CTS

CTS

CONSOLIDATED TAPE SYSTEM

LOW SPEED TICKER

INTERFACE SPECIFICATION

March 21,2003

S I A C

SECURITIES INDUSTRY AUTOMATION CORPORATION

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SUMMARY OF CHANGES

REVISION #1 – June 30, 1998	
PAGE(S)	**DESCRIPTION**
All	Updates to document format and elimination of all obsolete language.
All	Changed examples to reflect 16^{ths} trading.
Page 10 – 11, Appendix A	The Ticker Slash Character has been added to the functionality of the Low Speed Ticker.

REVISION #2 – January 7, 2000	
PAGE(S)	**DESCRIPTION**
All	Changed examples to reflect issues trading in decimals.
All	Updates to examples to eliminate errors and typos.
Page 11	Updates to the Decimal Prices section to reflect the eventual conversion of all securities to decimal prices
Page 14	Added minimum and maximum volume delete levels, clarification of “inclusive” print modes.
Page 15	Added new rule for prices $1000 and over to print in full under DVD mode.
Pages 17 - 18	Revised the MPV mode to reflect change in mode to accommodate trades in decimals.
Page 20	Clarification of correction printing rules in DVD and RPO modes.
Page 22	Clarification of correction mode settings as it relates to the various printing modes.
Page 57	Clarification of consolidated/ participant last qualification rules.

REVISION #3 – August 22, 2001	
PAGE(S)	**DESCRIPTION**
All	All fractional prices are converted to their decimal equivlant due to decimals conversion; Deleted all references to fractions
Page 10	Deleted Single Digit and Multiple Digit Denominator Fractions sections
Page 17	Deleted fractional example for MVP functionality description
Page 19	Addition of Rule 155 as a condition to trigger corrections to print under DVD mode
Page 38	Deleted Denominator Change Administrative Message
Appendix I	Updates to Priority Table to reflect the change of definition for Priority 3 from “Other” to “Extended Hours/ Basket” and addition of Priority 4 for “Other”

SUMMARY OF CHANGES

REVISION #4 – November 27, 2001	
PAGE(S)	**DESCRIPTION**
Page 1	Introduction: added The Island, ECN
Appendix H	Sale Condition Ticker Representative: Modifications to reflect sale conditions associated with a trade, and ticker representative

REVISION #5 – April 5, 2002	
PAGE(S)	**DESCRIPTION**
Page 1, 45	Added Nasdaq with ticker identifier and changed ticker identifier for NASD
Page 33	Deleted Noon example of NYSE Half Hourly Market and Indices
Page 34-36	Revised format of Most Active Issues, Closing Trade Prices, Closing Bid/Ask Prices
Page 37	Changed title of Daily Volume Messages to Approximate ITS Adjusted Volume Market Center Messages
Appendix H	Sale Condition Ticker Representative: Moved to be Appendix J and replaced by Consolidated Last, High, Low Calculations Table.

REVISION #6 – March 21, 2003	
PAGE(S)	**DESCRIPTION**
Page 7	Added Below Continuing Listing Standards
Pages 20-22	Revised descriptions of Correction Formatting in DVD, RPO and MPV modes
Pages 23-24	Revised descriptions of Cancel/Error Formatting in DVD, RPO and MPV modes
Appendix D	Changed Appendix D to be: Symbol Appendage Identifier Table. Moved Market Identifier Table to be Appendix E, Glossary to be Appendix F, etc.

1. INTRODUCTION

This specification defines the message formats and communications interface for the Consolidated Tape System (CTS) Low Speed Ticker interface facility. This facility provides the means by which users can receive trade information and related data over a low speed interface. It is intended for visual display on subscribers display devices.

1.1. CONSOLIDATED TAPE SYSTEM OVERVIEW

Trades and associated administrative messages in listed equity securities that meet NYSE or Amex market eligibility, regardless of the Market Center on which such trades occur, are reported to the Consolidated Tape System. CTS consolidates this information and disseminates it over a consolidated High Speed Line and the appropriate Low Speed Ticker lines.

As of this date, the following Market Centers are participating in the Consolidated Tape System:

American Stock Exchange, Inc.
Boston Stock Exchange, Inc.
Chicago Board Options Exchange, Inc.
Chicago Stock Exchange, Inc.
Cincinnati Stock Exchange, Inc.
The Island, ECN
National Association of Securities Dealers, Inc.
Nasdaq
New York Stock Exchange, Inc.
Pacific Exchange, Inc.
Philadelphia Stock Exchange, Inc.

The Consolidated Tape Association (CTA) Plan established the provision for the consolidation of the last sale prices by the Securities Industry Automation Corporation (SIAC) Processor for dissemination to the users of this information. This data is transmitted to subscriber locations over the Consolidated High Speed Line facility.

The CTS Low Speed interface facility consists of two physically distinct ticker lines, Ticker "A" and Ticker "B". These tickers carry trade reports, index reports, administrative messages, trading activity summary reports and test messages.

Ticker "A" represents trade information for NYSE eligible securities, regardless of the market center traded on.

Ticker "B" represents trade information for the following:
- all Amex eligible securities, regardless of the market center traded on
- Local Issues
- Network B Bonds

1.2. TYPES OF MESSAGES BROADCAST

The types of messages that are disseminated over the Low Speed Tickers are as follows:

- *TRADES*
- *CORRECTIONS*
- *CANCELS/ERRORS*
- *TRADING STATUS*
- *ADMINISTRATIVE*

2. DATA TRANSMISSION AND COMMUNICATIONS INTERFACE

2.1. COMMUNICATIONS FACILITIES

Low Speed Ticker data is transmitted from the CTS Processor and delivered via terrestrial and satellite facilities to customers located in the Continental United States. The domestic network is shared with the American Stock Exchange.

2.2. COMMUNICATIONS INTERFACE

The CTS Processor broadcasts the ticker information utilizing the 6-level baudot character code set, shown in **Appendix A**. Data is transmitted asynchronously at 134.5 baud. Each character contains nine bits; six information bits, one start bit and two stop bits. The data rate is 15 characters per second (approximately 900 characters per minute). The electrical characteristics of the Low Speed Ticker signal are shown in **Appendix B**.

3. COMMON FORMATTING RULES

3.1. INTRODUCTION

In periods of heavy trade volume, it is necessary to omit some of the information in order to minimize reporting delays on the low speed facility. The Low Speed Ticker facility formats Trade, Correction, Cancel, and Error messages for output depending on the print mode and the volume delete level in effect at the time the messages are actually formatted to the line. Various data deletion methods are employed depending on the traffic intensity at a given time. Ticker print modes are detailed later on in this document.

Formatting rules for the symbol, suffix and trade sale conditions are the same, regardless of which ticker print mode is activated. Volume and price formatting may vary depending upon the ticker print mode. An entire print may be omitted in Repeat Prices Omitted or Minimum Price Variation print modes.

In the following sections, the common formatting rules for the symbol, suffix, prefix, sale conditions, volume and price for Trade, Correction, Cancel and Errors messages will be described in detail.

3.2. SYMBOL FORMATS

Each security is identified by a security symbol having from one to eleven characters (Root/Suffix).

3.2.1. SYMBOL ROOTS

The symbol root identifies the name of the corporation represented by the symbol. In most cases, the symbol consists of the symbol root exclusively.

A
45•69 (Stock with symbol A, 100 shares at 45.69)

ABCD
45•69 (Stock with symbol ABCD, 100 shares at 45.69)

3.2.2. SYMBOL SUFFIXES

A stock symbol may include a regular and/or a temporary suffix (see **Appendix C** for a listing of all suffixes).

3.2.2.1. REGULAR SUFFIXES

A Regular suffix represents a separate security or class of stock in addition to the underlying common stock of the company. A Letter Dot separator is used between the symbol root and suffix unless the suffix begins with a special character. Special suffix characters (${}^{W}{}_{I}$, ${}^{P}{}_{R}$, ${}^{R}{}_{T}$) follow the symbol root with no embedded blanks or a Letter Dot separator.

ABC•A **45•81**	(ABC Class A 100 shares at 45.81)
ABC•A•CV **45•81**	(ABC Class A Convertible 100 shares at 45.81)
ABC${}^{P}{}_{R}$A **45•81**	(ABC Preferred Class A 100 shares at 45.81)
ABC${}^{R}{}_{T}$45•81	(ABC Rights 100 shares at 45.81)

3.2.2.2. TEMPORARY SUFFIXES

A temporary suffix reflects a transitory condition (e.g., .XD = Ex-Dividend, .XDIS = Ex-Distribution, etc.) and is appended to the symbol for the first five trades of the day on a consolidated basis. For trading status messages (see **Trading Status Message Format Section**), the temporary suffix is appended for the entire day (see **Appendix C**). A Letter Dot separator is used between the symbol, regular suffix (if any), and the temporary suffix.

ABC•XD **45.69**	(ABC is Ex-Dividend, 100 shares at 45.69)
ABC•XDIS **45.69**	(ABC is Ex-Distribution, 100 shares at 45.69)
ABC•XI **45.69**	(ABC is Ex-Interest, 100 shares at 45.69)
ABC•X$^{R}_{T}$ **45.69**	(ABC is Ex-Rights, 100 shares at 45.69)
ABC•A•X$^{R}_{T}$ **45.69**	(ABC Class A is Ex-Rights, 100 shares at 45.69)
ABC•N **45.69**	(ABC is New, 100 shares at 45.69)

NOTE: A Temporary suffix is appended to the symbol for the first five **trades** (not Corrections, Cancels or Errors) of the day on a consolidated basis, although some of the trades might not appear on the ticker (as determined by a prevailing deletion mode detailed in the **Trade Formatting Section**).

3.2.3. SYMBOL APPENDAGE IDENTIFIERS

A symbol appendage can be used to identify a security symbol's financial status where appropriate. A letter dot separator is used between the root symbol, the suffix (if applicable) and the appendage.

For Tape 'A' listed securities (i.e., securities whose primary market is the NYSE), the symbol appendage **.BC** identifies a symbol as **Below Continuing Listing Standards**, or **Bankrupt <u>and</u> Below Continuing Listing Standards**, when appropriate. Symbols appended with **.BC** will be displayed over the Tape 'A' Low Speed Ticker.

For Tape 'B' listed securities (i.e., securities whose primary market is the Amex or a Regional Participant), the symbol appendage **.DL** identifies a symbol as **Pending Delisting**, or **Bankrupt <u>and</u> Pending Delisting**, when appropriate. Symbols appended with **.DL** will be displayed over the Tape 'B' Low Speed Ticker.

ZZZ.BC **45•69**	(Tape 'A' stock with symbol ZZZ, identified as Below Continuing Listing Standards, or Bankrupt <u>and</u> Below Continuing Listing Standards.)
ZZZ.B.BC **45•81**	(Tape 'A' stock with symbol ZZZ Class B identified as Below Continuing Listing Standards, or Bankrupt <u>and</u> Below Continuing Listing Standards.)
ZZZZ.DL **12•36**	(Tape 'B'stock with symbol ZZZZ, identified as Pending Delisting, or Bankrupt <u>and</u> Pending Delisting.)

Note 1: .BC or **.DL** will be appended to the symbol when appropriate, and displayed over the Tape 'A' and Tape 'B' Low Speed Tickers respectively in trades, corrections, cancel/ errors, and trading status messages.

3.2.4. MARKET IDENTIFIER

A Market Center identifier can be used in a message where appropriate to identify the market relevant to the messages concerning a stock. A market center identifier follows the symbol with a "&" between them. These Market Center identifiers are listed in **Appendix D**.

• • • •TRD•RESUMED•ABC&N • • **(&N represents report from NYSE)**

3.3. VOLUME FORMATS

The formatting rules for volume described in the following sections are valid for normal print mode. The rules may vary in other print modes. Refer to the specific print mode section later on in the document for special volume formatting rules.

3.3.1. STOCKS TRADING IN UNITS OF TRADE OF 100 SHARES

3.3.1.1. 100 SHARES

Volume is omitted.

ABC
45.69 (100 shares at 45.69)

3.3.1.2. 200 to 9,900 SHARES

Only the 100's and 1000's digits of the volume are displayed (the last two zeros are not displayed). The volume is followed by an "s" in the lower palette of the ticker.

ABC
2s45.81 (200 shares at 45.81)

ABC
10s45.81 (1,000 shares at 45.81)

ABC
99s45.81 (9,900 shares at 45.81)

3.3.1.3. 10,000 OR MORE SHARES

Volume is displayed in full and is followed by an "s" in the lower palette of the ticker. Figure dots separate the thousands and the millions digits.

ABC **10•000s45.69**	(10,000 shares at 45.69)
ABC **850•000s45.69**	(850,000 shares at 45.69)
ABC **1•500•000s45.69**	(1,500,000 shares at 45.69)

3.3.2. STOCKS TRADING IN UNITS OF TRADE OF 1, 10, 25, OR 50 SHARES

3.3.2.1. TAPE A REPRESENTATION

3.3.2.1.1. 1 - 9 SHARES

Volume is displayed and is followed by the characters "SHRS".

ABC SHRS **2 45.69**	(2 shares at 45.69)

3.3.2.1.2. 10 to 9990 SHARES

The last zero is not displayed. Volume is followed by the character " $^{\mathbf{s}}_{\mathbf{s}}$ "

ABC **1$^{\mathbf{s}}_{\mathbf{s}}$45.69**	(10 shares at 45.69)
ABC **99$^{\mathbf{s}}_{\mathbf{s}}$45.69**	(990 shares at 45.69)
ABC **990$^{\mathbf{s}}_{\mathbf{s}}$45.69**	(9900 shares at 45.69)

3.3.2.1.3. 10,000 OR MORE SHARES

Volume is displayed in full and is followed by the character " $^{\mathbf{s}}_{\mathbf{s}}$ ". Figure dots separate the thousands and the millions digits.

ABC **235•100$^{\mathbf{s}}_{\mathbf{s}}$45.69**	(235,100 shares at 45.69)
ABC **1•500•000$^{\mathbf{s}}_{\mathbf{s}}$45.69**	(1,500,000 shares at 45.69)

3.3.2.2. TAPE B REPRESENTATION

Representation does not vary with the number of shares. Volume is displayed in full and is followed by “SHRS” for any share amount.

ABC SHRS **2 45.69**	(2 shares at 45.69)
ABC SHRS **990 45.69**	(990 shares at 45.69)
ABC SHRS **9900 45.69**	(9900 shares at 45.69)
ABC SHRS **235•100 45.69**	(235,100 shares at 45.69)
ABC SHRS **1•500•000 45.69**	(1,500,000 shares at 45.69)

3.3.3. ODD LOTS AND BROKEN LOTS

Odd Lots are those orders to buy or sell a security in an amount less than one unit of trade (“round lot”). Broken Lots are those orders to buy or sell a security in an amount consisting of a combination of a round and an odd lot. Volume prints in full and is followed by "SHRS".

ABC SHRS **85 2.81**	(85 shares at 2.81)
ABC SHRS **185 2.81**	(185 shares at 2.81)

Note: Unit of trade for stock ABC is 100 in above example.

3.3.4. LOCAL ISSUES

Local Issue trades and corrections are displayed using the same format as is used for Listed Equities. No distinction is made between Local Issues and Listed Equities.

3.3.5. NETWORK B BONDS

The formats for network B bond trades and corrections are the same as the formats for listed equities except that the volume is always followed by an “s” in the lower palette of the ticker instead of “SHRS”.

ABC **10s12•3**	(1000 shares at 12.3)

3.4. PRICE FORMATS

3.4.1. DECIMAL PRICES

All securities trade in decimals, a figure dot separates the whole number and the decimals portion of the price. Decimal places can be displayed from the tenths through the hundred millionths positions.

ABC **10s12•3**	(1000 shares at 12 and 3 tenths)
ABC **8s5•16**	(800 shares at 5 and 16 hundredths)
ABC **5s12345•678**	(500 shares at 12345 and 678 thousandths)
ABC **30s25•0046**	(3000 shares at 25 and 46 ten thousandths)
ABC **25s30•00045**	(2500 shares at 30 and 45 hundred thousandths)
ABC **55s•2**	(5500 shares at 2 tenths)
ABC **65•000s45•0000075**	(65000 shares at 45 and 75 ten millionths)
ABC **15s76•00000005**	(1500 shares at 76 and 5 hundred millionths)

3.4.2. STOCKS TRADING IN WHOLE PRICE ONLY

Prices are displayed in whole dollars with no decimals. There is no distinction between whole price only trades, and zero decimal trades on the ticker.

ABC **25s65**	(2500 shares at 65)

3.5. TRADE SALE CONDITIONS FORMATS

Sale conditions can be included in a trade report to denote market conditions associated with that trade. The appearance of these conditions within the trade report is shown below and in **Appendix J**. These conditions are defined in the Glossary, **Appendix E**.

Trade Conditions may appear in the following positions:

3.5.1. SALE CONDITION APPENDED TO THE SYMBOL

Sale conditions: **Opened**, **Sold**, **Sold Last**, **Next Day,** and **Next Day Only** are appended to the symbol.

ABC•OPD **45•35**	(100 shares at 45.35 Opened)
ABC•SLD **45•35**	(100 shares at 45.35 Sold)
ABC•SLD•LAST **45•35**	(100 shares at 45.35 Sold Last)
ABC•ND **45•35**	(100 shares at 45.35 Next Day (Only))

3.5.2. SALE CONDITION FOLLOWING PRICE

Sale Conditions: **Average Price Trade, Cash, Cash (Only) Market,** and **Stopped Stock** may follow Price.

ABC **45•94•B**	(100 shares at 45.938, Average Price Trade)
ABC **45•94•C**	(100 shares at 45.938, Cash)
ABC **45•94** $^{S}_{T}$	(100 shares at 45.938, Stopped stock)

3.5.3. SALE CONDITION APPENDED TO TRADE REPORT

Sale conditions: **Seller**, **Rule 127 (NYSE)** and **Rule 155 (AMEX)** are appended to the end of the trade report.

ABC SELLER **50s45 7**	(Seller Sale - 5000 shares at 45, settlement within 7 days)
ABC RULE **20•000s145 127**	(NYSE RULE 127 Sale - 20000 shares at 145)
ABC PREV•LAST **10s45•• 44•25••**	(Amex RULE 155 Sale -1000 shares at 45, Previous Last was 44.25)

3.5.4. MULTIPLE SALE CONDITIONS

Up to four sale conditions can be appended to a trade report. If two or more sale conditions should appear in the same position relative to the symbol, the order is determined by priority (see **Appendix I**). Sale conditions are separated by a Letter Dot separator.

ABC•ND•SLD•LAST **54**	(Next Day (Only), Sold Last 100 shares at 54)
ABC•SLD **54•C•B**	(Cash (Only) market, Sold, Average price trade 100 shares at 54)
ABC•SLD RULE **54•C 127**	(Cash (Only) market, Sold, RULE 127 100 shares at 54)
ABC•SLD RULE **50•000s54 127**	(Sold, RULE 127 50,000 shares at 54)

4. TRADE FORMATTING

During periods of heavy trading activity, because data is displayed at 900 characters per minute, various print modes are invoked in order to maintain current reporting for trades disseminated over the Low Speed Ticker. During the first half hour of trading, it may not be possible to maintain the reporting objective since all opening trades, on a consolidated basis, must be reported in full, and administrative and trading status messages must be printed due to market conditions (e.g., delayed openings, trading halts, etc.).

In addition to Normal mode, in which all trades print in full, there exist three additional modes from the lowest to highest level order: ***Digits and Volume Deleted*** (DVD), ***Repeat Prices Omitted*** (RPO), and ***Minimum Price Variation*** (MPV). Each of the latter three modes restricts the printing of data on the ticker. The higher modes include formatting rules from the lower modes. For example, when in MPV mode, the rules from DVD and RPO modes also apply.

These modes have the following attributes:
- the ability to move from one mode to another without sequentially entering or exiting modes in a fixed order
- the capability to increase the volume delete level setting to any desired level

Under certain circumstances, the variable, ***volume delete level***, can affect the manner in which a trade is printed. It represents the level at which the higher modes (DVD, RPO, MPV) print the volume in full, and in some cases defines the criteria under which it forces a trade to print on the ticker. The volume delete level can range from a minimum of 5,000 up to a maximum of 100,000. For example, the message that prints on the ticker when the delete level is changed to 100,000 is

```
   VOL•DELETE•LEVEL•IS•NOW      SHRS
• • •                   100•000      • •
```

For information regarding general formatting rules for each field of the ticker print, see the section on ***Common Formatting Rules.***

Note: For each of the following modes, all trades are processed in the order in which they are received, with the exception of an issue trading on its primary market for the first day. In this case, the first six trades of the issue, on the primary exchange only, are sent to the ticker ahead of any others and printed in full. After those trades are processed, the issue follows the current mode rules.

4.1. TRADE FORMATTING IN NORMAL MODE

Under normal mode, all trades print in full, including price and volume. The volume delete level has no significance under normal mode, since each trade always prints in full. For example, a trade of 1000 shares of ABC at 162.81 is displayed as:

```
ABC
     10s162.81
```

Upon entering normal mode, the following message appears on the ticker:

```
   TICKER•MODE•NORMAL
• • •                  • •
```

4.2. TRADE FORMATTING IN DIGITS & VOLUME DELETED MODE (DVD)

In the Digits & Volume Deleted mode, the printing of the volume is omitted in trades whose number is below the activated volume delete level, and only the units digit of the price, and decimal, if any, are printed. To help resolve any ambiguity in the price, the price is printed in full if:

- the trade is the first trade of the day for that security
- there is a change in the tens or higher digit of the price
- the whole portion of the price ends in zero
- the unit of trade is one
- the price per share is $1000 or over

The volume prints under the following conditions:

- the volume is equal to or greater than the volume delete level
- the trade is the first trade of the day for that security that qualifies for the consolidated last
- the trade is one of the first six trades from a Primary Market of a first-day issue
- the trade has a sale condition of Rule 127 or Rule 155

The following represents a trade printed in ***normal*** mode compared to the same trade printed under ***DVD*** mode. Note that the assumption is a volume delete level of 5000.

Normal Mode	**DVD Mode**	
ABC **49s45•55**	**ABC** **5•55**	(4900 shares at 45.55)
ABC **50s45•55**	**ABC** **50s5•55**	(5000 shares at 45.55)

A price ending in zero is printed in full.

Normal Mode	**DVD Mode**	
ABC **49s40•69**	**ABC** **40•69**	(4900 shares at 40.69)

Upon entering DVD mode, the following message is printed on the ticker:

NOW•IN•DIGITS•&•VOLUME•DELETED•MODE
• • • • •

Setting the Volume Delete Level to 5000 shares will print the following message:

VOLUME•DELETE•LEVEL•IS•NOW SHRS
• • • 5000 • •

4.3. TRADE FORMATTING IN REPEAT PRICES OMITTED MODE (RPO)

Under RPO mode a trade is generally not printed when its price is the same as the immediately preceding trade print for the same symbol. A trade under RPO mode ***will only*** print if any one or more of the following are true:

- the price establishes a new consolidated high, low, or last
  Note: Certain sale conditions do not affect the consolidated high, low, or last. See **Appendix H**.
- the trade is one of the first six trades from the Primary Market of a first-day issue
- the volume is equal to or greater than the volume delete level
- the unit of trade is one
- the trade has a sale condition of Rule 127 or 155

Trades that print are formatted according to the DVD mode rules.

The following sequence of trades represents the functionality of the RPO mode. Assume a volume delete level of 10,000:

Ticker Print **Normal Mode**	**Ticker Print** **RPO Mode**	**Remarks**
ABC **50s45**	**ABC** **5**	Assumes not the first trade, and previous trade printed did not have a price of 45. DVD mode rules also apply
ABC **50s45•15**	**ABC** **5•15**	Not same as previous printed price of 45.15. DVD mode rules also apply
ABC **50s45•15**	***Trade Not Printed***	Same as previous printed price of 45.15
ABC•C **50s45•25•C**	***Trade Not Printed***	CASH does not affect the consolidated high, low or last
ABC•SLD **10•000s45•15•C**	**ABC•SLD** **10•000s5•15.c**	10,000 equals volume delete level, price is the same as previous price printed, consolidated last is unaffected
ABC RULE **90s45•15 127**	**ABC RULE** **90s5•15 127**	Price is same as previous printed, 9,000 shrs is less than volume delete level, prints because trade is Rule 127

Upon entering RPO mode the following message is printed on the ticker:

• • • NOW•IN•REPEAT•PRICES•OMITTED•MODE • •

4.4. TRADE FORMATTING IN MINIMUM PRICE VARIATION MODE (MPV)

Under MPV mode, a trade will generally not print unless its price exceeds the minimum price variation from the preceding tape print. The minimum price variation can be set from 1 to 100 multiples of $0.05, i.e., ranging from $0.05 to $5.00. Trades that print are formatted according to the DVD mode rules.

For example, if the MPV level is set to 4, all trades for a stock whose price are $ 0.20 or less away from the preceding printed trade for that stock will not print. This MPV functionality will apply to all trades regardless of the denominator an issue is trading at.

A trade under MPV mode ***will only*** print if any one or more of the following are true:

- the price exceeds the minimum price variation when compared to the last price printed on the ticker for the same issue and trade qualifies for consolidated last.
- the trade is the first trade of the day for that security that qualifies for the consolidated last
- the trade is one of the first six trades from the Primary Market of a first-day issue
- the volume is equal to or greater than the volume delete level
- the unit of trade is one
- the trade has a sale condition of Rule 127 or Rule 155

The following are examples of messages that are printed on the ticker when the MPV level changes:

MPV Level	**Ticker Message**
1	**MIN•PRICE•CHGS•OMITTED•NOW**
	•••　　　　•05••
20	**MIN•PRICE•CHGS•OMITTED•NOW**
	•••　　　　1.00••
55	**MIN•PRICE•CHGS•OMITTED•NOW**
	•••　　　　2.75••
100	**MIN•PRICE•CHGS•OMITTED•NOW**
	•••　　　　5.00••

4.4. TRADE FORMATTING IN MINIMUM PRICE VARIATION MODE (MPV), continued

The following sequence of trades illustrates the functionality of the new MPV mode compared to the same trade under normal mode. Assume the MPV is set at 6, a volume delete level of 10,000, issue ABC is trading in 0.01 denominator:

Ticker Print Normal Mode	**Ticker Print MPV Mode**	**Remarks**
ABC **49s45•23**	**ABC** **49s45•23**	First trade of day that qualifies for consolidated last
ABC **49s45•55**	**ABC** **5•55**	Trade exceeds MPV of $ 0.30 from previous print. DVD rules still apply.
ABC **49s45•50**	***Trade Not Printed***	Trade less than MPV of $ 0.30 from previous print
ABC **10•000s45•65**	**ABC** **10•000s5•65**	Trade less than MPV, but, volume equal to volume delete level
ABC RULE **9s45•75 127**	**ABC RULE** **9s5•75 127**	Trade less than MPV, but prints because of Rule 127
ABC **49s46•20•c**	***Trade Not Printed***	Trade more than MPV of $ 0.30 from previous trade, does not print because cash does not qualify for consolidated last

5. CORRECTION FORMATTING

Correction messages show corrections to a trade that was originally reported with an error(s). A Correction message starts with two begin announce characters followed by "CORR.". "WAS." separates the original trade and the correcting trade. The message concludes with two end announce characters.

The printing of corrections on the ticker is controlled not only by the prevailing ticker delete mode at the time the correction is entered, but also by the CORR MODE setting (which is discussed later). In the following sections we assume the CORR MODE is not activated. The formatting rules for corrections under each ticker delete mode will be detailed.

5.1. CORRECTION FORMATTING IN NORMAL MODE

Corrections under normal mode should always print in full on the ticker.

5.1.1. CORRECTION DUE TO PRICE AND/OR VOLUME ERROR

Refer to **Common Formatting Rules Section** for the formatting of the price and volume in both the original trade and the correcting trade portion in the correction message.

```
   CORR•ABC      WAS•
••             4s42       5s42••
```
(The sale of 400 shares at 42 should have been 500 shares at 42)

```
   CORR•ABC      WAS•
••             4s42       5s43••
```
(The sale of 400 shares at 42 should have been 500 shares at 43)

5.1.2. CORRECTION WHICH INVOLVES A SALE CONDITION

The symbol will print after "WAS." if the correcting trade includes *at least one* of the following sale conditions: Sold, Sold Last, Open, Cash, Cash Only Market, Next Day, Next Day Only Market, or Average Price Trade. The symbol will not print after "WAS" if the correcting trade contains one of the following sale conditions exclusively: Seller, Rule 127 or Rule 155.

Refer to Section 3 for the formatting of symbol, volume, price and sale conditions.

```
   CORR•ABC•SLD      WAS•ABC•SLD•LAST
••               4s42                       4s42••
```
(The sale of 400 shares at 42 SOLD was supposed to be SOLD LAST)

```
   CORR•ABC      SELLER   WAS•        SELLER
••             4s42      60       4s42•10       60••
```
(The sale of 400 shares at 42, Seller days 60, was supposed to be 42.10

```
   CORR•ABC      WAS•     RULE
••             4s42       4s42      127••
```
(The sale of 400 shares at 42 was supposed to be Rule 127)

```
   CORR•ABC      WAS•        PREV•LAST
••             4s42       4s42••          42•10••
```
(The sale of 400 shares at 42 was supposed to be Rule 155)

5.1.3. CORRECTION TO CORRECTION MESSAGE

If a correction message is erroneously entered, another correction message is simply entered to correct the particular error. This message is printed in the same format as the correction message.

5.2. CORRECTION FORMATTING IN DIGITS AND VOLUME DELETED MODE (DVD)

Corrections will print if any of the following conditions are true:

- the price of the correcting trade is not the same as the original trade, and the volume of the correcting trade is equal to or greater than the volume delete level
- the correcting trade has a sale condition of Rule 127 or Rule 155
- the unit trade is 1

In DVD mode, only the units of the whole price, and decimal or fraction, if any, are printed. However, if a correction is printed, the price prints in full if any of the following are true:

- the whole portion of either the original and/or correcting price ends in zero
- the original and/or correcting price per share is $1000 or over
- there is a change in the tens or higher digit of the correcting price from the original price
- the unit of trade is 1

If a correction is printed, the volume prints if any of the following are true:

- the correcting trade volume is equal to or greater than the volume delete level
- the original or correcting trade has a sale condition of Rule 127 or Rule 155

Note: The assumption is a volume delete level of 5000.

CORR•ABC WAS• **• • 8•69 8•94• •**	(The sale of 900 shares at 78.69 was supposed to be 1000 shares at 78.94)
CORR•ABC•SLD•LAST WAS• **• • 3•44•c 2•44• •**	(The sale of 500 shares at 33.44, sold last and cash, was supposed to be 32.44 with no sale condition)

5.3. CORRECTION FORMATTING IN REPEAT PRICES OMITTED MODE (RPO)

Corrections under RPO mode only print if any one or more of the following are true:

- the unit of trade is 1
- the correcting trade has a sale condition of Rule 127 or Rule 155
- the original and/or correcting trade's volume is equal to or exceeds the volume delete level
- the original and/or correcting trade has sale condition of Seller, and the original price is corrected
- the correcting trade establishes a new consolidated high, low or last

Note: certain sale conditions do not affect the consolidated high, low, or last. See **Appendix H**.

In RPO mode, in general only the units of the whole price, and decimal or fraction, if any, are printed. However, if a correction is printed, the price prints in full if any of the following are true:

- the unit of trade is 1
- the whole portion of the original and/or correcting price ends in zero
- the original and/or correcting price per share is $1000 or over
- there is a change in the tens or higher digits of the correcting price from the original price

If a correction is printed, the volume prints if any of the following are true:

- the correcting trade volume is equal to or greater than the volume delete level
- the original and/or correcting trade has a sale condition of Rule 127 or Rule 155

Note: The assumption is a volume delete level of 5000.

CORR•ABC•SLD•LAST WAS• **• • 6•75 6•45• •**	(The sale of 100 shares at 16.75, SLD LAST should have been 1234 shares at 16.45)

5.4. CORRECTION FORMATTING IN MINIMUM PRICE VARIATION MODE (MPV)

Similar to corrections under RPO mode, corrections under MPV mode will only print if any of the following are true:

- the unit of trade is 1
- the original and/or correcting trade has a sale condition of Rule 127 or Rule 155
- the original and/or correcting trade's volume is equal to or exceeds the volume delete level
- the original and/or orrecting trade has a sale condition of Seller, and the price is corrected
- the correcting trade establishes a new consolidated high, low or last

5.4. CORRECTION FORMATTING IN MINIMUM PRICE VARIATION MODE (MPV), continued

In MPV mode, in general, only the units of the whole prices, and decimal or fraction, if any are printed. However, if a correction is printed, the price prints in full if any of the following are true:

- the whole portion of the original and/or correcting price ends in zero
- the unit of trade is 1
- the original and/or correcting price per share is $1000 or over

If a correction is printed, the volume prints if any of the following are true:

- the correcting trade volume is equal to or greater than the volume deleted level
- the original and/or correcting trade has a salecondition of Rule 127 or Rule 155

5.5. CORRECTION MODE

CORR MODE has two options: MPV ON and MPV OFF. In CORR MODE MPV ON, the corrections follow MPV/ RPO mode rules regardless of the current mode for trades. In CORR MODE MPV OFF, corrections are formatted under the current mode for trades.

6. CANCEL AND ERROR MESSAGE FORMATS

Cancel and Error messages start with two begin announce characters and conclude with two end announce characters. (For symbol, volume, and sale condition formatting refer to Common Formatting rules section.) In all cases, the prevailing ticker mode will determine what, if any, data is deleted from a cancel/error message. Cancel/error messages always print regardless of the ticker mode.

6.1. CANCEL/ERROR FORMATTING IN DIGITS AND VOLUME DELETED MODE (DVD)

In DVD mode, in general, only the units of the whole price and decimal or fraction, if any, are printed. Prices for cancels/errors print in full if any of the following are true:

- the whole porton of the original price ends in zero
- the unit of trade of the original price is 1
- the price per share of the original price is $1000 or over

The volume prints if any of the following are true:

- the original trade volume is equal to or greater than the volume delete level
- the original trade has a sale condition of Rule 127 or Rule 155

The cancel message reports the cancellation of a trade (buyer and seller agree to cancel the trade).

	CXL•ABC	
••	**4s42••**	(The sale of 400 shares at 42 has been cancelled.)

The error message is used to report that a trade reported on the ticker never took place.

	ERR•ABC	
••	**4s42••**	(The sale of 400 shares at 42 never took place.)

6.2. CANCEL AND ERROR FORMATTING IN REPEAT PRICES OMITTED MODE (RPO)

In RPO mode, all cancels/errors are printed. In general, only the units of the whole price and decimal or fraction, if any, are printed. However, prices for cancels/errors print in full if any of the following are true:

- the whole portion of the original price ends in zero
- the unit of trade of the original price is 1
- the price per share of the original price is $1000 or over

The volume prints if:

- the volume of the original price is equal to or greater than the volume delete level
- the original trade has a sale condition of Rule 127 or Rule 155

6.3. CANCEL AND ERROR FORMATTING IN MINIMUM PRICE VARIATION MODE (MPV)

In MPV mode, all cancel/errors are printed. In general, only the units of the whole price, and decimal or fraction, if any, are printed. However, prices for cancel/errors print in full if any one of the following is true:

- the whole portion of the original price ends in zero
- the unit of trade of the original price is 1
- the price per share of the original price is $1000 or over

The volume prints if any of the following are true:

- the original trade volume is equal to or greater than the volume delete level
- the original trade has a sale condition of Rule 127 or Rule 155

An example is as follows:

CXL•ABC
• • 2• • (The sale of 400 shares at 42 has been cancelled.)

6.4. ERROR MESSAGE IN DVD, RPO or MPV MODE

An example is as follows:

ERR•ABC
• • 2• • (The sale of 400 shares at 42 never took place.)

6.5. CORRECTION MODE

CORR MODE has two options: MPV ON and MPV OFF. In CORR MODE MPV ON, the cancel and error messages follow DVD mode rules regardless of the current mode for trades. In CORR MODE MPV OFF, the cancel and error messages are formatted under either NORMAL or DVD mode rules depending on the current mode for trades.

6.6. CANCEL MESSAGE IN CORR MODE MPV ON

An example is as follows:

CXL•ABC
• • 2• • (The sale of 400 shares at 42 has been cancelled)

6.7. ERROR MESSAGE IN CORR MODE MPV ON

An example is as follows:

ERR•ABC
• • 2• • (The sale of 400 shares at 42 never took place.)

7. TRADING STATUS MESSAGE FORMATS

A Trading Status message is displayed when a Participant elects to notify CTS of one of the following:

- Opening Delay
- Trading Halt
- Trading Resume
- No Open/No Resume
- Price Indication
- Trading Range Indication
- Market Imbalance

All trading status messages start with three Begin Announce characters and conclude with two End Announce characters.

7.1. OPENING DELAY AND TRADING HALT MESSAGES

All Opening Delay (OPG.DLY.) and Trading Halt (TRD.HLT.) messages are classified as either Regulatory or Non-Regulatory.

The Last Price of the Primary Market that initiated a regulatory or a non-regulatory halt is appended to the end of the message.
Note: The one exception to this rule is an individual stock "IN VIEW OF COMMON" message (see section on "In View Of Common")

If a subsequent Opening Delay/Trading Halt is submitted for the same symbol while the first delay/halt is still active, "CONT." (continued) is included in the message.

7.1.1. REGULATORY OPENING DELAY/TRADING HALT MESSAGES

All Regulatory Opening Delay/Trading Halt Messages include one Letter dot following the three Begin Announce characters.

7.1.1.1. NEWS PENDING

•OPG•DLY•ABC&N•NEWS•PND•LAST
• • •   55•25• •

•TRD•HLT•ABC&N•NEWS•PND•LAST
• • •   55•25• •

7.1.1.2. NEWS DISSEMINATION

```
    •OPG•DLY•ABC&N•DISS•OF•NEWS•LAST
• • •                                    55•25• •
```

```
    •TRD•HLT•ABC&N•DISS•OF•NEWS•LAST
• • •                                    55•25• •
```

7.1.1.3. ADDITIONAL INFORMATION / CONTINUED

Additional Information ("ADDL.INFO") must be preceded by a Regulatory Delay/Halt (e.g., News Pending).

As mentioned in Section 7.1, if a Delay/Halt is submitted while the previous Delay/Halt is still active, "CONT." (Continued) is included in the message.

In the remainder of this document, "(ADDL.INFO)" and "(CONT)" indicate that under certain circumstances "ADDL.INFO" and "CONT" will appear in the message. As "ADDL.INFO" requires that "CONT." be included, the first example below includes both. The second example includes only "CONT." which is not dependent upon "ADDL.INFO".

```
    •OPG•DLY•CONT•ABC&N•ADDL•INFO•LAST
• • •                                      55•25• •
```

```
    •TRD•HLT•CONT•ABC&N
• • •                      • •
```

7.1.2. NON-REGULATORY OPENING DELAY/TRADING HALT MESSAGES

7.1.2.1. ORDER IMBALANCE

```
    OPG•DLY•ABC&N•ORD•IMB•LAST
• • •                             62• •
```

```
    TRD•HLT•ABC&N•ORD•IMB•LAST
• • •                             62• •
```

7.1.2.2. EQUIPMENT CHANGEOVER

OPG•DLY•ABC&N•EQPMNT•CHNGOVR•LAST
• • • 62• •

TRD•HLT•ABC&N•EQPMNT•CHNGOVR•LAST
• • • 62• •

7.1.2.3. ORDER INFLUX

OPG•DLY•ABC&N•ODR•INF•LAST
• • • 62• •

TRD•HLT•ABC&N•ODR•INF•LAST
• • • 62• •

7.1.3. DUE TO RELATED SECURITY

7.1.3.1 REGULATORY MESSAGES

•OPG•DLY•ABC&N•RELATED•SECURITY•NEWS•PND•LAST
• • • 55.69• •

•TRD•HLT•ABC&N•RELATED•SECURITY•NEWS•PND•LAST
• • • 55.69• •

•OPG•DLY•ABC&N•RELATED•SECURITY•DISS•OF•NEWS•LAST
• • • 55.69• •

•TRD•HLT•ABC&N•RELATED•SECURITY•DISS•OF•NEWS•LAST
• • • 55.69• •

•OPG•DLY•CONT•ABC&N•RELATED•SECURITY•ADDL•INFO•LAST
• • • 55.69• •

•TRD•HLT•CONT•ABC&N•RELATED•SECURITY•ADDL•INFO•LAST
• • • 55.69• •

7.1.3.2 NON-REGULATORY MESSAGES

OPG•DLY•ABC&N•RELATED•SECURITY•ORD•IMB•LAST
• • • 55.69• •

TRD•HLT•ABC&N•RELATED•SECURITY•ORD•IMB•LAST
• • • 55.69• •

OPG•DLY•ABC&N•RELATED•SECURITY•EQPMNT•CHNGOVR•LAST
• • • 55.69• •

TRD•HLT•ABC&N•RELATED•SECURITY•EQPMNT•CHNGOVR•LAST
• • • 55.69• •

OPG•DLY•ABC&N•RELATED•SECURITY•ORD•INF•LAST
• • • 55.69• •

OPG•DLY•ABC&N•RELATED•SECURITY•ORD•INF•LAST
• • • 55.69• •

7.1.4. IN VIEW OF COMMON (IVC)

There must be an active Delay/Halt on the common security to submit an IVC Delay/Halt. "ADDL.INFO." is the only halt reason that will print during an IVC Delay/Halt (parenthesis shown below are for illustrative purposes only, actual display will be without the paranthesis).
An IVC can be submitted to Delay/Halt **all** non-common associated securities or an **individual** non-common associated security.

7.1.4.1. DELAY/HALT ALL NON-COMMONS:

Message is identical for either an Opening Delay or a Trading Halt.

• • • **•ALL•ABC•$^{P}_{R}$&N•ISSUES•CURRENTLY•TRADING•ARE•DELAYED•**
OR•HALTED•IN•VIEW•OF•COMMON(•ADDL•INFO) • •

A subsequent IVC is entered for all non-commons:

• • • **•DLY•OR•HLT•CONT•FOR•ALL•ABC•$^{P}_{R}$&N•ISSUES•DELAYED•OR•**
HALTED•IN•VIEW•OF•COMMON(•ADDL•INFO) • •

7.1.4.2. DELAY/HALT AN INDIVIDUAL NON-COMMON:

• • • **•ABC$^{P}_{R}$B&N•DELAYED• •IN•VIEW•OF•COMMON(•ADDL•INFO)** • •

• • • **•ABC$^{P}_{R}$B&N•HALTED• •IN•VIEW•OF•COMMON(•ADDL•INFO)** • •

A subsequent IVC is entered for the individual non-common:

• • • **•ABC$^{P}_{R}$B&N•DELAYED•CONT• •IN•VIEW•OF•COMMON(•ADDL•INFO)** • •

• • • **•ABC$^{P}_{R}$B&N•HALTED•CONT• •IN•VIEW•OF•COMMON(•ADDL•INFO)** • •

7.2. TRADING RESUME MESSAGES

The Letter Dot (in parentheses for illustrative purposes only, actual display will be without the paranthesis) will print if there was a Regulatory Delay/Halt on the underlying common.

7.2.1. RESUME INDIVIDUAL STOCK

• • • (•)TRD•RESUMED•ABC&N • •

7.2.2. RESUME INDIVIDUAL NON-COMMON IVC

• • • (•)TRD•RESUMED•ABC$^{P}_{R}$A&N • •

7.2.3. RESUME ALL NON-COMMONS IVC

• • • (•)ALL•ABC•$^{P}_{R}$&N•CURRENTLY•DELAYED•OR•HALTED•IN•
VIEW•OF•COMMON•ARE•NOW•RESUMED • •

7.3. TRADING WILL NOT OPEN/RESUME

The Letter Dot (in parentheses for illustrative purposes only) will print if there was a Regulatory Delay/Halt on the underlying common. "ADDL.INFO." (in parentheses for illustrative purposes only) will print if the delay/halt reason was IVC additional information.

7.3.1. NO OPEN/NO RESUME INDIVIDUAL STOCK

• • • (•)ABC&N•WILL•NOT•RESUME•TODAY • •

• • • (•)ABC&N•WILL•NOT•OPEN•TODAY • •

7.3.2. NO OPEN/NO RESUME INDIVIDUAL STOCK IVC

• • • (•)ABC$^{P}_{R}$A&N•WILL•NOT•OPEN•TODAY•IN•VIEW•OF•COMMON
(•ADDL•INFO) • •

• • • (•)ABC$^{P}_{R}$A&N•WILL•NOT•RESUME•TODAY•IN•VIEW•OF•COMMON
(•ADDL•INFO) • •

7.3.3. NO OPEN/NO RESUME ALL NON-COMMONS IVC

```
      (•)ALL•ABC P/R &N•ISSUES•DELAYED•OR•HALTED•IN•VIEW•OF•COMMON•
• • •
              (ADDL•INFO•)WILL•NOT•OPEN• OR•RESUME•TODAY
                                                          • •
```

7.4. PRICE AND TRADING RANGE INDICATION MESSAGES

Note: Price Indication and Trading Range Indication Messages print identically

7.4.1. PRICE INDICATION MESSAGE

```
      ABC&N•LAST        IND
• • •                21•55      19•25• •20•65• •
```

7.4.2. NEW PRICE INDICATION MESSAGE

```
      ABC&N•LAST        NEW•IND
• • •                21•55              20•25• •21•65• •
```

7.4.3. CORRECTED PRICE INDICATION MESSAGE

```
      ABC&N•LAST        CORRECTED•IND
• • •                21•55                         20•25• •21•65• •
```

7.4.4. CANCEL PRICE INDICATION MESSAGE

```
      ABC&N•LAST        CANCELLED•IND
• • •                21•55                        • •
```

7.4.5. TRADING RANGE INDICATION MESSAGE

```
      ABC&N•LAST        IND
• • •                21•55      19•25• •20•65• •
```

7.5. MARKET IMBALANCE MESSAGES

7.5.1. PRE-OPENING IMBALANCES

The following messages reflect net market order imbalances at 9:00 a.m. ET and will not necessarily reflect net imbalances at the opening due to cancellations or reductions and entry of other orders to participate at the opening.

```
    AA              TO•SELL
• • •    146•900s              • •

    A            TO•SELL
• • •  904.300s              • •

    ABC•NO•IMBAL
• • •                      • •

    ABC        TO•SELL
• • •     105•700s           • •

    ZZZ        TO•BUY
• • •     288•800s           • •
```

7.5.2. MARKET ON CLOSE (MOC) IMBALANCES

The following messages reflect net imbalances at 3:40 p.m. ET and will not necessarily reflect MOC imbalances at the close due to entry of MOC orders to offset published imbalances.

```
    MMM        TO•BUY•MOC
• • •     69•200s                   • •

    BBB•NO•MOC•IMBAL
• • •                          • •

    PP         TO•BUY•MOC
• • •    79.800s                 • •

    TTT•NO•MOC•IMBAL
• • •                          • •

    ABC•NO•MOC•IMBAL
• • •                          • •

    A          TO•SELL.MOC
• • •  172.100s                  • •
```

8. ADMINISTRATIVE MESSAGES

The examples given below are intended to be indicative of the kinds of Administrative messages that are transmitted on the Low Speed Tickers, and therefore Administrative messages are not limited to the examples shown. The text of these messages vary depending on the news and information that is being conveyed.

Administrative messages start with three "begin announce" dots (...) and end with two "end announce" dots (..). These messages may appear before Market Open, during trading hours and after Market Close. Examples of administrative messages that may appear during each of these periods are reflected in **Appendix F,** with frequently used abbreviations listed in **Appendix G**.

8.1. TEST MESSAGE

The test message is transmitted daily before the opening and is broadcast repeatedly starting at approximately 7:35 a.m. and continues until approximately 7:55 a.m. ET.

• • • TESTING• • • ABCDEFGHIJKLMNOPQRSTUVWXYZ&Pr • • • 1234567890• •

8.2. MARKET OPEN AND CLOSE MESSAGES

8.2.1. MARKET OPEN

There are two distinct messages forming the official Market Opening sequence for Network A. The format of the first message is:

• • • NEW•YORK•STOCK•EXCHANGE•LISTED•STOCKS• • CONSOLIDATED• TAPE•NETWORK•A•MMM•DD•YYYY • •

There are two distinct messages forming the official market opening sequence for Network B. The format of the first message is:

• • • AMERICAN•STOCK•EXCHANGE•LISTED•STOCKS• • CONSOLIDATED• TAPE•NETWORK•B•MMM•DD•YYYY • •

The second message, which appears at 9:30 a.m. ET for both Ticker A and Ticker B, is as follows:

• • • • • • • • • • • • • • • • • • MARKET•OPEN• • • • •

There is <u>not</u> a separate message announcing the opening at each Market Center.

8.2.2. MARKET CLOSE

At the close of the normal trading day, the following messages are transmitted to indicate certain Markets' closed after 4:00 p.m. ET.

```
    MARKET•CLOSED     TRDS•FROM•MKTS•STILL•OPEN•WILL•CONTINUE
• • •             • • • •                                       • •
```

```
    CLOSED     TRDS•FROM•MKTS•STILL•OPEN•WILL•CONTINUE
• • •       • • • •                                     • •
```

The final Market Close Message is:

```
    MARKET•CLOSED
• • •              • •
```

8.2.3. END OF TRADING DAY

8.2.3.1. NETWORK A

```
    GOODNIGHT•NETWORK•A•MMM•DD•YYYY• • • • • • • • • • • • • •
• • •
```

8.2.3.2. NETWORK B

```
    GOODNIGHT•NETWORK•B•MMM•DD•YYYY• • • • • • • • • • • • • •
• • •
```

8.2.4. STOCKS NOT AVAILABLE FOR NYSE CROSSING SESSION

```
    ABC••NOT•AVAILABLE•FOR•NYSE•CROSSING•SESSION
• • •                                            • •
```

8.2.5. STOCKS NOT AVAILABLE FOR NYSE CROSSING SESSION DUE TO OPENING DELAY OR TRADING HALT

```
    ABC••NOT•AVAILABLE•FOR•NYSE•CROSSING•SESSION•NEWS
• • •                                                 • •
```

8.3. NYSE HOURLY AND HALF-HOURLY SUMMARY MESSAGES

8.3.1. NYSE HOURLY MARKET AND INDICES

An hourly market report is normally scheduled and reported to the ticker starting at 10:00 a.m. ET. This report contains the hour, volume of stocks traded, volume of warrants traded, the change from the previous day's close for the Market Center and up to six index values and their change from the previous closing value.

```
         A•M•APPROX•NYSE•VOL• • STOCK          • • NYSE•WS
• • • 10:00                          12.000.000          10.000

    • • MKT•DOWN   CTS• • NYSE•IDX    DOWN  • • INDU     UP   • • TRAN
                85               220      14       228.5   24        280

    DOWN    • • UTIL    DOWN   • • FINC    DOWN
          240        220      69        220      60• •
```

8.3.2. NYSE HALF HOURLY MARKET AND INDICES

Every half-hour (from 10:30 a.m. ET to 3:30 p.m. ET) a Market and Index report is issued. This report is an abbreviated version of the hourly report.

```
         A•M• • • NYSE•MKT•UP   CTS• • NYSE•IDX       UP
• • • 10•30                    20                252•40    10• •
```

8.4. MARKET SUMMARY MESSAGES

The following messages provide end of day market summary information.

8.4.1. NYSE FINAL MARKET AND INDICES SUMMARY

A final version of the Hourly Market and Indices report (ITS Adjusted) is issued after the market close which includes a volume adjustment to account for executions via ITS where the executing Market reported the trade and the seller is credited for trade volume.

```
      TODAY•APPROXIMATE•NYSE•VOL• • STOCK•ITS•ADJUSTED
• • •                                                  381•370•000

      NYSE•WS            • • MKT•DOWN CTS• • NYSE•CMN•STOCK•IDX
              354•000             4

             DOWN      • • INDUSTRIAL       DOWN      • • TRANSPORT
      254•66       0•28              300•26       0•56             246•59

      DOWN      • • UTILITY        UP       • • FINANCIAL        UP
           0•69          245•70        0•22              229•28     0•10• •
```

8.4.2. NYSE TOTAL TRADES AND DOLLAR VALUE

```
      TODAY•APPROXIMATE•NEW•YORK•STOCK•EXCHANGE•STOCK •TRADES
• • •

               DOLLAR •VALUE•STOCK •TRADING
       227•449                               $14•388•112•200• •
```

8.4.3. MOST ACTIVE ISSUES

The closing trade prices of the most active issues are sent after the market closes for the NYSE and AMEX. The market and number of most active issues being reported is denoted in the opening text in the following format.

NYSE Most Active Issues:

```
      VOLUME•OPEN•HIGH•LOW•LAST•NET•CHANGE 15 MOST•ACTIVE•NYSE
• • •

•STOCKS• • • ABC                                          DOWN        • •
                 6•552•100• • 23.31• • 24•19• • 23•31• • 23•44• •       1•16

ZZZ                                        UP
      2•733•700• • 97•75• • 98•85• • 97•15• • 98•65• •    .50• •
```

8.43 MOST ACTIVE ISSUES, continued

AMEX Most Active Issues (note that the open, high, and low prices will not be included):

```
    VOLUME•LAST•NET•CHANGE•10•MOST•ACTIVE•AMEX•STOCKS• • DEF
• • •
                  DOWN      • •
3•552•100• • 23•44• •      1•16
↓
XYZ                    UP
    2•935•700• • 98•65• •   .60• •
```

8.4.4. CLOSING TRADE PRICES

A list of **NYSE** and **AMEX** Closing Trade Prices for is sent after the Market closes in alphabetic sequence.

NYSE Closing Trade Prices consist of a symbol followed by the last price in the following format:

```
    CLOSING•PRICES• • AA      AAA      AAE
• • •                  76•69    16•45    20 (ETC.)
    ↓
    END•CLOSING •PRICES
• • •                  • •
```

AMEX Closing Trade Prices consist of a symbol followed by the trade volume, open, high, low, last price fields, net change tick indicator, and net change in price. Regardless of the numeric value, the trade volume and all prices will be shown on the ticker. The following example illustrates AMEX closing trade prices:

```
    CLOSING•PRICES• • ACZ                   UNCHANGED••BBB
• • •                  2•369••22••44••31••31                932••22•70••5
               UP   ••
4•55••32•20••31•00   •30   (ETC.)
    ↓
    END•CLOSING •PRICES
• • •                  • •
```

8.4.5. CLOSING BID/ASK PRICES

The Closing Bid/Ask Prices are reported for issues trading on the AMEX and issues with no trading activity during the day on the NYSE.

The following example illustrates the Bid/Ask Closing Prices for AMEX.

```
      CLOSING • BID•ASK•PRICES•• AG              AH
 • • •                               71•19••89•00     1•39••9•70 (ETC.)

END•CLOSING•BID•ASK•PRICES
                             • •
```

The following example illustrates the Bid/Ask Closing Prices of Stocks not Traded for NYSE.

```
     CLOSING • BID•ASK•PRICES•OF•STOCKS•NOT•TRADED• • ABC
 • • •                                                    48•44••50•20

XYZ          END•CLOSING•BID•ASK•PRICES
   •00••3•10                          • •
```

8.4.6. CROSSING/AFTER HOURS SESSIONS SUMMARY MESSAGES

8.4.6.1. NYSE CROSSING SESSION SUMMARY - NETWORK A TICKER

```
    NYSE• • CROSSING•SESSION•I• • SHARES        CROSSING•
• • •                                  261•400

    SESSION•II•NYSE•LISTED•STOCKS•DOLLAR•VALUE
                                            $518•108•

452

    AND•SHARE
              11•610•973• •
```

8.4.6.2. AMEX AFTER HOURS TRADING SESSION SUMMARY - NETWORK B TICKER

AMEX•AFTER•HOURS•TRADING•SESSION•STOCKS•VOLUME
• • • **25•000**

CUMULATIVE•DAILY•VOLUME
13•039•790• •

8.4.6.3. REGIONAL SESSIONS SUMMARY

REGIONAL•CROSSING•SESSION•I• • VOLUME• • CHX • • SHARES• •
• • • **500**

PCX • • SHARES
500 • •

8.4.7. APPROXIMATE ITS ADJUSTED VOLUME MARKET CENTER MESSAGES

Network A:

TODAY•APPROXIMATE•ITS•ADJUSTED•VOLUMES•FOR•TAPE•A•MARKET•
• • •

CENTERS• • • NYSE BSE CBOE CHX
381•374•000 3•293 2.496.000 13•046•100

CSE NASD PHLX PCX
3•532•900 22•255•580 3•593•300 6•178•500• •

Network B:

TODAY•APPROXIMATE•ITS•ADJUSTED•VOLUMES•FOR•TAPE•B•MARKET•
• • •

CENTERS• • • BSE CBOE CHX
3•293 2•496•000 13•046•100

CSE NASD PHLX PCX
3•532•900 22•255•580 3•593•300 6•178•500• •

8.4.8. NYSE FINAL MARKET CHANGE, INDICES, ISSUES TRADED

Note: Weekly data is provided on Fridays.

NYSE•FINAL••MARKET•DOWN 4 CENTS•NYSE•COMMON•STOCK• • • •

INDEX 254•66 DOWN 0•28 HIGH 254•66 LOW 254•15 • • INDUSTRIAL 0•26 DOWN 0•56

HIGH 300•27 LOW 299•87 • • TRANSPORTATION 246•59 DOWN 0•69 HIGH 246•85

LOW 46•07 • • UTILITY 245•70 UP 0•22 HIGH 245•70 LOW 244•61 • • FINANCE 229•28

UP 0•01 HIGH 229•28 LOW 228•50 • • • • • • COMMON•ISSUES•TRADED 2210 • • UP 840 • •

DOWN 816 • • UNCHANGED 554 • • • WEEKLY•HIGH•LOW•AND•NET•CHANGE•

FOR•WEEK•ENDED•MMDDYYYY• • • NYSE•COMMON•STOCK•INDEX•

HIGH 256•46 LOW 253•34 DOWN 1•27 • • INDUSTRIAL•HIGH 302•26 LOW 298•86

DOWN 1•48 • • TRANSPORTATION•HIGH 249•08 LOW 44•96 UP 0•38 • • UTILITY•

HIGH 246•95 LOW 4•97 DOWN 0•23 • • FINANCE•HIGH 232•18 LOW 227•98 DOWN 2•30• •

8.4.9. NEW LISTING INFORMATION

ADMITTED •TO •THE •LIST •AND •TO •DEALINGS• • • COMPANY •NAME • • • •

CAPITAL •STOCK •WHEN •ISSUED •$.50 •PAR •VALUE •TICKER •SYMBOL •

ABC $^{W}_{I}$•POST• 4• SECTION• N • •

8.4.10. DELETION FROM LIST

STRICKEN•FROM•LISTING•AND•REGISTRATION• • • ABC•CORPORATION• • • •

COMMON•STOCK•NEW•YORK•DEALINGS•WERE•SUSPENDED•MONTH•DD

YYYY •DEALINGS •CONTINUE •UNDER•ABC•CORPORATION•DELAWARE • •

8.4.11. EX-DIVIDEND NOTICE

REGULAR•WAY••TRADES•IN•THE•FOLLOWING•STOCKS•WILL•BE•EX• • • •
DIVIDEND•••CASH•TRADES••THROUGH•THE•RECORD•DATE•WILL•INCLUDE•
DIVIDEND••NEXT•DAY••TRADES•UP•TO•BUT•NOT•INCLUDING•RECORD•DATE
•WILL•INCLUDE•DIVIDEND••WITH•REGARD•TO•A•STOCK•DIVIDEND•OR•STO
CK•DISTRIBUTION•OPEN•BUY•AND•OPEN•STOP•ORDERS•TO•SELL•SHALL•BE•
REDUCED•IN•PRICE•AND•INCREASED•IN•SHARES•PURSUANT•TO•RULE118•• • •

8.5. AFTER HOURS MARKET SUMMARY MESSAGES

The following set of messages are transmitted on the Network A Ticker repeatedly starting after the End-of-Day (Goodnight) message and continuing until the morning of the next business day (approx. 7:30 a.m. ET). See referenced paragraph for message formats.

1. NYSE (ITS ADJUSTED) FINAL MARKET AND INDICES* (par 8.4.1)
2. NYSE TOTAL TRADE & DOLLAR VALUE* (par. 8.4.2)
3. NYSE 15 MOST ACTIVE ISSUES (par. 8.4.3)
4. NYSE CLOSING TRADE PRICES (par. 8.4.4)
5. APPROXIMATE ITS ADJUSTED VOLUME MARKET CENTERS (par. 8.4.7)
6. NYSE FINAL MARKET CHANGE, INDICES & ISSUES TRADED (par. 8.4.8)

* These messages include the total dollar value and total shares for NYSE listed securities from Crossing Session II.

9. TICKER BYPASS

The ticker bypass mode, in which the ticker print queue is "purged", will be used only in the unanticipated event that deletion modes are not effective in keeping the ticker current. This mode will be invoked only in extraordinary circumstances.

Ticker Bypass Message

• • • TICKER•WILL•RESUME•PRINTING•TRADES•FROM• •1•01 P.M• • •

Other Examples of time:

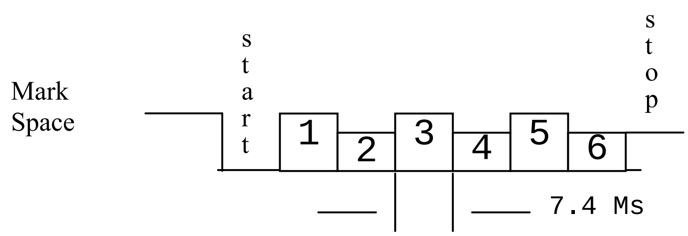
.10.30A.M.
.11.00A.M.
NOON
.1.30P.M.
.4.00P.M.

APPENDICES

A. TICKER CHARACTER CODE SET

b6. . . . . . b1

ROW					COLUMN →	0	1	2	3
	b6 →					0	0	1	1
	b5 →					0	1	0	1
	b4	b3	b2	b1					
0	0	0	0	0			T	Ш	1/8
1	0	0	0	1		E	Z	5	7/8
2	0	0	1	0		Ш	L	C	S S
3	0	0	1	1		A	W	1	1/2
4	0	1	0	0		Pr	H	Ш	8
5	0	1	0	1		S	Y	S	3/4
6	0	1	1	0		I	P	G	S T
7	0	1	1	1		U	Q		1/4
8	1	0	0	0		W I	O	0	
9	1	0	0	1		D	B	4	2
10	1	0	1	0		R	G	Ш	7
11	1	0	1	1		J	&	Ш	B
12	1	1	0	0		N	M		S
13	1	1	0	1		F	X	6	5/8
14	1	1	1	0		C	V	3	3/8
15	1	1	1	1		K	R T	Ш	




```
Bit Rate = 134.5 BPS

SPECIAL CHARACTERS

Col/row
0/2   Letter Dot
2/4   Figure Dot
2/10  End Announcement Character
2/11  Begin Announcement Character
2/0   Figure Dot/Figure Slash
2/15  Spare Fig. Dot (unused)

NON PRINT ITEMS

Col/row
2/12  Space (unused)
3/15  Rubout
3/8   Spare
2/7   Spare
```

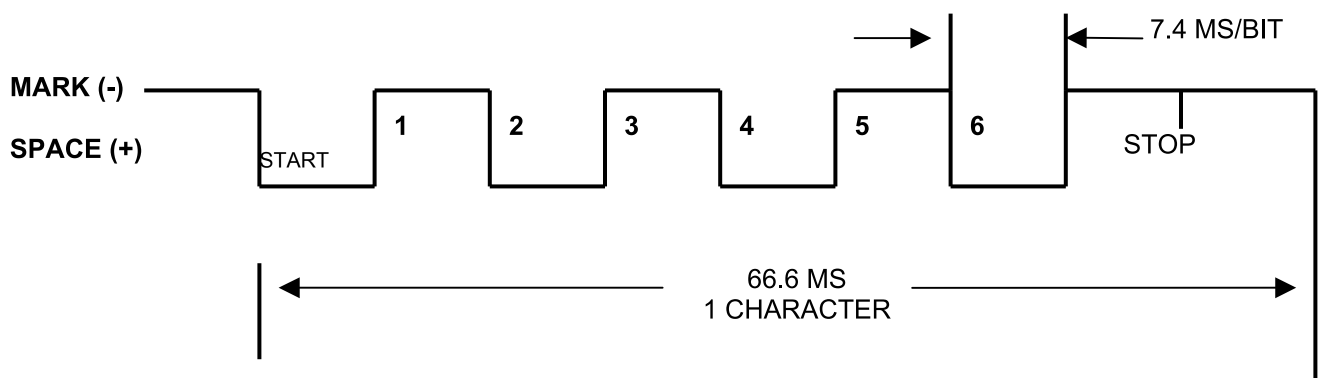
<u>Note:</u> The special character in Column 2, Row 0 is displayed as a Figure Dot or Figure Slash depending on the vendor device being used.

B. LOW SPEED TICKER INTERFACE

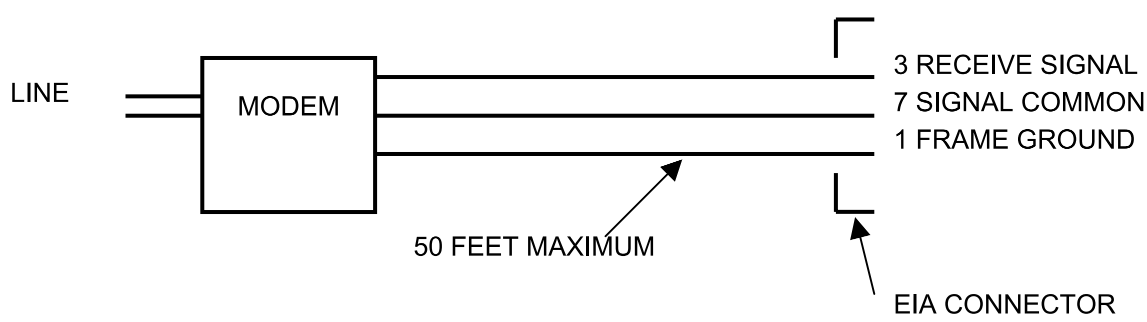
The low speed ticker is an asynchronous (start-stop) signal transmitted at a rate of 15 characters per second. A character consists of 9 bits: 1 start, 6 intelligence and 2 stop bits. The total bit rate is 134.5 bits/second. Subscribers to the ticker service are provided with a modem that furnishes a polar signal at ±12 volts. Negative voltage is the mark polarity, plus is space. These characteristics are illustrated below:

CODE STRUCTURE:	6 level baudot
BITS PER CHARACTER:	9 (6 intelligence, 1 start, 2 stop)
CHARACTERS PER SECOND:	15
BIT RATE:	134.5

SIGNAL



ELECTRICAL



C. SUFFIX TABLE

Description	Suffix
Class A	.A
Class A Called	.A.CL
Class A Convertible	.A.CV
Class A When Issued	$.A_{I}^{W}$
Class A New	.A.N
Class B	.B
Class B Called	.B.CL
Class B Convertible	.B.CV
Class B When Issued	$.B_{I}^{W}$
Class B New	.B.N
Called	.CL
Certificates	.CT
Convertible	.CV
Contingent Value Right	.CVR
Convertible Called	.CV.CL
Emerging Company Marketplace	.EC
Foreign News	.F.N
Partial Paid	.PP
Part Called	.PT.CL

C. SUFFIX TABLE, continued

Description	Suffix
Preferred	${}^{P}_{R}$
Preferred A through	${}^{P}_{R}A$
Preferred Z	${}^{P}_{R}Z$
Preferred A Covertible through	${}^{P}_{R}A.CV$
Preferred Z Convertible	${}^{P}_{R}Z.CV$
Preferred A Called through	${}^{P}_{R}A.CL$
Preferred Z Called	${}^{P}_{R}Z.CL$
Preferred A When Issued through	${}^{P}_{R}A^{W}_{I}$
Preferred Z When Issued	${}^{P}_{R}Z^{W}_{I}$
Preferred When Issued	${}^{P}_{R}{}^{W}_{I}$
Preferred New	${}^{P}_{R}.N$
Preferred Called	${}^{P}_{R}.CL$
Preferred Convertible	${}^{P}_{R}.CV$
Preferred Convertible Called	${}^{P}_{R}.CV.CL$
Preferred When Distributed	${}^{P}_{R}.WD$
Class A of a Second Category of Preferred. Also could be B-K and M-S.	${}^{P}_{R}.CA$
Rights	${}^{R}_{T}$
Rights When Issued	${}^{R}_{T}{}^{W}_{I}$

C. SUFFIX TABLE, continued

Description	**Suffix**
Small Corporate Offering Registration	.SC
Special	.SP
Stamped	.SD
Tier II Securities	.TT
Units	.U
Variable Common Right	.VR
When Distributed	.WD
When Issued	$^{W}_{I}$
Warrants	.WS
With Warrants	.W.WS
Warrants Class A	.WS.A
Warrants Class B	.WS.B
Warrants New	.WS.N
Warrants When Issued	.WS$^{W}_{I}$
Without Warrants	.XW

C. SUFFIX TABLE, continued

TEMPORARY SUFFIX TABLE

Description	**Suffix**
Ex-Dividend	.XD
Ex-Distribution	.XDIS
Ex-Rights	$.X^{R}_{T}$
New	.N
Ex-Interest	.XI

D. SYMBOL APPENDAGE IDENTIFIER TABLE

Description	**Appendage**
Below Continuing Listing Standards	.BC
Pending Delisting	.DL

E. MARKET IDENTIFIERS

MARKET	IDENTIFIER AS IT APPEARS ON TICKER
American Stock Exchange, Inc.	&A
Boston Stock Exchange, Inc	&B
Chicago Board Options Exchange, Inc	&W
Chicago Stock Exchange, Inc	&M
Cincinnati Stock Exchange, Inc	&C
National Association of Securities Dealers, Inc	&D
Nasdaq	&T
New York Stock Exchange, Inc	&N
Pacific Exchange, Inc	&P
Philadelphia Stock Exchange, Inc	&X

*Identifier symbols are used only at the end of the day in previously unreported trades and in certain administrative and indication messages during the day.

F. GLOSSARY

- A -

ADDITIONAL INFORMATION - For a security that is Opening Delayed or Trading Halted, if inadequate information is disclosed during a Regulatory Opening Delay or Trading Halt, the Opening Delay or Trading Halt reason could be subsequently reported as "Additional Information".

AVERAGE PRICE TRADE - A trade where the price reported is based upon an average of the prices for transactions in a security during all or any portion of the trading day.

- B -

BELOW CONTINUING LISTING STANDARDS – A financial status designation pertaining to Tape 'A' listed securities only. The status identifies that a company, whose issue is listed on the New York Stock Exchange, has failed to meet established listing standards. The New York Stock Exchange will subsequently review the appropriateness of continuing to list the issue, and may decide to commence the Delisting Process. The symbol appendage identifier, **.BC** is used to denote that a symbol is Below Continuing Listing Standards on the Tape 'A' Low Speed Ticker.

- C -

CASH TRADE - A transaction that calls for the delivery of securities and payment on the same day the trade takes place.

CASH (Only) MARKET - A security settling in Cash all day on a participant or consolidated basis, such as a Common, Preferred or Right, that is nearing expiration. Settlement is similar to a Cash Trade, except that Cash (Only) Market trades qualify to update a security's trading range (high, low, last calculations) during the day. Participants can elect to report different settlements in the same security during the day based on their own settlement requirements. For example, one participant can report trades as Cash (Only) Market, while another participant can report trades as Regular or Next Day settlement. For Network B Bonds, Cash (Only) Market can be used to report transactions in a Regular way market.

CONTINUED - If a Delay/Halt is submitted while the previous Delay/Halt is still active, "CONT." (Continued) is included in the message. This Continued message is a notification that the Delay/Halt has not yet ended.

CORRECTED INDICATION - Denotes a correction to the last indication or new indication. It will contain the corrected approximation of what that security's opening or re-opening price range (bid and offer prices, no sizes) will be when trading resumes after a delayed opening or after a trading halt.

- C -

CTA ELIGIBLE - Generally, any common stock, long-term warrant or preferred stock, which becomes registered on any national securities exchange, or is admitted to unlisted trading privileges thereon, and which at the time of such registration or at the commencement of such trading, substantially meets the original listing requirements of the NYSE or the Amex for such securities.

- D -

DUE TO RELATED SECURITY - Used to describe a halt condition, when events concerning one security will affect the price and performance of another related security (e.g., a call for redemption of a convertible preferred security or convertible debt security, which could affect the related common security).

- E -

EQUIPMENT CHANGEOVER - The ability to trade a security by a Participant is temporarily inhibited due to a systems, equipment or communications facility problem or for other technical reasons.

EX-DISTRIBUTION - Securities without the right to receive the forthcoming distribution of securities, which has been recently declared.

EX-DIVIDEND - Securities without the right to receive the forthcoming dividend, which has been recently declared.

EX-RIGHTS - Securities without the right to buy a company's securities at a discount from the prevailing market price, which was distributed until a particular date. Typically, after that date, the rights trade separately from the security itself.

- I -

INDICATION - An approximation of what a security's opening or re-opening price range (bid and offer prices, no sizes) will be when trading resumes after a delayed opening or after a trading halt.

IN VIEW OF COMMON - When matters affecting the common stock of a company affect the performance of the non-common associated securities, e.g., warrants, rights, preferreds, classes, etc. Those securities, which must be of the same company, are globally Opening Delayed or Trading Halted for a Participant in view of the common stock.

- L -

LOCAL ISSUE - A Local Issue is an issue that does not meet Amex or NYSE listing requirements (is not CTA eligible) but is traded at one or more Regional Exchanges.

- M -

MARKET IMBALANCE BUY – An excess of 50,000 shares or more of market orders to buy over market orders to sell, as of 9:00 a.m. on expiration days.

MARKET IMBALANCE SELL – An excess of 50,000 shares or more of market orders to sell over market orders to buy, as of 9:00 a.m. on expiration days.

MARKET ON CLOSE (MOC) IMBALANCE BUY - An excess of 50,000 shares or more of MOC orders to buy over MOC orders to sell (including MOC sell plus and MOC sell short orders).

MARKET ON CLOSE (MOC) IMBALANCE SELL - An excess of 50,000 shares or more of MOC orders to sell (not including MOC sell short and MOC sell plus orders) over MOC orders to buy (including MOC orders to buy minus).

- N -

NEW - A temporary suffix, which can be used when deemed necessary to identify a new status or structure of an issue, but where the symbol remains the same.

NEWS DISSEMINATION - Denotes a regulatory trading halt when relevant news influencing the security is being disseminated. Trading is suspended until the primary market determines that an adequate publication or disclosure of information has occurred.

NEW INDICATION - Newest indication on an already indicated security denoting a new approximation of what that security's opening or re-opening price range (bid and offer prices, no sizes) will be when trading resumes after a delayed opening or after a trading halt.

NEWS PENDING - Denotes a regulatory Trading Halt due to an expected news announcement which may influence the security. An Opening Delay or Trading Halt may be continued once the news has been disseminated.

NEXT DAY (Only) MARKET - Same definitions as Cash (Only) Market except settlement is next day.

NEXT DAY TRADE - A transaction which calls for delivery of securities on the first business day after the trade date.

NO MARKET IMBALANCE - Indicates that the imbalance of market orders for a security is less than 50,000 shares as of 9:00 a.m. on expiration day.

NO MARKET ON CLOSE (MOC) IMBALANCE - The difference between the number of shares to buy MOC and the number of shares to sell MOC is less than 50,000.

- N -

NON-REGULATORY HALT OR DELAY - An operational Trading Halt for a Participant due to Order Imbalance, Order Influx, Equipment Changeover or Due to Related Security. In addition, Due To Related Security can be used in conjunction with a non regulatory Halt Reason, i.e., Order Imbalance, Order Influx or Equipment Changeover.

NO OPEN/NO RESUME - Indicates an Opening Delay or Trading Halt is to be in effect for the rest of the trading day in a security for a Participant.

- O -

OPENED - Indicates an opening transaction that is printed out of sequence or reported late or printed in conformance to the One or Two Point Rule.

ONE OR TWO POINT RULE - A trade must receive Floor Official approval and be published on the tape as "opened" or "sold last" if it is:

a. one point or more away from the last sale when the last sale is under $20.00; or
b. two points or more away from the last sale when the last sale is $20.00 or more

OPENING DELAY - Postponement of the opening of trading in a security for a Participant.

ORDER IMBALANCE - Denotes a non-regulatory halt condition where there is a significant imbalance of buy or sell orders.

ORDER INFLUX - Denotes a non-regulatory halt condition where there is a significant influx of orders.

- P -

PENDING DELISTING - A financial status designation pertaining to Tape 'B' listed securities only. The status identifies that a company, whose issue is listed on the American Stock Exchange or on one of the Regional exchanges, has failed to meet the established listing standards of the respective exchange. The exchange will subsequently review the appropriateness of continuing to list the issue, and may decide to commence the Delisting Process. The symbol appendage identifier, **.DL** is used to denote that a symbol is Pending Delisting on the Tape 'B' Low Speed Ticker.

PRICE INDICATION - Reflects an approximate price range of what a security's trading range (bid and offer prices) will be when trading resumes after an Opening Delay or a Trading Halt.

- R -

REGULAR SALE - A trade made without stated conditions is deemed regular way for settlement on the fifth business day following the transaction date.

- R -

REGULATORY HALT OR DELAY - An Opening Delay or Trading Halt called due to news dissemination or news pending. In addition, Due To Related Security can be used in conjunction with a regulatory Halt Reason, i.e., News Dissemination or News Pending.

RESUME - Indicates that trading for a Participant is no longer suspended in a security which had been Halted or had its Opening delayed.

RULE 127 TRADE (NYSE) - To qualify as a 127 print the trade is executed outside the present quote and meets one or both of the following conditions: (1) has a volume of 10,000 shares or more and/or (2) has a dollar value of $200,000 or more.

- R -

RULE 155 TRADE (AMEX) - From time to time, a specialist may arrange for the sale, or purchase, of a block of a stock, or other large number of shares of stock, at a single "clean-up" price. Generally such sale, or purchase, is outside of the current market. Such sale, or trade is designated a Rule 155 trade.

- S -

SELLER SALES - A Seller's Option transaction gives the seller the right to deliver the stock at any time within a specific period, ranging from not less than two calendar days, to not more than 180 calendar days. A stock offered "Seller's Option" may command a lesser price than if offered "Regular Way".

SOLD - Sold is used when a trade is printed (reported) out of sequence and at a time different from the actual transaction time.

SOLD LAST - Sold Last is used when a trade prints in sequence but is reported late or printed in conformance to the One or Two Point Rule.

STOPPED STOCK - There are several uses of the Stopped Stock indicator:

1. Stopping stock takes place when a Broker, trying to get a better price for the customer's market order than the currently available price, asks the Specialist to "stop the stock". The Specialist guarantees the Broker the current "stopped" price but does not immediately execute the order. The order is used by the Specialist to improve the quote in order to obtain a better price. If the next trade is at the "stopped" price, the order is "elected" and executed by the Specialist at the stopped price rather than at an improved price. The execution at the stopped price is designated as "Stopped Stock".

2. Under NYSE Rule 116.40 paired-off MOC buy and sell orders are stopped against each other and printed as "Stopped Stock".

- S -

3. The Stopped Stock Indicator is also used to identify a trade defined by NYSE Rule 72 paragraph (b), wherein the so-called Clean Agency Cross transaction has 25,000 shares or more and must consist of orders for public customers only and not for the proprietary account of an Exchange member or member organization. A Clean Agency Cross may be effected without being broken up at the proposed cross price. The rule allows for a portion of the customer's order to be effected at an improved price and the remainder of the order to be executed at the proposed cross price. In the latter case, the Clean Agency Cross could be effected and reported with less than 25,000 shares.

- T -

TRADING HALT - Temporary halt in trading in a particular security for a Participant.

TRADING RANGE INDICATION - Denotes the probable trading range (bid and offer prices, no sizes) of a security that is **not** Opening Delayed or Trading Halted. **The Trading Range Indication is used prior to or after the opening of a security**.

G. LIST OF ADMINISTRATIVE MESSAGES

BEFORE MARKET OPENING	DURING TRADING HOURS	AFTER MARKET CLOSE
Test Messages	Market Open	Market closed message
Listings to be admitted	Cash Bid	Close (end of NYSE trading reporting)
Called for Redemption	Emergency Notices	Crossing Session Summary messages
Cash, Next Day or Regular Way Delivery	1/2 Hourly index	Held trade reports
Change of corporate name	Hourly indexes and volume	New issues added to list
Dealings will be suspended	Index Corrections	Issues deleted from list
Dealings suspended	Initial Public Offerings	Indices, volume, etc.
Dealings will be regular way in lieu of when issued	Minutes of Silence	Secondary distribution messages
Drop New	No Name Notices	Restrictions on Stop Orders in an issue
Emergency - Opening Delayed due to storm conditions or other emergency conditions and transit strikes	Nominating Committee	Change in floor location of an issue
Ex-Distribution	Notice of stock being called	Notice on renewal on GTC orders
Ex-Rights	Rights and Warrants	Regional exchange volumes
Ex-Dividends	Admitted to Dealings	ITS adjusted volumes
GTC Notices	Rights and Warrants to be admitted to dealing (should be transmitted 3 times - time permitting)	Notice on market GTC orders when stock does not trade
Initial Margin Notices	Secondary Distribution	NYSE 15/Amex 10 most active issues message
New Listings - admitted to the list and to dealings	Special bid and Special Offering	NYSE Closing trade prices
New Membership Organization	Suspensions	NYSE Bid/asked of issues that did not trade
Rights to Subscribe	Stock ABC will not open for trading today	Next day and cash notices
Settlement Date	Veteran's Day	Weekly, monthly, quarterly, annual summary of stocks and warrants volumes and bond dollar volumes
Special Exchange Closing	Wanted for cash	Prior day trade reports and prior day corrections
Stop Orders		NYSE Final index, weekly, monthly, etc. summaries
Stricken from listing and registration		Number of NYSE issues up, down and unchanged
Symbol Changes		Dollar volume of NYSE trading and number of transactions
Trading Hour Changes		Goodnight – date
Trading Unit Change		Amex Closing Reports
		Amex Stock and Bond Values
		Final Index
		Dollar Market Value

H. ABBREVIATIONS FREQUENTLY USED IN ADMIN MESSAGES

TERM	ABBREV.
APPROXIMATE	APPROX
ADDITIONAL	ADDL
AVERAGE PRICE TRADE	*B
BACK	BK
BELOW CONTINUING LISTING STANDARDS	.BC
CANCEL	CXL
CASH	*C
CALLED	CL
CENTS	CTS
CHANGE	CHG
CONTINUED	CONT
CONVERTIBLE	CV
CERTIFICATES	CT
DELAYED	DLY
DISSEMINATION	DISS
DOWN	DN
EFFECTIVE	EFF
EQUIPMENT CHANGEOVER	EQPMNT CHNGOVR
ERROR	ERR
EXCHANGE ACQUISITION	ACQ
EXCHANGE DISTRIBUTION	DIST
EX-DISTRIBUTION	XDIS
EX-DIVIDEND	XD
EX-RIGHTS	XRT
FINANCIAL	FINC
HOUR	HR
HALTED	HLT
IMBALANCE	IMB
IMMEDIATELY	IMMED
INDEX	IDX
INDICATION	IND
INDUSTRIALS	INDU
MARKET	MKT
NEXT DAY	ND
NEW	N
OPEN	OPN
OPENED	OPD
OPENING	OPG
ORDER	ODR
PENDING	PND
PENDING DELISTING	.DL

H. ABBREVIATIONS FREQUENTLY USED IN ADMIN MESSAGES, continued

TERM	ABBREV.
PREFERRED	$\#^{P}_{R}$
PREVIOUS	PREV
RIGHTS	$\#^{R}_{T}$
SALES	SLS
SELLER	SLR
SHARES	SHRS
SOLD	SLD
SOLD LAST	SLD.LAST
SPECIAL OFFERING	SP.OFF
SPECIAL	SP
STAMPED	SD
STOPPED STOCK	$\#^{S}_{T}$
TRADES	TRDS
TRADING	TRD
TRANSACTIONS	TRANS
TRANSPORTATION	TRNS
UNCHANGED	UNCH
UTILITY	UTIL
VOLUME	VOL
WHEN DISTRIBUTED	WD
WHEN ISSUED	$\#^{W}_{I}$
WARRANTS	WS

* Appears on lower line

Single character

I. CONSOLIDATED LAST, HIGH, LOW CALCULATIONS

The following criteria should be used in determining the impact of different sale conditions on the Last, High, Low calculations, on a Consolidated and individual Participant basis. In cases of multiple trades, the sale condition and eligibility applies to both trades. In addition, in cases of multiple sale conditions, if any of the conditions do not qualify to be included in the Last, High, Low calculation, then that trade is not included in the Last, High, Low calculation.

		CONSOLIDATED		PARTICIPANT	
INDICATOR	**CONDITION**	**LAST**	**HIGH/ LOW**	**LAST**	**HIGH/ LOW**
@	REGULAR	YES	YES	YES	YES
A	CASH (ONLY) MARKET	YES	YES	YES	YES
B	AVERAGE PRICE TRADE	NO	NO	NO	NO
C	CASH TRADE	NO	NO	NO	NO
D	NEXT DAY (ONLY) TRADE	YES	YES	YES	YES
G	OPENING/RE-OPENING TRADE DETAIL	NO	NO	NO	NO
H	INTRADAY TRADE DETAIL	NO	NO	NO	NO
J	RULE 127 (NYSE ONLY)	YES	YES	YES	YES
K	RULE 155 (AMEX ONLY)	YES	YES	YES	YES
L	SOLD LAST (SEE NOTE #3)	#3	YES	YES	YES
N	NEXT DAY TRADE	NO	NO	NO	NO
O	OPENED (SEE NOTES #1, 2)	#1	YES	#2	YES
R	SELLER	NO	NO	NO	NO
S	RESERVED	NO	YES	#2	YES
Z	SOLD (SEE NOTE # 2)	#2	YES	#2	YES

I. CONSOLIDATED LAST, HIGH, LOW CALCULATIONS, continued

Note 1: YES if there is no previous trade that qualifies for the consolidated last, **OR** if it is the primary market's first qualifying last, OTHERWISE NO

Note 2: YES if there is no previous trade that qualifies for the last, OTHERWISE NO

Note 3: YES if there is no previous trade that qualifies for the consolidated last, **OR** if it is from the same participant as the trade that previously qualified for the consolidated last, **OR** if it is from the Primary market for that Security, OTHERWISE NO

Note 4: <u>TRADE COUNT AND VOLUME CALCULATION</u> - All trades <u>**except**</u> for **Bonds and Local Issues** are included in the overall daily trade count for a Participant. All trades <u>**except**</u> **for Bonds and Local Issues and those issues having a "G" or an "H" Sale Condition** are included in the overall daily volume count for a Participant.

J. SEQUENCE OF SALE CONDITIONS

Participants should prioritize conditions in ascending order of priority from left to right. Only one sale condition is permissible from each of the categories listed below:

PRIORITY 1 SETTLEMENT	**PRIORITY 2 SEQUENCE**	**PRIORITY 3 EXTENDED HOURS/ BASKET**	**PRIORITY 4 OTHER**
A- CASH (ONLY) MARKET	**L**- SOLD LAST	**F-** BURST BASKET EXECUTION	**B**- AVERAGE PRICE TRADE
C- CASH TRADE	**O**- OPENED	**I**- BASKET INDEX ON CLOSE TRANS.	**E**- AUTOMATIC EXECUTION
D- NEXT DAY (ONLY) MARKET	**Z**- SOLD	**T**- PRE/POST MARKET TRADE	**J**- RULE 127
N- NEXT DAY TRADE			**K**- RULE 155
R- SELLER			**S**- RESERVED

Note 1: In instances when ‘Cash Trades’ are executed in a ‘Next Day (only) Market’, the trade is sent with only a ‘Cash Trade’ sale condition (from the priority 1 settlement category) and ‘Next Day (only) Market’will **not** be denoted.

J. SEQUENCE OF SALE CONDITIONS, continued

Note 2: Cash Trades (code C), Next Day Trades (code N) and Pre/Post Market Trades (code T) do **not** qualify to update the Last, High, Low calculations, while Cash (only) Market trades (code A), Next Day (only) Market trades (code D), and Automatic Execution (code E) qualify to update the Last, High, Low calculations.

Note 3: Sale Conditions **Regular (@), Opening/Reopening Trade Detail (G) and Intraday Trade Detail (H)** are **not** used with other sale conditions. Consequently, they do not fall into a priority sequence category.

K. SALE CONDITION TICKER REPRESENTATIVE

*The following table represents the appearance of **Sale Conditions** associated with a trade, which are **represented across the Ticker**.*

CONDITION	TICKER REPRESENTATIVE
CASH (Only) MARKET	•C
AVERAGE PRICE TRADE	•B
CASH TRADE	•C
NEXT DAY (Only) MARKET	ND
RULE 127 (NYSE only)	RULE 127
RULE 155 (AMEX only)	PREV•LAST
SOLD LAST	SLD•LAST
NEXT DAY TRADE	ND
OPENED	OPD
SELLER	SELLER
SOLD	SLD