



Expected Opening Price and Expected Opening Size

User's Guide

Version 1.0

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Change Notices

The following change notices are provided to assist users of the CBOE[®]direct[™] screen-based trading system in determining the impact of changes to their processing.

If you have any questions or review comments about this document, please contact Odalys Castro at (312) 786-8817.

Date	Version	Description of Change
8/18/06	1.0	New document.

Table of Contents

Table of Contents	3
Introduction	4
Purpose.....	4
Intended Audience	4
Conventions Used in this Guide.....	4
Screen-Based Trading	5
Getting Started	6
Login	6
Monitor Opening Imbalances	8
Select the Post / Station to Monitor	8
EOP Message Types	11
Purge and Auto-Purge	11
Manual Purge.....	12
Auto-Purge	12
Print.....	13
Save Preferences.....	13
Configure the EOP/EOS Display	14
Filter EOP Message Types	14
Edit Table Preferences.....	17
Column Arrangement.....	18
Display Specifications	20
Display Color Options	20
Sizing Windows.....	24
Open Console Window	25
Exit the System	26
Exit the System	26


Introduction

Purpose This document was written to assist users in utilizing the Expected Opening Price (EOP) and Expected Opening Size (EOS) features of the CBOE[®]direct[™] screen-based trading system. The EOP/EOS system displays expected opening price and size data to allow you to monitor opening imbalances in the market.

Intended Audience This user guide is intended for any person interested in CBOE[®]direct[™]'s EOP/EOS functions.

Conventions Used in this Guide The system was designed so that you can monitor the opening price and size activity from a standalone application. Some fields are sensitive to both right and left mouse clicks. Window control functions can also be activated by using keyboard commands. There are several conventions used throughout this guide to help trigger important information:

Bolding Used to highlight menu selections (e.g., **Login**) and button names (e.g., **Update**)

 **Note:** This notation is used to indicate important information you should note when performing the associated function.

Brackets [] Used to highlight keyboard commands (e.g., [Alt]-[T]). Note that when [Alt] or [Ctrl] are used in conjunction with another key, hold down the first key while pressing the second.

Some button functions can be executed through keyboard commands. Hold down the [Alt] key and press the keyboard character of the underlined letter in the command. For example:

[Alt]-[R] Restores an active window



This mouse graphic with the right mouse button highlighted will appear in the margin when accompanying instructions relate to functions activated by clicking the **right** mouse button.

All other mouse commands (such as double clicking to display a window) refer to a normal left mouse click.

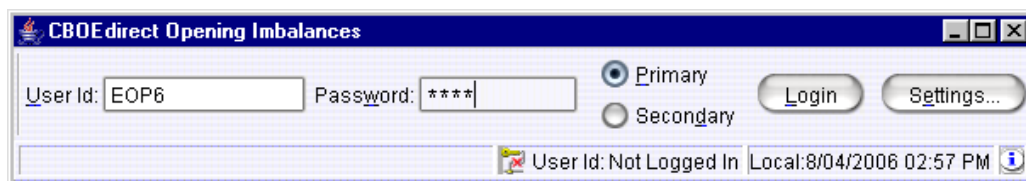


Screen-Based Trading

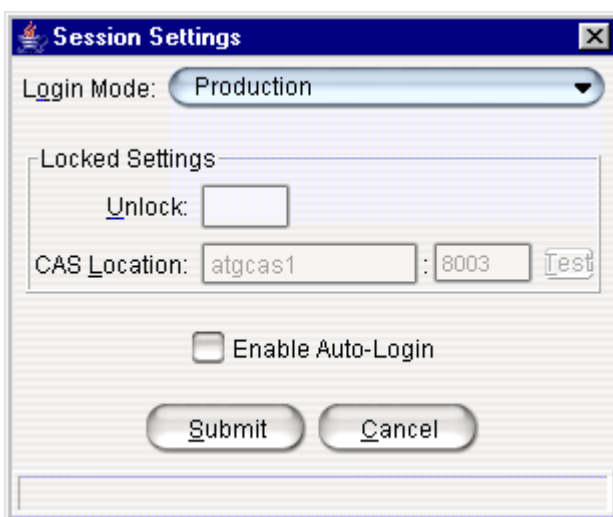
This user's guide will direct you through all the EOP/EOS functions for CBOE*direct*.

Getting Started

When you launch the EOP/EOS application, the following login window will display.

The screenshot shows the 'CBOEdirect Opening Imbalances' login window. It has a title bar with the application name and standard window controls. The main area contains a 'User Id' field with 'EOP6' entered, a 'Password' field with '****', and two radio buttons labeled 'Primary' (selected) and 'Secondary'. There are 'Login' and 'Settings...' buttons. At the bottom, a status bar shows 'User Id: Not Logged In' and 'Local: 8/04/2006 02:57 PM'.

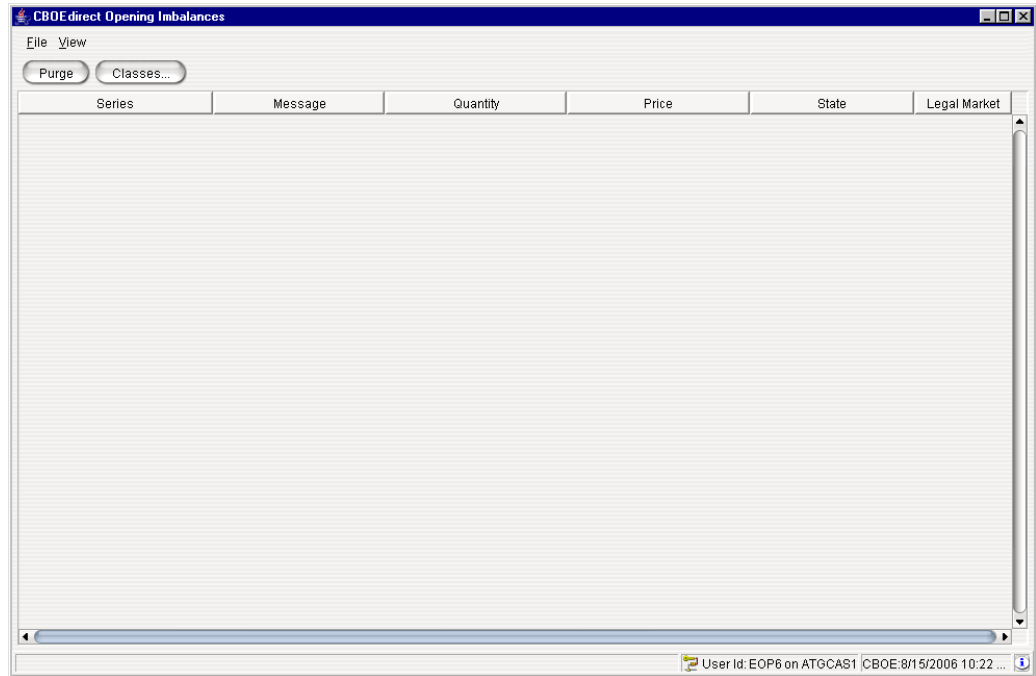
Login Enter your User ID and Password. Both User ID and Password are case sensitive. Select your login as Primary by clicking the appropriate radio button. Click **Settings**, to change your login mode. The Session Settings window will display.

The screenshot shows the 'Session Settings' window. It has a title bar with the window name and standard window controls. The main area contains a 'Login Mode' dropdown menu set to 'Production'. Below it is a 'Locked Settings' section with an 'Unlock' field. The 'CAS Location' is set to 'atgcas1' and '8003', with a 'Test' button next to it. There is an 'Enable Auto-Login' checkbox which is unchecked. At the bottom are 'Submit' and 'Cancel' buttons.

Select your **Login Mode** setting from the drop down list, click **Submit, Confirm**. If you decide you do not wish to change your login mode, click **Cancel**. The system will return to the menu window. Click **Login**.

To change your CAS location, enter your password in the **Unlock** field and enter the new **CAS location**. Click **Test** to check your setting. Click **Submit**. If you decide you do not wish to change your login mode, click **Cancel**. The system will return to the menu window.

Click **Login**. The **CBOEdirect Opening Imbalances** window will display.



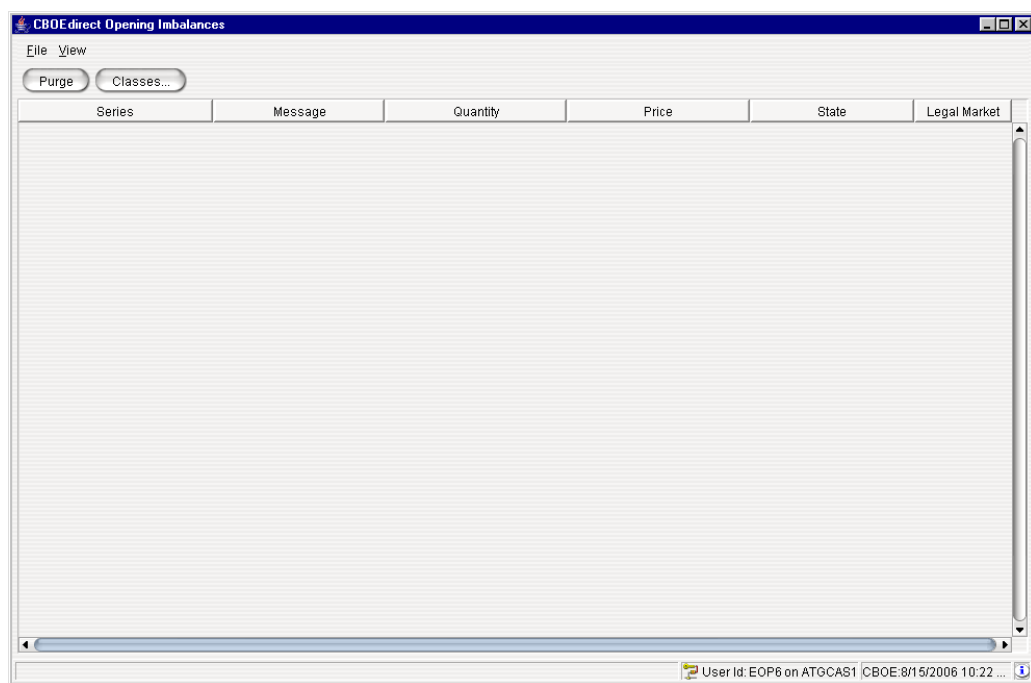
You are now ready to monitor opening price and size imbalances.

Monitor Opening Imbalances

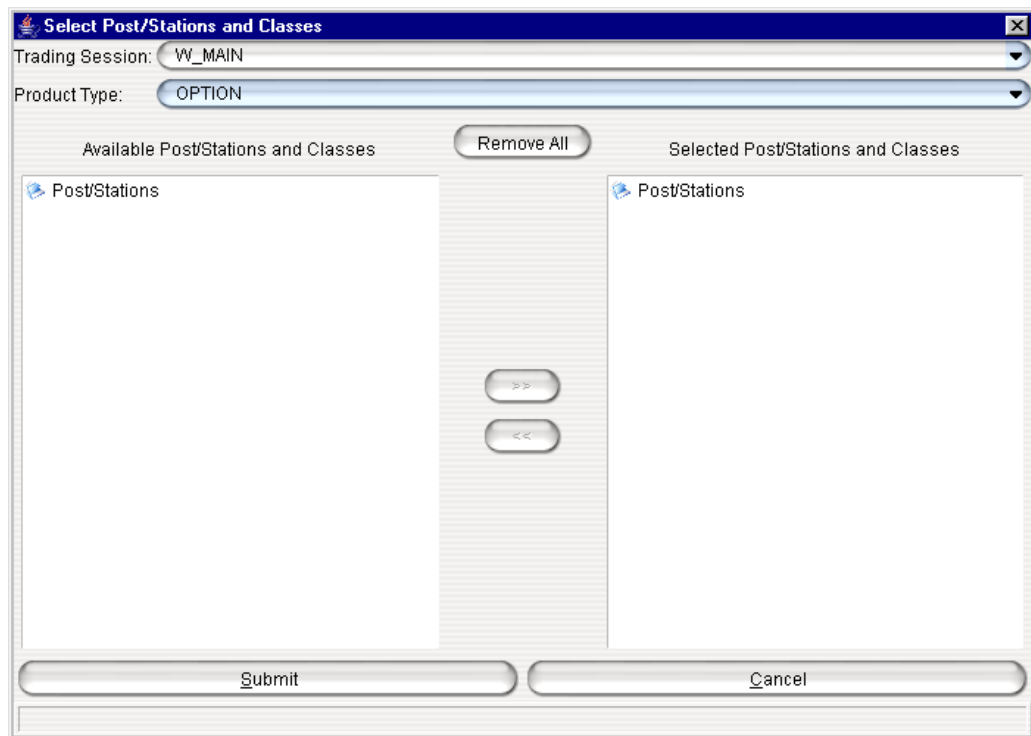
The EOP/EOS system displays expected opening price and size data to allow you to monitor opening imbalances in the market.

Select the Post / Station to Monitor

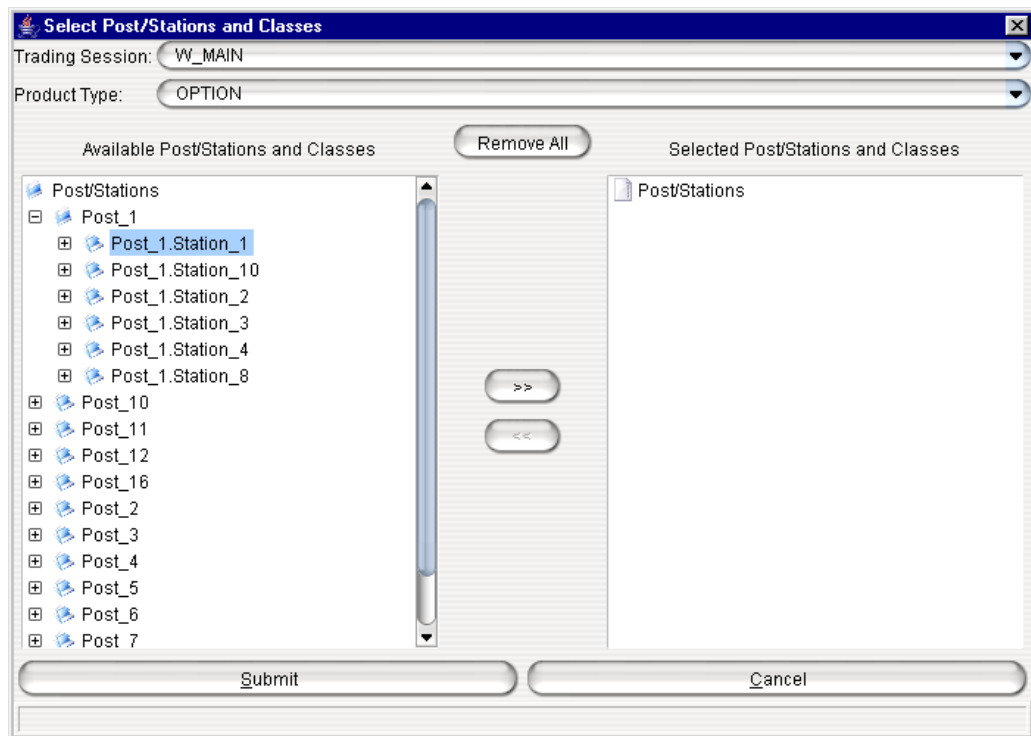
To begin monitoring opening imbalances in the market, you must select which Post/Stations or classes to monitor. The selection is made through the **CBOEdirect Opening Imbalances** window.



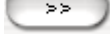
Click on the **Classes** button, or choose **Select Classes...** from the **View** menu. The following window will display.

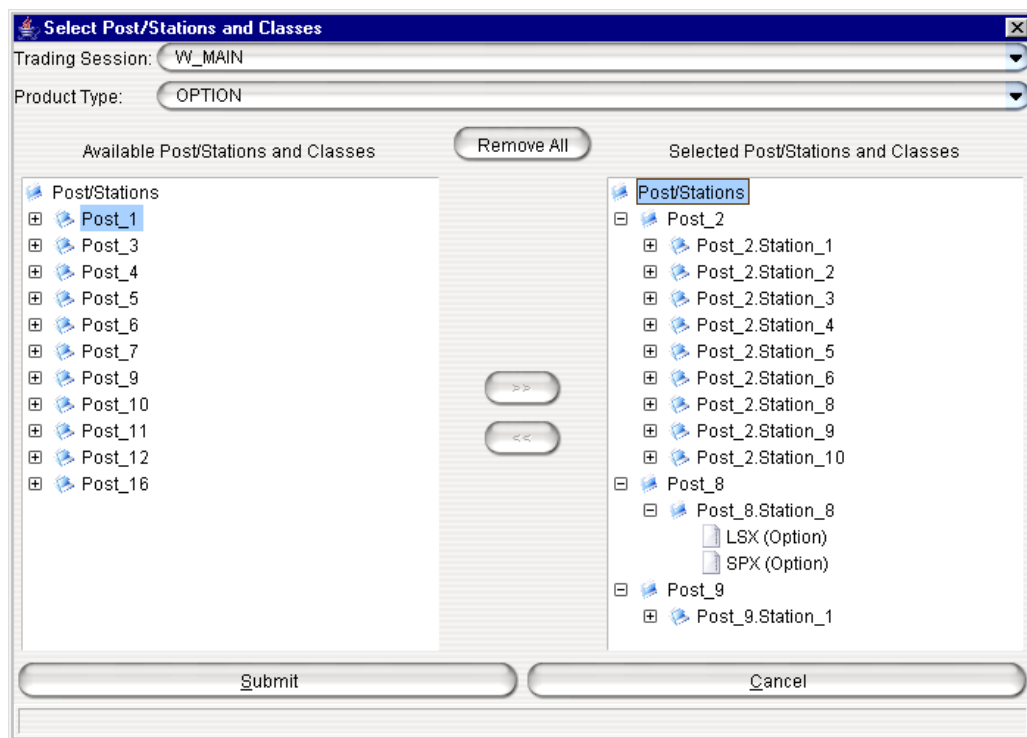


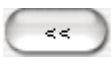
- Select the Trading Session and Product Type from the drop down lists.
- Double-click on the **Post/Stations** directory to display the list of available Post/Stations and related classes. The following window will display.



- Highlight the **Post/Stations** or individual classes you wish to monitor for opening imbalances. To highlight multiple Post/Stations or classes, hold down the Shift key on your keyboard and click on each selection. In the example above, all of **Post_1Station_1** is highlighted.

- Click the double arrow  to move the Post/Station to the **Selected Post/Stations and Classes** list box.

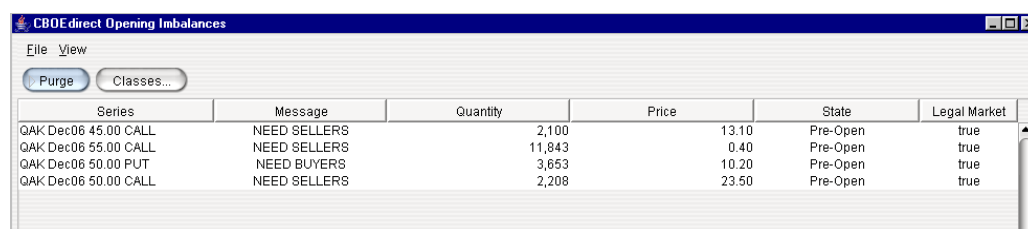


- To remove your Post/Station selection, highlight the Post/Station from the **Selected Post/Stations and Classes** list box.
- Click . Your selection will be moved back to the **Available Post/Stations and Classes** list box.
- If you wish to cancel your entire selection and return to the **CBOEdirect Opening Imbalances** window, click **Cancel**.
- To submit your selection, click **Submit, Confirm**. The system will return to the **CBOEdirect Opening Imbalances** window displaying opening imbalances for the series in the selected Post/Stations.

Series	Message	Quantity	Price	State	Legal Market
QAK Dec06 45.00 CALL	NEED SELLERS	2,100	13.10	Pre-Open	true
QAK Dec06 55.00 CALL	NEED SELLERS	11,843	0.40	Pre-Open	true
QAK Dec06 50.00 PUT	NEED BUYERS	3,653	10.20	Pre-Open	true
QAK Dec06 50.00 CALL	NEED SELLERS	2,208	23.50	Pre-Open	true

EOP Message Types

The **CBOEdirect Opening Imbalances** table provides descriptive opening messages to be used by Market Makers to send in valid/tradable quotes at the open.



Series	Message	Quantity	Price	State	Legal Market
QAK Dec06 45.00 CALL	NEED SELLERS	2,100	13.10	Pre-Open	true
QAK Dec06 55.00 CALL	NEED SELLERS	11,843	0.40	Pre-Open	true
QAK Dec06 50.00 PUT	NEED BUYERS	3,653	10.20	Pre-Open	true
QAK Dec06 50.00 CALL	NEED SELLERS	2,208	23.50	Pre-Open	true

Below are descriptions of the available message types that appear in the **Message** column:

NEED BUYERS: This EOP message type indicates that the current market is imbalanced and will need more buyers' contracts (n) at the opening price. The EOP message will provide users with the potential opening price (bid price) and the imbalanced quantity (n).

NEED SELLERS: This EOP message type indicates that the current market is imbalanced and will need more sellers' contracts (m) at the opening price. The EOP message will provide users with the potential opening price (ask price) and the imbalanced quantity (m).

DPM QUOTE INVALID: This EOP message type indicates that the DPM quote is invalid.

MULTIPLE OPENING PRICES:

 **Note:** This message type is not currently supported

NO OPENING TRADE: This EOP message type indicates there is no opening trade available.

PRICE NOT IN BOTR RANGE: This EOP message type indicates that the potential opening price is not in the valid Best of the Rest (BOTR) range based on the current BOTR price, current potential opening quantity and the system configuration. The EOP message will provide users with the potential opening price and opening quantity.

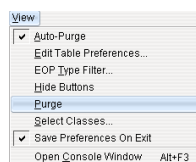
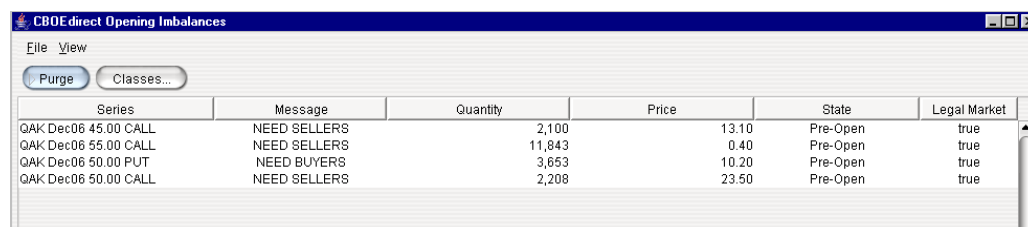
PRICE NOT IN QUOTE RANGE: This EOP message type indicates that the potential opening price is not in the valid quote range.

NEED DPM QUOTE TO OPEN: This EOP message type indicates that a DPM quote is needed to open the series.

NEED QUOTE TO OPEN: This EOP message type indicates that a valid quote is needed to open the series.

Purge and Auto-Purge

You can setup your display to auto-purge data or you can manually remove data during your monitoring session.

Series	Message	Quantity	Price	State	Legal Market
QAK Dec06 45.00 CALL	NEED SELLERS	2,100	13.10	Pre-Open	true
QAK Dec06 55.00 CALL	NEED SELLERS	11,843	0.40	Pre-Open	true
QAK Dec06 50.00 PUT	NEED BUYERS	3,653	10.20	Pre-Open	true
QAK Dec06 50.00 CALL	NEED SELLERS	2,208	23.50	Pre-Open	true

➤ **Manual Purge**

A manual purge can be performed when the product is in “Open” state. As soon as the product’s state changes to “Open”, the row is grayed out, but it remains in the table until a purge is performed.

To immediately remove all “Open” rows from your display, click on the **Purge** button or select **Purge** from the **View** menu.

➤ **Auto-Purge**

When enabled, auto-purge occurs every 30 seconds. It will remove all rows that have a product state of “Open”, only if there are currently too many rows in the table to fit in the window. If there are one or more product state “Open” rows, but all the rows are visible without having to scroll down, the “Open” rows will remain in the table.

To set the Opening Imbalances window to auto-purge, click on the **Auto-Purge** option in the **View** menu. A checkmark will appear in front of the **Auto-Purge** option, enabling the feature.



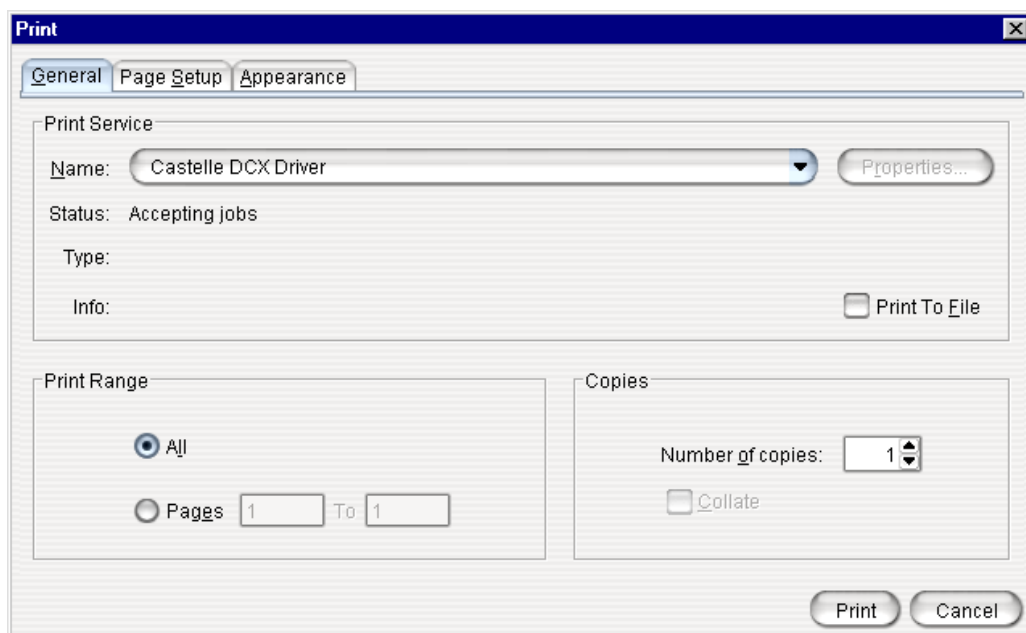
You can customize your window by selecting or deselecting specific columns to display and by changing your display color. To customize your display, right mouse click on a data row. Select **Edit Table Preferences**. The Edit Column Preferences window will display.

For detailed information, refer to the Edit Table Preferences section, page 17.

Series	Message	Quantity	Price	State	Legal Market
NOK Oct06 15.00 CALL	NEED BUYERS	5	4.10	Pre-Open	true
NAY Oct06 20.00 CALL	OPENING PRICE	10	1.20	Pre-Open	true
NOK Oct06 7.50 CALL	OPENING PRICE	100	5.00	Pre-Open	true
NOK Oct06 17.50 CALL	OPENING PRICE	45	1.90	Pre-Open	true

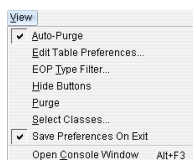
Print

You have the ability to print your table display at any time. Right mouse click on a data row and select **Print Table**. The **Print** window will display.



- To print your display, set your print options and click **Print**.
- If you decide not print the display, click **Cancel**.

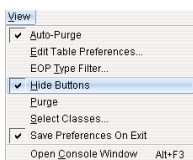
**Save
Preferences**



If you want the system to save your changes and automatically open the window with your customized defaults, be sure to save your configuration.

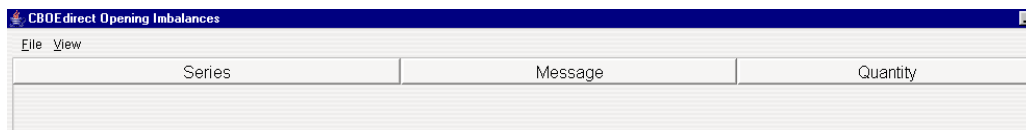
From the **View** menu, click **Save Preferences on Exit**. A checkmark will appear in front of the option, enabling the feature. Setting the **Save Preferences on Exit** feature will prevent you from losing any configuration changes you make while you are monitoring opening imbalances. At exit, the system will save your configuration and make it available at your next login.

To save your preferences periodically, as you configure your display, click **File, Save Preferences**.



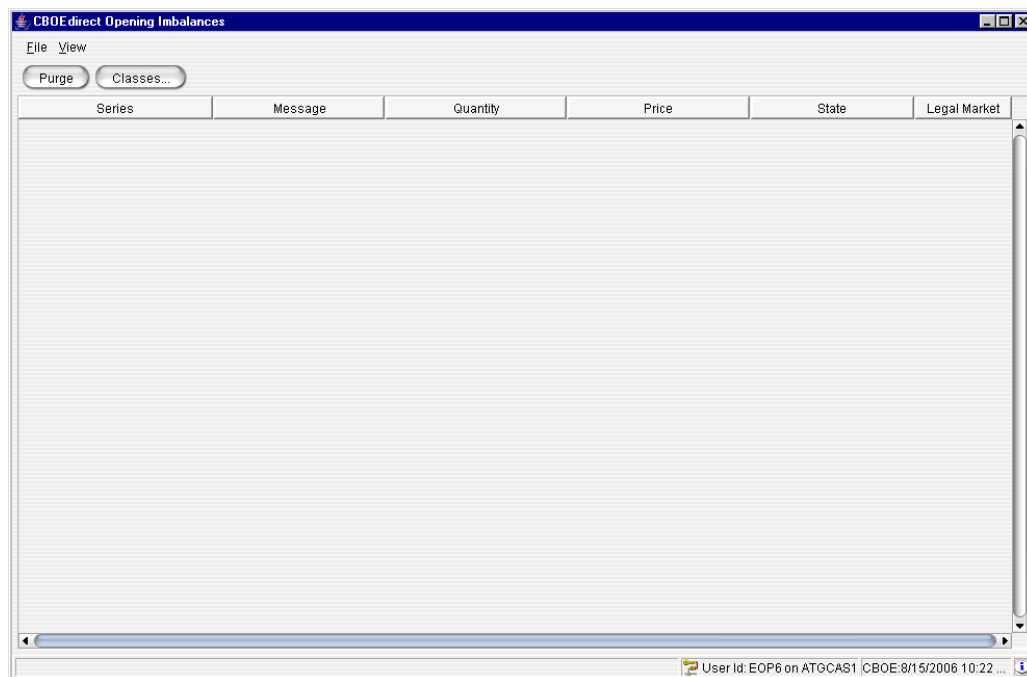
You can expand the view of the CBOEdirect Opening Imbalances window by hiding the **Purge** and **Classes** buttons.

From the **View** menu, select the **Hide Buttons** option. A checkmark will appear in front of the selection and the CBOEdirect Opening Imbalances window will display without the buttons.



Configure the EOP/EOS Display

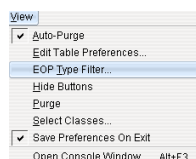
The **CBOEdirect Opening Imbalances** window is configurable. You can set it to your specifications to monitor opening imbalances in the market.

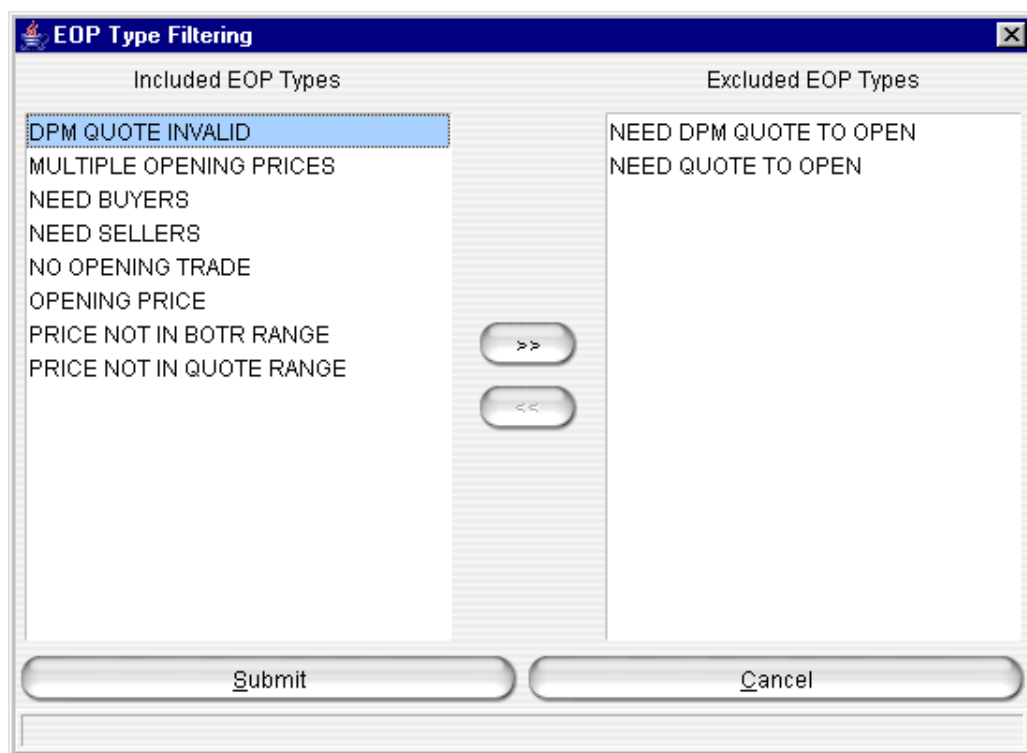


Filter EOP Message Types

The EOP/EOS system allows you to select which EOP message types you wish to monitor for opening imbalances.

From the **View** menu, select **EOP Type Filter** or hold down the **[Alt]-[T]** keys to display the **EOP Type Filtering** window.

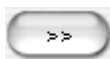




The EOP messages type available for monitoring are displayed in the **Included EOP Types** list box.

↳ **Note:** The message types: NEED DPM QUOTE TO OPEN and NEED QUOTE TO OPEN are excluded by default but can be included as EOP types to monitor.

To exclude additional EOP types from your display:

- Highlight the EOP type from the **Included EOP Types** list. In the example above, the DPM QUOTE INVALID message is highlighted.
- Click . The message type will be moved to the **Excluded EOP Types** list.

EOP Type Filtering

Included EOP Types

- MULTIPLE OPENING PRICES
- NEED BUYERS
- NEED SELLERS
- NO OPENING TRADE
- OPENING PRICE
- PRICE NOT IN BOTR RANGE
- PRICE NOT IN QUOTE RANGE

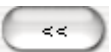
Excluded EOP Types

- DPM QUOTE INVALID
- NEED DPM QUOTE TO OPEN
- NEED QUOTE TO OPEN

>>

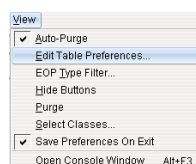
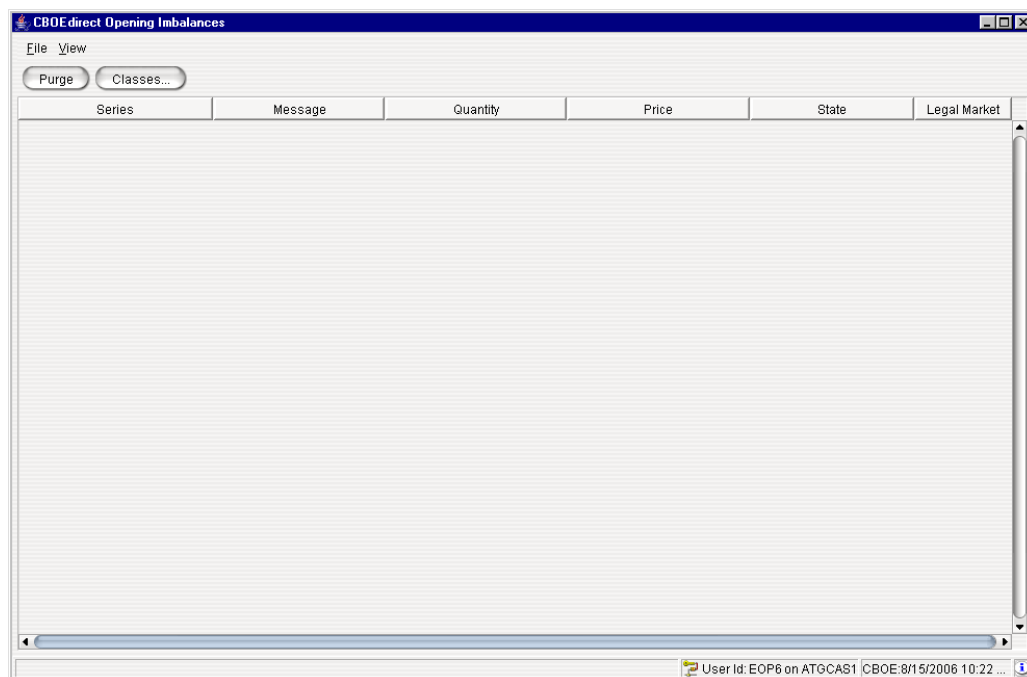
<<

Submit Cancel

- To remove your EOP message type selection, highlight the message from the **Excluded EOP Types** list box.
- Click . Your selection will be moved back to the **Included EOP Types** list box.
- If you wish to cancel your entire selection and return to the **CBOEdirect Opening Imbalances** window, click **Cancel**.
- To submit and save your filtering selection in the system, click **Submit, Confirm**. The system will return to the **CBOEdirect Opening Imbalances** window.


Edit Table Preferences

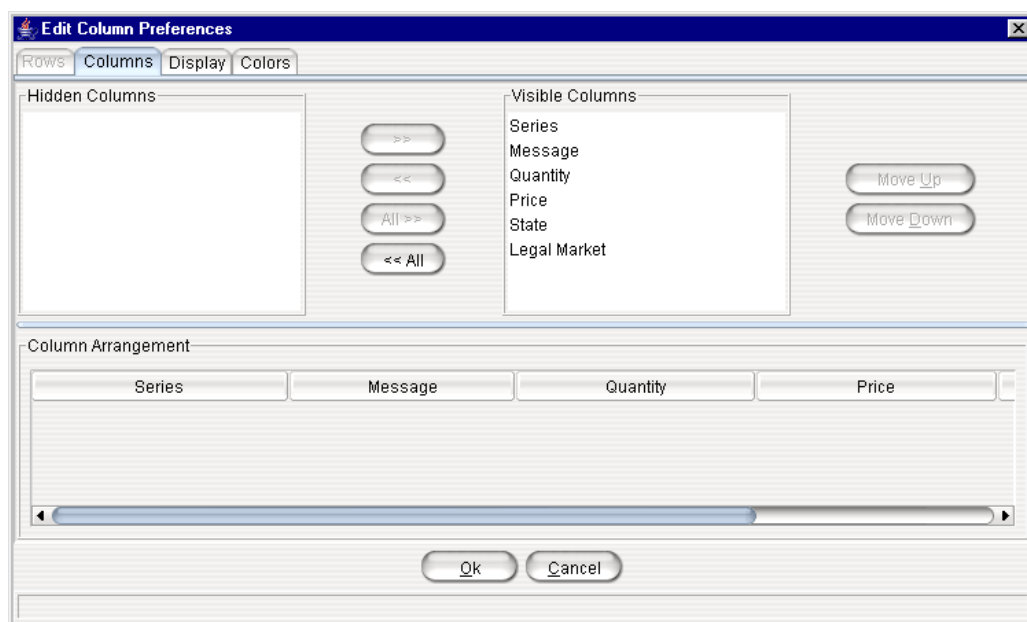
When you initially open the **CBOEdirect Opening Imbalances** window the default columns display for monitoring opening imbalances. Data that is in column format can be customized to your specifications.



To modify the column display, select **Edit Table Preferences** from the **View** menu. The **Edit Column Preferences** window will display.

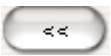
From this window, you can rearrange column positions and select or deselect columns for viewing.

 **Note:** Tabs that are not available are grayed out.




➤ **Column Arrangement**


If there is a data column you do not wish to view:

- Select the column name in the **Visible Columns** list box. To select a continuous range of columns, hold down the shift key and highlight the column names. Hold down the ctrl key to select individual, non-continuous, column names.
- Click  to move the column name to the Hidden Columns list box.
- Click **Ok** to update the column arrangement.
- If you decide to retain the default layout, click **Cancel**.

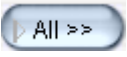
To hide all columns:

- Click  to move all the column names in the Visible Columns to the Hidden Columns list box.
- Click **Ok** to update the column arrangement.
- If you decide to retain the default layout, click **Cancel** instead of Ok.

To display a hidden column:

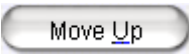
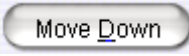
- Select the column name(s) from the Hidden Columns list box.
- Click  to move the selected column name(s) to the Visible Columns list box.
- Click **Ok** to update the column arrangement.
- If you decide to retain the default layout, click **Cancel** instead of Ok.

To display all hidden columns:

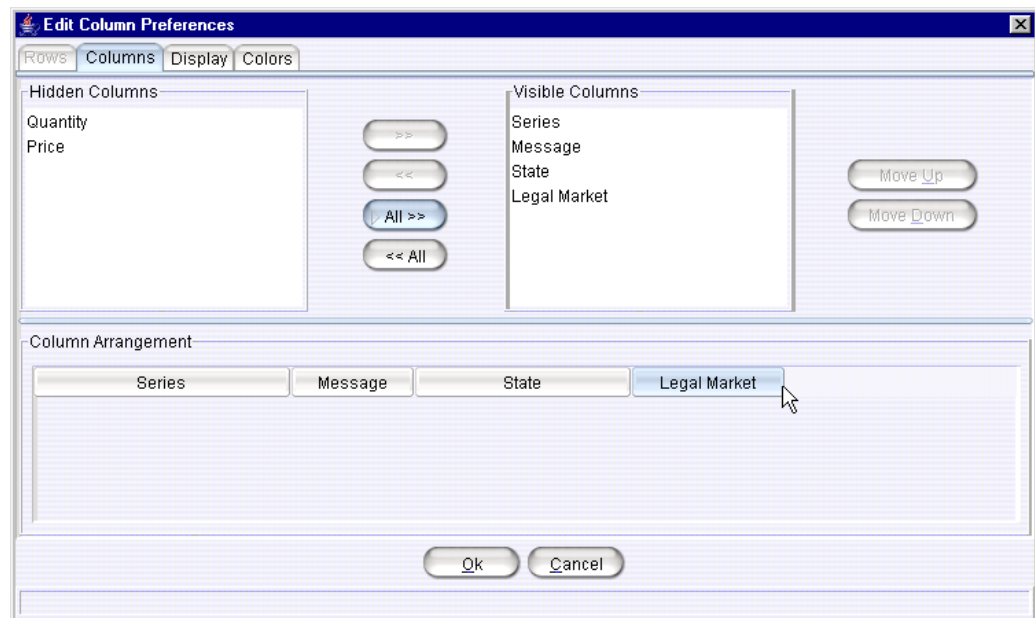
- Click  to move the column names to the Visible Columns list box.
- Click **Ok** to update the column arrangement.
- If you decide to retain the default layout, click **Cancel** instead of Ok.

You may prefer to view data columns in a different order than the default display.

To move a column:

- Highlight the column name from the Visible Columns list box.
- Click  or  until you reach the new column location.
- Click **Ok** to update the column arrangement.
- If you decide to retain the default layout, click **Cancel**.

From the Column Arrangement section of the window, the columns can be resized to make viewing information easier for you.

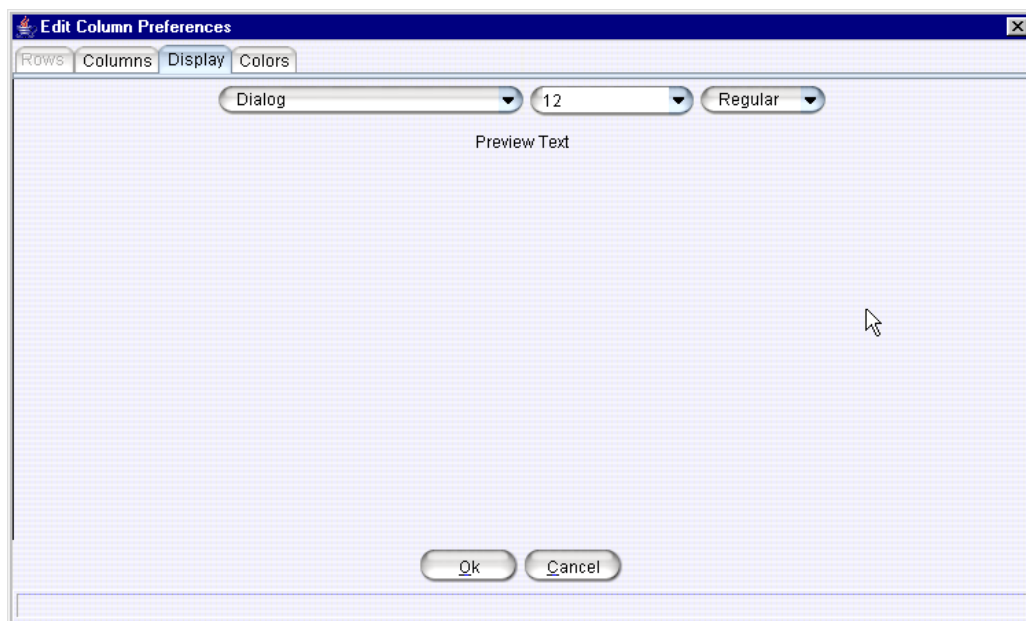


To resize a column:

- Place the mouse on the right edge of the column header (where the column titles are displayed).
- Hold the left mouse button down and move it to the desired size.
- Click **Ok** to save the new column size.
- If you decide to retain the default column size, click **Cancel** instead of Ok.

➤ **Display Specifications**

In addition to customizing column settings, you can adjust the display of the text on your windows. From the Edit Column Preferences window, select the **Display** tab.

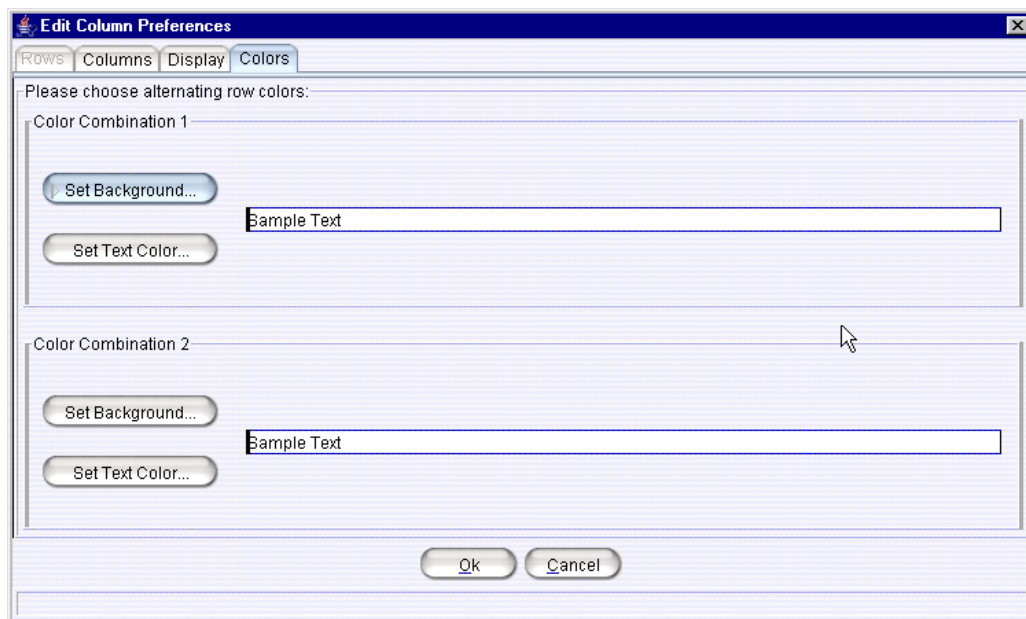


Select the font type, font size and font style from the drop down lists. Your selection will display in the **Preview Text** section of the window.

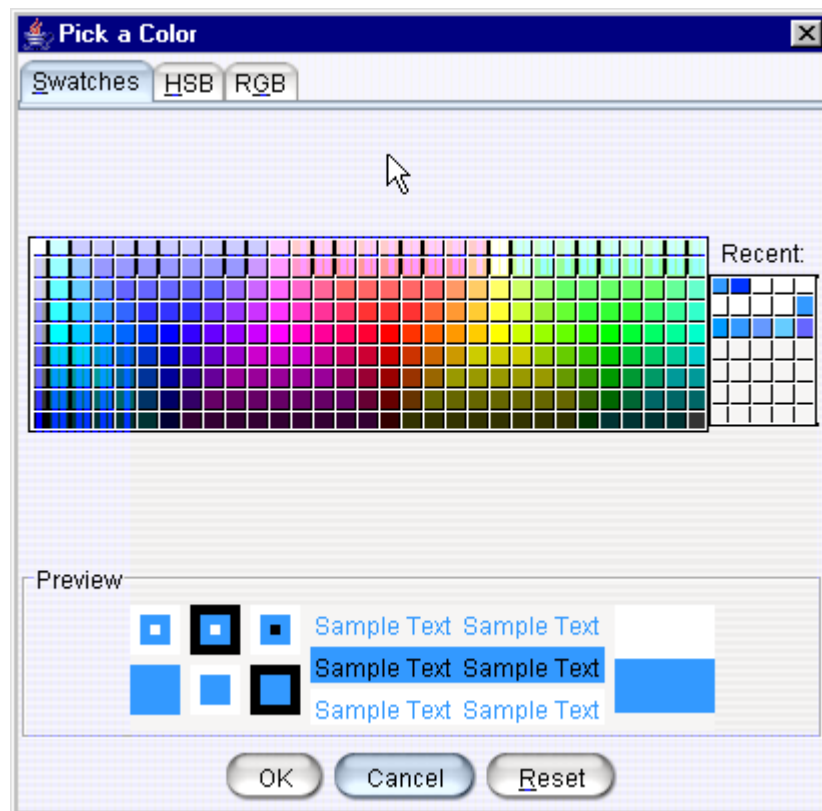
- Click **Ok** to set the new text style.
- If you wish to retain the default text settings, click **Cancel**.

➤ **Display Color Options**

You can change the look of your EOP/EOS opening imbalance display by choosing alternating row colors. Click on the **Colors** tab in the Edit Column Preferences window.

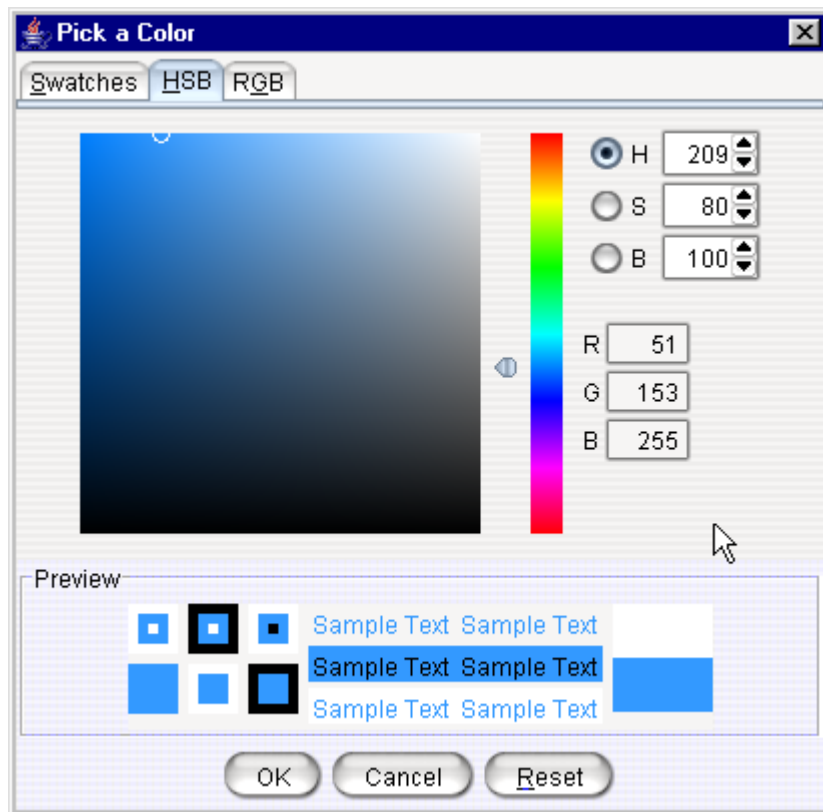


To change the background or text color, click **Set Background** or **Set Text Color** in the **Color Combination 1** box. The **Pick a Color** window will display. The system allows you to setup a second color combinations in the **Color Combination 2** box.



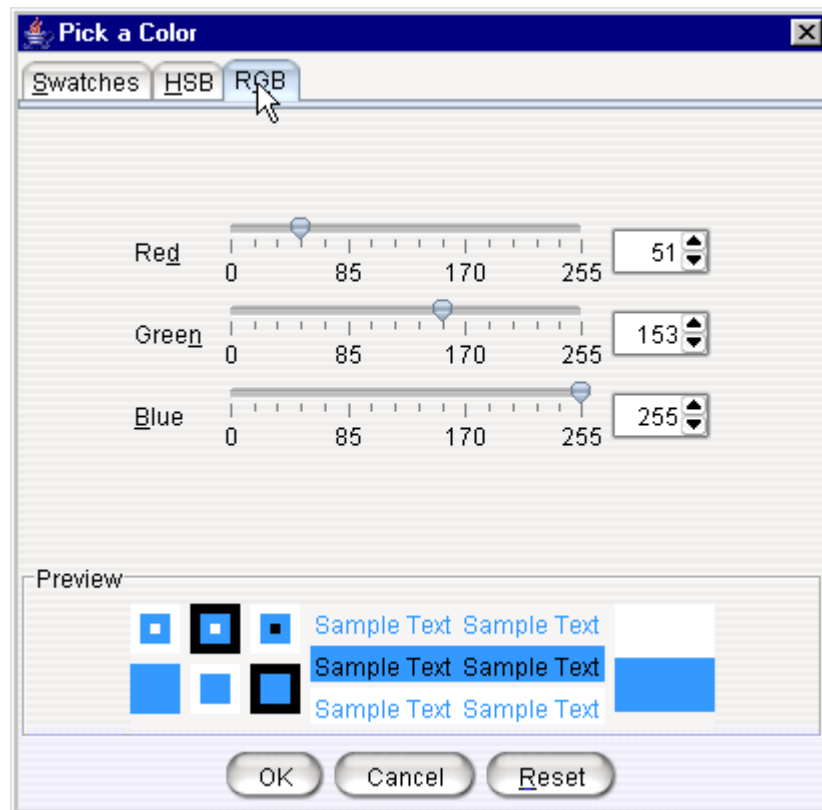
From the **Swatches** tab, click on your background color choice. An example of your color choice and text will appear in the **Preview** section of the window.

Click the **HSB** tab to set your hue, saturation and brightness. Place your mouse on the scroll bar button and adjust your color preference.

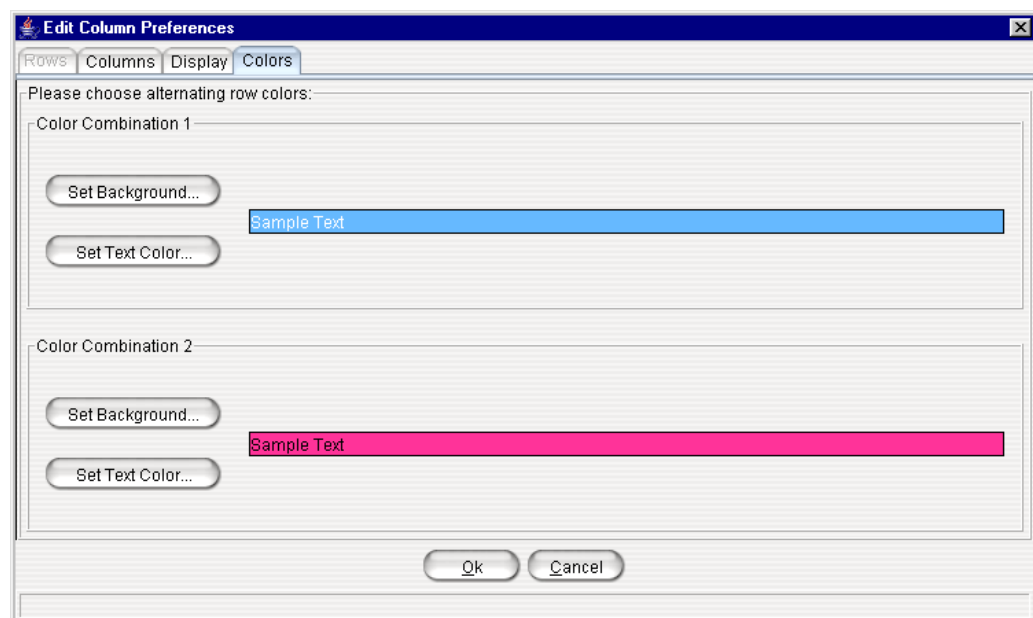


- Click **Cancel** to remove your changes and exit the window.
- Click **Reset** to retain the original settings.
- Click **OK** to save your changes. The background and text color will display in the **Preview** section of the window.

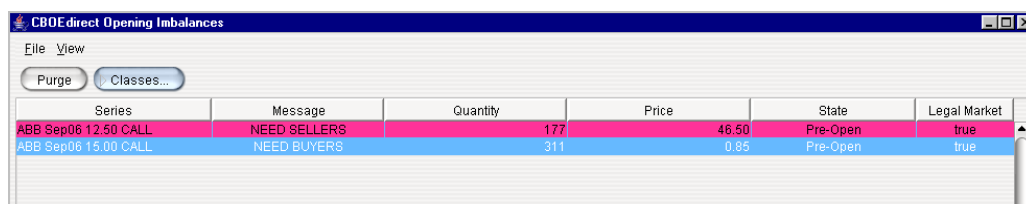
Click the **RGB** tab to set your red, green and blue color model. Place your mouse on the side scroll bar and adjust your color preference.



- Click **Cancel** to remove your changes and exit the window.
- Click **Reset** to retain the original settings.
- Click **OK** to save your changes. The background and text color will display in the **Sample Text** box.



- Click **Cancel** to retain the original settings.
- Click **Ok** to save the color combinations. The **CBOEdirect Imbalances window** will display with alternating row colors.



Series	Message	Quantity	Price	State	Legal Market
ABB Sep06 12.50 CALL	NEED SELLERS	177	46.50	Pre-Open	true
ABB Sep06 15.00 CALL	NEED BUYERS	311	0.85	Pre-Open	true

Sizing Windows

The CBOEdirect Opening Imbalances window is sizable. That is, it can be resized on the screen to make viewing information easier for you.




Place the mouse on any edge of the window until it becomes a two-sided arrow. Hold the left mouse button down and move it to the desired size.


Resizing a window on the corner will expand or contract it in both directions (i.e. up and down and side-to-side). Resizing it on the side or top/bottom will expand or contract the window only in that one direction.

Windows can also be resized using the center glyph in the upper right corner of the window.



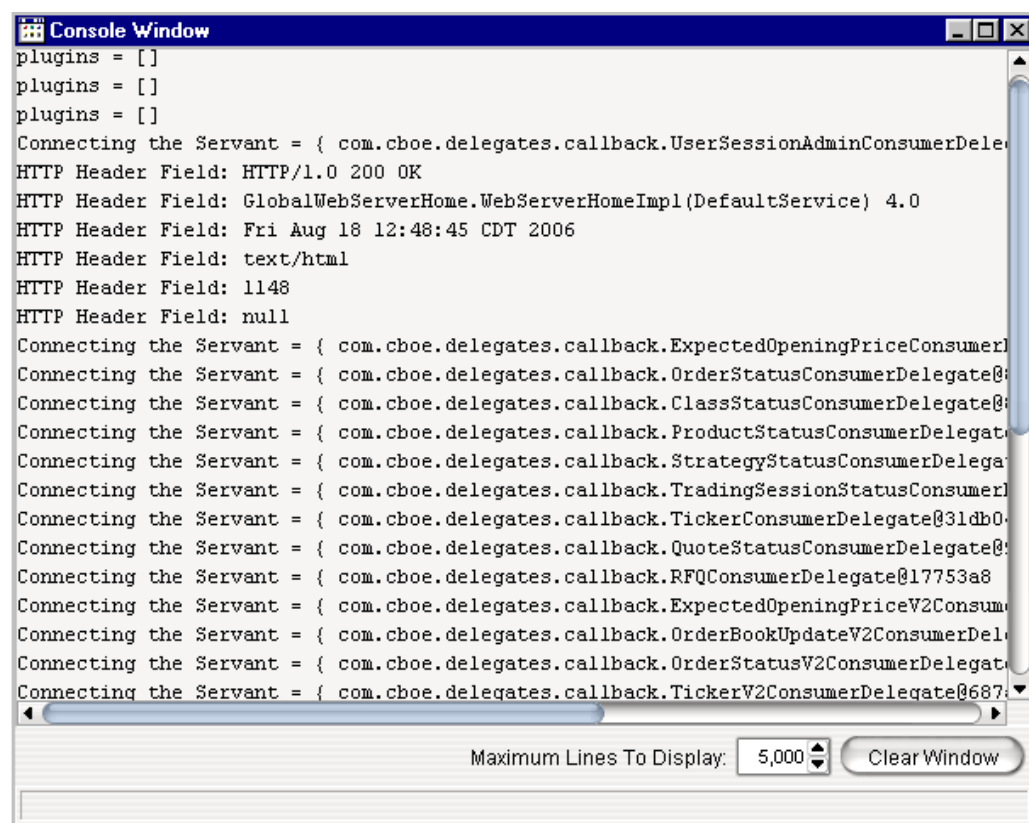
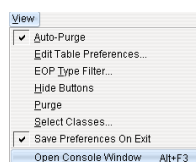
Click the left button (_) to minimize the window. Click the right button (X) to close the window. The center button is used for sizing.

If  is displayed, clicking it will increase the window size to a full-screen display.

If  is displayed, clicking it will return the window to its default size.

Open Console Window

The EOP/EOS system allows you to view system messages that are generated by the functions you perform. To view these messages, select **Open Console Window** from the **View** menu or press **[Alt-F3]** on your keyboard from anywhere on your screen. The Console Window will display.



The information in this window can be copied to any text editor on your PC. To copy text from this window,

- Place your cursor on the line you want to copy and using your mouse highlight the text.
- Press **Ctrl C** on your keyboard to copy the text.
- Open your text editor (Word, Notepad, etc.) and place your cursor in the text entry area.
- Press **Ctrl V** on your keyboard. The text is copied to your editor.

The window defaults to display 5,000 lines. You can change the maximum amount of lines to display by entering a new quantity in place of the default value, or you can select a higher/lower quantity by clicking the up/down arrows until the desired quantity is reached.

If you wish to clear the window of all its contents, click the **Clear Window** button.

Exit the System

You can log out and exit the system at any time.

Exit the System To exit the system, select **Exit** from the **File** Menu. You will be prompted to verify that you wish to close all windows and logout. Click **Yes**. The application will be closed and you will be returned to your system desktop.