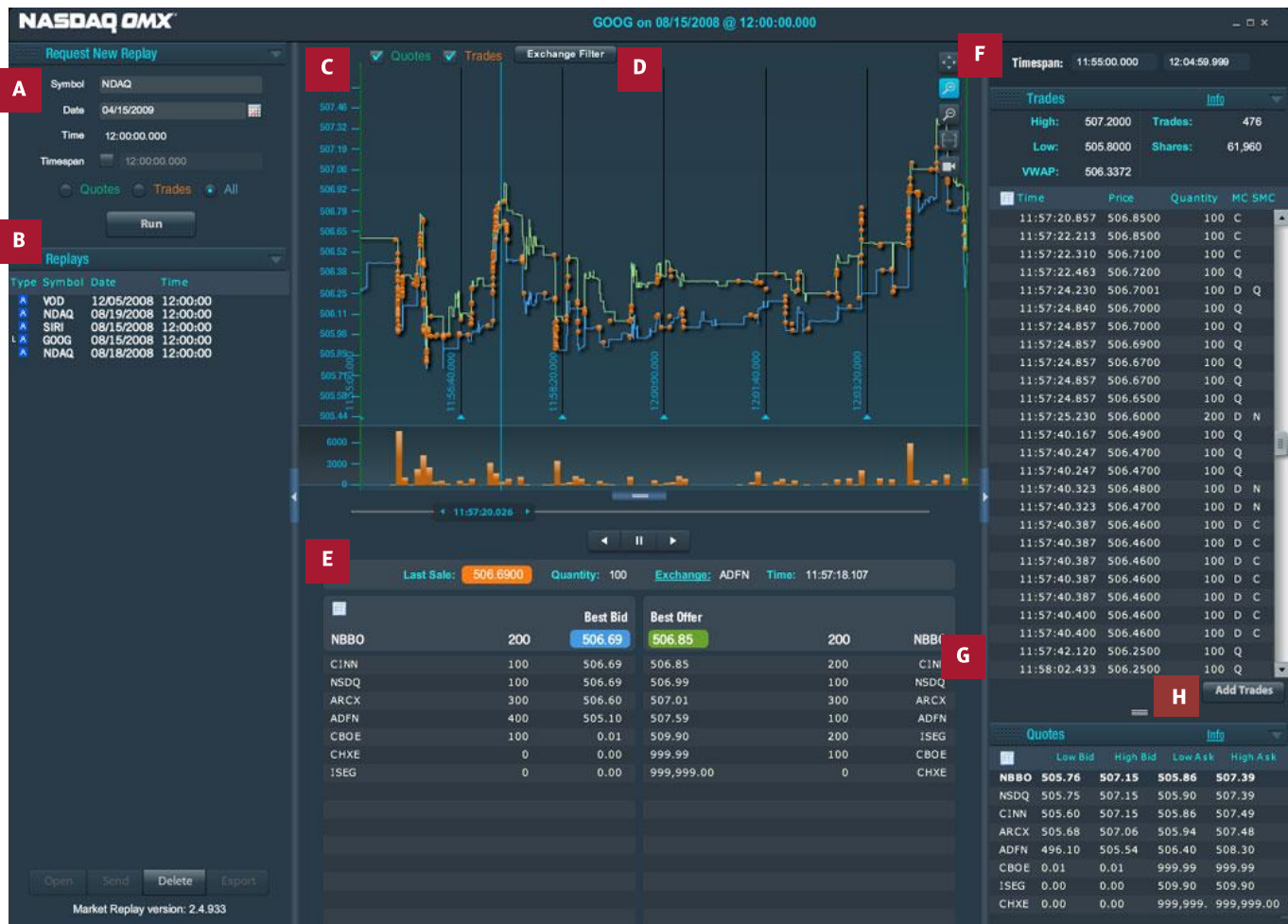


QUICK REFERENCE GUIDE

NASDAQ Market ReplaySM is an extremely powerful replay and analysis tool, allowing users to view consolidated quote and trade data for NASDAQ-, NYSE- and regional-listed securities at any point in time. Replay data is available intraday as soon as 15-minutes after it occurs. NASDAQ will not offload data, guaranteeing that you will always have immediate access to the detailed market information you need.

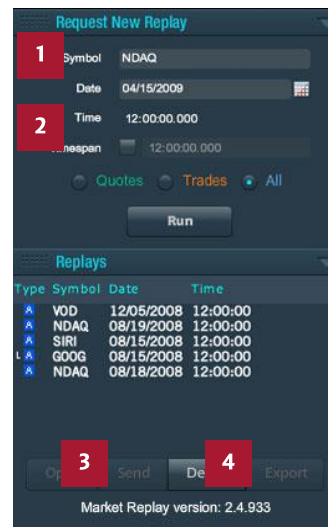


- A. **Replay Request Panel** – Request new market data from NASDAQ.
- B. **Replay List Panel** – View the list of replays you have already received.
- C. **Chart Panel** – Navigate detailed market data.
- D. **Exchange Filter** – Add or remove specific exchange data to the display.
- E. **Quote and Trade Replay Panel** – View replays of consolidated orders and trades in a realistic trading environment.
- F. **Timespan Trade Analysis Panel** – View a list and analysis of trades between a start and end time.
- G. **Timespan Quote Analysis Panel** – View an analysis of quotes between a start and end time.
- H. **Add Trades Tool** – Upload trades for a customized view of the market.

1. **Request a Replay:** To immediately access historical market data, enter a “Symbol”, “Date” and “Time”. Then select “Quotes”, “Trades” or “All”. Click “Run” and NASDAQ will send you every quote, trade or quote and trade record for the time period you requested. The data will appear as a new replay line item in the “Replays” list below.

For CQS securities’ suffix symbology, visit the [Symbol Directory on NASDAQTrader.com](http://SymbolDirectoryonNASDAQTrader.com).

2. **Request an Extended Replay:** A standard replay will display at least five minutes of market data before and after the time that you requested. To view a longer time range, select the “Timespan” check-box and enter a start time and an end time for your request. Timespan replays are indicated by a “T” in the replays list panel.
3. **Load a Replay:** To load data into the replay and analysis panels to the right, select the replay line item in the Replays list panel and click “Open”.



4. **Delete Replays:** Replay data is saved in the Replays list panel. When finished with a replay, select the replay line item and click “Delete”. Hold down the shift or control key to delete multiple replays at one time.

5. **Chart Panel:** Once loaded, replay data is represented in the chart panel. Use the chart panel to quickly navigate and analyze the multitude of records in the detailed stock market data.

6. **NBBO Lines:** Consolidated quotes are represented on the chart panel by the National Best Bid and Offer (NBBO) at each point in time. The National Best Bid is represented by a blue line and Best Offer by a green line.

7. **Trades:** Consolidated trades are represented on the chart panel by orange dots for each trade price. Volume bars below the price chart provide the total shares traded in each time period.

8. **Controlling the Replay:** The vertical blue lines in the chart and the slider bar below the chart indicate the exact time shown in the quote and trade replay panels. Slide the bar left or right to see the state of quotes and trades at any point in time.

9. **Chart Panel Tools:** Market Replay provides powerful tools that allow you to pan the chart, zoom in/out, select a specific time range and even capture and save screen shots:



Pan Tool - Use the Pan Tool to navigate around the graph. You can select any particular point on the graph to view the state of the book at that time.

Zoom In/Out Tools - Zoom in all the way to the millisecond to view detailed market activity in your replay.

Timespan Selection Tool - Use the Selection Tool to choose a timespan for analysis in the quote and trade timespan analysis panels.

Camera Tool - Click on the Camera Tool to capture and save a screenshot of the quote and trade information at any point in time.



10. **Hide Trades or Quotes:** After the replay is loaded, users have the ability to hide either quotes or trades to increase visibility in a busy chart.



11. **Exchange Filter:** Use the Exchange Filter to add or remove specific exchange information from the Chart Panel, Quote and Last Sale Replay Panel and the Timespan Trade and Quote Analysis Panels. When an exchange is selected, the data from that exchange will be included. If an exchange is not selected, data will be excluded from the data fields.

Once a Replay is open, select the 'Exchange Filter' button. Select the appropriate exchange(s) and then 'Apply'. Filtering by exchange automatically recalculates the VWAP, High/Low, number of trades, number of shares and the NBBO.



Market Center Codes

BATS Exchange Inc. (BATS)	Z
BATS Y-Exchange Inc. (BYX)	Y
CBOE Stock Exchange (CBSX)	W
Chicago Stock Exchange (CHXE)	M
EDGA Exchange Inc. (EDGA)	J
EDGX Exchange Inc. (EDGX)	K
Financial Industry Regulatory Authority (FINRA/ADFN)	D
International Securities Exchange (ISEG)	I
NASDAQ OMX BX, Inc. (NQBX)	B
NASDAQ OMX PSX (NQPX)	X
National Stock Exchange (CINN)	C
NYSE AMEX (Amex)	A
NYSE Arca (ARCX)	P
NYSE Euronext (NYSE)	N
The NASDAQ Stock Market LLC (NSDQ)	Q, T
OTCBB	U
Pinksheets/ Non-OTC	u

12. **Tool Tips:** Hover over the orange trade indicators, or the blue and green NBBO lines, to view Tool Tips. Tool Tips provide detailed price and volume information at the time a quote or trade event occurred.



13. **Quote and Last Sale Replay Panel:** View the last sale and quote from every exchange that was trading a stock at any point in time. Manually move through time by moving the slider bar or the pan tool in the chart panel.

	Last Sale: 506.5800	Quantity: 100	Exchange: ARCX	Time: 10:10:31.963	
			Best Bid	Best Offer	
NBBO	400	506.30	506.63	300	NBBO
CINN	300	506.30	506.63	300	ARCX
NSDQ	100	506.30	506.69	200	CINN
ARCX	400	506.25	506.70	100	NSDQ
ADFN	500	496.10	510.00	10000	ADFN
CBOE	0	0.00	510.22	100	ISEG
CHXE	0	0.00	999,999.00	0	CBOE
ISEG	0	0.00	999,999.00	0	CHXE

14. **Replay Controls:** Replay a trade or quote in simulated real time by clicking the "Play" button at the top of the replay panel. Pause or rewind replays. Control the replay speed by dragging the speed meter to the left or right.



15. **Zoom to the Millisecond View:** At the maximum zoom level, users can view each individual millisecond of market time — the highest resolution supported by timestamps. Click on silver highlighted millisecond lines to see a list of all quote updates that occurred in that millisecond. Click on the individual quote updates to see the state of the consolidated order book that resulted from that quote update. Only milliseconds that include quote updates are highlighted in silver.

Exchange	Bid	Ask	Seq. No.
ARCX	530.90	400 531.32	200 179836
ARCX	530.90	400 531.20	100 179837
ARCX	530.90	400 531.18	100 179838
ARCX	530.90	400 531.15	100 179839
ARCX	530.90	400 531.17	100 179840
NSDQ	530.98	500 531.21	100 179841

16. **Timespan Trade Analysis Panel:** Use the Timespan Selection Tool or manually enter start and end times at the top of the timespan panels to select a time range for analysis. The trades panel provides a list of trades that occurred in that timespan and calculates price and volume statistics (min, max, total shares and VWAP). An export button enables you to export the trade data that you have selected. Click on the column headers to sort the trades.

17. **Timespan Quotes Analysis Panel:** Use the Timespan Selection Tool on the chart or manually enter start and end times at the top of the timespan panels to select a time range for analysis. The quote panel provides min and max NBBO for the selected time period. It also provides the minimum and maximum bid and offer for each exchange that was trading a stock during the selected timespan. An export button enables users to export the calculated quotes data. Click on the column headers to sort the quotes.

18. **Add Trades:** Select the “Add Trades” button to upload trades manually or importing through the ‘Browse’ button. To manually upload, enter a time, price and quantity and press “Add”. To import the trade(s), select “Browse”, choose your CSV file and select “Import”. Note: In order for successful import, the first three columns in the CSV file must be Time, Price and Quantity. When finished, select the “Done” button. The trades will be imported and designated as blue dots on the chart and highlighted in blue in the Trade Panel.

16 Timespan 10:05:00.000 10:24:59.999

Trades Info

High: 509.2745 Trades: 1,787
 Low: 505.5000 Shares: 262,375
 VWAP: 506.7651

Time	Price	Quantity	MC
10:10:30.933	506.5700	100	C
10:10:30.997	506.5700	200	D
10:10:31.933	506.5700	100	Q
10:10:31.933	506.5800	100	Q
10:10:31.933	506.5800	100	Q
10:10:31.933	506.5800	100	Q
10:10:31.963	506.5900	100	Q
10:10:31.963	506.5800	100	P
10:10:31.963	506.5800	100	P
10:10:37.700	506.3100	100	Q
10:10:37.700	506.3100	100	Q

18 Add Trades

17 Quotes Info

	Low Bid	High Bid	Low Ask	High Ask
NBBO	505.50	508.28	505.72	508.29
ARCX	505.50	508.28	505.72	508.42
NSDQ	505.42	508.20	505.73	508.50
ADFN	496.10	506.19	507.01	510.00
CINN	490.01	508.05	505.72	508.49
CBOE	0.00	506.54	506.82	999,999

Replays Made Easy

As highlighted above, Market Replay provides a level of quote and trade detail unmatched in the industry today. Featuring an easy-to-use interface, you can request a replay by issue, date and time in a matter of seconds. Control the zoom feature to replay the order book in simulated real-time or at an accelerated/decelerated speed. The time-span analysis provides the highest and lowest priced quotes that existed over a specific span of time, even if they lasted less than a millisecond.

Don't be left asking "What happened?". Protect and improve your trades with NASDAQ Market Replay.

How to Order NASDAQ Market Replay

- To subscribe to NASDAQ Market Replay, contact your NASDAQ OMX Market Data Account Manager or call +1 301 978 5307.
- To learn more about NASDAQ Market Replay and other NASDAQ OMX Data Products, visit the NASDAQ DataStore at data.nasdaqomx.com or email datastore@nasdaqomx.com.

Technical Requirements

Windows

- Intel Pentium 2GHz or faster processor
- Windows 2000 with Service Pack 4; Windows XP with Service Pack 2; or Windows Vista Home Premium, Business, Ultimate, or Enterprise
- 512MB of RAM; 32MB of VRAM

Mac OS X

- PowerPC G4 1.8GHz or faster processor or Intel Core Duo 1.33GHz or faster processor
- Mac OS X v.10.4.9 or later or 10.5.1 (Intel or PowerPC; Intel processor required for H.264 video)
- 512MB of RAM; 32MB of VRAM