In the early 1930 's, **Arthur Young**, a brilliant young inventor, built and successfully demonstrated a viable, flyable helicopter model.

Larry Bell, a successful entrepreneur and founder of the Bell Aircraft Corporation, was so impressed with Young's efforts that in 1941 he set the youthful inventor up in a small shop in Gardenville, New York

At that time Bell was already a manufacturer of conventional aircraft such as the WWII fighter P-39 Airacobra and the P-59, America's first jet-powered airplane. In addition, Bell was to develop the X-1, which was to become the world's first super- sonic plane.

By 1951, Bell helicopters were in service around the world, breaking records as fast as they were setting them. And since Bell Aircraft Corporation's reputation for helicopter manufacture began to rival its reputation as a builder of conventional aircraft, the company created a separate helicopter division which was headquartered in Fort Worth, Texas.

Today, with Bell helicopters flying in more than 120 different countries, they are logging another ten hours every minute of every day.

Our History

Bell Aircraft Corporation, the predecessor of Bell Helicopter Textron was founded July 10, 1935 in Buffalo, New York by Lawrence D. Bell, a man referred to as "America's most seasoned dreamer."

Bell Aircraft Corporation created a Helicopter Division which moved to Fort Worth, Texas in 1951 and became Bell Helicopter Corporation, a wholly owned subsidiary of Bell Aircraft Corporation.

In 1960, Textron of Providence, Rhode Island bought various Bell Aircraft properties including the Helicopter operation. Textron changed the name of the helicopter operation to Bell Helicopter Company, and within a few years established itself as Textron's largest division. In January 1976 the name was changed to what it is today, "Bell Helicopter Textron".

In 1946 pioneers like Floyd Carlson, Joe Mashman, Art Young and Dick Stansbury were the experimental pilots developing the first Bell Helicopter models in Buffalo, New York. In 1947 they conducted flight instruction in NC-1H a Model 47; the first helicopter to receive CAA certification. In those days the Buffalo operation was essentially the only place where a pilot could get flight instruction in helicopters. The first Army helicopter pilots took their training from Bell Helicopter at this Gardenville, N.Y. location.

When Bell Aircraft moved the helicopter operation to Fort Worth, Texas, all of the initial operations, including flight and maintenance training in the Model 47 took place at a leased facility in Saginaw, Texas just north of Fort Worth. This original plant, which was used for a variety of design, production, testing and training operations was commonly called the Globe Plant. This was a Naval facility that was acquired to manufacture the Cessna "Bamboo Bombers" late in the WW II era.

After the war this flying field was leased to Bell Helicopter. For history buffs this was the original Globe "Swift" Airplane

manufacturing facility. Pilot and maintenance training continued at the Globe Plant until 1970 when a new classroom and maintenance instruction hangar was built in Hurst just southwest of the main plant. This was location of the Bell Helicopter Training Academy and Delivery Center until 2004. Initially, pilot and mechanic training was limited to the Model 47 and the 206 JetRanger. This new Bell

Training Facility offered hands on pilot and maintainer training using real aircraft in a setting considered to be state of the art. This modern facility hosted training conducted by a staff of 20 people including two Instructor Pilots.

The Model 206A "JetRanger" was added to the commercial product line in 1967, and as other models were produced the Training Academy staff and facility continued to grow. More hangar space, more classrooms, more aircraft, more training aids, and more maintenance and flight instructors.

In 1978 Bell Helicopter and Flight Safety International completed an agreement under which Flight Safety took responsibility for the classroom and simulator training in medium twin helicopters. At the present time Flight Safety has visual and motion based simulators for the 212/412, 222/230 and 430 helicopters at their facility adjacent to the Bell Helicopter Customer Training Academy.

In 1996, the Customer Training Academy opened an 18,000 square-foot wing, providing muchneeded additional office and classroom space to handle the heavy customer load. From a mere trickle when Bell began training in Buffalo in the 40's, the Training Academy saw its 90,000th customer complete training in 2003. Traditional mechanic and pilot training has been the primary product of the Training Academy; but it also has the capability of producing state-of-the-art Computer Based Training (CBT). Developed primarily to meet the needs of the U.S. Military for OH-58D and V-22 pilot and mechanic training, this CBT is also being applied to commercial training programs.

The Bell Helicopter Customer Training Academy has moved to the new Customer Center located at Alliance Airport in January of 2005 and, now has a staff and offices of 62 people; 7 helicopters; 27 classrooms and laboratories, 3 Flight Training Devices; and the desire to deliver the highest quality products and services to the helicopter industry. It has been the quality of training and the genuine interest in the customer that has built the Bell Helicopter Customer Training Academy into the finest helicopter training facility in the world; which created the motto "We Train the World".

1935: Bell Aircraft Corporation

56 employees make up the entire staff of the newly found Corporation.

<u> 1941:</u>

Development begins on the first Bell helicopter. With a tethered control line model, Arthur Young proves his invention is workable.

<u> 1942:</u>

Gardenville, New York becames the site for Arthur Young and his apprentice, **Bartram Kelley** to produce a full-size vertical takeoff aircraft.

1943: Bell 30



The ship #1 nicknamed Genevieve flies for the first time

1945: Bell 47 (H-13 Sioux)



The Model 47 would subsequently set the stage for a whole new industry.

March 8, 1946:

The Bell 47 receives Helicopter Type Certificate No. 1 : **NC-1H** It's the first one ever granted by the Civil Aeronautics Board (forerunner of the FAA)

<u> 1946:</u>

Bell establishes the first flight training school for commercial helicopters pilots

In December, first production helicopters are delivered to the US Army.

1949: Bell 54 (YH-15)

A utility helo for the USAF with a gross weight of 1225 kg

1950: Bell 48 (YH-12)

13 units built.

<u> 1951:</u>

Bell Helicopter division moves to Hurst, Texas

<u> 1952:</u>

Agusta Spa licencesing aggreement to built Bell helicopters in Italy

March 4, 1953: Bell 61 (HSL-1)

First world's helicopter designed for ASW (antisubmarine warfare) 50 units built then replaced in the US Navy with the Sikorsky S-58 (HSS-1 then SH-34)

April, 1953:

1000th helicopter rolls off the Bell assembly line.

<u>1954: XH-13F</u>

A derivative of the Bell 47, it is the first Bell turbine helicopter.

August 23, 1955: Bell 200 (XV-3) [XH-33]



A revolutionary concept, this aircraft converts from takeoff in helicoper mode to straight and level flight like an airplane.

Starting built in 1953, this experimental aircraft flew until 1966, proving the fundamental soundness of the tiltrotor concept and gathering data about technical improvements needed for future designs.

October, 1956: Bell 204 "Huey" (UH-1)



US Army 's first production-line turbine powered utility helicopter.

The Huey is the most representative helicopter of the Vietnam era.

1957: Name changed to Bell Helicopter Corporation

<u> 1958:</u>

The XV-3 makes the first conversion of tilting prop-rotor aircraft **1960:** Spacecraft Recovery Rotor

1960: Textron Inc.

Textron purchases the defense activities of Bell Aircraft and set ups **Bell Aerospace Corp** as a wholly owned subsidiary with three divisions.

1962: Bell 207 Sioux Scout

A derivative of the Bell 47, this gunship concept demonstrator, was a very important step for Bell and will end in the Model 209 years later. Serial number N73927

1962: Bell 533 HPH

An UH-1B modified for research with sweptback wings and side-mounted turbojet engines. **1963:** Bell 206 (YOH-4)

Serial number 62-4201 lost US Army LOH (Light Observation Helicopter) competition against the Hughes YOH-6 (the winner) and the Hiller FH-1100 (YOH-5).

However, Bell continue this model that will end in the Bell 206A civilian series and later acquired by the militaries as the H-57/58.

1963: Bell 204B (H-48) Hueys modified as missile site support helos.

March 27, 1965: Bell 208

An UH-1D fitted with two Continental turbines, was the first twin turbine helicopter built by Bell. January 10, 1966: Bell 206A JetRanger

<u> 1966:</u>

Bell receives a contract for 2115 UH-1 Iroquois.

A unique radar antenna is built into a blade and succesfully tested.

March 17, 1966 : X-22

Tiltrotor, experimental.

Bell 209 Huey Cobra (AH-1)



In 1966, the US Army made a request for a interim gunship helicopter to be complete in one year to be deployed in Vietnam.

The winner was the Bell 209 HueyCobra against gunship derivatives of the Kaman SeaSprite, Boeing Vertol Chinook, Piasecki Pathfinder and Sikorsky S-61





1967 : Bell 205A (UH-1D)

<u> 1967 :</u>

Huey Cobras first deployed to Vietnam **1968 :** TH-57 SeaRanger & OH-58A Kiowa The US Navy and US Army variants of the Bell 206A. **1969 :** Bell 300 Mock-up. Tiltrotor development continues. **1970 :** Bell 212 (UH-1N)

Twin-turbine Hueys

After the successful of the Models 204 / 205, Bell joined Pratt & Whitney Canada for develop a twin engine derivative, the result was the **Model 212 Twin Two Twelve**, soon followed by the **Model 214** that was a lengthened version (with single and twin engine) of the Bell 205. In 1979 appear the **Model 412** with a 4 blades main rotor

Sept. 10, 1971: Bell 309 King Cobra

Because the US Army 's **AAFSS** (Advanced Aerial Fire Support System) competition was cancelled (See <u>Lockheed Cheyenne</u>), Bell designed the model 309 King Cobra as a company-funded project, like Sikorsky does with the S-67.

Only 2 units of the KingCobra were built but some of the improvements would be applied to the following US Marines model: the AH-1T

1972 : Bell 214 Huey Plus / Big Lifter

A "big 205", Was first developed for the Iranian Armed Forces **1974 :** Bell conmemorates the delivery of it 20000th helicopter **October 1, 1975 :** Bell 409 (YAH-63) Developed from the Model 309, two units were built for the US Army **AAH** (Advanced Attack Helicopter) program.

Lost competition against the Hughes YAH-64.

<u>**1976 :**</u> New Name : Be The 2000th II Helicopter Textron Inc. JetRanger roll out.

1977 : Bell 222



America 's first commercial midsize twin-turbine helicopter

May 3, 1977 : Bell 301 (XV-15)



1978 : Bell 214ST

A 19 place stretched version of the 214 with twin General Electric CT7 turboshafts developing 1625 shp.

1979 : Bell 412

The four-bladed version of the Bell 212



<u>**1979 :**</u> First sale of US helicopters to China, 8 Bell 212s

Bell Helicopter TEXTRON

<u>1983 :</u> AHIP

An Army Helicopter Improvement Program prototype makes ir first flight and completes tests with a full-up mast-mounted sight.

<u> 1983 :</u>

AH-1T+ Super Cobra

Bell Helicopter Canada :

The Canadian government selects Bell to establish a helicopter industry in that country.

<u>**1984**</u> : Bell 406 Combat Scout The AHIP (Advanced Helicopter Improvement Program) made the <u>OH-58D Kiowa Warrior</u>



1985 : Bell 412SP Special Performance

<u> 1985 :</u>

A four-bladed Bell Cobra research aircraft performs tactical maneuvers without pilot hand control. The tests are part of the US Army 's Advanced Technology Integration **ARTI** program.

The AH-1T+ is redesignates AH-1W

The **Model D292** developed for the US Army 's Advanced Composite Airframe Program **ACAP** makes its initial hover flight.

<u> 1986 :</u>

The V-22 Osprey after winning a Billion-dollar award fromt the US Navy is approved for full-scale development by the Department of Defense.

The JetRanger III and the LongRanger III are produced in Quebec, Canada.

The first production OH-58D is delivered to the US Army.

The US Marines take delivery of the first production AH-1W Super Cobra,



<u> 1987 :</u>

Bell and Boeing announce the development of the **Pointer**, the world's first tiltrotor unmanned air vehicle. (UAV)

The XV-15 demonstrates civilian applications of tiltrotor aircraft in Chicago and Washington DC

1988 : Bell Boeing Pointer

Commercial production of the JetRanger III reaches the 4000 mark.

Bell delivers the 100th helicopter built at the Mirabel Quebec Plant.

March 19, 1989 :

Bell / Boeing 901 Osprey (V-22)

<u> 1989 :</u>

Bell announces development of the Bell 230, a significantly improved version of the popular Bell 222.

Bell flies its Model 680 all-composite, four bladed bearingless rotor system for the first time on an AH-1W.

1991 : Bell UAV Eagle Eye



1991 :

Bell delivers the 500th helicopter built at the Mirabel Quebec Plant.

August 12, 1991 : Bell 230

1992 :

Canada announces the purchase of 100 Bell 412 for its defense forces nicknamed CH-146.

US Army conducts a ceremony at Fort Rucker to honor Bell UH-1H Iroquies serial 62-02109 achieving 20.000 flight hours. The aircraft was built in 1962 and was flown in Vietnam for five years before it became a training helicopter at the Army 's Aviation School.

1993 : TH-67 Creek



A modified 206B-3, US Army awards Bell an \$85 million contract to build 102 new training helicopters to replace the <u>TH-1 Huey</u>

<u>**1993**</u>: Bell 206LT TwinRanger Twin engine version of the 206L-4

1994 : Bell 407

The new light four-bladed single engine helicopter.

1994 : Bell 430



<u>**1995**</u> : <u>Bell 427</u> The twin engine version of the Bell 407

1998 : Bell 209 Cobra Lifter

The new Bell 230 had a four-bladed main rotor

 \square

A Civilian Crane variant of the Cobra

1999, Oct 8 : BA609 Tiltrotor announced



2000, Nov 1st : World 's First Commercial Tiltrotor Academy news

2000, Dec 7 : Bell 449 "Super Cobra" (AH-1Z)

2001, Feb 3rd : Agusta / Bell AB139 announced news

A medium twin helicopter, completed its first flight at Agusta's flight test facility in Cascina Costa di Samarate, Italy.

2001, Dec 21 : UH-1Y first flight news



21st Century : Bell Quad Tiltrotor news

2002 : Textron has ordered work to stop on the Bell Agusta 609 Tiltrotor

2002, Feb 14 : <u>3 AB139 flying news</u>

2002, March 19 : First 11 MV-22 into production news

2002 : Textron has ordered work to stop on the Bell Agusta 609 Tiltrotor

2002, Feb 14 : <u>3 AB139 flying</u> news

2002, March 19 : First 11 MV-22 into production news

2002, Nov 29 : HV-911 Eagle Eye

Bell Helicopter Textron will remodel its Eagle Eye **HV-911** unmanned aerial vehicle (UAV) production version in preparation for the <u>US Coast Guard</u> Integrated Deepwater System Program (ISDP) contract announcement. In an effort to reduce signature the redesign is said to include the airframe, and possibly a new engine.



2002, Dec 23 : BA609 continue ? news

2004, Mar 14 : Bell Helicopter Sells 600th 407 Helicopter news

2004, Dec 18 : Bell 210

The Bell 210 is a Bell UH-1H that is rebuilt using all new Bell certified parts. Receives <u>FAA</u> <u>Certification</u> on July 21,2005. news

2005, July 22 :

The **BA609** performed its <u>first conversion to airplane mode</u> in flight being the first civil aircraft in history to perform this feat. news



2005, July 29 : ARH-70



Following the cancellation of the <u>RAH-66 Comanche</u> in February 2004, the US Army issued a request for proposals for an Armed Reconnaissance Helicopter (ARH) in September 2004. the ARH was to use commercial off-the-shelf (COTS) technology and reach operational status in 4 years to have an operational unit of 30 helicopters and 8 trainers ready by September 2008.

Bell Helicopter Textron proposed an update of the <u>OH-58D Kiowa Warrior</u> in a militarized version of the Bell 407, utilizing a more powerful Honeywell HTS900 turbine engine and the Bell 427 tail assembly.

On July 29, 2005 a contract for 368 helicopters was awarded to Bell news

2005 : Bell 429 NBAA press release news

2005, Sep 19 : Bell Boeing Wins JHL Contract - Quad tiltrotor news

2005, Nov 21 :

In a <u>realignment of the Joint Venture</u> with <u>Agusta</u> (now AgustaWestland) Bell sold its 25 percent interest in the **AB139** now to be known as AW139 news

2005, Dec 5 : Bell Eagle Eye UAS Receives FAA Certificate news

2006, Jan 23 : Bell 412 LUH Global Rescue news



2006, Sep 13 : Wind Tunnel Testing Completed on Bell Boeing Quad Tiltrotor news

Contribution: Kevin Hale and Thomas Mueller

Friday July 22, 2005

World's first civil tiltrotor, BA609 reaches nearly 220 mph With first full conversion to airplane mode

Arlington, Texas, USA (Bell/Agusta Press Release) - The Bell/Agusta 609 tiltrotor streaked over the skies of Central Texas today with its outboard nacelles rotating forward to full airplane mode for the first time. Roy Hopkins, 609 project pilot and Bell pilot Jim Lindsey were at the controls when the BA609 reached full airplane mode at 9:23 am CDT. Both are highly experienced tiltrotor pilots with flight time logged in both the V-22 Osprey as well as the XV-15. When making its first transition to airplane mode this morning the BA609 today flew at 190 knots (219 mph).



"Jim and I thought the aircraft flew as expected and the vibration level was very low. This was the culmination of months of dedicated effort from engineering and manufacturing personnel and everyone should certainly be proud!" Mr. Hopkins stated.

With its nacelles in the vertical position, the tiltrotor takes-off, lands and hovers like a traditional helicopter. When the nacelles are tilted forward to the horizontal position, the aircraft flies with the high speed and range of a turboprop fixed-wing airplane.

The aircraft returned to flight status June 3, 2005, at Bell's XworX research and development facility here following an 18-month programmed pause in flight-testing for developmental engineering configuration. "This is truly a momentous point in aviation history because we have finally achieved the full range of flight on the BA609, the world's first civil tiltrotor," declared Bell/Agusta Programs Executive Director Jack Gallagher, adding, "this changes everything in vertical lift and general aviation."

BA609 Aircraft #02 is at Agusta's assembly and flight-testing facility in Italy, where tests are progressing in support of Aircraft #01. Aircraft #02 is scheduled to make its first flight during the 4th Quarter of this year.

The BA609, a six to nine passenger aircraft, has market applications for corporate business, offshore operators and government customers for a variety of roles including search and rescue, and internal security team insertion.

Bell/Agusta Aerospace Company is a joint venture corporation between Agusta/Westland and Bell Helicopter.

AgustaWestland, a Finmeccanica company, with primary operations in Italy, United Kingdom and USA, is a commercial enterprise offering an unrivaled range of products designed to satisfy the most diverse requirements of civil and military customers. With turnover exceeding \$2.5 billion, AgustaWestland is committed to delivering outstanding products and services in globally competitive markets.

Bell Helicopter, a Textron Company, is a \$1.6 billion, leading producer of commercial and military helicopters, and the pioneer of the revolutionary tiltrotor aircraft. Globally recognized for customer service, innovation and superior quality, Bell's global workforce of over 8,500 employees serves customers flying Bell aircraft in over 120 countries.

news: <u>Civil Tiltrotor Enters Next Phase of Flight Test Program</u> (Jul 19, 2004)
news: <u>BA609 Tests Set Stage For First Hover Flight</u> (Dec 23, 2002)
news: <u>Wing mated to Bell/Agusta Tiltrotor BA609</u> (Dec 1, 2000)
news: <u>Bell / Agusta 609 presentation</u> (Oct 8, 1999)
<u>BA609 page</u>
<u>Agusta timeline</u>
<u>Bell timeline</u>
Westland timeline

Bell Helicopter Textron



Bell Helicopter Textron (or **Bell** for short) is an <u>American helicopter</u> and <u>tiltrotor</u> manufacturer headquartered in <u>Fort Worth, Texas</u>. Bell manufactures military helicopter and tiltrotor products in the United States (primarily in and around Fort Worth as well as in <u>Amarillo, Texas</u>) and commercial rotorcraft products in Mirabel, Quebec, Canada.

Bell formerly produced airplanes as <u>Bell Aircraft Corporation</u>, including the famous <u>Bell X-1</u>, which, piloted by <u>Chuck Yeager</u>, was the first aircraft to fly faster than the speed of sound in level flight. It is a unit of the <u>conglomerate Textron</u>, which purchased Bell Aerospace in 1960.

Bell Helicopter has a close association with <u>AgustaWestland</u>. The partnership dates back to separate manufacturing and technology agreements with <u>Agusta</u> and <u>Westland</u>. When the two European firms merged, the partnerships were retained, with the exception of the AB139, which is now known as the A139.

Product list



Bell 206B JetRanger III



Commercial

- <u>47</u>
- 206 (Currently in production)
- <u>210</u>
- 212
- <u>214</u>
- 222
- 407 (Currently in production)
- 412 (Currently in production)
- 427
- 429 (Announced February 2005)
- 430 (Currently in production)

Military

- UH-1 Iroquois (or Huey)
- UH-1F, Air Force variant of UH-1
- <u>AH-1 Cobra</u> (or HueyCobra)
- AgustaWestland A139 (formerly 50/50 as the Bell/Agusta AB139, now 100% AgustaWestland)
- <u>ARH</u>

Tiltrotors

- <u>V-22 Osprey</u> (with <u>Boeing IDS</u>)
- Bell/Agusta BA609 (with AgustaWestland)
- Eagle Eye

External links

- Official site.
- Bell Timeline at the Helicopter History Site
- Photos and videos of Bell helicopters

Patents owned by Bell Helicopter Textron. US Patent & Trademark Office. URL accessed on December 5, 2005.