

PRESENTED BY THE STOCK TICKER COMPANY, HENRY FORD MUSEUM & GREENFIELD VILLAGE®, AND BERNER MACHINE LABS



# THE UNIVERSAL STOCK TICKER

ld meets new in one of the most ingenious ideas to celebrate our financial and innovative heritage. A working reproduction of the Universal Stock Ticker. Built to exacting standards of historical authenticity, yet, at the same time, taking advantage of today's precise mechanical standards.

After 100 years, the Universal Stock Ticker is back in production. We're proud to reintroduce you to a legendary symbol of Wall Street, unchanged from the days of Thomas Edison.

"Looking for just the right gift...? Something that says both money and technology? The [Stock Ticker Company]...has just the ticket, or ticker..."

Rob Fixmer. The New York Times

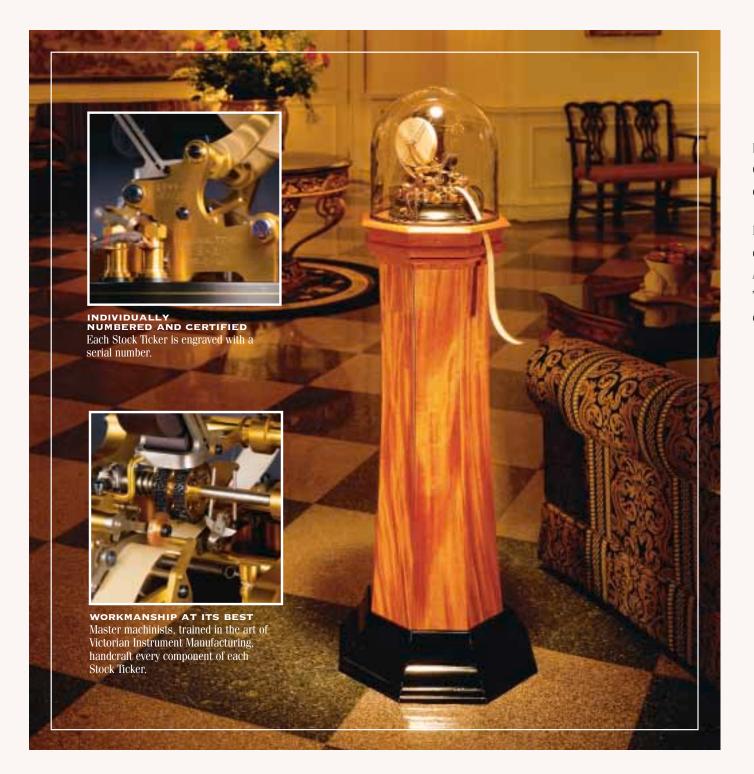
Designed in the 19th-century, and now ticking again in the new millennium, the Universal Stock Ticker is capable of working if connected to the original 1870s transmission lines. However, today it will print your favorite stock quotes from the New York Stock Exchange, NASDAQ, or Mutual Funds, direct from the Internet—live.



- In the 1870s, the Universal Stock Ticker represented what could be considered the very first mass-produced electronic printer. Today, the Universal Stock Ticker reproduction, while available only in extremely limited numbers, still functions as an electronic printer. Simply connect it to your computer to get current stock quotes or print personal messages.
- It is manufactured to the strict standards of historical authenticity as certified by Henry Ford Museum & Greenfield Village®, site of the largest collection of Edison patented stock tickers in the world.
- It can print four stored personalized messages without a computer connection, and has a remote control to activate the stored messages.
- It's portable. The Stock Ticker and power module disconnect easily and can be used at other venues without the substantial pedestal and glass dome. A hard-shell case is included for convenient transportation of the Ticker, the power module, and all needed accessories.

"It barely achieves ten words per minute, is so loud that a glass dome must be set over it—it's the detail—an exact replica of a stock ticker that the genius inventor Thomas Edison built in 1872."

Stern Magazine



# THE HEARTBEAT OF WALL STREET

dward A. Calahan invented the first stock ticker in 1867, which revolutionized the New York Stock Exchange. Three years later, a young Thomas Edison improved on Calahan's design and made the ticker a viable communication instrument.

By 1872, Edison's work on the stock tickers evolved into the Edison Universal Stock Ticker.

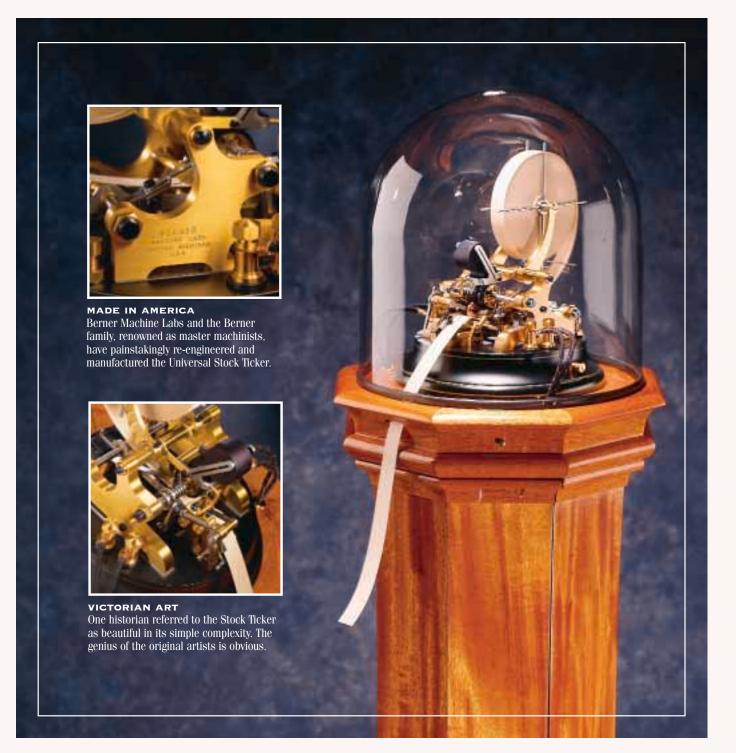
And, by 1875 the Universal was in full production.

The stock ticker was Thomas Edison's first commercial success.

"The growth of this [stock ticker] business is of great moment to the Stock Exchange, for it is through the instant dissemination of the quotes made on the floor that the active and continuous interest in the markets is sustained."

Horace L. Hotchkiss—1867 One of the original founders of the Gold & Stock Company

THREE



# 100% AUTHENTIC

ngineering drawings for the original Edison Universal Stock Ticker no longer exist. Therefore, we drafted our own blueprints from scratch. Master machinist Klaus Berner, of Berner Machine Labs, was referred to the project by the Smithsonian Institute. Under Mr. Berner's direction, a team of highly talented individuals methodically brought the Universal Stock Ticker back to life.

Many original stock tickers were disassembled, tested, measured, and closely inspected. Quite an undertaking since each unit has over 200 parts.

"The Universal Stock Ticker was a fixture in brokerage offices... The modern version has the same design but connects to your computer to print stock quotes... from the Internet."

St. Louis Post Dispatch

The new set of blueprints and production standards required that...

All paper rolls be manufactured to exact thickness, width, color, and texture. A custom-made
machine was even required to produce the
cardboard core for the paper tape.



- All original materials had to be matched, including brass, copper, cast iron, wood, and glass. The
  hardness of metals was also tested to ensure an
  authentic match.
- Intense and highly skilled handwork had to be used to polish the brass subassemblies to remove any machining marks. The copper coils of the electromagnets were wound by hand so that all the strands align. The magnificent carpentry work on the solid mahogany pedestal includes 40 pieces of inlaid wood in the capital portion alone.
- Lacquer formulas were determined for all metal and wood finishes by Mark Norfleet. Mr. Norfleet is a talented artist whose work includes the restoration of Stradivarius and other priceless violins.
- Over 200 parts had to be built from scratch to precise historical dimensions and modern tolerances.

"The type of workmanship required to build an advanced electromechanical device of a past century has nearly vanished from today's digital landscape."

Tim Elliott, Creative Director Stock Ticker Company



# A BRIEF HISTORY OF THE STOCK TICKER

## CALAHAN TICKER-1867



In 1867, Mr. E. A. Calahan, of the American Telegraph Company, invented the first stock telegraph printing instrument.

#### UNIVERSAL-1870

The Universal Stock Ticker was Thomas Edison's first commercial success, and established him with Wall Street connections that would fund development of his Menlo Park Laboratory.



### NEW YORK QUOTATION-1890s



In 1890, the New York Stock Exchange secured a major interest in the Commercial Telegram Company and made the New York Quotation stock ticker the exclusive ticker on Wall Street.

## SELF-WINDING TICKER-1900

The Western Union Self-Winding ticker, invented by Gold & Stock, was much faster than the Universal, though both remained in service together for many years.



# BLACK BOX TICKER-1934



By 1934, the New York Quotation Company put the black box into full operation. This was an extremely fast machine.

#### NYSE TICKER-1960

In 1960, The New York Quotation Company introduced the last mechanical ticker, which was eventually replaced by modern-day computers and electronic displays.

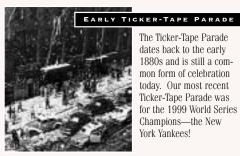


SIX



# THE STOCK TICKER HAS **TICKED ITS WAY INTO OUR AMERICAN CULTURE**

ince its invention, the stock ticker has played a vital role in shaping our rich financial history and our pursuit of the American dream. Below are just a few examples of how the stock ticker has been used, in many forms, as a legendary icon of wealth and prosperity.

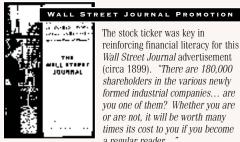


The Ticker-Tape Parade dates back to the early 1880s and is still a common form of celebration today. Our most recent Ticker-Tape Parade was for the 1999 World Series Champions-the New York Yankees!

### VICTORIAN ADVERTISEMENT

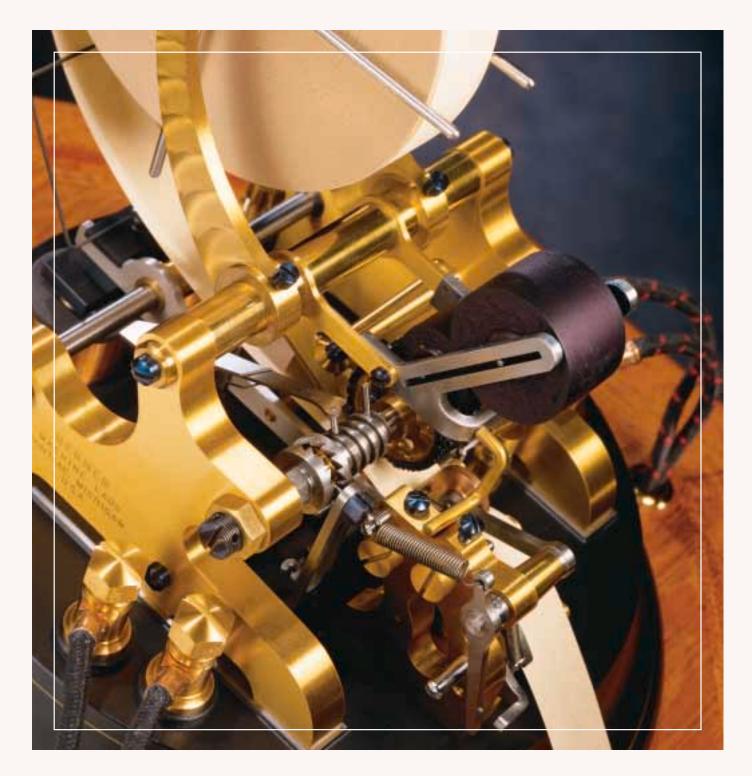
Early stock tickers were used in many advertisements to establish a product as "upscale." The image of the stock ticker can be found in some of the most unlikely situations.





The stock ticker was key in reinforcing financial literacy for this Wall Street Journal advertisement (circa 1899). "There are 180,000 shareholders in the various newly formed industrial companies... are you one of them? Whether you are or are not, it will be worth many times its cost to you if you become a regular reader..."





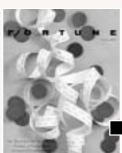


Early lottery and other games of chance such as this one (circa mid-1920), used the stock ticker as a symbol of wealth. In this game, five cents bought a chance to hit it rich... this particular card paid out 50 cents.

GAME OF CHANCE BOARD

This spirited illustration on the front cover of the Saturday Evening Post (circa 1934) shows Baby New Year keeping up to date on the nation's financial report via the stock ticker.





This Fortune magazine cover (circa 1964) entices the reader to learn more about the "Mysterious New Stock Market." Ticker tape surrounded by poker chips is one of many visual metaphors used to imply the risk inherent in investing.

FORTUNE MAGAZINE

### EDUCATIONAL GAME

The stock ticker portrayed on the cover of this 1969 board game had not been in popular use for decades. However, it remains the image we most associate with Wall Street. Today without a single stock ticker in active use, electronic stock reports are still displayed in the same configuration as printed by the original stock ticker.





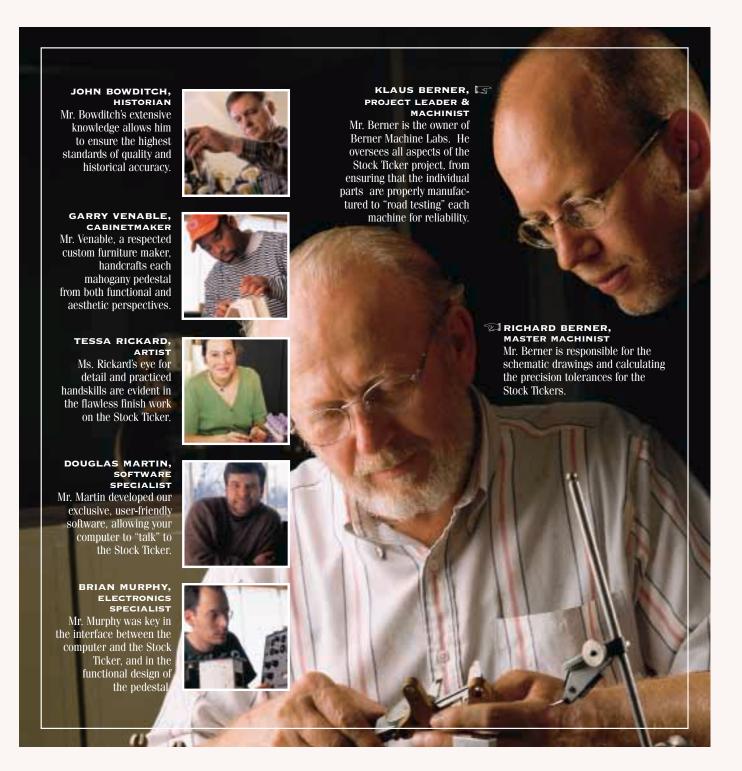
# THE HEROIC AGE OF INVENTION

he Heroic Age of Invention is celebrated and demonstrated in the Victorian work-manship of what is definitely history's first Internet application—the stock ticker.

Standards of excellence in the 1870s were, in many respects, much more difficult to meet than today's, due to the prolific handwork and high-level detail. Modern artists and machinists have had to dedicate hundreds of hours of intense labor into building each Stock Ticker to duplicate the beauty found in the originals.

\*Stock tickers were more than functional machines to their Victorian inventors, they celebrated technology. People placed stock tickers on pedestals with glass domes because they wanted to appreciate the artistic beauty of the object.\*\*

> Klaus Berner, Project Leader Berner Machine Labs



## **OUR STORY**

uilding the working reproduction of
Thomas Edison's first successful innovation was a labor of love for everyone on
the team. The first step was to secure our own
collection of original stock tickers. We began purchasing the tickers several years ago from auction
houses, retired Western Union repairmen, retired
stockbrokers, estates, and other collectors. We
now own what may be the largest private collection
of historic stock tickers.

We dismantled a number of these machines in order to study each part closely. We also visually examined many original stock tickers in museums.

We were able to get a couple of the original stock tickers from our collection ticking again. We brought these tickers to schools, antique shows, universities, and small businesses. We went to New York City where we were introduced to business leaders, the media, Wall Street executives, and historians

"Nostalgia never goes out of style, especially when it joins with something new...a Michigan company is investing new life in the stock ticker as a working replica with an Internet twist."

> Don Sheron San Antonio Express-News



This gave us the opportunity to see how the stock ticker actually worked before we started on the reproduction. In addition, we were able to confirm there was a market for the reproduction. Along the way, we observed how people reacted to the stock ticker, what questions they had, and how they interacted with it. This led to several design considerations regarding how the pedestal and stock ticker connected, and how to make it portable.

We brought one of our early reproduction prototypes to the COMDEX® computer show in Las Vegas, and listed it as the loudest, slowest, most expensive printer there. To our astonishment, and we're sure to the astonishment of thousands of other high-tech, leading-edge exhibitors, we won a "Byte.com Best of Show Award."

"It's a true anomaly at COMDEX, an ancient machine being offered among the bells, whistles, and microprocessing chips of the 21st-century."

John Cartner, Wired News

Our Stock Ticker has been televised from the floor of the New York Stock Exchange and featured on Lou Rukeyser's show, *Wall \$treet Week.* We've been asked to a number of prominent corporate venues to demonstrate the Stock Ticker and give our presentation, "The Heartbeat of Wall Street."



Once, on the way to an appointment with our Ticker equipment in tow, we even found ourselves in the midst of an actual ticker tape parade celebration for the New York Yankees.

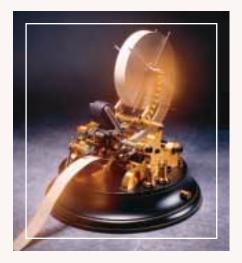
You see the looks of wonder...
the ability to attract a person's attention so definitively is the first step in bringing someone closer to the capital markets process, and to a higher standard of financial literacy.
These endeavors go right to the heart of the foundation blocks of a free and independent country.

John E. Herzog, Chairman Museum of American Financial History

We've made many new friends. We're having far too much fun. And we're working harder than ever. A gentleman once asked us, "What is the single most valuable lesson you've learned from this experience?" A great question.

The answer? All through history, the story of the stock ticker is of a mechanical device struggling to keep up with a growing and dynamic economy. The stock ticker is a demonstration of capitalism at work, and it teaches us a very simple lesson. Wherever freedom exists—the pie grows.

Rare. Beautiful. Historic. Functional. Outstanding. We did not build this Stock Ticker for everyone. We built it for you.



We would like to acknowledge these individuals and organizations for their support during the research, manufacture, and promotion of the Universal Stock Ticker reproduction:

- $\bullet$  Henry Ford Museum & Greenfield Village  $\bullet$  The Museum of American Financial History
- Rutgers Edison Papers Project (Professors Israel & Rosenberg) New York Stock Exchange
- Edison National Historic Site (West Orange, NJ) Smithsonian Institute (Department of Electricity)
- Mr. John Bowditch for your wisdom, passion, humor, and horse sense.



350 East Michigan Avenue • Suite 301 • Kalamazoo, MI • 49007

(877) 842-1870 (toll-free) • www.stocktickercompany.com info@stocktickercompany.com