

A Tutorial: The Basics of Using EDS

In This Chapter

How to develop and test your own screening strategies with EDS 516

Summary of how to use EDS 524

How to develop and test your own screening strategies with EDS

Note

TradingExpert Pro includes a comprehensive data base of ready made strategies. To access these strategies, select **Open** from the **File** menu and from the \wintes32 folder open the folder named **EDS Strategies**.

The most challenging aspect of EDS is defining your screening strategy in the form of rules. If you know how to create your own rules, the rest of the program becomes much easier. To make it easier to define strategies, EDS provides Pre-built Rules that cover most aspects of technical analysis. Users can create trading systems by simply pasting these Pre-built Rules into their EDS documents.

Before we cover how to create a trading system using the Pre-built Rules, let's first create a simple screening strategy by entering our rules directly into the Rule Library.

Creating a simple screening strategy

In our first example, we'll create a strategy that screens for:

- Stochastic buy signal (Stochastic rising from below 20 to above 20)
- Share price between \$10 and \$30

The EDS formula for this screening strategy is shown in **Figure 1**. The strategy consists of three statements, each defining a separate rule.

- The first rule, labeled **Rule1**, screens for stocks with a closing price that is greater than \$10 but less than \$30.
- The second rule, labeled **Rule2**, looks for stocks whose Stochastic indicator rose above 20. To accomplish this, it first looks for securities whose Stochastic value one day ago is less than 20 (left side of the equation) and then it looks for securities whose current day's Stochastic is above 20 (right side of the equation). Only those stocks for which the Stochastic indicator rose above 20 will pass **Rule2**.
- The final rule, which we called **Allworks**, will screen for the stocks that pass both **Rule1** and **Rule2**.

To create the rules in our screening strategy and save them in an EDS file, follow these steps:

1. Open **EDS** and select **New** from the *File* menu. A blank *Rule Library* Document will appear in the main EDS window.

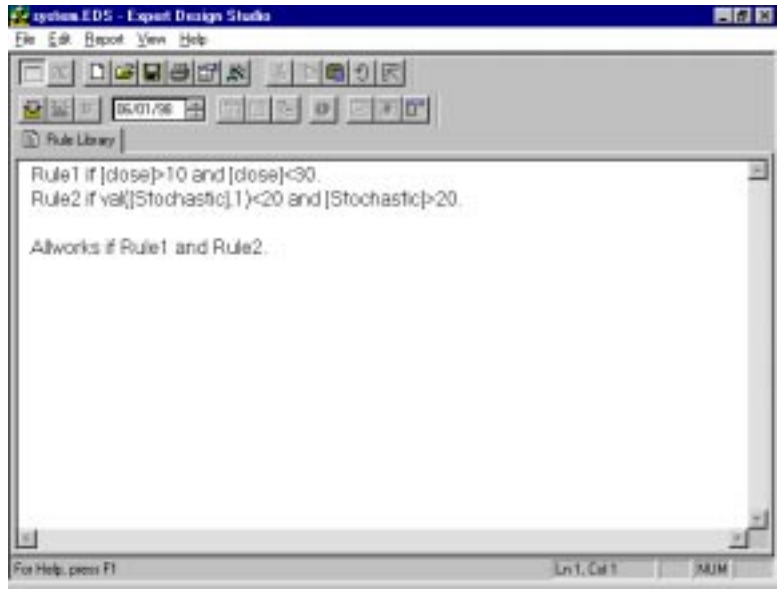


Figure 1

Note:

To see a list of available indicator names, select **Edit** from the menu bar and then choose **Builder**. The *Rule Builder* dialog box will appear. In box #1, Select **Indicator Fields**. A complete listing of the different indicators will appear in box #2.

2. At the cursor, type the three rules exactly as they appear in Figure 1.
 - Each rule begins with the rule name (i.e., Rule1) and ends with a period.
 - The rule name is always followed by the word *if*.
 - The remaining characters (those characters after the word *if* and before the period) comprise an expression that can be evaluated with either a True or False result. (This expression is called the **Rule Body**.)
 - Characters enclosed within the “[]” brackets typically refer to an indicator or a component of the stock price. (When a rule is evaluated for a specific stock and date, the value of the indicator or price component on that date is used to evaluate the rule.)
3. After entering your three rules, select **Save As** from the *File* menu. In the *Save As* dialog box, enter a name for the file and click **Save**. Before saving the file, the EDS Rule Compiler checks each statement for errors and displays messages describing any errors that may be present. If no errors are found, the rules are compiled and the file is saved.

Creating a Report

Now that our screening strategy has been created, the next step is to set up a Report that will list those stocks that pass our screening criteria. A separate Report with its own report tab can be created for any rule in a trading system. Since we are most interested in the stocks that pass the Allworks rule, the only report tab we need to create is one for the Allworks rule.

To create an Allworks report tab, proceed as follows:

1. From the menu bar, choose **Report** and then **Insert**. A dialog box will appear which lists the rules that have been created.
2. Highlight **Allworks** and click **OK**. An Allworks report tab will appear next to the Rule Library tab.

Running a Report

Proceed as follows:

1. To run the Allworks Report, click on its tab.
2. Next, select **Report** from the menu bar and then choose **Run Single**.
3. A list of the ticker symbols that pass the Allworks rule for the date listed on the icon bar will begin to appear on the screen. To display a chart of any stock listed on the Allworks report, simply double click on its ticker symbol.

Enhancing the Report

The basic Report lists only the symbols of the tickers that pass the rule. EDS allows you to display additional information by adding columns to the report. For instance, we can list the Closing Price and Stochastic value next to the ticker symbols on the Allworks Report page.

To add columns to the report:

1. With the Allworks tab active, choose **Report** and then **New Column**. The *Fields* dialog box will appear.
2. From the *Category* box, select **Indicator Fields**. The *Items* box will now display an alphabetical list of all indicators.
3. From this list, select **Close** and **Stochastic** and click **OK**. The final report appears in **Figure 2**.

The screenshot shows the 'system.EDS - Expert Design Studio' window. At the top is a menu bar with 'File', 'Edit', 'Report', 'View', and 'Help'. Below the menu bar is a toolbar with various icons. A status bar at the top indicates the date '06/21/08'. Below the toolbar, there are tabs for 'Rule Library' and 'Allevato'. The main area contains a table with three columns: 'Symbol', 'Close', and 'Stochastic'. The table lists various symbols and their corresponding values. At the bottom of the window, there is a status bar with the text 'For Help, press F1', 'Items: 24', and 'N/A'.

Symbol	Close	Stochastic
ALB	10.88	33.33
ADAC	20.08	28.89
ADP	21.63	25.80
APZ	23.63	25.97
BAFE	21.08	27.27
BI	13.08	33.33
CCDN	14.50	25.64
CCG	15.08	38.90
EDI	34.58	36.27
EXC	20.03	25.80
FBR	25.38	38.10
FHT	29.58	21.47
FLS	29.58	43.24
FPS	11.01	68.09
GAM	29.03	25.81
HMY	12.44	31.91
IBP	19.68	25.14
FS	34.91	28.17
INT	17.88	23.67
LACF	26.08	38.95
MIL	29.08	21.88
M/V	36.74	38.47

Figure 2

Using Pre-built Rules

The Expert Design Studio comes with a vast array of Pre-built Rules and strategies. These pre-built routines will cover most every user's needs. These routines, which are accessed through the EDS *Builder* function (*Edit* submenu), allow you to create trading systems by simply cutting and pasting the Pre-built Rules.

Pre-built Strategies can be located by clicking **Open** on the **File** submenu and opening the folder named EDS Strategies.

As an example, let's say we want to build a system that screens for stocks that just crossed above the 28-day Moving Average at the same time that the Velocity indicator is above zero and increasing.

To create a trading system using Pre-built Rules, proceed as follows:

1. Our first step is to tell EDS we want to open a new file. To open a new file, select **File** from the menu bar and choose **New**.
2. Next we want to use the Builder function to select the appropriate Pre-Built Rules. From the menu bar, choose **Edit** and then **Builder**.
3. The *Rule Builder* dialog box that appears contains several boxes. From *box #1, Select Category*, choose **Pre-built Routines**. (Pre-built Routines are EDS rules that have been constructed for different technical indicators.)

4. The Items available for selection are listed in *box #2*. When an Item is selected, a description of that item appears in the text box immediately below *boxes #1* and *#2*.
5. In order to build a rule for the 28-day Moving Average Crossover, click on the **ST MA price cross up** rule.
6. Next, click on **Paste Selected Item Below**. The rule will now appear in *box #4*.
7. Click **OK** to paste the rule to your Rule Library document. Make sure the ST MA in your *Charts* application is set to 28 days.
8. To return to the Pre-Built Rules, select **Edit** from the menu bar, choose **Builder**, and once again, select **Pre-built Routines**.
9. In order to build a rule for Velocity above zero and increasing, choose the **Velocity Above Zero Slope Up** rule.
10. Click **Paste Selected Item Below** and then click **OK**. Both rules should now appear in the Rule Library.
11. With these rules created, we can now type in the final rule which will be called Allworks. This rule simply states that the two previous rules are true. Our newly created trading system appears in **Figure 3**.

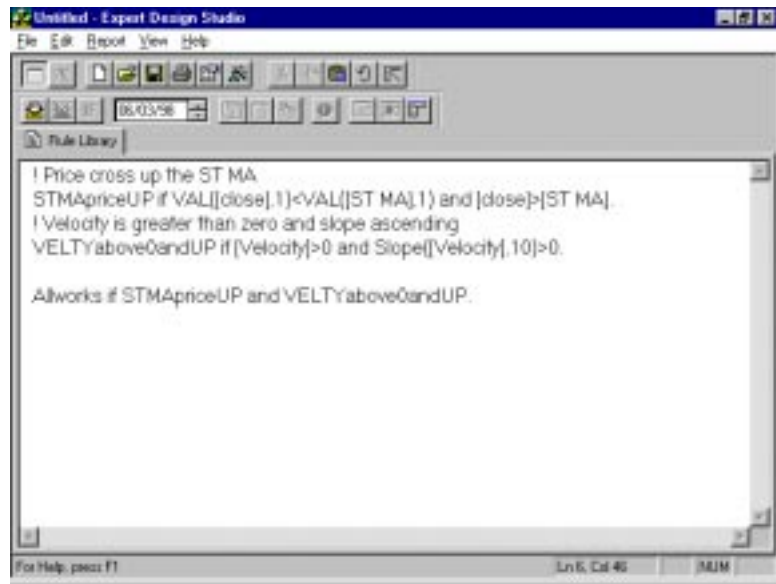


Figure 3

12. To complete our system, we will create a Report for the Allworks rule. Select **Report** from the menu bar and choose **Insert**. From the dialog box that appears, select **Allworks** and click **OK**. To run this report, click on the Allworks tab, set the date shown in the tool bar to the proper day, and from the *Reports* menu choose **Run Single**.

Running a back test

The Expert Design Studio not only allows you to create your own trading systems but it also provides a complete and thorough backtester. This backtester will quickly scan the securities in your database and report the average return per trade using the strategy along with the average holding period. Many other statistics are reported including a listing of how returns compare to equivalent trades in the S&P 500 index.

To demonstrate the backtester, we'll run an historical test on the trading system that was just created. This system screened for stocks that just crossed above the 28-day Moving Average at the same time that the Velocity indicator was above zero and increasing.

To run a back test, proceed as follows:

1. Click on the Allworks report tab that was created in Step 12 above.
2. Select **Report** from the menu bar and choose **New Backtest**. The first in a series of dialog boxes appears. These boxes are used to set up a back test for the selected rule.
3. The first box titled *Test Name* shows the default name assigned to the test. Click **Next** to move to the next dialog box.
4. From the next box, titled *Entry*, select **Buy long** and enter **SPX** for the index we want to compare our results to. Click **Next**.
5. In the next box titled *Range*, choose the **Test from** option and enter the date range that will be used for the back test (6/13/96 through 6/12/98). Click **Next**.
6. The next box, *Pricing*, allows you to determine how positions are priced at entry and exit. For both *Position Opening Price* and *Position Closing Price*, choose **Default (Next period Open)**. Under this option, the next day's open price will be used for both the opening and closing price for all positions. Click **Next**.
7. The last box, *Exit*, is used to set the sell strategy for the test.
 - Select the first option choice (**Evaluate for**) and enter a holding time of 21 periods. With this strategy, all positions are simply held for the same fixed time period.

Note

You can elect to include open positions in the back test summary. At the bottom of the **Exit** dialog box, check *include open positions held at least* and enter the number of days.

- The second choice, **Trade It**, can be used to employ more active sell strategies. These include a simple trailing stop or stops that allow for entering different percentages for capital protection and profit protection. You can also elect to exit on a sell rule that you create in the Rule Library.
8. Check the option labeled *Include open positions held at least* and select a time period of 1 day. Then, click **Finish**. The screen is automatically switched to *Test View* where tests are run and test reports can be viewed.
 9. By default, the back test we have set up will screen all the stocks in our database. You can also run the test on a list, an industry group, or only the mutual funds in your database. To change the default from your entire database, do as follows:
 - From the *File* menu, choose **Properties**.
 - In our test, we'll run the strategy only on stocks that are in the S&P 500. From the *Tickers in List* list box, choose **SP500**.
 - Click **OK**.
 10. To run the back test, select **Test** from the menu bar and choose **Run**. When the test is completed the Summary test report will appear in the main window (see **Figure 4**).

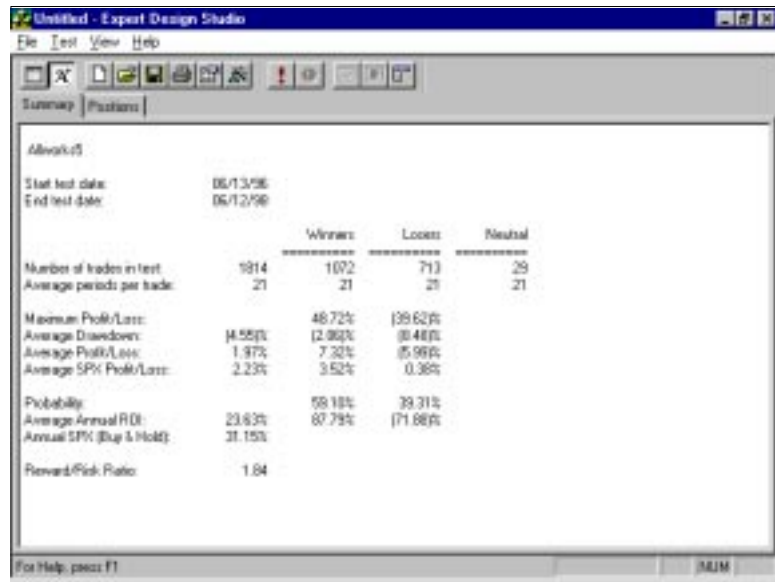


Figure 4

From the results of the back test, we see that 1814 trades took place over the two year time period with an average gain of 1.97% for the fixed 21 day holding period. That's a 23.6% average annual rate of return. If you bought the S&P 500 instead of the stocks, the average gain per trade was 2.23%. The annualized buy and hold return was 31.15%

To see a listing of the individual trades, click on the *Positions* tab.

To run a new back test, move to Test View and select **Test** from the menu bar and then choose **Run**. A dialog box is displayed which allow you to make changes to the testing parameters. Make any changes and click **OK**. When the test is completed, results from the modified back test will appear.

Note:

When you are in Test View, you can return to the report/rule screen by selecting **View** from the menu bar and choosing **Report View**. To return to the test screen, select **View** from the menu bar and choose **Test View**. Before moving to the test screen, a report tab must be active. You can not move to the Test View when the Rule Library is the active tab.

Quick Summary of how to use Expert Design Studio

1. Create a Document (Chapter III)

The user begins by opening a new “Document”. The EDS Document is a special file that EDS creates to store a trading system. You can create and save as many Documents (i.e., trading systems) as you like.

Each Document has its own Properties. Properties designate which tickers in your AIQ database will be screened by this trading system. You can specify a list that you have created in TradingExpert and/or a specific ticker type (stocks, futures, etc.). You can also choose daily or weekly data.

Each time you open EDS, you open the last Document you saved with your latest settings and changes. If a report has been created for a trading system, the Document file for that system contains the latest report settings and the last report that was run.

2. Enter rules into the Document window (Chapter IV)

You create a trading system by entering your trading rules into the Document window. Trading systems can be quite simple, consisting of just one or two rules, or highly sophisticated, with many rules involving many different filters or conditions. You can build your own rules, or use the pre-built rules (Pre-built Routines) furnished with the EDS application.

EDS provides powerful tools for creating trading rules. Rules can be entered directly into your EDS Document using the built-in text editor or you can use the EDS Rule Builder, an easy-to-use “wizard” function. The Rule Builder allows you to quickly find any of the basic rule components supplied by EDS (Fields, Functions, etc. — see the EDS Reference Guide) and easily paste them into the rule that you are defining.

3. Back test your rules (Chapter V)

EDS provides a back testing function with all the tools you need for testing your systems under different historical market conditions. You specify the tickers that will be scanned, the historical time period for the test, and the exit parameters. When the test is run, a report is produced that gives you all the information needed to analyze the effectiveness of your rules and fine-tune your system.

With EDS, you back test your systems rule-by-rule. This allows you to analyze and perfect each component as you build your systems. You can fine-tune each rule in your system for maximum performance based on your criteria. For fine-tuning, you simply adjust critical parameters, repeat the test, and compare results. Using this technique you can easily hone in on the values that produce the best results.

4. Create customized rule reports (Chapter VI)

Once you have fine-tuned your trading system and are ready to start trading (or paper trading) with live data, you can begin running the EDS scanning reports. The EDS reporting function screens your AIQ data using the trading systems you have developed and produces customized reports listing trading opportunities.

The EDS report function also serves as an advanced reporting tool for TradingExpert Pro, giving users the ability to produce fully customized reports based on their personal stock screening techniques.

In addition to listing those tickers that meet your screening criteria, rule reports can be individually customized to display additional columns of information.

If your system consists of more than one rule, you can produce a Summary Report which contains separate columns for each rule included in the report. Each column in the Summary Report lists the tickers that passed a particular rule and the report data is easily sorted to bring together a list of tickers that passed any rule.

