Exhibit 3

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Trading Technologies' X_TRADER Trading System™ gives you and your customers the best technological edge in the business. Combining universal exchange/marketplace access, high performance, and full customization, X_TRADER, with its sophisticated trading tools, enhances your presence in all the world's open-access electronic markets.

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X_TRADER Features

X_TRADER's modular design allows you to create one or more personal workspaces. You can customize each trading tool to respond to your specific needs and trading style. Your X_TRADER trading tools include the following:

Market

The Market window combines your Order Entry and Market Grid tools. These are your principal trading tools that allow you to monitor the current market and place orders.

Click Trading is a feature of the Order Entry window that allows you to trade with a single click of your mouse.

Market Depth

The Market Depth Trader window provides a view of the market depth for a selected product and you can open as many MD Trader windows as you have products in the Market Grid. From this window you can perform one-click trading for any single product that populates the MD Trader window. This trading method is used as an alternative to the click trading technique that is also available in X_TRADER.

Audit Trail

The Audit Trail displays the current day's order-related messages from the exchange and official exchange announcements. The last 10 days of Audit Trail information are available to you on your workstation's hard drive in a Microsoft Access file. You can narrow the range of data displayed.

Order Book

The Order Book provides information about your current open orders. You can change or delete orders. You may also perform an inquiry to determine the status of an open order, and apply one or more filters to quickly sort and display data.

Fill and Position panes

The Fill window provides detailed information about the current day's trades. The Fills pane (top section) reflects the exchange-confirmed data about a trade. Use filters to narrow the range of orders displayed. The Position pane (middle section) provides your net position summary by exchange/marketplace, product and contract. The Fast Fill pane (bottom section-- supported by some exchanges) displays partial trade information until the confirmed trade data is received from the exchange.

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Customer Defaults

Define Customer Default profiles to establish all of the most common order variables by customer name. Multiple profiles allow you to quickly switch between customers or apply different trading profiles for the same customer.

Quoting

You can generate quotes by using a proprietary theoretical pricing model, X_TRADER Spread Table(s) and Product Group(s), or you can manually enter individual quotes. You can respond to RFQs manually or enable autoquoting to automatically send a response.

Excel Two-Way Link for Theoretical & Implied Pricing

Link a Microsoft Excel worksheet to X_TRADER to calculate theoretical bid/ask prices and/or implied prices using your proprietary pricing model(s).

Other features and tools are described in their respective sections. Refer to the Table of Contents for a list of topics.

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What's New in X_TRADER 522

New Features and Enhancements

The following list of new features and enhancements is provided for your convenience. Help users should click on the green text to jump to a description of the feature. User's Guide readers should refer to the section described.

X_TRADER features are dependent on the Exchange. Refer to the Market Rules for each exchange to determine what is supported.

New Market

TT CBOT MISS/NT Gateway.

New Trading Screen

This version of X_TRADER includes the Market Depth (MD) Trader window. The Market Depth TRADER window allows the trader to use one click of the mouse to buy or sell products. The grid format dynamically displays the market depth for a given instrument, and enables the trader to enter orders quickly by simply clicking on specific cells in the grid layout.

Users of this new trading window will not typically use the click-trading feature in X_TRADER (which still can be used as an alternative ordering method).

Some versions of X_TRADER will not have this functionality within the application.

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TRADING TECH EXHIBIT 2233
                    IBG et al. v. TRADING TECH. - CBM2016-00054

Getting Started

How to Begin Trading

This section lists the minimum number of steps necessary to begin using X_TRADER. In addition, your particular trading environment (e.g., back office requirements or quoting) may require that you set up additional parameters. Advanced features and functionality are described in their respective sections, while advanced customization is explained in the topics listed under the X_TRADER Common Administration.

▶ To begin working with X_TRADER:

1. Log in to X_TRADER

2. Create a Workspace

3. Create a Customer Profile

4. Send an Order to Market

5. Learn the Click Trading feature

6. Track Messages and Working Orders

Note: This section is not intended to replace training provided by Trading Technologies, but rather to supplement it. We strongly suggest that you perform the steps suggested above in a simulation environment prior to attempting live trades.

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Logging in to X-TRADER

To begin trading using X_TRADER, you must first open the program. This process is known as logging-in.

▶ To login to X_TRADER:

1. On your Windows desktop, double click the X_TRADER icon.

2. Note: Trading Technologies recommends that you rename this icon with the particular version number of X_TRADER that you are using. To rename the icon, right-click the icon. From the Context menu that displays, choose Rename.

3. Click the Accept button to accept the license agreement (if applicable).

4. At the TT Exchange Login Screen, double-click the Exchange name from the Exchange List or select the appropriate exchange tab (for example, LIFFE).

5. Enter the login data provided by your X_TRADER Administrator. Login data includes the Member ID, Group ID (if applicable), and Trader ID. Your login data may also include your clearing member and default account. The Preferred Server is usually automatically chosen based on availability. After your first log in, all data--excluding the password--is retained.

6. Memorize or keep a record of your login data. This data is not retained after an X_TRADER software upgrade.

7. Click the Login button. If your password is authenticated, a check mark appears in the box on the left of the exchange name.

8. Repeat steps #3 and #4 for each exchange/marketplace.

9. Click the Close button.

10. After a short delay, while your workstation establishes a connection to the server and loads any undelivered fills, the X_TRADER Control Panel becomes fully enabled. The gray icons now display in full color.

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Logging into an Exchange
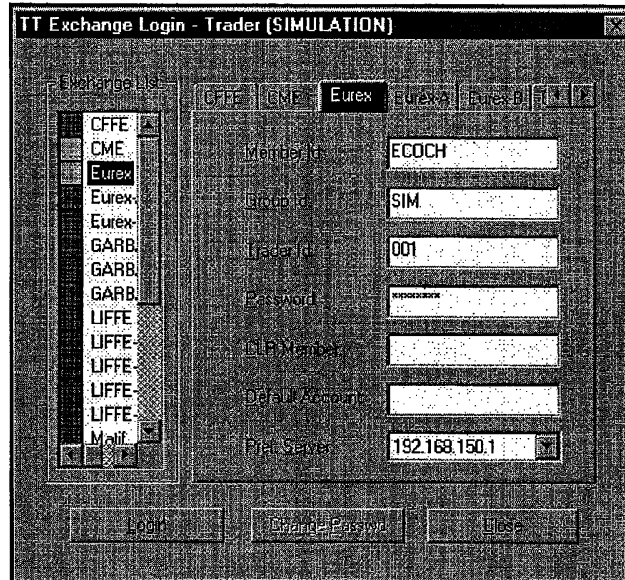
The first time you log in (or after your workstation is rebooted), you must enter your Member, Group, and Trader IDs, and Password. There are also areas available to enter the Clearing Member, Default Account, and Preferred Server. Your System Administrator will supply the Login data.

The Trading Technologies (TT) Exchange Login dialog box has a "tab for each exchange available in your environment. The Exchange List displays all available exchanges, as well as Guardian status.

The status lights can vary in each environment. Your System Administrator or your provider will inform you of what to expect in your environment.

- A **green** box next to the exchange indicates that the services are all running.

- A **red** box next to the exchange indicates that one or more services are not running ("down).

- A **yellow** box indicates that one or more services may be running but not active. This may be normal for your trading network.

Memorize or keep a record of your login data. The data is not retained after a X_TRADER software upgrade.

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▶ To login to an exchange use the following steps:

1. Select the appropriate exchange tab or double-click the name from the Exchange List.

2. Enter the login data provided by your System Administrator.

3. Choose the **Login** button. After your password has been authenticated, a check mark appears in the box next to the exchange name—as shown above for EUREX.

4. If you want to log in to another exchange, select the appropriate exchange tab and enter the login information.

5. Choose the **Close** button to close the TT Exchange Login dialog box.

Note: Change Password on the Exchange Login dialog box is not functional at this time.

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Logging into More than One Exchange
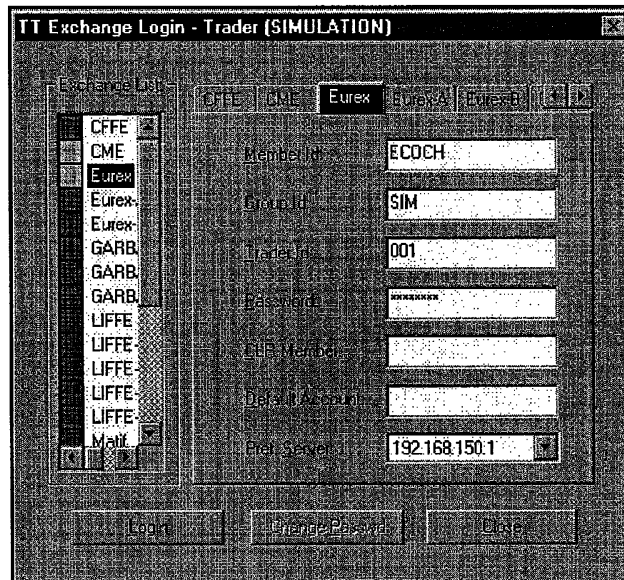
When you are working with X_TRADER you may want to open more than one exchange during a session.

▶ To open additional exchanges in X_TRADER:

1. Locate the Windows NT System Tray in the bottom right-hand corner of your Desktop. Double-click the TT icon.

2. From the Guardian menu bar, choose File menu → Trader Login. The Exchange Login dialog box (pictured above) opens.

3. Select the appropriate exchange tab, and enter your login data.

4. Choose **Login**. After a successful login, a check mark (√) displays in the exchange's status box.

5. Repeat the above steps for any additional exchanges.

6. Choose **Close** to exit the dialog box.

Logging in with a Different Trader ID

To log in with a different Trader ID, you must close X_TRADER. When you restart X_TRADER, you must enter the new Trader ID in the Exchange Login dialog box.

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WARNING: If you attempt to log in via the Guardian Trader Login option without closing X_TRADER; the login will appear successful, and the Guardian window Status column will change to reflect the 'new' trader ID. However, all subsequent trades will be attributed to the original trader's account. For example, all Audit Trail messages will point to the original trader. This is a known error that will be corrected in a future version of X_TRADER.

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Introduction to the X-TRADER Workspace

Your X_TRADER workspace is a file that holds a "snapshot of your X_TRADER desktop. This file records all your open windows, the spatial relationships among those windows, and all customized settings from the last time that you saved the workspace. This includes all open and minimized windows, as well as color, font, column/row sizing, placement, selection, and many other formatting preferences.

You create one or more workspaces to fully customize X_TRADER to fit your particular trading style and environmental requirements. For example, you may have a morning and afternoon workspace to reflect the opening and closing of different exchanges. You may also have a report printing workspace in order to avoid reformatting your windows to display needed data.

Creating a New Workspace

You can open the main X_TRADER windows by using the Control Panel icons. The X_TRADER Control Panel is pictured below.
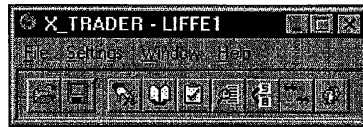
► To create a new workspace:

1. Click the **Market Explorer** button.

2. To open a Market Window, you must expand one or more exchanges. To open a Market Window with only one product listed, click within the Product Type box (for example, Future or Stock) and choose the button. You can accomplish the same thing by double-clicking the product type. Refer to the Market Explorer topic.

3. To display multiple products from one or more exchanges within one window, expand different product folders to show the product type (e.g. future or stock). Then hold down the **CTRL** key while clicking each product. Choose the button.

4. Open the Order Book by choosing the Control Panel **Order Book** button. The Order Book displays open orders and supports order inquiries, changes, and deletions. You can move, resize, and hide any of the columns. See the Order topic for more information.

5. Open the Audit Trail by choosing the Control Panel **Audit Trail** button. The Audit Trail displays messages concerning order additions, changes, deletions, errors, and announcements from the TT Gateways and exchanges. You can move, resize, and hide any of the columns. See the Audit Trail topic for more information.

6. Open the Fill window by selecting the Control Panel **Fill Window** button. The Fill window presents three panes of information: The top pane lists confirmed fills, the middle pane provides position information, and the bottom pane displays fast fills (for those exchanges, EUREX is one, that support this feature). You can move, resize, and hide any of the columns. See the Fill Window topics for more information.

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7. Arrange the windows to make the best use of the space available on your monitor.

8. Save your workspace for future use. Choose the **Save** button. Enter a name for your workspace, and choose **OK**. You can create multiple workspaces under different names and then switch workspaces by clicking the **Open Workspace** button.

Copying a Workspace

You can use the same workspace on multiple workstations by copying various files. In addition, you can also copy customer defaults, customer list, quoting Spread Tables, and quoting Product Groups.

▶ To copy a workspace:

1. Workspace sub-directories are located in this directory: **<installation drive>:\TT\X_TRADER\TTConfig**. Each directory is created with the same name as the workspace. You can transfer the directory to the destination machine using the data transfer method of your choice. For example, the workspace directory can be shared (see your network administrator), copied to a network directory, placed on a diskette, or sent as an e-mail attachment.

2. If you work with the same clients, copy the Customer Defaults and Customer List. Close X_TRADER if the program is running. Copy the Customer Defaults and Customer List files from the <install drive>:\TT\X_TRADER\TTConfig directory to the same directory on the destination machine.

3. If you also want to copy market maker quoting spread tables, a file named for each spread table is located in this directory: **<installation drive>:\TT\X_TRADER\TTSprdTbls**. You can also copy Product Groups. The file name **is ProdGroup.prd** and it is located in the same TTSprdTbls directory.

4. Place the workspace directory in the same location: **<installation drive of the new workstation>:\ TT\X_TRADER \ TTConfig**.

5. The workspace and other copied files will be immediately available. Your X_TRADER files are stored on your local hard drive. You should make arrangements for backing up your machine (or at least the TT directory) to protect yourself in case of hardware failure.

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Creating a Customer Default Profile

You define a Customer Defaults profile to establish all of the most common order variables by customer name.
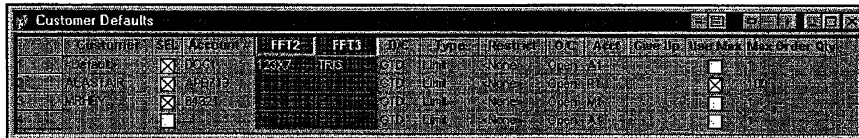
▶ To define a customer defaults profile:

1. From the X_TRADER Control Panel, open the Customer Defaults window. Click Settings menu → Customer Defaults.

2. Enter the customer profile information as described in the Customer Defaults Field Description section. The **first** profile has a customer name of "Default which you cannot change.

3. When changing Customer Default data, make sure that you tab to the next field, or press **ENTER** to save your changes. If you enter your change without using the tab key to advance to the next field, or if you do not press **ENTER,** your changes will not be saved. This is a safeguard to ensure that no data is inadvertently changed and then saved in the customer profile.

4. Close the Customer Defaults window.

Sending an Order to the Market

You can enter orders manually or use the Click Trade feature. Click trading allows you to send market orders with a single mouse click and is the fastest method of getting your order to market. Refer to the Click Trading topics for a complete description of this feature. The Order Entry and Market Grid topics contain complete descriptions of the Market window.

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Entering a Manual Order

New traders or those who are new to electronic trading may want to use the **Lock** safety feature until accustomed to using X_TRADER. Every Order Entry window and Order Book window has a Lock check box. When enabled, this feature requires you to confirm the action you want to take before sending the order to market. For example, if there is a check in the Lock check box, when you chose the **Sell** button, the button title changes to **Apply Sell.** You must choose the **Apply Sell** button to confirm your sell order, and only then will it be sent to market.

▶ To enter a manual order:

1. From the Market Grid, in the appropriate strike/expiry row on the bid or ask side of the screen, click any cell. Clinking in the BidPrc or AskPrc (Price) cell feeds the Order Entry price field. Clicking in the BidQty or AskQty cells feeds both the Order Entry quantity *and* the price fields. Add or change the order information as necessary: for example, quantity, price, and order type information.

2. Choose **Buy** or **Sell.**

3. If you have entered valid data, the order is sent to market. The Audit Trail message displays a status of **OK** and an Action of **Add.**

Note: The default options Market window displays the Calls on the left and Puts on the right.

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Introduction to the Click Trading Feature
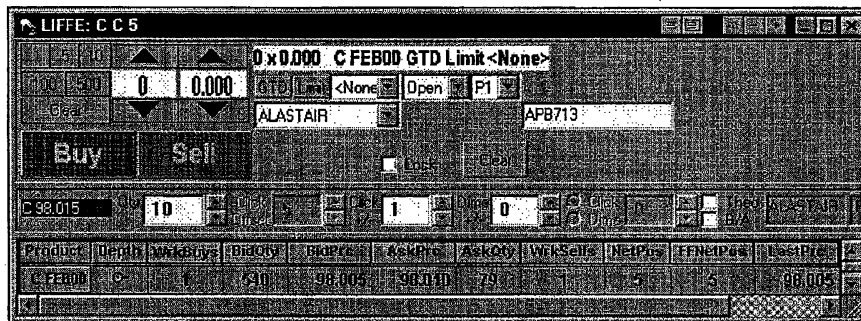
The process you use to place standard buy and sell orders is described in the topics below. Click trading allows you to right-click the bid price to send a limit sell order or right-click the ask price to send a limit buy order. The Click Trading feature offers other functionality and order types as well.

Note: Before using Click Trading for live trading, please read the entire Click Trading topics that describe this feature in detail. When click trading is enabled, ALL safety measures are removed. The Lock feature described in the Manual Order Entry topic may only be used when click trading is disabled.

Enabling/Disabling the Click Trading Feature

▶ To turn click trading on and off from the Market Grid context menu:

- Right-click anywhere on the Market Grid to access the Context menu.

- Left-click the "Click Trade On option. A check mark (√) signifies that the feature is ON. When turned on, the Click Trading pane (pictured above) opens above the Market Grid.

Note: When accessing the Context Menu with Click Trading turned on, click anywhere on the Bid and Ask Price columns.

Selecting Default Properties in Click Trading

You have several default properties available to you in click trading, which are set to control the mouse settings and other restrictions. These properties are maintained from the Settings menu.

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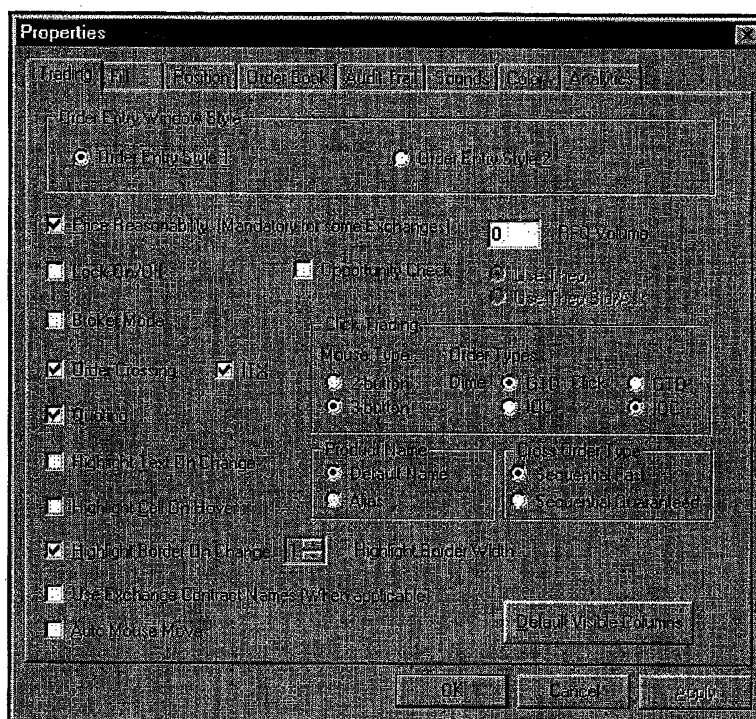
To set the properties for click trading:

1. From the Control Panel, click Settings menu → Properties → Trading tab.

2. For Mouse Type, if you use a two-button mouse, click that option button. A three-button mouse is the default setting and is necessary for sending all types of Click Trading orders to market in the quickest manner possible.

3. Click and Dime order restrictions are set separately. To change the default to GTD click the GTD option button. Any GTD orders still working at the end of your trading session will automatically be deleted. IOC orders allow a partial fill before the balance is cancelled.

4. Choose **OK** to exit the Properties dialog box.

Setting Up Options for Click Trading

The basic steps to set up options for using the click-trading feature are:

1. Enable the click trading feature.

2. Enter the required quantities and information from the table below:

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Qty	Enter your Click Trading order quantity.
Click Offset	Enter the maximum number of ticks that the price can move from the last traded price. Click Offset protects you from sending an order that is too far away from the last traded price. Click Offset and Click +/- are mutually exclusive.
Click +/- (Plus/Minus)	Enter the maximum number of ticks the price can move from the clicked price. Plus/Minus allows you to chase a fast moving market. For example, if the Plus/Minus value is two ticks where the tick value for the product is .01 and clicked bid price is 115.99, the worst price that will be accepted is 115.97. If a better price is available, the order will be filled (e.g., 115.98 or 115.99). Click Offset and Click +/- are mutually exclusive.
Click vs. Dime option buttons	If these options are disabled (grayed out), a three-button mouse has been selected as your default Click Trading mouse style. If you are using a two-button mouse, follow the instruction instructions in the Properties—Trading tab topic. If you have a two-button mouse and the option is active (you can select between Click or Dime), for this example, you should select the Click option button.

This example assumes that theoretical prices are not being used, so the Edge, Theo, and B/A (bid/ask) options will not be used.

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Sending a Click Trade to the Market

▶ To send a click trade to the market:

- Right-click the bid price to send a limit sell order.
- Right-click the ask price to send a limit buy order.

Order Messages in the Audit Trail Window

The Audit Trail displays messages relating to X_TRADER actions and exchange announcements. For additional information refer to the Audit Trail topics.

The Audit Trail displays the following three lines of messages for successful buy (blue background) or sell (red background) orders:

- The first message details the order information, including the time the order was sent from the workstation (Time column) to the TT Gateway (i.e., server), an order Status of ACCEPT, and an Action of Add.

- The second message immediately follows the first and indicates acceptance by the TT Gateway. The order has been routed to the exchange trading host.

- The third message displays sometime after the previous two. This message is the confirmation received from the exchange's trading host. The information detailed includes the time the confirmation was received by the workstation (Time), an order Status (OK), and the time the confirmation was sent by the exchange's host machine (Exch Time).

When the order is filled, the fill notification message displays a Status of **OK** and an Action of **Fill**, and provides detailed information about the order.

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Exiting X_TRADER

You should close X_TRADER at the end of each trading session.

▶ Exit X_TRADER by using one of the following methods:

From the X_TRADER Control Panel, choose **File → Exit.**

or

In the top left-hand corner of the X_TRADER Control Panel, double-click the X_TRADER icon.

or

In the top right-hand corner of the X_TRADER Control Panel, click the Exit window button.

Automatic Shutdown in X_TRADER

X_TRADER automatically closes after four hours of inactivity when there are no orders in the Order Book and no new fills or price updates have been received. X_TRADER will display an automatic closure message. If you do not take any action or if you choose **OK,** the X_TRADER application closes. At this time this feature is not configurable.

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Global Client Support Center

Trading Technologies' Global Client Support Center (CSC) has offices in both Germany (Frankfurt) and the US (Chicago, Illinois). Support personnel can be dispatched to client sites from all of our offices worldwide. The CSC offers assistance over the phone and via remote dial-in equipment.

Calls received by the USA center are automatically forwarded to Germany between the hours of 11PM and 6AM CST, Sunday through Friday.

Telephone Number: +49. 69. 13 87 26. 50 (Germany) or +877.424.8844 (USA)

Fax Number: +49. 69. 13 87 26. 99 (Germany) or +847.424.8404 (USA)

Global E-mail: support@tradingtechnologies.com

Support Via E-mail

Global Client Support Center E-mail: support@tradingtechnologies.com

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The X_Trader Control Panel

Finding the Control Panel

Since most X_TRADER users do not continuously display the Control Panel, it can get "lost behind other windows. To quickly display your Control Panel on top of your other open windows, most of the Context Menus offer a Find Control Panel option.

▶To find the control panel:

1. Right-click in one of the main X_TRADER windows (for example, Order Book or Fill window) to access the **Context** menu.

2. Choose **Find Control Panel.** If the **Context** menu does not include this option, access the **Context** menu from another window.

NOTE: If you enabled Click Trading, do not click in the Market Grid bid/ask price columns.

The Toolbar on the Control Panel

The X_TRADER Control Panel is used to open and save workspaces, define settings, and open new windows. The Control Panel displays on your desktop after you start X_TRADER.

Establishing a connection to the exchange/marketplace may result in a short delay before the Control Panel buttons are enabled. If one or more buttons still remain disabled (grayed out), a service may be down or you may have not established a connection to your server. Please consult your System Administrator.

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Button Descriptions

Open Workspace: Multiple workspaces can be created and saved. This icon displays a list of workspace names. Select a workspace name, and choose **OK.**

Save Workspace: The Save Workspace button saves your current X_TRADER workspace under the current name. The workspace name appears next in the Control Panel title bar. If this is the first time you are saving the workspace, enter a descriptive name in the text box. Choose **OK.**

Market Explorer: The Market Explorer lists all products by exchange/marketplace. The "+ sign signifies that you can expand the Exchange/Product. With the Market Explorer, you may open one or more Market windows with one or more products displayed in each window. For an options Market window, you can also choose to display the calls next to or above the puts for the same strike.

Order Book: The Order Book is used to manage your open orders. You can monitor, change, delete, or perform a status inquiry about any open order. Once the order is filled, the entry is automatically deleted.

Fill Window: The Fill window lists the current day's trades. The top pane lists fills. The middle pane displays your Net Position by product and contract, providing the profit/loss for the current day's trading. The lower pane displays "fast fills (if supported by the exchange/marketplace).

Audit Trail: The Audit Trail opens a window displaying data sent to the exchange and the responses received from the exchange. This information is stored in a local database, so the last five days of information is available. Order add, delete, change, inquiry, trader, and customer detail, as well as error messages and all exchange announcements are detailed in this window. Exchange announcements include time issued, time received, exchange name, severity, and the announcement. You can use one or more filters to sort and display specific data.

Create Spread: Opens a dialog box to create multiple-legged spreads, strips, packs, and bundles.

Quote Audit Trail: This audit trail is used by Market Makers to monitor addition, deletion, and related error messages for both manual and auto quoting. You can also monitor both inbound and outbound RFQs.

Customer List: Based on information obtained from the Customer Defaults Settings window, the Customer List displays all accounts by customer name.

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The X_Trader Menu Bar

The Menu Toolbar on the Control Panel

In addition to the Toolbar, you can access many of the functions in the Control Panel by using the various menus on the menu bar. Click on any of the links below to see the individual actions available from the menu bar.

- **File Menu**

- **Settings Menu**

- **Windows Menu**

- **Help Menu**

File Menu in the Control Panel

The following options are available from the File menu:

Open Workspace	Opens a previously saved workspace.
Save	Save the currently open workspace. If it has no name, you will need to give it one.
Save As	Save the currently open workspace under a different name or with a new name.
Print Setup	Brings up the Windows Print Setup dialog. You can set up a printing format here, but it will not be saved when you print out the form.
Exit	Exit the X-TRADER application.

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Settings Menu in the Control Panel

The following options are available from the Settings menu:

Customer Defaults	Lets you access the Customer Defaults dialog box, so that you can establish or view customer defaults.
Product Group Setup	Lets you access the Product Group Information dialog box, so that you can create a Product Group to use with the quoting tool. Product groups control how quotes are calculated. Auto quoting is also controlled from this dialog box.
Spread Table Setup	Lets you access the Spread Tables dialog box, so that you can create a spread table to use with the quoting tool. You create spread tables to detail the maximum spread in ticks based on the number of days to expiration and the bid price.
Properties	Lets you access the Properties dialog box, so that you can set default X_TRADER features for the Market window (Trading tab), Fill window, Position pane, Order Book, and Audit Trail. Features include Quoting, Click Trading, opportunity check, default visible columns, event sounds, text/background/border select colors, and theoretical server selection.

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Window Menu in the Control Panel

The following options are available from the Window menu:

Market Explorer	Lets you access the Market Explorer, so that you can view exchanges and associated products.
Order Book	Opens a new Order Book.
Fill Window	Opens a new Fill window.
Customer List	Lets you view your list of customer account names.
Audit Trail	Opens the audit trail of order-related exchange messages.
Quote Audit Trail	Opens the audit trail for quoting related exchange messages.
Create Strategy	Opens the Create New Spread dialog box so that you can create multiple-legged spreads, strips, packs, and bundles. The ability to create strategies is exchange-dependent.
Available Credit	Opens the Available Credit dialog box, which displays the amount of available credit left in your trading account. A total in green indicates a positive balance; a total in red indicates a deficit. Since this is not a dynamic field, you must choose the Recalculate button in order to view the current balance.

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Help Menu in the Control Panel

The following options are available from the Help menu:

Help Topics	X_TRADER online Help user documentation.
About X_TRADER	X_TRADER version and copyright information.

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Customer Defaults Dialog Box

Customer List Overview
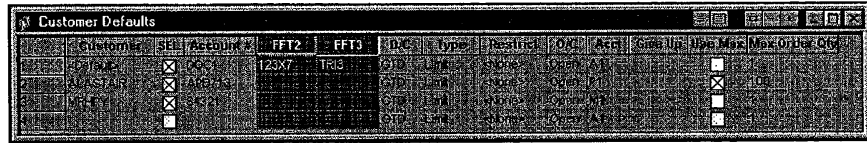
The Customer List displays customer/account names in alphabetical order. The Customer Defaults dialog box allows you to create customer profiles that reflect most often used trade settings, such as market vs. limit order, and GTD/GTC/FOK, among others. When you create new Customer Default profiles, the customer name is automatically added to the Customer List.

Selecting a name from the customer list populates all open Order Entry windows with that customer's default settings. This allows you to quickly change trading accounts so you can place orders in multiple exchanges for multiple products—all for one customer. If you do not want to populate all your Order Entry windows with one customer's information, use the Customer Selection list from the Order Entry window.

▶ To open the Customer List:

- On the X_TRADER toolbar, click the Customer List icon.

or

- From the Control Panel choose Window menu → Customer List

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Overview of the Customer Defaults List
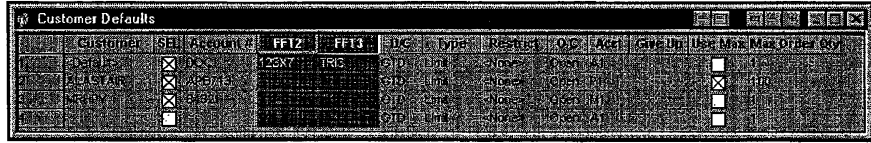
You access the Customer Defaults window from the Control Panel.

Control Panel → Settings → Customer Defaults

You define Customer Default profiles to establish all of the most common order variables by customer name. You may add a new profile or change the profile of a current customer at any time. All subsequent orders for that customer are affected if you change the Customer Default profile. For field descriptions, refer to Customer Defaults Field Descriptions

Order Entry Customer Selection Drop List

The Customer Selection list for the Order Entry window is located below the GTD and **Limit** buttons. Use this list to quickly change customer accounts. If you have multiple Order Entry windows open and want to change the customer account for all of the windows, use the Customer List (explained in the Customer List section below).

► To add/remove a customer to/from the **Order Entry Customer Selection List:**

The SEL box in the Customer Defaults window controls the addition/removal of a name from the Order Entry Customer Selection list. If you place a check in the SEL box, you add the customer name to the list. Deselecting the box removes the customer name from the list. Display changes are real time and affect all open windows.

or

If the Customer Defaults SEL box is unchecked, you may also click a name in the customer list to add it to the Order Entry Customer Selection list. This action automatically checks the SEL box in the Customer Defaults window.

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Customer Defaults Window Field Descriptions

You define a Customer Defaults profile to establish all of the most common order variables by customer name. You can add a new profile or change the profile of a current customer at any time. By changing the Customer Defaults profile, all subsequent orders for that customer are affected.

Enter the following for each customer:

Customer	Name of your choice.
SEL	Check this box to automatically add the customer to the Order Entry Customer Selection list. You add names to the Order Entry Customer Selection list so that you can quickly change accounts.
Account #	The Account Number is a customer account code. This field may be used by the middle or back office (sub-account) to display any user-defined, customer account information for any market. The account number information is typically used to associate the trade with a specific customer. This field may be required by the exchange (for example, CME requires it).
FFT2	Free Form Text field #2 may be used for annotation purposes by the trader or back office (sub-account). The back office manager usually dictates use of this field.
FFT3	Free Form Text field #3 is another Free Form Text box. Optional.
D/C	The order choices are GTD or GTC. The default selection is GTD. The X_TRADER GTD designation indicates that the order is valid only for the current trading session. The GTC designation indicates that the order will be valid until the trader cancels the order or until the contract expires.
Type	Order types are Limit (default selection) or Mkt (Market).
Restrict	Order restrictions include None, DiscQty, FOK, IOC, MV, and STOP. None: No additional restrictions are placed on the order.
	Disc: Disclose Quantity. Disguise trading volume by disclosing a partial amount of total.
	Qty Quantity. When selected, a quantity box opens in the Order Entry window
	FOK: Fill or Kill; immediate fill of entire qty, or if not possible, immediate cancellation of order.
	IOC: Immediate or Cancel. An immediate partial fill before the balance is cancelled.
	MV: Minimum Volume. The minimum volume of partial fills; default is zero. The Minimum Volume order type is not supported by all exchanges (for example, LIFFE supports MV and EUREX does not). The minimum volume is entered in the Order Entry window. When you choose this restriction, a field labeled Min Vol displays. Enter the minimum volume quantity and place the order.
	STOP: Stop order–user defined price triggers market buy or sell order. You can perform all normal operations (hold, submit, change, cancel, replace, and delete) on a stop order. When you choose the STOP restriction, a field labeled Stop Prc displays. Enter the trigger price, and place the order. A stop order displays in the Order Book with a Working status, but it is not actually in the

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market. A negative order number (-###) displays, indicating that it is a "synthetic order. When the stop triggers, the order becomes the native order type and remains in the Order Book until filled.

If the trader who originated the order is not logged in (in other words, has no order router), when the order is triggered, the order is sent to market with the trader ID of another trader with the same Group ID. If another trader in the same group is not available (no one from his group is logged on), the order status changes from Working to Hold and does not trigger until the order is resubmitted by the original trader, or a trader with the same Group ID.

The LIFFE Gateway accepts a Stop Limit order only if the limit price meets these criteria:

TRIGGER price<= BEST ASK price, for a SELL STOP LIMIT

TRIGGER price>=BEST BID price, for a BUY STOP LIMIT

And

TRIGGER price<= LIMIT price, for a BUY STOP LIMIT

TRIGGER price>= LIMIT price, for a SELL STOP LIMIT

X_TRADER enforces only the second set of limits. A stop limit order is triggered only if the last traded price is within the trigger range. The trigger conditions are:

LAST TRADED price<= TRIGGER price, for a SELL STOP order

LAST TRADED price>= TRIGGER price, for a BUY STOP order

If multiple stop orders are in place for the same product at the same trigger price (for the same trader or multiple traders), they are processed in a FIFO (first in, first out) order.

If the Order Server of the LIFFE Gateway goes down, all stop orders must be moved to a hold status (in other words, they will not trigger). Held stop orders are not automatically resubmitted when the Gateway recovers. You must do this manually. Audit trail messages will show you that the orders have been held. In the event that an Order Router goes down, and the stop order triggers, but cannot be sent (because the Order Router is down), the Order Router of another trader in the same group as the trader who entered the order will be used to send the order to market. If no such Order Router is available, the stop order is put into a hold status and an audit trail message is generated.

Note: Support of the order restrictions is determined by each exchange/marketplace. The definition and use of the restriction may differ between exchanges/marketplaces. If the order type is not supported, the Audit Trail displays an error message from the exchange. Refer to each exchange's Market Rules for additional information.

O/C: Indicates whether a position is being opened or closed. This information is not used by the Exchange and may be used (or not used) by the trader as his discretion. The default status is open.

Acct: Select one of the following account types:

A1--First Agent Account (e.g., broker)

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G1--Pre-Designated Giveup Trade

G2 Designated Giveup Trade

M1--First Market Maker Account

M2 --Second Market Maker Account

P1--First Principal Account (e.g., proprietary trader)

P2--Second Principal Account

U1--Unallocated—for orders that have not been allocated to a customer account, or where allocation is a middle/back office function.

Giveup:	Member code for clearing member--for Give-up Trade accounts only.
Use Max:	A checked box indicates that the maximum trade quantity restriction is applied. A blank box indicates that there is no maximum order quantity, or that the maximum order quantity is NOT be applied. You may establish a high order quantity that will not restrict normal trading, yet will still provide a measure of security in the event of an erroneous trade. Deselect Use Max to turn off the restriction.
Max Order Qty:	The maximum quantity allowed per trade for the specified account. Select the Use Max check box in order to apply the maximum quantity (see above). Deselect Use Max to turn off the restriction. If you are using the Guardian Risk Management tool: any Customer Default maximum order quantity must be less than the Maximum Order Quantity risk parameter defined for the Trader ID, or the trade will not be allowed.

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Creating a Customer Profile in the Customer Defaults List

► To add a new customer profile to the customer defaults list:

1. Open the Customer Defaults window from the Control Panel. **Control Panel** → **Settings** → **Customer Defaults.**

2. Enter the customer profile information as described in the Customer Defaults.Field Descriptions. The first profile has a customer name of Default.

3. When changing Customer Default data, make sure you that you tab to the next field, or press **ENTER** to save your changes. If you enter your change without using the tab key to advance to the next field, or if you do not press **ENTER,** your changes will not be saved. This is a safeguard to ensure that no data is inadvertently changed and then saved in the customer profile.

4. Close the Customer Defaults window.

Adding Customers to the Order Entry List

Add your most frequently used customer profiles to your Order Entry Customer Selection list to simplify switching from one customer profile to another. You may add any number of customers to the Order Entry list.

When you are creating a new Customer Defaults profile, clicking the SEL column in the Customer Defaults window (**Control Panel** → **Settings** → **Customer Defaults**) adds the customer name to the Order Entry list.

► To add customers to the list directly from the Customer List:

1. While both the **Market** window and **Customer List** are open, select the customer's name.

2. The customer name immediately displays in the **Order Entry** list. The SEL box in the Customer Defaults window will also be checked.

3. Repeat the above two steps for each additional name.

4. Close the **Customer List.**

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Changing a Customer Profile in the Customer Defaults List

▶ To change the information in a customer profile:

1. Open the Customer Defaults window from the Control Panel. **Control Panel → Settings → Customer Defaults.**

2. Change the customer profile information as described in the Customer Defaults.Field Descriptions. The first profile has a customer name of Default and cannot be changed.

3. When changing Customer Default data, make sure you that you tab to the next field, or press **ENTER** to save your changes. If you enter your change without using the tab key to advance to the next field, or if you do not press **ENTER,** your changes will not be saved. This is a safeguard to ensure that no data is inadvertently changed and then saved in the customer profile.

4. Close the Customer Defaults window.

Using the Customer Defaults Context Menu

Use a right-click anywhere in the Customer Defaults window to access additional functionality.

The **Customer Defaults Context** menu provides additional commands:

Find Control Panel   Brings the X_TRADER Control Panel to the foreground of your workspace. Refer to Using the Control Panel for additional information on services available from the Control Panel.

Delete Row(s):   Select a row, right-click to access the Context Menu, and select **Delete Row.**

Formatting: Accesses the Grid Styles dialog box so that you can customize fonts, colors, and borders.

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Product Group Set Dialog Box

Product Group Setup Dialog Box Overview
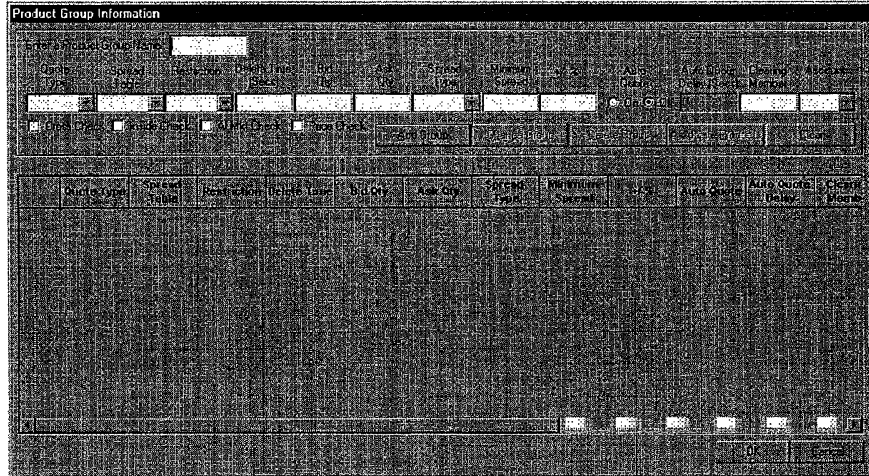
Product Groups allow you to define how the bid/ask values are calculated. You can specify the quote type, spread table, and delete time, account, and other parameters. Autoquoting is enabled/disabled via your Product Groups.

Product Group Information Dialog Box Field Descriptions

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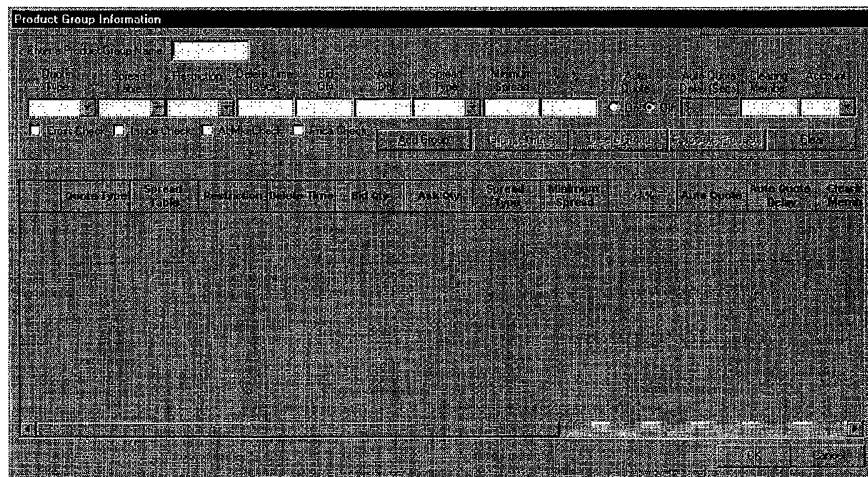
You can construct the quote according to the following guidelines:

Dime	A tick better on both bid and ask.
Join	Current price of both bid and ask.
Mkt Ave	The average between bid and ask is the mid-point for calculating the spread. The Maximum or Percent spread is divided by 2. This figure is added and subtracted from the Market Average to define the upper and lower limits.
Theo	Similar to the Mkt Ave except the theoretical price is used as the mid-point for calculating the spread.
Theo Bid/Ask	Current theoretical bid and ask.
Spread Table	Associate the product group with a pre-defined spread table for time, price, and spread limits. Choose any spread table from the list.
Restriction	Delete (delete the quote after a specified number of seconds) or GTC.
Delete Time (Secs)	If you choose the Delete Restriction, the Delete Time is the number of seconds the quote remains in the market. The quote is automatically deleted after the specified number of seconds. (The minimum time for EUREX is 20 seconds.)
Bid Qty	The Bid Quantity to be quoted. (The minimum quantity for EUREX is 50.)
Ask Qty	The Ask Quantity to be quoted. (The minimum quantity for EUREX is 50.)
Spread Type	Max, N/A, or Percent.
Maximum	The spread defined in the spread table is used to generate the quote. If the center price used for the calculation is 50 and the spread is 4 ticks, the quote will be 48-52.
N/A	The spread type is inconsequential when the quote type is Dime, Join, or Theo Bid/Ask. When set to one of these quote types, the spread type defaults to N/A (not applicable).
Percent	The chosen percentage of the price is used to calculate the spread. The +- % field is used to define the exact percentage.
	The Percent Spread Type is also subject to the Spread Table's defined Maximum Spread and the Product Group's defined Minimum Spread.
	If the calculated quote is greater than the Maximum Spread, the Maximum Spread will be quoted. For example, if the Percent calculated is 6 ticks and the Spread Table is 4 ticks, then the Spread Table Max of 4 ticks will be used.
	This field is not applicable for Dime, Join, and Theo Bid/Ask Quote Types
Minimum Spread	This is the minimum spread--expressed as the total number of ticks--used to generate a quote. If the calculated quote is less than the minimum defined, then this minimum will be used to generate the quote. For example, if the calculated spread is 1 tick and your minimum is 2 ticks, the quote will have a 2-tick spread. Not applicable for Dime, Join, and Theo Bid/Ask Quote Types.

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+/-%	If you choose the Percent Spread Type, define the percentage of the price that will be used to calculate the spread. Not applicable for Dime, Join, and Theo Bid/Ask Quote Types.
Auto Quote	Select the On or Off option button for automatic quoting in response to an RFQ.
Auto Quote Delay (Secs)	Enter the number of seconds the quote should be delayed before being sent to the market after a Request for Quote is received.
Clearing Member	Enter your clearing member ID.
Account	Enter the account type.
A1	Agent 1
G1	Pre-designated Giveup Trade 1
G2	Designated Giveup Trade 2
M1	Market Maker 1
M2	Market Maker 2
P1	Principal 1
P2	Principal 2
U1	Unallocated—for orders that have not been allocated to a customer account or where allocation is a middle/back office function.
Quote Viability Checks	The following checks are optional:
Cross Check	The quote will not be sent to the market if the constructed bid is greater than the current market ask price, or the constructed ask is less than the current market bid.
Inside Check	The quote will not be sent to the market if the constructed bid is greater than the current bid, or the constructed ask is less than the current ask. This check does not apply when the Dime Quote Type is selected.
At Mkt Check	The quote will not be sent to the market when the constructed bid and/or ask are equal to the current market price.
Price Check	The quote will not be sent to the market if there is no current bid or ask price.
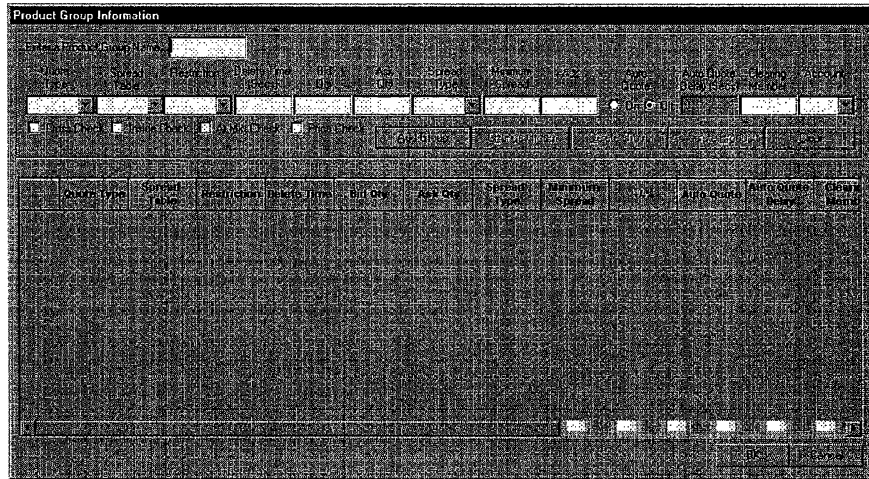
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Adding a Product Group

Product Groups allow you to define how the bid/ask values are calculated. You can specify the quote type, spread table, and delete time, account, and other parameters. Autoquoting is enabled/disabled via your Product Groups.

▶ To add a Product Group:

1. From the Control Panel, choose Settings menu → Product Group Setup.

2. Enter your Product Group name in the text box at the top of the window.

3. Choose a quote type.

4. After entering all required parameters, click Add Group. The product group and defined parameters display in the bottom portion of the Product Group Information dialog box.

Note: After adding, deleting, or changing product group information, choosing the appropriate button (**Add, Change, Delete**), and associating products, close the product window to ensure that your changes are saved.

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Associating a Product to a Product Group
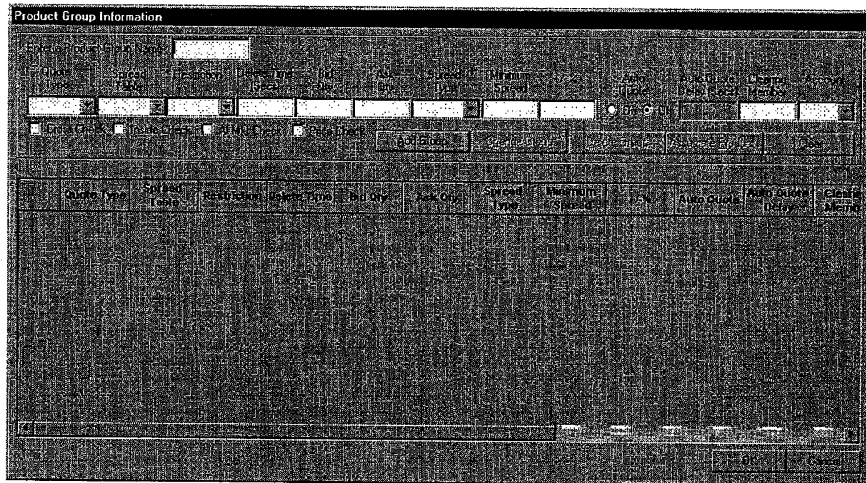
Each quoted product must be "Associated or assigned to a Product Group that you have created. It is the Product Group that determines how a quote is generated. Therefore, each product must be associated with **one** (and only one) product group in order to generate quotes.

► To associate a product to a Product Group:

1. From the Control Panel, choose Settings menu → Product Group Setup.

2. Select the Product Group (single-click in any cell on the bottom half of the Product Group Information window). All the Product Group settings will be displayed in the top half of the window. Note: The trader creates Product Groups. If no Product Groups are displayed, you must create a custom Product Group before products can be associated. Refer to the Product Groups section.

3. Choose the Associate Products button. If this button is grayed out, a Product Group has not been selected. The box in the lower half of the window will list all added Product Groups. The Product Group name appears in the far left-hand column. Left-click anywhere on the Product Group row. The entire row is selected, and the Associate Products button is enabled.

4. Select the appropriate exchange from the list.

5. Select the product from the drop list.

6. Choose the Add to List button, and the exchange and product now display on the product list. You can associate other products with this Product Group in the same manner.

7. Choose OK to complete the association and exit.

Note: Each product can be associated with only one Product Group at a time. If you require quotes for the same product to be constructed using different parameters (for example, max vs. percentage or a different clearing member), you must first disassociate the product and then re-associate it with another Product Group.

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Disassociating a Product from a Product Group
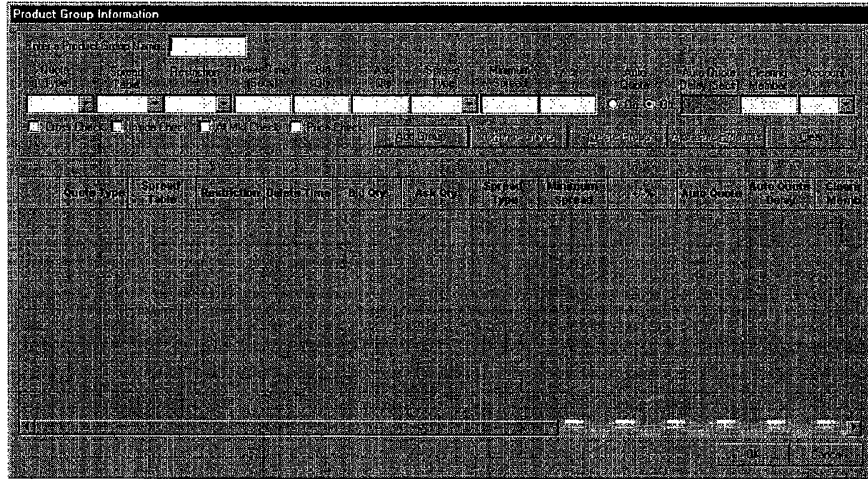
▶ To disassociate a product from a product group:

1. From the Control Panel, choose Settings menu → Product Group Setup.

2. From the Product Group Information window (lower portion of the window), click a Product group and choose the Associate Products button.

3. If this button is grayed out, a Product Group has not been selected. The box in the lower half of the window will list all added Product Groups. The Product Group name appears in the far left-hand column. Left-click anywhere on the Product Group row. The entire row is selected and the Associate Products button is enabled.

4. Click the product to be removed. It should become selected.

5. Choose the Remove button and choose OK to exit.

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Changing a Product Group

▶ To change a product group:

1. From the Control Panel, choose Settings menu → Product Group Setup.

2. Select the product group (single click in any cell on the bottom half of the Product Group Information dialog box). The entire row will be selected and all the Product Group settings will be displayed in the top half of the window.

3. Make any desired changes in the entry section of the window (top half).

4. Choose the Change Group button and OK to save and exit. The changes are not saved until you close the Product Group window.

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Deleting a Product Group

▶ To delete a product group:

1. From the Control Panel, choose Settings menu → Product Group Setup.

2. Select the product group (single-click in any cell on the bottom half of the Product Group Information window). All the Product Group settings will be displayed in the top half of the window.

3. Choose the Delete Group button and OK to save and exit.

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Spread Table Dialog Box

Spread Table Dialog Box Overview
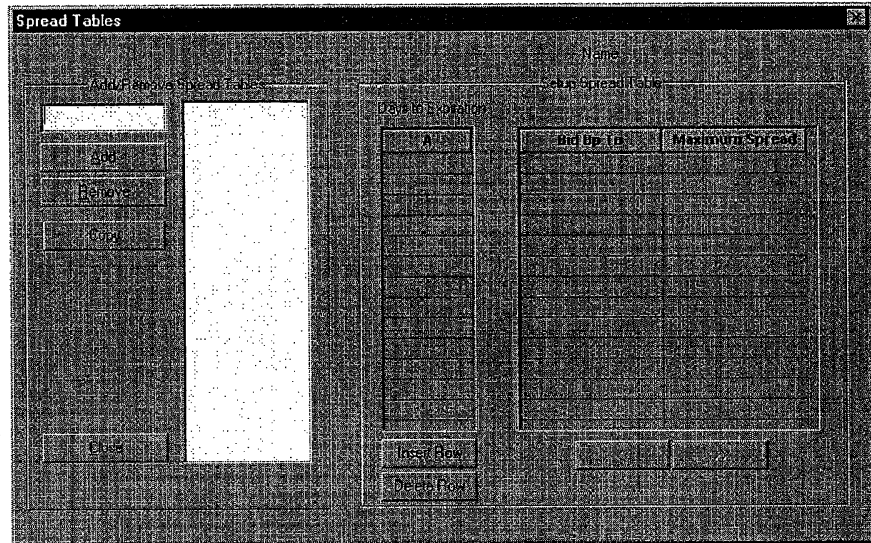
You use the Create New Strategy dialog box to create, maintain, and delete a spread or strategy for use in X_TRADER. You may create any number of strategies, which are then maintained in a file and are available from a drop-down list. After creation, you can then use the new strategy in the course of your trading.

You access the Create New Strategy dialog box from the **Control Panel→Settings Menu→Spread Table Setup.**
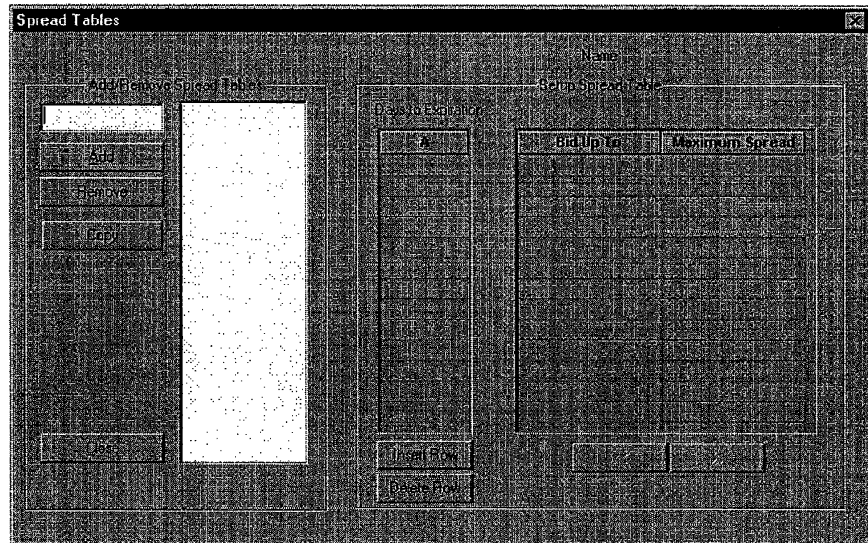
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Adding a Spread Table

Spread tables allow you to define how wide quote spreads should be, based on a product's time to expiration and price. Multiple spread tables provide flexibility within X_TRADER's quoting system.

▶ To Add a Spread Table:

1. From the X_TRADER Control Panel, choose **Settings menu → Spread Table Setup**.

2. Name your Spread Table: In the Add/Remove Spread Tables text box, located above the Add button, enter the name. Choose **Add**. The table name displays.

3. Select the table name: Single-click the newly named table to set up your table. The fields in the Setup Spread Table area become active.

4. The Days to Expiration column: The Days to Expiration column (A) is used to set the upper boundary for any given time period. For example, entering 30 in the top cell creates a 0 to 30-day time-to expiration period. Entering 90 in the cell below creates a 31 to 90-day time-to-expiration period. Entering 99999 creates the 91–99999 day time period.

   Click any cell in the **Days to Expiration column,** and the exact time period is confirmed in the line above the **Bid Up To column.** For example, if you enter 30 as the number of days to expiration and you click this cell, the line above the **Bid Up To** column will read, "For expiration between 0 and 30 days.

   Each expiration period has a corresponding table of prices and spreads. Similar to **Days to Expiration,** the **Bid Up to Price** is an upper bound and the **Maximum Spread** is the largest spread to be used (in ticks). For instance, setting the **Bid Up To** price to 5 and the **Maximum Spread** to 4 means that for all prices up to 5, the **Maximum Spread** for any quote will be 4 ticks wide.

   A. Set up expiration periods. Use a high upper bound (99999) to indicate 'or longer.' A table with the last entry of 30 only goes out to 30 days. Setting the last cell to 99999 creates a last time period of 31 days or longer.

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B. Set up prices and spreads. Follow the same logic as above and use a high upper
    bound for the last price range.

Use the **Insert** and **Delete Row** buttons as necessary.

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                                                    IBG et al. v. TRADING TECH. - CBM2016-00054

Copying a Spread Table

Spread tables allow you to define how wide quote spreads should be, based on a product's time to expiration and price. Multiple spread tables provide flexibility within X_TRADER's quoting system.

▶ To copy spread table data from one spread table to a new one:

1. Select an existing Spread Table.

2. Choose the **Copy** button.

3. Enter a new table name. All Spread Table data is copied to the new table. Edit the new table as necessary.

4. Click the **Close** button. The table information is automatically saved.

Saving A Spread Table

Spread tables allow you to define how wide quote spreads should be, based on a product's time to expiration and price. Multiple spread tables provide flexibility within X_TRADER's quoting system.

▶ After entering the information into the spread table, click the **Close** button. The table information is automatically saved.

Removing a Spread Table

▶ To remove a Spread Table, select the table in the Spread dialog box and choose the **Remove** button.

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Properties Dialog Box

Properties Dialog Box
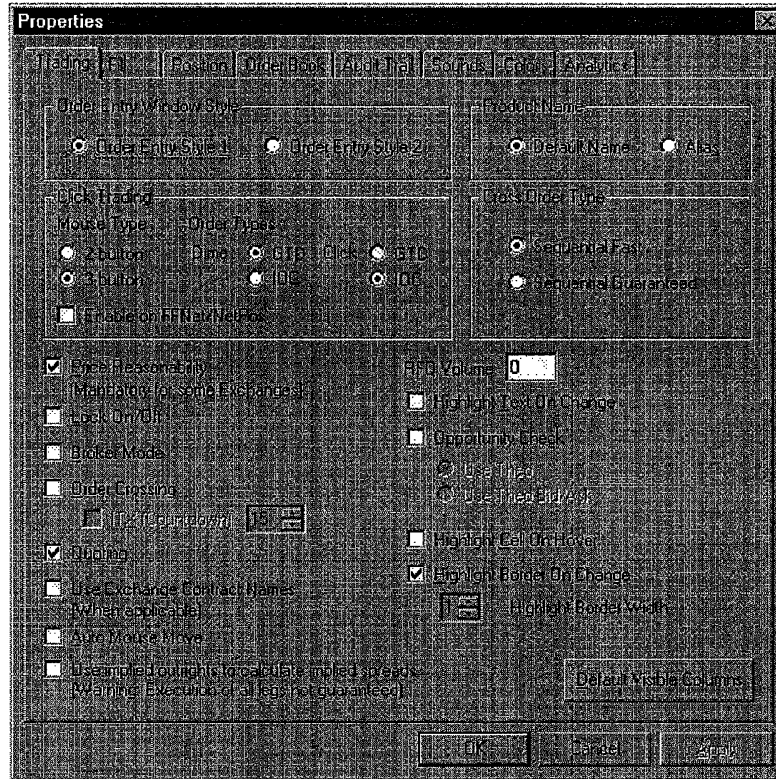
You access the Properties dialog box from the **Control Panel**. Choose **Settings →
Properties.**

The Properties dialog box has nine tabs that you use to activate, deactivate, and customize
various X_TRADER windows and features:

Trading:	Use the Trading tab to customize the Market window (Order Entry and Market Grid) features
Fill:	Use the Fill tab to customize fast fill notification, enable or disable buy/sell color coding, and select default visible columns for the Fill window.
Position:	Use the Position tab to select default visible columns for the Position pane

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Order Book:	Use the Order Book tab to enable or disable buy/sell color coding and select default visible columns for the Order Book
Audit Trail:	Use the Audit Trail tab to select viewable records, enable or disable buy/sell color coding, and default visible columns for the Audit Trail
Sounds:	Use the Sounds tab to associate an X_TRADER event with an audio cue
Color:	Use the Color tab to select text, background, and border colors
Analytics:	Use the Analytics tab to integrate a proprietary pricing model

NOTE: The Properties dialog box settings become the defaults for all new windows. However, changing these settings may or may not affect windows that are already open. For example, changing your default visible columns does not affect open windows. However, if you open a new window, it reflects your new defaults. In contrast, disabling the Trading tab Lock feature immediately deselects the Lock checkbox on the Order Entry window.

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Properties Dialog Box—Trading Tab
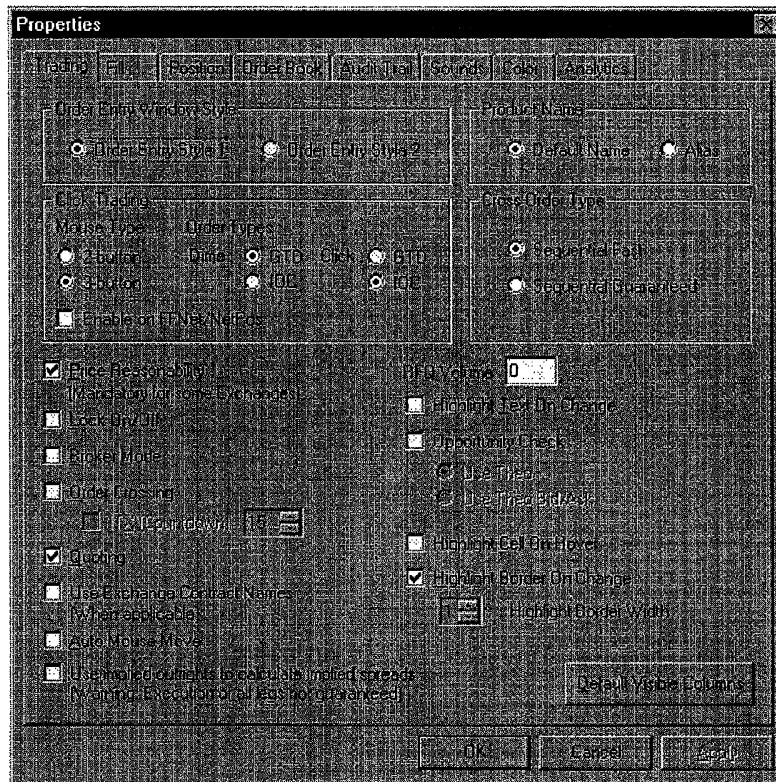
From the X_TRADER Control Panel, choose **Settings → Properties → Trading** tab.

The Trading tab lets you set default properties for the Market window (Order Entry and Market Grid

The following options are available:

Order Entry Style 1 is the default selection: Order Entry Window Style 2 is disabled.

Order Entry Style 1 is pictured in this documentation. It was designed for the Windows NT version of X_TRADER. Order Entry Window Style 2 closely resembles the format available in the OpenVMS version (discontinued) of X_TRADER. Reference the Order Entry → Order Entry Window Styles section for additional information.

The Click Trading Options include:

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Mouse Type:	The 3 button mouse is selected by default. The 3-button mouse supports Dime trading with the middle button and Click trading with the right button. The 2-button mouse requires the manual selection of Click or Dime trading and the right mouse button is used to trade.
Order Types:	For Dime and Click trading; select GTD or IOC for Dime and Click trading.
Enable on FFNet/NetPos:	Enable on Fast Fill Net Position.
Price Reasonability:	Enabled by default. Mandatory for some exchanges. "Price reasonability is defined by each supporting exchange as a maximum number of ticks from the last price. When this feature is enabled (or if the check is required by the exchange), a trade is rejected if it falls outside the parameter set by the exchange. Detailed information must be obtained directly from the appropriate exchange.
Lock On/Off:	Disabled by default. The Lock feature requires the trader to choose an additional button (i.e., Apply Buy or Apply Sell) before the order is sent to market. To affect all existing and new Order Entry windows, enable or disable via the Trading tab. To turn on/off the feature for a single Order Entry window, check (ON) or uncheck (OFF) the Lock checkbox on the Order Entry window. This box is located to the right of the Sell button.
Broker Mode:	Disabled by default. When enabled and a price is selected, the Order Entry window will offer an oversized Sell button when the bid prices is selected or an oversized Buy button when the ask price is selected.
Order Crossing:	Disabled by default. If enabled, cross trades can be performed.
ITX (Countdown):	Intention to Cross. Enabled by default. Displays the **ITX** button on the right side of the Order Entry window. See Order Entry Field Descriptions for a full discussion of intention to cross.
Quoting:	As a feature, quoting is disabled by default. To use the Quoting tool, it must be enabled at two levels: 1. Quoting must be enabled as a feature from the Trading tab, and 2. Quoting must be turned on from the Context Menu of each Market window.
	A check in the Quoting box on the Trading tab will allow the Quoting option to be selected from the Market Grid Context window.
	Right-click any cell on the Market Grid *(excluding bid/ask price columns if click trading is enabled)*, and select Quoting; the quoting columns will be immediately added to the Market Grid. Refer to the Quoting section for additional information.
Use Exchange Contract Name	Disabled by default. When enabled the exchange given

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(When Applicable):	contract names will be used when applicable.
Auto Mouse Move:	Disabled by default. When enabled, the cursor will automatically move to the Buy button when the Ask price is selected. When the Bid price is selected the cursor will move to the Sell button.
Use implied outrights to calculate implied spreads.	Disabled by default. When enabled, execution of all legs is not guaranteed.
Product Name:	Display the product's exchange assigned name (default) or its alias.
Cross Order Type:	Sequential Guaranteed will submit the first order and will wait for an acknowledgement from the exchange. Only then will the other side be submitted. Due to the delay in sending the second order, this method increases the risk of order matching by a third party.
RFQ Volume:	Request for Quote minimum volume. Default is zero.
Highlight Text on Change:	Disabled by default. Improves identification of affected cells.
Opportunity Check:	When Click Trading is used with the Opportunity Check, the opportunity selecting is based on the click trading parameters and edge implementation.
Highlight Cell on Hover:	Disabled by default. As the cursor moves over each cell, it will be selected with a 3-D effect. Both the Column and Row headings will also be selected to help you track your cursor position.
Highlight Border on Change & Highlight Border Width:	Enabled by default. Improves identification of affected cells. Default width of 1.
Default Visible Columns:	Select the default visible Market Grid columns.

WARNING: Some versions of the Microsoft Intellimouse driver are incompatible with X_TRADER. If the middle button of your Intellimouse cannot be used for Click trading, remove the Intellimouse driver using the Add/Remove Programs tool from **Start Menu→Setting→Control Panel**. This disables the scrolling feature of the mouse, but allows you to use it for Click Trading.

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Properties Dialog Box—Fill Tab
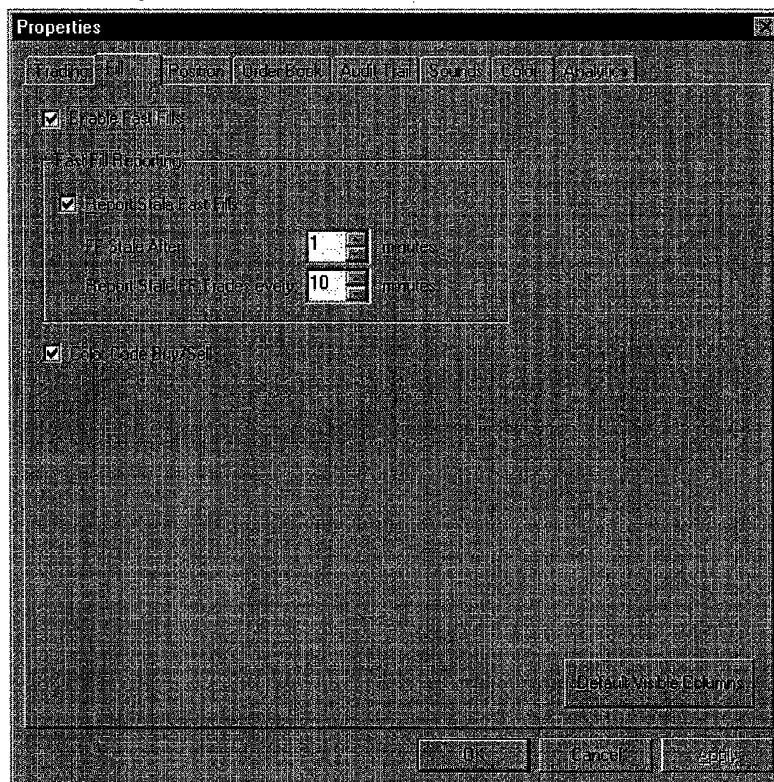
From the X_TRADER Control Panel, choose Settings → Properties → Fill.

The Fill tab lets you set default properties for the Fill (top) pane. The following options are available:

Enable Fast Fills:	Enabled by default. Some exchanges provide partial trade information prior to sending a confirmed fill (i.e., Eurex).
Report Stale Fast Fills	Enabled by default Options include:
	FF Stale After: Fast fills that do not receive a matching confirmation from the exchange are considered stale after the time specified.
	Report Stale FF: Trades every: Default is 60 minutes. Every 60 minutes, a message reporting the existence of a stale fast fill will flash until you refresh your position.
Color Code Buy/Sell:	Enabled by default. To help you quickly differentiate among orders, the default text color for **Buy** orders is blue and **Sell** orders display in red. The default confirmed fill text background is gray. Customize buy and sell colors via the Color tab; the colors that you select apply for all windows in which buy/sell orders are color -coded.

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When you enable color- coding, color formatting of the individual grids is disabled. Only the colors you select via the global **Properties → Color** tab are applied.

Default Visible Columns: Select the default visible Fill window columns.

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Properties Dialog Box—Position Tab
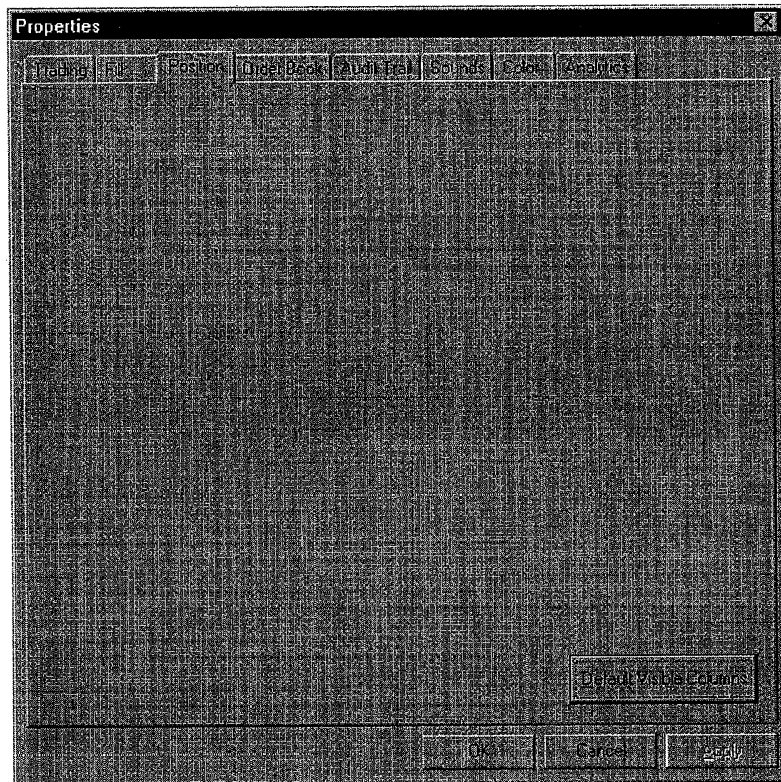
From the X_TRADER Control Panel, choose **Settings** → **Properties** → **Position** tab.

The Position tab lets you set the **Default Visible Columns** for the Position pane.

Choose the **Default Visible Columns** button to select from the dialog box the columns of information to be available in the Position pane when a new Fill window is opened. Each checked column will be visible; an unchecked column will be hidden.

For a detailed listing of the available information which can be enabled or turned off, refer to the Position Pane Field Descriptions topic.

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Properties Dialog Box—Order Book Tab
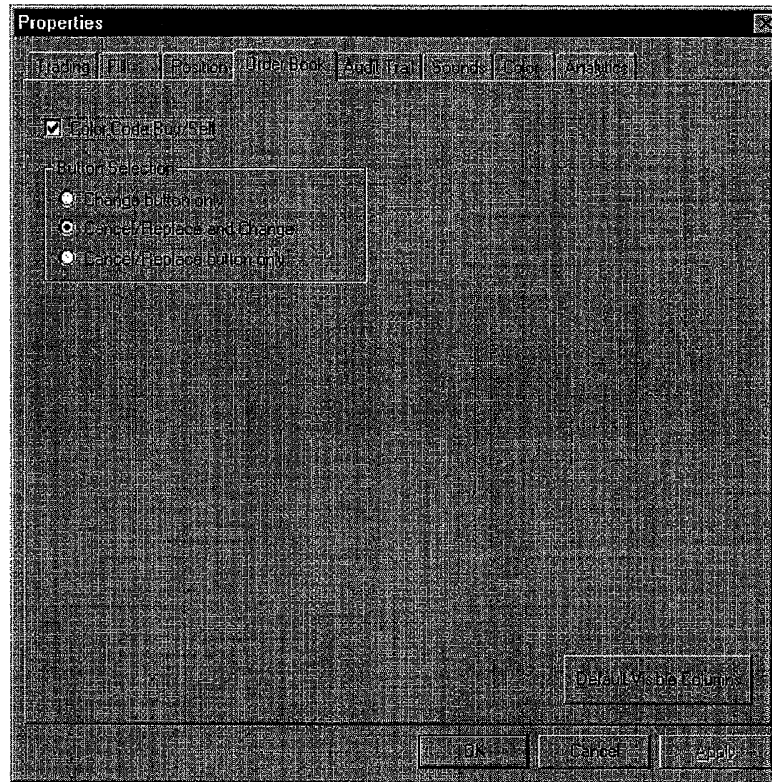
From the X_TRADER **Control Panel,** choose **Settings** → **Properties** → **Order** tab.

The Order tab lets you set default properties for the Fill (top) pane. The following options are available:

Colored Coded Buy/Sell: Enabled by default. To help you quickly differentiate among orders, the default text color for **Buy** orders is blue with **Sell** orders shown in red. The default text background is gray. You can customize buy and sell colors via the Color tab; the colors you select apply for all windows in which buy/sell orders are color-coded. When you enable color-coding, color formatting of the individual grids is disabled. Only the colors you select via the global Properties → Color tab are applied.

Button Selection: By default, both the **Change** and **Cancel/Replace** buttons are available. Two other button options are allowed: **Change button only** and **Cancel/Replace button only.**

Default Visible Columns: Select the default visible Order Book columns

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Properties Dialog Box—Audit Trail Tab
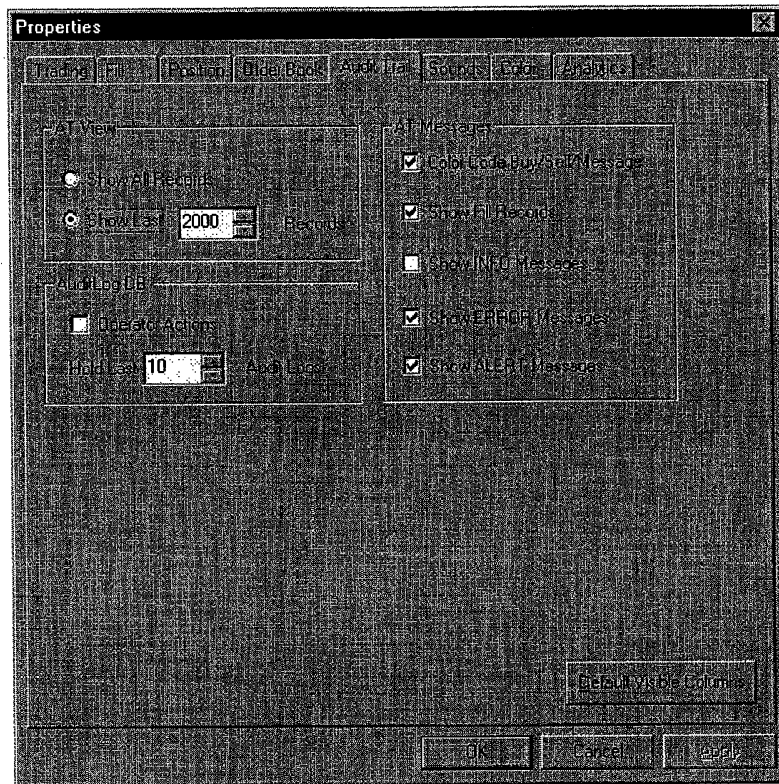
From the X_TRADER Control Panel, choose **Settings → Properties → Audit Trail** tab.

The Audit Trail tab lets you set the number of viewable records and columns:

Viewable Records: Show All Records or choose a specific number of the most recent messages to display (100-2000)

Audit Log DB: Ten calendar days of Audit Trail information is automatically stored in a database (<install directory>:\TT\Logfiles\AuditLog). To include Operator Actions, left-click within the checkbox. Select the number of calendar days of data to save on the workstation hard drive (10 – 60 days).

AT Messages: **Color Code Buy/Sell/Message:** Enabled by default. When enabled, the default buy and sell text is blue and red, respectively. Customize buy/sell text and background colors using the Properties → Color tab.

Show Fill Records: Enabled by default. When enabled, the default buy and sell text is blue and red, respectively.

Show INFO Messages: Disabled by default. When enabled, the default colors for messages are white text on a black background.

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Show ERROR Messages: Enabled by default. When enabled, the default colors for messages are white text on black background.

Show ALERT Messages: Enabled by default. When enabled, the default colors are black text on a yellow background. Customize text and background colors using the Properties → Color tab → ALERT/WARN text and background.

Default Visible Columns: Select the default visible Audit Trail columns. For a detailed listing of the available information, refer to the Audit Trail Field Descriptions section.

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Properties Dialog Box—Sounds Tab
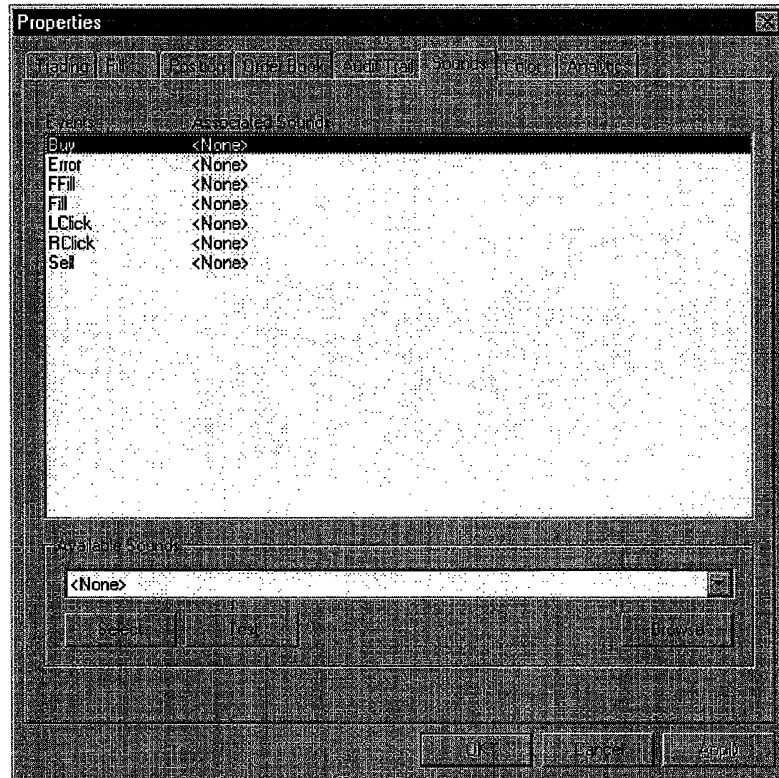
From the X_TRADER Control Panel, choose **Settings → Properties → Sounds** tab.

The Sounds tab lets you set audio notification for certain events. If your workstation is equipped with a sound card and speakers and the appropriate drivers have been installed, you can assign sounds to the following events:

- **Buy**
- **Error**
- **FFill (Fast Fill)**
- **Fill (Confirmed Fill)**
- **LClick (Left Click)**
- **RClick (Right-click)**
- **Sell**

Suggestions

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You can copy sound files from another source (for example, WINNT\Media directory) to the <TT installation drive>:\TT\X_TRADER\<X_TRADER Version>\SOUNDS directory (for example, C:\TT\X_TRADER\Vx.xx\SOUNDS (x.xx represents the version of X_TRADER, e.g., V510)).

Sound files should be short in duration. Longer files may not be able to keep up with near simultaneous events.

NOTE: When performing a cross trade with sounds assigned to Buy and Sell events, you will not either hear the first sound based on your selection of Buy First or Sell First, or it will be cut off. Only the second sound event will be audible, because the buy and sell events are closely timed.

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Adding an Event Sound

To add a sound to a specific event, first go to the Sounds tab in Properties: From the X_TRADER Control Panel, choose Settings → Properties → Sounds tab.
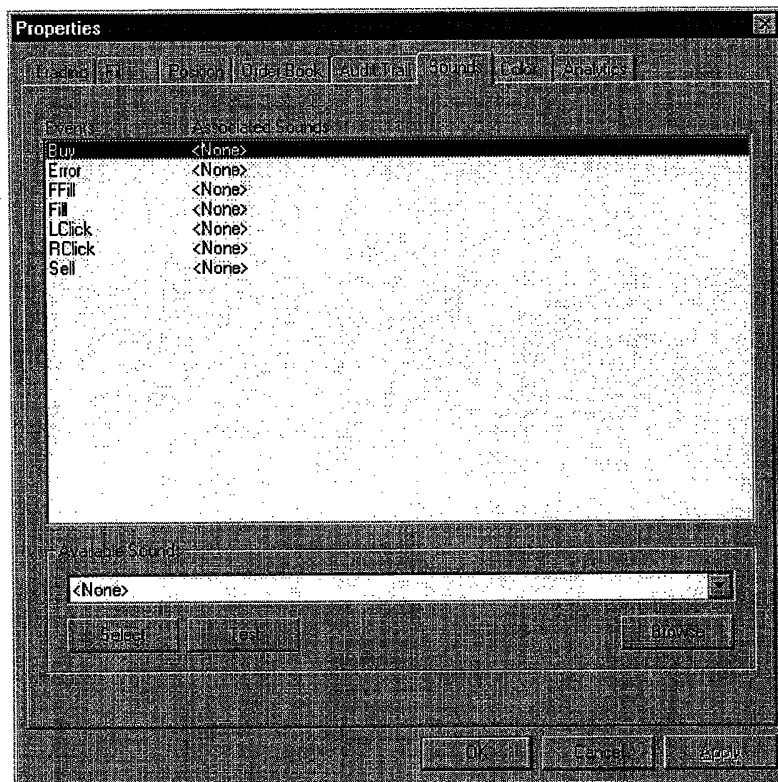
The top list box displays the event and its associated sound. By default, no audio files (<None>) are associated with the events.

► To add an event sound to a given event:

1. From the X_TRADER Control Panel, choose **Settings** → **Properties** → **Sounds** Tab.

2. Click the event and sound in the **Events** and **Available Sounds** boxes.

3. Choose the **Select** button. In the top box, the new sound name displays next to the selected event.

4. Choose **Apply** and then **OK** to exit.

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Changing or Removing an Event Sound
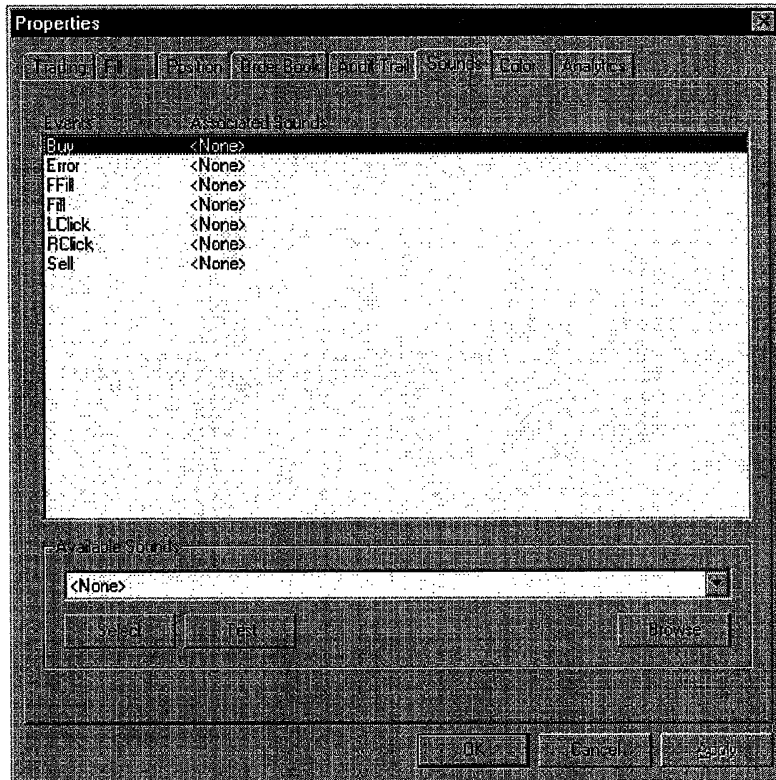
▶To change or remove a sound from an event:

1. From the X_TRADER Control Panel, choose **Settings → Properties → Sounds Tab.**

2. In the Available Sounds box, click a new sound file or choose <None> to remove a sound file. Click the event in the Event box.

3. Choose the Select button. In the **Event** box, the new sound name displays next to the selected event.

4. Repeat this process for any additional changes to your event sounds.

5. Choose **Apply** and then **OK** to exit.

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Properties Dialog Box—Color Tab
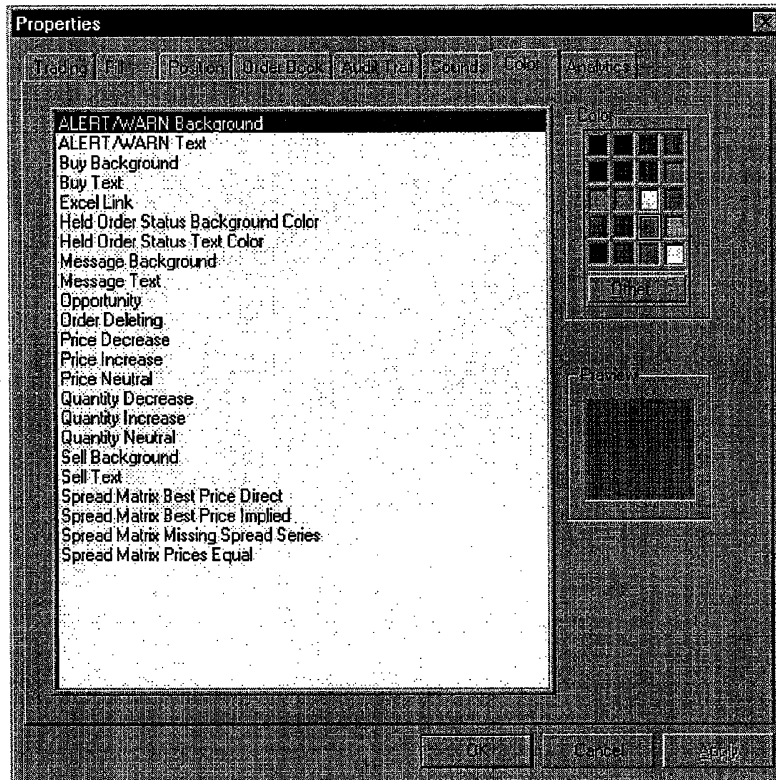
From the X_TRADER **Control Panel**, choose **Settings** → **Properties** → **Color** tab.

The Color tab lets you select text, background, and border colors for:

ALERT/WARN Background:	The message default background color is yellow.
ALERT/WARN Text:	The default color is black.
Buy Background:	The default text color is blue with a gray background. This setting affects the Fill pane, the Order Book, and the Audit Trail.
Buy Text:	The default text color is blue with a gray background. This setting affects the Fill pane, the Order Book, and the Audit Trail.
Excel Link:	The default background color of Market Grid cells containing Excel linked data is gray.
Held Order Status Background Color	The default background of the held orders is yellow.
Held Order Status Text Color	The default text color is black.

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Message Background:	The default Audit Trail exchange announcement background color is black.
Message Text:	The default Audit Trail exchange announcement text color is white.
Opportunity:	When you have enabled Opportunity Selecting on the Properties → Trading tab, the bid or ask price will be selected in yellow (default color) when there is an opportunity to better your theoretical price or theoretical bid/ask prices.
Order Deleting:	Default color is red.
Price Decrease:	The cell border is selected in red (default color).
Price Increase:	The cell border is selected in bright green (default color).
Price Neutral:	The cell border is selected in white (default color).
Quantity Decrease:	The cell border is selected in red (default color).
Quantity Increase:	The cell border is selected in bright green (default color).
Quantity Neutral:	The cell border is selected in white (default color).
Sell Background:	To quickly identify sell orders, the default text color is red; the default grid background color is gray. This setting affects the Fill pane, the Order Book, and the Audit Trail.
Sell Text:	To quickly identify sell orders, the default text color is red; the default grid background color is gray. This setting affects the Fill pane, the Order Book, and the Audit Trail.
Spread Matrix Best Price Delta:	The default color is a medium blue.
Spread Matrix Best Price Spread:	The default color is coral.
Spread Matrix Missing Spread Series:	The default color is gray.
Spread Matrix Prices Equal:	The default color is white.

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Changing Window Color Display Options
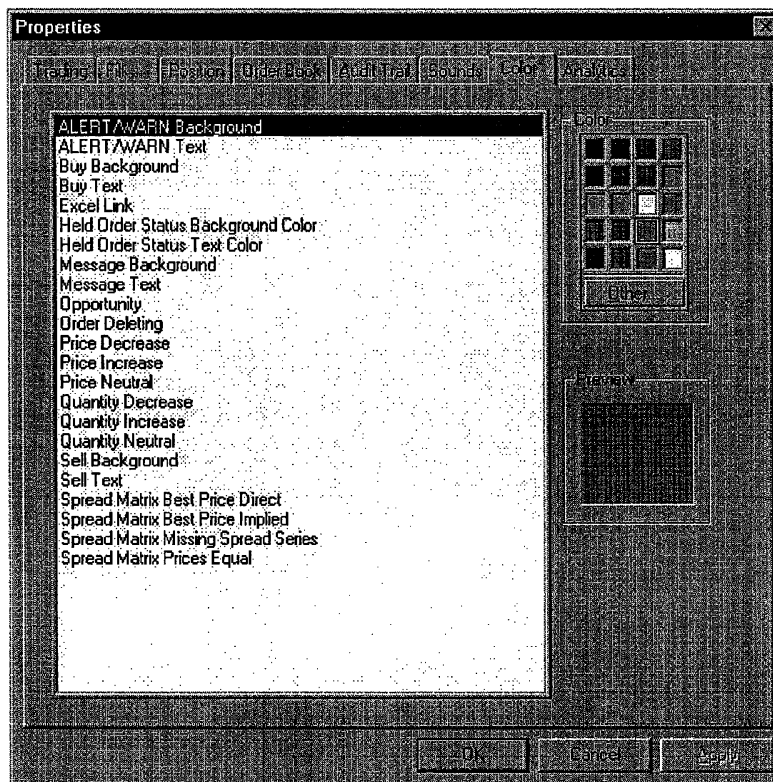
▶ To change the colors for X_TRADER display windows:

1. From the Control Panel, choose **Settings** → **Properties** → **Color.**

2. In the Selection box, click the appropriate option button.

3. Click a color in the displayed palette. Click **Other** to see an additional palette or to create custom colors.

4. The color preview window displays your chosen color.

5. Click **OK** to exit.

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Properties Dialog Box—Analytics
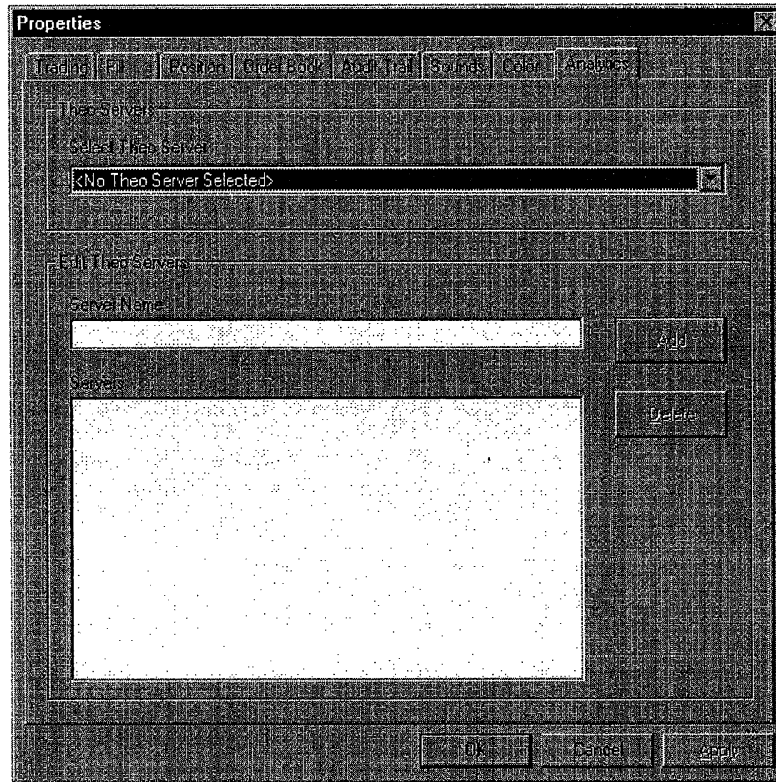
When written to The X_TRADER API, you can integrate your proprietary pricing model with X_TRADER. The Analytics tab lets you add, delete, and select the Theo (theoretical) Server(s) to broadcast the theoretical values. Additional information is available in Trading Technologies API documentation.

From the X_TRADER Control Panel, choose **Settings → Properties → Analytics** tab.

NOTE: You can link a pricing model running on Microsoft Excel directly to the X_TRADER Market Grid. This method of calculating theoretical prices does not require the use of Trading Technologies' (TT) API. The **Analytics** tab is only applicable for programs written to TT's API.

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Market Explorer Window

Market Explorer Overview
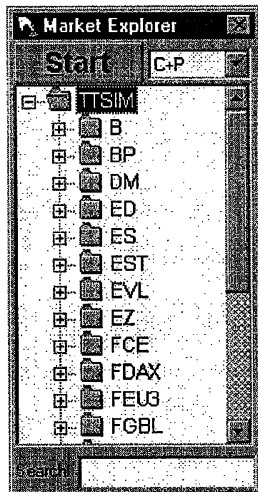
You use the Market Explorer dialog box to select those markets and products you wish to trade during your X_TRADER session. You may select one or more products from one or more exchanges to trade during the same session.

You can use the Market Explorer to discover information about the various products offered by an exchange. The following product information can be obtained:

- **Expand and Collapse the Exchange Product Tree:**

Expand or collapse the tree by single clicking the "+ or "–" next to the product or exchange name. All products are exchange/marketplace-dependent and list the type of instrument offered. The tree displays all available markets for which you have completed the login process.

- **Product Description:**

To see a text description (or alias, depending on the exchange) of the product, move the cursor above the product name and hold it there (hover). No mouse click is necessary.

- **Search Feature:**

You can use the Market Explorer Search feature to quickly find a specific product. Select the exchange and type in one or more characters of the product name or number. Market Explorer automatically expands the exchange product tree to display the search results. If you are logged on to only one exchange, you do not need to select the exchange.

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Market Explorer Field Descriptions
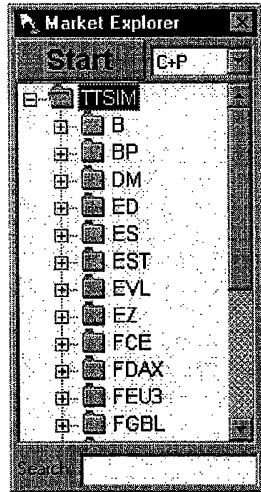
The fields in the Market Explorer are:

Start	After making a selection in the Market Explorer use this button to open the market.
C+P	Display view dropdown menu. Use to select an Option display in the Market Grid.
Market Window	Displays the available markets
Search	Enter a market name to search through the list.

Opening the Market Explorer

You can open the Market Explorer using either of the methods below:

Control Panel → Market Explorer button.

or

Control Panel® Window ® Market Explorer

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Changing the Options Display in the Market Window

There are two separate views available to see options in the Market Explorer. The Options Display box is located in the top right-hand corner of the Market Explorer. Each selection represents a way to display an option screen.

Option Selections:

C+P   The Market Grid displays each strike on a single line, with the calls on the left side and the puts on the right.

C/P   The Market Grid displays each strike on two lines, with the calls placed directly over the puts.

Opening a Market Window for One Product
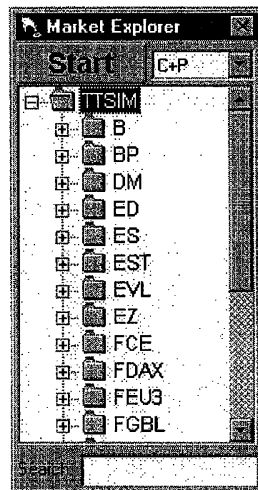
▶The are two available methods to open a market window for a single product:

• Expand the Market Explorer to view the product instrument, and double-click the instrument type.

or

• Single-click the product instrument so that a check mark displays. Choose **START**.

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Opening a Market Window for Multiple Products
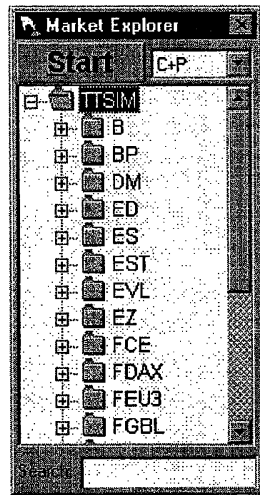
You can trade multiple products from multiple exchanges in the same Market window.

▶ To open multiple products in the same market window:

1. Press and hold down the **CTRL** key before you select the first instrument. Continue pressing it while expanding or scrolling through the Market Explorer until you have selected all products.

2. Choose **START.**

NOTE: All products that you select while continuously holding down the CTRL key are displayed in one Market window.

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Order Entry Window

Order Entry Window Overview

When you select a product, the Market window opens. It is composed of a top pane, the **Order Entry window,** and a bottom pane, the **Market Grid,** which displays contract information. The Order Entry window and Market Grid are the principal trading tools that allow you to monitor the current market and place orders.

X_TRADER makes order entry simple. With Click Trading, a single right-click sends an order to market. When using a three-button mouse, single-clicking the middle button will perform Dime trading. If you prefer manual entry, enter a price and quantity. Customized Customer Defaults provide the data for the majority of customer trading preferences.

The Order Entry window has many pre-set fields, properties, and buttons that help you to trade quickly and efficiently.

You can also display a Floating Order Entry window instead to open independently of the Market Grid.

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Order Entry Window Field Descriptions

The Order Entry field descriptions are:

Quantity Buttons: These pre-set buttons, located in the upper left-hand corner, allow you to quickly enter and increment a quantity. The quantity defaults are 1, 5, 10, 100, and 500. You can edit these buttons to reflect customized quantities: right-click a button, input the desired quantity, and press **ENTER.** The button immediately changes to the new quantity. The edited quantity button is saved with your workspace. The **Clear** button below the quantity buttons clears the Quantity field (only). To clear the entire Order Entry window, use the **Clear** button below the account type field.

Quantity/Price Fields: The order quantity appears on the left; the price field appears on the right. You can use the **Quantity Clear button,** located below the Quantity buttons, to clear the Quantity field, but not the Price field. Each field has its own spinners (the up and down arrows). Click the spinners to increase or decrease the quantity and/or price.

Order Information: This field automatically reflects the contract information provided when you left-click any row in the grid: quantity, price, product, month/year, and order restriction type. This field also displays a "C for call or "P for put.

GTD/GTC/Date Button: Click this button to toggle among **GTD, GTC,** and **Date.** The default selection is **GTD:** the order is valid only for the current trading session. **GTC** indicates that the order is valid until you cancel the order or the contract expires. **Date** allows you to select an order expiration date. Selecting **Date** opens a calendar with the current date circled in red. Select the expiration month and day for the order and choose **OK.**

Limit (Market) Button: Click this button to toggle between **Limit** (default) and **Market** orders.

Order Restrictions: Available restrictions include None, DiscQty, FOK, IOC, MV, and STOP:

> **None** No additional restrictions on the order.

> **DiscQty** Disclose Quantity disguises trading volume. Discloses partial amount of total quantity. Quantity box opens.

> **FOK** Fill or Kill. Immediate fill of entire quantity or immediate cancellation of order.

> **IO** Immediate or Cancel. Immediate partial fill before balance is cancelled.

> **MV** Minimum Volume. Minimum volume of partial fills; default is zero. The Minimum Volume Order type is not supported by all exchanges (i.e., LIFFE supports MV and EUREX does not). The minimum volume is entered on the Order Entry window. When this restriction is chosen, a field labeled Min Vol will appear. Enter the minimum volume quantity, and place the order.

> **STOP** The Stop order price triggers a market buy or sell order. You can perform all normal operations (hold, submit, change, cancel, replace, and delete) on a stop order. When you choose the STOP restriction, a field labeled Stop Prc

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displays. Enter the trigger price, and place the order. A stop order displays in the Order Book with a Working status, but it is not actually in the market. A negative order number (-###) displays, indicating that it is a "synthetic order. When the stop triggers, the order becomes the native order type and remains in the Order Book until filled.

If the trader who originated the order is not logged in (in other words, has no order router), when the order is triggered, the order is sent to market with the trader ID of another trader with the same Group ID. If another trader in the same group is not available (no one from his group is logged on), the order status changes from Working to Hold and does not trigger until the order is resubmitted by the original trader, or a trader with the same Group ID.

A Stop Limit order is accepted by the LIFFE Gateway only if the limit price meets these criteria:

TRIGGER price<= BEST ASK price, for a SELL STOP LIMIT

TRIGGER price>=BEST BID price, for a BUY STOP LIMIT

And

TRIGGER price<= LIMIT price, for a BUY STOP LIMIT

TRIGGER price>= LIMIT price, for a SELL STOP LIMIT

X_TRADER enforces only the second set of limits. A stop limit order is triggered only if the last traded price is within the trigger range. The trigger conditions are:

LAST TRADED price<= TRIGGER price, for a SELL STOP order

LAST TRADED price>= TRIGGER price, for a BUY STOP order

If multiple stop orders are in place for the same product at the same trigger price (for the same trader or multiple traders), they are processed in a FIFO (first in, first out)order.

If the Order Server of the LIFFE Gateway goes down, all stop orders must be moved to a hold status (in other words, they will not trigger). Held stop orders are not automatically resubmitted when the Gateway recovers. You must do this manually. Audit trail messages will show you that the orders have been held. In the event that an Order Router goes down, and the stop order triggers, but cannot be sent (because the Order Router is down), the Order Router of another trader in the same group as the trader who entered the order will be used to send the order to market. If no such Order Router is available, the stop order is put into a hold status and an audit trail message is generated.

Open/Close:	Open Position or Close Position (annotation for use by the trader).
Acct:	Select one of the following account types.

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A1--First Agent Account (e.g., broker)

G1--Pre-Designated Giveup Trade

G2--Designated Giveup Trade

M1--First Market Maker Account

M2 --Second Market Maker Account

P1--First Principal Account (e.g., proprietary trader)

P2--Second Principal Account

U1--Unallocated. For orders that have not been allocated to a customer account or where allocation is a middle/back office function.

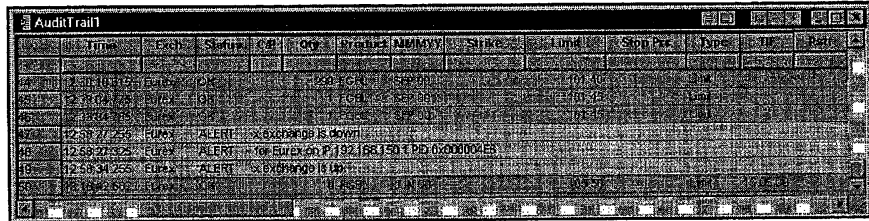|	
Cross With:	**This button displays if you enable Order Crossing from the Trading Tab in Global Window Properties.** Choose the Cross With button to trade with a specific counter party. Enter the counter party's Trader ID where indicated. Support of this feature is exchange specific. If the exchange does not support use of this feature, the message "Order Format Invalid will be displayed in the Audit Trail.
Cross:	**This button displays if you enable Order Crossing from the Trading Tab in Global Window Properties.** Choose the Cross button to perform a cross trade. The Order Entry pane will change to display the appropriate fields to perform a cross trade—including **BUYER** and **SELLER** drop lists of customer accounts. In addition, the BUY and SELL buttons will be replaced by **BUY FIRST** and **SELL FIRST** buttons. By default, order crossing is enabled. This feature may be disabled from the X_TRADER Control Panel → Settings → Properties → Trading tab. Deselecting Order Crossing will remove the Cross With and Cross buttons from all Order Entry windows.
ITX:	**This button displays if you enable ITX from the Trading Tab in Global Window Properties and enable Crossing from the Properties dialog box.** This button displays on the right side of the Order Entry window. Some exchanges require a trader to send an Intention to Cross notification. Choosing ITX sends the intention to cross to the exchange (However, this is rejected for markets that do not support this announcement). After you choose the **ITX** button, a 15-second (default) countdown displays on its face (This timer is for informational purposes only and does not trigger a cross order when it gets down to zero.). You can set the number of seconds from the Properties dialog box. X_TRADER does not time cross orders for markets that require a time interval between sides of the cross being submitted. You must manage this manually. **Do not confuse Intention to Cross with a cross order per se, or with the LIFFE ITX function; Intention to Cross is an announcement of the desired intention to cross. The LIFFE ITX is a cross order, not an announcement.**
Customer Selection Field:	This field displays the current customer defaults profile in use. The drop list contains all customer accounts for which the SEL box is selected from the Customer Defaults window. X_TRADER is installed with a default account. The Default profile specifies placing GTD limit orders for an agent account. No other information is assumed. You may immediately trade with the default account. Other order types (e.g., GTD Market) can be placed by manually changing the order parameters.

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Customer Defaults:	To create customized customer profiles, so that manual changes are not necessary, create custom Customer Defaults. Refer to the Customer Defaults section for information.
Customer Account:	You may manually enter a customer account (e.g., EUREX ACCOUNT #, back office account) or select an account from the drop list by clicking the down arrow. Your middle/back office may define a specific code for each customer to facilitate the association of each trade with a specific account. The account information displayed is taken from the Customer Defaults Account # field. Use this Order Entry field to change or add the client account for the current order.
Buy and Sell Buttons:	Choose these buttons to send an order to market. In Broker Mode, clicking on the bid side will enlarge the Sell button; clicking on the ask side will enlarge the size of the Buy button. The oversized Buy or Sell buttons provides an immediate visual confirmation as a result of clicking the bid or ask. If you are using Order Entry Style 2 (replication of OVMS client Order Entry window), the buy or sell confirmation is appears next to the order price and quantity fields. Broker mode and Order Entry Style 2 settings are selected via the X_TRADER Control Panel (Settings (Properties (Trading tab. Note: If you are working with an auction product, such as any of the Garban instruments, the **Buy** and **Sell** buttons have additional functionality.
Lock:	When the Lock box is checked, a buy or sell confirmation is requested before sending an order to market. After choosing the buy or sell button, the appropriate button title will change to
Apply Buy or Apply Sell.	Choose the appropriate button to confirm the order and send the order to market. To cancel the order (prior to sending it to the market), choose the Clear button. By default, this feature is enabled. See the Properties → Trading tab to disable this feature for every Order Entry window.
Clear:	The Clear button located to the right of the Lock check box and below the order type information will clear all contract, price, and quantity data without sending the order to market. Note: the Quantity Clear button is located below the quantity buttons. This button will change the Quantity to zero without impacting the other fields.

NOTE: Support of order restrictions is determined by each exchange. The definition and use of the restriction may differ between exchanges and marketplaces. If the order type is not supported the Audit Trail displays an error message from the exchange. Refer to each exchange's Market Rules for additional information.

WARNING: EUREX's API (Application Programming Interface) provides GTC order information only for the current day. EUREX GTC orders are removed from the order Book at the end of the day and must be tracked via an off-line account. This is a limitation of the EUREX interface and does not impact other exchanges.

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Confirming the Status of Market Orders

The Audit Trail confirms the status of your submitted order. Comprehensive trade information is provided to confirm receipt of order/request by the exchange and all details about the order itself. ERR indicates that an error has occurred.

► To confirm the status of market orders:

- If the order is immediately filled (and assuming that you have not applied any filters in the Fill (top) pane), a fast fill will flash in the bottom pane of the Fill window (for supporting exchanges).

or

- A working order displays in the Order Book.

When the guaranteed fill information is received from the exchange, the order is removed from the Order Book and the Fills pane displays all trade information.

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Changing Window Styles in the Order Entry Window
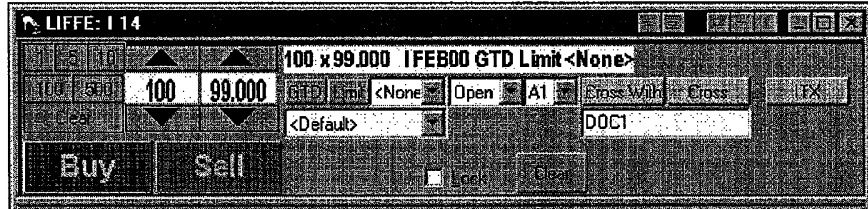
There are two Order Entry window styles available. Style 1 is pictured above These are changed from the Trading tab of the Properties dialog box:

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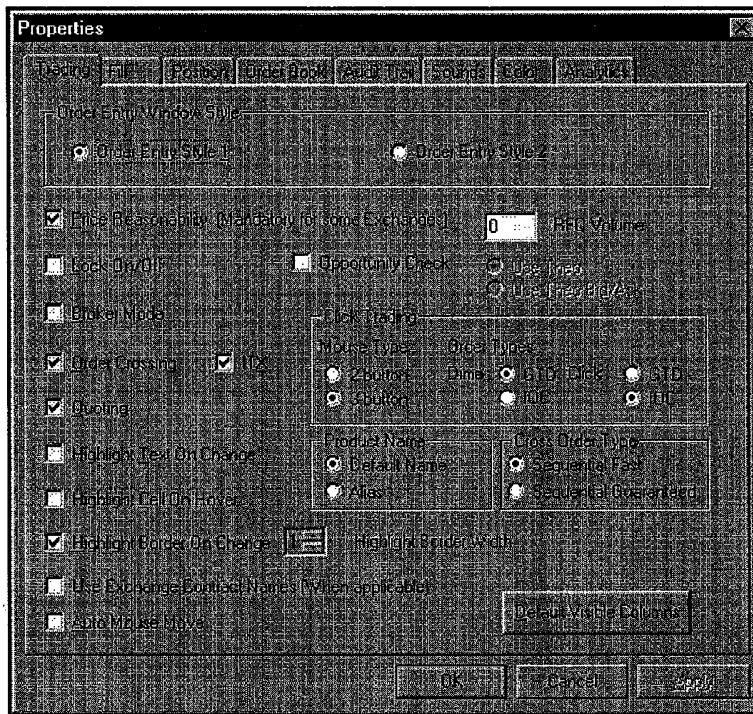
Order Entry Style 1:	The default. Order Entry Style 1 is pictured throughout this documentation. It was designed for the Windows NT version of X_TRADER. The Order Entry window does not display the **Cross Trading** buttons unless you have enabled Cross Trading via X_TRADER Properties. Refer to the Window Properties (Trading Tab section for additional information.
Order Entry Window Style 2:	Closely resembles the design of the original X_TRADER OpenVMS product. When you choose a disabled (grayed out) button, an error message is sent to the Audit Trail.

▶To select an Order Entry Window style:

1. From the Control Panel(Settings (Properties (Trading tab.

2. Select the appropriate option button, **Order Entry Style 1** or **Order Entry Style 2.**

3. Choose **OK.** The Order Entry window style immediately changes all open windows. All new windows will be opened in this style.

Closing the Order Entry Window above the Market Grid

▶To close the Order Entry window:

- Right-click the Market Grid (excluding bid/ask price if Click Trading is enabled) to access the Context Menu. Select the **Order Entry** option.

or

- Move your cursor to the bottom of the Order Entry frame (located just below the **Buy** or **Sell** button). The cursor will change to a double-headed arrow. Left-click and hold--while still showing the double headed arrow--and move your mouse up until the entire Order Entry window is hidden.

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Using the Floating Order Entry Window
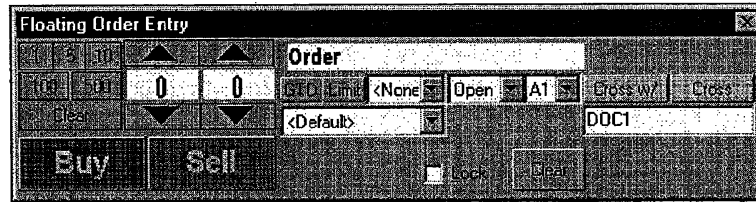
The Floating Order Entry window opens independently of the Market Grid, allowing you to further customize your workspace. Because the Floating Order Entry window is detached from the Market Grid you can place it anywhere on your screen. This is useful when you have multiple Market Grids open to monitor several products and exchanges.

You may use the standard Order Entry window (opens with the Market Grid), the Floating Order Entry, or a combination of both. By default, both the Order Entry and Market Grid open as one window.

The Floating Order Entry window is populated with data from any and all active windows. For example, if you have both the standard Order Entry window and a Floating Order Entry window open, when you click a contract bid price, both windows will reflect the contract information, including the price. Only the Quantity field is independent. Entering a quantity in one window does not populate the quantity field of the other Order Entry window.

To populate multiple Order Entry windows with the same Customer Default trade information, use the Customer List. This is especially useful when you are monitoring multiple products and markets and placing orders for the same customer.

▶ To enable/disable the **Floating Order Entry** window (Disabled By Default)

1. To enable/disable Floating Order Entry, right-click anywhere in the Market Grid (excluding the bid/ask price column if Click Trading is enabled) to access the Context Menu. Floating Order Entry is enabled if it is checked. It is disabled if it is not checked.

2. Select the Floating Order Entry option to enable or disable the feature.

NOTE: Clicking the X button in the top right corner of the **Floating Order Entry** window does not disable the feature. The first time you click a **Market Grid** cell, the floating window will display. To turn off the feature, you must follow the instructions above.

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Using the Keyboard to Enter Orders

If you prefer to use a keyboard instead of a mouse, you can access a keyboard entry dialog box by choosing the **Insert** key for **Buy** orders and the **PageUp** key for **Sell** orders. The keyboard entry window will appear at the top of the Order Entry window. After entering the order data, choose **ENTER** to review the order. Choose **ENTER** a second time to send the order to market.

▶ To open the **Keyboard Entry** window:

1. To open the **Keyboard Entry** window, the **Market Grid** of the product you wish to trade must be the active window. To make the **Market Grid** active, click any **Market Grid** cell.

2. If the **Floating Order Entry** window is enabled, select a market grid **row**, then choose the **Insert** (Buy order) or **PageUp** (Sell order) key.

Or,

Select a **Market Grid** cell; hold down the left mouse button while choosing the **Insert** buy order or **PageUp** Sell order button.

▶ To move from field to field:

- The **Tab** button moves the cursor left to right.

- The **Shift** and **Tab** buttons chosen simultaneously move the cursor from right to left.

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▶ To send an order to market:

1. Choose **ENTER** to review the order.

2. Choose **ENTER** again to send the order to market.

▶ To close the Keyboard Entry window:

- Prior to sending the order to market, choose **ESC** to close the **Keyboard Entry** window and cancel the order.

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Establishing Available Credit
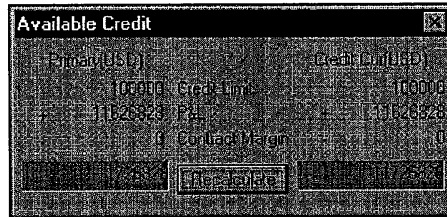
If your trading environment uses the Guardian Risk Management tool, the Available Credit dialog box displays available credit information in the primary currency and the margin account currency, including Credit Limits, Profit/Loss, and Contract Margin. The X_TRADER Administrator uses Guardian to select both currencies. The primary currency is selected from the Currency Table Setup, and the margin account currency is selected via the Guardian Trader Setup window.

Totals in green indicate a positive available balance; totals in red indicate a deficit. When the risk controls are enabled, a zero or negative credit limit disallows trading.

▶ To access the Available Credit dialog box:

1. From the Control Panel select **Window → Available Credit**

2. Choose **Recalculate**. You must choose **Recalculate** in order to display the current total. This allows X_TRADER to reserve processing power for high priority actions such as order processing.

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Cross Order Techniques

Cross Orders Overview
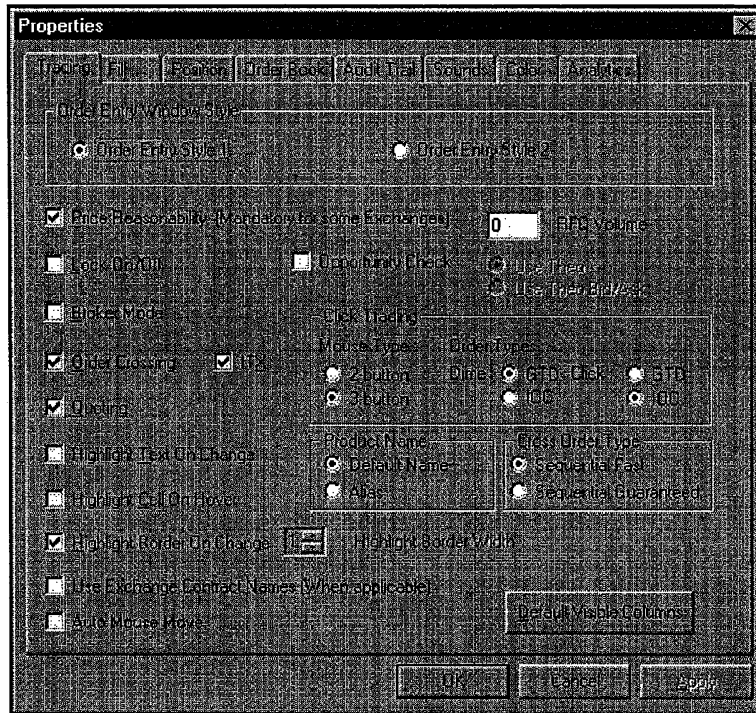
The Properties dialog box Trading tab offers the following Cross Trading controls:

- **Order Crossing**: When enabled, the **Cross** and **Cross With** buttons are added to the Order Entry window.

- **ITX**: When enabled, the ITX button is added to the right side of the Order Entry window. See Order Entry Field Descriptions for a full discussion of intention to cross.

- **Cross Order Type**: Sequential Fast or Sequential Guaranteed. This controls how cross orders are submitted to the exchange. X_TRADER processes both sides of a cross order by sending them sequentially.

    Sequential Fast order type: Default. Both orders (buy and sell) are immediately submitted, one after the other. Under normal market conditions the crossing tool sends orders into the market in the correct sequence, according to your selection of performing the buy or sell transaction first. However, there are occasions when heavy network traffic results in routing the orders through different order routers. As a result, different data lines to the exchange may be used to transmit the cross orders and cause the wrong leg to arrive at the exchange host first.

    Sequential Guaranteed order type: Waits for an acknowledgement from the exchange after sending the first order. Only then is the other side submitted. Due to the delay in sending the second order, it is possible for a third party to take the offer or bid before both sides are matched.

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In both cases, if the first side of the order is filled (partially or completely), the second side of the cross order will still be submitted.

Cross With Feature

Use the **Cross With** button for LIFFE CONNECT cross trades to indicate a specific counter party by entering the Trader ID. Support of this feature is exchange-specific. If the exchange does not support it, the message "Order Format Invalid displays in the Audit Trail.

ITX (Intention to Cross)

When you enable this feature, the ITX button displays on the right-hand side of the Order Entry window: See Order Entry Field Descriptions for a full discussion of intention to cross.

Global Window Properties ® Trading Tab ® ITX

EUREX MISS currently requires an ITX to be sent 15 seconds prior to submitting a cross order. It is your responsibility to manually time the submission of their cross order.

Returning to the Standard Order Entry Window

After a cross trade, the Order Entry window reverts to the standard (non-cross trade) format.

Use the **Clear** button to exit the Cross Trade format.

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Screen Controls in Cross Trading

The following controls are added or deleted after you choose the **Cross** button in the Properties Trading tab:

- **Buyer** and **Seller** lists appear. However, you must have previously established customer defaults for the buyer and seller.

- The order variables (order type, open/closed, acct type, and ACCOUNT # account) are removed. Cross trades are always Immediate or Cancel orders.

- **Buy First** and **Sell First** buttons are added. Use these buttons to send the buy or sell order first.

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Setting up the Cross Trading Feature
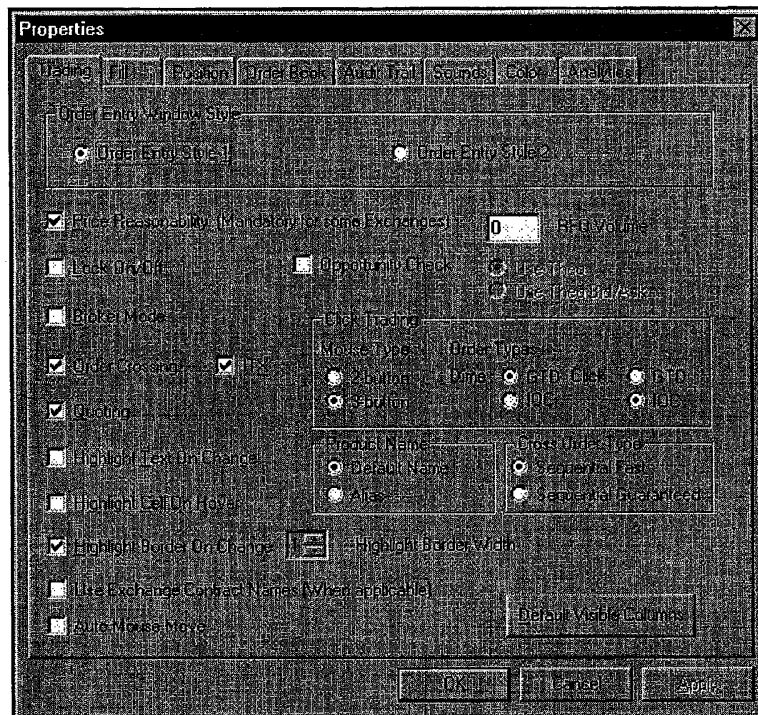
By default, the cross trading feature is disabled.

Enable this feature from X_TRADER Control Panel (Settings (Properties (Trading tab.

▶ To enable cross trading:

1. Left-click the **Order Crossing** checkbox to turn this feature on (a check mark indicates that the feature is enabled).

2. Select the **Cross Order Type** (Sequential Fast or Guaranteed). The default is Sequential Fast.

3. Choose **OK.** The **Cross** and **Cross With** buttons are immediately added to all Order Entry windows. New Order Entry windows will also have the cross trading buttons added. You can disable cross trading at any time by reversing the above procedure.

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Executing a Cross Trade

▶ To execute a cross trade use the following steps:

1. In the Order Entry window, choose the **Cross** button. If your Order Entry window does not display the **Cross** and **Cross With** buttons, then the Order Crossing feature is disabled. See Cross Order Overview to enable it.

2. Select your buyer and seller from the list. Remember that you must have previously set up customer defaults for each client.

3. In the Market Grid, select a contract.

4. Enter the quantity and price.

5. Choose Buy First or Sell First.

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Market Grid

Market Grid Overview

When you select a product, the Market window opens. It is composed of two panes, one above the other in a single window:

- Top Pane—the Order Entry window.

- Bottom Pane—the Market Grid

The Market Grid displays contract and up to date price information about the selected products. It can be customized to include or exclude any of the fields described in the Market Grid Context Menu section. You can use one or more Market Grids to display single or multiple products from one or more exchanges.

There are two display choices for Options. The default Options Market window displays each strike on one row -- with the Calls next to Puts (C+P--Calls on the left and the Puts on the right). You can also choose to list each strike on two rows -- with the Calls over Puts (C/P).

For each Market Grid, you customize the columns to include only the information that interests you. Size the columns and rows to make the best use of the available space on your monitor. Formatting options include fonts, colors, and borders. As always, save your workspace after customizing your Market Grid (or any other window). You can select default visible columns from the X_TRADER Properties dialog box and Trading tab). The default visible columns you select impact all new Market windows.

The Market Grid provides many customizable fields for current price information about the selected products that you can set to suit your needs. View the topics in the See Also section below for more information.

Note: For **Garban,** there is a special Auction Market Grid.

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Market Grid Fields Descriptions

The Market Grid provides up to date price information about the selected products. You can customize it to include or exclude any of the fields listed later in this section.

▶ There are three ways to customize the columns of information displayed in your Market Grid:

1. You can define default visible columns via X_TRADER Settings (Properties (Trading tab. Defining the default visible columns ensures that every new Market window displays only the default columns of information.

2. X_TRADER offers 5 pre-defined Market Grid layouts (a 5th layout is offered if you are using a theoretical server). Refer to the Market Grid Context Menu section for further information.

3. You can customize each Market Grid to include/exclude data regardless of whether you've defined default columns or chosen a pre-defined layout. Refer to Hiding/Showing Columns section for further information.

You can display the following information in the Market Grid:

COLUMN	DESCRIPTION
Month	Expiration Month/Year
Bid Mbr (1)	Bid Member ID
WrkBuys (2)	Working Buys for Entire Group ID
BidQty	Bid Quantity
ThrshBid (6)	Threshold Bid Price
BidPrc (9)	Bid Price
Bid Qty Accum (7)	Accumulated Bid Quantity
BidPrc Avg (7)	Bid Price Average
AskPrc Avg (7)	Ask Price Average
AskQty Accum (7)	Accumulated Ask Quantity
AskPrc	Ask Price
ThrshAsk (6)	Threshold Ask Price
AskQty	Ask Quantity
WrkSells (2)	Working Cells for Entire Group ID

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Ask Mbr (1)	Ask Member ID
Net Pos	Net Position
FFNetPos	Fast Fill Net Position
Last Prc (9)	Last Price
Last Qty	Last Quantity (8)
Total	Total Traded Quantity
Settle	Settlement Price
High	High Price
Low	Low Price
Open	Opening Price
Close	Closing Price
Chng	Last Price - Settlement
TheoPrc	Theoretical Price
TheoBid	Theoretical Bid Price
TheoAsk	Theoretical Asking Price
QAct	Quote Action (Sends Individual Quotes)
BQQ	Test Bid Quote Quantity
BQP	Test Bid Quote Price
Mkt BQQ	Market Bid Quote Quantity
Mkt BQP	Market Bid Quote Price
Quote	Checkbox activates/deactivates contract for quoting
Market AQQ	Market Ask Quote Quantity
Market AQP	Market Ask Quote Price
AQP	Ask Quote Price
AQQ	Ask Quote Quantity

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Imp BidQty (5)	Implied Bid Quantity
Imp BidPrc (5)	Implied Bid Price
Imp AskQty (5)	Implied Ask Quantity
Imp AskPrc (5)	Implied Ask Price
Gamma (3)	Change in Delta Given 1 Point Change in Underlying
Delta (3)	Change in Price Given 1 Point Change in Underlying
Vola (3)	Percent Volatility
Vega (3)	Price Change Given 1 % Change in Vola
Rho (3)	Price Change Given 1 % Change in Interest Rate
Theta (3)	Price Change for Every Day that Elapses
Click Trd	Activate/Deactivate Click Trading by Contract
S (Status)	**Action, Closed Fast Mkt, Not Tradable, Pre-Trading** Tradable, S = Post Trading
Expiry	Expiration Month/Year

[1] If supplied by the exchange/marketplace

[2] WrkBuys and WrkSells reflect the total number of working contracts for your entire group across all prices. Group ID from exchange login (for example, AAAAABBB001--AAAAA represents Member ID, BBB represents Group ID, and 001 represents Trader ID). One or more traders may be assigned the same Group ID.

[3] Options Theoretical Pricing Model (Theo Server) data categories

[4] When the Click Trd check box is deselected (blank), click trading is disabled for that strike/expiry. If you attempt to click trade for this contract, the Audit Trail displays an error message.

[5] For options, there are two sets of these columns (put and call sides). These columns are exchange-dependent. For example, LIFFE supports implied pricing with the exception of strategies. Calculate implied prices for strategies using Excel.

[6] Threshold prices for MATIF and MONEP are the upper and lower price reasonability limits established by the exchange. If trading occurs outside the thresholds, the exchange ceases trading for the product. A frozen market requires manual release by the exchange.

[7] Bid Qty Accum, Ask Qty Accum, BidPrc Avg, and AskPrc Avg should be used only when Market Depth information is useful and enabled.

[8] Last Quantity behaves differently for each Gateway. On NSC it is a cumulative total of all trades at that particular price; it sums the last quantity while it remains at the current trading price. Once the trade price changes, the last quantity resets. On LIFFE, Last Quantity is treated per individual order. On Eurex and Xetra it is the last traded quantity.

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[9] In the Garban market, when there is no bid or offer, the price will not populate in the bid price or ask price columns, and the last price column will be the seed price.

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Using the Market Grid Context Menu

The Market Grid Context menu lists additional available features, which you can use to customize the Market Grid to your preferences.

The menu options available include:

Menu Selection	Description
Find Control Panel	This option brings the X_TRADER Control Panel to the foreground of your workspace.
Send RFQ	Refer to the Using the Quoting Tool (Inbound and Outbound RFQs section.
Quoting	A check mark indicates that Quoting is enabled for this Market Grid. Quoting must also be enabled as a Property (Trading Tab).
Click Trade On	Refer to the Click Trading section.
Order Entry	If enabled, the Order Entry window is automatically displayed with the Market Grid. Deselecting this option removes the Order Entry window.
Floating Order	Refer to the Market window section.
Layouts	The Market Grid offers four pre-formatted layouts that offer different columns of information. Select multiple layouts to combine information. The terms below are defined in the Market Grid Field Description section. Each layout includes the following columns:

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Market Default layout. Displays WrkBuys, BidQty, ThrshBid, BidPrc, AskPrc, ThrshAsk, AskQty, WrkSells, Ask Mbr, NetPos, FFNetPos, LastPrc, LastQty, Total and Expiry.

Range The following data is added when you select Range: High, Low, Open, Close, and Chng (Change) prices.

Depth Adds the Market Depth feature to list the next best prices. Refer to the Market Grid Market Depth topic.

Implieds This layout adds columns for Implied Bid Quantity, Implied Bid Price, Implied Ask Quantity, and Implied Ask Price. Depending on the exchange, implied price data may be provided or it may require calculation using your own Excel pricing model. Refer to the Exchange Specific Functionality topic for additional information.

Theos: This layout is only available if you are using a theoretical server.

You can select Default Visible Columns via the X_TRADER Properties dialog box. Trading tab. Selected columns will be displayed automatically for all new Market Grids. See the Customizing Properties section for further information.

Formatting	This offers options to customize fonts, colors, and borders.
Hide Column(s)	After you click a cell in the Market Grid or select multiple columns, this option immediately hides the column(s). Changes affect only this window.
Hide/Show Cols	This option allows you to select which columns to hide or show. You use this option to show columns hidden by "sliding them closed in the window. Changes affect only this window.
Hide Row(s)	After you click a cell in the Market Grid or select multiple rows, this option immediately hides the row(s). Changes affect only this window.
Hide/Show Row	Selected rows may be hidden or displayed. Changes affect only this window.
Copy	After selecting the data to be copied, select this option to place the data on a clipboard. The data may then be pasted to another program (for example, Excel).
Paste Link	After copying data from another source (for example, Excel), you can paste the data into X_TRADER. The Paste Link creates a dynamic link between the two programs so that data from one program automatically updates the data in the other. The Paste Link function is only valid for copying from Excel to the Market Grid. See the Using Excel for Theoretical & Implied Pricing section for additional information.
Links	This command opens a dialog box listing all applications that have

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	links to the Market Grid.
Delete Link	Removes an established link.
Create Spread	Currently, this option is available only for the LIFFE exchange. Refer to the Spreads section.
Generate Spread Matrix	The spread matrix simplifies the tasks of monitoring and trading calendar spreads.
Name Product	Rename a strategy by clicking one of the Market Grid cells in the spread's row, and entering the name of your choice.
Rename Window	The default window name lists exchange and product names. Use this option to enter a name you've selected.
Resize: Use	this option to automatically resize your Market Grid window. It quickly widens or narrows your window after adding or deleting columns or rows.

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Using the Market Depth Feature

Market Depth lists all available next-best bids and asks. The number of next best prices depends upon the exchange.

▶To access Market Depth:

- In the Market Grid, right-click a cell and from the menu select **Layouts**.

These are the Market Depth components and functions:

- **Arrow buttons** allow you to open and close rows.

- **Market Depth icon:** Click to show and hide the next-best prices. The working buy and sell quantities for each price level are displayed. When closed, all the working buy and sell quantities represent the sum of all price levels. Note: Working buy and sell quantities reflect activity for all traders with the same Group ID. Refer to the FAQ's section for an explanation of the login Trader ID.

- **Market Depth rows:** You can trade on the Market Depth rows; click trading quantity and offset settings apply.

- **Add Bid and Ask Price Averages and Accumulations to the Market Grid:** Use the Accum(ulation) columns to take all the outstanding bids/offers at the specified price or better. Right-click anywhere on the Market Grid (excluding the bid/ask price if Click Trading is enabled) to access the Context Menu. Choose Show/Hide Columns, and click in the BidQty Accum, BidPrc Avg, AskPrc Avg, and AskQty Accum to show these columns. Save your workspace with Market Depth turned off (see warning below) to retain customized settings.

  You can select Default Visible Columns via the X_TRADER Properties dialog box Properties Trading tab.

- **Market Depth column:** Informs you of market depth status by displaying different colors. Yellow indicates that the application is waiting for data. Red indicates that the Market Depth has failed to receive the data from the server and has "timed out. Green indicates that the data has just been updated.

  Error Message: "Warning X_TRADER has encountered an abnormal situation. Code: 9025: Unknown indicates potential inaccuracies related to Market Depth data.

  Invalid Market Depth Data for EUREX Traders: Invalid data may be caused by incorrect product symbols in the trader profile (for example, BUND instead of FGBL). The Eurex User Device API does not provide Market Depth information. As a result, X_TRADER uses a terminal emulation process to obtain the depth data.

  If the first trader to request market depth information has errors in his trader profile, invalid market depth data will be displayed for ALL Eurex traders. Your system administrator maintains Eurex trader profiles. Please contact your system administrator to verify the accuracy of all trader profiles. However, when customers convert to the Eurex MISS Values API, invalid market depth data will no longer be a problem. The Eurex MISS Values API provides a native interface for retrieving market data.

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WARNING: Do not save workspaces with the market Depth Feature on. This may result in inaccurate EUREX market depth data when you reopen the workspace. Although the market data feed problem will correct itself, this may occur after a significant (and unpredictable) delay.

Note: The auction market has some special considerations regarding Market Depth.
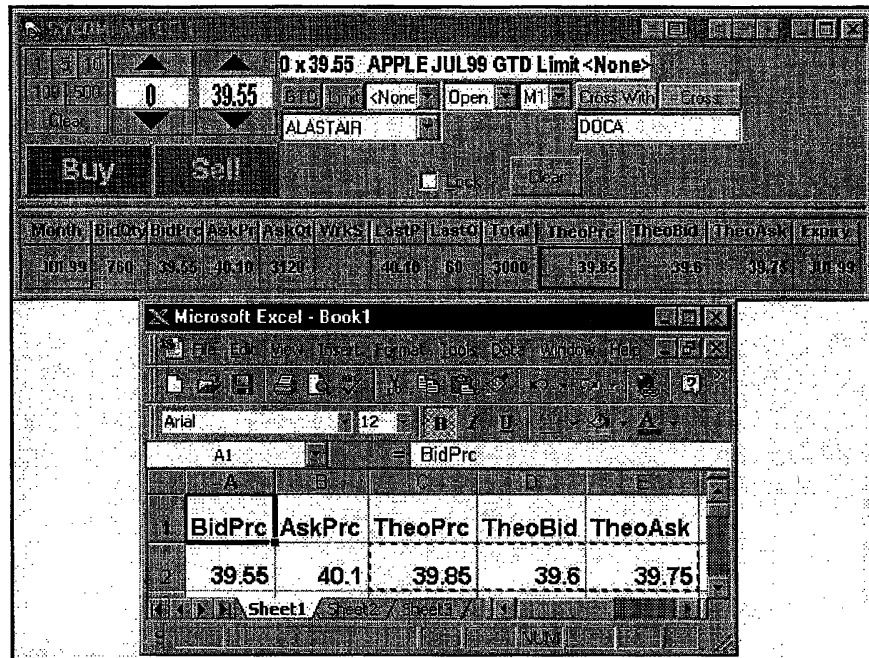
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Using Excel for Theoretical and Implied Pricing

You can create one or more links between X_TRADER's Market Grid and Microsoft Excel.

You can link the X_TRADER quoting tool to an Excel worksheet to calculate quotes using proprietary pricing models. To add, delete, or edit a theoretical server (non-Excel pricing model interfacing via API), refer to the Customizing X_TRADER Properties (Analytics tab.

You can also use Excel to calculate implied prices and quantities.

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Establishing an Excel Link for Theoretical and Implied Pricing

▶ To create a link between X_TRADER and an Excel worksheet use the following steps:

1. In order to copy and paste link one block of data, make sure that your Market Grid and Excel pricing model columns are in the same order, or repeat the steps below to copy and paste link each column of data.

2. Select the pricing data from the Market Grid that you want to copy: Left-click the top left cell and hold the left mouse button down while dragging the mouse to the bottom right-hand cell of the desired data. All cells you choose will be selected. Right-click within the selected area to access the Market Grid Context Menu, and choose **Copy.**

3. Open your Excel model and right-click in the top left cell where the data should be pasted. From the Excel right-click menu, choose **Paste Special.** From the Paste Special dialog box, select the Paste link option button. By default, the data will be pasted as Unicode Text. Choose **OK** to close the dialog box.

4. Run your Excel model.

5. If you want to copy and paste link one block of data, ensure that the Market Grid Theo Prc, Theo Bid, and Theo Ask (or implied price and quantity) columns are in the same order as your Excel model. Or, you can repeat the steps below to copy and paste link each column of data.

6. To display these columns, right-click anywhere on the Market Grid (excluding bid/ask price if Click Trading is enabled) to access the Context Menu and choose **Hide/Show Columns.** A check mark should appear next to the 3 "Theo columns. Make sure that your Market Grid Theo columns are in EXACTLY the same order as your Excel worksheet columns.

7. Select the Excel cells to be copied to X_TRADER. Right-click within the selected area to access the Excel context menu, and choose **Copy.** In the X_TRADER Market Grid, right-click the top left cell of the area where you will be pasting the Excel data, and choose **Paste Link** from the Market Grid Context Menu.

Your Excel data now appears in your Market window. The "Paste Link command ensures that numbers updated in Excel will also be updated in X_TRADER.

To quickly identify the Market Grid cells that are being fed from the Excel model, you can select a distinctive background color (the default is light blue with black text). You can set a default background color: X_TRADER Properties (Color tab. Select the **Excel Link option button** and **choose a color** from the palette. Click **OK** to apply the color and exit the Properties sheet. Since this is a default setting, all new links will also be identified by this background color.

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Note: The response time from Excel is affected by several variables, Including:

- Workstation available memory (RAM)

- Microprocessor(s) speed

- Number and types of other applications running on the workstation

For example, if you meet X_TRADER's minimum hardware requirements, but are running a complex theoretical quote-generating program for multiple products/strikes, this will create a significant load on your microprocessor(s), which may slow the response time. Consult your company's System Administrator for assistance.

Market Depth Trader Window

Market Depth Trader Window Overview

The Market Depth Trader window allows the trader to use one click of the mouse to buy or sell products. The grid format dynamically displays the market depth for a given instrument, and enables the trader to enter orders quickly by simply clicking on specific cells in the grid layout.

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The MD Trader window features include:

- MD TRADER window that allows buy or sell, one-click trading on any box in the grid layout.

- Unlimited number of open MD Trader windows (subject to the restriction that one window can only exist per series contract).

- Ability to change customer profiles from a list drawn from the Customer List dialog box.

- One-click centering of the MD Trader grid on the market.

- Color coding for text and background colors.

- Mouse wheel control of the zoom in/out feature.

- Mouse wheel control of order quantity.

- Sound notification for the action columns.

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Market Depth Trader Window Field Descriptions

The Market Depth Trader window has the following fields (These are default settings, which can be rearranged to suit your needs.) The columns are listed from left to right, and then down:

Working Quantity Column	Shows all working orders and executions. Functions as the Order Book for the MD window. When working quantities are matched by the exchange the displayed values will clear.
System Clock Indicator	Shows the current time (drawn from NT system clock).
Customer List Dropdown Box	Shows the contents of the Customer List.
Total Quantity Traded indicator	Indicates the total quantity of all trades.
Net position Indicator	Indicates the net position.

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Quantity for Order Indicator	Indicates the order quantity that will be sent to market.
10	Preset order quantity button (Ten)
50	Preset order quantity button (Fifty)
1K	Preset order quantity button (One Thousand)
1H	Preset order quantity button (One Hundred)
3H	Preset order quantity button (Three Hundred)
5H	Preset order quantity button (Five Hundred)
Clr	Clear button. Clears all trades from the market.
Default Quantity	Initially set to '0', then resets to reflect the first trade of the day.
Maximum Quantity	Maximum quantity that can be traded at any one time (set by user)
GTD Button	Good Til Date option button.
IOC Button	Immediate or Cancel button.
Del All Button	Deletes all bids and offers from the market.
Del Bids Button	Deletes all bids from the market
Del Offers Button	Deletes all offers from the market.
Trade Out	Matches buy and sell order to equalize a net position. Orders are considered Immediate or Cancel.
Buy Column	Indicates buy orders, color-coded to blue.
Sell Column	Indicates sell orders, color-coded to red.
Price Column	Indicates market price and depth.
Last Traded Quantity Column	Indicates the last traded quantity at that price.
Grid Movement Scrollbar	Indicates that there are orders above or below what is visible in the window. Use a mouse to scroll up or down the MD window.

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Opening the Market Depth Window

▶ To open the Market Depth window:

1. Right click on a product name in the Market Grid window to bring up the Market Grid Context menu.

2. Click on **Market Depth Trader.**

Using MD Trader Functions

Selecting a Customer Profile in the MD Trader Window

▶ To select a customer profile in the MD Trader window:

1. Click on the dropdown arrow in the Customer List box.

2. Select from the list and click to populate the box with the customer name.

Note: The client profile is one of any listed in the Customer List. This list is maintained and created through the Customer Default dialog box, available from the Settings menu of the X_TRADER Control Panel.

Setting the Maximum Trade Quantity in the MD Trader Window

Although it is not a requirement for trading, you can set up the MD Trader window with a maximum trade quantity. If entered, this quantity will prevent the user from entering any order that is larger. For example,if the maximum trade quantity were set to '50', attempting to sweep the market with an order quantity of '300' would not be permitted. Instead, the order would be entered as a 50 lot.

▶ To set the optional maximum trade quantity:

1. Left click in the Maximum Trade Quantity box.

2. Enter the maximum trade quantity.

The maximum quantity for any lot will now be enforced for the entered quantity.

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Setting the Trade Quantity in the Market Depth Window

The order quantity is set by the user in the Quantity field. Once an initial order has been sent to the market at the start of trading, this quantity also populates the Default Quantity field. From that point forward, the quantity field will continually reset itself to the default quantity after each trade. This field can, of course, be manually edited.

Note: The size of the order is limited by the order quantity restriction that may have been set in the maximum quantity field. See Setting the Maximum Trade Quantity in the MD Trader Window

Resizing the Grid in the MD Trader Window

► To resize the grid—that is, view more grid rows—in the MD Trader window:

Use the X_TRADER Frame Command Button Bar.

Or

Use the mouse to pull down on the bottom or top frame of the MD Trader window. Pulling down on the bottom of the frame will display more rows at the bottom of the grid. Pulling up on the top of the frame will add more rows to the bottom of the window.

Using Drag and Drop to move Grid Columns

You can use the mouse to drag-and-drop the columns in the MD Trader window to a different location in the grid.

► To drag and drop columns to different location in the MD Trader Grid:

1. Left click at the top of the column and hold down the mouse button. A box outline will appear beneath the mouse pointer.

2. Move the column left or right to the desired position. A red line will indicate where the column is moving.

3. Release the mouse button.

The column will remain in its new location.

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Text and Grid Colors in the MD Window

Many of the grids, text boxes, and indicators in the MD Trader window are color coded to give you a visual indication of market position and other information. The grid below gives a summary of the default colors associated with columns in the MD Trader window:

Column or Text Box	Associated Colors
Working Quantity Column	Foreground color: Gray
	Working Sell Text: Red Font
	Working Buy: Blue Font
	Executed Sell: Blue Font
	Executed Buy: Red Font
Net Position Box	Foreground color: White
	Short Position: Red Font
	Long Position: Green Font
Bid Column	Foreground color: Blue
	Font Color: White
Sell Column	Foreground color: Red
	Font Color: Black
Last Traded Quantity Column	Foreground color: Gray
	Offer Lifted: Red Font
	Bid Hit: Blue Font

Note: These color combinations are the default colors for the MD Trader. You can alter and change them from within the MD Trader window.

Changing the Grid and Font Colors in the MD Trader Window

► To change the default grid and associated font colors in the MD Trader window:

1. Use your mouse to position the cursor directly below the MD Trader window title bar and within the small bow that heads the column whose colors you want to change.

2. The cursor will change to a downward pointing arrow. Click once to change the default foreground and font colors.

3. To change back to the default colors, click once in any other column.

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Using the Mouse to Center the Market

You can use the mouse to 'center the market' by clicking anywhere within the MD Trader window. This will automatically shift the grid to show the center of the market. The default position is the mid-point of the current bid or ask. However:

- If there is no bid, it will center on the ask price;

- If there is no ask price, it will center on the bid price;

- And, if there is no market, it will center on the last traded quantity.

Using the Mouse Wheel to Control Order Quantity

Most users will use the keyboard to enter order quantity amounts in the quantity text box. However, you can also use the mouse wheel to increase order quantity.

▶ To use the mouse wheel to increase or decrease order quantity:

1. Hold down the **Shift** key on the keyboard.

2. Move the mouse wheel to increase or decrease the order quantity.

Note: Using the mouse wheel to increase or decrease order quantity is subject to two constraints:

- You cannot increase the order quantity above the preset figure in the maximum trade quantity field (if any).

- Increase or decreases in the order quantity field will be in increments of ten orders.

Using the Mouse Wheel to Control the Zoom Feature

▶ To zoom the view in or out using the mouse wheel:

1. Hold down the **Ctrl** key on the keyboard.

2. Depress and use the mouse wheel to zoom the MD Trader window in or out.

Releasing the **Ctrl** key will freeze the view in its last position.

Deleting Trades from the Market

A left or right click on any grid cell in the Last Traded Quantity column performs a 'sweeping' delete of all working bids and offers in the market. This has the same effect as clicking on the **Delete All** button in the MD Trader window.

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Click Trading in the MD Trader Window

MD Trader Click Trading Overview

The function of the Market Depth Trader window is to allow one-click trading for the product that populates the MD Trader window. This trading method is used as an alternative to the click trading technique that is also available in X_TRADER. It is strongly recommended that you practice the procedures mentioned below in a simulation environment before actually using these them in a live market.

To use the click-trading feature in the MD Trader window, the following steps should be followed:

- Open a Market Depth window

- Select a customer

- Add a trading quantity

- Use the click-trading facility to trade

Left and Right Click Trading in the MD Trader Window

The function of the Market Depth Trader window is to offer a trader the ability to one-click trade across the depth of a market for either a buy or sell order. The window presents the market's price and order information in a grid structure, which makes it easy to use the mouse buttons to single click in and out of a trade.

Once the quantity has been set for an order, you use the left or right mouse button to perform various trades. The discussion below describes the distinctions between left and right clicking on grid cells.

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Left Click in the Buy or Ask Columns:

A left click in a grid cell in the buy or ask columns will immediately send a buy or sell order to the market. The quantity for the order is taken from the quantity field. The price is taken from the same row as the grid cell that is clicked. If you **left** click on a grid cell in the:

Column	Position	Result
Buy	Next to populated grid cell in the Sell column:	Send a buy order to the market (lifting the bid).
Sell	Next to populated grid cell in the Buy column:	Send a sell order to the market (hitting the bid).

Column	Position	Market Result
Buy	In a grid cell that is populated by a bid quantity:	Sends a buy order to the market (you are joining the bid).
Sell	In a grid cell that is populated by an offer quantity:	Sends a sell order to the market (you are joining the offer).

Right Click in the Buy or Ask Columns:

A right click in a grid cell in the buy or ask columns will immediately send a 'sweeping' buy or sell order to the market. The price is taken from the same row as the grid cell that is clicked. If you **right** click on a grid cell in the:

Column	Position	Market Result
Buy	Directly to the left of populated grid cell in the Sell column:	Sends in a buy for as many contracts as exist from the best ask price up to that price level.
Sell	Directly to the right of a populated grid cell in the Buy column:	Sends in a sell for as many contracts as exist from the best bid price up to that price level.

A right-click on a grid cell that is populated with either a bid or offer will result in **no orders being sent to market.**

Note: The size of the order is limited by the order quantity restriction that may have been set in the maximum quantity field. See Setting the Maximum Trade Quantity in the MD Trader Window

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Mouse Click Operation in the Working Quantity Column

A left or right click on any grid cell in the working quantity column deletes the working quantity of all orders at that price level. If the working quantity is for 50 orders, for example, in five separate 10-lot orders, all five orders will be deleted. If there is only a single 50-lot order, than this single order is deleted.

Adding Sound to the MD Trader Click Actions

If your desktop machine is equipped with a sound card and speakers, you can set T_TRADER to make sounds corresponding to a left or right click. These sounds can only be heard when you click on the action columns:

- Buy Side
- Sell Side
- Working Quantity
- Last Traded Quantity

These sounds are associated from the Properties menu of the X_TRADER Control panel, as are all the action sounds with the application.

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Order Book Window

Order Book Overview

The Order Book provides information about your current open orders. Traders in the same "Group as related to their Trader ID (explained below) share the Order Book and are able to view one another's working orders.

You can use the Trading Technologies Order Book to change, cancel and replace, hold, or delete orders. You can also perform an inquiry to determine the status of an open order.

You can use one or more filters to quickly sort and display data. If you are part of a Group, and you want to view only your open orders, you can filter using your Trader ID (explained below). However, you must first record an open order before your Trader ID is available as a filter (Place an order far off the market, filter using your Trader ID, and then delete the order).

You can customize the Order Book to include or exclude any of the fields described in the Order Book Field Description section. After customizing your Order Book (or any other window), save your workspace.

NOTE: When displaying EUREX GTC Orders, the EUREX's API only includes GTD or the current day's GTC orders. GTC open order information from previous days is not supplied.

Trader ID's

The Trader ID is a combination of the Exchange Member ID, a Group ID, and a Trader ID. The Member ID is supplied by the exchange; the administrators of your trading environment assign the Group and Trader IDs.

Using Trader ID AAAAABBB001 as an example:

AAAAA is the Exchange Member ID; this is assigned by the exchange to their trading member.

BBB represents the Trader's Group ID. All traders sharing the same Group ID will share the Order Book, Fill Window, and Audit Trail.

001 represents the Trader ID. This ID is used to uniquely identify a specific trader.

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Order Book Field Descriptions
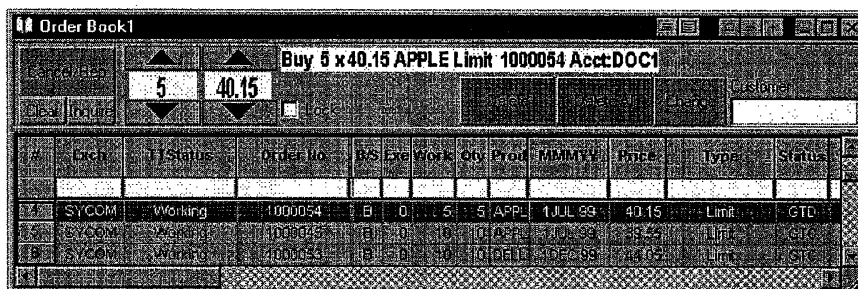
You can customize the Order Book to include or exclude any of the information below. See the Customizing X_TRADER section for further information. After customizing your Order Book (or any other window), save your workspace.

Order Book Buttons:

Change	Use the **Change** button to decrease an order quantity, and the order's place in queue is retained. Using the **Change** button to make any other change results in an error message, or a new order will replace the original. The results of using the **Change** button are exchange-dependent.
Cancel/Replace	The order is deleted and a new order is sent to market. The original order's place in the queue is lost. If you are only decreasing the order quantity, using the **Change** button to keep the order's place in queue. Depending on the exchange, if you want a change other than decreasing the price, you may need to use the **Cancel/Replace** button.
Quantity & Price	The order quantity appears on the left; the price field appears on the right. Enter the price and/or quantity with the keyboard or use the spinners (up and down arrows).
Clear	Removes data from the quantity, price, and customer fields. It cancels any changes not already processed.
Inq (Inquire)	Sends an Inquiry to the exchange for the status of an order. A message in the Audit Trail confirms the order information.
Order Information	Clicking any Order Book cell displays the order data.
Cust	Customer name.
Lock	A safety measure. It requires you to confirm the order before sending it to market.
Hold	A held order is deleted from the market and the order information is stored on the TT Gateway. Held orders are stored in volatile memory. If the Gateway Order Server process goes down, the held order information is lost. You can change, cancel, replace, delete, or resubmit held orders. In every case--**except for submit**-- the order remains held and out of the market. In every case, you will also see a hold message in the Audit Trail when an order is held, but in actuality, the order is deleted from the market and held only by the Gateway. The **Hold** button is disabled if you select a single row for an order that is already held. If you select multiple orders and then click **Hold**, only orders that are not already held are put on hold. In the event that an order is held that is already in the hold state, the Gateway gives you

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an error message.

Submit	You can resubmit hold orders to the exchange. Note: If the LIFFE CONNECT (futures and equity options) connection is lost between the exchange host and TT Gateway, the exchange changes the status of all working orders to hold. Upon reconnection, each order will have a hold status. You can use the **Submit** button to resubmit these orders to the exchange. When an order is resubmitted after being held, it receives a new order number; it is really a new order because it was previously deleted from the market. If a submit fails for a held order, it remains in the hold state and the Audit Trail indicates that the submit failed. The Audit Trail will also give you an explanation of why it failed. If you select multiple orders and click **Submit**, only orders that are already held are submitted.
Delete	Deletes selected orders. Confirmation messages appear in the Audit Trail.
Delete All	If enabled (default state is on), this button deletes all orders in the Order Book. This button is enabled from the **Order Book** Context menu (Right-click in the Order Book grid. Click **Delete All** to enable/disable the feature). Use the **Delete All** button to cancel all visible working orders. Orders hidden due to filters will NOT be deleted. To ensure the deletion of all orders in the Order Book—visible and filtered—use the Context menu's **Clear All Filters** option (Access the Context Menu by right-clicking any cell in the Order Book grid. Select **Clear All Filters**). This is the only method of ensuring that all filters are removed. For Garban, **Delete All** is the equivalent to **Cancel Post** if you have filtered the Order Book in this manner.
Cancel Offers	Garban only: cancels all offers in the Order Book for **all** products. WARNING: A fill or partial fill on the original order may occur at the same time the change is sent. As a result an ADDITIONAL fill may occur on the adjusted working quantity.
Customer Account	Allows you to change the customer account assigned to a particular order.

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You can display the following information in the Order Book. It is listed in the order presented in X_TRADER Properties (Settings (Properties (Order Book Tab):

Column	Description
Exch	Exchange
TT Status	Working, Change, Deleting, Inquiry
B/S	Buy/Sell [1]
O/C	Open/Close a Position
C/P	Call/Put
Qty	Order Quantity
Product	Exchange Symbol
MMMYY	Expiration Month/Year [3]
Strike	Exercise price of an option
Price	Limit Price
Stop Prc	Stop Trigger Price
Type	Limit/Market
Status	GTD/GTC
Rest (Restriction)	Stop, MV, (also GTD date for XT 5.2)
RstrQty	Restriction Quantity
Exe Qty	Executed Quantity
Work Qty	Working Quantity
Account #	Back Office Account Number or Acct Name
Action	A, C, D, E, H, I, U, R, S [3]
FFT2	Free Form Text Field #2
FFT3	Free Form Text Field #3
Date	Exchange Order Date

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Acct	Agent, Market Maker, Principal, Give-Up,Unallocated
Time Sent*	Time Sent from Workstation
Expiry	Expiration Month/Year
Order No.	Order Number Assigned by Exchange
Version	Version Number
Exch Time	Exchange Time (Order Received or Confirmation Sent)
Exch Mbr	Exchange Member ID
Exch Grp	Risk Mgt Direct User's Group ID (Broker's Trader ID = PRD)
Ech Trd	Risk Mgt Direct User's Trader ID (Broker's Trader ID = 001)
Trd Mbr	Risk Mgt Proxy User Member's ID (Broker's Client = TTORD)
Trd Grp	Trader's or Risk Mgt Proxy User's Group ID (Broker's Client = SIM)
Trd ID	Trader's or Risk Mgt Proxy User's Trader ID (Broker's Client = 666)
Clr Mbr	Trader's Clearing Member
Time Recvd [4]	Time Received by TT Gateway
Time Procsd	Time Processed by TT Gateway
A/L	Last Action Performed for Order

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[1] **Buy/Sell** -- For Garban, the **Order Book** displays bids and offers (B = bid, S = offer), as well as buys and sells (B = buy, S = sell). Bids and offers are displayed with no restriction. Buys and sells are displayed with a restriction of AUCTION. You can remove bids, offers, buys, and sells from the Garban market by canceling them in the Order Book.

[2] **MMMYY** -- For Garban, this is the description of the product (for example, 6 1/8 DO/1), instead of the expiration month/year.

[3] **Action** -- Possible actions include Add (A), Change (C), Delete (D), Delete all your orders (E), Hold (H), Inquire (I), Update (U), Replace/Cancel button (R), Resubmit to remove from hold (S)

[4] **Time Sent/Time Received** -- These fields may be blank after re-establishing connectivity to LIFFE CONNECT. The trading host or TT Gateway does not retain this information.

Inquiring on an Order's Status

▶ To inquire or request an order's status:

1. Select the order by clicking a cell in the appropriate row and bring up the Context menu.

2. Choose the **Inq** button.

After the inquiry is requested:

- The **Order Book TTStatus** column temporarily changes to **Inquire**.

- The **Audit Trail** displayed two messages. The first confirmed that an inquiry request was received by the exchange. The second message confirms that the order status information has been provided.

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Using the Change Function in the Order Book

In theory, the **Change** button changes a working order without losing its place in queue. However, keeping the order's place in queue is dependent on the type of change requested and the exchange's Market Rules.

When a Change request violates the exchange's rules, the request may be rejected or the exchange may execute the request as a Cancel/Replace order. The new order returns to the back of the queue and a new order number is usually—but not always—assigned.

You use the Change button for a number of reasons:

- Use the **Change** button to decrease an order quantity, and the order's place in queue is retained. For example, to decrease the order quantity:

  1. Select the order to be changed by clicking any cell in the appropriate row.

  2. Decrease the original quantity—NOT the working quantity. If you have been filled on 6 of 10 and now want a total of 8 contracts, the change request should be for a total of 8 contracts. This will automatically change the working order from 4 to 2 contracts. If you base your change request on the working quantity (requesting a change to 2 contracts), the request will be rejected.

  3. Choose the **Change** button. The order's place in queue is retained and the order number doe not change.

- Using the **Change** button to make any other change results in an error message or a new order replaces the original. The new order is sent to the back of the queue and most likely receives a new order number. For example, using the **Change** button to allocate the trade to a different account number results in the assignment of a new order number, and the order is sent to the back of the queue. Therefore, in this example, the Change request was handled by the exchange in the same manner as a Cancel/Replace.

NOTE: A changed EUREX order will **not** receive a fast fill notification.

NOTE: If a change, cancel/replace, or delete attempt results in an **"ORDER DELETED OR FILLED** message, the exchange has rejected the request because the order has already been successfully deleted or filled. If the receipt of the confirmed fill is delayed (e.g., EUREX back office feed performance degradation), the Order Book cannot remove filled orders in a timely manner. It is also possible to request a change/delete at the same moment that a confirmed fill is being received. Either occurrence results in the trader receiving the above message.

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Using the Cancel/Replace Function in the Order Book

Using the **Cancel/Replace** button deletes the original order and sends a new order to market. The original order's place in queue is lost and a new order number is assigned.

Refer to the Exchange Specific Functionality topic for further information.

You use the **Cancel/Replace** button for a number of reasons:

- Use the **Cancel/Replace** button to delete the original order and send a new order in its place. The new order moves to the back of the queue and may—depending on the exchange—receive a new order number.

- Use the **Cancel/Replace** feature to change an account number, increase the quantity, and/or adjust the price ensures that you know exactly how the request will be handled.

- Use the **Change** button when you are unsure of how the exchange will handle the request may result in a rejected request.

▶ To use the **Cancel/Replace** button:

1. Select the order to Cancel/Replace by clicking any cell in the appropriate row.

2. Change the order information as necessary.

3. Choose the **Cancel/Replace** button. The original order's TT Status will temporarily be "Replaced. The Audit Trail will receive the first of two messages that reflects the Deleted order with a zero working quantity. The second message details the new order information and the new order number.

Note: If the second half of a Cancel/Replace order fails, the order will be deleted from the order Book and from the market. You should also be aware that if any part of that order is filled before a successful Cancel/Replace happens, you are still responsible for the position incurred.

Note: If a change, cancel/replace, or delete attempt results in an "**ORDER DELETED OR FILLED** message, the exchange has rejected the request because the order has already been successfully deleted or filled. If the receipt of the confirmed fill is delayed (e.g., EUREX back office feed performance degradation), the **Order Book** cannot remove filled orders in a timely manner. It is also possible to request a change/delete at the same moment that a confirmed fill is being received. Either occurrence results in the trader receiving the above message.

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Using the Order Book Context Menu
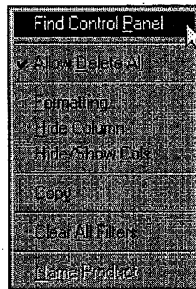
The Order Book Context Menu lists additional available features. Other widow context menus share most of these options.

The following options are available on the Order Book Context menu:

Find Control Panel	Brings the X_TRADER Control Panel to the foreground of your workspace.
Allow Delete All: By	Default, this option is enabled (checked); enables the Delete All button.
Formatting	Offers options for customizing fonts, colors, and borders.
Hide Column	After you click a cell on the Market Grid or select multiple columns, this option hides the column(s).
The Hide/Show Cols	Allows you to select which columns to hide or show. You use this option to show columns hidden by "sliding them closed in the window.
Copy	After selecting the data to be copied, select this option to place the data on a clipboard. You can then paste the data into another program (for example, Excel).
Clear All Filters	Use this option to quickly clear all filters. As a result, all data available is displayed in the Order Book.
Name Product	Allows you to change the name of the selected product.

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Deleting an Order

You can delete any order that has not been filled. Because there is a short delay before you receive notice of a filled order, it is possible for you to request the deletion of an order that has already been filled. If this occurs, the Audit Trail sends your an ERR (error) message, informing you that the order has already been deleted or filled.

▶ To Delete an Order

1. Select the order to be deleted by clicking any cell in the appropriate row. To select multiple orders, left-click and hold the button down while you move the mouse across the order rows, *or*

2. Hold the CTRL button down while single clicking each order,

3. or

4. Use the **Delete All** button to cancel all visible working orders.

5. Choose the **Delete** or **Delete All** button. The Audit Trail message will specify which action was taken—Delete or Delete All.

After the Delete Request is sent:

- The original order's TT Status temporarily changes to Deleting before being removed from the **Order Book**.

- The **Audit Trail** displays two messages. The first is confirmation that the exchange has received the request. The second message confirms that the request is processing.

"Order Deleted or Filled Error Message

If a change, cancel/replace, or delete attempt results in an **"ORDER DELETED OR FILLED** message, the exchange has rejected the request because the order has already been successfully deleted or filled. If the receipt of the confirmed fill is delayed (for example, EUREX back office feed performance degradation), the Order Book cannot remove filled orders in a timely manner. It is also possible to request a change/delete at the same moment that a confirmed fill is being received. Either occurrence results in the above message.

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▶ To enable/disable the **Delete All** button:

1. The **Delete All** button is enabled by default. Right-click anywhere in the **Order Book** grid to access the **Context** menu.

2. Left-click **Delete All** to enable/disable this feature. A checkmark indicates the feature is enabled.

WARNING: Using the **Delete All** button to empty your **Order Book** does NOT delete any orders that have been hidden by filters. To ensure that all orders in the **Order Book** are deleted—visible as well as filtered—use the Context menu's **Clear All Filters** option:

• Right click on any cell in the Order Book grid. Choose Clear All Filters from the menu. This is the only way to ensure that all the filters have been removed.

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Keyboard Order Entry

Keyboard Order Entry Overview

Some users may prefer to use the keyboard rather than a mouse for order entry. X_TRADER has been set up to do this for you.

If you prefer to use a keyboard instead of a mouse, you can access a keyboard entry dialog box by choosing the **Insert** key for **Buy** orders and the **PageUp** key for **Sell** orders. The keyboard entry window will appear at the top of the Order Entry window.

Keyboard Entry Window Fields

Keyboard Entry Window Fields (left to right)

BUY/SELL:	The order type (buy or sell) is detailed. In addition, the entire window is color-coded (blue for buy orders and red for sell orders).
Product and Expiry:	The product symbol, expiration month, and expiration year are given.
Quantity:	The quantity is blank. This is the first field requiring data; the cursor is automatically placed within this cell. Use any number key or Up and Down arrows to increase or decrease the quantity by 1.
Price:	The appropriate Bid or Ask price of the selected contract populates this field. Use the number keys or use Up and Down arrows to increase or decrease the price by the appropriate increment.
Open/Close:	At the trader's discretion, this field may be used to indicate whether the order will Open or Close a position. Default is Open. Use the Up and Down arrow keys to toggle between Open and Close.
Restrictions:	Select the appropriate order restriction: None (default), DiscQty, FOK, IOC, MV, and STOP. Refer to the Order Entry Field Descriptions section for restriction definitions. Use the Up and Down arrow keys to cycle through the available restrictions.
Account Type:	Select the appropriate account type: A1 (Agent Account), G1 (pre-designated Give-up), G2 (designated Give-up), M1 (first Market Maker), M2 (second Market Maker), P1 (first Principle), P2 (second Principle), U1 (Unallocated). Use the Up and Down arrow keys to cycle through the available selections.
GTD/GTC/Date:	Select GTC, GTD, or select an expiration date. The up and down arrow keys may be used to toggle among GTD, GTC, and Date.
Limit/Market:	Select a Limit vs. Market order. Use the Up and Down arrow keys to toggle between Limit and Market.

*NOTE: Active Window: Depending on the Windows NT system colors you have chosen (**Windows Start → Settings → Control Panel → Display → Appearance**), the active window title bar displays the selected active color. For example, if you have accepted the default colors, the active window title bar displays the exchange and product(s) and is dark blue in color.

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Order Book Filters

Order Book Filters Overview

Filters are used to control the amount of data displayed. You can set and clear filters at any time. In addition to the Order Book, filters are available for:

- Fill Pane —Filters will also filter data for the Position pane and will disable Fast fills.

- Audit Trail

Setting a Filter in the Order Book

▶ To set a filter in the **Order Book:**

Double click a cell to select that variable as a filter.

or

Open the box below any column heading. A list of all currently referenced variables for the selected column displays. Select one or more of the variables to set the filter. Choose **OK** to activate the filter.

When you set a filter, the box below the column heading turns red and displays the filter you selected. If you selected multiple filter variables, a row of asterisks displays.

Clearing a Filter in the Order Book

▶ To clear a filter in the **Order Book:**

Right-click the column that contains the filter to access the **Context** menu. Choose **Clear Filter.**

or

Double-click the blank box below any column heading. A list of all currently referenced variables for the selected column displays. The selected variables have been selected as filters.

Click a selected variable to remove the filter or choose the **Clear** button to remove all filters for the selected column.

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► To clear all filters:

- Right-click any grid cell to access the **Context** menu. Choose **Clear All Filters.**

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Fill Window

Fill Window Overview

The Fill window provides detailed information about the current day's trades. X_TRADER displays fill information immediately upon receipt from the exchange. However, each exchange has implemented the dissemination of fill information differently. Some exchanges provide the information faster, some slower.

The Fill window is composed of three panes: Fills pane, Position pane, and Fast Fills pane:

Fills Pane

The Fills pane reflects the exchange-confirmed data about a trade. This pane is fully customizable and filters may be used to display specific trades. However, when you use filters, fast fills (described below) are not displayed. Filters also will apply to the data displayed in the Position pane.

Position Pane

The Position pane provides net position information by product and contract. The P/L is calculated using only confirmed fills. EUREX fast fills are no longer included in net position calculations.

Note: The Position pane may have a leading "o (lowercase letter for options) in the expiration column when the position represents an option. This is done to distinguish futures and options positions for the same product that have identical expiration dates, such as occur on LIFFE. For example, a futures and options position for product B Jun00 expiration on LIFFE would display both an entry for Jun00 (futures position) and oJun00 (options position).

The FFNet column displays the fast fill net quantity. The NetQty (Net Quantity) column reflects the position based only on confirmed fills. Using these two columns, a EUREX trader can monitor position updates. When the Fill window is opened, the FFNet column is synchronized with NetQty. As fast fills are received, the FFNet column is updated to reflect the new fast fill position. When confirmed fills are received, the NetQty column is updated to

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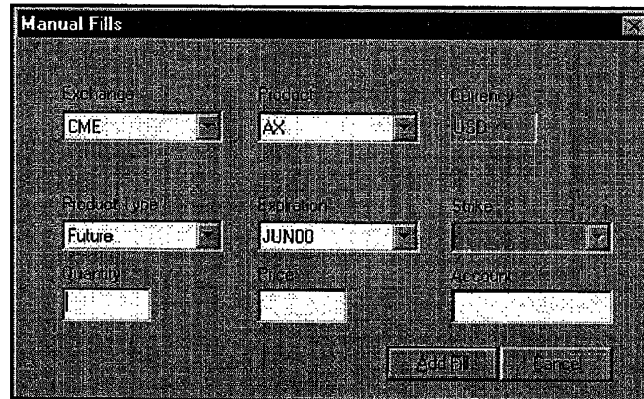
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reflect the new confirmed position. In normal trading situations, the FFNet column is updated slightly ahead of the NetQty column, since fast fills are received before confirmed fills.

You can easily determine when NetQty and FFNet are out of synchronization (do not match) for an extended period. This situation may indicate an errant or erroneous fast fill. If you think that the fast fill position reflects errant or erroneous fast fills, you can resynchronize the fast fill position with the confirm fill position by using the **Remove Fast Fills from Position** function.

Fast Fill Pane

The Fast Fill pane (supported by some exchanges) will display limited trade information until the confirmed fill is received from the exchange. Some exchanges provide guaranteed fill information via the back office feed. This may result in delayed fills if the trade information is not received from the exchange. The Fast Fills pane is provided to mitigate the potentially significant delays that may occur waiting for a guaranteed fill. The fast fill net quantity is displayed in the Position Pane FFNet column.

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Adding a Manual Fill

You can manually add or delete all orders executed through a source other than X_TRADER. You can calculate your true position and P&L (profit/loss) when you use the Manual Fills feature.

▶ To add a manual fill to the Fill pane:

1. From the Fill or Position pane, right-click within the grid to access the **Context** menu. Choose **Manual Fill**. If you place your cursor on a specific fill in the Fill pane when you right-click to access the Manual Fill option, that order information will feed the Manual Fills dialog box. The exchange, product, currency, product type, and expiration data will automatically be completed. If you open the Manual Fills dialog box via the Position pane **Context** menu, all fields will be blank.

2. Enter or change the necessary data for these items: Exchange, Product, Product Type, Expiration, Strike, and Quantity (a positive quantity indicates a buy order, a negative quantity indicates a sell order), Price, and Account.

3. Choose **Add Fill**. The Fill and Position panes are updated to reflect the added fill.

Deleting a Manual Fill

▶ To delete a manual fill from the Fill pane:

1. From the Fill pane, choose **Manual Fill**.

2. Right-click to access the **Context** menu.

3. Choose **Delete Manual Fill**. The Fill and Position panes are updated to reflect the fill deletion.

NOTE: Manual fills affect only the position and P & L data. X_TRADER does not provide manual fill information to the middle or back office.

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Removing Stale Orders

It is possible for stale (filled) orders to remain in the Order Book. This occurs when a confirmed fill arrives at the same time that you used the **Inquire** button to request status for an order, or the **Change** button to modify the order.

To remove a stale order from the **Order Book** use the **Inquire** feature. This confirms and updates the status of an order; and any stale order is removed from the **Order Book.**

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Fill Pane

Fills Pane Overview

TT delivers trade (fill) information immediately upon receipt. Each exchange has implemented the dissemination of fill information differently. Some exchanges provide the information faster, some slower.

Some exchanges send fill information only via their back office feed. Problems may arise due to the following:

- Trade Confirmations may not be sent immediately or may not be received from the exchange.

- Guaranteed fills that are only provided by a back office feed are typically delayed 10 to 15 seconds but can be delayed for many minutes. The length of the delay can vary due to exchange trading volume fluctuations and product state changes (for example, the closing of a market).

Trading Technologies recommends that you use regular exchange screens to complement TT screens during periods of such delay.

Fills Pane Field Descriptions

You can display the following information in the Fills pane. It is listed in the order presented in X_TRADER Properties (Settings → Properties → Fill Tab):

Column Name	Description
Time	Time at the workstation
Exch	Exchange
B/S	Buy/Sell
O/C	Open/Close a Position
Qty	Order Quantity
Price	Fill Price
Cur	Currency
Product	Exchange Symbol
C/P	Call/Put
MMMYY	Expiration Month/Year
Strike	Exercise Price of an Option
Version	Version
Account #	Back office account number or account name
FFT2	Free Form Text Field 2
FFT3	Free Form Text Field 3
Clr Mbr	Clearing member

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Exch Member	Exchange member ID
Exch Group	Risk Manager Direct User's Trader ID
Exch Trd	Risk Manager Direct User's Trader ID
Trd Mbr	Trader's or Risk Manager's Proxy User's member's ID (e.g., Broker's client=TTORD)
Trd Grp	Trader's or Risk Manager's Proxy User's member's ID (e.g., Broker's client=SIM)
Trd ID	Trader's or Risk Manager's Proxy User's member's ID (e.g., Broker's client=666)
Acct	Agent, Market Maker, Principal, Give-up, Unallocated
Exch Time	Transaction Time—at the exchange
Type	Limit/Market
GU	Give-up Member ID
PF	Partial Fill*
Rstr (Restriction)	FOK, IOC, Stop, Minimum Volume
Fee	Associated Fee
G	Not Used at this time (zero fill)
Order No.	Order Number assigned by exchange
Trans ID	Unique transaction ID assigned to each fill and partial fill
Exch Date	Exchange Date
Ord Time	Workstation Order Time
Ord Date	Workstation Order Date
C	Confirmed by operator
Conf MbrIID	Confirmed Member ID

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Conf GroupID	Confirmed Group ID
Conf TraderID	Confirmed Trader ID
Conf IP	Confirmed IP Address
Cntr Party	Counter Party
Row Numbers	Far left column displays row numbers

*Partial Fill: For Xetra, no Partial/Final fill indicator is provided. Therefore, this value is left blank in the X_TRADER Fill window.

NOTE: If logging is enabled, LIFFE fill records are retained in the <install drive>:\TT|LogFiles directory on the TT LIFFE Gateway. Every day a file is created for each LIFFE trader that records all fills. The file has the following format: "day.month.year.Ttfill_trader mnemonic. The X_TRADER Administrator must manually delete these files in order to manage hard disk space.

Using the Fill Pane Context Menu
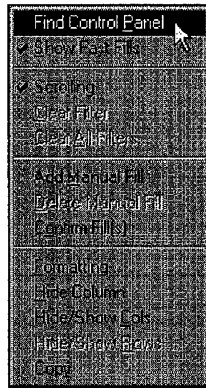
The Fill pane Context Menu lists these additional features and options:

Find Control Panel   Brings the X_TRADER **Control Panel** to the foreground of your workspace. Refer to the **Control Panel** section for additional information on services available from the **Control Panel.**

Show Fast Fills   Enabled by default. Filters effectively disable fast fills, but the setting remains checked unless you manually disable it.

Scrolling   Enabled by default.

Clear Filter   Right-click in the column that contains a filter and choose **Clear Filter** to remove the filter.

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Clear All Filters	Right-click in the Fill grid and choose **Clear All Filters** to quickly remove all filters.
Add Manual Fill	Selecting this option allows you to manually enter a fill. Enter the following information: Exchange, Product, Product Type, Expiration, Strike (if applicable), Quantity (positive quantity for buy order, negative quantity for a sell order), Price, and Customer Account. Choose **Add Fill**; the trade displays in the Fill window and updates the Position pane.
Delete Manual Fill	Right-click the fill and choose this option to delete. Only manual fills can be removed from the position.
Confirm Fill(s)	Click a single fill or select multiple fills and choose this option. The "C (Confirmed) column displays a hyphen (-) for trades you have confirmed. An equal sign (=) is displayed for fills confirmed by another trader.
Formatting	This offers options for customizing fonts, colors, and borders,
Hide Column	After clicking a cell in the Fill pane or selecting multiple columns, this option immediately hides the column(s).
Hide/Show Cols	This option allows you to select which columns to hide or show. Use this option to show columns hidden by "sliding them closed in the window.
Copy	After selecting the data to be copied, choose this option to place the data on a clipboard. You can then paste the data into another program (for example, Excel).

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Fast Fills Pane

Fast Fills Pane Overview

The lower pane of the Fill window contains the Fast Fills display. Fast fills--in which only partial information about the order is supplied--are offered only by some exchanges.

Trading Technologies (TT) provides Fast Fill information to mitigate the potentially significant delays that may occur waiting for a guaranteed fill. For example, TT Fast Fills for EUREX are composed of two items:

- Immediate executed quantities resulting from an order entered via X_TRADER

- Eurex Trade Confirmations sent to X_TRADER for resting orders (which are typically sent immediately after a match occurs)

X_TRADER Fast Fill Conditions:

- Fast fills are typically not guaranteed by the exchange.

- Fast fills are sent to all traders with the same Group ID.

Example: With a Trader ID = AAAAABBB001

AAAAA represents the Exchange Member ID

BBB represents the Group ID

001 represents the Trader ID

- Fast fills are NOT reflected in the Position calculations.

- Fast fills are removed from the Fast Fill pane upon receipt of the guaranteed fill from the exchange.

- Fast fills do NOT cause the Order Book to update, as a given order cannot be tied to the limited information contained in the Fast Fill.

- The Fast Fills pane is disabled when you are using Fill window filters. The Position pane column of FFNet (Fast Fills Net Quantity) is also disabled (grayed out) when filters are being used. When all filters are cleared, the Fast Fill pane and FFNet column are again enabled. All fast fills that came in while the filters were in use will be displayed, and the FFNet column will automatically update. Fast fills are disabled when filters are applied due to the limited information provided by fast fills (An account # filter cannot be applied to a fast fill, because this information is not provided until the confirmed fill is received).

▶ To remove Fast Fills from a position (refresh a position):

1. Right-click a cell in the Position pane to access the Context menu.

2. Select **Remove Fast Fills from Position.**

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Using the Fast Fill Pane Context Menu

The Fast Fill pane Context Menu lists these additional options:

Find Control Panel   Brings the X_TRADER Control Panel to the foreground of your workspace. Refer to the **Control Panel** section for additional information on services available from the **Control Panel.**

Show Fast Fills   Enabled by default.

Scroll To End   Enabled by default.

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Position Pane

Position Pane Overview

The middle pane of the Fill window displays your position. Click each "+ /-" to expand/contract the position tree. The level of detail ranges from summary totals to totals by exchange, totals by product, and/or totals by contract expiry.

NOTE: The Position pane may have a leading "o (lowercase letter for options) in the expiration column when the position represents an option. This is done to distinguish futures and options positions for the same products that have identical expiration dates, such as occur on LIFFE. For example, a futures and options position for product B Jun00 expiration on LIFFE would display both an entry for Jun00 (futures position) and oJun00 (options position).

Position Pane Field Descriptions

You can display the following information in the Position pane. It is listed in the order presented in X_TRADER Properties (Settings → Properties → Fill Tab). By default, all columns are displayed.

Column Name	Description
Exchange	Exchange
Product	Exchange Symbol
MMMYY	Expiration Month/Year
Strike	Exercise price of an option
C/P	Call/Put
BuyQty	Total Buy Quantity
SellQty	Total Sell Quantity
NetQty	Net Quantity of confirmed fills (BuyQty-Sell Qty)
FFNet	Fast Fills Net Quantity (FF Buys-FF Net Sells)
P/L	Profit/Loss (Last)
AvgBuy	Average Buy Price
AvgSell	Average Sell Price
Bid	Bid Price
Ask	Ask Price
Open	Open Price
Close	Close Price
High	High price
Low	Low Price

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Last	Last price
Stlmnt	Settlement Price
Buy	Buy Totals
Sell	Sell Totals

Selecting a P/L (Profit/Loss) Calculation Method

Profit and loss for open positions can be based on any of the following: last price, bid/ask prices, opening price, closing price, high price, low price or settlement price. Right-click any cell in the Position pane to access the **Context** Menu. Choose a calculation method by selecting the P/L based on option. You can select any of the options listed above. Profit/Loss based on the last price is the default.

Select the P/L (Profit/Loss) Column Display Type

The position's profit/loss column is displayed in your selected currency*, the product's native currency, or as the quantity multiplied by the price. Right-click any cell in the position pane to access the **Context** Menu. Choose the Display option, and choose a display type (Currency, Native Currency, or Qty x Prc). Quantity multiplied by price is the default.

NOTE: You can obtain a total position P/L only if you have selected these options from the Right-Click menu: Display – Currency – USD.

* The currency used by the Display option is fed from the Primary Currency designation in the Guardian Currency Table. The default primary currency is USD. To change the primary currency via Guardian, you must have X_TRADER administrative privileges. Refer to the Guardian documentation for additional information or speak to your X_TRADER System Administrator.

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Using the Position Pane Context Menu

The Position pane Context Menu lists these additional features and options:

Find Control Panel	Brings the X_TRADER Control Panel to the foreground of your workspace. Refer to the **Control Panel** section for additional information on services available from **the Control Panel.**
Show Fast Fills	Enabled by default. Filters effectively disable fast fills, but the setting remains checked unless you manually disable it.
Formatting	This offers options for customizing fonts, colors, and borders.
Hide Column	After clicking a cell in the position pane grid or selecting multiple columns, this option immediately hides the column(s).
	The Hide/Show Cols option allows you to select which columns to hide or show. Use this option to show columns hidden by "sliding them closed in the window.
Add Manual Fill	Selecting this option allows you to manually enter a fill. Enter the following information: Exchange, Product, Product Type, Expiration, Strike (if applicable), Quantity (positive quantity for buy order, negative quantity for a sell order), Price, and Customer Account. Choose **Add Fill**; the trade displays in the Fill window and updates the Position pane.
Remove Fast Fills From Position	Removes fast fills from the position and recalculates the P/L.
Expand	Expands the current branch.
Contract	Contracts only the selected product.
Expand All	Expands the position tree to view all branches.
Contract All	Contracts the position tree.
Autoexpand	Automatically opens the position tree.
P/L based on	You can calculate Profit/Loss figures based on one of the following: last price (default), bid/ask, opening price, closing price, high price, low price, and settlement.
Display	You can base the display on a currency, the native currency, or the quantity multiplied by the price (default). The primary currency is annotated next to the Currency option (for example, Currency – USD).
Copy	After selecting the data to be copied, choose this option to place the data on a clipboard. You can then paste the data into another program (for example, Excel).

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Fill Window Filters

Fill Window Filters Overview

Filters are used to control the amount of data displayed. Use filters to narrow the range of orders displayed. For example, opting to filter on a product (FGBL) and action (Sell), eliminates extraneous orders from the grid. You can set and clear filters at any time. In addition to the Fills pane, filters are also available for the following windows:

- Audit Trail

- Order Book

If you use Fill window filters, you will not be able to receive Fast Fills from supporting Exchanges. A message reminding you that Fast Fills are disabled automatically displays in the Fast Fills pane. In addition, the Fill window filters carry over to the Position pane. The position information includes only the data displayed in the Fill pane. To start fresh, simply remove the filter settings. This returns every fill record to the grid.

Setting a Filter in the Fill Window

▶ To set a filter in the Fill window:

Double-click a cell to select that variable as a filter.

or

Open the box below any column heading. A list of all currently referenced variables for the selected column displays. Select one or more of the variables to set the filter. Choose **OK** to activate the filter.

When you have set a filter, the box below the column heading turns red and displays the filter you selected. If you have selected multiple filter variables, a row of asterisks displays.

Clearing a Filter in the Fill Window

▶ To clear a filter in the Fill Window:

Right-click the column that contains the filter to access the Context menu. Choose **Clear Filter.**

or

1. Double click the blank box below any column heading. A list of all currently referenced variables for the selected column displays. The selected variables have been selected as filters.

2. Click a selected variable to remove the filter or choose the **Clear** button to remove all filters for the column you selected.

To clear all filters:

- Right-click any grid cell to access the **Context** menu. Select **Clear All Filters.**

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EUREX Fast Fill Information

Older versions of X_TRADER (2.XX and earlier) handled fast fills by matching fast fills with confirmed fills and used fast fills in the calculation of a trader's P/L. However, now the P/L is calculated using only confirmed fills. EUREX fast fills are not included anymore in net position calculations.

The FFNet column displays the fast fill net quantity. The NetQty (Net Quantity) column reflects the position based only on confirmed fills. Using these two columns, a EUREX trader can monitor position updates. When the Fill window is opened, the FFNet column is synchronized with NetQty. As fast fills are received, the FFNet column is updated to reflect the new fast fill position. When confirmed fills are received, the NetQty column is updated to reflect the new confirmed position. In normal trading situations, the FFNet column is updated slightly ahead of the NetQty column, since fast fills are received before confirmed fills.

FFNet and Filters: Using filters disables the Fast Fills pane. The Position pane FFNet (Fast Fills Net Quantity) is also disabled (grayed out) when filters are being used. When all filters are cleared, the Fast Fill pane and FFNet column are again enabled. All fast fills that came in while the filters were in use will be displayed in the Fast Fills pane, and the FFNet column will automatically update.

FFNet and NetQty Synchronization: The EUREX trader can easily identify when NetQty and FFNet are out of synchronization (do not match) for an extended period. The following may result in an out of synch occurrence:
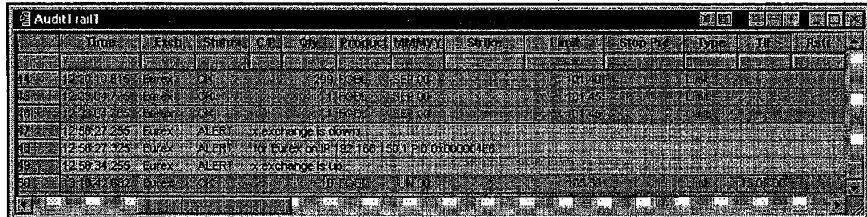
- An errant or erroneous fast fill.

- Changing a working order that gets filled immediately.

- If a fast fill has been received, clearing all filters results in reinitializing the NetQty and FFNet, so that they are the same. Receipt of the confirmed fill causes an out of synch occurrence.

If you think that the fast fill position reflects errant or erroneous fast fills, you can resynchronize the fast fill position with the confirm fill position by using the Remove Fast Fills from Position function.

FFNet and Non-EUREX Traders: Non-EUREX traders may remove the FFNet column from the Position pane by using the **Context** menu's Hide/Show Columns or X_TRADER's Properties (Position tab.

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Audit Trail Window

Audit Trail Overview
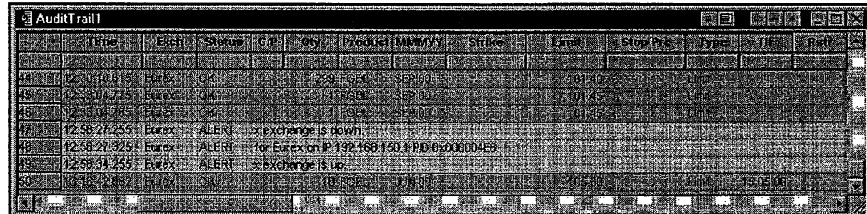
The Audit Trail displays the following information for the current day:

- **Order related messages:** Messages to and from the exchange including fills, add/change/delete orders, and inquiries. Messages related to all members of your Group ID (e.g., Login ID = AAAAABBB###, where BBB represents the Group ID) will appear in the Audit Trail.

- **Exchange Announcements:** These announcements include busted trades and pre/post opening/closing product activity.

- **Gateway Alerts:** Information concerning the status of server/host processes.

- **Error messages:** Notification of an invalid action.

Audit Trail Field Descriptions

The Audit Trail displays information related to all orders transactions sent to the exchange. You open the Audit Trail by double-clicking the Control Panel Audit Trail button.

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You can display the following Audit Trail items. They are listed in the order presented in
X_TRADER Properties → Audit Trail Tab:

Column	Description
Time	Time Message received at workstation
Exch	Exchange
Status	OK, ERR (error), INFO, Alert, Warning
Msg	Message
Action	Add, Change, Delete, Fill, Hold, Submit
B/S	Buy/Sell
O/C	Open/Close a Position
C/P	Call/Put
Qty	Quantity
Product	Exchange Symbol
MMMYY	Month/Year Expiration
Strike	Exercise Price of Option
Limit	Limit Price
Stop Prc	Stop Trigger Price
Type	Limit/Market Order
TIF	Time in Force (for example, GFD, GFC)
Rstr (Restriction)	GTD, GTC, FOK, IOC, Stop, MV (Min Volume), Limit
Exec Qty	Executed Quantity
Work Qyt	Working Quantity
Cxl Qty	Cancelled Quantity When Using Cancel/Replace
Account #	Back Office Account Number or Account Name
Member ID	Exchange Member ID Assigned by the Exchange or TTORD ID information

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Group ID	Group ID Assigned by the Exchange Member Exchange or TTORD ID information
Trd ID	Trader ID Assigned by the Exchange Member Exchange or TTORD ID information
Acct	Agent, Market Maker, Principal, Give-up
Exch Time	Time Message Received/Sent by Exchange Trading Host
Exch Date	Date at the Time the Trading Host Received/Sent the Message
Time Sent	Time Sent from Workstation
Time Processed	Time Processed by the TT Gateway
Order No.	Order Number Assigned by the Exchange
IP	IP Address of the Workstation
FFT2	Free Form Text Field 2
FFT3	Free Form Text Field 3

NOTE: An appropriate audit trail message results from all normal order functions performed on held orders: change, cancel, replace, delete, or submit. You can see held messages in the Audit Trail when an order is held, but in actuality, the order is deleted from the market and held only by the Gateway. If a submit fails for a held order, it remains in the hold state and the Audit Trail indicates that the submittal failed. The Audit Trail also gives you an explanation of why the order submit failed.

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Audit Trail Customizable Feature List

You can customize a number of features in the **Audit Trail** window:

- For **Message Color Coding**, select any color text and background to identify Buy, Sell, and Exchange Announcement activity. The default colors for Buys are blue text with a gray background. Sells have red text with a gray background. Exchange announcements have white text with a black background.

- For **Audio Notification**, assign a sound to the Exchange Announcement event.

- **Historical Data:** Audit Trail data for the last 10 calendar days is saved on your workstation's hard disk in a Microsoft Access file. Use <install drive>:\TT\LogFiles\AuditLog.mdb file to start Access. The dates available are identified by month and day (i.e., MMMDD—Dec 31).

- The Audit Trail is fully customizable. You can set visible **columns** and **rows, colors, borders,** and **fonts**. By default, all available information is displayed. Move or hide any of the columns (except Time, Exch (Exchange), Status, and Msg). See the Customizing X_TRADER → Formatting section for additional information.

- Use **filters** to limit the information displayed.

NOTE: If you use filters, Trading Technologies suggests that you open two Audit Trail windows to ensure receipt of all Exchange and Gateway announcements. The first window can be used to display order-related data with the desired filters. The second window should have a Status column filter set to capture alerts (ALERT) and general information (INFO).

Audit Trail Exchange Announcements

The Audit Trail window also displays all announcements released by the exchanges. These exchange-specific announcements include host activity, busted trades, and pre/post opening/closing product activity. Each announcement details the time issued (exchange time), time received (local time), exchange name, severity, and the announcement.

If speakers and audio drivers are installed on your workstation, X_TRADER "beeps when an announcement is added to the Audit Trail. You can associate any sound file with this event from the X_TRADER Properties dialog box Properties → Sounds tab).

TIP: If you are using Audit Trail filters, open two Audit Trail windows to ensure receipt of all Exchange and Gateway announcements. Use one Audit Trail window to display order-related data with the desired filters. You should set the Status column filter for the second window to capture alerts (ALERT) and general information (INFO).

Audit Trail Message Types

Theses are the types of messages you will see in the Audit Trail:

Successful **Buy, Sell, Change, Cancel-Replace,** or **Delete** Orders:

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- The **first line of messages** details the order information, including the time the order was sent from the workstation (Time column) to the TT Gateway (server), an order Status of ACCEPT, and an Action of Add, Change, or Delete.

- The **second line of messages** immediately follows the first and indicates acceptance by the TT Gateway. The order has been routed to the exchange host.

- The **third line of messages** displays sometime after the previous two. This message is the confirmation received from the exchange. The information detailed includes the time the confirmation was received by the workstation (Time), an order Status (OK), and the time the confirmation was sent by the exchange's host machine (Exch Time). **Note:** When you use **Cancel/Replace,** the confirmation from the exchange host will reflect a new order number.

Errors: When the TT Gateway rejects a Buy, Sell, Change, Cancel/Replace, or Delete order:

- The **first line** details the order information, including a Status of ERR to indicate that the order was rejected by the TT Gateway and was not sent to the exchange host.

- The **second line** immediately follows the first and reflects a status of ERRS; a message (Msg) explains the error.

Fills: This one-line message has a Status of OK, an Action of Fill, and provides detailed information about the order.

Exchange Announcements: These one-line messages have a status of Alert, Info, or Warning and reflect general information send by the exchange host or the TT Gateway.

Customer Account: Allows you to change the customer account assigned to a particular order.

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Audit Trail Messages

The following messages appear in the Audit Trail window:

Status	Msg	Action	Means
	No order router available		This is a LIFFE error message. When this error message appears in the Audit Trail Window, it means that the trader is not actually logged into the LIFFE exchange. When the trader logs into X_TRADER and sees the check mark next to the exchange, this means that the user has been authenticated in the TT server. TT cannot tell if the trader ID has been actually logged into the LIFFE exchange. Resolution: The trader should log out of X_TRADER, wait one minute, and then log back into X_TRADER. If the error message still appears, the Registered Trader should contact the Market Control Center (MCC) at LIFFE. The MCC is the trader front line support for the LIFFE exchange (Help Desk).
ACCEPT	Approved (Lmt 0 + PL 0 - M 0 = Av 0)USD		
ACCEPT	Approved (Lmt 1000000 + PL 0 - M 5910 = Av 994090)USD		Risk check is turned on for trader. Order passed all checks.
ACCEPT	Approved (No Credit Check)		Risk checking is turned on for trader, but no check is done for this action (see preceding ACCEPT message to determine action)
ACCEPT	Delete Approved (No Credit Check)		Risk checking is turned on for trader, but no check is done for a delete order (see preceding ACCEPT message to determine action).
ACCEPT	Order accepted.		(Eurex only) GW verifies to trader that it received last request, see previous record
ACCEPT	Order accepted.		Order has passed the established XT credit management checks.
ACCEPT	Order accepted.		
ACCEPT		Add	API received request from XT to add order (outbound)
ACCEPT		Delete	API received request from XT to delete order (outbound)
ACCEPT	Approved (No Credit Check)	Delete	Risk checking is turned on for trader, but no check is done for a delete order
ACCEPT		Inquire	
ALERT	<any>		Priority message to trader from trading host, see Msg

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ALERT	The order server for the LIFFE exchange is up.		Could be any server (order, price, fill) and any exchange (LIFFE, Eurex, etc.). Indicates that workstation's Guardian detects this server is up. Typically follows a down message. If it does not,
ERR	\<any\>		Trading host did not understand last request, see Msg and previous record
ERR	FAILED PRICE REASONABILITY CHECK	Add	All caps indicates this message is likely from host (Eurex). Trader is trying to put in an order that fails the exchange's price reasonability check. Check with the exchange on its reasonability check for each product.
ERR	INVALID RESTRICTION CODE	Add	Eurex message; call Eurex. It is likely that one of the descriptors on the order cannot be accepted for this product or this exchange. Descriptors include Day restriction (GTC, GTD, GTDate), limit vs. market, FOK, IOC, MV, and STOP.
ERR	Order Add failed. 001010 – ABMandatory field Client account number is not filled	Add	CME requires that the account # field contain information to make an order valid.
ERR	Order failed LIFFE Price Limit check. not submitted.	Add	
ERR	Order size 10 (10 long + 0 short) exceeds order limit of 2	Add	Risk checking is turned on for trader. Order exceeds order quantity limit set in risk management for the trader/product.
ERR	PRICE ENTERED EXCEEDS THE MAXIMUM PRICE ALLOWED	Add	Eurex message; call Eurex.
ERR	Restricted order did not pass Liffe submission restriction.	Add	Order failed to trade at LIFFE because there was no market for the order.
ERR	Worst Case position of 12 Long exceeds position limit of 10	Add	
ERR		Delete	Trading host received an error trying to delete the order, see following record
ERR	\<any\>	Delete	Trading host received an error trying to delete the order, see Msg
ERR	Order has been deleted or filled.	Inquire	Action which trader tried to perform (see preceding ACCEPT message for trader action) could not be performed because order was either deleted or it had been filled. This can happen when fills are coming in slowly from Eurex. At this point, the trader should find out if a Fast Fill has been received for the order or if someone else has deleted the order. If the original action that caused this message to occur was a delete, a new order should not be entered into the system to replace this order because the delete has not taken affect. If an error message was

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			received due to a change or cancel and replace, these actions also were not completed successfully if an error message occurs.
INFO	<any>		Informational message to trader from trading host, see Msg
OK	The administrator has updated trader credit limits.		Either trader has just logged on, risk parameters were updated, or a disconnect caused Guardian to re-send risk parameter information
OK		Add	GW received confirmation from trading host that order was added
OK		Delete	GW received confirmation from trading host that order was deleted
OK		Fill	Trading host confirms filled order
OK		Inquire	

Audit Trail Filters

Audit Trail Filter Overview
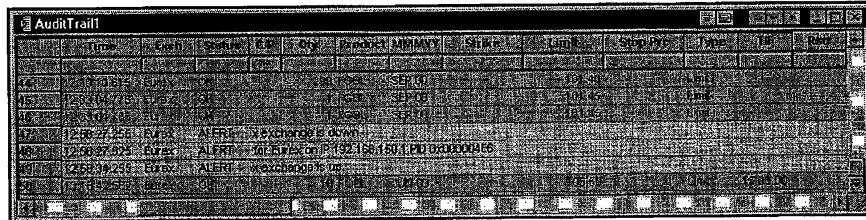
You use filters to control the amount of data displayed. You can set and clear filters at any time. In addition to the Audit Trail, filters are available for the following windows:

- Fill Pane---will also filter data for the Position pane and will disable Fast fills.

- Order Book

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Setting an Audit Trail Filter

▶ To set a filter in the Audit Trail window:

Double-click a cell to select that variable as a filter.

or

Open the box below any column heading. A list of all currently referenced variables for the column you selected displays. Select one or more of the variables to set the filter. Choose **OK** to activate the filter.

When you set a filter, the box below the column heading turns red and displays the filter you selected. If you selected multiple filter variables, a row of asterisks displays.

Clearing an Audit Trail Filter

▶ To clear a filter in the Audit Trail window:

Right-click the column that contains the filter to access the **Context** menu. Choose **Clear Filter.**

or

1. Double-click the blank box below any column heading. A list of all currently referenced variables for the selected column displays. The selected variables have been selected as filters.

2. Click a selected variable to remove the filter or choose the **Clear** button to remove all filters for the selected column.

▶ To clear all filters:

1. Right-click any grid cell to access the **Context** menu.

2. Choose **Clear All Filters.**

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Quote Audit Trail Window

Quoting Overview

You can generate quotes by using a proprietary theoretical pricing model, X_TRADER
Spread Table(s) and Product Group(s) , or by manually entering individual quotes. You can
respond to RFQs manually or enable autoquoting to automatically send a response.

Quoting Setup Requirements

In order to use the quoting feature, you must first indicate your quoting preferences.
X_TRADER quoting requires ALL of the following:

- **One or more Spread Tables:** Spread tables allow you to define how wide quote spreads
  should be, based on a product's time to expiration and price. Multiple spread tables
  provide flexibility within X_TRADER's quoting system. For more information, refer to
  the Quoting Setup Requirements → Spread Tables section.

- **One or more Product Groups:** Product Groups allow you to define how the bid/ask
  values will be calculated. You can specify the quote type, spread table, and delete time,
  account, as well as other parameters. You can enable or disable AutoQuoting via your
  Product Groups. For more information, refer to the Quoting Setup Requirements →
  Product Group section.

- **Each quoted product must be "associated or assigned to a Product Group:** It is the
  Product Group that determines how a quote is generated, therefore, in order to generate
  quotes, each product must be associated with **one** (and only one) product group. For more
  information, refer to the Quoting Setup Requirements → Associating Products section.

Quote Audit Trail

The Quote Audit Trail displays messages related to quoting from the exchanges. You can also
use this message window to monitor incoming and outgoing RFQs, as well as manual and
autoquoting responses to RFQs.

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Quote Audit Trail Window Overview
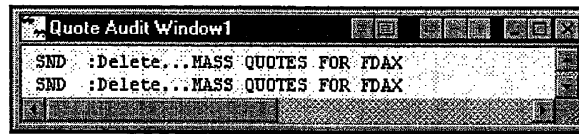
All exchange messages relating to quoting are displayed in the Quote Audit Trail. You can use this window to confirm outbound quoting events and monitor inbound quoting events (i.e., RFQs). This window is displayed from either the Control Panel menu bar or Toolbar.

Opening the Quote Audit Trail

▶ To open the Quote Audit Trail:

From the **Control Panel,** click the **Quote Audit Trail** button.

or

From the **Control Panel,** choose **Window → Quote Audit Trail.**

Enabling the Quoting Tool

Enabling the Quoting tool is a two-step process. You must:

- Enable Quoting as a feature.

- Turn Quoting on for each individual Market window.

▶ Enable & Disable Quoting as a Feature:

You enable or disable Quoting as a feature from the X_TRADER Properties dialog box (default is disabled):

- From the **Control Panel,** choose **Settings menu → Properties.** The Properties dialog box opens with the **Trading** tab displayed by default.

- Click inside the box to enable or disable Quoting. A √ indicates that Quoting is enabled for all Market windows.

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► Turning Quoting ON for a Single Window (You must first enable Quoting as a feature. See above.):

- Right-click anywhere (excluding the bid/ask price columns if Click Trading is enabled) in the Market Grid to access the **Context** menu.

- Choose **Quoting.** If Quoting is ON, a check mark immediately appears next to the Quoting title. The absence of a check mark indicates that Quoting for this Market window if OFF.

The √ next to the Quoting option indicates that Quoting is turn ON.

► Turning Quoting OFF for a Single Window (You must first enable Quoting as a feature. See above.)

1. Right-click anywhere (excluding the bid/ask price columns if Click Trading is enabled) in the Market Grid to access the **Context** menu. If Quoting is ON, a check mark appears next to **Quoting.**

2. Choose **Quoting.** The check mark immediately disappears and Quoting is turned off for this Market window.

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Quoting Options in the Order Entry Window

When you turn on the Context menu's Quoting option, these buttons are added to the Order Entry window:

Test Quotes   Generates test quotes wherever possible.

Send   Sends mass quotes to market for all activated strikes/expirys.

You can edit the test quote columns. Manually editing a quote and choosing **Send** sends the information in the test quote columns. If you choose not to edit these columns, choosing the **Send** button generates a new quote—that you need to confirm—based on current market conditions.

Delete   Deletes mass quotes sent to market. Test quotes are still retained. Use this button to pull all live quotes. If any unusual occurrence causes your workstation or X_TRADER to unexpectedly shutdown immediately after restarting, choose the **Delete** button.

Toggle the **Test and Market Quotes** buttons to view Test Quotes vs. Market Quotes.

Quoting Options in the Market Grid

When you turn on the Context menu's Quoting option, these columns are added to your Market window:

QAct   Sends a quote for a single strike/expiry. If the strike/expiry is activated, a confirmation dialog box appears, and you can edit the quote information or accept the generated quote. Choose **Add** to send the quote, **Delete** to delete the quote, or **Cancel** to cancel the action.

Quote   The quote column box indicates the active (checked) or inactive (unchecked) status of the strike/expiry. You must check this box to send a quote to market. An unchecked box denotes an inactive strike/expiry; therefore, no quote is sent.

Deselecting this box deletes a quote from the market, if one exists

To select and activate/deactivate strikes/expirys, right-click anywhere in the Quote column to access the Context menu. From this menu, choose **Select →** **All, Calls, Puts, 2-Sided Mkts,** or **Last Prc.** Then choose **Activate** or **Deactivate.** All checked boxes in the Quote column are active strikes/expirys; all others are deactivated. Refer to the Activating a Strike or Expiry section for additional information.

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TRADING TECH EXHIBIT 2233
      IBG et al. v. TRADING TECH. - CBM2016-00054

Test Quote Column Headings:

BQQ	Bid Quote Quantity (test quote)
BQP	Bid Quote Price (test quote)
AQP	Ask Quote Price (test quote)
AQQ	Ask Quote Quantity (test quote)

The above test quotes columns are displayed when you choose **Test Quotes** or the **Test Quotes** button. Market quotes are displayed when you choose the **Market Quotes** or **Send** button. If the Market Quote columns are currently displayed, choosing the **Test Quotes** button will automatically result in changing to the Test Quotes environment; the reverse is also true.

When these column headings are displayed, only the test quote environment is viewed. The quantities will always match those set in the product group dialog box immediately after quote generation, although they may change if you manually edit them.

When mass quotes are sent, the market quote columns (defined below) are automatically displayed. However, sending a single market quote maintains the test quote display, provided that the test quote environment was active when the individual market quote was sent. The cells for the currently sent market quote are selected in blue to let you know that the quote hit the market.

Or

Mkt BQQ	Market Bid Quote Quantity
Mkt BQP	Market Bid Quote Price
Mkt AQP	Market Ask Quote Price
Mkt AQQ	Market Ask Quote Quantity

These columns display all active quotes in the market and are updated according to price and quantity.

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Activating a Strike or Expiry

You must activate the strike/expiry before sending the quotes to market. A √ in the Market Grid Quote column indicates an activated strike/expiry. If a quote is not activated, test quotes are generated, but are not sent to market.

▶ To activate a stroke or expiry:

Examine the Quote Column

The Market Grid Quote column indicates the status of the strike/expiry:

- A checked box in the Quote column indicates an **ACTIVATED** strike/expiry. Generated or manually entered quotes are sent to market.

- An unchecked box in the Quote column indicates a **DEACTIVATED** strike/expiry. Generated and manually entered quotes are NOT sent to market.

To manually activate or deactivate an individual strike or expiry:

- Each strike or expiry can be activated or deactivated by clicking the box in the Quote column.

- If the box is checked, the strike/expiry is activated and quotes are sent to market. An unchecked box indicates that the strike/expiry may have test quotes generated, but the quote will not be sent to market.

- Deactivating (Deselecting) a strike/expiry deletes a quote from the market, if one exists.

To activating or deactivate multiple strikes or expirys:

All checked strikes/expirys are activated. All others are deactivated. Deactivating an active strike/expiry deletes a quote from the market, if one exists.

1. Right-click anywhere in one of the Quote columns (BQQ, BQP, Quote, AQQ, or AQP) to access the **Context Menu.**

2. Choose **Select** to choose which strikes/expirys to activate/deactivate. These are your selections:

All	All strikes/expirys will be selected.
Calls	Only calls will be selected.
Puts	Only puts will be selected.
2-Sided Mkts	Only 2-sided markets will be selected.
Last Prc	Only strikes/expirys with a last price will be selected.

3. From the **Context** menu, click **Activate or Deactivate.**

4. Left-click outside the **Context** menu to exit.

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TIP: If you want to narrow your selection, you can select multiple strikes/expirys while simultaneously holding down the **CTRL** key. All selected rows should be highlighted. Then select **Activate** or **Deactivate** from the Context menu (Right click menu).

Viewing Quotes in Multiple Windows

A second quoting Market window with the same contract will not display all existing quotes. The second window will only see data about live quotes after the workstation receives an update. Additionally, if you send a new quote with only a single changed parameter, the first window will display the entire quote, but the second window will only receive an update of changed information. Therefore, the second window will only receive the changed parameters. This information also applies to a trader who is logged onto more than one workstation.

Generating a Quote

To setup quote generation:

- Choose the **Test Quotes** button to generate quotes. If the **Market Quotes** button is selected, choosing the **Test Quotes** button will also change the button to **Test Quotes**.

▶ To send mass quotes:

1. Choose the **Send** button to send edited test quotes to market.

2. Choose the **Send** button to regenerate unedited quotes based on current market conditions. The new quotes are sent to market.

When you send mass quotes, the market quote columns automatically display.

▶ To send quotes individually:

1. Choose the **QAct** button to send an individual quote to market.

2. A dialog box opens so that you can confirm or edit the quote. Choose **Add** and the quote is sent to market.

Sending a single quote will not display the market quote columns. The test quote columns continue to display, but the cells for the sent quote are selected in blue to indicate that the quote hit the market.

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Editing a Test Quote

▶ You can manually edit any test quote. There are two methods:

Directly from the Market Grid, double-click the **BQP** (Bid Quote Price) or **AQP** (Ask Quote Price) and edit the price.

If you want to send a single quote, after choosing the **QAct** button, you are given the opportunity to change or confirm the quote.

Deleting Quotes

In your Product Table you can set a default quote **Restriction** (GTC or Delete) and **Delete Time** (in seconds).

▶ To delete mass quotes:

- Choose the **Delete** button to delete all quotes from the market.

▶ To delete an individual quote:

1. Uncheck the **Quote column** box of the strike/expiry. This deactivates the strike/expiry and deletes the quote.

2. Click in the **Quote column** box (a check mark appears) to re-activate the strike/expiry.

Live Quotes and X_TRADER Shutdown

Status of Live Quotes when X_TRADER is shut down:

- **Normal Shutdown:** If you exit normally from X_TRADER by choosing **File → Exit,** by double-clicking the top left icon, or by clicking the "X frame button, X_TRADER automatically pulls all live quotes from the market.

- **Abnormal Shutdown:** When X_TRADER experiences an abnormal shutdown, the live quotes cannot be pulled from the market. Since quoting data is tracked by X_TRADER on the local workstation, if X_TRADER is not allowed to exit normally, there is no record of active quotes. Since the quotes remain active in the market, they may unknowingly be filled.

- **If this occurs, restart X_TRADER as soon as possible and choose the Delete button from the quoting Market window. This will pull all live quotes from the market.**

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Sending a Request for Quote (RFQ)

▶ To send a Request for Quote:

1. Right-click within the strike/expiry row, and from the **Context** menu, choose **Make RFQ.**

2. Review the strike/expiry information and enter a quantity if applicable.

3. Choose **OK** to send the request or **Cancel** to abort it.

Receiving an Inbound Request for Quote (RFQ)

▶ To receive inbound RFQs, the following must be true:

- A Market window for the product must be open, but you can minimize it so that it does not take up space.

- You must turn on AutoQuoting. This setting is part of your Product Group(s). Access **Product Group Setup** from **X_TRADER Control Panel → Settings menu.** Select the appropriate Product Group from the lower half of the Setup window, and verify that the **Auto Quoting On** button is selected.

If you choose to minimize the Market window, you can monitor RFQ notices using the Quote Audit Trail.

If you have your Market window open, the requested strike/expiry **QAct** button will turn red when an RFQ is received.

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Responding to a Request for Quote (RFQ)

▶ To respond to an RFQ:

Manual Response

You must activate the strike/expiry (displaying a √ in the Quote column box) to send a quote to market.

1. Choose the **QAct** button to display a regenerated quote in a dialog box.

2. Accept the regenerated quote or manually edit the quote. Choose **Add** to send the quote to market.

Auto Quoting

When properly set up, Auto Quoting does not require any action from you. X_TRADER will handle all requests, sending out quotes as RFQs are received. You may use the Quote Audit Trail to monitor requested and sent quotes.

Auto Quoting requires the following:

- You must turn on Auto Quoting and set the Quote Delay Time in the product's **Product Group.**

- You must activate the strike/expiry (displaying a √ in the Quote column box) in order to send a quote to market.

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Create Spread Dialog Box

Spread Strategy Overview

X_TRADER supports the creation of intra-product spreads, as permitted by LIFFE CONNECT. For additional information about LIFFE CONNECT STIR (Short-Term Interest Rate) strategies, refer to documentation provided by the exchange or visit the Internet site at **www.liffe.com.**

Creating a New Spread or Strategy
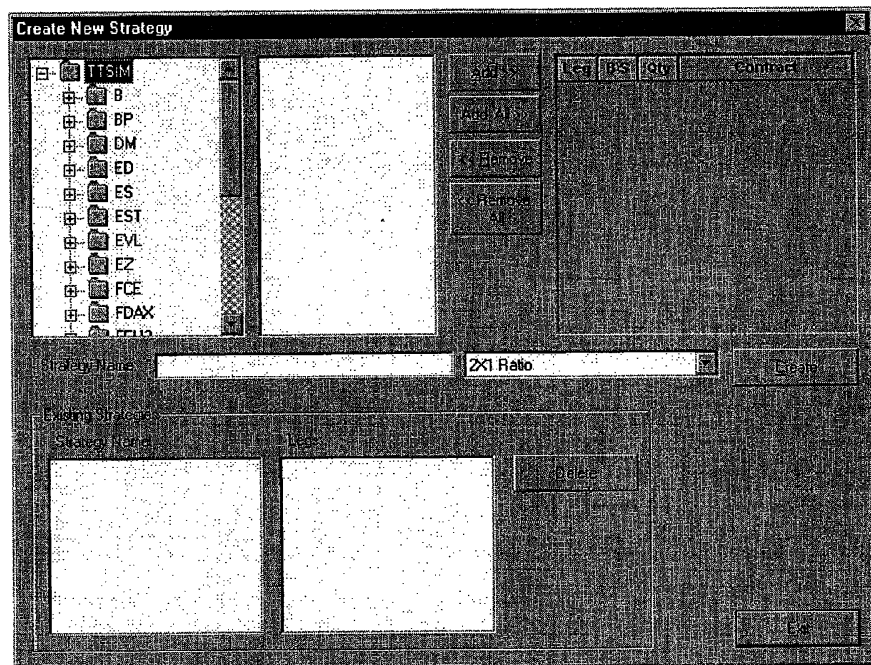
X_TRADER supports the creation of intra-product spreads, as permitted by LIFFE CONNECT. For additional information about LIFFE CONNECT STIR (Short-Term Interest Rate) strategies, refer to documentation provided by the exchange or visit the Internet site at **www.liffe.com.**

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▶ To create a new spread

1. Open the Create Spread dialog box. Choose the Control Panel button, or right-click the Market Grid to access the Context menu, and choose Create Spread Option.

2. Select a product. The available contract months are displayed to the right.

3. Use the Add, Add All, Remove, and Remove All buttons to add or delete one or more legs, or double-click the contract when adding one leg at a time.

4. Edit the spread data. Choose the B/S button to toggle between Buy (B, blue) and Sell (S, red). You can also edit the number of contracts per leg—where permitted.

5. Enter the name of your choice in the Spread Name box. If you leave this box blank, the name will be the spread type followed by the quantity and contract month for each leg.

6. Select a spread type. Available types include the following: 2X1 Ration, Box, Bundle, Butterfly, Calendar 1, Combo, Condor, Conversion/Reversion, Diag Calendar, Diag Strad Calendar, Guts, Iron BFly, Ladder, Misc. Call/Put Spread, Pack, Strad Calendar, Straddle, Strangle, Strip, or Volatility Combo. Refer to exchange documentation for strategy definitions.

7. Choose Create. If the spread data is valid, the spread is created and immediately displayed in the Existing Spreads section of the New Spread dialog box. The Audit Trail displays a message confirming the creation of a spread/strategy or an error message is displayed.

Adding a Spread or Strategy to the Market Window

▶ To add a newly created spread or strategy to the Market Window:

1. Open the Market Explorer by clicking its **Control Panel** button.

2. Select the appropriate exchange, product, and contract type (i.e., Spread). All existing spreads and strategies are displayed.

3. Customize the Market Grid if necessary. Use the **Context** menu's **Hide/Show Row(s)** option to hide any unwanted strategies. Right-click anywhere in the Market Grid (excluding BidPrc and AskPrc columns if Click Trading is enabled) to access the **Context** menu. Choose **Hide/Show Row(s)**. For any rows you do not want, click within their checkboxes. A blank box indicates that the row will be hidden; a checked box indicates the row will be shown.

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Trading with an Existing Spread or Strategy

There are no functional differences to trading an existing spread with X_TRADER. From the Market Explorer, view the product and select the Spread product type. You can open one or more products and product types (for example, spread and future) in the same Market Window.

The spread name you entered appears in the Product column. If you did not enter a personalized name, the default name is the spread type/spread ratio/contract months of the legs. To see the entire name or a larger portion of the name, expand the column or row size.

NOTE: As always, refer to the exchange's Market Rules for trading information specific to that exchange.

Trading Strategies with a Maximum Order Quantity Limit

If your trading environment is using the Guardian Risk Management (Credit Controls), the Maximum Order Quantity limit impacts trading in the following manner:

- Strategies that result in a net position of zero are not restricted by the Maximum Order Quantity limit. Calendar, Condor, and Butterfly strategies net to a zero position (neither long nor short) and may be traded in any quantity. For example, if the Maximum Order Quantity is 100 lots, you may trade beyond the 100-lot limit because the net position for the order is zero.

- Orders for strategies that result in a net long or short position are subject to the Maximum Order Quantity limit. For example, a trader with a 100-lot Maximum Order Quantity who is trading strip strategies will reach his maximum order quantity with a 25-lot order. In this case, the 100-maximum quantity is equivalent to the 25 lots * 4 legs per strip. Orders for 1-25 lots of a strip strategy will be accepted. Orders over 25 lots will be rejected for exceeding the specified Maximum Order Quantity limit of 100.

Trading on an Expired Strategy

Attempting to trade an expired strategy results in the following error message, **"This product does not currently exist in the order router's product table.** The Simulation environment will also receive this message if the strategy was deleted at the exchange due to a host failure.

Renaming an Existing Strategy

▶ To rename an existing strategy:

1. In the Market Grid, in the Product column, double-click the spread name, or right-click a cell in the spread row to access the **Context** menu. Choose **Name Product.**

2. Enter the new spread name, and choose **OK.** You can revert to the original name (spread type, ratio, legs expirys) by choosing **Restore.**

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Deleting a Created Spread or Strategy
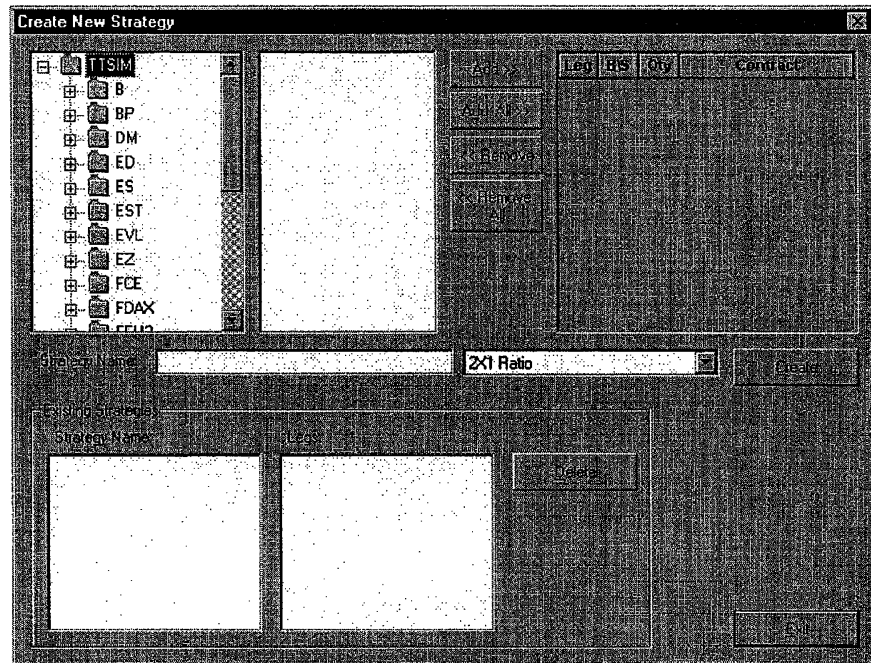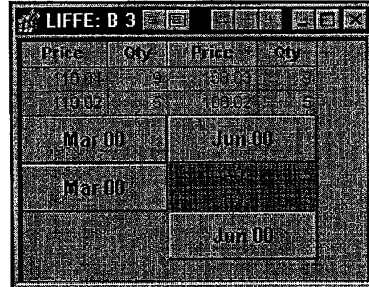
You use the **Create New Strategy** dialog box to delete a created strategy.

▶ To delete a created spread or strategy:

1. Open the Create Spread dialog box. Choose the **Control Panel** button, or right-click the Market Grid to access the **Context** menu, and choose **Create Spread Option.**

2. Select the spread name in the Existing Spreads section. The legs of the selected spread name display.

3. Choose **Delete.** The spread is immediately deleted.

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Spread Matrix

Spread Matrix Overview

The Spread Matrix provides an interface for monitoring and trading calendar spreads. The month from the Market Grid is the first month in the Spread Matrix. You must open the Market Grid first in order to open the Spread Matrix, even though the Spread Matrix is its own price consumer and does not share one with the Market Grid.

The top two rows display the outright prices (**Bid** in Blue, **Ask** in red) for each month. The Matrix displays the contract months and one of three types of prices--**Best, Delta,** or **Spread.**

The **Best Price** (default selection) displayed is the better of the **delta** (between the outright prices) or **the spread itself** (as it already exists in the market). Alternatively, you can elect to always display the **Delta Price** or always display the **Spread Price.**

The Matrix uses colors to depict opportunities between the outrights and the spread. **Best Price deltas** display in blue. The **Best Price spreads** display in coral. **Equal prices** display in white.

You can display multiple spread matrices simultaneously, by selecting various contract months and starting a matrix for each. A single floating Order Entry window for all matrix windows is the default. You can customize spread matrices, just as you can customize any other X_TRADER grid (for example, column widths, colors, and row heights).

Spread matrices are saved in your workspace, along with all other windows. X_TRADER displays the spreads that are created when the application is open. It does not recreate strategies that you created in past sessions. However, if you create the same spread for the same or different workstation, the workspace remembers its formatting and user name.

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Generating a Spread Matrix

▶ To generate a spread matrix:

1. Open a Market Window for the product.

2. Right-click within any Market Grid cell of the desired contract and choose **Generate Spread Matrix.**

3. If customization is necessary, right-click within the matrix to access the **Context** menu. You can select from among display of the Best, Delta, or Spread price. Use **Hide/Show Series** to include or exclude certain contract months. Customize the Spread Matrix Best Price colors via Settings (Properties (Color tab.

You can create multiple matrices by repeating the process described above.

▶ To set the Best Price, Delta Price, or Spread Price:

- Via the **Context** menu, select the type of price displayed in the matrix.

Matrix Calculations

The calculations made for a Matrix include:

Outright Delta Prices:

- Spread Ask = Front Month Ask – Back Month Bid

- Spread Bid = Front Month Bid – Back Month Ask

Quantities:

- Best Price Outright Delta Quantity = Lesser of the Front Month quantity and Back Month quantity

- Best Price Spread Quantity = Spread quantity

- Outright Delta and Spread Price are equal = Lesser of the Front Month quantity and the Back Month quantity + the Spread quantity.

Implied Prices:

If only outright prices are provided by the exchange (LIFFE), the spread matrix calculates the implied in prices for the spread using this data. If only the implied in prices are provided by the exchange (Eurex MISS), the matrix calculates the implied in prices. In both cases, the best price is displayed as described above.

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Trading with the Spread Matrix

Selecting a price or quantity from the matrix automatically opens a Floating Order Entry window. The price, quantity, and order description fields are filled based on the matrix cell you selected.

Click any of the price or quantity cells to feed data to the Floating Order Entry window. Click Trading is not possible from the Spread Matrix.

Using the Spread Matrix Context Menu

Right-click within the Spread Matrix to access the **Context** menu. The following options are available:

Find Control Panel	Brings the X_TRADER Control Panel to the foreground of your workspace. Refer to the **Control Panel** section for additional information on services available from the **Control Panel.**
Best Price, Delta Price, or Spread Price	Display the Best Price, Delta Price, or Spread Price. The default is Best Price.
Hide/Show Series	A dialog box allows you to select which series are displayed. If checked, the series are shown; if the checkbox is blank, the series are hidden.

Creating Outrights

The LIFFE exchange allows you to create new outrights. In other words, you can create a new strike/expiry. X_TRADER supports spontaneous display of newly created outrights as they occur in real time; however, you cannot create outrights in X_TRADER itself.

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X_Trader Common Administration Tasks

Filtering Options

Filtering Overview

Filters are used to control the amount of data displayed. You can set and clear filters at any time. Filters are available for the following windows:

- Fill Pane—Filters will also filter data for the Position pane and will disable Fast fills.

- Audit Trail

- Order Book

Setting a Filter

▶ To set a Filter

Double-click a cell to select that variable as a filter.
Or

Open the box below any column heading. A list of all currently referenced variables for the selected column displays. Select one or more of the variables to set the filter. Choose **OK** to activate the filter.

When a filter is set, the box below the column heading will turn red and will display the filter selected. If multiple filter variables have been selected, a row of asterisks will be displayed.

Clearing a Filter

▶ To clear a filter that has been set up:

1. Right-click the column that contains the filter to access the **Context** menu.

2. Choose **Clear Filter.**
Or

1. Double-click the blank box below any column heading. A list of all currently referenced variables for the selected column displays. The selected variables have been selected as filters.

2. Click a selected variable to remove the filter or choose the **Clear** button to remove all filters for the selected column.

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Font Setting Options

Font Overview
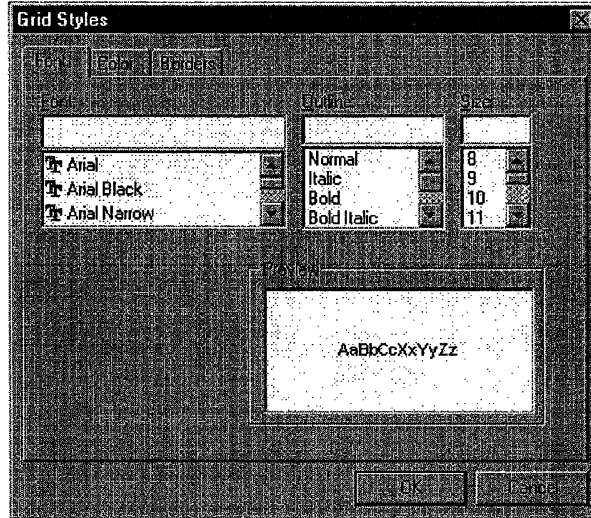
You can change the font, outline, and size of the typeface displayed in your windows:

Changing the Font in Your Workspace

▶ You can change the font, outline, and size of the typeface displayed in your windows:

To change the typeface characteristics:

1. Select the area you want to change or click the top left-hand column heading to select the entire grid.

2. Right-click in the window to access the **Context** menu; if you are using Click Trading, do not click in the bid/ask price columns.

3. Choose **Formatting.**

4. Select the **Font** tab, make your changes, and choose **OK.**

5. Now save your workspace.

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Changing Grid Text and Background Colors

You can add color to text and window backgrounds. Use color to select specific products, contracts, or entire windows. You can also change the color of rows, columns, or individual cells.

► To change grid text and background colors:

1. If you want to apply the same text and background colors to the entire grid for all windows that have buy/sell color-coding enabled, select colors from **Settings menu →
Properties → Color tab.** If you prefer to use different colors for each window, or want only a portion of the grid displayed using the selected color, disable Color Code Buy/Sell for the appropriate window. From **Settings menu → Properties → Fill, Order Book, and/or Audit Trail tabs,** clear the Color Code Buy/Sell checkbox to disable global color-coding.

2. Once you have disabled global color-coding, select the area you want to change, or click the top left-hand column heading to select the entire grid.

3. Right-click in the window to access the **Context** menu; if you are using Click Trading, do not click in the bid/ask price columns.

4. Choose **Formatting.**

5. Select the **Color** tab, make your changes, and choose **OK.**

6. Text colors are displayed on the left palette, while background colors are displayed on the right. Click a color in the displayed palette or click **Other** to see additional colors. You can also create custom colors. The color preview window displays the colors you've chosen.

7. Click **OK** to exit.

8. Now save your workspace.

NOTE: Color-coding for buy/sell is enabled by default. Defaults for color-coding display the Fill window, Order Book, and Audit Trail have Buy orders in blue text, with Sell orders shown in red. As a result, selecting colors using the **Formatting** option is disabled. Although you can select colors, the selected text or background colors will not change. To re-enable the **Context menu Formatting→Colors** option, disable the Color Code Buy/Sell option for the appropriate window in the Properties Dialog Box

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X_TRADER Frame Command Button Bar

Many of the windows within the X_TRADER application have a set of frame command and printing controls at the top of the window. This is located to the immediate left of the standard Windows **Close Window** button. These buttons permit you to control printing functions and sizing options using your mouse.

Using a left click on the buttons will bring about these commands (they are listed in order from left to right as they appear in the graphic above):

Button Command	Action
Print Preview	Brings up the standard Print Preview dialog box. Here you can preview the information to be printed before printing it.
Print	Brings up the Print dialog box. Here you can select your printer and other options, as well as printing the document.
Reset	Resets the window view back to the original (default) size.
Zoom Out	Expands the focus on the active window.
Zoom In	Contracts the focus on the active window.

Resizing a Window Font Using the Frame Buttons

You can quickly resize the window font by using the **Reset, Zoom Out** and **Zoom Out** frame buttons, the last three in the graphic above. Continual clicking on the selected button repeats the zoom action. The **Reset** button sets the window back to its original (default) size.

In certain instances, it is possible to also use the mouse wheel to perform a zoom function. See Using the Mouse Wheel to Control the Zoom feature to see the procedure for this.

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Grid Formatting

Grid Formatting Overview
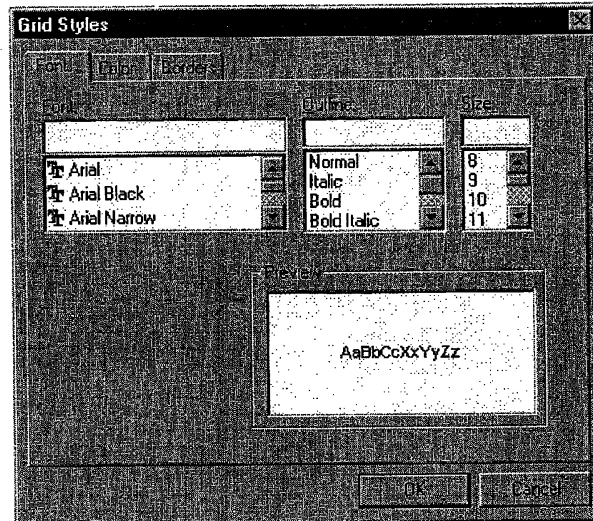
X_TRADER includes a number of useful methods for customizing the look and feel of its component Windows. Any of the links below will take you to specific instructions for altering your workspace environment.

- Changing column and row width
- Hiding and showing columns and rows
- Moving columns and rows
- Using filters
- Changing font type, style, and size
- Changing the color of text and/or grid backgrounds
- Changing the width, appearance, and type of grid borders
- Quick resizing using the Zoom frame buttons

To customize X_TRADER features including such items as default visible grid columns, click trading, quoting, and cross trading, refer to the X_TRADER Properties dialog box.

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Setting the Default Column Selection
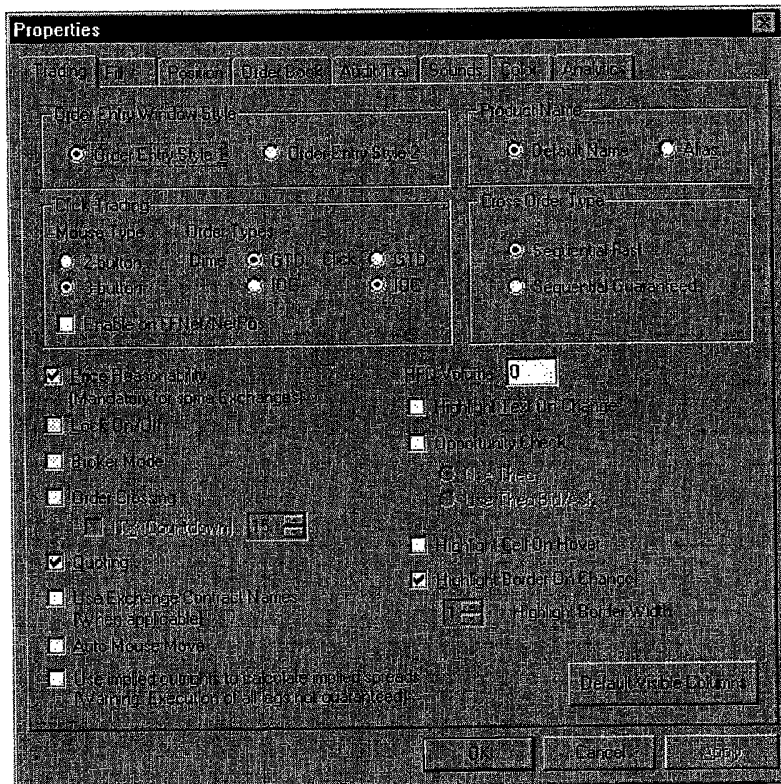
You can use the Properties dialog box. to customize the default columns that display with a new Market Grid, Fill pane, Position pane, Order Book, or Audit Trail.

▶ To set the default column selection using the properties Tab:

1. From the Control Panel, choose Settings → Properties.

2. Select the appropriate tab: (Trading (Market Grid), Fill, Position, Order Book, or Audit Trail).

3. Choose the **Default Visible Columns** button.

4. All checked columns will be visible when you open a new window. Left-click in the boxes to select or de-select the column, and choose **OK** to exit and save.

Moving Columns or Rows

You can customize the order in which the columns and rows are displayed in some windows.

▶ Reorganize your display by using the drag and drop technique:

1. Select the entire row or column with a single click of the column or row title, or select multiple columns or rows.

2. Click and hold the left mouse button on the header and drag the row/column to its new position. The red line indicates where the column or row will be dropped.

3. Release the left mouse button to complete the move.

4. Now save your workspace.

Hiding Rows or Columns

▶ To quickly hide a row or column:

1. Select one or more columns or rows that you want to hide.

2. Right-click a grid cell to access the **Context** menu. Choose **Hide Column** or **Hide Row(s)**.

3. Now save your workspace.

or

1. If you want to customize a single window (for example, for your workspace), select the column(s) or row(s).

2. Move the cursor over one border until the double-headed arrow displays.

3. With the arrow still displayed, hold the left mouse button down while contracting the column/row until it is no longer visible. This automatically de-selects the columns/rows from the Hide/Show Columns/Rows options.

4. Now save your workspace.

Restoring Hidden Rows or Columns

To restore hidden rows, right-click any grid cell in a window to access the window's **Context** menu. Choose **Hide/Show Row(s)** or **Hide/Show Cols,** and select the columns to display. Columns or rows hidden by "sliding the borders closed cannot be restored in the same manner. You must select the row or columns from the **Hide/Show Row(s) or Cols** option.

Changing the Width or Height of one Column or Row

▶ To change the width/height of one column or row:

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1. Select the entire column or row by left clicking the column or row heading.

2. Move the cursor over one of the column or row borders until a double-headed arrow displays.

3. With the double-headed arrow displayed, hold the left mouse button down and move the mouse to expand or contract the width/height.

4. Release the left mouse button when you are satisfied with the width/height of the column or row.

Changing the Width or Height of Multiple Columns or Rows

▶ To change the width/height of multiple contiguous columns or rows:

1. On the left-most or right-most column or row heading, hold the left mouse button down while moving the mouse over the heading of the columns or rows you want to change.

2. Move the cursor over one of the column or row borders until a double-headed arrow displays.

3. With the double-headed arrow displayed, hold the left mouse button down while moving the mouse and changing the width/height.

4. Release the left mouse button when you are satisfied with the width/height. All columns/rows have changed.

Using the Context Menu to Show or Hide Columns or Rows

▶ You can select which columns and rows display by using a **Context** menu option:

1. Right-click in the window you want to customize. If Click Trading is enabled, do not click in the bid/ask price column.

2. Choose **Hide/Show Row(s)** or **Hide/Show Cols** from the Context menu.

3. Left-click in the boxes to select or de-select the column/row, and choose **OK** to exit.

4. Now save your workspace.

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Changing Border Styles

▶ To change the grid border type, select a 3D Effect, and choose a border color:

1. Select the area you want to change or click the top left-hand column heading to select the entire grid.

2. Right-click in the window to access the **Context** menu; if you are using Click Trading, do not click in the bid/ask price columns.

3. Choose **Formatting.**

4. Select the **Borders** tab, make your changes, and choose **OK.**

5. Click **OK** to exit.

6. Now Save your workspace.

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Printing Options

Printing from X_TRADER

Most X_TRADER windows offer Print and Print Preview "frame buttons. These frame buttons are located in the top right-hand corner of the window and are the first two in the row.

If you regularly print data from X_TRADER, you may want to create a workspace that is pre-formatted to display only the information you require. You will format the window only once, save the workspace under a new name, and will not have to change the workspace you use for trading.

▶ To print data from any X_TRADER window:

1. Click anywhere in the pane or window. For example, to print your fills, click in the top **Fills** pane of the Fill window.

2. Choose the **Print** frame button.

3. The **Print** dialog box displays if you have printer services installed through Windows NT*. You can choose a printer, print range, and number of copies, or you can print to a file. Additional print settings are available by choosing the **Properties** button, located to the right of the Printer Name list. The additional print settings include such items as paper size, orientation, and reduction.

4. Choose **OK.**

* Your System Administrator or network support department must have already installed a printer (usually a shared network printer) on your workstation.

NOTE: Using the **Print Setup** dialog box does not save your printing preferences. Each time that you choose the **Print Frame** button, you must reset the print setting (unless the default selection is satisfactory).

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Workspace Options

Workspace Overview
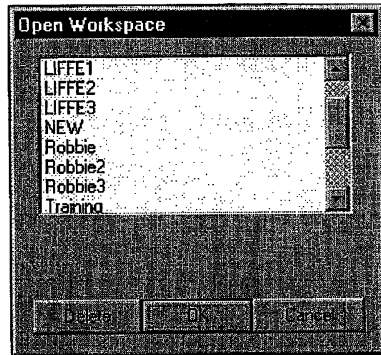
Your X_TRADER workspace is a file that holds a "snapshot of your X_TRADER Desktop. This file records all your open windows, the spatial relationships among those windows, and all customized settings from the time that you last saved the workspace. This includes all open and minimized windows, as well as color, font, column/row sizing, placement, and selection, as well as many other formatting preferences. Create one or more workspaces to fully customize X_TRADER to fit your trading style and environmental requirements.

Multiple Workspace Suggestions:

- Use multiple workspaces to reflect your changing trading environment.

- You can create separate workspaces for different markets.

- If you print reports, you may want to create a workspace that has a preformatted Fill window that prints only specific information.

- You can create as many workspaces as you want. Each one is saved on your workstation's hard drive. These files are retained even if your X_TRADER software is upgraded. Workspace files are saved in a sub directory of <**installation drive>:\TT\X_TRADER\TTConfig**, and are named after your workspace.

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Creating a Workspace

▶ To create a personalized workspace:

1. Before creating your first workspace, you can immediately set your default column preferences via Control Panel Properties dialog box tabsProperties Dialog Box If you plan to set up multiple workspaces, pre-selecting your default columns will save you time.

2. To create you own workspace, decide which products and windows you want open on your Desktop. Your saved workspace will also remember the windows that you minimized. Customize your workspace—adjust such items as window sizing, displayed columns/rows, colors, sounds, and window placement.

3. To save the workspace under the name of your choice: **Control Panel → Save Workspace** button or **File menu → Save Workspace.** You can re-open this workspace at any time in the form in which it was last saved. If you make any subsequent changes, save your workspace.

Warning: Close Market Depth before saving the workspace. Leaving **Market Depth** open may render the feature temporarily inoperable when you reopen the workspace.

Copying a Workspace

You can copy workspaces from one machine to another and save a great deal of set-up time. You can then complete any customization necessary and save the workspace under the current or new name.

Saving a Workspace

▶ To save a new or altered workspace:

Choose the Save Workspace button.

If this is your first workspace, you will be asked to enter a workspace name. If you have already named your workspace, any changes are automatically saved under the same name. The workspace name is displayed in the **Control Panel** title bar.

▶ To save your current workspace under a new name:

1. From the Control Panel, choose File → Save As.

2. In the Save As dialog box, enter the new workspace name and choose OK.

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Opening an Existing Workspace
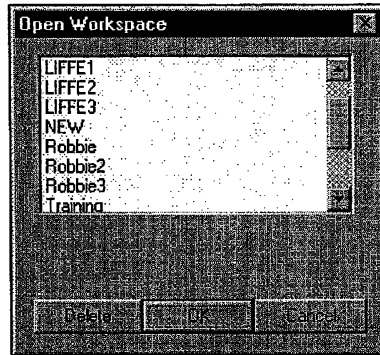
▶ To open a previously saved workspace:

1. Choose the **Open Workspace** button.

2. Select a workspace's name and choose **OK**.

TIP: Save any changes before opening a new workspace or all changes will be lost.

Notes: If any part of a workspace is corrupt, an error message informs you that not all windows could be opened. For example, this may happen if a Market window displays an expired contract. The unopened window is deleted from the workspace, and the message does not reappear. All valid (uncorrupted) windows are still saved under the existing workspace name.

Changing the NT windows display resolution affects the size of the workspace. If you increase the resolution, this results in more Desktop space because such items as window size and fonts appear smaller. If you decrease the resolution, the opposite is true. In this case, you can resize windows and adjust the font size by using the grid formatting options. However, depending on the resolution you selected, you may have to reverse the resolution change to properly display the workspace.

Deleting a Workspace

▶ To delete an existing workspace:

1. From the Control Panel, choose the **Open Workspace** button.

2. Select the workspace you want to delete.

3. Choose **Delete.**

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Trading Technologies Information

Trading Technologies, Inc.

T R A D I N G   T E C H N O L O G I E S

Trading Technologies (TT) is the pioneer in the field of ultra-fast trading software.

Trading Technologies is instrumental in the growth of electronic markets. Most notably, TT provides its software to traders responsible for the vast majority of trading volume at the world's largest electronic derivative exchanges. TT provides several products and related services, and as such is the leader in its market place.

X_TRADER & The X_TRADER Trading System

Trading Technologies offers the fastest, most adaptable interface available for futures, options, bond, and stock trading. X_TRADER offers a fast and safe universal front-end trade and order-input screen.

The X_TRADER Trading System is an integrated software suite offering a wide range of services. Various software modules—including a real-time position manager, a flexible automatic quoting systems, and the fastest order routing system available, complete with pre-execution risk controls—let each user tailor the system's functionality to his needs.

Facilities Management

TT designs and maintains very fast, efficient trading system architecture and international communications solutions for exchanges and trading institutions.

Solutions Consulting

TT makes its expertise available on a value-linked basis to its clients. We provide more efficient, more integrated trading technology to build global solutions that meet our clients' expectations.

Global Perspective

Trading Technologies maintains a worldwide presence, with offices in Chicago, New York, London, and Frankfurt, as well as an office in Tokyo that is scheduled to open in the near future.

Our client list includes many of the world's premier exchanges, money-center banks, securities brokers, and trading institutions, located in major market centers such as Frankfurt, London, Zurich, Geneva, Paris, Hong Kong, Chicago, and New York.

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Internet Home Page

For additional information, visit our Internet home page at
http://www.tradingtechnologies.com

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X_TRADER Trading System

TRADING TECHNOLOGIES

X_TRADER--the world's fastest, most adaptable trading screen.

First-come, first-served electronic trading systems place a premium on reaction time—a product of both human and technological components. Even if you are quick to take the offer or hit the bid, someone with faster technology—or technology that is easier to use—will beat you to the trade.

Trading Technologies' X_TRADER Trading System™ gives you and your customers the best technological edge in the business. Combining universal exchange access, high performance, and full customization, X_TRADER enhances your presence in all the world's open-access electronic markets.

Universal Exchange Access

The X_TRADER interface works with any open-architecture electronic market in the world. You just master the X_TRADER system—not various exchange or proprietary systems—and leave the rest to our software. That huge efficiency alone separates elite traders from the pack.

High Performance

X_TRADER is the fastest, most efficient system for futures, options, stock, bond, and currency trading. The unparalleled graphical user interface features mouse and keyboard trading commands, one-click trading and quoting, and fast pop-up order entry, including the fastest response times around. It is all designed to get your order to market first.

Full Customization

Unlike many trading screens, X_TRADER's flexible, user-friendly trading windows respond to your needs and trading style. Customizable trading tools available in X_TRADER and X_TRADER Extensions include multi-exchange trading windows, order books, fill and position windows, quoting tools, strategy trading windows, market watch trigger windows, auto quoting tools, customer account maintenance, exchange contract maintenance, open APIs for interfacing to in-house and third-party systems, back office interfaces, and much more.

Open Systems Standard

All TT products provide open access to the TT API. The TT Exchange API offers one technology link, one data set, and one protocol— basically one way of talking to many exchanges. This radically reduces the significant cost and technical challenges related to chasing the constant changes of exchanges.

Standard Technical Platforms

TT products are offered on standard platforms. All client component products, such as X_TRADER, are offered on Windows NT (Intel and Alpha). TT API libraries are available on Windows NT, Solaris, and OpenVMS. TT Exchange Server products are available (depending upon exchange) on Windows NT Server, Solaris, OpenVMS, and AIX. This flexible approach to platforms ensures that TT products smoothly integrate with all technical strategies.

Support Services

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Trading Technologies invests heavily in all X_TRADER users, and that investment includes extensive technical support. To keep you trading first, we perform fully secure, remote online diagnostics and maintenance under the supervision of your system administrator, provide helpdesks in Chicago, London and Frankfurt, and maintain a restricted access area of our web site for downloading system upgrades.

Internet Home Page

For additional information, visit our Internet home page at www.tradingtechnologies.com.

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Chicago Office

Trading Technologies' corporate headquarters is located 20 minutes north of Chicago, Illinois.
Trading Technologies is among the fifteen largest software businesses in Chicago, as
published by Crain's Chicago Business.

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New York Office

Trading Technologies' New York office is located in the World Trade Center. Software demonstrations are available at this office or can be held at a location convenient for you.

London Office

Trading Technologies' United Kingdom office is located in the heart of London's "Square Mile". This office maintains full sales, account management, and technical support teams.

Frankfurt Office

Trading Technologies' German office is located in Frankfurt. This office offers sales, account management, and technical support for our European clients.

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Exchange Specific Information/Procedures

Checklist of Exchange Features

The checklist below is intended to help identify features supported by each exchange/marketplace. As a result, a feature may not always be available, or using the feature may result in an Audit Trail error message.

Y (Yes), N (No), or N/A (Not Applicable) indicates that the feature is supported, unsupported, or the category is not applicable, respectively.

The exchange column indicates the features available to X_TRADER users. An unsupported feature may be a limitation of the Exchange API, the TT Gateway, or X_TRADER. Please see your Account Manager if you require additional information about the availability of features. You should also read the Additional Information section for more exchange-specific information.

For **Garban**, refer to Garban Additional Information.

FEATURES	CME	EUREX	LIFFE	MATIF	MONEP	COMMENTS
Miscellaneous						
FFT1 (Acct # / BOF)	Y	Y	Y	Y	Y	1
FFT2 (Free Form Text, Field 2)	Y	Y	Y	Y	Y	2
FFT3 (Free Form Text, Field 3)	Y	Y	Y	Y	Y	3
Orders						
Order Book Sharing	Y	Y	Y	Y	Y	
Order Quantity Reasonability On/Off		N	N			
Order book kept on the trading host		-	-			
Prices						
Settlement Prices provided	Y	N	Y	Y	Y	
Close Prices provided	N	N	Y	N	N	
Last Traded Price/Quantity provided		Y	Y			4
Price Reasonability Switch On/Off	N	Y	N	N	N	5
Price of underlying instruments provided		Y	N			
Fills						
Fast Fills	N	Y	N	N	N	
Trade book kept on the trading host		-				

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Confirmation of Fills		Y	Y			
Quoting						
Quote Creation	N	Y	N	N	N	
Send RFQ	Y	Y	Y	Y	Y	
Receive RFQ	Y	Y	Y	Y	Y	
Crossing						
Intention to Cross (ITX)	N	Y	Y	N	M	
Cross as cross order	Y	N	Y	Y	Y	6
Cross as a single structure w/both legs	Y	N	N	Y	Y	
Crosses matched immediately	Y	Y	Y	Y	Y	
Intention to cross announcement supported for crossing		Y	N			
Intention to cross announcement required		Y	N			
Cross with counter party supported		N	Y			
Spreads						
Spread Creation	N	N	Y	N	N	
Spread type required for creation	N	N	Y	N	N	
Inter-product spreads	Y	N	N	Y	N	
Calendar Spreads	Y	N	Y	Y	N	
N-legged Spreads	Y	N	Y	Y	Y	
2-legged Spreads		N	Y			
Display fills of underlying	N	N	Y	N	N	
Display of spread type	N	N	N	N	N	
Other spreads	N	N		N	N	
Are Implied Out Prices Published		N	Y			
Are Implied In Prices Published		N	N			
Strategies						
Strategy Creation	N	N	Y	N	N	
Strategy type required for creation	NA	N	Y	NA	NA	

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Inter-product strategies	Y	N	N	Y	Y	
Calendar Spreads	Y	N	Y	Y	Y	
N-legged Spreads	Y	N	Y	Y	Y	
Display fills of underlyin	N	N	Y	N	N	
Display of spread type	N	N	N	N	N	
Market Depth	Y	Y	Y	Y	Y	
Order Restrictions						
FOK Market	Y	Y	Y	Y	N	7
FOK Limit	Y	N	Y	Y	Y	
GTC Market	Y	Y	N	Y	Y	
GTC Limit	Y	Y	Y	Y	Y	
GTD Market	Y	Y	N	Y	Y	
GTD Limit	Y	Y	Y	Y	Y	
IOC Market	Y	N	Y	Y	N	
IOC Limit	Y	Y	Y	Y	Y	
MV (Minimum Volume)	Y	N	Y	Y	N	
Stop Limit	Y	N	Y	Y	N	
Stop Market	N	Y	N	N	N	
Disclose Quantity Orders		N				
Change orders		Y	Y			
Account Types						
A1	Y	Y	Y	Y	Y	
A2	Y	Y	Y	Y	Y	
G1	Y	Y	Y	Y	Y	
G2	Y	Y	Y	Y	Y	
M1	Y	Y	Y	Y	Y	
M2	Y	Y	Y	Y	Y	
P1	Y	Y	Y	Y	Y	
P2	Y	Y	Y	Y	Y	
U1	N	Y	Y	N	N	
Tick Size						
Tick size varies by product	Y	Y	Y	Y	Y	

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Tick size varies by strike price	Y	N	N	N	N
Tick size varies by order price	N	Y	N	N	N

Failover

Any process failure (order, fill, price)	N	Y
Order server failure	Y	Y
Price server failure	N	N
Fill server failure	Y	N
Physical server failure (failover to spare machine)	Y	N
Disconnect btw XT and GW	N/A	N/A
Disconnect btw GW and trading host	N/A	N/A

Exchange-Specific

Alias of product names	Y
Trader Handoff	N
Partial Fills of IOC Orders	Y
Partial Fills of Deleted Orders	N

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[1] CME-8 char to Clearing Firm field

[2] CME-8char to Trd Ord # field

[3] CME/MONEP-18 char Memo field

[4] Both are provided

[5] Exchange enforces order price reasonability; CME/MATIF-enforced check

[6] vs. 2 orders

[7] Eurex = N/A for futures

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Checklist of CBOT Exchange Specific Features

Type	Feature	Supported by Exch. API	Supported by TT CBOT GW 5.2.3	Comments
Misc	FFT1 (BOF)	Y	Y	12 chars in length, natively supported
	FFT2	Y	Y	12 chars in length, natively supported
	FFT3	Y	Y	12 chars in length, natively supported
Prices	Settlement price provided?	Y	N	Provided in the BOF feed, but make visible in the price feed and therefore visible in XT GUI.
	Close prices provided?	Y	N	Provided in the BOF feed, not visible in the price feed and therefore not visible in XT GUI.
	Last traded price/quantity provided?	Y	Y	
	Price Reasonability switch on/off	Y	Y	
	Price of underlying instruments provided?	Y	Y	
Fills	Fast Fills	Y	Y	
	Trade book kept on the trading host?	Y	-	
	Confirmation of Fills	N	Y	Fill confirmations are processed only by the GW and not reported to the exchange. The common GW code allows for the account number (FFT1) can be edited when confirming a fill. All traders in the trading group will receive the updated fill in their Fill Window when it is confirmed/edited. The edited fill, however, is not reported to the exchange so that the BOF feed (trade reports) from the market will not match the fill feed from the GW if a trader has edited a fill upon confirmation.
Quoting	Quote creation?	Y	Y	
	Send RFQ	Y	Y	Available with Values API.
	Receive RFQ	Y	Y	
Crossing	Intention to cross announcement supported for crossing?	Y	Y	Available with Values API. Must be sent prior to entering a cross order. The amount of time before which you enter your cross order varies for

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	Intention to cross announcement required?	Y	Y	Available with Values API. Must be sent prior to entering a cross order.
	Crosses as single-structure cross order (ie single structure that contains both sides of cross)?	N	N	Crosses in Eurex are submitted as two orders. A delay is required after sending in the cross announcement.
	Cross with counter party supported?	N	N	
	Crosses matched immediately?	Y	Y	The two sides of a cross order are now submitted (sent) to the market in one of two ways: **Sequential Fast:** the two sides of the orders are submitted as quickly as possible (through multiple order routers if necessary) **Sequential Guaranteed:** the second side is not submitted until an acknowledgement is received from the first side. The switch to control this is on the Properties sheet of XT GUI.
Spreads	Spread creation?	N	N	
	Spread type required for spread creation?	N	N	
	Inter-Product Spreads?	N	N	
	Calendar Spreads?	N	N	
	2-legged spreads?	N	N	
	N-legged spreads	N	N	
	Display fills of underlying contracts?	N	N	
	Display of spread type?	N	N	
	Other spreads?	N	N	
	Are Implied Out Prices published?	N	N	
	Are Implied In Prices published?	N	N	
MarkeDepth	Market Depth	Y	Y	Limited to 10 deep - imposed by Eurex API. For all options and spreads, orders entered below the top of the book are not reflected in market depth automatically. You must manually open/close depth to get the

futures and options, per Eurex.

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				updates. Each time you turn on/off MD, the GW sends an inquiry to the market to get the latest depth. Doing this can be a "chargeable" action, meaning the exchange can charge you money for doing this too often.
Orders	Order book sharing	Y	Y	
	Order Inquiry	N	N	
	Order Quantity Reasonability on/off	N	N	
	Order book kept on the trading host?	Y	-	
	FOK Market	Y	Y	Supported, but only for options (not futures). For *any* market order to trade, the best bid or ask against which the order would match must be within five ticks of the last traded price. If this is not true, the order goes into the OB as a Market order, no price. Note that an order sent into the market with a zero price, the order will be translated (forcibly by Eurex) to a market order, regardless of the order restrictions entered in XT (e.g. GTD Limit).
	FOK Limit	N	N	
	GTC Market	Y	Y	
	GTC Limit	Y	Y	
	GTD Market	Y	Y	
	GTD Limit	Y	Y	
	GTDate Market			
	GTDate Limit			
	IOC Market	N	N	
	IOC Limit	Y	Y	
	MV	N	N	
	Stop Limit	N	N	Not valid for options at all. (neither stop limit or stop market).
	Stop Market	Y	Y	Only valid for futures and futures spreads.
	Disclose Quantity Orders	N	N	
	Change Orders	Y	Y	Decreasing qty at the same price keeps your place in the queue and your order number remains the same.

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				Increasing the quantity, or changing the price at all, will cause you too move to the back of the queue and give you a new order number (it's a cancel replace). A race condition exists that causes the change to fail if the order is getting filled while change is on it's way to the host.
Accounts	A1	Y	Y	CTI set to 4, Origin set to 1, fft2[0] must be set to a fee (M, E, or C)
	A2	N	Y	Not supported
	G1	Y	Y	CTI must be set to 3, and Origin set to 1
	G2	Y	Y	CTI set to 4, Origin set to 1, fft2[0] must be set to a fee (M, E, or C)
	M1	Y	Y	CTI must be set to 1, and Origin set to 1
	M2	Y	Y	CTI must be set to 2, and Origin set to 2
	P1	Y	Y	CTI must be set to 1, and Origin set to 1
	P2	Y	Y	CTI must be set to 2, and Origin set to 2
	U1	N	Y	Mapped to A1 (same as A1).
Tick Size	Tick size varies by product?	Y	Y	
	Tick size varies by strike price?	N	N	
	Tick size varies by order price?	Y	Y	
Messages	Accept			
Process Info	Number of Order Routers			One Order Router for every 10 traders. All orders for one trader routed through the same connection.
Failover	Any process failure (order, fill, price)	n/a	N	
	Order Server failure	n/a	Y	Working orders are retrieved from the user device when the order server reinitializes. Thus, there is no need to write working orders to disk. The Eurex fill feed is also checked to see if any of these orders were filled in the time the order server was down,

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				because there is no inquire on open orders supported in the Eurex API.
	Price Server Failure	n/a	N	If the price server fails, it will be restarted by the Admin Console but in the interim, no price updates will occur.
	Fill Server Failure	n/a	Y	Fills are received by the fill server directly from the Eurex API. The Eurex API does provide historical fill information so in the event of a fill server crash and restart, all fills are received from the Eurex user device.
	Physical Server Failure (failover to spare machine)	n/a	Y	This is supported for the TT Eurex GW as the order book is synchronized, on the fly, between the primary and secondary TT Eurex GWs. This does require that both user devices must by Eurex BOF nodes and the Eurex BOF feeds between them must be synchronized by Eurex.
	Disconnect btw XT & GW	n/a	n/a	Unlike UD, MISS validates logins at a trader level. However, the Eurex MISS GW (and TTAPI/XT) do not support a trader level logout. So if communication btw XT and the GW is lost, or if XT is closed, the trader remains logged in until the GW restarts. If a trader logs out, all orders remain working and any missed fills can be retrieved upon logging. All still-in-force orders, such as GTC, are retrievable upon reconnect.
	Disconnect btw GW & trading host	n/a	n/a	If communication btw the GW and the trading host is lost, all orders remain working and any missed fills can be retrieved upon logging. All still-in-force orders, such as GTC, are retrievable upon reconnect.
Exchange Specific	Connection to trading host			There can be a delay in the first order sent by each trader each day. This is because the order router must establish a connection with the trading host and authenticate the trader on the first order. Thus, the "order routing" time (time from GW to trading host and back) is longer for first orders.

CBOT Specific Information

The TT CBOT Gateway supports essentially the same features as the EUREX gateway, with some specific differences:

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- The FFT1 field must contain the customer number.

- The FFT2 field requires a four digit CTI for the order.

- The Tick increments for the CBOT are different, since the traded fractions on the CBOT are measured in increments of 4/32nds.

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CME/MOTIF/MONEP Specific Information

You should also read the Checklist of Exchange Features topic for additional exchange-specific information.

- **Threshold prices for MATIF and MONEP** are the upper and lower price reasonability limits established by the exchange. If trading occurs outside the thresholds, the exchange will cease trading for the product. A frozen market requires manual release by the exchange.

- **Strategies:** The CME does not provide fill information on spread legs. However, the TT Gateway will synthetically determine leg fills from the previous day's settlement prices. As a result, the process of each leg may not be exact, but the resulting price will be accurate.

- **Bundle Fill Notification:** Since the CME does not support leg fills, bundle fills will receive an Audit Trail fill notification with the strategy name, but no Fill window notification will be received.

- **Tick Size:** Both exchanges have tick sizes that vary by strike price for certain products. As the price moves closer to or farther away from the market price, the tick size varies. The TT CME or MATIF Gateway will dynamically send the correct tick size to your workstation. However, as a result of the changing tick size, a popup message warning you of an invalid tick table for the product may appear. It is safe to disregard these messages; the pricing will work accurately.

- **CME Customer Defaults Account #, FFT2, and FFT3 fields:** The Account # field maps to the CME's 8-character Clearing Firm field. The FFT2 (Free Form Text #2) field indicates the fee structure when fee codes are entered (B, C, E, H, L, or M). The FFT3 fields maps to the 18-character Memo field.

- **Changing the Account # of a Working Order:** Cancel/Replace must be used to change the Account #. A new order number is assigned, and the order goes to the end of the queue.

- **The CME allows for access of trading customers through direct members.** X_TRADER considers these to be proxy traders (TTORD users). However, at the CME, these traders are given direct and unique member group trader IDs so that they can directly access the trading host. Therefore, they do not use the TTORD proxy login ID. The only difference between a direct member and an Order Routing client for the CME is that the Order Routing clients have limited access to market depth. There are three types of clients for the CME:

    1B: These traders have access only to the top of the host Order Book and can see only the best bid and ask.

    5B: These traders have limited access to the host Order Book and can see only five levels of market depth.

    FB: These clients can see the full market depth in the host Order Book.

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EUREX Specific Information

You should also read the Checklist of Exchange Features topic for additional exchange-specific information.

- **Eurex GTC orders** do not reappear in the Order Book the following day if the order has not been filled. The order is still in queue with the Host (Eurex), but their API does not resend GTC orders so that they may be viewed via the Order Book.

- **Orders sent using Eurex's native software ("green screens)** appear in the X_TRADER Order Book if Order Confirmation data has been requested from Eurex.

- **Market Depth:** Eurex can list a maximum of 10 next best bid/ask prices.

- **Eurex Cross Orders** are sent as two separate orders as opposed to a single structure that contains both legs.

- **FOK Market Order Restriction** is not available for Eurex Futures.

- **Changing the Account # of a Working Order:** You can use the Order Book Change/Replace button to substitute an Account #. However, the exchange handles the request in the same manner as a Cancel/Replace request. The order will receive a new order number, and its place in queue is lost.

- **Stop Orders:** Stop Limit or Stop Market orders are not valid for options.

- **Orders entered below the top of the book:** For all options and spreads, orders entered below the top of the book are not automatically reflected in market depth. You must manually open or close market depth to get the updates. However, be aware that this can be a "chargeable action, meaning that the exchange can charge you a fee for doing this too often.

- **For a market order to trade** the best bid or ask against which the order would match must be within five ticks of the last traded price. If this is not true, the order enters the Order Book as a Market Order, no price.

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LIFFE Specific Information

You should also read the Checklist of Exchange Features topic for additional exchange-specific information.

- **Products Available in the United States:** In accordance with CFTC regulations, LIFFE is obliged to restrict trading access to a subset of the current contracts available over the LIFFE CONNECT™ system.

- **As of December 7, 1999, the following products are available to U.S. traders:** Long Gilt (R), 5 Year Gilt (H), FTSE 100 Index (Z), FTSE 250 Index (Y), Euroswiss (S), Short Sterling (L), Euribor (I), Euro Libor (C), BTP (X), BUND 5 Year (B), JGB (N), Euroyen LIBOR (T), and Euroyen TIBOR (J).

- **The following contracts are listed on LIFFE CONNECT for futures but are not available to U.S. traders (CFTC approval is pending):** FTSE Eurobloc 100 Index, FTSE Eurotop 100, FTSE Eurotop 300 Index, FTSE Eurotop 300 UK Index, FTSE Estars Index, MSCI Pan-Euro Index, and MSCI Euro Index.

- The above information may change based on CFTC actions and LIFFE CONNECT offerings. You can obtain the most recent information from your LIFFE CONNECT account manager.

- **WARNING:** The manner in which U.S. orders for unavailable products are handled by the LIFFE CONNECT host places the burden of knowledge on the trader. When a trader attempts to trade a product not offered to the US, the order is ignored by the LIFFE CONNECT host. However, the host does not respond with an error message. As a result, X_TRADER cannot notify a trader of the error.

- **Strategies:** LIFFE supports the creation of the following strategy types: bundle, butterfly, calendar, condor, and pack. The strategy must conform to LIFFE's definition or it will not be created. Refer to LIFFE's Member Services or its Internet site (www.liffe.com) for further information.

- **Implied Prices:** Implied Out Prices of outrights based on the price of a strategy that contains the outright are provided by LIFFE and are displayed in the Implied Bid and Ask columns. Implied In Prices of strategies based on the prices of outrights are not provided by LIFFE. You can link an Excel spreadsheet to the Market Grid to calculate these prices.

- **GTC Orders:** If GTC orders are filled by the exchange overnight, the LIFFE trading host does not send a notification. As a result, the GTC order will remain in the X_TRADER Order Book the next day.

- **IOC Orders:** Fill information provided by the LIFFE API may not be accurate for IOC orders. This is a known weakness of the LIFFE API and issues should be addressed with LIFFE Member Services.

- **Settlement Prices:** This information is provided by LIFFE at 4PM each trading day. These prices are listed in the Close columns of various X_TRADER windows.

- **Closing Prices:** This information is provided by LIFFE at 6PM each trading day

- **Changing the Account # of a Working Order:** If only the Account # is changed, you must use the Cancel/Replace button. When changing the price and/or quantity **in addition** to changing the Account #, you can use the Change button. In both cases, the place in queue is lost. However, the order number is retained.

- **X_TRADER Order Book Inquire feature:** LIFFE does not support this feature

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- **"It is recommended that users do not attempt to log in using lower case for their ITM,** per LIFFE CONNECT (September 1999). **Note:** Excluding the password, X_TRADER automatically ensures that login information is entered using uppercase letters.

- **Stop Market Orders:** Stop Market orders are not implemented in the LIFFE gateway.

- **Stop Limit Orders:** Stop Limit orders are implemented in the LIFFE gateway synthetically. In other words, Stop Limit orders are not actually in the market, even though they display as Active in the Order Book. They are instead triggered by the price for that instrument. Order Entry Field Descriptions has further information about LIFFE and Stop Limit orders.

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XETRA Specific Information

You should also read the Checklist of Exchange Features topic for additional exchange-specific information.

- No Partial/Final fill indicator is provided. Therefore, this value is left blank in the X_TRADER Fill window.

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