stored in the Account Status file, which was last computed from the last closing price on file for each of the associated contract data files and the entry price for each position. You can change any of these values by clicking within the editable text-box for the item of interest, or by typing the *tab* key to advance from one text-box to the next. Double-clicking within any text-box will result in the entire field being selected, after which any typing will replace the numbers in that field.

You may enter any values in the various equity fields that you wish, including negative numbers. Negative numbers should be preceded by a minus sign, with no intervening blank characters between the minus sign and the decimal digits that follow. No alphabetic characters are allowed, so you should *not* type any dollar-sign characters into these fields.

It does not make any sense to edit the open trade equity field, as this field will be computed on the next daily accounting update automatically, wiping out any changes you have made manually to this field.

Trade Data Manager does not manage or modify the value entered into the *Securities* field at any time, so you will have to edit this field from time to time when T-Bills or other securities are purchased, or when they mature. The corresponding cash required to purchase a T-Bill, or the cash and interest received when a T-Bill matures must be deducted or added, respectively, from the *Cash equity* field manually, using this dialog. The value in the *Securities* field is simply added to the *Cash equity* field and the *Open equity* field as a convenience whenever Trade Data Manager computes your total account equity for the accounting report. You are solely responsible for editing the value that appears in the *Securities* field.

When the *Edit Account Status file* dialog first appears, the current orders are displayed in the scrolling list by default. If you wish to view or edit the current open positions list, click the *Edit Positions* button, or type *Command-P*. This will cause the list to display the current positions, along with a new legend above the scrolling list. The *Edit Positions* button changes to read *Edit Orders*, with a command short-cut of *Command-O*, so you can toggle back and forth between the two lists.

To select any entry in either the current orders list or the current positions list for display, editing or deletion, you can click on the entry directly, or you can type one to six characters of the commodity or stock symbol to select the next matching entry in the list. You can also use the keyboard up or down arrows to move one row at a time, or the *page up* or *page down* keys to move one list window's worth at a time, or the *home* or *end* keys to immediately move to the top or the bottom of the list.

To edit, add, or delete a given order or position, see the relevant section below. Once you have completed any editing you wish to perform, click the *Save* button, or type the *Return* or *Enter* keys, and the result of your edits will be written to the Account Status file on disk. If you wish to discard the edits made during a session with this dialog, click the *Cancel* button, or type the *Escape* or *Tilde* keys, and the dialog will be removed without saving the changes to the Account Status file.

Editing the current orders list

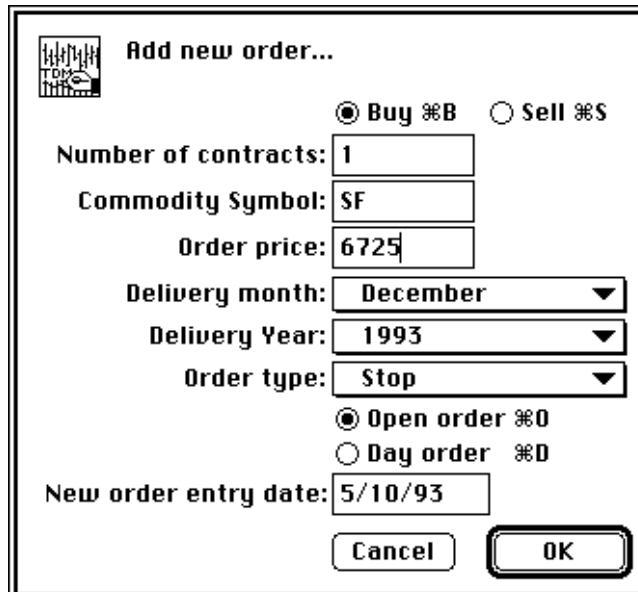
To edit or delete any given order entry in the current orders list, or to add new orders to the list, you must first select the order list display within the *Edit Account Status file* dialog. The current orders list will be displayed when this dialog first appears.

Deleting an existing order entry

To delete an order from the list, select the order you wish to delete in the manner described in the previous section, then click the *Delete Order* button, or type *Command-D*. The selected order will immediately be removed from the current order list.

Adding a new order entry

To add a new order to the current orders list, select an entry in the current orders list above which you wish the new order to appear, then click the *Add Order...* button, or type *Command-A*. This will display the *Add new order* dialog, as shown below:



Add new order...

Buy ¶B Sell ¶S

Number of contracts: 1

Commodity Symbol: SF

Order price: 6725

Delivery month: December ▼

Delivery Year: 1993 ▼

Order type: Stop ▼

Open order ¶O
 Day order ¶D

New order entry date: 5/10/93

Cancel OK

Add New Order Dialog

You may change the value of any field in the order by clicking on the appropriate control, pop-up menu, or editable text-box. The *tab* key will advance the currently selected text-box from top to bottom, selecting the entire contents of each box in succession for replacement with whatever you type.

When the *Add new order* dialog first appears, several defaults are set in the various controls and editable fields that make order entry faster. The type of order will default to either a “Buy” or “Sell” order that is one of several possible types of order. The default order type is taken from the *Accounting settings* dialog, described later in this section. The number of contracts in the order will default to the number specified in the *Accounting settings* dialog. The delivery month and year will default to December of the current year (which is what you want for stocks, but not usually what you want for commodities). The date on which the order was “entered” with your broker is defaulted to either the *next* trading day *after* the current day, or the current system date, depending on the default specified in the *Accounting settings* dialog. When set to default to the next trading day, Trade Data Manager assumes that you are updating your contracts every day after the markets close, deciding what orders to change or add during the evening, and placing the new or changed orders with your broker after-hours, in which case they will be recorded by the broker as having been entered on the next trading day. If you normally enter orders during the day, you will probably want to set the default to be the current system date.

The quickest way to add an order is to start typing immediately after the *Add new order* dialog appears, starting with the *Commodity symbol* text-box, using the *tab* key to advance from one text-box to the next. This approach is much faster than using the mouse to point and click inside each text-box. Once you gain familiarity with this approach, you will find that you can edit or add new orders very quickly, and that you won’t have to look up from your keyboard very much while entering orders.

Start by typing the one to six character commodity or stock symbol in the *Commodity symbol* text-box. Remember that all commodity symbols must be previously defined in the Commodity Fact file, and that nearly all commodity symbols consist of all upper-case letters, so you may wish to have the *caps lock* key on whenever you are editing or adding orders to the Account Status file.

After entering the commodity symbol, type the *tab* key, and the insertion caret will advance to the *Order price* text-box. If you are entering a market-type order, for which no order price is defined, skip this section and select the order type from the order type pop-up menu, described below, otherwise enter the order price desired in standard quotation format, according to the conversion information for the commodity in question in the Commodity Fact file. For example, grain prices will always be in eighths, so a price of 234 $\frac{1}{4}$ is entered as 2342, while the price for a Treasury Bond would be entered in thirty-seconds, so a price of 99 $\frac{7}{32}$ is entered as 9907. There are *never* any decimal points entered or displayed in standard price quotation format. If you forget and mistakenly enter a decimal point, or if the fractional price is not in the correct unit range for the commodity indicated, you will generally get an error alert, so don't worry about making too many mistakes here.

If you are entering an order that will be for the number of contracts that have already been set by the default number of contracts, and that will be recorded at your broker's office as being entered on the default *New order entry date*, you will not need to edit the corresponding text-boxes for these values, and you can proceed with setting the delivery month, year, order type, and Buy/Sell buttons. If you need to change the number of contracts or the *New order entry date*, type the *tab* key again, once to reach the *New order entry date* text-box, and one more time to select the *Number of contracts* text-box. Enter order dates in "MM/DD/YY" format, including the slashes. For example, a date of April 24, 1992, would be entered as 4/24/92. The number of contracts in the order must be between one and 32767, and is entered as an integer number, with no decimal point.

To set the delivery month, delivery year, and order type, click and drag the mouse in the appropriate pop-up menu. Note that each pop-up menu has complete command-key keyboard short-cuts available. Since you will be using the *Edit Account Status file* dialog every day to change orders, it will save you a lot of time to learn **every** keyboard short-cut in the *Add new order* dialog.

The delivery month pop-up allows you to select any month from January through December, as well as special delivery month codes for CSI's custom data products. See the subsection titled: "Special delivery month specification", located under the section: "Roster File Management" for details on how to use the special delivery month feature. The delivery year pop-up allows selection of any year from the past year through five years forward from the current year. You will see the delivery year menu automatically update each new year you use Trade Data Manager to continue to offer five forward years.

The delivery year for stocks and contracts with delivery month codes above 36 have no meaning and are ignored when Trade Data Manager is posting daily update data to files in the Roster. The delivery year specified for any orders in the Account Status file, however, must match the delivery year of the data received during a daily update when the daily accounting operation is performed. Orders that have matching symbols and delivery months but which have a mis-match in the delivery year will not be recognized as having been filled.

The *Order type*: pop-up menu is useful for displaying and keeping track of the order type, which affects the way Trade Data Manager checks to see if orders have been filled during daily accounting operations. The currently supported order types are shown below, together with the rule that Trade Data Manager uses when checking to see if an order may have been filled:

<i>Order Type</i>	<i>Order fill rule – Buy orders</i>	<i>Order fill rule – Sell orders</i>
Stop	High >= Stop price	Low <= Stop price
Limit	Low <= Limit price	High >= Limit price
Market	Always assumed filled	Always assumed filled
Market if Touched	High >= MIT price	Low <= MIT price
Stop-Limit	High >= Stop-Limit price	Low <= Stop Limit price
Stop Open Only	High >= Stop price	Low <= Stop price
Limit Open Only	Low <= Limit price	High >= Limit price
Market Open Only	Always assumed filled	Always assumed filled
Stop-Limit Open	High >= Stop-Limit price	Low <= Stop Limit price
Stop On Close	High >= Stop price	Low <= Stop price
Limit On Close	Low <= Limit price	High >= Limit price
Market On Close	Always assumed filled	Always assumed filled
Stop-Limit Close	High >= Stop-Limit price	Low <= Stop Limit price
Fill Or Kill	Always assumed filled	Always assumed filled

If you select any *Market* type order, selection of that order type will cause the *Order price* text-box to disappear, and the symbol “<N/A>” to appear in its place, indicating that no price is applicable. Re-selection of a non market-type order will cause the *Order price* text-box to reappear.

If you are actually placing a different type of order than the types that are available in this menu, such as an “Order-Cancels-Order” type of order, select the closest type of order that will result in the correct price comparison action during accounting operations. For example, a Stop-Close-only order (even though available on the menu directly) to Buy might be filled if the daily high is above the order price, so the selection of a simple *Stop* order from the menu would be equivalent. When Trade Data Manager compares the order price with the price action for the each day during the daily data collection session, it will prompt you for a potential order fill if this price comparison indicates that the order *might* have been filled. In cases where the order was not filled, or was partially filled, you will have an opportunity to indicate that this was the case during the accounting operation.

Select the order type desired by clicking and dragging on the *Order type* pop-up menu, or learn to use the keyboard short-cuts listed on the pop-up menu.

After selecting the order type, click the *Buy* or *Sell* radio button (or type *Command-B* or *Command-S*, respectively) as appropriate, then click the *Open order* (also known as a “good-till-canceled” order) button or the *Day order* button as appropriate, or type the *Command-O* or *Command-D* short-cuts. Trade Data Manager will treat day-orders and GTC orders equivalently during the daily accounting operation with respect to checking for order fills, etc., however *day-orders will automatically be deleted* from the Account Status file after the next daily accounting operation has been completed.

When you are satisfied with the contents of the new order, click the *OK* button, or type *Return* or *Enter*, to confirm the dialog and insert the order in the current orders list. The *Edit Account Status file* dialog will then reappear, and the new order will appear and will be selected in the scrolling list. If you do not want to insert the order, click the *Cancel* button, or type the *Escape* or *Tilde* key instead while in the *Add new order* dialog.

Editing an existing order entry

To edit an order within the current order list, select the order you wish to edit in the manner described in the previous section, then click the *Edit Order...* button, or type *Command-E*, or simply double-click the order entry in the list directly. This will cause the *Edit selected order* dialog to appear, as shown below:

Edit selected order...

Buy ¶B Sell ¶S

Number of contracts:

Commodity Symbol:

Order price:

Delivery month:

Delivery Year:

Order type:

Open order ¶O
 Day order ¶D

New order entry date:

Edit Selected Order Dialog

In the example above, an order to buy one contract of December 1993 Swiss Franc has been selected for editing. This order is a good-till-canceled (or “open”) stop order to buy one contract at a stop price of 0.6800, which is expressed in standard quotation format. The date on which the order was entered into the Account Status file has been automatically updated to either the *next* trading day *after* the current system date, or the current system date, depending on the default specified in the *Accounting settings* dialog. When set to default to the next trading day, Trade Data Manager assumes that you are updating your contracts every day after the markets close, deciding what orders to change or add during the evening, and placing the new or changed orders with your broker after-hours, in which case they will be recorded by the broker as having been entered on the next trading day. If you normally enter orders during the day, you will probably want to set the default to be the current system date.

You may change the value of any field in the order by clicking on the appropriate control, pop-up menu, or editable text-box. The *tab* key will advance the currently selected text-box from top to bottom, selecting the entire contents of each box in succession for replacement with whatever you type. It is perfectly OK to change the commodity symbol, the number of contracts in the order, the order price, or the date field. Remember that all commodity symbols must be previously defined in the Commodity Fact file.

Editing the selected order is really the same thing as adding a new order, with the only difference being that the existing order’s data is used to initialize the controls and text-boxes in the dialog, instead of using defaults, with the exception of the order entry date. Follow the instructions for adding a new order in the previous section for details.

Editing the current positions list

You should only have to edit, delete, or add new positions to your Account Status file when you first install Trade Data Manager, or when you forget to enter an order that was placed with your broker and that was executed, but was not entered in the Account Status file. Trade Data Manager takes care of creating new positions and closing out old positions as trades occur during the daily accounting operation, so your current positions list should always accurately reflect the actual positions in your account. There are occasions where you may need to directly add new positions, or correct entry prices on existing positions, or other changes that require that you edit the current positions list.

To edit any given position entry in the current positions list, or to add new positions to the list, you must first select the position list display within the *Edit Account Status file* dialog. The current orders list will be displayed when this dialog first appears, so you will need to click the *Edit Positions* button, or type *Command-P*. The current orders list will disappear, and the current positions list will appear in the scrolling list region of the dialog. The legend above the scrolling list will also change to display the field definitions for the current positions list, as show below:

Edit Account Status File...

Account Equity

Cash equity: 16935.28

Securities: 50000.0

Open equity: 18050.25

Commodity Symbol	Month Year	Long/Short	Number Contr.	Position Entry Price	Position Entry Date
GC	08/92	Short	3	3389	5/14/92
ED	09/92	Long	2	9575	5/14/92
SF	09/92	Long	2	6650	5/14/92
ADBE	12/92	Long	2	4408	7/14/92
S	11/92	Long	2	6266	5/14/92
GE	12/92	Long	3	4548	6/12/92
TR	09/92	Short	3	9720	5/6/92

Buttons: Save, Cancel, Edit Orders ⌘O, Edit Position... ⌘E, Delete Position ⌘D, Add Position... ⌘A

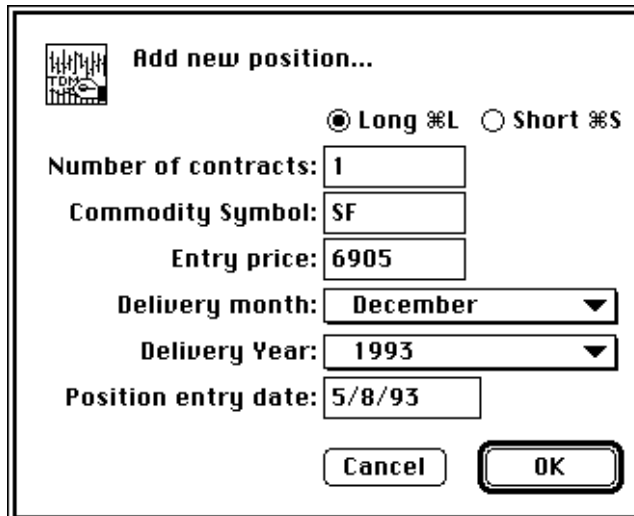
Edit Account Status File Dialog – Positions View

Deleting an existing position entry

To delete a position from the list, select the position entry you wish to delete in the manner described in the previous section, then click the *Delete Position* button, or type *Command-D*. The selected position entry will immediately be removed from the current positions list.

Adding a new position entry

To add a new position to the current positions list, select an entry in the current positions list above which you wish the new position to appear, then click the *Add Position...* button, or type *Command-A*. This will display the *Add new position* dialog, as shown below:



Add new position...

Long %L Short %S

Number of contracts: 1

Commodity Symbol: SF

Entry price: 6905

Delivery month: December

Delivery Year: 1993

Position entry date: 5/8/93

Cancel OK

Add New Position Dialog

You may change the value of any field in the order by clicking on the appropriate control, pop-up menu, or editable text-box. The *tab* key will advance the currently selected text-box from top to bottom, selecting the entire contents of each box in succession for replacement with whatever you type.

When the *Add new position* dialog first appears, several defaults are set in the various controls and editable fields that make position entry faster. The type of position will default to a “Long” position. The number of contracts in the position will default to one. The delivery month and year will default to December of the current year (which is what you want for stocks, but which is usually not what you want for commodities). The date on which the position was “entered” is always defaulted to the current system date.

The quickest way to add the position is to start typing immediately after the *Add new position* dialog appears, starting with the *Commodity symbol* text-box, using the *tab* key to advance from one text-box to the next. This approach is much faster than using the mouse to point and click inside each text-box. Once you gain familiarity with this approach, you will find that you can edit or add new positions very quickly, and that you won’t have to look up from your keyboard very much while entering positions. If you find this very convenient, then you are probably not doing a very good job of maintaining your current orders list!

Start by typing the one to six character commodity symbol in the *Commodity symbol* text-box. Remember that all commodity symbols must be previously defined in the Commodity Fact file, and that nearly all commodity symbols consist of all upper-case letters, so you may wish to have the *caps lock* key on whenever you are editing or adding positions to the Account Status file.

After entering the commodity symbol, type the *tab* key, and the insertion caret will advance to the *Entry price* text-box. Enter the position's entry price in standard quotation format, according to the conversion information for the commodity in question in the Commodity Fact file. For example, grain prices will always be in eighths, so a price of 234 $\frac{1}{4}$ is entered as 2342, while the price for a Treasury Bond would be entered in thirty-seconds, so a price of 99 $\frac{7}{32}$ is entered as 9907. There are *never* any decimal points entered or displayed in standard price quotation format. If you forget and mistakenly enter a decimal point, or if the fractional price is not in the correct unit range for the commodity indicated, you will generally get an error alert, so don't worry about making too many mistakes here.

If you are entering a position that consists of one contract, and that will be recorded at your broker's office as being entered on the current trading day (equal to the current system date), you will not need to edit the corresponding text-boxes, and you can proceed with setting the delivery month, year, and Long/Short buttons. If you need to change the number of contracts or the *Position entry date*, type the *tab* key again, once to reach the *Position entry date* text-box, and one more time to select the *Number of contracts* text-box. Enter the position entry date in "MM/DD/YY" format, including the slashes. For example, a date of April 24, 1992, would be entered as 4/24/92. The number of contracts in the position must be between one and 32767, and is entered as an integer number, with no decimal point.

To set the delivery month and year, click and drag the mouse in the appropriate pop-up menu, or use the keyboard short-cuts listed in each pop-up menu. The delivery month pop-up allows you to select any month from January through December, as well as special delivery month codes for CSI's custom data products. See the subsection titled: "Special delivery month specification", located under the section: "Roster File Management" for details on how to use the special delivery month feature. The delivery year pop-up allows selection of any year from the past year through five years forward from the current year. You will see the delivery year menu automatically update each new year you use Trade Data Manager to continue to offer five forward years.

The delivery year for stocks and contracts with delivery month codes above 36 have no meaning and are ignored when Trade Data Manager is posting daily update data to files in the Roster. The delivery year specified for any positions in the Account Status file, however, must match the delivery year of the data received during a daily update when the daily accounting operation is performed. Positions that have matching symbols and delivery months but which have a mis-match in the delivery year will not be recognized as having been closed if a corresponding order is filled during the accounting operation.

After selecting the delivery month and year, click the *Long* or *Short* radio button, or type *Command-L* or *Command-S*, as appropriate.

When you are satisfied with the contents of the new position entry, click the *OK* button, or type *Return* or *Enter*, to confirm the dialog and insert the position entry in the current positions list. The *Edit Account Status file* dialog will then reappear, and the new position will appear and will be selected in the scrolling list. If you do not want to insert the position entry, click the *Cancel* button, or type the *Escape* or *Tilde* key.

Editing an existing position entry

To edit a position entry within the current positions list, select the position entry you wish to edit in the manner described in the previous section, then click the *Edit Position...* button, or type *Command-E*, or simply double-click the position entry in the list directly. This will cause the *Edit selected position* dialog to appear, as shown below:

The image shows a dialog box titled "Edit selected position...". In the top-left corner, there is a small icon of a bar chart with the letters "TD" below it. To the right of the icon is the title "Edit selected position...". Below the title are two radio buttons: the first is labeled "Long %L" and is selected (indicated by a filled circle), and the second is labeled "Short %S" and is unselected (indicated by an empty circle). Below the radio buttons are several input fields: "Number of contracts:" with a text box containing "1"; "Commodity Symbol:" with a text box containing "SF"; "Entry price:" with a text box containing "6750"; "Delivery month:" with a dropdown menu showing "December"; "Delivery Year:" with a dropdown menu showing "1993"; and "Position entry date:" with a text box containing "12/28/92". At the bottom of the dialog are two buttons: "Cancel" and "OK".

Edit Selected Position Dialog

The example above shows a long December 1993 Swiss Franc position consisting of one contract, which was entered on December 28, 1992, at an entry price of 0.6750.

You may change the value of any field in the position entry by clicking on the appropriate control, pop-up menu, or editable text-box. The *tab* key will advance the currently selected text-box from top to bottom, selecting the entire contents of each box in succession for replacement with whatever you type. It is perfectly OK to change the commodity symbol, the number of contracts in the position, the position entry price, or the position entry date field. Remember that all commodity symbols must be previously defined in the Commodity Fact file.

Editing the selected position entry is really the same thing as adding a new position entry, with the only difference being that the existing position's data is used to initialize the controls and text-boxes in the dialog, instead of using defaults. Follow the instructions for adding a new position entry in the previous section for details.

Performing the daily accounting operation

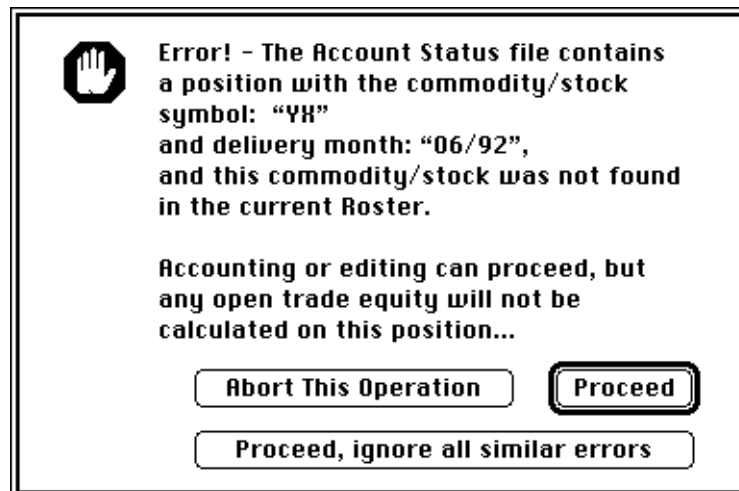
“Daily accounting” is the process whereby Trade Data Manager performs closed trade analysis, new position creation, and open position account equity calculations, using the Account Status file, the Account History file, the Roster, and the contract data files indicated in the Roster. To perform daily accounting, Trade Data Manager executes the following sequence of steps:

- 1) Each of the current orders in the Account Status file are compared with the last day’s prices on file from the contract data file in the Roster with a matching commodity symbol, delivery month, and delivery year, following the price comparison rules described in the section titled “Adding a new order entry,” to see if any orders *might* have been filled. If the required contract data file is not defined in the Roster for a given order, Trade Data Manager will assume that the order *may* have been filled.
- 2) For each order that may have been filled, Trade Data Manager prompts for fill information, including the fill price and the number of contracts filled at the fill price (split fills at multiple prices are also handled). The order fill confirmation process is described more fully later in this section.
- 3) Each order fill that was confirmed is processed, with the result being that a position is either closed or reduced in the number of open contracts, or a new position is opened. The current positions list is updated automatically in response to each order fill as appropriate, which may result in new position entries, deletion of position entries that were closed, or changes to the number of open contracts in a position. The current orders list is also updated automatically in response to each order fill as appropriate, which may result in deletion of order entries, or a change in the number of contracts remaining to be filled in an order. For each order fill that occurs, Trade Data Manager writes a fill record to the Account History file to record the event. For each closed trade fill, or new position fill, an additional record is written to the Account History file to record these events as well.
- 4) The closed trade gain or loss is calculated for each order fill that results in a closed trade or a reduction in the number of open contracts within an existing position. The closed trade gain or loss takes into account the number of contracts filled, the contract point value, and the overnight round-trip commission rate. The values for these parameters are taken from the Commodity Fact file for each commodity.
- 5) The total closed trade gain or loss is added to the current cash equity value found in the Account Status file.
- 6) For all remaining open positions, and for all new positions that were created as a result of order fills, Trade Data Manager computes the current open trade equity for each position using the last day’s prices on file from the contract data file in the Roster with a matching commodity symbol, delivery month, and delivery year. The open trade equity calculation takes into account the number of contracts in the position, the contract point value, and the direction of the position (long or short).
- 7) The total open trade equity and the total account equity are computed, and the net change in cash equity, open trade equity, and total account equity is computed. The new cash equity, securities equity, and total open trade equity figures are also written to the Account History file as a summary record.

- 8) If the daily accounting report option has been enabled in the *Accounting settings* dialog, a detailed report is printed either on the currently selected printer, or to the Daily Update Report Log file, which lists all closed trades, new positions, current open positions, and account equity information. The individual sections of the report may be selectively printed or suppressed under control of the *Accounting settings* dialog, described later in this section.
- 9) The Account Status file on disk is updated with the changes to the current orders list, the current positions list, and the cash and open trade equity values. Any day-orders in the current orders list are discarded, as it is assumed that they have expired.

In computing open trade equity and total account equity, Trade Data Manager requires that price data be available for each commodity or stock indicated in the current positions list. During contract roll-over, you may occasionally have an open position in a particular delivery month or year in the positions list that does not have a corresponding contract data file available yet. In these situations Trade Data Manager will not be able to compute open trade equity for those positions, and the accounting report will list the open trade equity for those positions as “<NotAvail.>”. The total account equity, open trade equity, and net change to these values will therefore also be indeterminate, and will also be listed as undefined or not available. This does *not* indicate an error condition, and you will *not* have to edit your Account Status file for these situations. As soon as you have collected data for each of the contracts required to compute open trade equity figures, Trade Data Manager will again report accurate figures in the daily accounting report, and the Account Status file will be updated with accurate equity figures.

At the start of the daily accounting operation, the Account Status file is read into memory and checked to insure that each order entry and each position entry have a defined contract data file available in the Roster with a matching delivery month and year. If any of the required files are not available, you will get the following alert, or a similar alert for order entries that do not have a matching contract data file:



Account Status File Position Error Alert

If this alert comes as a surprise to you, and you believe there is an error in your database that you need to correct, you can click the *Abort this operation* button to terminate daily accounting. If you abort, the Account Status file is not updated or modified in any way, and the daily accounting report will not be printed. As described above, there may be conditions where this alert should appear which are not errors, such as during contract roll-over, so you may wish to click the *Proceed* button. If there are many such cases that you wish to by-pass, click the *Proceed, ignore all similar errors* button.

Order fill confirmation

During the daily accounting operation, Trade Data Manager compares the last day's prices for each contract data file in the Roster against any orders for the same commodity or stock that exist in the Account Status file. When a potential order fill is detected, Trade Data Manager will display the *Order Fill / Fill Price Confirmation* dialog, shown below:

Order Fill / Fill Price Confirmation...

The following order might have been filled:

Buy 1 BP British Pound
June 1992 at: 17168 Stop

If the order was filled, enter the actual fill price, and the quantity filled at the fill price below. If there was a split-fill, enter only the price and quantity of the first portion for now:

Fill Quantity:

Fill Price:

Order Fill / Fill Price Confirmation Dialog

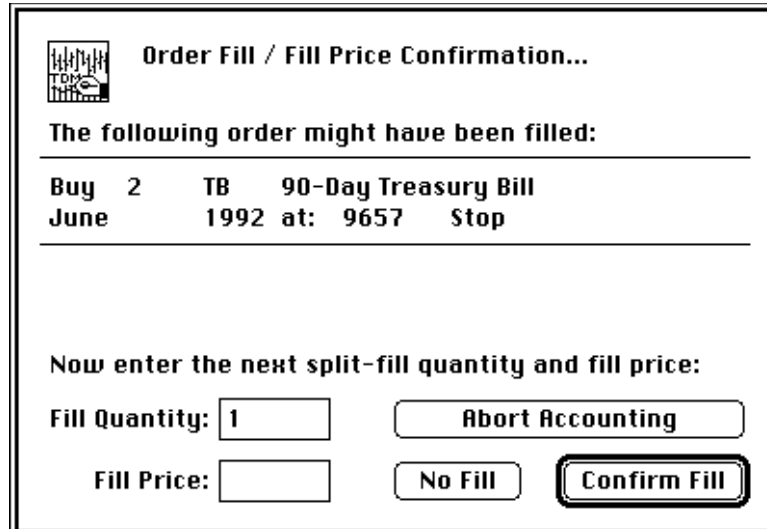
In the example above, Trade Data Manager has detected that the last daily high price on file in the June 1992 British Pound contract data file is above the price of an order to buy one contract of the June 1992 British Pound at a stop price of 17168 that was found in the Account Status file. This order *may* have been filled, so the user is being asked if the order *was indeed* filled, and if so, at what price.

The *Order Fill / Fill Price Confirmation* dialog defaults the number of contracts being filled to the number in the order displayed within the dialog. If you have a split-fill, type the *tab* key to select the *Fill Quantity* text-box, then enter the number of contracts filled at the first fill price.

If the order was filled, enter the price at which the order was filled in the *Fill Price* text-box, using standard price quotation format. Confirm the fill by clicking the *Confirm Fill* button, or by typing *Return* or *Enter*. If the order was not filled, or you haven't received confirmation of the fill yet and do not know the fill price, click the *No Fill* button to proceed with the daily accounting operation, in which case the order will be ignored.

If you wish to abort the daily accounting operation in response to this dialog, click the *Abort Accounting* button. This may be advisable if you see this dialog during the daily accounting operation and the possibility of an order fill has come as a complete surprise to you (e.g., due to not receiving a fill confirmation from the broker). In such cases you may want to call your broker to get your fill, then run the daily accounting operation later when you have all the fill data required. If you abort the accounting operation, the Account Status file will **not** be modified or updated in any way, even if you had confirmed other order fills during the same daily accounting run.

If you have a split-fill, where several contracts are filled at different fill prices, and you have reduced the number of contracts displayed in the *Fill Quantity* text-box, Trade Data Manager will update the dialog to prompt you for each successive split-fill, as shown below:



Order Fill / Fill Price Confirmation...

The following order might have been filled:

Buy 2 TB 90-Day Treasury Bill
June 1992 at: 9657 Stop

Now enter the next split-fill quantity and fill price:

Fill Quantity:

Fill Price:

Order Fill / Fill Price Confirmation Dialog

Trade Data Manager will reduce the number of contracts in the *Fill Quantity* text-box by the number of contracts filled at each split-fill price, and will continue to prompt for split-fills until the number of contracts filled equals the original order quantity, or until you click the *No Fill* button.

Note that the *Order Fill / Fill Price Confirmation* dialog will be displayed for any order that *may* be filled to the best of Trade Data Manager's knowledge. If you have market orders on file, or if you have orders for which the corresponding contract data file is not available (and hence the price data is unavailable for that commodity or stock), Trade Data Manager will have to assume that a fill could have taken place. This assumption is very useful on contract roll-over days, where you have discontinued data collection for a particular contract and have simultaneously exited an open position in that contract on the same day

Manual versus auto-run daily accounting

You will usually want to perform the daily accounting operation automatically during the daily update data collection session. The *Daily update* dialog defaults to running the daily accounting operation unless you un-check the check-box for this option, or if you have disabled the daily accounting auto-run feature in the *Accounting settings* dialog.

Daily accounting can also be performed as a stand-alone operation at any time by selecting the *Daily Accounting...* command under the *Service* menu, or by typing *Command-U*. If you elect to invoke the daily accounting process in this manner, be sure that the printer is powered up and on-line, and that the contract data files in the Roster have all been updated to the correct date. Any changes that are required to the current orders or current positions lists in the Account Status file to make the file current should also be made before invoking the daily accounting process.

Accounting – database back-up considerations

It is important for you to understand the daily accounting operation in detail, so that you do not inadvertently do something that gets you database “out of sync” with the Account Status file. For example, if you have forgotten to enter a given order that was filled in actuality, the daily accounting operation will not include the effect that order might have had in creating a new open position or in closing out an existing trade. As a result of such an omission, the account cash equity or open trade equity calculation would be in error. If something like this ever happens (and it will eventually), you will either need to edit the Account Status file manually to correct entries in error, or you can go back to the previous day’s backup files, make the necessary corrections to the Account Status file to enter the order that you forgot, and re-run the daily accounting operation. It is much easier to take the latter approach than to try to reverse the error that was induced by calculating the change in equity that occurred during the accounting operation.

The easiest and safest way to keep your database in sync and to avoid having to perform manual edits to the Account Status file is to back-up the database every day. This includes making a copy of all contract data files, the Account Status file, the Account History file, and the Roster. See the section titled: “Database back-ups” for a detailed procedure.

Printing the Account Status file

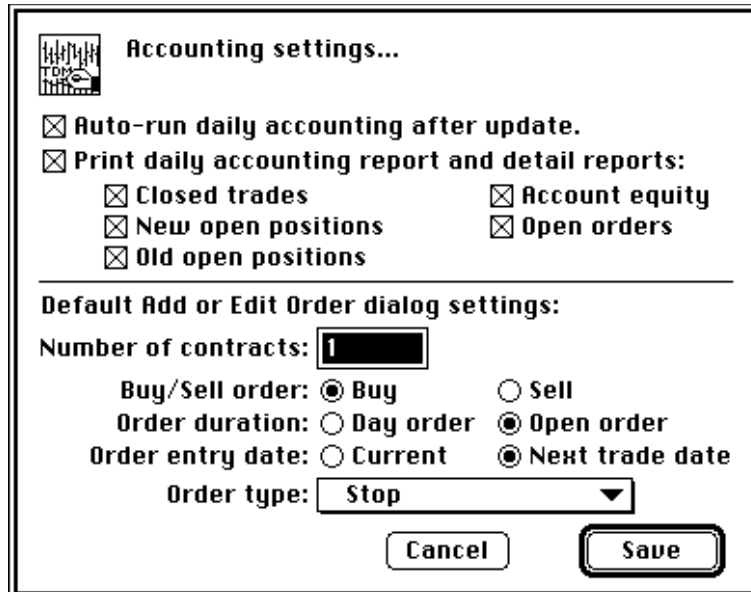
The orders, positions, and account equity information contained in the Account Status file can be printed at any time by selecting the *Print Account Status File...* command under the *File* menu. A detailed report will be printed to the currently selected printer that includes a listing of all open and day-orders, positions, and a computation of the account equity information. Open trade equity is computed and listed for each open position in the report.

As with the daily accounting operation, the computation of open trade equity and the resulting total account equity is dependent on having up to date data in each of the required contract data files.

Accounting settings

Control over when the daily accounting process is initiated and the appearance of the daily accounting report is accomplished through the use of the *Accounting settings* dialog. You can also use the *Accounting settings* dialog to specify default initial settings for the *Add new order* and *Edit selected order* dialogs. By setting the default settings for new or existing orders, you can significantly reduce the time spent editing orders each day.

Select the *Accounting Settings...* command under the *Service* menu to activate the *Accounting settings* dialog. The default configuration for this dialog is shown below:



The screenshot shows a dialog box titled "Accounting settings...". It contains several sections of settings:

- Auto-run daily accounting after update.**
- Print daily accounting report and detail reports:**
 - Closed trades**
 - Account equity**
 - New open positions**
 - Open orders**
 - Old open positions**
- Default Add or Edit Order dialog settings:**
 - Number of contracts:** 1
 - Buy/Sell order:** Buy Sell
 - Order duration:** Day order Open order
 - Order entry date:** Current Next trade date
 - Order type:** Stop

At the bottom right, there are "Cancel" and "Save" buttons.

Accounting Settings Dialog

You can choose to run the daily accounting operation at the end of the daily update data collection session, or you can disable this feature. Click the *Auto-run daily accounting after update* check-box to switch between enabling and disabling this feature. Daily accounting will be performed at the end of the daily update session if the check-box is checked.

The *Print daily accounting report and detail reports* check-box enables or disables the daily accounting report regardless of whether the daily accounting operation is run automatically or from the menu command. If enabled, the various detail reports within the accounting report can be selectively enabled or disabled. Check or un-check each of the detailed report options as desired.

Default initial settings for the *Add new order* and *Edit selected order* dialogs are provided in the lower half of the *Accounting settings* dialog. Enter the number of contracts to use when adding new orders to the Account Status file in the *Number of contracts:* text-box.

Select the type of order (“Buy” order or “Sell” order), the order duration (day-order or open order), and the default order entry date (current system date versus next trading date) from the radio buttons provided. Click and drag the *Order type* pop-up menu to select the default order type that will appear.

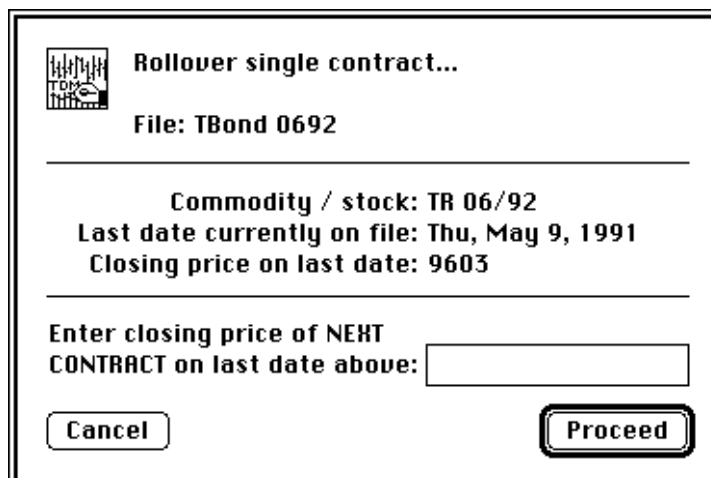
Click the *Save* button to confirm the *Accounting settings* dialog and record the accounting settings on disk, or the *Cancel* button to dismiss the dialog.

Continuous contract roll-over

The continuous contract roll-over facilities in Trade Data Manager are applicable **only** if you have elected to maintain your database using the continuous contract paradigm described earlier. If you are maintaining your database as a collection of actual, discrete contracts, you should **not** use the continuous contract roll-over command at any time.

As the first notice day or last trading day draws near on a commodity that you are receiving, you will need to roll-over your position, if any, to the next delivery month, and you will want to roll-over the contract delivery month that you wish to receive in any case. Trade Data Manager provides facilities to keep your contract data files in a continuous contract format during the roll-over with the *Single Contract...* command under the *Rollover* menu (*Command-R*). This command displays the *Roster Browser*, from which you can select which contract you wish to roll-over.

After selecting the desired contract, Trade Data Manager will display the *Rollover single contract* dialog, which appears as shown below:



Rollover single contract...

File: TBond 0692

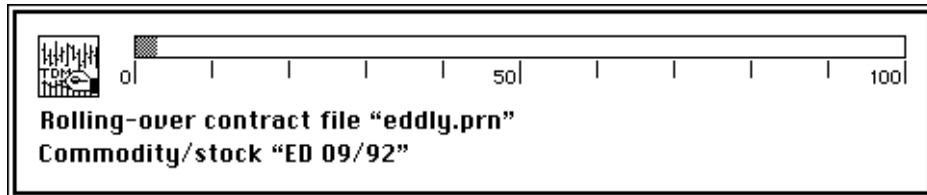
Commodity / stock: TR 06/92
Last date currently on file: Thu, May 9, 1991
Closing price on last date: 9603

Enter closing price of NEXT
CONTRACT on last date above:

Rollover Single Contract Dialog

The last date on file in the selected contract data file is displayed, along with the closing price on that date, using standard price quotation format. You must obtain the closing price on this same date of the *next* delivery month contract that you want to roll-over to, and enter this price in the editable text-box provided. Be sure to enter the price in industry-standard quotation format (just like the closing price that is displayed in the dialog), without a decimal point.

After confirming the dialog, Trade Data Manager will display the *Progress* dialog, which will display information about the various stages of rolling over the contract:



Progress Dialog

The difference in price obtained by subtracting the last closing price on file in the selected contract data file and the closing price that you entered into the dialog is referred to as the “closing price delta.” Trade Data Manager will perform the roll-over by reading in the entire contract data file, then it will adjust all open, high, low, and close prices on file by adding the closing price delta to each price. After all the prices have been adjusted, the contents of the file will be written with the new data.

After roll-over, all the prices in the file will approximate the trading action that has been taking place on the contract with the new delivery month. The spread in prices between delivery months is generally fairly constant over a short period of days, thus you will find that the rolled-over contract data file will serve as a fairly close approximation for trading purposes. Refer to the section “Continuous Contract Paradigm” for details on the theory behind this algorithm.

You should perform contract roll-over *just after* a daily update session in which you have sent a portfolio change to CSI that deletes the old delivery month you had been receiving and adds the new delivery month you want to start receiving on the next daily update session for the commodity in question. During this daily update, Trade Data Manager will automatically edit your Roster to reflect the new delivery month for that contract (unless you had clicked the check-box to disable this function). You will get a caution alert at the end of the daily update session to remind you to roll-over any contract files whose delivery months have changed.

It is a good idea to have a fixed schedule for the days that you will roll-forward from one delivery month to the next for each commodity in your database. For example, you might choose to always roll-over a contract on the first trading day of the delivery month. You will always know the number of days of contract data in your files that have been taken from the actual, discrete contract by using this approach.

On days when you will be transmitting a portfolio change request that results in a roll-over of a continuous contract in your database, you may also be exiting a position in the old delivery month and rolling over the position to the new delivery month in many cases. If you will be executing trades to roll-over a position, then you should un-check the check-box in the daily update data collection session *Daily update* dialog titled “Update Roster after portfolio changes sent” on that day’s data collection session. The reason for this is that you will want the daily accounting operation to be able to find the contract data files with matching delivery months and delivery years for the trades that will be executed and confirmed during the daily accounting operation. After the daily accounting operation has terminated, manually roll-over the Roster entries that were changed in the remote portfolio on CSI’s computer using the Roster file editor, then use the *Rollover* menu’s *Single Contract...* command to roll-over price data for those data files to correspond to the new delivery month.

If you forget to un-check the Roster update option during the daily data collection session, you will get an error alert for each order and position entry in the Account Status file for which there is

no matching contract data file available when the daily accounting operation starts. This is not a fatal error, but it can be annoying. You can abort the daily accounting operation in response to the error alert, manually change the Roster entries back to what they were before the Roster was updated, then manually run the daily accounting operation from the *Service* menu command. Following the completion of the daily accounting operation, you can manually roll-over the Roster entries that were changed in the remote portfolio on CSI's computer using the Roster file editor, then use the *Rollover* menu's *Single Contract...* command to roll-over price data for those data files to the new delivery month.

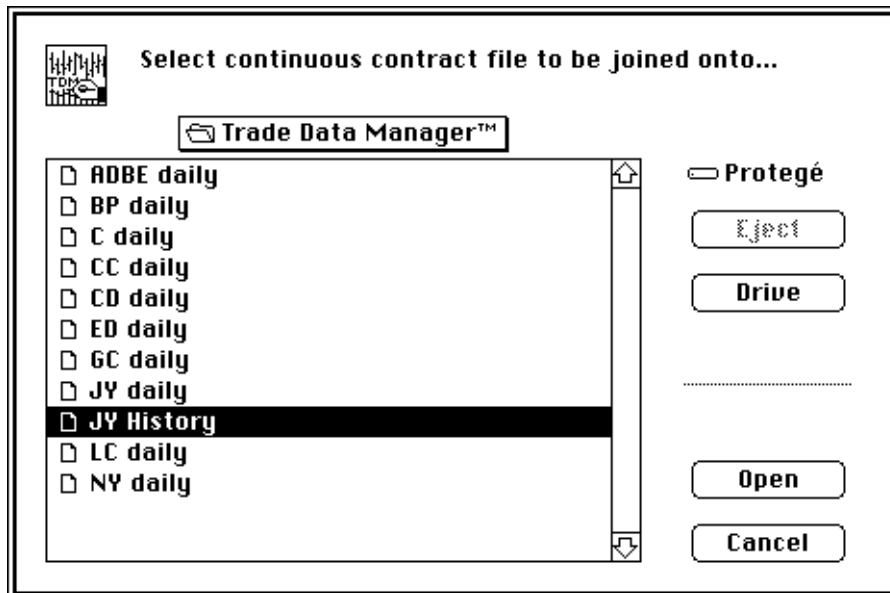
Archive database management

As you update your database each day, the individual contract data files continue to grow in size. In some trading systems the time spent in simulating the trading algorithm over the period of time in the contract data file can be considerable, so you may have a need to split up your files into more manageable sub-files, relegating older data to an archive. This issue is relevant to continuous contracts in particular, since actual contracts have a fairly limited time span anyway.

Trade Data Manager provides a simple way to extract sub-sections of any contract data file, as well as a way to merge (or "join") two files into a single continuous file. These actions are accomplished through the use of the *Extract Contract...* command and the *Join Contracts...* command in the *Rollover* menu. A common use of these commands is to join the current daily update contract data file onto the end of an old archive continuous contract data file, extending the archive through the current date. After the archive file is updated, the current daily update file is truncated through the *Extract Contract...* command so that it retains only the most recent data (perhaps only a few months of data).

Joining a continuous contract data file with an actual contract data file

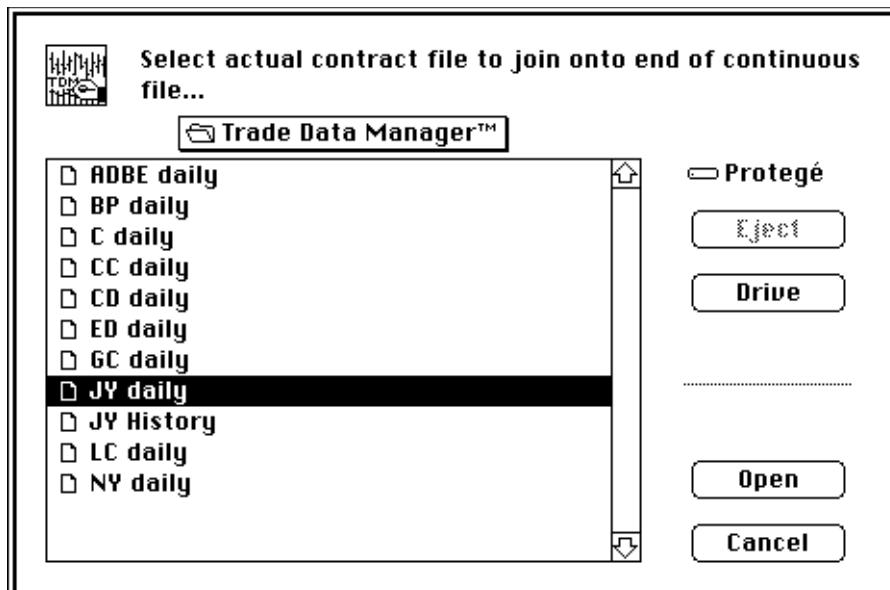
To merge two contract data files, select the *Join Contracts...* command under the *Rollover* menu. A File Selection dialog will be displayed, with a prompt indicating that you should select a *continuous contract file* to be joined onto, as shown below:



File Selection Dialog

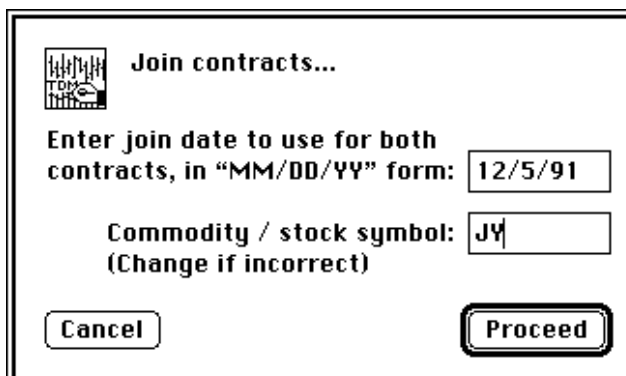
The file that you select in this dialog will generally be a continuous contract archive file that extends from the first trading day for which you have data for that commodity or stock. This file will be written with the results of the contract file join operation, such that data near the start of the file will be taken from the file you select in this dialog, while data near the end of the file will be taken from the actual contract data file, which is selected in the next step.

After confirming the File Selection dialog, Trade Data Manager will display the File Selection dialog again, only this time the prompt will ask you to select the *actual contract file* to join onto the end of the continuous contract file. Neither the actual contract data file nor the continuous contract data file need be in the current Roster, although it is perfectly OK if either of them are. The actual contract data file will generally be the daily update contract data file that you have been updating each day, which may be an actual contract with a particular delivery month and year:



File Selection Dialog

After confirming the actual contract data file File Selection dialog, Trade Data Manager will display the *Join contracts* dialog:

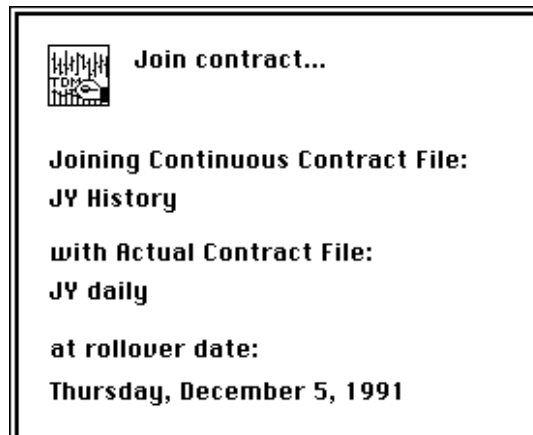


Join Contracts Dialog

You should type in the date you wish to use in joining the two files together in the editable text-box provided. All data in the result file from the first date in the continuous contract file to the “join date” will be taken from the continuous contract file. All data in the result file from the join date to the last date on file in the actual contract file will be taken from the actual contract file. Thus, you will have effectively “pasted” the actual contract file “onto” the continuous contract file, joining them at the specified join date. **Be sure to type in a valid trading date that is present in both contract files.** Trade Data Manager will refuse to join the files if the specified date is not present in both files.

If either of the files specified is also contained in the current Roster, Trade Data Manager will place the associated commodity symbol in the *Commodity symbol:* text-box. If neither of the files are in the Roster, Trade Data Manager has no way of knowing what commodity symbol is correct, and thus it would have no way to adjust all prices to the nearest “tick”. In this case you must type the commodity symbol into the text-box manually.

Confirm the dialog by clicking the *Proceed* button, or by typing *Return* or *Enter*. Trade Data Manager will then display a progress dialog that indicates which files are being joined, and the join date that is being used, as shown below:




Join Contract Progress Dialog

Due to the continuous contract paradigm, Trade Data Manager will find that the closing price on the join date will usually be different in the two files specified. This is a natural result of the adjustments to the prices that have been made as contracts are rolled-over. Trade Data Manager will compute the “closing price delta” in the same way that it is computed for single contract roll-overs, then all prices in the continuous contract file from the first date on file to the join date will be adjusted by the closing price delta. The resulting joined file will therefore have a smooth, continuous contract form, suitable for use in many trading system simulators.

Extracting contract data files

After joining two files together, you will generally want to truncate your daily update file (referred to as the actual contract file above) so that only the most recent data is retained. Depending on your trading system's requirements, or your own personal preferences, you may wish to retain anywhere from a few months of data to a year or more. This is accomplished through the *Extract Contract...* command, under the *Rollover* menu.

The *Extract Contract...* command will display the *Roster Browser*, listing only those commodities and stocks that are in the current Roster. After selecting the contract that you want to extract, the *Extract Contract* dialog will appear:



Extract Contract...

Select starting and ending dates to be included in the extracted output...

Contract: NY 07/92
File: Cotton 0792

Starting Date: 12/3/90 Ending Date: 5/10/91

First Date Last Date

Cancel Save As... Save

Extract Contract Dialog

In the example above, the July 1992 Cotton contract has been selected for extraction. By default, Trade Data Manager will list the first and last dates on file as the starting and ending date to include in the extraction. You can type in any valid trading date in place of these defaults, using the convention of typing dates in MM/DD/YY format, including the slashes. If you make a mistake and want to reset either default date, click the associated *First Date* or *Last Date* buttons to restore the associated date. Trade Data Manager will also let you specify a date that is not a valid trading date, in which case it will ask you if you want to use the closest trading date to the date you specified as the extraction date before proceeding.

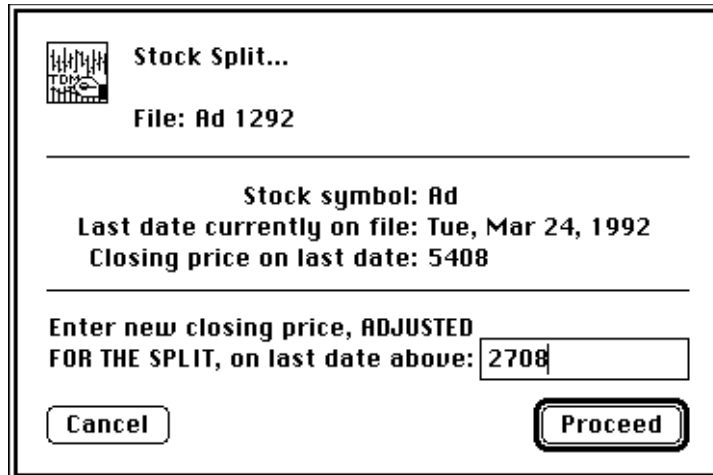
You can select between saving the extracted result in the contract data file that you started with or saving the extracted result in a new file. Click the *Save As...* button if you want to save the result in a new file, otherwise click the *Save* button to save the extracted results in the same file.

After confirming the dialog with the *Save As...* or *Save* buttons, Trade Data Manager will write the data from the specified starting date through the specified ending date, inclusive, to the desired file. None of the price, volume, or open interest data for any day retained in the file is modified by this operation.

Stock splits

When a stock splits, Trade Data Manager allows you to adjust (or “restate”) all prices in the stock data file through the *Stock Split...* command in the *Rollover* menu. Selecting this command displays the *Roster Browser*, listing symbols in the current Roster. You can also use the *Stock Split...* command to perform price scaling on commodity contracts, since the split operation actually just multiplies every price in the contract file by a fixed multiplier.

After confirming the *Roster Browser* with the stock symbol on which you wish to effect the split, Trade Data Manager will display the *Stock Split* dialog, shown below:



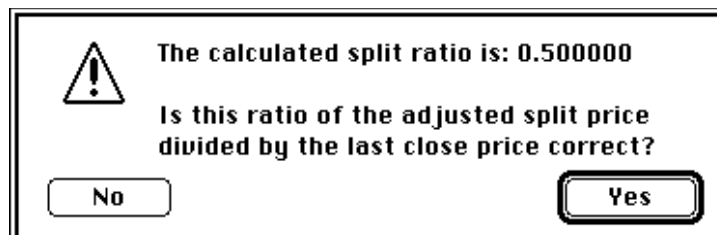
Stock Split...
File: Ad 1292


Stock symbol: Ad
Last date currently on file: Tue, Mar 24, 1992
Closing price on last date: 5408

Enter new closing price, ADJUSTED
FOR THE SPLIT, on last date above:

Stock Split Dialog

To split the stock, enter the new closing price of the stock, **adjusted for the split**, in the editable text-box provided. The ratio of the new closing price to the old closing price must be between 0.01 and 100.0. After confirming the dialog by clicking the *Proceed* button, or by typing the *Return* or *Enter* keys, Trade Data Manager will compute the “split ratio”, which is the ratio of the new split-adjusted closing price divided by the old closing price on file. Trade Data Manager will then display the calculated split ratio confirmation alert shown here:



 **The calculated split ratio is: 0.500000**
**Is this ratio of the adjusted split price
divided by the last close price correct?**

Calculated Split Ratio Confirmation Alert

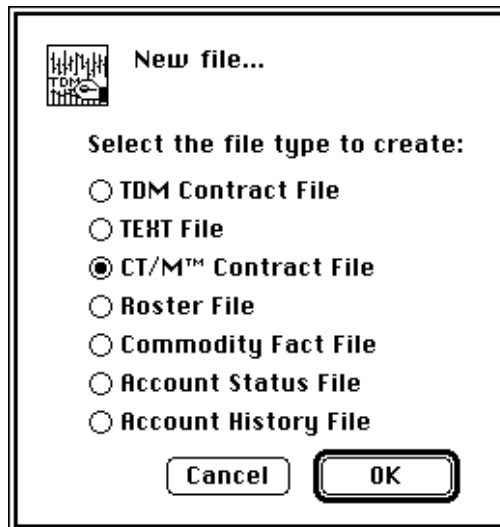
If the ratio appears to be correct, confirm this alert by clicking the *Yes* button, or by typing the *Return* or *Enter* key, otherwise abort by clicking the *No* button. After confirmation, Trade Data Manager will multiply the split ratio times the open, high, low, and close prices for every record in the selected file. This action causes all the prices to be restated to the split price. The volume and open interest fields of each record are left unmodified.

If you discover that a stock you had been collecting data for has split some time ago, and you have inadvertently collected more data since the split, with the new data in split-adjusted form, do not despair! You will have to extract the more recent, split-adjusted section from the older, non split-adjusted section of the file using the *Extract Contract...* command. Save the split-adjusted section in a *new* file, and save the older non-split-adjusted section in the original contract file. Perform the stock split operation on the original section of the file that needs to be adjusted, using the split ratio that was used when the stock split times the last price on file, then use the *Join Contracts...* command to *join* the two sections together again, using the split date as the join date. The original contract file is specified as the continuous contract file, while the new file is specified as the actual contract file. Since the closing prices on the “join date” will be identical, the closing price delta will be zero, thus all of the prices in the resulting file will be correct

You can use the *Stock Split* dialog to scale the prices of a commodity contract by a fixed multiplier. This is potentially useful in changing the basis of the contract’s price quotation unit, in conjunction with a change to the quotation unit value specified in that commodities entry within the Commodity Fact file. Simply type the new closing price in the text box provided, suitably scaled, then use the Commodity Fact file editor dialog to change the corresponding quotation unit, point value, minimum tick size, etc. The split ratio will generally be a very small or very large number (perhaps 0.01 or 100.0) when performing this procedure, but this is perfectly acceptable to Trade Data Manager.

Creating New Files

From time to time you may have occasion to create a new, empty file within Trade Data Manager. In addition to creating new files from within various dialogs, such as any File Save dialog, the *Edit Roster file* dialog, or the *Commodity Fact file edit* dialog, you can create any of the file types that Trade Data Manager works with by selecting the *New...* command from the *File* menu. Invoking the *New...* command causes the *New file dialog* to appear, as shown below:



New File Dialog

Select the file type that you wish to create by clicking the mouse in the corresponding radio button. Confirm the dialog by clicking the *OK* button, or by typing *Return* or *Enter*. Trade Data Manager will create a new, empty file of the type desired in response to confirming the dialog.

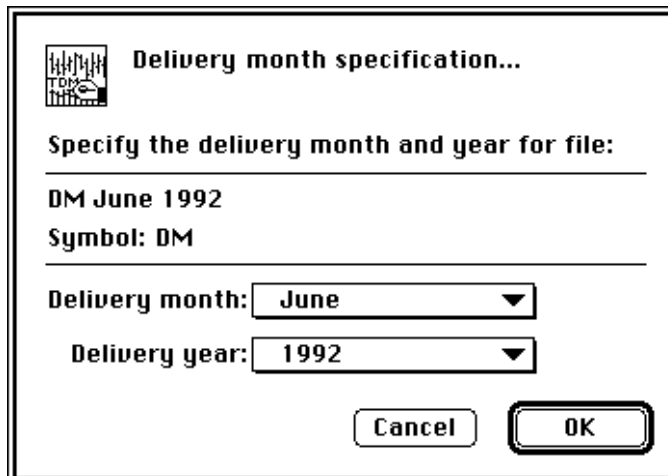
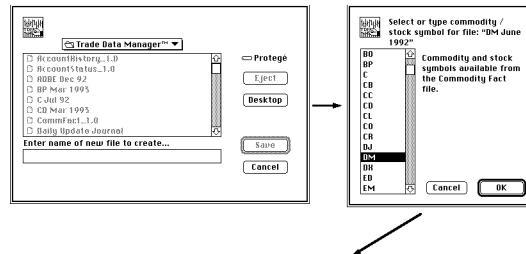
If you create a new Roster, Commodity Fact, Account Status, or Account History file, the new file will not become the active file nor will the new file be accessible for editing until you define the new file as the currently active file of that type by selecting the *Define xxxx file...* command under the *Service* menu, where “xxxx” is the file type in question.

Newly created support files are completely empty, with the exception of the Account Status file, which is written with default initial contents in order to meet internal formatting requirements. The initial contents include the header records only. See the section titled “Trading System Interface” for the definition of the Account Status file record formats for details.

New contract data files initially cannot be opened for editing or display except through the *Open Contract w/File...* command under the *File* menu. After adding new contract data files to the currently defined Roster file, you can open them for editing or display with the *Open Contract w/Roster...* command, and you can post daily data to the new files during daily data collection sessions.

New CompuTrac/M data files require identifying and formatting information that is stored in the file's resource fork. When using the *New file dialog*, this information must be supplied by the you interactively. After confirming the *New file dialog*, A File Save dialog will appear, requesting that you select a destination folder and that you enter a file name. After confirming the File Save dialog, the Commodity Symbol Browser will appear, asking you to select a commodity or stock symbol for the new file. After selecting a symbol and confirming the Commodity Symbol Browser, the *Delivery month specification dialog* will appear, where you must specify the delivery month and year for the new file. The newly created CT/M file information resource will be updated with the selected symbol, delivery month, year, and quotation format information (which is obtained from the Commodity Fact file using the selected commodity or stock symbol). These steps are shown below:

New File Dialog – CT/M File Specification Process



Delivery Month Specification Dialog

You will also see the *Delivery month specification dialog* at other times in other dialogs within Trade Data Manager. Any time a new CompuTrac/M file is created, the commodity or stock symbol, delivery month and year, and quotation format information must be simultaneously created. In cases where the new file is being created as part of a process which knows some or all of this information, the required information will be obtained from the context. For example, when adding new entries to the Roster following the transmission of portfolio changes to CSI, Trade Data Manager can get this information from the portfolio change information itself, so the *Delivery month specification dialog* will not appear in this case. In other cases, the *Delivery month specification dialog* will appear to fill-in missing information. An example where this can occur would occur after opening a file not currently in the Roster, using the *Open Contract w/File...* command in the *File* menu, then saving the open chart window as a new file, using the *Save As...* command in the *File* menu, specifying the new file to be a CT/M file type.

Trading system interface

Trade Data Manager has been designed to facilitate easy access to the contract data files, Roster file, Commodity Fact file, Account Status file, and the Account History file. All of these files are maintained as simple ASCII text files, which can be easily moved across PC to Macintosh platforms, or through networks. The Roster, Commodity Fact, Account Status, and Account History files are fixed-field formatted, so it is very easy to read these files from another program that desires to access common information maintained by these files.

The Daily Update Journal file is not meant to be a general purpose file for other programs to interface with, and is therefore stored as a binary file for efficiency reasons. The format of the Daily Update Journal file is documented here for completeness, however.

If you wish to write applications that use these files, you will find complete information in this section on the detailed format for each of these files. Even if you are not a programmer, you can still read many of these files into standard spreadsheet programs, where you can perform various calculations manually, or with spreadsheet macro functions. Using the charting facilities of most spreadsheets, you can construct graphs of your account equity, drawdown, and various financial indicators of your choosing, using the data in the Account History file.

Although every attempt will be made to preserve the format of each of the support files that Trade Data Manager uses in future releases, it may be necessary to change the format of some files to accommodate new features. Please be aware of this possibility when constructing interfaces to any of these files, and isolate the part of your software or spreadsheet macros that “knows” about the format of any given file. In particular, the format of the Commodity Fact file may be expanded to include more fields for each record, and the Roster may be expanded to include support for commodity and stock options. The Account Status file may be expanded to include additional fields as well. Contract data file formats are unlikely to change.

Data file importing and exporting

Trade Data Manager can read contract data files that have been produced by other applications by using the *Open Contract w/File...* command in the *File* menu. This command displays the File Selection dialog, as opposed to the *Open Contract w/Roster...* command, which uses the *Roster Browser* to provide contract data file selection.

When opening a contract file using the *Open Contract w/File...* command, Trade Data Manager will list all files in the File Selection dialog that are indicated as “TEXT” *file types* in the Macintosh file system, as well as all files whose *file type* is one that Trade Data Manager understands how to read. The *file type* for a given file is not visible to ordinary users of the Macintosh – you must have a resource editor or other special purpose file utility in order to view or edit the *file type* on your Macintosh. Macintosh files that are of the “TEXT” file type can be read or written by most Macintosh applications. These files are therefore the *lingua franca* of the Macintosh, as well as other PC platforms. Trade Data Manager can also save contract files in TEXT file format, by using the *Save As...* command in the *File* menu, and specifying the TEXT file type in the File Save dialog. There is actually no difference in the internal format of the data in a contract data file between the TEXT type of file and Trade Data Manager’s internal contract file type, only the file types differ. This difference manifests itself only in that the TEXT file type will generally appear in many other Macintosh applications File Selection browsers, whereas the Trade Data Manager Contract file type will not appear in any other File Selection browser. The CompuTrac/M file type is quite different internally, however, consisting entirely of binary data.

The major use of this facility is generally to import a contract data file into Trade Data Manager's database from a historical database created by another application. In particular, CSI's IBM PC-compatible based QuickTrieve[®]/QuickManager[®] program is capable of generating this file format by using the contract print command, specifying that the contract data is to be saved in a text file, with a choice of comma or blank delimiters between each field. Refer to CSI's QuickManager documentation for details on this operation. After printing the contract to a disk file, you will have to delete the first record of the file, which contains a "header record", before having Trade Data Manager read the file. Perform this operation using any text file editor, such as a word processor application, using the approach described in the section titled "Editing contract data files."

QuickTrieve and QuickManager only run on IBM PC-compatible platforms, however they work equally well on PC emulators, such as Insignia Solution's "Soft-PC[®]", which can be run on most Macintosh computers. Using such emulators, you can interchange data files between Trade Data Manager and QuickManager quite easily. Apple's new "Access PC" product also lets you interchange files with PC platforms.

Data file formats

Trade Data Manager can simultaneously read, write, or display contract data files that are in CompuTrac/M binary format, ASCII TEXT file format, or Trade Data Manager's own ASCII file formats. If you are interested in accessing contract data files directly from another application, you will usually want to use one of Trade Data Manager's native file formats, both of which are ASCII text files.

Data file types

In various dialogs that involve creating new contract data files within Trade Data Manager, you will see references to a "TEXT File" type and a "TDM Contract File" file type. These two file types are defined as types 'TEXT' and 'TDco' in the Macintosh file system. Within these file types, the file contents are formatted exactly the same. The only differences between these file types are the appearance of the file's icon within the folder, and whether or not the file will be displayed for selection within a standard File Selection browser in some applications.

Many applications can read or write TEXT file types, and will thus display all TEXT file types in file selection dialogs within the application. All word processors and all spreadsheet programs sold for use on the Macintosh support reading and writing the TEXT file type.

The Trade Data Manager TDco file type is unknown to any other application, and should never appear in another application's File Selection browser, unless that application has elected to display all file types.

TEXT and TDco file type formats

Trade Data Manager's TEXT file type and its own internal TDco file type use exactly the same data formats for the contract data. In both cases, the data is stored in ASCII text form, using some form of delimiter between each date, price, volume, and open interest field. When *reading* any of these files, Trade Data Manager will allow the delimiter between each field to be a *comma*, one or more *blank* characters, or a *tab* character. When *writing* these files, Trade Data Manager consistently uses the delimiter selected under the *Data base settings* dialog. The choices for the delimiter to use in writing data files are the same (comma, blank, or tab character), but only one choice will be used at all times, even if the data file currently contains other delimiters in any of the data records.

To conserve disk space, Trade Data Manager *writes* contract files without any excess intervening blanks between fields of each record. Trailing zeros in decimal fractions, which appear in price quotations, are also trimmed before writing. Trade Data Manager can *read* files that do have intervening blanks or trailing fractional zeros, however, so you can import files that have this characteristic from other systems.

All contract price data is stored in *decimal* form, *not* standard quotation format, so you will *not* need to perform standard price quotation conversion functions within another application in order to read or write these files. This is a major convenience, especially if you import a contract data file into a spreadsheet, where standard price quotation formats would make no sense at all, and would be extremely hard to implement.

Trade Data Manager maintains double-precision floating point representation of all prices when price quotations are stored in memory internal to the program. This format maintains 17 decimal digits of equivalent precision. When reading or writing these prices from or to an ASCII decimal format, or when performing calculations on these prices (such as contract roll-over or stock splits), Trade Data Manager uses the minimum tick information in the associated entry in the Commodity Fact file to maintain absolute conversion accuracy. No round-off error is allowed to accumulate this way, so your database is always precise.

A contract data file consists of a number of records, one record for each trading day, each of which is terminated by a carriage return character. Each record contains a date-code field, open, high, low, and close price fields, and optional volume and open interest fields. **Note that all records must have a terminating carriage return character, including the last record of the file.** If you supply a file to Trade Data Manager that is missing any carriage return characters, it will cause the parser to fail.

Consider the following example record from a Treasury Bond file, where “®” is defined as a carriage return character:

```
910705,98.03125,99.5,98.0,98.375,443563,311538®
```

In this example, the first field contains the value “910705”, followed by a comma, which indicates the end of the field. This field is the “date-code” field, which is always a single six-digit integer, coded in “YYMMDD” format, where YY is the year number (without the preceding century indicated, which would be 19 in this case), MM is the month number (from 01 to 99), and DD is the day of the month (from 01 to 31). This field must always be six characters long, with leading zero digits used as appropriate. This date-code convention is fairly common in various trading systems. This convention is also convenient for comparing dates to each other for equality, or for arithmetic ordering, since the order of the digits facilitates direct integer math.

The second, third, fourth, and fifth field in the example are the open, high, low, and close prices, respectively. Each field is delimited in this example by a comma. Trade Data Manager will read files that also have intervening blanks in addition to a comma or tab delimiter, provided they occur before or after comma or tab, and not in the middle of a price, date-code, volume, or open interest number. Note that all the prices are in *decimal* format, not the usual $1/32$ nds quote format used for T-Bond quotations. This allows another program to read the correct price without having to know anything about commodity quotation formats, or having to know which commodity a particular file is associated with. Trade Data Manager always trims extraneous trailing zeros and intervening blanks between any price field when writing data to a file, to save disk space.

The sixth field in the example above contains the actual total contract volume for the day in the file: “443563” contracts traded. The exchanges always post actual total volume for a commodity for a given day on the *next* day’s close, so you will see an *estimated* total volume figure on the last day’s record in any given commodity file. Trade Data Manager follows the convention of over-writing the previous day’s estimated volume with the actual volume when the file is updated during the next daily data collection session. Stocks and contracts with delivery month codes above 37 are posted with actual volume on the same day.

The seventh and final field in the example above contains the total open interest: “311538” contracts. As with the volume field, this number reflects the actual total open interest for the day, and is updated on the day *following* the date-code indicated for commodities. The last record on file will always contain a duplicate of the previous day’s open interest for its open interest field, which represents a best estimate of the open interest for the last day on file. The previous record’s volume and open interest figures are always over-written when posting a given record to the contract data file, even if the record in question is being inserted in the middle of the file, and regardless of whether a record with a matching date was already present in the file or not.

In some cases, contract data from some sources does not contain volume or open interest data. Trade Data Manager will accept records that have the terminating carriage return character immediately after the close price field, or the volume and open interest fields can be null, with the delimiting commas or tabs still included (but not blank delimiters), as in the following examples. This facility allows you to import data from other sources into Trade Data Manager:

```
910705,98.03125,99.5,98.0,98.375®
910705,98.03125,99.5,98.0,98.375,,®
```

The following example records are all equally acceptable for input to Trade Data Manager, where the letter “t” implies the tab character, and “®” implies the carriage return character:

```
920330 , 00231 233.5, 229.75,230 t , ®
920425t76.58t77t75.6t76.87t45023t23790®
920425 76.58 77 75.6 76.87 45023 23790®
920425,76.58t0077 0075.6 , 0076.87 t 45023 00023790®
```

The last three data records above will all be interpreted the same way by the data file parser.

CompuTrac/M file type format

The CompuTrac/M system (“CT/M”) uses a binary format file, where every field in every record consists of a 32-bit long integer value. Each record contains seven fields, and there are no record terminators. For use with Trade Data Manager, each CT/M file must define the seven fields as the date, open, high, low, close, volume, and open interest respectively. Each CT/M file has a resource fork, where identifying and formatting information is stored (similar to the information in Trade Data Manager’s Commodity Fact file).

The graphic example below shows four records from a Corn CT/M data file, where the format information in the resource fork indicates that there are two decimal digits of fraction for all price quotations (in order to be able to specify fourths). Although the figures here as shown as decimal numbers, they are actually 32-bit integers in the file:

920104	21675	21700	21600	21650	47530	2398000
920105	21625	21725	21525	21625	49300	2407600
920106	21725	21950	21700	21950	65000	2603400
920107	21900	22025	21625	21675	55300	2610300

Note that each price value is multiplied by the power of ten required to state the price as an integer value, as

required. Since the resource fork of this file specifies two decimal places of fraction, the prices are all multiplied by 100 to maintain integer values. The open price for January 4, 1992 is

therefore 216.75, or 216 ³/₄ths. Volume and open interest values are pure integers anyway, so no scaling is performed on these figures.

Each record in a CT/M file is therefore 224 bits long (7 fields times 32 bits each, no terminator).

Note that some commodities require many digits of fraction to accurately represent prices to the tick, such as Treasury Bonds (which are quoted in 32nds). Rather than have five digits of precision for all prices, and therefore have to multiply all prices by a factor of 10000 to obtain integer values, most CT/M users specify less precision. It is common for Treasury Bond files, for example, to specify three digits of precision, and to scale prices by 1000. A Bond price of 97 ³/₃₂nds would therefore be represented as the integer value 97094, where the actual fraction of 0.09375 has been rounded off to 0.094. In reading or writing CT/M files, therefore, you have to pay attention to formatting information that is stored in the CT/M file's resource fork, *not* what is represented in Trade Data Manager's Commodity Fact file.

The resource fork of all CT/M files contains a resource whose type is 'CTF0' (CTF zero), and whose resource item number is 0 (zero). Older CT/M files may also have a CTF0 resource whose item number is 1, however these are now obsolete beginning with CT/M version number 2.3. The CTF0 resource can be described with the following "C" language structure declaration:

```
typedef struct
{
    char          period;           // periodicity
    char          convert;         // conversion factor
    unsigned char decimal;         // number of decimal places
    unsigned char prime;          // maximum characters in price quotes
    float         cent;           // value of a 1-cent move
    long          user1;          // reserved
    long          user2;          // reserved
    long          user3;          // reserved
    long          user4;          // reserved
    char          use[8];         // field usage
    unsigned char columnName[8][8]; // column names
    Str13         typeString;     // type of file string
    Str13         tickerString;   // ticker symbol string
    Str7          dmdyString;     // contract delivery month/year string
} ctf0, *ctf0Ptr, **ctf0Hndl;
```

The structure is fully packed, with no byte padding. The precise definition of each field is as follows:

<i>Field name</i>	<i>Description</i>
period	Time interval of one data record; 1=daily, 2=weekly, 3=monthly
convert	Conversion factor for ASCII import files (not CSI's conversion factor)
decimal	Number of decimal places to the left for decimal point
prime	Maximum number of characters in a price quote
cent	Value of a 1-cent move
columnName	Pascal strings, 1 for each field name
typeString	Pascal string with file type; e.g. "Commodity" or "Stock"
tickerString	Pascal string with commodity or stock symbol
dmdyString	Pascal string with delivery month and year, in "MMYY" format

Note: Full programming information, example "C" code, and header files useful to developers using CT/M files is available to developers directly from CompuTrac in the form of a developer application note.

Roster file format

The Roster file has the Macintosh file type of 'TDRs', and is an ASCII text file, consisting of variable length records, each of which is of fixed-format. Blanks are used to delimit each field, but a given application may simply choose to parse the file by knowing the position of each field in the record. Each record is terminated by a carriage return character, including the last record. The terminating carriage return character is not shown in the example below. The following is an example of a Roster file, with an accompanying column indicator:

Column number:

	1	2	3	4	5	6	7
	1234567890123456789012345678901234567890123456789012345678901234567890						
C	1291	HardDisk-80				465 C Dec 91	
ADBE	1291	HardDisk-80				465 ADBE daily	
TR	0991	HardDisk-80				465 TR 0991	
CC	0991	HardDisk-80				465 Coffee Sep 1991	
YX	1291	HardDisk-80				465 NYSE Comp daily	
DM	0991	HardDisk-80				465 D-Mark 9/91	

Column number Description

- | | |
|---------|--|
| 1 – 6 | Commodity or stock symbol. Symbols with less than six characters are blank-padded on the right. |
| 8 – 11 | Delivery month and year, coded in MMY format, where MM is the month number from 01 to 99, and YY is the year number. Year numbers greater than 40 imply 1940 or greater, and year numbers less than 40 imply the year 2000 or greater (this is standard Macintosh time convention). |
| 13 – 43 | Volume name of the disk drive on which the contract data file is located, left-adjusted. |
| 45 – 54 | Right-adjusted integer number that corresponds to the HFS directory ID number on the specified volume name where the contract data file is located. The directory ID number can be used in conjunction with the volume name to directly find and open the file through Macintosh HFS file system calls from within an application. Note that Trade Data Manager must be run on systems that have the HFS file system only. |
| 56 – 87 | Contract data file name, left-adjusted. The record is terminated with a carriage return immediately after the last character in the contract file name. The Roster records are therefore variable length, however the end of each record is readily found by scanning for the terminating carriage return character. |

Commodity Fact file format

The Commodity Fact file has the Macintosh file type 'TDcf', and is an ASCII text file consisting of fixed length records, each of which is of fixed-format. Blanks are used to delimit each field, but a given application may simply choose to parse the file by knowing the position of each field in the record. Each record is terminated by a carriage return character, including the last record (not shown in this example). The following is an example Commodity Fact file, with an accompanying column indicator:

Column number:

	1	2	3	4	5	6	7	8	9		
	1234567890123456789012345678901234567890123456789012345678901234567890123456789012345										
BP	0026	C 2	0.020000	02	British Pound	CME	625.00	9.00	2800.00	25.24	28.24
O	0011	C 2	0.250000	-1	CBOT Oats	CBOT	50.00	40.00	1200.00	22.24	25.24
DM	0024	C 2	0.010000	02	Deutsche Mark	CME	1250.00	3.00	1800.00	25.24	28.24
C	0009	C 2	0.250000	-1	CBOT Corn	CBOT	50.00	35.00	900.00	22.24	25.24
YX	0151	C 2	0.050000	02	NYSE Composite Index	NYFE	500.00	15.00	5000.00	26.24	29.24
CC	0010	C 2	0.010000	02	Coffee "C"	NYCSCE	375.00	26.00	5500.00	26.24	29.24
GC	0030	C 1	0.100000	01	Comex Gold	COMEX	100.00	60.00	2000.00	26.24	29.24
NY	0007	C 2	0.010000	02	Cotton #2	NYCTE	500.00	6.00	1800.00	26.24	29.24
ED	0141	C 2	0.010000	02	Eurodollar	CME	2500.00	2.50	1200.00	25.24	28.24
LC	0002	C 3	0.025000	02	Live Cattle	CME	400.00	2.00	1000.00	22.24	25.24
OJ	0012	C 2	0.050000	02	FCOJ Orange Juice	NYCTE	150.00	10.10	1700.00	26.24	29.24
TR	0044	C 5	0.031250	-3	CBOT Treasury Bond	CBOT	1000.00	3.10	2500.00	25.24	28.24
ADBE	5998	S 6	0.015625	-4	Adobe Systems Inc.	NASDAQ	1.00	9999.99	0.00	0.00	0.00

The individual fields of a Commodity Fact file record are as follows:

Column number Description

1 – 6	Commodity or stock symbol. Symbols less than six characters long, such as Corn, are blank-padded on the right.
8 – 11	Commodity number, per CSI's convention. Right-adjusted.
13	Commodity or stock flag. "C" indicates a commodity type record, "S" indicates a stock type record.
15	Number of decimal places to the right of a decimal point required to format prices in decimal format, expressed as an integer.
17 – 24	Minimum tick size, in decimal format, left-adjusted.
26 – 27	CSI conversion factor. Determines quotation format, where: 0 = whole units, 1 = tenths, 2 = hundredths, 3 = thousandths, 4 = ten-thousandths, -1 = eighths, -2 = sixteenths, -3 = 32nds, -4 = 64ths.
29 – 48	Commodity or stock text description, left-adjusted.
50 – 55	Exchange abbreviation on which commodity or stock is traded, left-adjusted.
57 – 63	Point value of contract, in dollars per whole point, right-adjusted.
65 – 71	Limit move, in points, right-adjusted.
73 – 81	Margin required to trade one contract, in dollars, right-adjusted.
83 – 88	Day-trade commission per contract, in dollars, right-adjusted.
90 – 95	Overnight commission per contract, in dollars, right-adjusted.
96	Terminating carriage return character.

Account Status file format

The Account Status file has the Macintosh file type 'TDas', and is an ASCII text file, consisting of fixed length records, each of which is of fixed-format. Blanks are used to delimit each field, but a given application may simply choose to parse the file by knowing the position of each field in the record. Each record is terminated by a carriage return character, including the last record (indicated by the "®" symbol in the example below).

The Account Status file is divided into functional sections, where each section is preceded by a record with a section name header, which serves as an identifier. Every section header is effectively a command record, and always begins with the '#' character. Within each section, the format of each record is the same. Use the section headers to trigger a parser state transition to the relevant parser for that type of section.

The following is an example Account Status file, with an accompanying column indicator and section information:

<u>Column number:</u>						<u>Section:</u>
1	2	3	4			
<u>123456789012345678901234567890123456</u>						
#ACCOUNT_STATUS_FILE						#® File Header
LAST_UPDATE:	911104					#® Update
#ACCOUNT_EQUITY:						#® Equity Header
#CASH:	\$	123456789.88				#® Cash Equity
#SECURITIES:	\$	123456789.88				#® Securities Equity
#OPEN_TRADES:	\$	123456789.88				#® Trade Equity
#ACCOUNT_POSITIONS:						#® Positions Header
JY	1291	911101	L	00001	78.35	#® Positions
TR	1291	911015	L	00001	98.03125	#® Positions
C	0792	910627	S	00002	234.75	#® Positions
#ACCOUNT_ORDERS:						#® Orders Header
JY	1291	911104	S	00001	76.00	S G#® Orders
TR	1291	911016	S	00001	96.03125	S G#® Orders
SYN	1291	911015	B	01000	1234.015625	S G#® Orders
C	0792	910629	B	00002	246.5	S D#® Orders
DM	1291	911101	B	00001	56.78	L G#® Orders
#END_OF_FILE						#® End File

The individual sections and record fields of the Account Status file are as follows:

<i>Column number</i>	<i>Section</i>	<i>Description</i>
1 – 46	File Header	Account Status file header record, exactly as shown
1 – 14	Update	Last update prefix, exactly as shown
15 – 20	Update	Last date file was updated, in YYMMDD format
21 – 46	Update	Last update postfix, exactly as shown
1 – 46	Equity Header	Account equity section header, exactly as shown
1 – 17	Cash Equity	Cash equity prefix, exactly as shown
18 – 30	Cash Equity	Current account cash equity, in dollars, decimal
31 – 46	Cash Equity	Cash equity postfix, exactly as shown
1 – 17	Secur. Equity	Securities equity prefix, exactly as shown
18 – 30	Secur. Equity	Current account securities equity, in dollars, decimal
31 – 46	Secur. Equity	Securities equity postfix, exactly as shown
1 – 16	Trade Equity	Open trade equity prefix, exactly as shown
17	Trade Equity	“S” if open trade equity is defined, “X” if unavailable
18 – 30	Trade Equity	Current account open trade equity, in dollars, decimal
31 – 46	Trade Equity	Open trade equity postfix, exactly as shown
1 – 46	Pos. Header	Current open positions section header, exactly as shown
1 – 2	Positions	Blank spaces
3 – 8	Positions	Commodity or stock symbol, left-adjusted
9	Positions	Blank space
10 – 13	Positions	Delivery month and year, in MMY format
14	Positions	Blank Space
15 – 20	Positions	Date-code for date position was entered
21	Positions	Blank space
22	Positions	“L” = long, “S” = short position
23	Positions	Blank space
24 – 28	Positions	Number of contracts in position, right-adjusted
29	Positions	Blank space
30 – 40	Positions	Entry price, decimal, left-adjusted
41 – 46	Positions	Position record postfix, exactly as shown
1 – 46	Orders Header	Current orders section header, exactly as shown
1 – 2	Orders	Blank spaces
3 – 8	Orders	Commodity or stock symbol, left-adjusted
9	Orders	Blank space
10 – 13	Orders	Delivery month and year, in MMY format
14	Orders	Blank space
15 – 20	Orders	Date-code for date order was entered
21	Orders	Blank space
22	Orders	“B” = Buy order, “S” = Sell order
23	Orders	Blank space
24 – 28	Orders	Number of contracts in order, right-adjusted
29	Orders	Blank space
30 – 40	Orders	Order price, decimal, left-adjusted
41	Orders	Blank space
42	Orders	Order type, where “S” = Stop, “L” = Limit, “M” = Market, “T” = Market if Touched, “K” = Stop-Limit, “A” = Stop Open Only, “B” = Limit Open Only, “C” = Mkt. Open Only, “D” = Stop-Limit Open, “E” = Stop on Close, “F” = Limit on Close, “G” = Mkt. on Close, “H” = Stop-Limit Close, “I” = Fill or Kill
43	Orders	Blank space
44	Orders	Order duration, where “G” = Good till canceled, and “D” = Day-order
45 – 46	Orders	Order record postfix, exactly as shown
1 – 46	End File	End of file trailer record, exactly as shown

Account History file format

As Trade Data Manager performs accounting during the daily accounting operation, entries are appended to the end of the Account History file in a sequential manner. Each run of the daily accounting operation will cause one or more of the following records to be posted to the Account History file:

- 1) Any orders that are confirmed to be filled generate order fill records, which are identified by the record identifier prefix “#FILL”.
- 2) Any order fills that close out existing positions, either partially or fully, generate closed trade records, which are identified by the record identifier prefix “#CLTR”.
- 3) Any order fills that generate new positions generate new position records, which are identified by the record identifier prefix “#NEWP”.
- 4) After all closed trade and new position records are written, the daily accounting operation generates a summary record that contains the total account cash equity, securities equity, and open trade equity figures. The summary records are identified by the record identifier prefix “#SUMM”.

The Account History file functions as an event log for all trading activity. You can also think of the Account History file as an “audit trail”, if you are accustomed to database jargon. The Account History file is a write-only file from the point of view of the Trade Data Manager application, and thus there are no facilities to view, edit, or read the contents of this file within Trade Data Manager in the current version. You can read, edit, and write this file using *Microsoft Excel*[®], or other spreadsheet programs that can read the same file format.

If you have a Macintosh spreadsheet program, such as *Microsoft Excel*[®], *Lotus 123*[®], or *Claris Resolve*[®], you can import the Account History file directly into a spreadsheet by using the text file import facilities of these applications. By writing some spreadsheet macro functions, you can use the data in this file to extend the functionality of Trade Data Manager. For example, you could write macros that compute maximum account drawdown, profit factor, Sterling Ratio, average profit per trade, and a number of other useful financial indicators. In the words of the familiar textbook; “the exercise is left to the reader.”

To use the Account History file in a spreadsheet program, you will have to write functions that parse the record identifier field, so that the interpretation of the remaining fields will be defined. You may wish to skip some record types if they are not of interest to your application.

Another easy way to separate the records within the file is to select all of the records in the spreadsheet, including all columns, then perform a sort operation. In *Excel*, you can use the *Sort...* command in the *Data* menu, specifying that the sort be done by row, using the record identifier field (which will be *Excel* cell number \$A\$1) as the sort key. After the sort completes, records of each type will be grouped together in adjacent rows within the spreadsheet. You can then select cell groups and draw graphs directly, or you can add columns which total results in some way.

The Account History file has the Macintosh file type ‘XLS ’ (XLS followed by a space character), and is an ASCII text file, consisting of variable length records, each of which is of fixed-format. Tab characters are used to delimit each field, which is intended to make the file easy to import into a commercial spreadsheet program. Each record is terminated by a carriage return character, including the last record in the file (not shown in the example below). The ‘XLS ’ file type is a file type that is defined by the *Microsoft Excel* program, and can be read directly by *Excel* as well as some other spreadsheet programs. If you have an application that does not recognize the XLS file type, you will need to convert the file to a ‘TEXT’ file type using a resource editor or other file utility. You can also perform this conversion by reading the Account History file with *Excel* or *Microsoft Word*[®], then save the file under another name as a simple TEXT file explicitly.

The following is an example of an Account History file that was first updated on January 21, 1992, and which has been updated through the daily accounting run of January 23, 1992. Each space between adjacent fields of a given record in the example below should be interpreted as the space that the tab character would generate if you read the file into a word processor with default tab stops set:

```
#FILL 920121 B JY 3 92 1 81.25
#NEWP 920121 L JY 3 92 1 81.25
#SUMM 920121 16370.89 83163.37 9000.85
#FILL 920122 B O 3 92 2 141.00
#CLTR 920122 B O 3 92 2 141.00 911127 133.00 -800.00 50.48 -850.48
#SUMM 920122 757.51 97926.27 9824.40
#FILL 920123 S TR 3 92 1 102.25
#CLTR 920123 S TR 3 92 1 102.25 911206 100.34375 1906.25 28.24 1878.01
#FILL 920123 S CC 3 92 1 76.40
#NEWP 920123 S CC 3 92 1 76.40
#FILL 920123 B SU 3 92 1 8.75
#CLTR 920123 B SU 3 92 1 8.75 920103 8.49 -291.20 29.24 -320.44
#FILL 920123 B SU 3 92 1 8.75
#NEWP 920123 L SU 3 92 1 8.75
#SUMM 920123 2315.08 97926.27 6688.10
```

For each record type, the field definitions are as follows, where the field number is the sequential field number derived from numbering each tab-delimited field from left to right in ascending order, starting with the first field after the record type indicator field as field number one:

<i>Record type</i>	<i>Indicator</i>	<i>Field#</i>	<i>Description</i>
Order fill	#FILL	1	Date-code – date on which the record was posted
“	“ 2		“B” = Bought, “S” = Sold; type of order fill
“	“ 3		Commodity or stock symbol
“	“ 4		Delivery month, from 1 to 99
“	“ 5		Delivery year, without the century prefix
“	“ 6		Number of contracts filled
“	“ 7		<u>Order fill price (not the original order price)</u>
New Position	#NEWP	1	Date-code – date on which the record was posted
“	“ 2		“L” = Long, “S” = Short; type of position entered
“	“ 3		Commodity or stock symbol
“	“ 4		Delivery month, from 1 to 99
“	“ 5		Delivery year, without the century prefix
“	“ 6		Number of contracts in new position
“	“ 7		<u>Position entry price</u>
Closed Trade	#CLTR	1	Date-code – date on which the record was posted
“	“ 2		“B” = Bought, “S” = Sold; type of order fill that generated the closed trade
“	“ 3		Commodity or stock symbol
“	“ 4		Delivery month, from 1 to 99
“	“ 5		Delivery year, without the century prefix
“	“ 6		Number of contracts in closed trade
“	“ 7		Closing trade fill price
“	“ 8		Date-code – date on which position was entered
“	“ 9		Position entry price
“	“ 10		Closed trade gain/loss before commission, dollars
“	“ 11		Total commission in dollars
“	“ 12		<u>Total closed trade gain/loss, in dollars</u>
Daily Summary	#SUMM	1	Date-code – date on which the record was posted
“	“ 2		Total account cash equity, in dollars
“	“ 3		Total account securities equity, in dollars
“	“ 4		<u>Total account open trade equity, in dollars</u>

If the total account open trade equity cannot be calculated on a given day (due to the closing prices not being available for one or more open positions on that day), the total account open trade equity on that day’s “#SUMM” record will contain the text string “<Undefined>” instead of a dollar figure.

Note that the total account equity must be derived by adding the total account cash equity, securities equity, and open trade equity together. Also note that Trade Data Manager makes no attempt to state the current market value for securities, since it knows nothing about their type, maturity, or current short term interest rates.

Daily Update Journal file format

The Daily Update Journal file is used to store data as it is received from the modem during daily update sessions. Before storing data into the Daily Update Journal file, each record is check-summed and converted into a binary format. All price data is converted into double precision floating point format, while volume, open interest, and date-code fields are converted to 32-bit long integer format. After receiving a daily update file, Trade Data Manager uses the data in the Daily Update Journal file to post the database.

The format of the Daily Update Journal file is fully disclosed here, however this file is not intended as a general purpose interface file for others to use. If you have a particular reason to directly access this file, be aware that the format of this file is subject to change in future releases. To access this file you must write software in "C", Pascal, or some other language – it cannot be read by spreadsheet applications.

The Daily Update Journal file has the Macintosh file type 'TDdj', and is a binary format file, consisting of fixed length records. The file is organized as a consecutive set of daily update subsections, where each subsection contains data for one trading day. Each subsection has a header and a trailer record to separate it from the next subsection. The "C" language structure declaration for this file is as follows:

```
/* Journal file data structures */

typedef enum { JournalDailyHeader,JournalDataRecord,JournalDailyEnd } JournalRecType;

typedef enum { DUNoError, DUOptionRec, DUNoComf } DUErrCode;

/* Structure of daily header record in daily update Journal file */
typedef struct
{
    long          dateCode;          // Date-code of following daily update file
} DUJournalHeaderRecord, *PtrDUJournalHeaderRecord;

/* Structure of daily end (trailer) record in daily update Journal file */
typedef struct
{
    long          dateCode;          // Date-code of preceding daily update file
} DUJournalEndRecord, *PtrDUJournalEndRecord;

/* Structure of individual commodity/stock record in daily update Journal file */
typedef struct
{
    /* Structure of record, one per commodity or stock received */
    DUErrCode     errCode;           // Error code for this record
    Boolean       isStock;           // True = stock record, false = commodity
    Str6          commSymbol;        // Commodity symbol string for this record
    short         dmdy;              // Delivery Month/Day, coded as one integer
    short         commNumber;        // Commodity number for this commodity
    short         quoteFormat;       // Quotation factor, per Commodity Fact file
    long          dateCode;          // Date-code for this record
    double        ohlcPrices[ 4 ];   // Open, High, Low, and Close price
    long          prevOpenInterest;  // Previous day's Open Interest
    long          prevVolume;        // Previous day's Volume
    long          estVolume;         // Estimated volume, current trading day
} DUJournalDataRecord, *PtrDUJournalDataRecord;
```

```
/* Structure of entire daily update Journal file, with identifier records */
typedef struct
{
    JournalRecType    recType;          // Record type identifier, per codes above
    Byte              fill;             // Byte padding for alignment
    union
    {
        // Union of records, according to "recType" field
        DUJournalHeaderRecord    dailyHeader; // Header at start of each daily file
        DUJournalDataRecord      dataRec;     // One commodity or stock data record
        DUJournalEndRecord        dailyEnd;   // End record at end of each daily file
    } rec;
} DUJournalFileRecord, *PtrDUJournalFileRecord;
```

Trade Data Manager menus

File		Edit		View	
New...	⌘N	Undo	⌘Z	✓ Scale By Window	⌘Y
Open Contract w/Roster...	⌘O	Cut	⌘H	Set Scale...	
Open Contract w/File...	⌘T	Copy	⌘C	Auto Scale	⌘[
Open Account Status File	⌘A	Paste	⌘V	Zoom In 2X	
Open Roster	⌘L	Clear		Zoom Out 2X	
Open Commodity Fact File	⌘F				
Close	⌘W			✓ Volume / Open Int. Chart	⌘I
Save File	⌘S			✓ Dot Grid	⌘G
Save File As...				✓ View Account Positions	⌘M
Revert File				✓ View Account Orders	⌘J
Page Setup - Chart...				✓ View Position Tails	⌘.
Page Setup - Text...				✓ View Order Tails	⌘-
Print Contract...	⌘P			✓ View Order Types	
Print Roster...				✓ Daily View	
Print Commodity Fact File...				Weekly View	
Print Account Status File...				Monthly View	
Quit	⌘Q			Window Cross-hair Cursor	⌘H
		Rollover			
		Single Contract...	⌘R		
		Join Contracts...			
		Extract Contract...	⌘E		
		Stock Split...			
		Windows			
		Clean Up			
		Zoom	⌘/		
		Close All			
		Send Behind	⌘B		
		Chart Settings...			
		ADBE 12\92:ADBE Dec 92	⌘0		
		BP 03\93:BP Mar 1993	⌘1		
		C 07\92:C Jul 92	⌘2		
		CD 03\93:CD Mar 1993	⌘3		
		DM 06\92:DM Jun 92	⌘4		
		SF 03\93:SF Mar 1993	⌘5		
		TR 12\92:TR Dec 92	⌘6		
		YH 03\93:YH Mar 1993	⌘7		
Service					
Daily Update...	⌘D				
Update From Journal...					
Daily Accounting...	⌘U				
Change Portfolio...	⌘=				
Order Historical Data...	⌘,				
Send Message...					
Define Roster...					
Define Commodity Fact File...					
Define Account Status File...					
Define Account History File...					
Service / Comm. Settings...	⌘;				
Daily Update Settings...					
Historical Data Order Settings...					
Accounting Settings...					
Data Base Settings...					
Network Access Settings...					

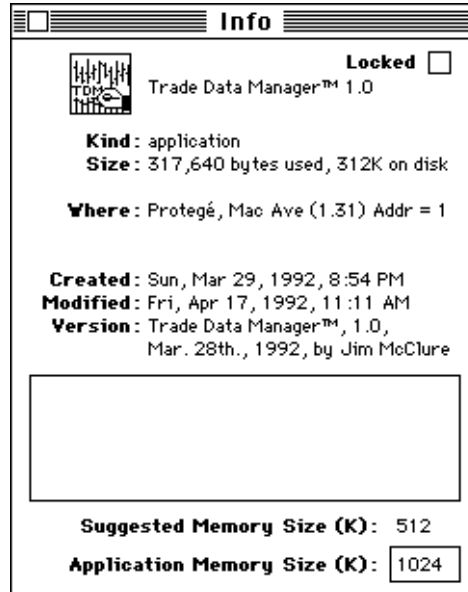
Re-Sizing Trade Data Manager

As distributed, Trade Data Manager is set up to run in a 512 KByte memory partition, which allows the program to run in Macintosh configurations that have as little as 1 MByte of main memory. Most Macintosh computers have 2 MBytes of main memory or more, and many now have 4 MBytes or more – these computers can take advantage of Trade Data Manager’s ability to use more memory if it is available. More memory allows Trade Data Manager to open more chart windows on the screen simultaneously, as well as allowing the size of each contract data file to be larger. Memory size does *not* set any limits on the size of your portfolio file, Roster file, or the number of days of data that you can collect in a session for either daily updates or history collection. You can still utilize any of the maximums indicated in this manual for Roster or portfolio size or the number of days of data collected in a single session with the program set to its minimum size.

To change the size of Trade Data Manager, select the Trade Data Manager icon in the Macintosh *Finder*, then select the *Get Info* command in the *Finder’s File* menu (or type *Command-I* as a short-cut). You must **not** be currently running Trade Data Manager when you choose the *Get Info* command, or else the “Application Memory Size” text-box will not appear. If you are running *System* version 6.0 or earlier, you must perform this operation within *MultiFinder*. (To activate *MultiFinder*, select the *Set Startup...* command from the *Finder’s Special* menu, then click the *MultiFinder* radio button at the top of the dialog to indicate which *Finder* will be launched at startup time. You will need to reboot your Macintosh after changing this selection to make this change take effect.)

If you still don’t see the “Application Memory Size” text-box, make sure the *Locked* check-box is un-checked, as shown in the sample below. If you still can’t get the “Application Memory Size” text-box to appear, you are probably running a very outdated version of the Macintosh *System* file. In this case, you can get a free upgrade to the latest version of *System 6.0.x* by taking several blank floppy diskettes to your Apple dealer. CSI recommends that you upgrade to *System 7* to fully utilize Trade Data Manager’s features, such as balloon help.

In the information window, select the “Application Memory Size” field by double-clicking the mouse within the editable text-box next to this term. Enter the new size for Trade Data Manager in this field, then close the window by clicking the close box, or by typing *Command-W*. The following example shows Trade Data Manager being resized to 1024 KBytes:



Get Info Dialog Window

If you have at least 2 MBytes of memory, you might want to size Trade Data Manager to be about 1024 KBytes. This will allow you to open about 30 chart windows if your contract data files are each about one to two years in length. If you have at least 4 MBytes of memory, you may wish to set Trade Data Manager to as much as 1500 to 2048 KBytes. Trade Data Manager has no maximum limit to the size of its partition other than the amount of the main memory you have installed in your Macintosh.

Compatibility details

Trade Data Manager runs on any Macintosh model from the Mac Plus onward. It has been tested most extensively on the Mac SE, Mac II, Mac IICX, Mac IICI, and the Quadra 700, 800, and 950. Trade Data Manager has been designed to be very strict about observing compatibility guidelines, thus you should not see any problems when new Macintosh models or new *System* files are released by Apple. The fact that Trade Data Manager runs on systems as old as *System 4.1* is a major testament to compatibility.

Trade Data Manager requires Apple's *System 4.1* or later. There are very few applications available today that will run on anything older than *System 6*, so you are advised to upgrade if you are a serious user. Apple dealers do not charge for any upgrades to *System 6*. Use *System 7* or later to take full advantage of all Trade Data Manager features, such as balloon help.

Trade Data Manager is “32-bit clean”, which means that it can run on Macintosh systems that are equipped with more than 8 MBytes of main memory. If you have a great deal of main memory, you can run Trade Data Manager in any partition in your memory space, and you can set the Application Memory Size to be as large as your memory configuration will permit.

Trade Data Manager has been tested to a limited degree with *System 7* virtual memory, and is believed to be compatible with this feature of *System 7*.

Trade Data Manager is also “MultiFinder Aware” and “Apple High Level Event Aware”, which means that it knows how to handle *Finder* start-up jobs (launching the program and opening files by selecting them in the *Finder*, then double-clicking them), “drag-and-drop” opening of contract data files, and the Roster, Commodity Fact, and Account Status files (including opening files while the program is already running by double-clicking them, or dragging the file’s icon onto Trade Data Manager’s icon from within the *Finder*), and it knows how to gracefully give as much processor time as possible to background tasks, such as the *Print Monitor*.

Trade Data Manager is designed to run in the background when performing a daily update session. You can use your Macintosh to perform other tasks using other applications in the foreground while downloading your daily portfolio, or while collecting historical data files. This is called “cooperative multitasking” by Apple Computer. See the section titled “Running the daily update session in the background” for details on backgrounding.

Customer support

If you have problems with the installation or use of Trade Data Manager, or if you think you have uncovered a defect, or if you just want to indicate what new features you would like to see added to Trade Data Manager in future releases, you can contact customer support. Future releases and their feature content of Trade Data Manager are very much driven by customer input.

Trade Data Manager customer support is provided by CSI. Customer Service can be contacted at 1-407-392-8663 on weekdays from 7:30 AM to 11:00 PM Eastern time and from 8:00 AM to 1:00 PM Eastern time on Saturdays. Have your CSI User ID and User Number ready when you call.

• *End of Trade Data Manager™ User Manual* •