

Introduction to Investor/RT

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Introduction to Investor/RT

Welcome

Thank you for selecting Investor/RT. Our goal at Linn Software, Inc. is to provide powerful and easy-to-use software that gives active traders, investors and day-traders effective tools for real-time market monitoring and analysis. Investor/RT provides real-time charting, technical analysis, scanning, backtesting, portfolio tracking, news capture, and a comprehensive alert system that will notify you of price or volume levels, technical trading signals, and news arrival. Investor/RT operates on both Windows and Macintosh computers and supports a wide variety of popular real-time, delayed, and end-of-day data services.

We hope that you find Investor/RT a useful tool in your investing and trading activities. We welcome your suggestions for improving and enhancing the product to better meet your specific trading/investment requirements.

Installing Investor/RT

The Investor/RT software may be installed via download from the Internet or from CD-ROM.

To install from the Internet:

1. Direct your web browser to <http://www.linnsoft.com/>.
2. On the home page, click the link to go to the Download Center.
3. Complete the form.
4. Click the "Download" button at the bottom of the form.
5. Follow the instructions to download Investor/RT for the correct platform (Windows or Macintosh). When the installer program download is completed, launch it and follow the instructions. Macintosh users must have Stuffit Expander (Version 5.5 or higher) installed to decompress the downloaded file.

To install from CD-ROM:

1. Insert the CD-ROM into the computer's CD-ROM drive.
2. Open the CD-ROM window and double-click on the installer application icon to begin the installation process.

The installation program will install a folder on the hard drive to contain the Investor/RT application and various related folders needed for its operation. Place the folder directly on the hard drive. It will be named "investrt" (Windows) or "Investor/RT Folder" (Macintosh). Upon successful installation, the following items will be placed inside the folder (Macintosh file names, if different, are shown in parentheses):

<u>Name</u>	<u>Description</u>
admin	a sub folder containing administrative files
news	a sub folder used to hold news text items
tickdata	a sub folder used to hold tick data files
data_f	a sub folder containing 39 files which make up the Investor/RT Database
scans	a sub folder containing sample scan definitions
symbols	a sub folder containing ASCII text file of ticker symbols
feedlibs	a sub folder containing DLL files (or Macintosh shared library files) for each data service supported by Investor/RT
markers	a sub folder containing bitmap images used by Investor/RT to mark signals in charts
investrt.exe (Investor/RT)	the Investor/RT main application
irtstart.exe (Investor/RT Startup)	the Investor/RT startup application
dbmaint.bat (I/RT Database Maintenance)	utility program for correcting minor database errors
Dbverify.bat (I/RT Database Verify)	utility program for verifying database integrity

Starting Investor/RT

Windows users start Investor/RT using the Start Menu. To make a shortcut, create the shortcut to the program investrt.exe.

Macintosh users start the Investor/RT application. Make an alias for Investor/RT and place the alias on the desktop. Place the alias in the Apple Menu items folder and Investor/RT will appear in the Apple menu.

Configuring the Data Service

The first time you start Investor/RT, a window will appear in which all supported data services are listed. Click on the desired data service. The logo for the selected data service will appear in the center of the window. Click on the “Launch” button.

Reconfiguring the Data Service

To reconfigure Investor/RT for a different data service use the Reconfigure command in the File Menu. Select the new data service from the list and click the Reconfigure button. Investor/RT will open the version you have selected.

When Investor/RT is running you can determine which data feed is in use by observing the data service name in the menu bar or by opening the Feed Status window.

Registering the Software

Linn Software issues a 20-character registration code to each licensed user of Investor/RT, including those users evaluating Investor/RT on a trial basis. The registration code must be entered in order to activate the software for use with the data service. Clients leasing Investor/RT will receive a new registration code when the lease is renewed. Clients who have purchased a permanent license to use Investor/RT can renew their registration codes annually in order to have continued access to periodic software maintenance, support and upgrades.

Automated Registration (Recommended)

The automated method is the fastest and most reliable way to register Investor/RT.

Automatic registration is accomplished using a “registration file” that is sent as an email message attachment. The name of the registration file will be the User Name suffixed with .reg (for example, “John Q. Public.reg”).

To auto-register, follow these steps:

1. Using the email program, save the registration file into the Investor/RT folder.

Windows users: Double-click on the attachment and save the attached .reg file to disk into the investrt directory.

Macintosh users: Drag the .reg file attachment icon into the Investor/RT Folder.

2. Launch Investor/RT and choose Setup: Preferences: Registration.

Investor/RT will detect the registration file and use its contents to register the software automatically.

3. When these steps have been completed successfully, the Registration window will show a status message of “Registration OK” and show the expiration date. To complete the registration, click the Setup button to access your Mail and Internet preferences. Enter your email address and outgoing mail server address in the spaces provided. For further instructions, click the Help button (?) on the main toolbar.

Manual Registration

Manual registration can be an error prone process. Linn Software strongly recommends using the automated registration procedure whereby all registration items are entered automatically by the software.

To register manually, follow these steps:

1. Choose Setup: Preferences.
2. When the list of preference topics appears, select “Registration”.
3. Click “OK” to open the Registration window (see Figure 1).
4. In the appropriate entry boxes, enter the User Name, the Registration Code, the Receiver ID (or Login ID), the Dial/Data User ID and your email address. The first four items must be entered exactly as they appear in the email from Linn Software.

5. Click the Setup button to access your Mail and Internet preferences. Enter your outgoing mail server address in the space provided. For further instructions, click the Help button (?) on the main toolbar.
6. Click the OK button.



The dialog box has a blue title bar with the text "Registration - Please Read License Agreement". The main content area is white with a grey border. At the top, it says "Investor/RT Registration Confirmed. Thank You." Below this are five input fields, each with a label on the left and a text box on the right. The labels and their corresponding values are: "User Name:" with "John Q Public", "Registration Code:" with "X272-AJ9B-KTF2-MQAU-0000", "InterQuote Login ID:" with "jqpublic", "Dial/Data User ID:" with "NA", and "E-Mail Address:" with "jqpublic@earthlink.net". Below the input fields, there is a line of text: "Outgoing mail server is mail.atl.bellsouth.net" followed by a "Setup" button. Below that is the text "Status: Registration OK. Expiration 10/07/01". At the bottom, there are three buttons: "Dial/Data Free Trial", "View Pricing", and "License Agreement". At the very bottom, there are three buttons: "Cancel", "Apply", and "OK".

Figure 1. Registration

Each item (including spaces and punctuation characters) must be entered precisely. If any of the first four items is entered incorrectly, a notice will appear stating that the registration was unsuccessful and why it failed (see Figure 2).

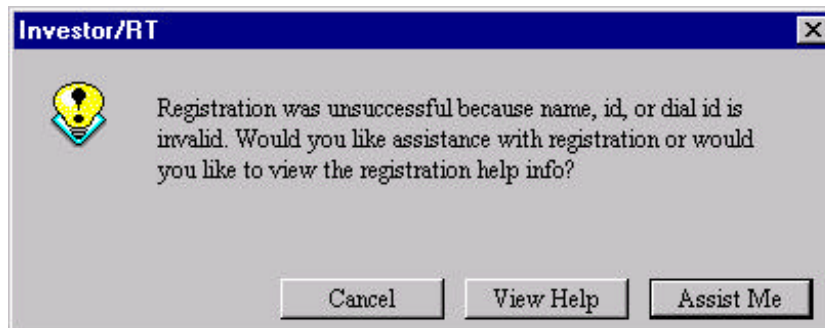


Figure 2. Unsuccessful Registration Notice

Choose “Assist Me”. Investor/RT will go through the process step by step, identifying common errors and offering the opportunity to correct any of the four items until registration is successful. If you still have difficulty registering using the manual method, do not contact Linn Software for assistance until you have attempted to register using the automated registration method described previously. Registration questions should be directed to info@linnsoft.com or support@linnsoft.com.

Completing the Registration Process

Once you have registered successfully, Investor/RT will guide you through a series of steps, described in the following section. When you have set your Backup Preferences, Investor/RT will attempt to complete the registration process by sending a confirmation to Linn Software.

If you do not have Internet access on the computer running Investor/RT, if you are using AOL for Internet access, or if you are having technical difficulty completing the registration process, please contact Linn Software for further instructions. Please email info@linnsoft.com or fax 770-922-9071 or call 770-922-7271 for assistance. Please do not call our sales department for registration assistance.

Required Software Settings

Before connecting to the data service, it is important to set up several user preferences related to data reception. These are:

- (1) Trading session and time zone settings
- (2) Backup settings
- (3) Data feed settings

Setting up Sessions

First, Investor/RT must be set to the local time zone. To specify the time zone, choose Setup: Preferences: Session. The Session Preferences window will appear (see Figure 3).

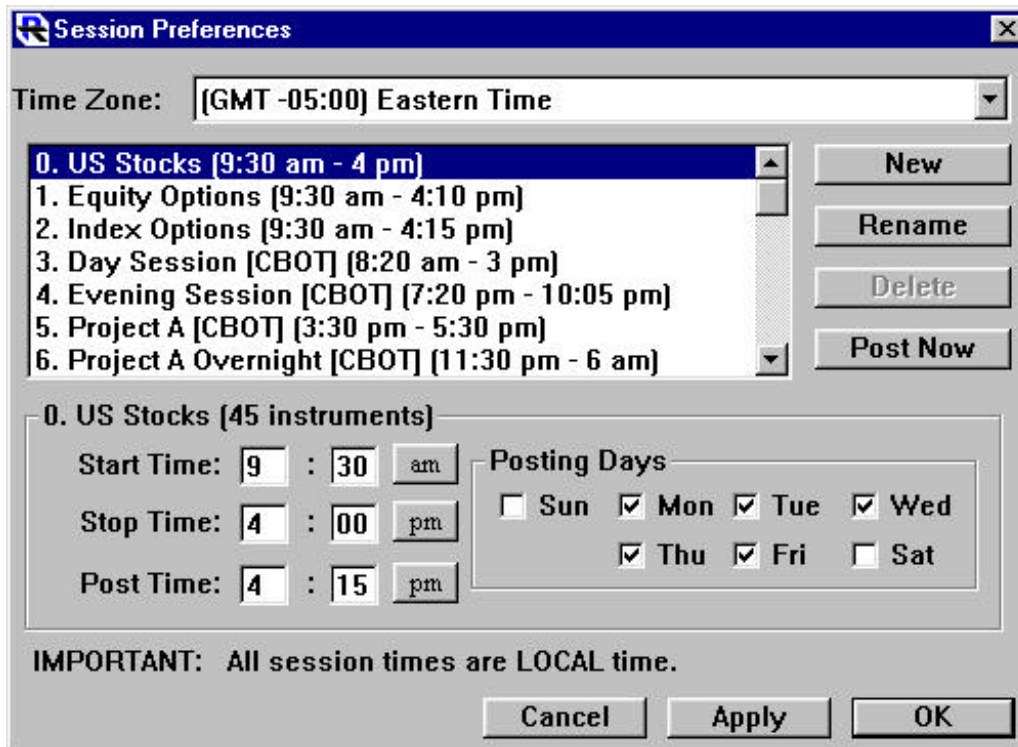


Figure 3. Setting up Sessions

Notice that there are several pre-defined “Sessions” (trading sessions). Each session is defined with a start and stop time that identify its trading hours. For example, session 0, the NYSE Stocks Session, is defined above with trading hours from 9:30 am to 4:00 PM. Note that all times are expressed in 24-hour local time. The session also defines the time of day that closing prices are to be officially recorded into the Investor/RT database. This is called the Post Time). The sessions are all pre-defined with starting and ending times expressed in the Eastern Time Zone.

Select the time zone from the Time Zone menu at the top of the Session Preferences window. A dialog box will appear asking to adjust all sessions to the time zone. Click “Yes”. All of the pre-defined sessions will now reflect the trading hours expressed in the local time zone.

The user can take a moment here to either add or rename any sessions for the markets to follow with Investor/RT. Remember, when setting up a session, always use local time to express the valid trading hours of the session. Each issue tracked by Investor/RT is assigned to a session. Investor/RT uses the session definition to determine when to capture tick data for the issue. The session definition is also used to draw intraday charts showing the proper trading hours.

Setting Backup Preferences

Investor/RT utilizes a high performance database management system to store information and historical data for the issues being followed.

Investor/RT features a built-in database backup and recovery system to protect the database from errors that can result from system failures, application failures, or power failures.

It is imperative that the backup preferences be set before beginning to use Investor/RT. Choose Setup: Preferences: Backup. The Backup Preferences window will open (see Figure 4).

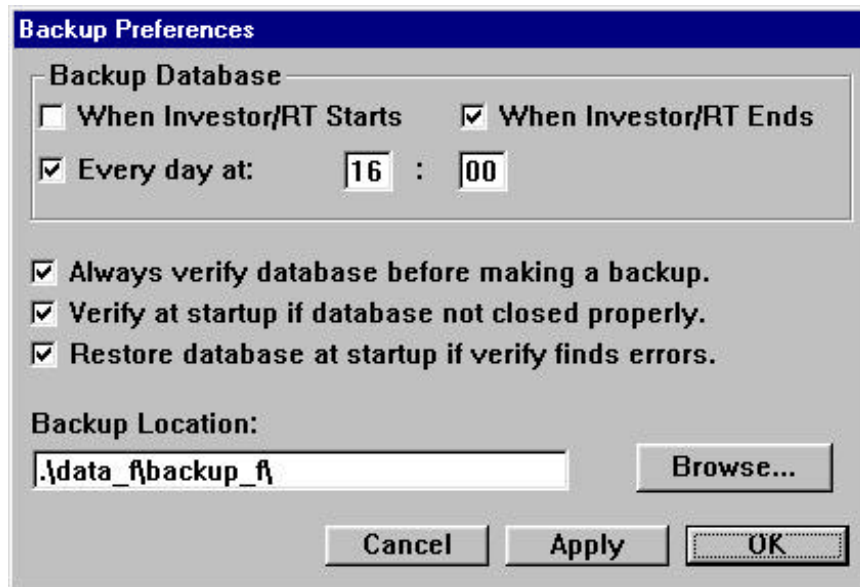


Figure 4. Backup Preferences

For most users, the default preferences are recommended, i.e.

1. Backup database each time Investor/RT ends.
2. Always verify before making a backup.
3. Verify at startup if database not closed properly.
4. Restore database at startup if the verification process detects errors.

If Investor/RT is active 24 hours per day or is shut down infrequently, it is recommended that backup be performed at a specific time each day. In this case, the backup when Investor/RT ends is optional.

During the first few days using Investor/RT, more frequent backups are recommended to ensure that the initial setup work (adding new issues,

creating charts, creating quote pages, etc.) is protected. The database can be backed up at any time by choosing Control: Database Utilities: Backup Database.

Setting Data Feed Preferences

Investor/RT supports a variety of data services. The first step in connecting to a data feed is to verify that Investor/RT is configured for the correct data service. The menu bar at the top of the screen will show the name of the data feed Investor/RT is configured to use. If the name in the menu bar is not the correct data feed, Investor/RT must be reconfigured. Refer to the section “Configuring the Data Service”.

In the data feed menu (BMI, Signal, etc.) choose “Setup”. The Data Feed Setup window is different for each data feed. The discussion that follows is divided into eight sections, one for each supported data feed option.

BMI Setup

The BMI data feed option is used to connect Investor/RT to BMI model DRC or model DRK data receivers using a direct serial port connection. For Macintosh users, this is the only BMI option. Windows users should consider using the Data Manager data feed option instead (see “Data Manager Setup” for details).

When the BMI Feed Preferences window appears (see Figure 5), choose the name of the Connection Port to which the serial cable from the BMI unit is connected. We recommend a connection speed of 38400 BPS or 19200 BPS. Checkmark the “Activate Data Feed at Startup” checkbox to automatically begin receiving data each time Investor/RT starts. To initiate communication with the BMI receiver, click the Start Feed button.

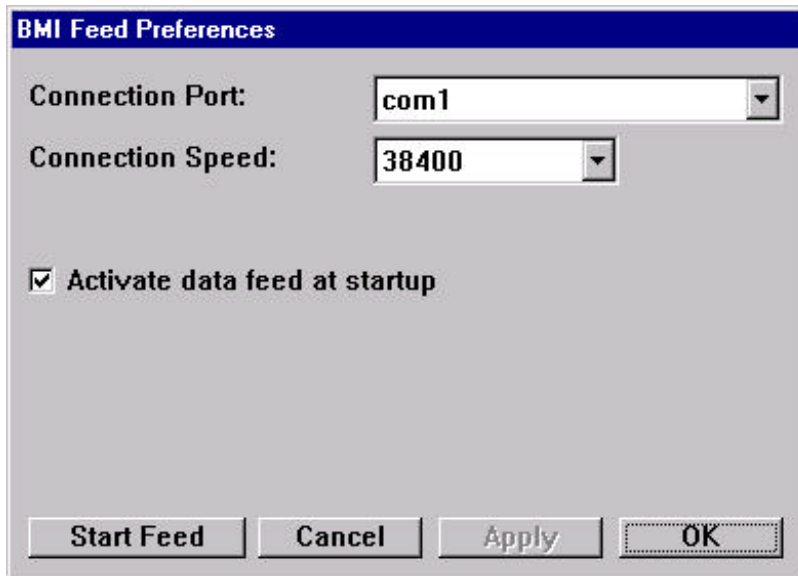


Figure 5. BMI Preferences

Signal Setup

eSignal users proceed to Data Manager Setup. The Signal data feed option is used to connect Investor/RT to Signal cable or FM receivers or Signal Card receivers using a direct serial port connection. For Macintosh users, this is the only Signal option. Windows users should consider using the Data Manager data feed option instead.

When the Signal Feed Preferences window appears (see Figure 6), choose the name of the Connection Port to which the serial cable from the Signal unit is connected. We recommend a connection speed of 19200 BPS. Checkmark the “Activate Data Feed at Startup” checkbox to automatically begin receiving data each time Investor/RT starts.

Signal Preferences

Primary Password: AKLM-RTYS-\$2YZ-TUVX-E3\$5-QCXB

Reports Password: BXUT-OXWY-\$3I8-BMM9-TXS4-GJKV

Channel: 32 Country Code: 0

Connection Port: com1

Connection Speed: 38400 Load ROS

Request Quotes at Startup Database Mode

Activate Data Feed at Startup Diagnostic Mode

Auto Scan for Signal Data Passwords are new

See Help before checking Auto Scan or Database Mode

Start Feed Cancel Apply OK

Figure 6. Signal Preferences

Enter the Signal primary and reports passwords, and channel number in the spaces provided.

The Country Code and “Auto Scan for Signal Data” checkbox are used only outside the U.S. See the Investor/RT Help System for details on setting these options.

All other checkboxes should be unchecked. See the Help System for an explanation of other options. To initiate communication with the Signal receiver, click the Start Feed button.

Data Manager Setup

This section applies to clients using eSignal, BMI or Signal data feeds via the Data Manager. This data feed option is only available on the Windows platform. The Data Manager is a software product of Data Broadcasting Corporation that provides Investor/RT with market data from eSignal, a BMI or Signal receiver. Investor/RT users should consult eSignal documentation and/or contact eSignal customer support regarding installation and setup of the Data Manager software. Once Data Manager, sometimes called “winros.exe”, has been installed and is operational, Investor/RT can utilize the services of Data Manager regardless of the delivery method (Internet or receiver) in use.

In the DataMgr menu (formerly named the DBC menu), choosing Setup will open the Data Manager Preferences window (see Figure 7). To automatically begin receiving data from the Data Manager each time Investor/RT starts, check the “Launch Data Manager at Startup” box. This will launch and then connect to the Data Manager. If the Data Manager is set to run continuously, check the “Connect to Data Manager at Startup” box. To initiate communication with the Data Manager, click the Start Feed button.

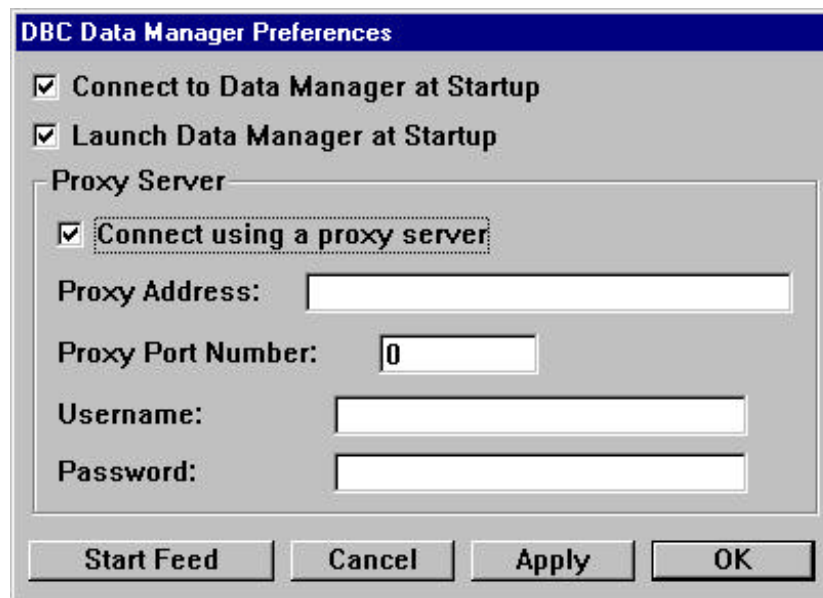


Figure 7. Data Manager Preferences

DTN Setup

The DTN data feed option is used to connect Investor/RT to DTN model 8000 or model 7000 series data receivers using a direct serial port connection. In the DTN Feed Preferences window (see Figure 8), choose the name of the Connection Port to which the serial cable from the DTN unit is connected. We recommend a connection speed of 115200 BPS for Windows users and 57600 BPS for Macintosh users (some Macintosh models support the higher rates, but 57600 BPS works well for all Macintosh models). Choose D8000 or D7001 from the DTN Model menu. To automatically begin receiving data from the DTN unit each time Investor/RT starts, check the “Activate Data Feed at Startup” box. To request the most recent quote on every symbol being tracked, check the “Request Quotes at Startup.” This option is not necessary during market hours, because streaming real time quotes update quickly. All other checkboxes should be unchecked. To initiate communication with the DTN receiver, click the Start Feed button. For information about the Database Mode and Maintenance settings, click the Investor/RT Help button (“?”) on the main toolbar.

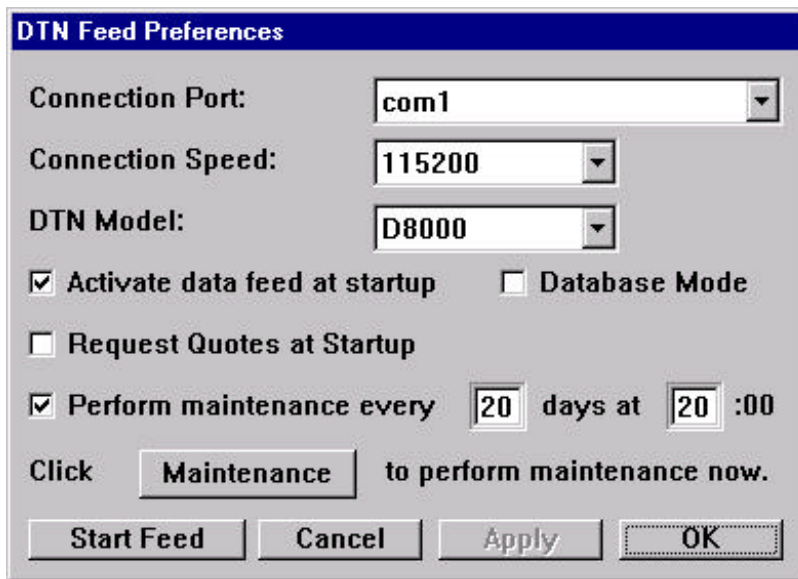


Figure 8. DTN Preferences

NOTE: DTN subscribers using Macintosh computers with the D8000 receiver must use a special DTN supplied Mac-to-D8000 serial cable. This is a single piece cable with a 9 PIN serial connector on one end and an 8 PIN MINI DIN Macintosh serial connector on the other. If the DTN unit was shipped with another cable or with serial adapters (used for Windows machines), you must acquire the Mac-to-D8000 cable from DTN before the DTN unit can be used with Investor/RT.

InterQuote Setup

The InterQuote data feed option is used to establish an Internet connection to the InterQuote data service. In the InterQuote Preferences window (see Figure 9), enter the InterQuote Login ID and InterQuote password into the spaces provided. The InterQuote Login ID is case sensitive, and must appear as it does on the registration screen. To automatically connect to InterQuote each time Investor/RT starts, check the “Start data feed when I/RT starts up” box. Investor/RT can be set to automatically reconnect to InterQuote if no data is received within 60 seconds. To activate this function, check the ‘Automatically restart data feed’ box. To initiate a connection with InterQuote, click the Start Data Feed button. An Internet connection must be established before starting the InterQuote feed.

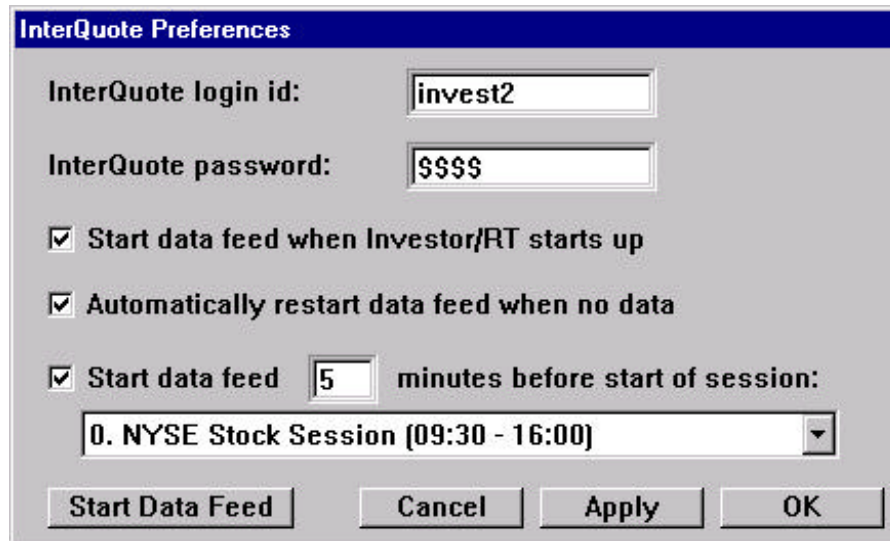
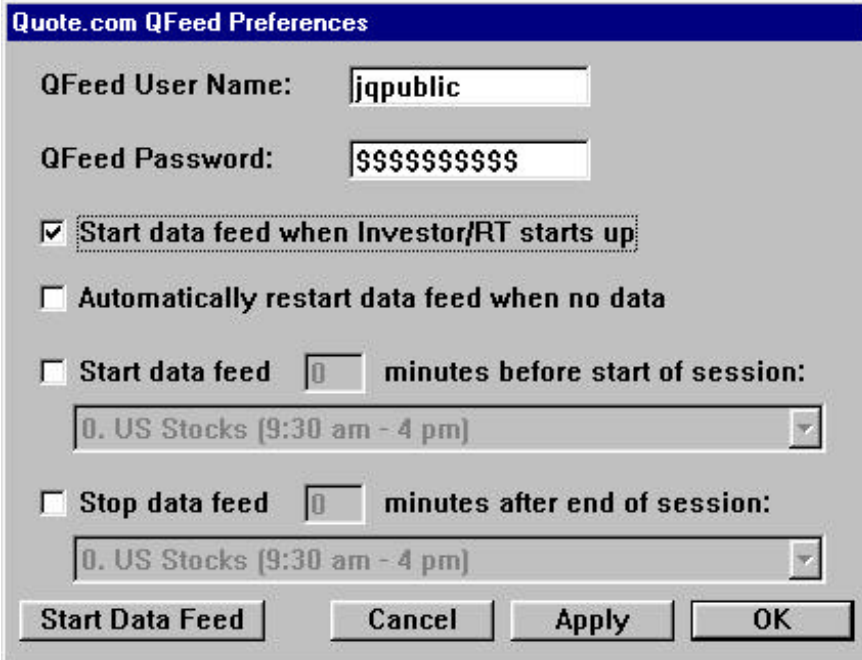


Figure 9. InterQuote Preferences

QFeed Setup

The QFeed data feed option is used to establish an Internet connection to the Quote.com QFeed data service. In the QFeed Preferences window (see Figure 10), enter the QFeed User Name and QFeed password into the spaces provided. To automatically connect to QFeed each time Investor/RT starts, check the “Start data feed when I/RT starts up” box. Investor/RT can be set to automatically reconnect to QFeed if no data is received within 60 seconds. To activate this function, check the ‘Automatically restart data feed’ box. To initiate a connection with QFeed, click the Start Data Feed button. An Internet connection must be established before starting the QFeed data feed.



Quote.com QFeed Preferences

QFeed User Name:

QFeed Password:

Start data feed when Investor/RT starts up

Automatically restart data feed when no data

Start data feed minutes before start of session:

Stop data feed minutes after end of session:

Figure 10. Qfeed Preferences

myTrack Setup

The myTrack data feed option is used to establish an Internet connection with the myTrack data service. In the myTrack Preferences window (Figure 11), enter the myTrack User Name and Password. The myTrack Host I.D. and Port I.D. are provided. To automatically connect to myTrack each time Investor/RT starts, check the “Start data feed when I/RT starts up” box. Investor/RT can be set to automatically reconnect to myTrack if no data is received within 60 seconds. To activate this function, check the

'Automatically restart data feed' box. To initiate a connection with myTrack, click the Start Data Feed button. An Internet connection must be established before starting the myTrack feed.

MyTrack Preferences

MyTrack User Name:

MyTrack Password:

MyTrack Host ID:

MyTrack Port ID:

Start data feed when Investor/RT starts up

Automatically restart data feed when no data

Start data feed minutes before start of session:

Stop data feed minutes after end of session:

Figure 11. myTrack Preferences

Establishing a myTrack account with Investor/RT

A new myTrack account can be established using Investor/RT. If you are a licensed user or have purchased the Investor/RT Trial Package you can sign up for a myTrack account by simply running the Investor/RT for myTrack software. Registered users should go to myTrack: Setup. Unregistered trial users will be prompted automatically when the program starts. The program offers to set up a new myTrack account. If you elect to do so, Investor/RT displays a dialog box for establishing a new account with myTrack. Four myTrack plans are available. The Investor/RT myTrack setup is a three-step process:

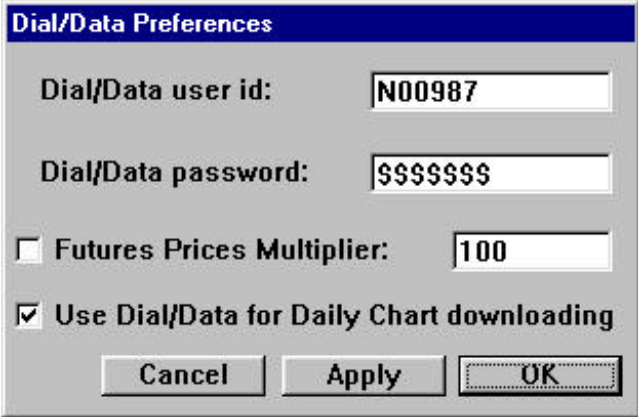
1. Choose a myTrack plan (basic, silver, gold, or platinum).
2. Provide account setup information, including your email address.
3. Choose a distinctive myTrack User ID and Password. The User ID and Password must be at least five characters long.

Investor/RT will submit your account information to myTrack and will display a message telling you if the account setup was successful. If your account is successfully activated by myTrack, you will receive email notification from myTrack, usually within an hour. Once you have received confirmation from myTrack, email info@linnsoft.com to request a registration code. Include your myTrack User ID in the message. Sometimes, the signup process fails. For example, the User ID chosen in step 3 above may have already been assigned to another myTrack user. If this occurs, repeat the signup process, choosing a more distinctive User ID. Some combination of your last name and several initials or other abbreviations is recommended.

Dial/Data Setup

The Dial/Data data feed option is used to establish an Internet connection to the Dial/Data end-of-day and historical pricing service. Linn Software offers an “End of Day Edition” of Investor/RT for use with Dial/Data only. With all continuous data feed editions of Investor/RT, Dial/Data access is available as a means of accessing historical data, fundamental data for stocks, and other market data.

In the Dial/Data Preferences window (see Figure 12), enter the Dial/Data User ID and password in the spaces provided and press OK. The Dial/Data User ID must begin with the letter N. Dial/Data User IDs issued for use with other software products will not operate with Investor/RT. A 30-day free trial of the Dial/Data service is available to Investor/RT users considering subscribing to Dial/Data. For more information, click the “Dial/Data Free Trial” button in the Registration window. To connect to Dial/Data, choose “Download Data” from the Control Menu.



The image shows a dialog box titled "Dial/Data Preferences". It contains the following fields and options:

- Dial/Data user id:** A text box containing "N00987".
- Dial/Data password:** A text box containing "\$\$\$\$\$\$".
- Futures Prices Multiplier:** A text box containing "100".
- Use Dial/Data for Daily Chart downloading**

At the bottom of the dialog are three buttons: "Cancel", "Apply", and "OK".

Figure 12. Dial/Data Preferences

Verifying Proper Data Feed Reception

The Data Feed Heartbeat

Investor/RT has a main toolbar, usually positioned at the top of the screen. It contains a status message display area and an array of icon buttons for accessing key features of Investor/RT. At the right end of the main toolbar is a button, called the “data feed heartbeat” (see Figure 13). The data feed heartbeat displays different things based on the status of the data reception. When data is being received, the button displays an animated chart icon. When the data feed is inactive, the button displays a red ‘x’. If the data feed has been started but no data has arrived during the last 60 seconds, the heartbeat will turn solid red and display a question mark. A message will also be displayed in the main toolbar message area. The appearance of the main toolbar can be easily changed by right-clicking (command-click on Macintosh) inside the message area of the toolbar to access the toolbar properties menu.

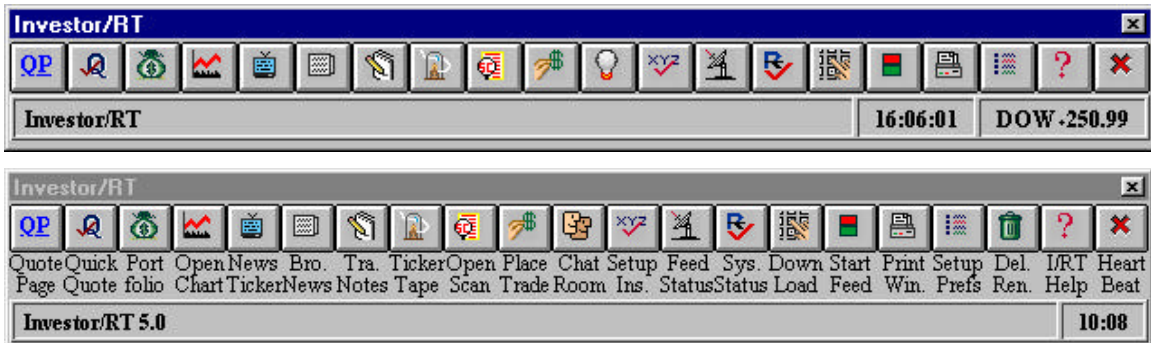
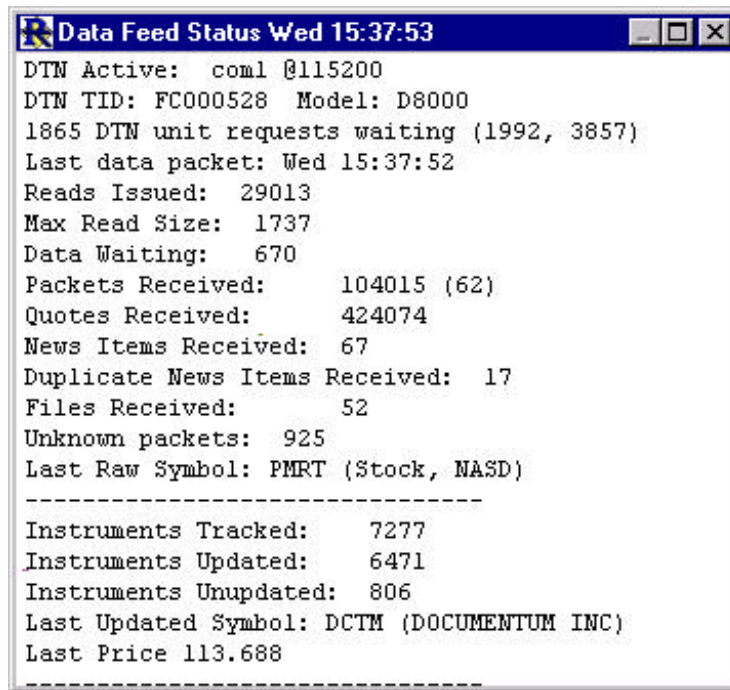


Figure 13. Main Toolbar (with and without button titles)

The Data Feed Status Window

For a more detailed look at the status of the data feed, open the Data Feed Status window (see Figure 14). Click the Feed Status icon on the main toolbar or use the Data Feed menu to access this window. The Feed Status window shows general information common to all data feeds such as the number of issues tracked and the number of “packets” of data received thus far. Other details specific to the data feed in use are also displayed. The Feed Status windows updates the display every few seconds to show the latest counts. To verify that data is flowing properly, inspect the “Packets Received” count. This number should increase every time the display

updates. 'Last Updated Symbol' displays the most recent ticker symbol encountered on the data feed. The ticker symbol should also change every few seconds. 'Last Raw Symbol' displays the most recent symbol encountered on the data feed, regardless of whether it is being tracked by Investor/RT. 'Last Raw Symbol' is not reported for Internet based data feeds.



```
Data Feed Status Wed 15:37:53
DTN Active: com1 @115200
DTN TID: FC000528 Model: D8000
1865 DTN unit requests waiting (1992, 3857)
Last data packet: Wed 15:37:52
Reads Issued: 29013
Max Read Size: 1737
Data Waiting: 670
Packets Received: 104015 (62)
Quotes Received: 424074
News Items Received: 67
Duplicate News Items Received: 17
Files Received: 52
Unknown packets: 925
Last Raw Symbol: PMRT (Stock, NASD)
-----
Instruments Tracked: 7277
Instruments Updated: 6471
Instruments Unupdated: 806
Last Updated Symbol: DCTM (DOCUMENTUM INC)
Last Price 113.688
-----
```

Figure 14. Data Feed Status

Using the Quote Sifter to Verify Reception

The Quote Sifter is another tool used to inspect the incoming data feed. By watching the incoming raw data feed and displaying ticker symbols that meet user-specified criteria, the quote sifter can determine whether market data of a particular type is flowing properly. The sifter can also be used to capture and set up issues you may be interested in following. For more information see the section “Using the Quote Sifter.”

The Quote Sifter was designed for use with cable or satellite broadcast data services where incoming data feed includes all quotes for the entire market. For Internet-based data feeds, the Quote Sifter can be used as a diagnostic tool to verify data reception, but is of little use otherwise.

To verify that raw data is flowing properly, go to Setup: Quote Sifter. Without specifying any criteria, press the Begin button in the Quote Sifter window (see Figure 15). A “Raw Feed” window will appear, displaying ticker symbols, security types and prices, scrolling rapidly through the window. (For Internet based data feeds, the Raw Feed window will display the incoming data on the instruments defined in Investor/RT). If the data feed is inactive, the window will not open. If the Raw Feed window remains blank, the data feed has been started but no data is flowing at the present time.



Figure 15. Quote Sifter

Symbol	Type	Exchange	Price	Volume
DELL	Stock	NASD	N/A	N/A
CMCSK	Stock	NASD	N/A	N/A
CATY	Stock	NASD	N/A	N/A
CLCX	Stock	NASD	N/A	N/A
AMZN	Stock	NASD	N/A	N/A
CFON	Stock	NASD	N/A	N/A
MSFT	Stock	NASD	113.000000	10.2m
DELL	Stock	NASD	N/A	N/A
LEVL	Stock	NASD	21.750000	681k
PSFT	Stock	NASD	31.625000	3.4m
QNTM	Stock	NASD	15.687500	1.8m
DURA	Stock	NASD	N/A	N/A
DIGI	Stock	NASD	N/A	N/A
ADSK	Stock	NASD	N/A	N/A
CSCO	Stock	NASD	N/A	N/A
CFON	Stock	NASD	N/A	N/A
AMZN	Stock	NASD	N/A	N/A
DRIV	Stock	NASD	N/A	N/A
ASFT	Stock	NASD	N/A	N/A
EGGS	Stock	NASD	N/A	N/A
CHIR	Stock	NASD	N/A	N/A
ATMI	Stock	NASD	N/A	N/A

Figure 16. Quote Sifter Raw Feed window

Trouble-Shooting

The Data Feed Heartbeat, the Data Feed Status window, and the Quote Sifter are usually sufficient to verify proper data feed reception. If it is determined that Investor/RT is not receiving data, refer to these trouble-shooting tips:

General Trouble-Shooting Tips

For the BMI, Signal and DTN data feed, verify that the serial cable is securely connected to both the data receiver and to the computer serial port. Also confirm that the correct serial port is specified in the data feed preferences window. If you are unsure which port to specify in the data feed preferences, experiment with different port settings. Change the connection port in the preferences window and click the Start Feed button. For connection speed recommendations, refer to the section that follows for the data feed you are using.

When starting the data feed, the message, “Could not open serial port...” usually indicates that another application is using that serial port. If this message appears, specify the correct port or terminate the other application and start the feed again.

Macintosh users: Ensure that fax/modem extensions are not configured to use the same serial port intended for use with Investor/RT.

For Internet-based data feeds (InterQuote, eSignal, myTrack and Dial/Data) verify that the Internet connection is active before starting the feed or using the Download Data window.

BMI Trouble-Shooting

Verify with BMI customer support that the BMI receiver is receiving data. The BMI receiver should be “profiled” by BMI for speed 38400 BPS and “Node Mode”. Using the buttons on the front panel of the BMI receiver, verify that the receiver is LOCKED onto the signal. Consult the BMI documentation or call BMI customer support for assistance if necessary.

The recommended connection speed is 38400 BPS. If there is no data at 38400 BPS, set the speed to 19200 BPS and start the feed again (BMI: Start Feed).

As a last resort, disconnect the power cord from the BMI receiver, wait 5 seconds and reconnect the power cord. Start the feed again (BMI: Start Feed).

Signal Trouble-Shooting

Verify with Signal customer support that the Signal receiver is tuned to the correct channel and is receiving data. The recommended connection speed is 38400 BPS. When the receiver is tuned to the correct channel, the +/- or ADJ light on the front panel of the Signal receiver should be dark (or flicker only occasionally). To adjust the channel, change the channel number in the Signal Preferences window and start the feed again (Signal: Start Feed).

Data Manager Trouble-Shooting

Set up and configure the Data Manager software per eSignal support instructions. Verify with eSignal customer support that the Data Manager is receiving data from either the Signal or BMI receiver, or from an Internet connection to eSignal. The Data Manager (winros.exe) must be running when the feed is started in Investor/RT. If not, Investor/RT will display a message box “Could not connect to Data Manager”.

If Data Manager is used with a Signal or BMI data receiver, the Investor/RT registration must contain a receiver id of “DM” followed by the Signal unit or BMI receiver number, e.g. DM102529. If the DM is not present in the registration, you are not licensed to use the Data Manager Edition with your receiver. Contact sales@linnsoft.com for more information on licensing the Data Manager Edition of Investor/RT.

If Data Manager is used to connect to eSignal via the Internet, the Investor/RT registration should specify the eSignal user name.

Note: The DM prefix is not present in the registration when Data Manager is used with an eSignal User Name.

DTN Trouble-Shooting

Verify with DTN customer support that the DTN unit is receiving data. Using the buttons on the front panel of the DTN 8000 unit, verify whether data packets are coming into the unit. DTN 7000 (Spectrum) users can verify reception using the System menu.

The recommended port speed for DTN is 115200 BPS for Windows and 57600 BPS for Macintosh. Investor/RT will attempt to set the DTN unit to the speed selected in DTN Preferences. However, if you have difficulty receiving data, verify and set the speed of the DTN 8000 unit manually as follows:

1. Press the Exit/Menu button on the front panel of the DTN unit repeatedly until “Main Menu 1 of 2” appears in the LCD display.
2. Press F2 for “Setup”.
3. Press F1 for “CmpPort”.
4. Observe the current speed setting.
5. Press F1 or F2 to increase or decrease the speed to the desired setting.
6. Press F3 to Save the Setting.

After confirming that Investor/RT DTN Preferences are set to the same speed, click the Start Feed button again.

After starting the feed, open the Data Feed Status window. Verify that there is a list of “Authorized Databases” at the bottom of the window (refer back to Figure 14). If no authorized databases are displayed, start the feed again (DTN: Start Feed).

When the list of authorized databases appears in the Data Feed Status window, this indicates proper data reception. New Investor/RT users should allow the software to receive data for several hours, preferably overnight, before attempting to use the software during trading hours. This time is necessary for Investor/RT to load various files from the DTN unit required for proper operation of the software.

For Macintosh Users with the D8000 receiver, verify that you are using the special (DTN supplied) Mac-to-D8000 serial cable. The cable is a single piece serial cable with a 9 pin connector on one end and an 8 pin mini-DIN Macintosh connector on the other. If the DTN unit was shipped with a different cable or with serial adapters (typically used for Windows machines), you must order the Mac-to-D8000 cable from DTN.

Macintosh users with the D8000 receiver can follow this procedure as a last resort to establish communication with the DTN unit:

1. Press the Exit/Menu button repeatedly until “Main Menu 1 or 2” is displayed.
2. Press the “Next” button.
3. Press F1 to Reset the DTN unit.
4. Restart the Macintosh.

5. When the DTN unit displays the DTN unit id (TID), start Investor/RT and start the feed.

InterQuote Trouble-Shooting

When starting the InterQuote feed, observe the main toolbar message area for progress messages. If the connection attempt fails repeatedly, verify that the Internet connection is active. Then follow this diagnostic procedure:

1. Choose Data Feed Setup from the InterQuote menu.
2. Replace the Login ID with the five lowercase letters “debug”.
3. A debug notice will appear. Click OK.
4. Investor/RT will reset your correct InterQuote Login ID.
5. Click the Start Feed button.
6. If the connection attempt fails, choose File: Open: Internet Log.
7. Inspect the Internet Log for error messages or other clues. If necessary email the Internet Log text to support@linnsoft.com for diagnosis.

InterQuote allows up to 600 issues to be tracked on a real-time basis at one time. The user controls which issues are being watched at any time by opening and closing quote pages. If you are not receiving data on a particular ticker symbol, open the Feed Status window. Inspect the “Watch Count” value to determine if your symbol limit has been exceeded. As long as the ticker symbol is valid, closing and re-opening appropriate quote pages will usually remedy the problem.

QFeed Trouble-Shooting

When starting QFeed, observe the main toolbar message area for progress messages. Error messages, if any, will also be placed in the Message Log. You can view the message log using File: Open: Message Log.

QFeed connections are established by a quote.com supplied software component called ContinuumClient.DLL. The latest version of this DLL can be obtained by upgrading to the latest version of Investor/RT. If you have trouble connecting, check the Quote.com web site for updates. If several connection attempts fail, sometimes the problem can be resolved by exiting Investor/RT, deleting the file ContinuumClient.ini, and restarting the program.

myTrack Trouble-Shooting

When starting the myTrack feed, observe the main toolbar message area for progress messages. If the connection attempt fails repeatedly, verify that the Internet connection is active. Verify that the myTrack setup specifies the Host ID as “host.mytrack.com” and the Port ID of 9983.

Dial/Data Trouble-Shooting

The Dial/Data service is accessed via the Download Data window (not the Start Feed command). To open the Download Data window, click the Download button on the main toolbar or go to Control: Data Management: Download.

When the Download Data window opens (see Figure 17), choose Dial/Data as the “Server” and specify the download type. To download data for an individual ticker symbol, use the “One Instrument” checkbox. To download data for all instruments in a particular quote page, select the quote page from the list at the left side of the window.

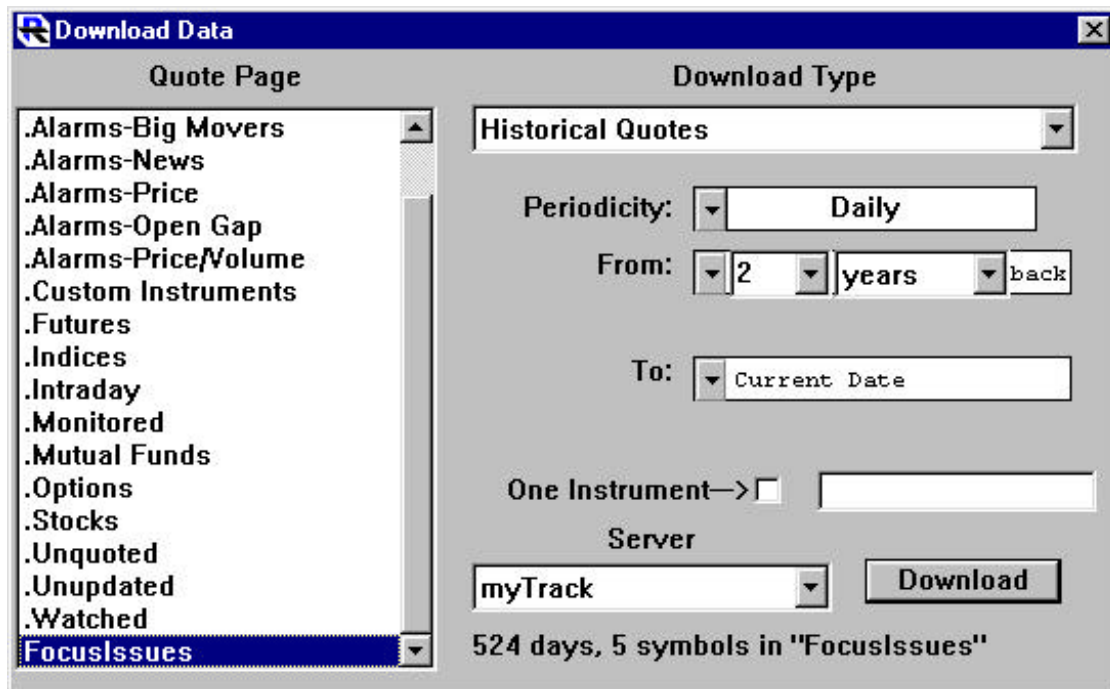


Figure 17. Data Downloading

If you have difficulty downloading from Dial/Data inspect the Internet Log (File:Open:Internet Log) for error messages. If necessary, email the Internet Log text to support@linnsoft.com for diagnosis.

Learning to Use Investor/RT

Overview of Investor/RT Window Types

Investor/RT presents market data using many types of windows. In the following sections, we will introduce each window type. After introducing a few key concepts, we will provide a step-by-step tutorial for creating a window of each type. A more thorough discussion of each window type can be found in the *Investor/RT Concepts and Facilities Guide*.

In general, it is possible to open as many windows as you like. The assortment of windows can be of any type. A Layout feature is provided to enable the user to name and save any group of windows and their screen positions. A saved layout can be recalled with a single menu choice.

Quote Pages

Quote pages are windows arranged like a spreadsheet (see Figure 18). Each row in the quote page represents a security (or “instrument”). The columns represent items of market data for the instruments, such as “last price” or “PE Ratio”. Investor/RT supports more than 100 distinct market data items for each instrument. Up to thirty of these items can be displayed as columns in a quote page.

Ticker	Bid	Ask	Last	Change	%Change	High	Low	Volume	Name
AAPL	20.33	20.38	20.44	+.56	+2.82%	20.75	19.35	8.0m	APPLE COMPUTER
ADBE	34.12	34.17	34.12	-.89	-2.54%	42.00	38.00	9.5m	ADOBE SYSTEMS
CA	28.12	28.15	28.12	+.75	+2.74%	33.05	31.00	2.9m	COMP ASSOCIATES
RNWK	7.12	7.18	7.00	-.70	-9.09%	11.05	10.20	2.4m	REALNETWORKS
YHOO	15.18	15.19	15.18	+.71	+4.91%	16.75	15.72	8.4m	YAHOO! INC

Figure 18. Quote Page

A quote page can contain an unlimited number of rows (instruments) and up to 30 data columns. Any quote page can be displayed in a variety of formats. A format is an ordered list of data columns of interest. A Quote page can be quickly changed to any format. Individual data columns can be added or removed at any time.

When Investor/RT is connected to a continuous data feed, the market data in open quote pages updates dynamically. Investor/RT features 18 built-in quote pages, called “system-defined quote pages”. An unlimited number of user-defined quote pages can be added. Quote pages can be sorted by a variety of market indicators, e.g. PE, %Change, % off 52 week high, etc. Quote pages can be set to sort automatically as market data changes. The user specifies the data column to sort on and the frequency.

Chart Windows

A chart window (see Figure 19) can have one or more panes containing graphs of price and volume data. A chart can graph technical indicators calculated from the price or volume for one or more instruments.



Figure 19. Chart window

Point and figure, volume profile, market profile, day bar, three line break, raw tick and custom profile charts are available in Investor/RT. For detailed information on a specific chart type, refer to the Help system. For example, open a day bar chart (File: New: Chart), then click the Help icon on the main toolbar for a description of Day Bar charts.

Chart data can be displayed in a variety of formats: bar, candlestick, continuous line, connected line, and histogram. Volume data can be charted as a line or as a volume histogram.

Each chart window can be easily varied to show market data of any periodicity: daily, weekly, monthly, tick-by-tick, or any minute interval.

Quick Quote Windows

The Quick Quote window shows a list of all of the instruments defined to Investor/RT (see Figure 20). To identify a particular instrument, type letters on the keyboard, or use the mouse to scroll the list and click on an instrument. The Quick Quote window displays a comprehensive summary of all current market data for the selected instrument. The Quick Quote window is useful for accessing all kinds of information related to a particular instrument. Icon buttons in the window provide access to (1) a chart of the selected instrument, (2) the setup information for the instrument, (3) all related news items, (4) trading notes, (5) portfolio positions and (6) a list of quote pages containing the instrument. The 'info' button provides detailed information about the selected instrument.

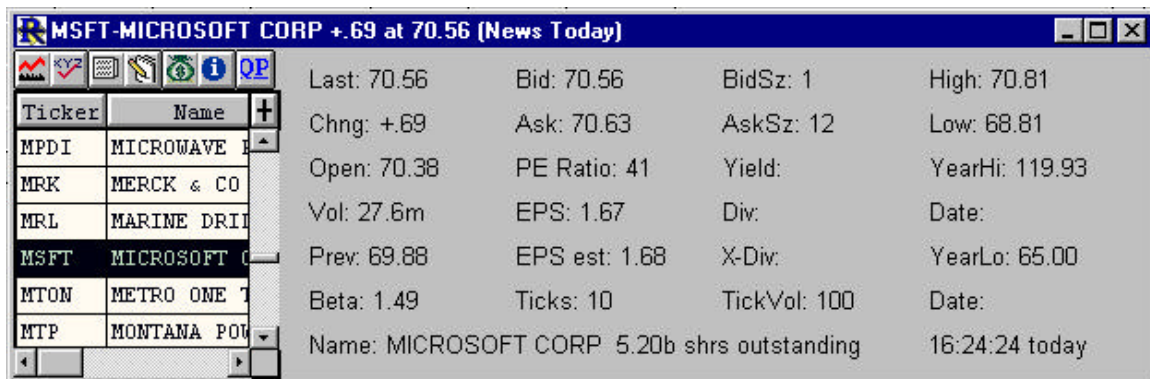


Figure 20. Quick Quote window

Ticker Tapes

A ticker tape is a narrow window strip showing real-time price and trading volume (see Figure 21).

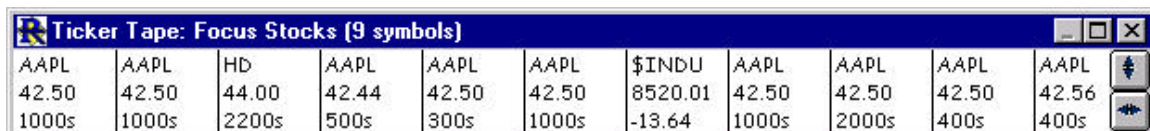


Figure 21. Ticker Tape Window

Ticker tapes are configured to show a tape of all trades for a list of instruments defined as a quote page. The tape can be restricted to show only trades exceeding a specified tick volume (for example, block trades of 5000 shares or more).

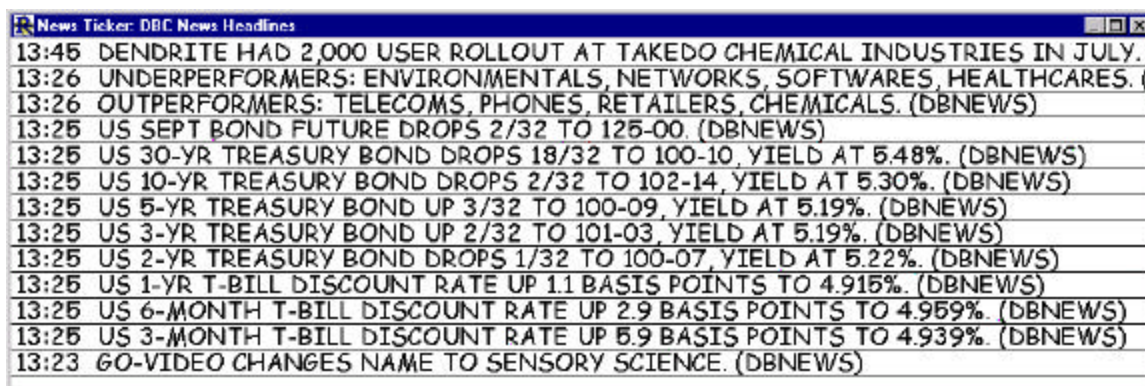
Multiple tapes can be open at once and may be sized and positioned as desired. Ticker tapes provide a way to observe trading activity of interest while using a minimal amount of screen space.

News Ticker

If the data service in use includes a news headline service, Investor/RT captures the incoming news items and organizes them by category. News categories are defined by the data service. If there are no news items on file, the 'ALL Categories' window will open.

A News Ticker window displays news headlines for a particular user selected category as the headlines arrive. The News Ticker window shows a limited number of the most recently received items. The latest items appear at the top of the window; older items are pushed down and out of the window over time (see Figure 22).

Double-click on an item of interest to see the full text (if available) of the news story.



Time	News Item
13:45	DENDRITE HAD 2,000 USER ROLLOUT AT TAKEDO CHEMICAL INDUSTRIES IN JULY. (DBNEWS)
13:26	UNDERPERFORMERS: ENVIRONMENTALS, NETWORKS, SOFTWARES, HEALTHCARES. (DBNEWS)
13:26	OUTPERFORMERS: TELECOMS, PHONES, RETAILERS, CHEMICALS. (DBNEWS)
13:25	US SEPT BOND FUTURE DROPS 2/32 TO 125-00. (DBNEWS)
13:25	US 30-YR TREASURY BOND DROPS 18/32 TO 100-10, YIELD AT 5.48%. (DBNEWS)
13:25	US 10-YR TREASURY BOND DROPS 2/32 TO 102-14, YIELD AT 5.30%. (DBNEWS)
13:25	US 5-YR TREASURY BOND UP 3/32 TO 100-09, YIELD AT 5.19%. (DBNEWS)
13:25	US 3-YR TREASURY BOND UP 2/32 TO 101-03, YIELD AT 5.19%. (DBNEWS)
13:25	US 2-YR TREASURY BOND DROPS 1/32 TO 100-07, YIELD AT 5.22%. (DBNEWS)
13:25	US 1-YR T-BILL DISCOUNT RATE UP 1.1 BASIS POINTS TO 4.915%. (DBNEWS)
13:25	US 6-MONTH T-BILL DISCOUNT RATE UP 2.9 BASIS POINTS TO 4.959%. (DBNEWS)
13:25	US 3-MONTH T-BILL DISCOUNT RATE UP 5.9 BASIS POINTS TO 4.939%. (DBNEWS)
13:23	GO-VIDEO CHANGES NAME TO SENSORY SCIENCE. (DBNEWS)

Figure 22. News Ticker

News Browser

News browser windows are used to review all news items or all news items on file for a particular news category. The news browser window can be scrolled using the mouse or keyboard to quickly review the selected headlines. The window has two panes (see Figure 23). The top pane lists headlines and the lower pane displays the full text of the selected headline. Double-click on a news headline to review the full text of the news item in a separate text window. To identify all headlines that contain a user-specified key word or phrase, use the Find command.

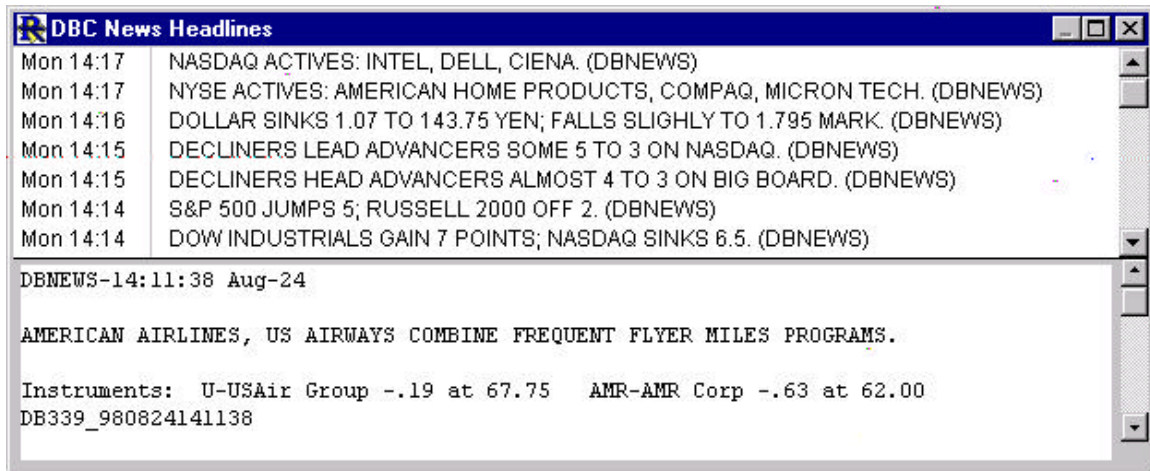


Figure 23. News Browser

Scans

The scan window allows the user to scan the historical data for any list of instruments to identify those meeting user-specified criteria. Scans can also be used to rank a list of instruments according to some criteria. Scan criteria are expressed in a simple yet powerful scan request language called the Investor/RT Real-Time Language, or RTL (see Figure 24). For an explanation of RTL, review the Investor/RT Tour topic, “RTL Language” on our website, <http://www.linnsoft.com/tour/scanElems.htm>.

Scan criteria can include market data items (e.g. price, % change, PE), historical data conditions (e.g. issues advancing for 3 consecutive periods), and technical indicators (RSI value, MACD crossovers, Moving Average crossovers, etc.).

Scans can be used to analyze daily, weekly, monthly, intraday, one minute or tick data. Scans can be saved and run later using a menu command. A scan can be run automatically throughout the trading session, watching for any custom trading signal expressed in the scan language.

When a scan is run, it produces a quote page listing the instrument(s) that satisfy the scan criteria. Optionally, the quote page can be ranked by any criterion or calculated value. In the section “Using Scans” (page 58) an example scan identifies all stocks trading more than 20% off their 52 week high. It then ranks the resultant quote page by the percent off the 52-week high in descending sequence.

WWW.TRADING-SOFTWARE.ORG

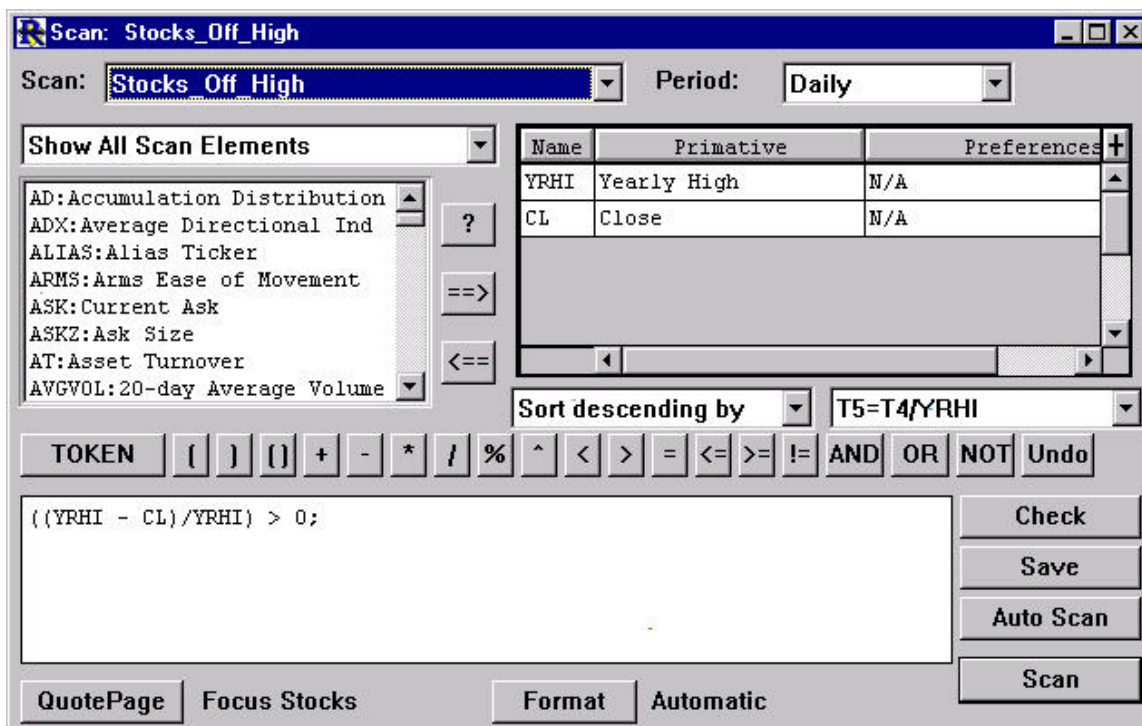


Figure 24. Scan setup window

Portfolios

A portfolio window is very similar to a quote page (see Figure 25). The key difference is that the quote page shows market data for instruments. The portfolio window has similar rows and columns, but the rows in a portfolio represent open positions (positions held in one or more instruments). Some data columns, such as “Quantity”, “L/S” (long/short), “Cost Basis”, “Days Held”, are available a portfolio windows, but not in quote pages.

In a portfolio window, the last three rows show totals for several key data columns. Totals are displayed for cost basis, value, gain/loss, change in value today, etc.

Portfolios, like quote pages, update in real-time. Investor/RT maintains the total portfolio value as an instrument. Therefore, portfolio value can be charted daily, weekly, monthly, or intraday, just like any other instrument. Positions are entered into a portfolio using the Order Desk and Order Confirmation windows. These are discussed in the next section.

Ticker	Name	Last	Cost Basis	Value	Net G/L	L/S	C/M	Qty Held	% G/L	
CA	Computer Associates	33.94	17,500.00	33,937.50	16,437.50	L	C	1000	93.93%	
WONE	WESTWOOD ONE I	20.63	2,200.00	2,063.00	-137.00	L	C	100	-6.23%	
ZBRA	ZEBRA TECHNOLOG	33.50	3,600.00	3,350.00	-250.00	L	C	100	-6.94%	
BMET	Biomet	30.56	2,200.00	3,056.25	856.25	L	C	100	38.92%	
LU	Lucent Technologies	88.00	4,300.00	8,800.00	4,500.00	L	C	100	104.65%	
Mkt Value			29,800.00	51,206.75						
Cash (Debt)				5,743.45						
Equity				\$56,950.20	\$21,406.75					

Figure 25. Portfolio window

Order Desk and Order Status Windows

The Order Desk window is used to enter unconfirmed or confirmed (completed) trades into a portfolio (see Figure 26). The window contains a list of available instruments (when opening new positions), or a list of existing positions (when closing out positions). To access the Order Desk, click the 'Place Trade' button on the main toolbar (or Control menu: Place Trade).

Limit or market orders can be entered using the Order Desk. Orders can be confirmed or canceled using the Order Status window. To access the Order Status window, click the 'Confirm Trade' button on the main toolbar (or Control menu: Confirm Trade).

Completed trades can be entered directly into the portfolio as "Trade Entry" or "Journal Entry" order types. Once a position is added to a portfolio, any of the position's data items may be edited within the portfolio window.

Ticker	Name	Last	Bid	
MRK	MERCK & CO	68.38	68.13	
MRL	MARINE DRUGS	27.06	27.06	
MSFT	MICROSOFT	70.56	70.56	
MTON	METRO ONE	11.75	11.50	

Figure 26. Order Desk window

Investor/RT maintains a record of all open and closed positions in its database. Screen or printed reports of completed trades can be produced for tax accounting purposes. To create a report, click the Portfolio Reports button on the Portfolio Toolbar.

Investor/RT also allows each position to be assigned to an “asset class”. A report is available showing the percentage breakdown of the portfolio positions by asset class.

Toolbars

Using toolbars, Investor/RT provides convenient single-click access to many of its features. The main toolbar, usually anchored at the top of the screen under the menu bar, is always available. It provides access to each of the window types previously discussed. Clicking a button on the main toolbar frequently brings up a list of objects of some type. For example, clicking the News Ticker button displays a list of available News Ticker categories. (see Figure 27).

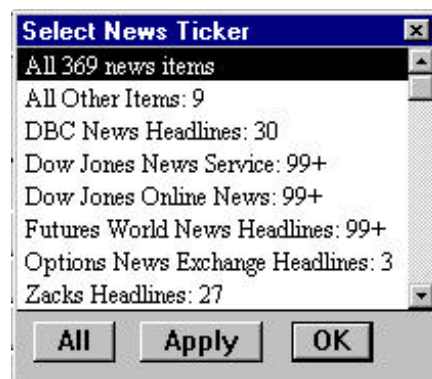


Figure 27. News ticker selection list

The main toolbar may be alternately shown and hidden by pressing Alt-H (command+H on Macintosh), or by using the Window menu. The main toolbar can be viewed in one of three styles. For new users, the “Expanded with Titles” style is recommended. In this style, the title of each main toolbar button is shown beneath the button. View the other styles by choosing Setup: Preferences: General.

Many of the other window types have special purpose toolbars that become accessible when windows of that type are active. For example, when a chart is active, the charting toolbar (see Figure 28) appears. There are special toolbars for charts, quote pages, portfolios, slide shows and news browsers.



Figure 28. Charting toolbar (Vertical & Horizontal Styles)

Button Help

The icons on the buttons in the various toolbars are indicative of the button's function. To determine a button's function, position the tip of the mouse pointer over the button for a second or two. A button help window will pop up containing the button's title. Right-click in the main toolbar messages area to turn on/off the tool button help.

Using the Help System

The Investor/RT Help System is a useful resource for the new user. The Help System provides instant access to useful information documenting each function and feature of Investor/RT. The Help System contains more than a million characters of carefully organized text and graphics designed to answer

common questions about the use of Investor/RT. Most “How to...” questions can be answered quickly by accessing the Help System.

To open the Help window (see Figure 29), click the Help button (“?”) on the main toolbar, press F1, or use the Help menu. The Help window is context sensitive. When Help is requested, Investor/RT determines which type of window is active and displays the Help text associated with that window. For example, to find out more about using the Import command in Investor/RT, choose File: Import. When the Import window appears, clicking the Help displays the topic “Importing Symbols and Historical Data”.

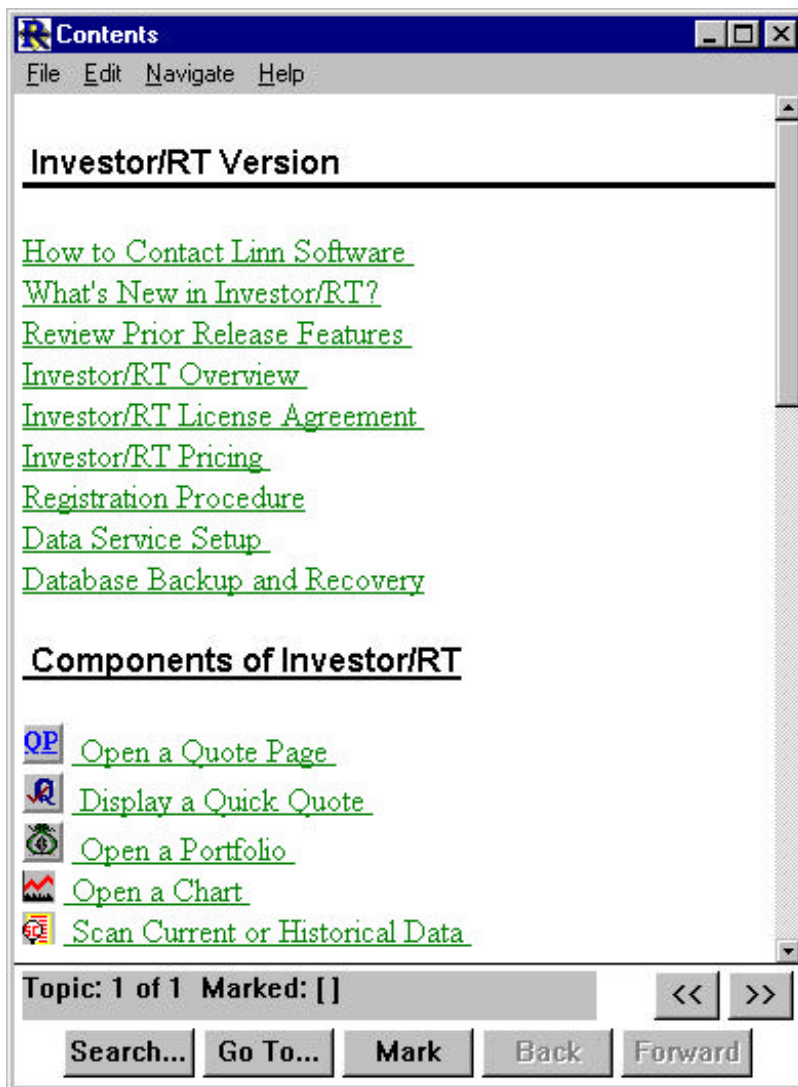


Figure 29. Help window

The Help System also includes a topic “How to use the Help System”. To access any topic directly, open the Help window and use the “Search” button

at the bottom of the window. To locate an item of interest, scroll through lists of topics or keywords. As shown in Figure 30, topics and keywords are listed alphabetically. To access an item, select it and click on the “Go to Selection” button.



Figure 30. Searching for help by Keyword or Topic

The Help System is built into certain frequently used windows. For example, when adding a technical indicator to a chart, a selection window will appear listing all available technical indicators. To view information about a particular indicator before adding it, select the indicator and click the Help button.

Investor/RT can also be setup to access Internet-based help web pages instead of the built-in help system. Turn on this feature in the Setup: Preferences: Mail & Internet Setup Window.

Investor/RT Discussion Group

Linn Software sponsors an email based “Discussion Group” for the benefit of all registered Investor/RT users. The Linn Software Yahoo Group is an email-based and web-based discussion group or forum and much more. It can be a great way to meet fellow Investor/RT users from all over the world who share similar interests, to share successful trading strategies, and to provide or request valuable insight or information regarding Investor/RT

tools and techniques. For information on joining the group, go to <http://www.linnsoft.com/egroups/index.htm>.

Accessing Linn Software Customer Support

Customer assistance is available to all Investor/RT users via email to support@linnsoft.com. Questions are answered promptly during normal business hours (8:30 a.m. to 5:30 p.m. Eastern Time, Monday through Friday). Questions submitted after business hours are answered as soon as possible the next business day. The User Profile is required with messages to Support.

Linn Software also offers a telephone consultation service to assist customers in system set up or problem resolution. There is a fee for this service, please consult the Help topic, “Investor/RT Pricing” for our fee schedule. To request a telephone consultation, email info@linnsoft.com. Include a telephone number and a preferred time for the consultation.

Sending the User Profile

When emailing Customer Support, a copy of the User Profile must be included with every message. The profile provides useful information about the Investor/RT system, including platform, version, session setups and other items.

Using the email feature built into Investor/RT, the profile is included automatically with the message.

If you use an email program (Outlook Express, Eudora, etc.), choose 'Copy User Profile' from the Investor/RT Edit menu. Go to the email program and compose a new message. Using the “paste” command, insert the User Profile text into the message.

The Investor/RT Email Feature

Investor/RT has a built in email feature for communicating with Linn Software. Questions can be emailed directly from Investor/RT to Customer Support, Sales, Development, and other Linn Software addresses. The Mail Preferences must be completed before messages can be sent.

Choose Setup: Preferences: Mail and Internet

1. In the reply address field, enter your email address, e.g. yourname@mindspring.com.

2. In the Mail Server field, enter the name of the (SMTP) mail server used for outgoing mail. Normally this is an address of the form mail.xxxxx.com or mail.xxxxx.net, where xxxxx indicates the Internet Service Provider (e.g. mail.mindspring.com, or mail.flashnet.net).

If you are connected to a local area network and use a proxy server to route outgoing email to the Internet, it is not necessary to fill in the Mail Server. Instead, check the "Use Proxy Server" box and enter the Internet Address of the proxy server. If necessary, contact your network administrator for this information.

Sending an Email from Investor/RT

In the Help menu, choose "New Message". This opens a new email message addressed to support@linnsoft.com. The pull down menu contains a variety of Linn Software addresses for different types of messages. Linn Software Support is the default address. To change the address, make a new selection from the pull down menu or type into the "To" field. The email feature includes a copy of the User Profile with each message to Support.

Setting Up Instruments

In Investor/RT, the term "instrument" refers to a security the user wishes to monitor. Each instrument has an associated ticker symbol. However, the ticker symbol is not always sufficient to uniquely identify the particular security. Each instrument is defined by three pieces of information: the ticker symbol, the requested exchange, and the trading session. Together, these three items uniquely identify the security and its trading hours.

Ticker Symbol

The ticker symbol is a sequence of one to 24 characters that identifies the instrument according to the data service in use. For example, Signal and InterQuote use the ticker symbol \$INDU to identify market data for the Dow Jones Industrial Average, while BMI and DTN use INDU.

Most ticker symbols are composed of uppercase letters. When typing ticker symbols in Investor/RT, the software automatically capitalizes letters as they are typed. Do not use the caps lock or shift key. Occasionally, a ticker symbol contains one or more lowercase letters.

When entering ticker symbols, typing a slash (forward slash /) signals Investor/RT to allow the next typed letter to remain in lowercase. For example, the InterQuote ticker symbol for Alcan Aluminum on the Toronto exchange is ALt. To enter this symbol, type al/t. Investor/RT will capitalize the AL, ignore the / and leave the t in lowercase to produce ALt.

NOTE: If a ticker symbol actually contains a slash, type two slashes in succession to enter one slash. For example to enter IBM/A, type ibm//a.

Requested Exchange

Some data services broadcast a unique code with each trade to identify the exchange on which the trade occurred. If the user specifies a particular exchange when defining an instrument, Investor/RT monitors just the trades that occur on that exchange. The exchange AUTO (automatic) is used to request monitoring of all trades for the ticker symbol regardless of exchange.

It is possible to define multiple instruments having the same ticker symbol. For example, the symbol IBM, requested exchange AUTO and symbol IBM, requested exchange NYSE, can be defined as distinct instruments. The former will track all trades in IBM; the latter will track only the trades that take place on the New York Stock Exchange.

NOTE: myTrack and Dial/Data users should always specify AUTO as the requested exchange since exchange identification is not supplied by the data service.

Session

A session (trading session) has a name and a session number. A session represents the hours during which trading occurs for one or more instruments monitored by Investor/RT. For example, session 0 is pre-defined as the trading hours of the New York Stock Exchange. Investor/RT is shipped with several sessions defined for Eastern Time Zone as a default.

IMPORTANT: All session times must be expressed in the local time of the user. For Windows users, the time zone must be set correctly in the Date/Time control panel.

The user can define as many as 50 unique trading sessions to Investor/RT. Assigning a session to an instrument causes the instrument to be monitored during the trading hours associated with that session. Data collection and intraday charting are restricted to the trading hours of the assigned session.

Default Instrument Properties

New instruments can be added to Investor/RT by typing their ticker symbols directly into a blank row in a quote page. Another method of adding instruments is to use the File:Import. Use this feature to import a list of ticker symbols from an ASCII text file or from a MetaStock directory. When adding new instruments in these two ways, Investor/RT determines the security type, the requested exchange, and the session for the new instrument from the user-specified default instrument settings. To adjust the default settings, choose Setup: Preferences: Instrument. Adjust the default preferences in the Instrument Preferences window (see Figure 31).

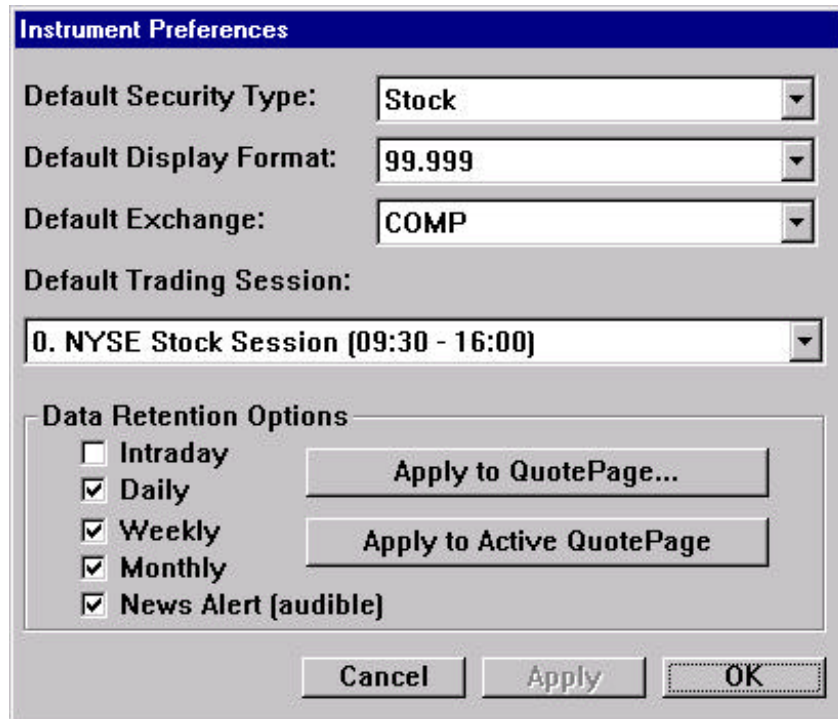


Figure 31. Default Instrument Preferences

Setup: Instrument

The Setup: Instrument window (see Figure 32) can be used to add new instruments or modify the set up for existing instruments.

In the Setup menu, there are special windows for adding suites of futures, equity & index options, and futures options. It is recommended that the special futures and options setup windows be used to add new instruments of these types. The rules for forming correct futures and options symbols differ for each data service. The special setup windows take these differences into account and generate the correct ticker symbols automatically.

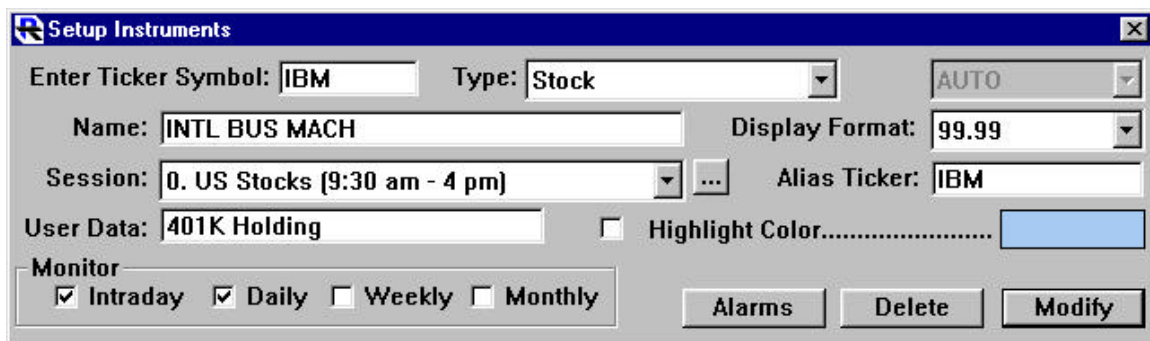


Figure 32. Setup Instrument window

To add a new instrument using the Setup: Instrument window:

1. Enter the ticker and security name in the spaces provided.
2. Adjust the security type and trading session.
3. Press the “Add” button.

The new instrument will be added and the entry boxes will be cleared for entering a new instrument.

To adjust the settings of an existing instrument:

1. Type in its ticker symbol.
2. When Investor/RT recognizes the instrument, the “Add” button will change to “Modify”. Adjust the name, the display, alarms, or monitoring options as desired.
3. Press “Modify”.

The identified instrument will be modified and the entry boxes will be cleared for entering a new instrument. To cancel the modification, close the window without pressing “Modify”.

NOTE: The session and the requested exchange of an existing instrument cannot be modified using the Setup: Instrument window. To assign an existing instrument to a different session or requested exchange, edit the instrument in a quote page instead.

Stock Option Instruments

Suites of stock and index options are established in Investor/RT using the Setup: Equity and Index Options command. When the setup window appears (see Figure 33) follow these steps:

1. Enter the ticker symbol for the underlying stock or index of interest.
NOTE: before generating a suite of options for an underlying stock or index, the underlying stock or index must first be defined to Investor/RT. Use Setup: Instrument as discussed previously. For Investor/RT to determine the price range to use for suggested strike prices, there must be a current quote for the underlying stock or index.
2. When the underlying ticker has been entered, Investor/RT will suggest a three-character code as the “option prefix”. (For example, the prefix for ticker AAPL is AAQ). Verify that the prefix code is correct or make adjustments if necessary.

3. Specify the cycle, if known, for the options of the underlying instrument or check off the expiration months to be followed.
4. Specify puts, calls, or both.
5. Investor/RT will suggest a range of strike prices. Edit the range if needed.
6. Click the Add button to create the option instruments. If the “Add to Quote Page” box is checked, the instruments will be added to the quote page open at the time. If no quote page is open, a new one will be created automatically.

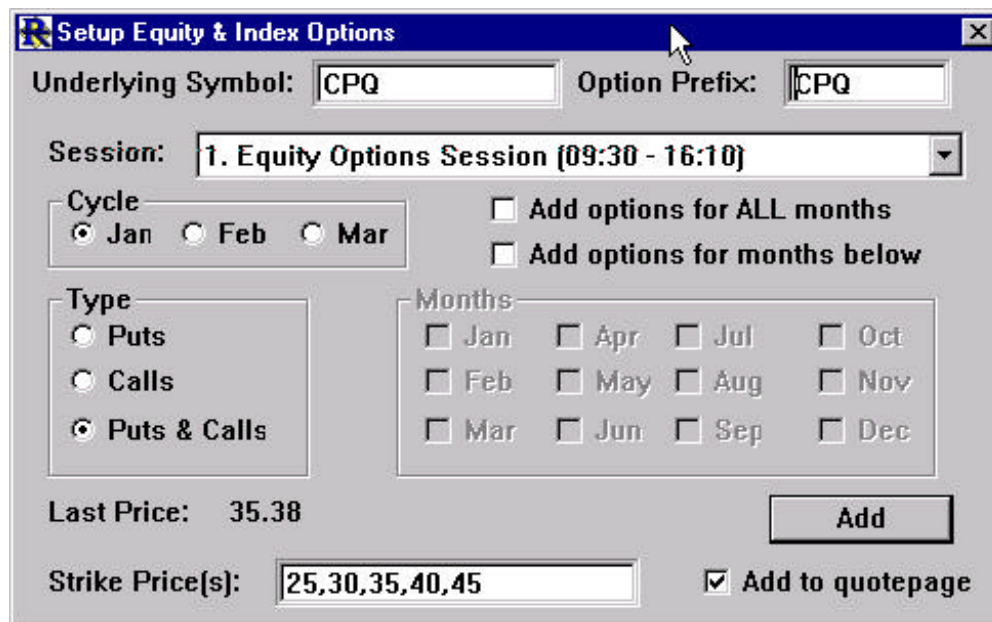


Figure 33. Setup Equity & Index Options

Futures Instruments

Suites of futures are established using the Setup: Futures window. Choose the particular type of futures contract from the “Future Type” menu. This selection identifies the future code (the first one or two letters of all ticker symbols for the selected type). If the desired future type is not listed, additional future types can be defined by choosing “Setup”. This will open the Future Definition window for adding futures types not pre-defined in Investor/RT.

After identifying the future type, set the contract year (use 00 for the year 2000). Check off the desired months and click “Add”. The “Add instruments to quote page” check box works in the same manner as previously described for stock options.

Futures Option Instruments

The Setup: Futures Options window operates similarly to the equity and index options window. The key difference is that the underlying is a future type instead of a stock or index ticker symbol.

Using the Quote Sifter for Ticker Symbol Setup

When Investor/RT is used with a “broadcast” type data feed such as Signal, BMI, or DTN, the Quote Sifter feature can be used to produce lists of ticker symbols from the “raw data feed”.

Note: The Quote Sifter cannot perform this function for Internet based data feeds. All Internet based data services transmit data requested for instruments already defined in Investor/RT.

1. Choose “Quote Sifter” from the Setup Menu.
2. Ticker symbols can be sifted based on a symbol “pattern”, price range, % change in price, volume range, security type, or exchange where traded.
3. Click “Begin” to start the sifter.
4. Tickers matching the criteria are displayed in a “raw feed” window. When the specified number of tickers has been collected, the sifter terminates.
5. A dialog box appears giving the option of displaying the sifter results in a quote page. If this option is chosen, Investor/RT will define new instruments for each collected ticker symbol, if necessary, and display the resulting quote page.

Using DTN Symbol Lookup to Add Instruments

The DTN data service provides Investor/RT with lists of all valid ticker symbols for each exchange. The lists are available for viewing using the “DTN Symbol Lookup” command in the DTN menu. The Symbol Lookup window (see Figure 34) lists the “databases” for which the user is authorized. Each database corresponds to a particular market, exchange, or security type. Select the database of interest and specify a symbol pattern.

The pattern can be the first few letters of the ticker symbol or a wildcard pattern. Wildcard patterns contain question marks or asterisks.

Use a question mark to represent any single character. For example, SP?? matches any four character symbol beginning with SP.

Use an asterisk to represent any span of zero or more characters. For example, *8U would match any ticker symbol containing 8U. Click the “Add All” or “Add Selected” button to add new instruments for each identified symbol.

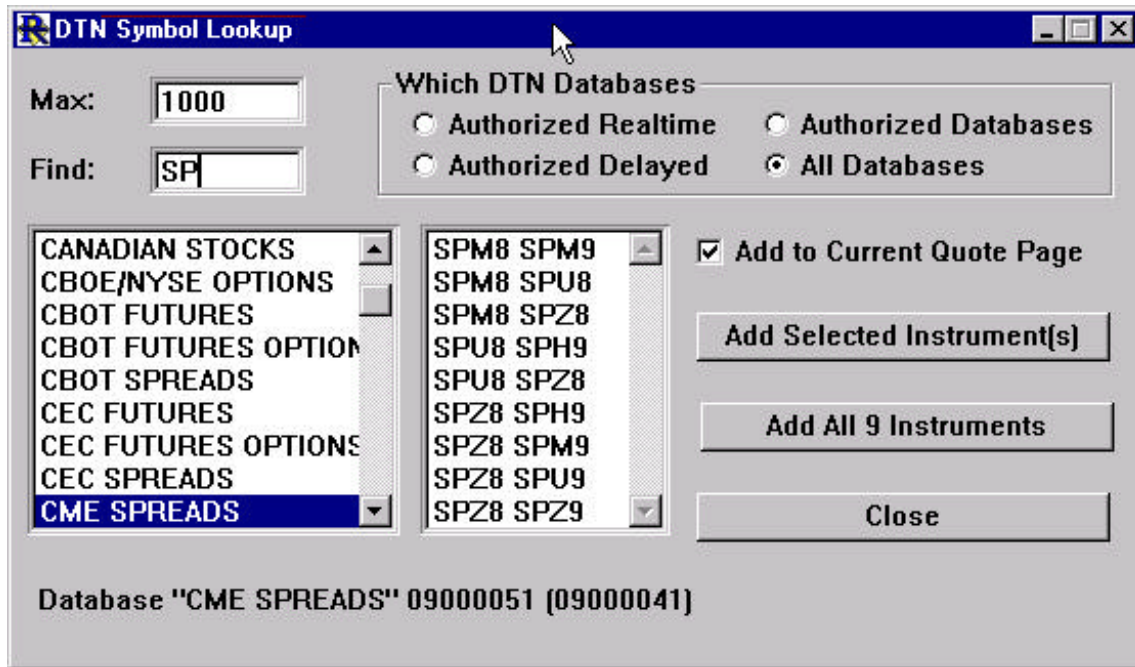


Figure 34. Using DTN Symbol Lookup

Defining New Instruments in a Quote Page

New instruments can be added by typing the tickers into blank rows in a quote page. Follow these steps:

1. Verify that the instrument defaults are set properly in Setup: Preferences: Instrument.
2. To open a new empty quote page, click the Quote Page button on the main toolbar or use File: New: Quote Page. To add additional blank rows press the “Insert” key on the keyboard or use the “Insert New Row” button on the quote page toolbar. (On Macintosh, use shift + ins to insert blank rows).
3. Click the mouse in the ticker cell of a blank row, and type in a ticker symbol.

4. Press the down arrow to move down to the next empty cell. If the ticker is not already defined as an instrument, moving down causes the new instrument to be added and positions the cursor in the next empty cell. The security type, session, and other properties of the newly added instruments are obtained from the Instrument Preferences.

Importing Ticker Symbols

Importing from MetaStock Directories

Many Investor/RT users have ticker symbols and historical data in MetaStock format (sometimes called Computrac format). Investor/RT can import the ticker symbols and the historical data using the File: Import command.

1. When the Import window opens, choose “MetaStock List Symbols” from the Import File Type menu, and click Import.
2. Identify the MetaStock Master file in a MetaStock folder. Locate the file named “master” or “xmaster” and open it.
3. Investor/RT will scan the master file and add new instruments for each ticker defined in the master file.

Historical data is imported in the same way, using “MetaStock All Symbols” instead of “MetaStock List Symbols” as the file type. For more information, consult the Help Topic “Importing MetaStock Files” or look up “MetaStock” in the help keyword index.

Importing from TickerWatcher

Macintosh users who have used Linn Software’s TickerWatcher software in the past can easily import all ticker symbols and historical data into Investor/RT. To import ticker symbols,

1. Open the Import window and choose “Ticker Symbols” as the Import Type.
2. Choose “TickerWatcher Quote File” as the File Format.
3. Click the Import button and locate the file named “Quote File” in the Ticker Watcher folder’s admin folder.

Investor/RT will scan the quote file and define new instruments as required. For more information, consult the Help Topic “Converting to Investor/RT from TickerWatcher.”

Importing from ASCII Files

Investor/RT can import lists of ticker symbols and their associated security names from ASCII text files. The file must contain only one symbol per line. If a comma or tab character follows the symbol, the remainder of the line is accepted as the security name.

1. Choose File: Import.
2. Select “Ticker Symbols” as the import type.
3. Select ASCII Text as the file type.
4. Click Import and select the ASCII file to be imported.

Setting up Quote Pages

Default Quote Page Properties

Each quote page has various properties that control its appearance (background color, font and size, the format of the data columns displayed, etc.). Before creating new quote pages, first set the default appearance properties using Setup: Preferences: Quote Page.

NOTE: Adjusting the defaults properties DOES NOT adjust any quote pages that already exist. Rather, the new defaults will be used only for those quote pages created in the future. Adjusting quote page properties in an existing quote pages is discussed later.

With the Default quote page properties set, creating a new quote page is easy. Click the Quote Page button on the main toolbar or use File: New: Quote Page. Select from a list of instruments or type the ticker symbols into the cells of the quote page.

System Defined Quote Pages

Investor/RT has 18 built-in and pre-defined quote pages. Their names begin with a period to denote them as system defined quote pages. Some examples include:

1. The quote page “.All Symbols” is a quote page that lists all instruments tracked by Investor/RT.
2. The “.Stocks” quote page lists all instruments defined as stocks.
3. The “.Alarms-All” quote page lists all instruments for which a price, volume, or news alarm has been triggered.

Investor/RT automatically maintains the list of instruments in each system defined quote page. For example, if an instrument’s security type is changed from “Stock” to “Mutual Fund”, Investor/RT will automatically add the instrument to the “.Mutual Funds” quote page and remove it from the “.Stocks” quote page.

Setting Up Quote Pages

To add “user defined quote pages” choose File: New: Quote Page. A blank quote page will open along with the “Add To Quote Page” window. This helper window displays a listing all of the instruments defined in the

Investor/RT database. To add an instrument to the quote page, highlight the instrument in the list and double click. To facilitate lookup, the window can be viewed alphabetically by ticker or by security name. Click the “plus sign” icon in the upper right corner of the helper window to alternate between the two listings. Tickers symbols can also be typed directly into the ticker cells of the quote page as described previously.

Initially, the new quote page is assigned the name “untitled”. To save the quote page choose File: Save or use the Save button on the quote page toolbar. Enter a name for the untitled quote page. Quote page names can be up to 31 characters in length. The name cannot begin with a period since the period is reserved to denote system defined quote pages.

Each user defined quote page is added to the list of quote pages in the Open menu. This list can also be accessed by clicking the Quote Page button on the main toolbar.

Adding and Deleting Instruments

To add new instruments to an existing quote page, open the quote page and click the “Add Instruments to Quote Page” button on the quote page toolbar. The “Add To Quote Page” helper window will appear. Use the window as described in the previous section.

New instruments can also be added to an existing quote page directly. To add a blank row beneath the currently selected row, open the quote page and press the “Insert” key (Macintosh: use shift + ins). If no row is selected, the blank row is added to the end of the quote page.

To delete a row from the quote page, selecting the row and press the Delete key (Macintosh: use the forward del key) or click the Green Trashcan icon on the quote page toolbar. This action removes the row from the quote page but continues to track the instrument in the Investor/RT database.

To permanently delete an instrument (i.e. stop tracking it altogether) select the instrument and click the Red Trashcan icon on the quote page toolbar. Confirmation will be requested. This action deletes the row from the quote page and removes the instrument from the Investor/RT database.

Editing Instrument Properties in a Quote Page

Many properties of an instrument can be edited by directly modifying the cells of a quote page. Edit the ticker symbol, the session, the requested exchange, the security type, or monitoring options by typing values into the appropriate cells and pressing the return or enter key.

When modifying the ticker, session, or requested exchange fields, Investor/RT asks whether the user desires to modify the existing instrument or define a new one with the new value. To change the value for the existing instrument, press “Modify”.

Customizing Quote Page Properties

To adjust the properties (colors, format, font, size, etc.) of a quote page click the “Quote Page Preferences” icon on the Quote Page toolbar. A window similar to the default quote page preferences window will appear. The name of the quote page being adjusted will appear in the window title.

Setting up Charts

Default Chart Properties

Like quote pages, chart windows also have a variety of properties that define the appearance and other characteristics of the chart. There are several preference windows used to specify default charting properties. Access these windows by clicking the Preferences button on the charting toolbar (or Setup: Preferences: Charting).

1. Use the “Color Preferences” window to specify chart coloring preferences and a default chart type: bar, candlestick, line, etc.
2. Use the “Viewing Period” preferences window to specify the default periodicity (daily, weekly, monthly, intraday) and the time period to view (e.g. “Last 2 years” for a daily chart, or “Last 3 days” for an intraday chart).
3. The “Other Preferences” window contains additional charting options. In this window, specify the name of a chart that Investor/RT will use as the default. The default chart will be used when a chart is requested for a particular instrument in a quote page.

Creating a New Chart Window

There are many ways to request a chart in Investor/RT.

Method 1: Create a chart using the File menu

1. Choose File: New: Chart.
2. The Create New Chart window will appear.
3. Select an instrument to chart.
4. Set the periodicity and chart type.
5. Press OK.

Method 2: Create a chart using a quote page

1. Open a quote page.
2. Point the mouse at a ticker symbol in the quote page and double-click (Windows: use the left mouse to double-click).
3. A chart of the selected instrument will appear. To modify charting options, click the mouse in the chart window and select from the pop up menu.

Method 3: Create a chart using the quick quote window

1. Open a Quick Quote window (File: New: Quick Quote).
2. Type the first few letters of the ticker symbol until the desired instrument is selected in the list. Press the esc key to start over.
3. Click the Chart icon at the top left of the Quick Quote window.

Method 4: Create a chart using the main toolbar

1. Click the mouse on the “Open Chart” button (4th button from the left).
2. A list of available charts will appear.
3. To create a brand new chart, double-click “New”.
To open an existing chart, double-click the chart name.

Method 5: Create a chart using the Open menu

1. Choose Open: Chart.
2. Select the name of the desired chart in the menu.
3. The chart will open automatically.

Adding or Replacing Instruments in a Chart Window

When a chart window is the front active window, a charted instrument can be replaced by another instrument by typing the first few letters of the new ticker symbol. An “Update Chart” window will appear. Continue typing until the desired instrument is identified. Press return to chart the identified instrument.

A chart can contain several instruments. To add a new instrument to an existing chart:

1. Click the “Add new instrument...” button on the charting toolbar.
2. A “Select Instrument” window will appear.
3. Type the letters of the ticker symbol to identify the desired instrument.
4. Choose the “Pane” into which the instrument should be added or choose “Create a new pane”.
5. Press OK.

Adjusting Chart Properties

Chart Periodicity

To change the periodicity (daily, weekly, etc.) of a chart, click the mouse inside the chart window. Use the “Set Periodicity” menu within the pop up menu.

Keyboard shortcut: Hold down the Ctrl key (Macintosh option key) while pressing the right or left arrow keys to cycle through daily, weekly, monthly, tick, one minute, etc.

Chart Types

The chart type (bar, line, candle, etc.) can be revised using the pop up menu. Right-click the mouse in the main body of the chart and select the desired type from the “Set Chart Type” menu.

Chart Colors

Access the pop up menu and choose Charting Preferences: Color Settings, or click the Preferences button on the Charting toolbar and choose Colors. To adjust a color, click on it and select a new color from the pallet that appears.

Chart Period Settings

There are three ways to access the chart period settings:

- Right-click the mouse (Macintosh command-click) in the horizontal axis (time axis) area of the chart.

- Access the pop up menu and choose Charting Preferences: Period Settings.
- Click the Preferences button on the Charting toolbar and choose Viewing Period.

Adding Technical Indicators to Charts

To add a new technical indicator to a chart:

1. Press the Insert key on the keyboard or click the “Add Technical Indicator” button on the charting toolbar. On Macintosh extended keyboards, the “Insert Key” is shift+Help (notice the legend “ins” on the Help key).
2. The “Add Technical Indicator” window will appear.
3. From the alphabetical list on the left, choose the desired indicator. Type letters or use the mouse to scroll the list to the desired indicator.
4. If necessary, revise the settings for the indicator.
5. Click Apply or OK.

NOTE: The Apply button adds the indicator and leaves the window open for adding more indicators. The OK button applies the indicator to the chart and closes the Add Technical Indicator window. Apply and OK buttons are similarly used in other windows.

Tip: Use Setup: Preferences: Keyboard Shortcuts to define function keys for your favorite technical indicators. Adding technical indicators setup in this way takes only a single keystroke.

Creating an Intraday Chart (a step-by-step example)

In this example, we will create an intraday 1-minute candlestick chart for the December 2001 S&P 500 Futures contract. Since each data service has its own conventions for futures symbols, the correct ticker symbol for each supported data feed is listed below.

Signal: SP-Z1

BMI: SP1Z

DTN: SPZ1

Data Manager: SP Z1 (there is one space after SP)

InterQuote: SP1Z

MyTrack: SP`Z

Dial/Data: SP1201

1. Set up the ticker symbol using Setup: Instruments.
2. Check the “Intraday” monitoring checkbox in Setup: Instruments. Define the instrument as security type “future”.
3. Set the session to the correct trading hours expressed in the local time zone and click “Add”.
4. Open the “.Futures” quote page.
5. Inspect a quote page to verify that the instrument is receiving data.
6. To view a chart, double-click on the ticker symbol.
7. Click in the chart window and choose Periodicity from the popup menu. Adjust the periodicity to “1 minute”.

Setting up Portfolios

To create a new portfolio:

1. Use File: New: Portfolio or click the Portfolio button on the main toolbar.
2. Enter the portfolio name, initial cash balance, brokerage account number and telephone number.
3. Click the Add button.
4. An empty portfolio window will appear and the “Order Desk” window will open.
5. Add positions to the portfolio using the order desk window.

Use “Journal Entry” to open or close positions in the portfolio without any adjustment to the cash in the portfolio.

Use “Trade Entry” to open or close positions in the portfolio where the cost or proceeds are debited or credited to the portfolio cash balance.

The cash balance can be adjusted by editing the cash balance cell in the portfolio spreadsheet. Data for any position (quantity, cost/share, etc.) can be similarly adjusted.

Setting up Layouts

A layout is a named collection of windows. To create a layout:

1. Set up the individual windows of the layout—quote pages, charts, portfolios, ticker tapes, etc.
2. Size and position each window.
3. Choose File: Save: Layout. A dialog box will appear asking for a name for the layout.
4. Enter a name for the layout or pick an existing name from the dialog and press “OK”. Confirmation will be requested if you are replacing an existing layout.

To open a layout, select the layout name from the Open: Layout menu.

When saving a new layout, every quote page and chart window must first be saved. Quote pages in a layout may be either system defined or user-defined quote pages.

Accessing Historical Data

Using Dial/Data

All editions of Investor/RT support Internet-based access to Dial/Data for downloading daily, weekly, or monthly historical data for all security types. To access Dial/Data, use the “Download Data” window. Click the Download Data button on the main toolbar or go to Control: Data Management: Download.

1. Set the “Server” to Dial/Data.
2. Choose “Historical Quotes” as the Download type.
3. Choose Daily, Weekly, or Monthly as the Period.
4. Specify the starting and ending dates.
5. To download for a particular instrument, check the “One Instrument” checkbox. To download data for every instrument in a quote page, select the quote page from the list.
6. Press the “Connect” button. Monitor the progress of the download in the main toolbar message area.

NOTE: To access Dial/Data you must be registered with a Dial/Data User ID. The ID must begin with “N” followed by a 5-digit number. A 30-day free trial is available to Investor/RT users. For more information, open the Registration window (Setup: Preferences) and click the “Dial/Data Free Trial” button.

Using the Momentum Stock CD-ROM

The Momentum CD-ROM (<http://www.momentumcd.com/>) contains eleven years of daily historical data for more than 15,000 stocks. Investor/RT has integrated support for this CD-ROM via the Download Data window.

Specify “Momentum CD-ROM” as the “Server” and follow steps 2-8 as outlined in the section “Using Dial/Data”.

The Period must be set to “Daily”.

NOTE: Before using the Momentum CD-ROM, choose Setup: Preferences: CD-ROM Preferences. Specify the location of the Momentum CD-ROM. With the CD-ROM Preferences window open, click the Help button for assistance. Macintosh users must follow the special instructions provided in the Help system.

Using the Glance Futures CD-ROM

The Glance CD-ROM (<http://www.momentumcd.com/>) contains long-term historical data on all futures contracts. The data on the Glance CD-ROM is organized in MetaStock format. Access to the historical data is provided via the File: Import window.

1. Choose “Daily Historical Data” as the Import Type.
2. Choose “MetaStock One Symbol” or “MetaStock All Symbols” from the File Type menu.
3. Specify “Import Format” as the File Format.
4. Press the Import Button. A file selection dialog box will appear.
5. Choose either the MASTER or XMASTER file from a MetaStock directory on the CD-ROM.

Using the InterQuote Historical Server

InterQuote users have access to five years of daily historical data for stocks and indexes. Historical data since April 1998 is available for all other security types. When using the Download Data window, specify “InterQuote” as the server.

Using the InterQuote Tick Data Server

Tick data and intraday bar data for the preceding 5 trading days is available for all security types. Access to daily, tick, and intraday bar data is accomplished via the Download Data window.

1. Specify “InterQuote” as the Server.
2. Specify Daily, Tick, or Intraday as the Period.
3. For Intraday, specify the number of minutes per bar.
4. Specify the starting date (and time if tick or intraday).
5. To download data for a particular instrument, check the “One Instrument” checkbox. A dialog box will appear for selecting an instrument.

To download data for each instrument in a quote page, select the quote page from the list.

6. Press the Connect button. Monitor the progress of the download in the main toolbar message area.

Using the eSignal Historical Server

Data Manager users have access to eight years of daily, weekly, or monthly data for stocks and indexes. When using the Download Data window, specify “Data Manager” as the server.

Using the eSignal Tick Data Server

Tick data for the preceding 24-hour trading period is available for all security types. Access to historical data and tick data is accomplished via the Download Data window.

1. Specify “Data Manager” as the Server.
2. Specify Daily, Weekly, Monthly, or Tick as the Period.
3. To download data for a particular instrument, check the “One Instrument” checkbox. A dialog box will appear for selecting an instrument.

To download data for each instrument in a quote page, select the quote page from the list.

4. Press the Download button. Monitor the progress of the download in the main toolbar message area.

Using the QFeed Historical Server

QFeed users have access to ten years of daily historical data for stocks and indexes, and futures. When using the Download Data window, specify “QFeed” as the server.

Using the QFeed Tick Data Server

Tick data and intraday bar data for the preceding several years is available for all security types. Access to daily, tick, and intraday bar data is accomplished via the Download Data window. Note that long term (more than 30 days) intra-day data downloads are not recommended during trading hours.

1. Specify “QFeed” as the Server.
2. Specify Daily, Tick, or Intraday as the Period.
3. For Intraday, specify the number of minutes per bar.
4. Specify the starting date (and time if tick or intraday).
5. To download data for a particular instrument, check the “One Instrument” checkbox. A dialog box will appear for selecting an instrument.

6. To download data for each instrument in a quote page, select the quote page from the list.
7. Press the Connect button. Monitor the progress of the download in the main toolbar message area.

Importing Data from Other Applications

MetaStock Import

Daily historical data stored in MetaStock format can be imported into Investor/RT using the procedure previously outlined in the section “Glance CD-ROM”. For more details, review the Help topic “Importing MetaStock Files”.

ASCII Import

Investor/RT can import historical data from any application able to produce a tab or comma delimited text file. The text file can contain historical data for one or more issues.

A “format” specifies the order of the data fields in each line of the text file (symbol, date, open, high, low, close, volume, open interest). The “Import Format”, built into Investor/RT, is set up with the most commonly used format definition. If the data is in a different order, a new format must be created. The newly created format must list the data fields in the proper sequence. To define a new format, use Setup: Preferences: Formats.

Usually, the historical data will contain a ticker symbol and a date in each line to identify the data for each instrument. If the ticker symbol is not present in the file at all, Investor/RT will ask the user to identify the instrument when the import takes place. All in data in the file will be associated with the specified instrument.

If the ticker symbol is present in the file format, the file may contain data for any number of ticker symbols. The data must be arranged oldest data first (ascending date sequence).

1. Choose File: Import.
2. Choose Daily, Weekly, Monthly, or Tick (for intraday data).
3. Specify ASCII Text File as the File Type.
4. Specify the Format of the file to be imported.
5. Click the “Import” button.
6. A file selection dialog box will appear. Open the file to be imported.
Monitor the progress of the import in the main toolbar message area.

An option is provided for importing multiple historical data files from a single folder. In the event that the data file(s) do not contain the ticker symbol on each line of the file, an option is provided for extracting the ticker from the file name.

For assistance with importing ASCII data into Investor/RT, email a sample ASCII text file to support@linnsoft.com and request instructions.

Using Scans

Overview

A Scan is a specification for searching through the instruments in a quote page. The purpose of a scan is to identify instruments whose current or historical market data or technical indicator values exhibit user-specified characteristics. The result of a scan is a quote page that lists the instruments matching the scan criteria. A scan request may also be used to monitor an instrument (or collection of instruments) repeatedly during trading hours until a user specified condition occurs (e.g. a buy or sell signal). Scans can also be embedded within Investor/RT chart as “scan markers”. This enables you to mark bars in a chart where any user-specified condition is true.

Using Scans to Screen Issues of Interest

Scans are created using the Scan setup window (see Figure 35). The scan criteria are specified using Investor/RT Real-Time Language, or RTL.

For a detailed description of the scan request language, review the Help topic “Scanning Current or Historical Data” (open the Scan setup window and press F1). Further information is available on the Linn Software web site. Review the Investor/RT Tour topic, “RTL Language” at <http://www.linnsoft.com/tour/scanElems.htm>.

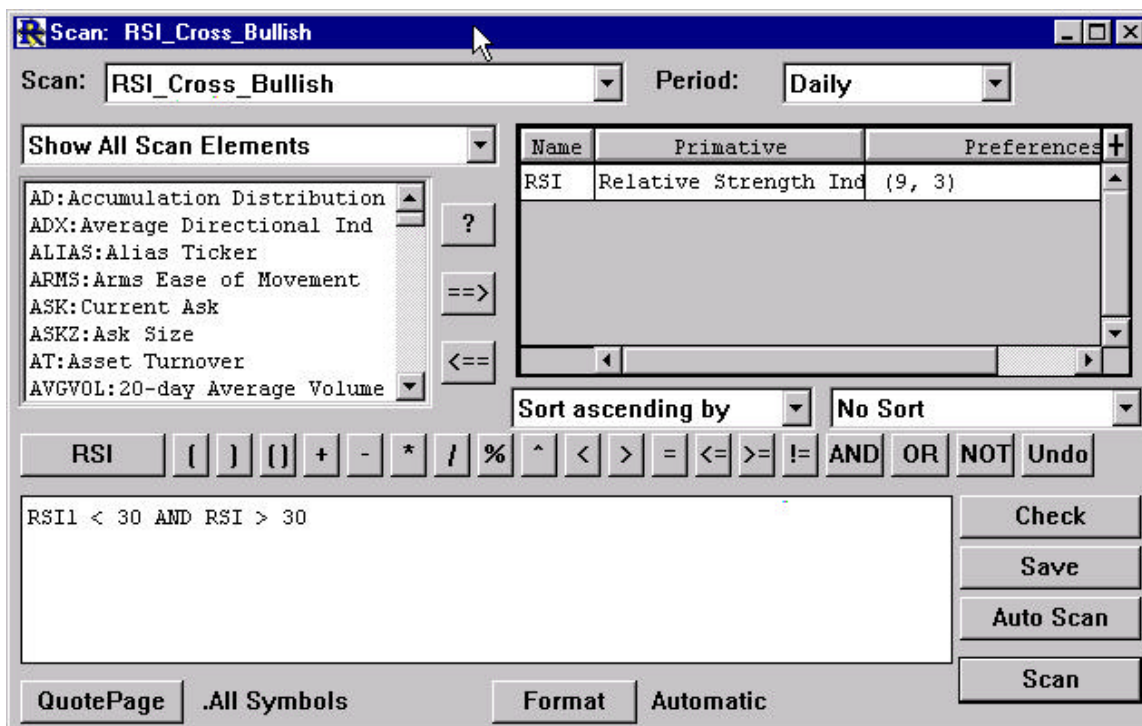


Figure 35. Scan setup window

Linn Software includes a small library of useful scans with Investor/RT. These scan definitions are stored as text files in the “scans” folder/directory with the Investor/RT folder. To load any of these pre-defined scans into Investor/RT follow these steps:

1. Choose File: Open: File. A file selection dialog box will appear.
2. Open the scans folder.
3. Select a scan (“RSI Cross Bullish”, for example) and click “Open”.
4. If a comment message appears, click OK.
5. A dialog box will appear for setting parameters for each technical indicator (the RSI indicator, in this example).
6. Adjust parameters and click OK for each dialog box.
7. The scan setup window will appear. To save the scan, click the “Save” button.

To run the scan, click the “Scan” button.

In this example (Figure 35), the “RSI Cross Bullish” scan searches all instruments looking for those that had an RSI value below 30 yesterday and an RSI value above 30 in today’s trading. This is a classic buy signal for the

RSI indicator. Any instruments satisfying these two criteria will be listed in a quote page.

Notice the scan request language in the window. To modify the scan request for a cross over point other than 30, edit the scan language replacing 30 with another value. Click the Scan button to run the modified scan.

Additional scans are provided in the scans folder for bearish and bullish signals based on RSI, MACD, Stochastics, and moving averages.

Scheduling Scans to Detect Trading Signals

Continuing with this example, we will set up a scan to monitor a list of stocks for RSI bullish crossovers during intraday trading. This involves running a scan to find the issues with an RSI value below 30. Follow these steps:

1. Change the scan language to read “RSI1 < 30”. RSI1 means “the RSI value one day ago”.
2. A quote page of issues with yesterday’s RSI below 30 will appear.
3. Choose File: Save As and name the quote page “RSI Under 30”.

Next, we will set up a new scan of the instruments in the “RSI Under 30” quote page. This scan will run throughout the trading day. It will alert the user if any of them break above 30 during the trading session.

4. Set the scan language to read “RSI > 30”. RSI means the current calculated value of RSI taking into account the last price of the issue in the current trading session.
5. Click the “Quote Page” button at the bottom of the scan setup window.
6. Select “RSI below 30” as the quote page to watch.
7. Save the scan as “RSI breaking above 30”

To setup the scan to run periodically, use a “schedule”. Create a new schedule using the following steps:

1. From the Setup Menu, choose “Schedule”
2. Click “New” to create a new Schedule
3. A setup dialog appears. Specify how often to run the schedule, for example, “every 1 minute during Session 0 trading hours”. Click OK.
4. Click “New” (to the right) to create a new Action for this schedule

5. A schedule can perform a variety of actions, in this case choose “Run Scan” as the action. Then pick the scan to be run “RSI breaking above 30”, and click OK.

The scheduling feature of Investor/RT is very powerful. You can have as many distinct schedules as you like running during the trading session(s) you follow. Each schedule can perform one or more actions like running scans, showing messages, opening and closing charts, etc.

The scan language (called RTL) provides the foundation for building powerful market monitoring/trading tools in Investor/RT. The scan language with its “and”, “or” and “not” operators is flexible enough to handle literally any combination of criteria. The criteria may include technical indicators, fundamental data, current trading conditions, and historical trading patterns.

Building on the scan language foundation, Investor/RT now supports trading system development and backtesting. Using the same RTL language, you may define “trading signals” and then define trading rules composed of signals and actions (buy, sell, etc.) to be performed when those signals are true. Trading systems can then be backtested using historical data for one or more instruments. It is beyond the scope of this document to cover trading system development and backtesting in detail. From the Help Menu in Investor/RT choose “Tutorials” to go to the Linn Software web site where more information can be found on this subject. Trading system development is also covered in the built-in Help system. Choose Setup: Trading System and when the window opens, press F1 for more information.

Accessing News

News items, if broadcast by the data service, are captured and saved by Investor/RT. Some news items carry a list of company ticker symbols mentioned in the news item. If the associated tickers are being tracked by Investor/RT, the news item is “linked” to the associated instrument(s). This feature facilitates single-click access to news on file for an instrument. News items, whether linked or not, are organized into categories for viewing. The news browser and news ticker windows are used to view news items.

Using News Browsers

To open a News Browser window:

1. Click the News Browser icon on the main toolbar.
2. A list of news categories will appear.
3. Select a category. Click OK or Apply (or double-click a category).
4. A news browser window for the category will open.
5. Use the arrow keys or the mouse to move through the list of headlines shown in the top half of the window.
6. Double-click on a headline to view the full text of the news item in a separate text window. The full text of the selected headline is also shown in the bottom half of the news browser window.

To search all news items in the category for a particular word or phrase, use the Find button on the News Browser toolbar. The search is not case sensitive.

Using News Tickers

To open a News Ticker window:

1. Click the News Ticker icon on the main toolbar.
2. A list of news categories will appear.
3. Select a category. Click OK or Apply (or double-click a category).
4. A News Ticker window for the category will open showing the most recent news received for the category. As news items arrive on the data feed, the news ticker will update showing the latest arrivals at the top.

5. To review the full text of the associated news item, double-click on a headline.

Resize the window larger to show more news items.

News Preferences

News items are retained in the Investor/RT database for a user-specified period. Choose Setup: Preferences: News. There are different settings based on whether the news items are “linked” to an instrument. For example, “linked” news items could be retained for 30 days, while news items of a more general nature could be discarded after only a few days.

Using News Markers in Charts

The News Marker is a technical indicator that can be added to charts. This indicator examines the news items on file for the charted instrument and displays a visual marker in the chart for each bar that has an associated news story. When a news marker appears in a chart, point the mouse at the marker. The headline of the associated news story will appear in the message area of the main toolbar.

To add a news marker to a chart, click the “Add Technical Indicator” button on the charting toolbar. Choose News Markers from the list. The News Marker box at right will display the settings for the news marker.

To establish default settings for News Markers, go to Setup: Preferences: Charting: Technical Indicators. To modify settings for a specific chart, right-click (Macintosh, command-click) on the marker in a chart or use the “Edit A Chart Element” button on the charting toolbar.

To view a news browser for the charted instrument, click on the news marker. Press the “View News” button in the News Marker window.

News Alerts

Instruments can be designated for news alerts using the Setup: Instruments window. Check the box titled “News Alarm” to be notified when news arrives for that instrument.

Use Setup: Preferences: News to set the desired effect when a news alarm occurs (a dialog box, a sound, or both). Use this feature with care. Activating news alarms on a large number of ticker symbols may trigger alarms frequently enough to be bothersome.

Accessing News for an Instrument

News on file for a particular instrument is accessed in two ways.

1. In a Quote Page, select the ticker symbol and click the “View News...” button in the Quote Page toolbar.
2. In a Quick Quote window, select an instrument and click the “News” icon above the instrument selection list.

News on file for ALL instruments in a particular quote page can be viewed by clicking the “View News...” button with no row selected.

Accessing News by Keyword

To search all news items on file for a particular keyword or phrase:

1. Choose File: Find.
2. A dialog box will appear. Enter the keyword or phrase.
3. Press return or enter (or click the Find button).

A News Browser window will appear showing all news items with headlines containing the word or phrase.

Using the News Alarms Quote Page

The system defined Quote Page “. Alarms-News” lists ticker symbols with current news (news dated with today’s date). This Quote Page is dynamic. If a news item arrives for an instrument being tracked, the instrument is added to the top of the “. Alarms-News” Quote Page automatically.

Any Quote Page can contain the “Alarms” data column. This data column will contain an “N” if there is current news for the instrument in that row. It will contain “n” if there is news on file for dates earlier than the current date. Double-clicking on the “N” or “n” will open a News Browser showing the news items for the associated instrument in the Quote Page.

Conclusion

This concludes the Introduction to Investor/RT. For more information on any topic, consult Investor/RT's built in Help System or visit our website. The linnsoft.com website contains hundreds of pages of useful information about Investor/RT including screenshots and explanatory text for every technical indicator, chart type, and scan token. Various links to the website can be accessed through the Investor/RT Help menu. You can also setup Investor/RT to display help pages directly from the Linn Software website when available. To activate web-based help, choose Setup: Preferences: Mail and Internet, then checkmark the box titled "Show web-based help pages...". Anytime you press the F1 key or click the Help button on the Investor/RT main toolbar, the help page relating to the then current window will appear.

In addition, our Support Department will respond promptly to questions e-mailed to support@linnsoft.com. We also recommend you setup and utilize the built-in e-mail feature of Investor/RT (see the Help Menu). We hope this guide has been a helpful introduction to Investor/RT. All of us at Linn Software wish you success with Investor/RT in your trading and investment activities.