

# Importing Data

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## Overview

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This chapter covers the DTU *Import* function which imports data into your AIQ TradingExpert Pro data base. With this function, you can import stock, warrant, index, futures, mutual fund, and market price data from an external file into your AIQ data base.

The *Import* function will import ticker data from a TeleChart 2000 data base directly into your AIQ TradingExpert Pro data base.

# 1. How the Import function works

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The DTU *Import* function imports data from an external file or from another charting software data base into your AIQ TradingExpert Pro data base.

## Importing external files

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The *Import* function imports data from an external data file into your AIQ TradingExpert Pro data base. The import file may contain data in standard ASCII, PRN, DIF, or Excel file formats. These are common data file formats used in a variety of applications.

- ASCII stands for American Standard Code of Information Interchange.
- DIF, which stands for Data Interchange Format, is a standard spreadsheet format.
- PRN is just a shortened version of the word print, since the file is more readable when printed.
- Excel is Microsoft's spreadsheet format.

See the Appendix for more information on the standard formats. If the import file is in one of these standard formats, the file may contain market data as well as ticker data.

## Import file data fields

During the *Import* setup procedure, you specify the file data fields by entering each field in the exact sequence in which it occurs in the file you are importing. You, therefore, must know the exact composition of a file record. If you do not know the exact field order of the import file, *Import* provides a function designed to help you identify the fields in a file. This function operates in an interactive mode which allows you to examine the file header and individual records field by field.

Data fields are entered by selecting from a list of standard fields. The fields included in this list are shown below:

**Data fields that can be imported**

- Symbol
- Description
- Date
- Ignore
- Open price
- High price
- Low price
- Close price
- Volume
- Open Interest
- Unadjusted Price
- Adjusted Price
- Dividend Distribution
- Advancing Issues
- Declining Issues
- Unchanged Issues
- Total Issues
- Advancing Volume
- Declining Volume
- Unchanged Volume
- Total Volume
- New Highs
- New Lows

If, for example, you are importing a stock data file, the data sequence is Symbol, Description, Date, Open, High, Low, Close, and Volume. This indicates that each record in the import file contains data in that order.

**Standard data fields for each data class**

Following are TradingExpert Pro's standard data fields for each data class. The standard field order is shown, but the fields may be arranged according to the sequence of the external file being imported.

**Stock data**

For stocks, the symbol is the standard ticker symbol and the standard field order is as follows:

Symbol, Description, Date, Open, High, Low, Close, Volume

### **Warrant data**

For warrants, the symbol is the standard ticker symbol and the standard field order is as follows:

Symbol, Description, Date, Open, High, Low, Close, Volume

### **Index data**

All index files are loaded into their own data files and stored in the TradingExpert Pro ticker data base rather than the market data base. The standard field order is as follows:

Symbol, Description, Date, Open, High, Low, Close

### **Futures data**

For futures, the symbol is the standard ticker symbol and the standard field order is as follows:

Symbol, Description, Date, High, Low, Close, Volume, Open Interest

### **Mutual Funds data**

For mutual funds, the symbol is the standard mutual fund symbol and the standard field order is as follows:

Symbol, Description, Date, Adjusted Price

### **Groups and Sectors data**

For groups and sectors, the symbol is the group or sector symbol. The standard field order is as follows:

Symbol, Description, Date, Open, High, Low, Close, Volume

### **Market data**

A Market data file should consist of an index symbol, index price data, and the applicable breadth items. The standard field order is as follows:

Symbol, Date, High, Low, Close, Advancing Issues, Declining Issues, Unchanged Issues, Total Issues, Advancing Volume, Declining Volume, Unchanged Volume, Total Volume, New Highs, New Lows

#### **Note**

The Description and Open fields are optional. If the imported file does not contain Open prices, TradingExpert Pro inserts the previous day's Close price in the Open field.

#### **Note**

Only three of the four Volume numbers and three of the four Issues numbers are required for a Market data file. If Total is included, Unchanged can be deleted, and, if Unchanged is included, Total can be deleted.

## Important notes about data fields and data storage

- If the import file contains data for one day only, the Date field is not required. Or, if the file contains data for one ticker only, the Symbol field is not required. In such cases, DTU allows you to enter a Date or Symbol for the file at the time of import (in the *Import Options* window).
- TradingExpert Pro stores specific data fields for each class of data (Stocks, Warrants, Indices, etc.). When you create a file for import, you should keep in mind what fields TradingExpert Pro stores, and not omit any of the essential fields.
- When you import data for a ticker that is contained in your Master Ticker List, TradingExpert Pro knows whether the ticker is a stock, warrant, index, etc. However, when you import data for a new ticker and ask DTU to create a file for that ticker, TradingExpert Pro does not know the data class and you must specify a data class in the *Type* section of the *Import Options* window.

## Importing from TeleChart 2000

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The *Import* function imports ticker data from TeleChart 2000. DTU transfers data directly from the program's data base into your AIQ TradingExpert Pro data base, eliminating the need for an intermediate file.

Since the transfer of data does not involve an intermediate file, you do not need to specify the imported fields. DTU automatically transfers the required fields.

In setup, you simply specify the location of the data and the tickers (or groups of tickers) in your TradingExpert Pro data base that are to receive data. You can update part or all of your TradingExpert Pro data or you can transfer historical files for one or more tickers. You can also reload data by specifying a range of dates.

### Tip

Create a user list in TradingExpert Pro's *Data Manager* of the stocks you would like to transfer, and use this list as your source for importing.

## 2. Setting up to import data

Prior to importing a particular type of file or data from a particular application for the first time, an initial setup is required. When importing a file, setup involves specifying the data fields that comprise the import file. When importing data directly from another application, setup is simply a matter of specifying the location of the other application's data. Once this initial setup is completed, importing data in the same file format or from the same application is a quick and easy process.

DTU stores setup information in a file called a Specification File. You must create a separate Specification File for each different type of file you will be importing and for each different charting application you will be transferring data from. If you will be importing different classes of data, different file types, or files in different formats, you will need a separate Specification File for each. Most users will import only one type of file and will, therefore, need only one or two Specification Files. You may, however, create as many Specification Files as you require.

Import Options

File Type

ASCII

PRN

DIF

TeleChart 2000

Excel

Symbols Not Found

Ignore

Create

Type

Stock

Index

Mutual Fund

Warrant

Future

Store As

nnn nn/32

nnnnnn.nn

nnnnnn.nnnn

nnnnnnnn

After Update

Update Groups/Sectors

Generate Reports

Print Reports

Print Messages

Erase Messages

Source File Name:  Browse...

Specification Name: {new} Edit...

Defaults Symbol:  Date: MM/DD/YY

OK Cancel Help

*Import Options window*

For each class of data (stocks, warrants, etc.), a specific set of data fields is available for inclusion in the imported file. The fields available are different for most data classes.

In setting up import specifications, you specify which fields are to be imported and the order in which those fields appear in a file record.

## Importing external files

(File Type ASCII, PRN, DIF or Excel)

► To create a *Specification File* to import an external file, follow these steps:

1. Select **Import** from the *DTU* menu bar. The *Import Options* window is displayed.
2. Select the type of external file that you want to import by clicking the option button for **ASCII**, **PRN**, **DIF**, or **Excel** in the section titled *File Type*.
3. Enter a file name in the text box labeled *Source File Name*. Unless a file name is entered, the *Edit* function can not be used to view file records and identify the order of the various fields.
4. Click the **Edit** command button which is located at the right of the *Specification Name* text box.

### Note

For initial setup, you need to select only the *File Type* in the *Import Options* window. Other entries are made when you are ready to import (see section 3, The Importing Process).

Analyze Import File Fields

Record from

Defaults Symbol:  Date: MM/DD/YY

Specification Name:

Field Order

<input type="checkbox"/> Symbol	<input type="checkbox"/> Open	<input type="checkbox"/> Open Interest	Advancing <input type="checkbox"/>	Issues <input type="checkbox"/>	Volume <input type="checkbox"/>
<input type="checkbox"/> Description	<input type="checkbox"/> High	<input type="checkbox"/> Unadjusted Price	Declining <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Date	<input type="checkbox"/> Low	<input type="checkbox"/> Adjusted Price	Unchanged <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> YY/MM/DD <input type="button" value="v"/>	<input type="checkbox"/> Close	<input type="checkbox"/> Dividend Distribution	Total <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Ignore	<input type="checkbox"/> Volume in	<input type="checkbox"/> New Highs	<input type="button" value="Clear"/>		
<input type="checkbox"/> Ignore	<input type="text" value="{units}"/> <input type="button" value="v"/>	<input type="checkbox"/> New Lows			

Analyze Import File Fields dialog box

5. For all files of type ASCII, PRN, DIF or Excel, the dialog box that appears when the *Edit* command is selected is titled *Analyze Import File Fields*. This dialog box is used for specifying the field order for the import file. To import an external file, you must know the exact order of each field and, if date and volume fields are included, you must know how this information is formatted. To help you determine the necessary field information, the *Analyze Import File Fields* dialog box includes a feature which allows you to easily analyze the source file. Complete entries in the *Analyze Import File Fields* dialog box by continuing with step 6.



### Note

The *Symbol* and *Date* fields in the *Analyze Import File Fields* dialog box are displayed for information only and do not require entries. If a symbol was entered in the *Symbol* text box of the *Import Options* window, it will appear in the *Symbol* text box of this dialog box. If a date was entered in the *Date* text box of the *Import Options* window, it will appear in the *Date* text box of this dialog box.

6. If you need to determine the file order, do as follows:
  - Check the file name which appears in the first text box labeled *Record from*. This is the file name entered for *Source File Name* on the *Import Options* dialog box and should be the name of the file that you want to import.
  - The text box just below the file name displays the beginning record of this file. Or, if the file contains a header, the header will be displayed. The header may provide the file order by identifying each field in the order in which it occurs in a record. If a header appears, click the **Next** command button to see the first record.
  - To see the second record, click the **Next** command button again. Continue to click **Next** to scroll through additional records.
  - Use the **Beginning** command button to return to the first record.
  - By examining the file header and the fields of several records, you should be able to identify each field so that you can complete the entries in the *Field Order* section (see step 8 below).
7. In the text box labeled *Specification Name*, type a name for the Specification File. Do not include a file extension. The default file extension DTI (DTU Import) will be automatically added. If you are changing a previously saved Specification File, you can select the name of the file from the text box.
8. In the *Field Order* section, specify the data fields that comprise each record by clicking the appropriate field boxes in the exact order that they occur in a record. See step 6. to determine the order of the fields. Note the following:
  - The *Ignore* field is used to represent blank spaces.
  - The text box below *Volume in* specifies the magnitude of the volume figure. This selection indicates whether the volume figure represents units (actual number of shares), tens, hundreds, or thousands. If the imported volume data is in whole units, then select *units*. If volume represents hundreds, select *hundreds*; if it represents thousands, select *thousands*. For Markets, this entry applies to all volume figures (*Advancing*, *Declining*, *Unchanged*, and *Total*).
9. When you have completed entries, click **OK** to save the file and return to the *Import Options* window.

## **Important notes about data fields and data storage**

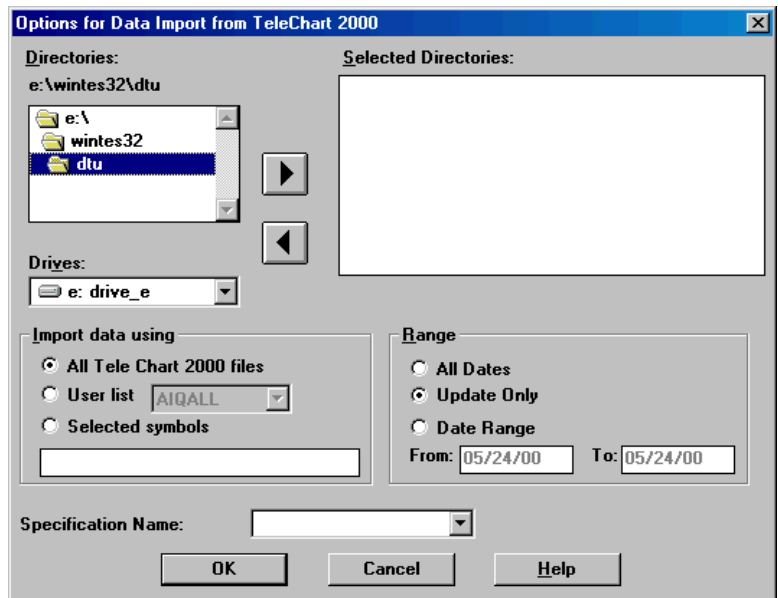
- If the import file contains data for one day only, the Date field is not required. Or, if the file contains data for one ticker only, the Symbol field is not required. In such cases, DTU allows you to enter a Date or Symbol for the file at the time of import (in the *Import Options* window).
- TradingExpert Pro stores specific data fields for each class of data (Stocks, Warrants, Indices, etc.). When you create a file for import, you should keep in mind what fields TradingExpert Pro stores, and not omit any of the essential fields.
- When you import data for a ticker that is contained in your Master Ticker List, TradingExpert Pro knows whether the ticker is a stock, warrant, index, etc. However, when you import data for a new ticker and ask DTU to create a file for that ticker, TradingExpert Pro does not know the data class and you must specify a data class in the *Type* section of the *Import Options* window.

## Importing from TeleChart 2000

When importing data from TeleChart 2000, the *Import* function moves data directly from your TeleChart 2000 files into your AIQ TradingExpert Pro files.

► *To create a Specification File to import from TeleChart 2000, follow these steps:*

1. Select **Import** from the DTU menu bar. The *Import Options* window is displayed.
2. Designate **TeleChart 2000** as the *File Type* by clicking the appropriate option button.
3. Click the **Edit** command button which is located at the right of the *Specification Name* text box. The dialog box that appears is titled *Options for Data Import from TeleChart 2000*. Complete entries in this dialog box by continuing with step 4.



*Options for Data Import from TeleChart 2000*

4. The upper section titled *Directories* is used for specifying the directory where your TeleChart 2000 data files are located. Select a drive from the text box labeled *Drives*.
5. The box above will list all of the directories available on this drive. Select a directory from this text box. (The name of the selected directory will appear above the box.)

6. Move this directory to the *Selected Directories* box by clicking the **right arrow**.
7. From the *Import data using* section, select one of the following:
  - **All Tele Chart 2000 files**  
Imports data for all your TradingExpert Pro ticker data files.
  - **User List**  
Imports data for only those tickers contained in the selected list. To change the list, click the text box arrow to display all available user lists.
  - **Selected Symbols**  
Imports data for those tickers entered in the *Selected Symbols* text box. You may enter as many symbols as you require (multiple symbols must be separated by semicolons).
8. From the *Range* section, select one of the following:
  - **All Dates**  
Imports all historical data contained in your TeleChart 2000 data base.
  - **Update Only**  
Imports only those dates necessary to update your TradingExpert Pro data to the latest data contained in your TeleChart 2000 data base.
  - **Date Range**  
Imports the range of data specified by the *From* and *To* entries in the respective text boxes.
9. In the text box labeled *Specification Name*, type a name for the Specification File. Do not include a file extension. The default file extension TCI (TeleChart 2000 Import) will be automatically added. If you are changing a previously saved Specification File, you can select the name of the file from the list of Specification Files in the *Specification Name* text box.
10. Click **OK** to save the *Specification File* and return to the *Import Options* window.

### 3. The importing process

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When you have completed the setup for the data and the type of file that you plan to import, importing data is a quick and easy process. You simply make a few selections on the *Import Options* window and click **OK**.

► *To import data, follow these steps:*

1. Select **Import** from the *DTU File* menu. The *Import Options* window is displayed.
2. From the section titled *File Type*, select the type of file you are importing. If you are importing an external file and are unsure of the file type, select ASCII.
3. From the section titled *Symbols Not Found*, select one of the following:
  - **Ignore**  
Any symbols not found in your TradingExpert Pro data base will be ignored.
  - **Create**  
Any symbols not found in your TradingExpert Pro data base will be added to your Master Ticker List so that the data for those symbols can be imported.
4. If **Create** is selected in the *Symbols Not Found* section, a data class must be specified in the section titled *Type*. This selection identifies the data class for the tickers that will be added to your Master Ticker List. Select one of the following:
  - Stock
  - Index
  - Mutual Fund
  - Warrant
  - Future
5. The section titled *Store As* specifies the data format that will be used for storing the imported price data. Accept the default or override by choosing from the following options:
  - **nnn nn/32** (three digits and a fraction in 32's) Default format for stocks.
  - **nnnnn.nn** (five digits and a two digit decimal) Default format for indices, mutual funds, groups and sectors.

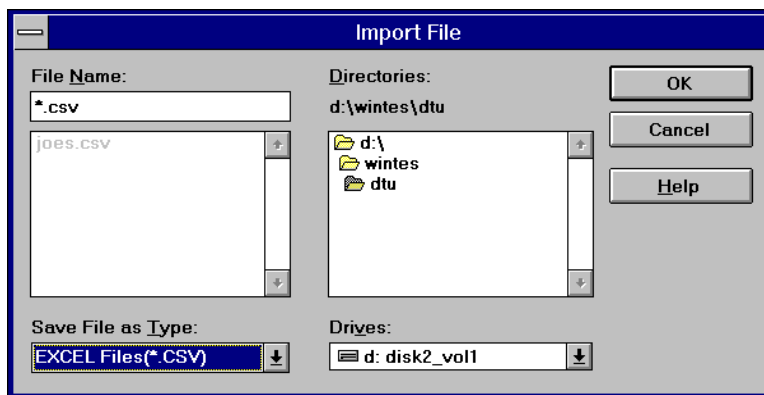
### Note

If you have several files that you want to import that all have the same file extension and specifications, you can use a wildcard (\*) in place of the File Name. For example, entering \*.ASC imports all files with the ASC file extension.

### Tip

Create a user list in TradingExpert Pro's **Data Manager** of the stocks you would like to transfer, and use this list as your source for importing.

- **nnnnn.nnnn** (five digits and a four digit decimal)
  - **nnnnnnnn** (eight digit integer)
6. From the section titled *After Update*, select any of the options. TradingExpert Pro will complete the tasks specified after data is imported exactly as it would after a data base update through **Data Retrieval**.
  7. In the text box labeled *Source File Name*, enter a path and name for the import file. You can use the *Browse* command to easily find and enter the source file path and name. To use *Browse*, do the following:
    - Click the **Browse** command button to display the *Import File* dialog box.
    - Select a drive from the text box labeled *Drives*.
    - Select the import File Type from the text box labeled *Save File as Type*.
    - Select a directory from the text box labeled *Directories*.
    - Double click on this directory in the *Directories* text box to display a list of all files of the specified type. The list of files will be shown in the adjacent text box.
    - Select a file from this list. The selected file will appear in the text box labeled *File Name*.
    - Click **OK** to return to the *Import Options* window. The *Import Options* window will now display the selected file with path in the *Source File Name* text box.



*Import File dialog box*

8. From the text box labeled *Specification Name*, select the name of the Specification File that you created in setup for the import of this file.
9. If you need to enter a symbol (single ticker file with no symbol field), enter a symbol in the *Symbol* text box.
10. If you need to enter a date for the imported file (single day files with no date field), enter the date of the data in the *Date* text box.
11. Click **OK** to initiate the data import process for the specified data and import file type.
12. During the transfer of data from the import file or data base, DTU shows you in a window exactly what data is being imported. This enables you to follow the progress of the import process. Clicking **Cancel** at any time will halt the importing process. When the import process is completed, the *Import Options* window reappears. The imported data is now contained in your TradingExpert Pro data base.

