Click to verify



```
, the free encyclopedia that anyone can edit. 111,866 active editors 7,011,342 articles in English Paperback cover of Jaws Jaws is an American thriller film that was released on June 20, 1975, directed by Steven Spielberg, and based on Peter Benchley's 1974 novel Jaws (paperback cover shown; for the film poster, see today's Picture of the Day). It
stars Roy Scheider as police chief Martin Brody, who, with the help of a marine biologist (Richard Dreyfuss) and a professional shark hunter (Robert Shaw), hunts a man-eating great white shark that has attacked beachgoers at his summer resort town. The film was distributed by Universal Pictures to more than 450 screens, a wide release for the time
It was extensively marketed and followed by three sequels. Regarded as a watershed in motion picture history, Jaws was the prototypical summer blockbuster and the highest-grossing film of all time until Star Wars two years later; both films were pivotal in establishing the modern Hollywood business model. Jaws was in 2001 selected by the Library
of Congress for preservation in the National Film Registry. (Full article...) Recently featured: History Ian Carmichael Russet sparrow Archive By email More featured articles About Welsh presbytery meeting, 1940 ... that the term "middle judicatory", which many denominations use for their mid-tier organizations, originated in Presbyterian courts
(example pictured) for church discipline? ... that an anime programming block that originally aired on the American football player Dominic Vairo went from being forced off the freshman team at Notre Dame to becoming captain of the varsity team? ... that an anime programming block that originally aired on the American
television channel TechTV was the inspiration for the co-founder of a Japanese animation studio? ... that a leak from a natural-gas storage field led to the destruction of or damage to almost 30 buildings in Hutchinson, Kansas? ... that Lorenzo Pace performed a
candlelit flute concerto at the outset of his dissertation defense? ... that Queen Afua inspired New York City mayor Eric Adams to become vegan? ... that the Fuck Tree has been described as a "physical embodiment of desire"? Archive Start a new article Aleksander Barkov In ice hockey, the Florida Panthers (captain Aleksander
Barkov pictured) defeat the Edmonton Oilers to win the 24 Hours of Le Mans. In the US state of Minnesota, State representative Melissa Hortman is assassinated and state senator John Hoffman is injured. Former president of Nicaragua and first elected female
president in the Americas Violeta Chamorro dies at the age of 95. Ongoing: Gaza war Russian invasion of Ukraine timeline Sudanese civil war timeline Recent deaths: Alfred Brendel Ali Shamkhani Hamilton Wanasinghe Afa Ah Loo Geoff Palmer Stella Chen Nominate an article June 20: World Refugee Day; Eid al-Mubahalah (Shia Islam, 2025) Queen
Victoria 1837 - Queen Victoria (pictured) acceded to the British Army officer Thomas Stanton Lambert was assassinated by the Irish Republican Army near Moydrum, Ireland. 1959 - The extratropical remnants of an Atlantic hurricane reached the Gulf of St. Lawrence in Canada, causing 22 fishing
boats to capsize and killing 35 people. 1979 - Bill Stewart, an American journalist, was executed by Nicaraguan Guardia forces. 1982 - The International Conference on the Holocaust and Genocide, the first major conference in genocide studies, opened despite Turkish attempts to cancel it due to the inclusion of presentations on the Armenian
genocide. John of Lancaster (b. 1389)Fritz Koenig (b. 1924)Edith Windsor (b. 1929)Ulf Merbold (b. 1924)Edith Windsor (b. 1924)Ed
pandemic, Prime Minister Boris Johnson announced new rules prohibiting gatherings of people who were not in the same household. Despite these regulations, regular social gatherings continued to take place in Downing Street and Whitehall, including a surprise party for Johnson's 56th birthday on 19 June (pictured). News articles about these
events began to appear in late 2021, with the majority of them published by the journalists Pippa Crerar and Paul Brand. Johnson denied any wrongdoing, and stated that the rules were followed at all times. In January 2022, a criminal investigation into the scandal was launched by the Metropolitan Police. As a result, 126 fixed penalty notices were
issued, including one to Johnson for attending his surprise birthday party, making him the first serving prime minister to be found to have broken the law. Johnson subsequently resigned as prime minister on 7 July, and as a member of parliament the following year. (Full list...)
Awards and nominations received by Bini Archive More featured lists This famous design, by Roger Kastel, of a shark with a mouth filled with jagged teeth, rising towards an unsuspecting female swimmer, was completed in 1974. Its first appearance was as a book cover (illustrated as the image accompanying Today's Featured Article) with publication
of the paperback edition of the novel by Peter Benchley, on January 1, 1975. Later that year, it formed the basis for one of the movie on June 20, 1975. In 2014, the Review Board of the United States Copyright Office upheld the denial of a copyright for the artwork as there was no
proper notice of copyright, since the only copyright notice in the paperback was that of Benchley's 1974 copyright of the Everett Collection; retouched by Crisco 1492 Recently featured: Dred Scott Garni Temple Igor Stravinsky Archive More featured pictures Community portal - The central hub for
editors, with resources, links, tasks, and announcements. Village pump - Forum for discussions about Wikipedia itself, including policies and technical issues. Site news - Sources of news about Wikipedia itself, including policies and technical issues.
editing Wikipedia. Reference desk - Ask research questions about encyclopedic topics. Content portals - A unique way to navigate the encyclopedia is written by volunteer editors and hosted by the Wikimedia Foundation, a non-profit organization that also hosts a range of other volunteer projects: CommonsFree media repository
MediaWikiWiki software development Meta-WikiWikimedia project coordination WikibooksFree textbooks and manuals WikidataFree knowledge base WikinewsFree-content library WikispeciesDirectory of species WikiversityFree learning tools WikivoyageFree travel guide
Wiktionary Dictionary and thesaurus This Wikipedia is written in English. Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles Bahasa Indonesia Bahasa Melayu beutsch Español العربية Prançais Italiano Nederlands 日本語 Polski Português Русский Svenska Українська Tiếng Việt 中文 250,000+ articles Bahasa Indonesia Bahasa Melayu
Bân-lâm-gú Български Català Čeština Dansk Eesti Eλληνικά Esperanto Euskara סעברית Егузк Gaeilge Galego Hrvatski عوردي Frysk Gaeilge Galego Hrvatski وردى Frysk Gaeilge Galego Hrvatski عوردي المالي كردار المالي كالمراكة المسائل ا
Retrieved from " 2 Calendar year Years Millennium 2nd millennium 
 Humanities Archaeology Architecture Art Literature Poetry Music By country Australia Belgium Brazil Canada Denmark France Germany New Zealand Norway Portugal Russia South Africa Spain Sweden United Kingdom United States Other topics Rail transport Science Sports Lists of leaders Sovereign states Sovereign state leaders Territorial
governors Religious leaders Law Birth and death categories Establishments Disestablishments Disestabl
calendar1758-1759Bengali calendar1243-1244Berber calendar2787British Regnal year7 Will. 4 - 1 Vict. 1Buddhist calendar3003Ethiopian
calendar1829-1830Hebrew calendar5597-5598Hindu calendar5597-5598Hindu calendar1764-1765Julian calenda
daysKorean calendar4170Minguo calendar75 before ROC民前75年Nanakshahi calendar369Thai solar calendar369Thai solar calendar170Minguo calendar4170Minguo calendar4170Minguo calendar75 before ROC民前75年Nanakshahi calendar369Thai solar calendar4170Minguo calendar4170Mi
Sunday of the Gregorian calendar and a common year starting on Friday of the 1837th year of the 2nd millennium, the 37th year of the 1837th year of the 1837th year of the 1837th year of the 2nd millennium, the 37th year of the 1837th year of the 2nd millennium, the 37th year of the 1837th year of the 1837th year of the 2nd millennium, the 37th year of the 2nd millennium, the 37th year of the 2nd millennium, the 37th year of the 1837th year of the 2nd millennium, the 37th year of the 3nd millennium, the 37th year of the 3nd millennium, the 3nd millennium with the 3nd millenniu
of the Julian calendar, which remained in localized use until 1923. Calendar year January 1 - The destructive Galilee earthquake causes thousands of deaths in Ottoman Syria. January 26 - Michigan becomes the 26th state admitted to the United States. February 4 - Seminoles attack Fort Foster in Florida. February 25 - In Philadelphia, the Institute for
Colored Youth (ICY) is founded, as the first institution for the higher education of black people in the United States. February - Charles Dickens's Oliver Twist begins publication in serial form in London. March 1 - The Congregation of Holy Cross is formed in Le Mans, France, by the signing of the Fundamental Act of Union, which legally joins the
Auxiliary Priests of Blessed Basil Moreau, CSC, and the Brothers of St. Joseph (founded by Jacques-François Dujarié) into one religious association. April 12 - The conglomerate of Procter & Gamble has its origins, when British-born businessmen William Procter and James Gamble begin selling their first manufactured goods (soap and candles) in
Cincinnati, Ohio.[1] April 24 - The great fire in Surat, a city of India, begins. Over a three-day period, the fire kills more than 9,000 houses. May 10 - The Panic of 1837 begins in New York City. May - W. F. Cooke and Charles Wheatstone patent an electrical telegraph system. June 5 - The city of Houston is
incorporated by the Republic of Texas. June 21 - Queen Victoria, 18, accedes to the United Kingdom, on the death of her uncle William IV without legitimate heirs (she will reign for more than 63 years).[2] Under
Salic law, the Kingdom of Hanover passes to William's brother, Ernest Augustus, Duke of Cumberland, ending the personal union of Britain and Hanover which has persisted since 1714. July 13 - Queen Victoria moves from Kensington Palace, as her
London home.[3] July - Charles W. King sets sail on the American merchant ship Morrison. In the Morrison incident, he is turned away from Japanese ports with cannon fire. August 16 - The Dutch colonial forces sack the fortress of Bonjol, Indonesia, ending the Padri War. September 19 - First Carlist War: Battle of Aranzueque - The liberal forces
loyal to Queen Isabel II of Spain are victorious, ending the Carlist campaign known as the Expedición Real. September 26 - The destructive "Racer's hurricane" sweeps across the Caribbean, northeastern Mexico, the Republic of Texas and the Gulf Coast of the United States and lasts until October 9, after killing at least 105 people.[4] September 28 -
Samuel Morse files a caveat for a patent for the telegraph.[5] October 13 - The French army under Sylvain Charles Valée captures the city of Constantine in French Algeria after a siege of three days. October 30 - The Tsarskoye Selo Railway, the first in the Russian Empire, opens between Saint Petersburg Tsarskoselsky station and Zarskoje Selo Railway.
(modern-day Pushkin), engineered by Franz Anton von Gerstner.[6][7] October 31 - In what will become the world's leading consumer goods brand, Procter & Gamble is founded in Ohio in the Quebec city of Montreal.[9] November 7 - American abolitionist
and newspaper editor Elijah Lovejoy is killed by a pro-slavery mob, at his warehouse in Alton, Illinois. November 8 - Mount Holyoke Female Seminary, later Moun
coast.[10] December 4 - Samuel Lount begins the Upper Canada Rebellion by marching with rebel followers to Toronto, one month after a similar rebellion against British rule had begun in Lower Canada.[11] December 17 - Fire breaks out in the Winter Palace, in Saint Petersburg, Russia killing 30 guards. December 23 - The Slave Compensation Act
is signed into law by the government of the United Kingdom. This paid a substantial amount of money, constituting 40% of the Treasury's tax receipts at the time, to former enslavers but nothing to those formerly enslaved. [12] December 29 - The Caroline Affair, on the Niagara River, becomes the basis for the Caroline test for anticipatory self-defence
in international relations. L'Atelier de l'artiste. An 1837 daguerre develops the Antikensammlung Berlin in Germany. The Olney Friends School is founded in the Appalachian Mountains of the United States. The first electric locomotive
built is a miniature battery locomotive constructed by chemist Robert Davidson of Aberdeen in Scotland, and powered by galvanic cells (batteries). Atlanta is fixed as the terminal of the Western and Atlantic Railroad; it is originally named Marthasville.[13] J. P. Morgan January 2 - Mily Balakirev, Russian composer (d. 1910) January 7 - Thomas Henry
Ismay, English shipowner (White Star Line) (d. 1899) February 5 Dwight L. Moody, American evangelist (d. 1899) Edward Miner Gallaudet, American educator of the deaf (d. 1917) February 24 - Nakamuta
Kuranosuke, Japanese admiral (d. 1916) March 1 - William Dean Howells, American writer, historian, editor, and politician (d. 1920) March 3 - Jacques Duchesne, French general (d. 1918) March 7 - Henry Draper, American physician and astronomer (d. 1882) March 18 - Grover Cleveland, 22nd and 24th President of the United States (d. 1908) March
22 - Virginia Oldoini, Countess of Castiglione (d. 1899) March 23 - Sir Charles Wyndham, English actor, theatrical manager (d. 1892) April 1 - Luis Francisco Benítez de Lugo (d. 1896) April 5 - Algernon Charles Swinburne, English poet (d. 1899) April 17 - J. P. Morgan, American
financier, banker (d. 1913) April 21 - Fredrik Bajer, Danish politician, pacifist, recipient of the Nobel Peace Prize (d. 1922) April 27 - Queen Cheorin, Korean queen (d. 1878) April 29 - Georges Ernest Boulanger, French general, politician (d. 1891) May 5 Anna Maria Mozzoni, Italian feminist, founder of the Italian women's movement (d. 1920) Theodor
Rosetti, 16th Prime Minister of Romania (d. 1923) May 7 - Karl Mauch, German explorer (d. 1875) May 9 Adam Opel, German engineer, industrialist (d. 1895) Ben Hall, Australian bushranger (d. 1875) May 27 - Wild Bill Hickok, American gunfighter (d. 1876) May 28 George Ashlin, Irish architect (d. 1921) Tony Pastor, American impresario, theater
owner (d. 1908) June 22 Paul Bachmann, German mathematician (d. 1920) Paul Morphy, American chess player (d. 1884) Touch the Clouds, Native American Miniconjou chief (d. 1905) June 28 - Petre P. Carp, 2-time prime minister of Romania (d. 1919) Anna Filosofova John Leary Empress Elisabeth of Austria July 4 - Carolus-Duran, French painter (d. 1908) June 28 - Petre P. Carp, 2-time prime minister of Romania (d. 1919) Anna Filosofova John Leary Empress Elisabeth of Austria July 4 - Carolus-Duran, French painter (d. 1908) June 28 - Petre P. Carp, 2-time prime minister of Romania (d. 1919) Anna Filosofova John Leary Empress Elisabeth of Austria July 4 - Carolus-Duran, French painter (d. 1908) June 28 - Petre P. Carp, 2-time prime minister of Romania (d. 1919) Anna Filosofova John Leary Empress Elisabeth of Austria July 4 - Carolus-Duran, French painter (d. 1908) June 28 - Petre P. Carp, 2-time prime minister of Romania (d. 1908) Anna Filosofova John Leary Empress Elisabeth of Austria July 4 - Carolus-Duran, French painter (d. 1908) Anna Filosofova John Leary Empress Elisabeth of Austria July 4 - Carolus-Duran, French painter (d. 1908) Anna Filosofova John Leary Empress Elisabeth of Austria July 4 - Carolus-Duran, French painter (d. 1908) Anna Filosofova John Leary Empress Elisabeth of Austria July 4 - Carolus-Duran Empress Elisabeth (d. 1908) Anna Filosofova John Leary Empress Elisabeth (d. 1908) Anna Filosofova Leary Empress Elisabeth (d. 1908) Anna Filosofova Leary Empress Elisabeth (d. 1908) Anna Filosofova Leary Empress Elisabet
1917) July 15 - Stephanie of Hohenzollern-Sigmaringen, Queen consort of Portugal (d. 1859) July 18 - Vasil Levski, Bulgarian revolutionary (d. 1873) July 21 - Johanna Hedén, Swedish midwife, surgeon (d. 1912) August 1 - (bapt.) Mary Harris Jones ("Mother Jones"), Irish-American labor leader (d. 1930) August 5 - Anna Filosofova, Russian women's
rights activist (d. 1912) August 24 - Théodore Dubois, French composer (d. 1924) September 12 - Louis IV, Grand Duke of Hesse (d. 1892) September 14 - Nikolai Bugaev, Russian mathematician (d.1903) September 16 - King Pedro V of Portugal (d. 1861)
September 18 - Aires de Ornelas e Vasconcelos, Portuguese Archbishop of Goa (d. 1880) September 24 - Mark Hanna, United States Senator from Ohio (d. 1885) October 4 - Auguste-Réal Angers, Canadian judge and politician, 6th Lieutenant Governor of Quebec (d. 1919) October 5 - José
Plácido Caamaño, 12th President of Ecuador (d. 1900) October 10 - Robert Gould Shaw, Union Army general in the American Civil War, social reformer (k. 1863) October 28 - Tokugawa Yoshinobu, Japanese shōgun, 15th and last of the Tokugawa
shogunate (d. 1913)[14] October 29 - Harriet Powers, African-American folk artist (d. 1910) November 2 - Émile Bayard, French artist, illustrator (d. 1891) November 20 - Lewis Waterman, American inventor, businessman (d.1901) November 23 - Johannes Diderik van der
Waals, Dutch physicist, Nobel Prize laureate (d. 183) December (d. 183) December (d. 183) December 11 - Webster Paulson, English civil engineer (d. 1887) December 15 - George B. Post, American architect (d. 1913)
December 24 Empress Elisabeth of Austria, wife of Emperor Franz Joseph I (d. 1898) Cosima Wagner, wife of German composer Richard Wagner (d. 1929) George Dewey, American admiral (d. 1917) Alexander Pushkin Osgood Johnson January 8 - Duke Wilhelm in Bavaria, Great-
    andfather of Empress Elisabeth of Austria (b. 1752) January 20 - John Soane, British architect (b. 1753) January 23 - John Field, Irish composer (b. 1782) February 10 - Alexander Pushkin, Russian author (b. 1799) February 13 - Mariano José de Larra, Spanish author
Georg Büchner, German playwright (b. 1813) March 31 - John Constable, English painter (b. 1776) April 4 - Louis-Sébastien Lenormand, French general (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 5 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 20 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 20 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Prince Frederick of Hesse-Kassel (b. 1760) May 20 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 - Niccolò Antonio Zingarelli, Italian composer (b. 1752) May 20 
1747) June 14 - Giacomo Leopardi, Italian writer (b. 1798) June 29 - Nathaniel Macon, American politician (b. 1756) September 7 - Fabian Gottlieb
von Osten-Sacken, Russian military leader (b. 1752) September 21 - Pieter Vreede, Dutch politician (b. 1770) October 1 - Robert Clark, American politician (b. 1771) October 10 - Charles Fourier, French philosopher (b. 1772)[15] October 12 - Charles-Marie Denys de Damrémont, French
governor-general of French Algeria (killed during the siege of Constantine) (b. 1783) October 17 Johann Nepomuk Hummel, Austrian composer (b. 1778) Peter Lebeck, French trapper and namesake of Lebec, California (birth unknown) November 7 - Elijah P. Lovejoy, American abolitionist (b. 1802) November 28 - Sophie Botta, the Dark Countess
German woman of mysterious identity Anne Pépin, Senegalese Signara (b. 1747) Mary Dixon Kies, first American recipient of a U.S. patent (b. 1752) Thomas Noble, English poet and translator (b. 1772) * "Procter & Gamble history" (PDF). Archived from the original (PDF) on January 17, 2016. Retrieved September 22, 2015. * "Icons, a portrait of
England 1820-1840". Archived from the original on September 12, 2007. Retrieved September 12, 2007. Penguin Pocket On This Day. Penguin Pocket
Archived from the original on February 2, 2017. Retrieved January 20, 2017. ^ Morse Timeline Archived May 13, 2014, at the Wayback Machine on memory.loc.gov (accessed on May 27, 2014) ^ Haywood, Richard Mowbray (1969). The beginnings of railway development in Russia in the reign of Nicholas I, 1835-1842. Durham, N.C.: Duke University
Press. ^ Gamst, Frederick (1990). "Franz Anton Ritter von Gerstner, Student of America's Pioneering Railroads". Railroad History (163): 13-27. JSTOR 43521426. Archived from the original (PDF) on July 24, 2020. Retrieved July 24, 2020. Retrieved July 24, 2020. Retrieved November 15, 2020. Archived from the original on November 16, 2020. Retrieved November 17, 2020. Retrieved November 18, 2020. Retrieved July 24, 2020. Retrieved November 19, 2020. R
Time-Dependent Seismogenic Zone". Bulletin of the Seismological Society of America. 107 (6): 2664-2675. doi:10.1785/0120170103. Archived from the original on November 3, 2020. Retrieved August 28, 2020.
ISBN 978-1-77-070324-7. Retrieved September 3, 2020. "Context | Legacies of British Slavery". www.ucl.ac.uk. Archived from the original on October 6, 2021. Retrieved September 11, 2021. Shimamoto, Mayako; Ito, Koji; Sugita,
Yoneyuki (July 1, 2015). Historical Dictionary of Japanese Foreign Policy. Rowman & Littlefield. pp. 297-298. ISBN 978-1-4422-5067-3. Archived from the original on October 6, 2023. Retrieved October 29, 2023. ^ "Charles Fourier | French philosopher". Encyclopedia Britannica. Archived from the original on February 25, 2021. Retrieved February 13
2021. "Chronicle of Events from August 1836 to September 1837". American Almanac and Repository of Useful Knowledge. Boston: Charles Bowen. 1838. Retrieved from "30ne hundred years, from 1701 to 1800 For other uses, see 18th century (disambiguation). Millennia 2nd millennium Centuries 17th century 18th century 19th century Timelines
17th century 18th century 18th century 19th 
French Revolution. Development of the Watt steam engine in the late 18th century was an important element in the Industrial Revolution in Europe. The American Revolutionary War took place in the late 18th century was an important element in the Industrial Revolution in Europe. The American Revolution in Europe. The American Revolutionary War took place in the late 18th century was an important element in the Industrial Revolution in Europe.
the 18th century, elements of Enlightenment thinking culminated in the Atlantic Revolutions. Revolutions began to challenge the legitimacy of monarchical and aristocratic power structures. The European colonization of the Americas and
other parts of the world intensified and associated mass migrations of people grew in size as part of the Age of Sail. During the century, slave trading expanded across the shores of the Atlantic Ocean, while declining in Russia[1] and China.[2] Western historians have occasionally defined the 18th century otherwise for the purposes of their work. For
example, the "short" 18th century may be defined as 1715-1789, denoting the period of time between the death of Louis XIV of France and the start of the French Revolution, with an emphasis on directly interconnected events.[3][4] To historians who expand the century to include larger historical movements, the "long" 18th century[5] may run from
the Glorious Revolution of 1688 to the Battle of Waterloo in 1815[6] or even later [7] France was the sole world superpower from 1659, after it defeated Spain, until 1815, when it was defeated by Britain and its coalitions following the Napoleonic Wars. In Europe, philosophers ushered in the Age of Enlightenment. This period coincided with the
French Revolution of 1789, and was later compromised by the excesses of the Reign of Terror. At first, many monarchies of Europe embraced Enlightenment ideals, but in the wake of the French Revolutionary Wars. Various conflicts
throughout the century, including the War of the Spanish Succession and the Seven Years' War, saw Great Britain triumph over its rivals to become the preeminent power in Europe. However, Britain's attempts to exert its authority over the Thirteen Colonies became a catalyst for the American Revolution. The 18th century also marked the end of the
Polish-Lithuanian Commonwealth as an independent state. Its semi-democratic government system was not robust enough to prevent partition by the neighboring states of Austria, Prussia, and Russia. In West Asia, Nader Shah led Persia in successful military campaigns. The Ottoman Empire experienced a period of peace, taking no part in European
wars from 1740 to 1768. As a result, the empire was not exposed to Europe's military improvements during the Seven Years' War. The Ottoman military consequently lagged behind and suffered several defeats against Russia in the second half of the century. In South Asia, the death of Mughal emperor Aurangzeb was followed by the expansion of the
Maratha Confederacy and an increasing level of European influence and control in the region. In 1739, Persian emperor Nader Shah invaded and plundered Delhi, the capital of the Mughal Empire. Later, his general Ahmad Shah Durrani scored another victory against the Marathas, the then dominant power in India, in the Third Battle of Panipat in
1761.[8] By the middle of the century, the British East India Company began to conquer eastern India,[9][8] and by the end of the century, the Anglo-Mysore Wars against Tipu Sultan and his father Hyder Ali, led to Company rule over the south.[10][11] In East Asia, the century was marked by the High Qing era, a period characterized by significant
cultural and territorial expansion. This period also experienced relative peace and prosperity, allowing for societal growth, increasing literacy rates, flourishing trade, and consolidating imperial power across the vast Qing dynasty's territories. Conversely, the continual seclusion policy of the Tokugawa shogunate also brought a peaceful era called Pax
Tokugawa and experienced a flourishment of the arts as well as scientific knowledge and advancements, which were introduced to Japan through the Dutch East India Company established increasing levels of control over the Mataram
Sultanate. In Africa, the Ethiopian Empire underwent the Zemene Mesafint, a period when the country was ruled by a class of regional noblemen and the emperor was merely a figurehead. The Atlantic slave trade also saw the continued involvement of states such as the Oyo Empire. In Oceania, the European colonization of Australia and New Zealance
began during the late half of the century. In the Americas, the United States declared its independence from Great Britain. In 1776, Thomas Jefferson wrote the Declaration of Independence. In 1789, George Washington was inaugurated as the first president. Benjamin Franklin traveled to Europe where he was hailed as an inventor. Examples of his
inventions include the lightning rod and bifocal glasses. Túpac Amaru II led an uprising that sought to end Spanish colonial rule in Peru. For a chronological guide, see Timeline of the Spanish Succession, 1700 The
Battle of Poltava in 1709 turned the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian and Swedish Empires. 1701: The Battle of Feyiase marks the rise of the Ashanti Empires. 1701: The Battle of Feyiase marks the rise of the Ashanti Empire. 1701-1714: The War of the Russian and Swedish Empires. 1701: The Battle of Feyiase marks the rise of the Ashanti Empire. 1701-1714: The War of the Russian and Swedish Empires. 1701-1714: The Battle of Feyiase marks the rise of the Ashanti Empire. 1701-1714: The War of the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian and Swedish Empires. 1701-1714: The War of the Ashanti Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill, 1st Duke of Marlborough 1700-1721: Great Northern War between the Russian Empire into a European power. John Churchill 1800-1721: Great Northern War between the Russian Empire into a European power. John Churchill 1800-1721: Great Northern War between the Russian E
Spanish Succession is fought, involving most of continental Europe. [12] 1702-1715: Camisard rebellion in France. 1703: Saint Petersburg is founded by Peter the Great; it is the Russian capital until 1918. 1703-1711: The Rákóczi uprising against the Habsburg monarchy. 1704: End of Japan's Genroku period. 1704: First Javanese War of Succession
[13] 1706-1713: The War of the Spanish Succession: French troops defeated at the Battle of Ramillies and the Siege of Turin. 1707: Death of Mughal Emperor Aurangzeb leads to the fragmentation of the Mughal Empire. 1707: Death of Mughal Empire. 1707: The Act of Union is passed, merging the Scottish and English Parliaments, thus establishing the Kingdom of Great Britain. [14]
1708: The Company of Merchants of London Trading into the East Indies and English Company Trading to the East Indies merge to form the United Company of Merchants of England Trading to the East Indies and English Company Trading to the East Indies. 1708-1709: Famine kills one-third of East Prussia's population. 1709: Foundation of the Hotak Empire. 1709: The Great Frost of 1709 marks
the coldest winter in 500 years, contributing to the defeat of Sweden at Poltava. 1710: The world's first copyright legislation, Britain's Statute of Anne, takes effect. 1710-1711: Ottoman Empire fights Russia in the Russo-Turkish War and regains Azov. 1711: Bukhara Khanate dissolves as local begs seize power. 1711-1715: Tuscarora War between
British, Dutch, and German settlers and the Tuscarora people of North Carolina. 1713: The Kangxi Emperor acknowledges the full recovery of the Chinese economy since its apex during the most reliable and accurate thermometer until
1718-1720: War of the Quadruple Alliance with Spain versus France, Britain, Austria, and the Netherlands. 1718-1730: The South Sea Bubble. 1720-1721: The Great Plague of Marseille. 1720: Qing forces oust Dzungar invaders from Tibet. 1721: The Treaty of
Nystad is signed, ending the Great Northern War. 1721: Sack of Shamakhi, massacre of its Shia population by Sunni Lezgins. 1722-1723: Russo-Persian War. 1722-1723: Controversy over William Wood's halfpence leads to the Drapier's Letters and begins the Irish economic
independence from England movement. Mughal emperor Muhammad Shah with the Persian invader Nader Shah. 1723: Slavery is abolished in Russia; Peter the Great converts household slaves into house serfs.[16] 1723-1730: The "Great Disaster", an invasion of Kazakh territories by the Dzungars. 1723-1732: The Qing and the Dzungars fight a series
of wars across Qinghai, Dzungaria, and Outer Mongolia, with inconclusive results. 1724: Daniel Gabriel Fahrenheit temperature scale. 1725: Austro-Spanish War ends inconclusively. 1730: Mahmud I takes over Ottoman Empire after the Patrona Halil revolt,
ending the Tulip period. 1730-1760: The First Great Awakening takes place in Great Britain and North America. 1732-1734: Crimean Tatar raids into Russia.[17] 1733-1738: War of the Polish Succession. Qianlong Emperor 1735-1739: Austro-Russo-Turkish War. 1735-1739: Austro-Russo-Turkish War. 1735-1739: The Qianlong Emperor of China oversees a huge expansion in territory.
1738-1756: Famine across the Sahel; half the population of Timbuktu dies.[18] 1737-1738: Hotak Empire ends after the siege of Kandahar by Nader Shah. 1739: Great Britain and Spain fight the War of Jenkins' Ear in the Caribbean. 1739: Hotak Empire ends after the siege of Kandahar by Nader Shah defeats a pan-Indian army of 300,000 at the Battle of Karnal. Taxation is stopped in Iran for three
years. 1739-1740: Nader Shah's Sindh expedition. 1740: George Whitefield brings the First Great Awakening to New England 1740-1741: Famine in Ireland kills 20 percent of the population. 1740-1748: War of the Austrian Succession.
1742: Marvel's Mill, the first water-powered cotton mill, begins operation in England.[19] 1742: Anders Celsius in his honor. 1742: Premiere of George Frideric Handel's Messiah. 1743–1746: Another Ottoman-Persian War involves 375,000 men but ultimately
ends in a stalemate. The extinction of the Scottish clan system came with the defeat of the clansmen at the Battle of Culloden in 1746.[20] 1744: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744-1748: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744-1748: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744-1748: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744-1748: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744-1748: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744-1748: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744-1748: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is fought off the coast of France. 1744-1748: The First Saudi State is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by Mohammed Ibn Saud.[21] 1744: Battle of Toulon is founded by 
Marathas, and Mysore in India. 1745: Second Jacobite rising is begun by Charles Edward Stuart in Scotland. 1747: The Durrani Empire is founded by Ahmad Shah Durrani. 1748: The Second Carnatic War is fought between the British, the
French, the Marathas, and Mysore in India. 1750: Peak of the Little Ice Age. Main articles: 1750s, 1760s, 1770s, 1780s, 1790s, and 1800s 1752: The British Empire adopts the Gregorian Calendar, skipping 11 days from 3 September to 13 September. 0n the calendar, skipping 11 days from 3 September to 13 September to 13 September to 15 September. 1750s, 1760s, 1770s, 1780s, 1780s, 1770s, 1780s, 1
ends the Second Carnatic War and recognizes Muhammed Ali Khan Wallajah as Nawab of the Carnatic. 1754: King's College is founded by a royal charter of George II of Great Britain. [22] 1754-1763: The French and Indian War, the North America, mostly by the French and their
allies against the English and their allies. 1755: The great Lisbon earthquake destroys most of Portugal's capital and kills up to 100,000. 1755: The Dzungar genocide depopulates much of northern Xinjiang, allowing for Han, Uyghur, Khalkha Mongol, and Manchu colonization. 1755-1763: The Great Upheaval forces transfer of the French Acadian
population from Nova Scotia and New Brunswick. 1756-1763: The Seven Years' War is fought among European powers in various theaters around the world. 1756-1763: The French, and Mysore in India. 1757: British conquest of Bengal. Catherine the Great, Empress of Russia. 1760: George III
becomes King of Britain. 1761: Maratha Empire defeated at Battle of Panipat. 1762-1796: Reign of Catherine the Great of Russia. 1763: The Treaty of Paris ends the Oyo Empire defeat the Ashanti army at the Battle of Atakpamé. 1764: The Mughals are defeated at the Battle of Buxar.
1765: The Stamp Act is introduced into the American colonies by the British Parliament. 1765-1767: The Burmese invade Thailand and utterly destroy Attuthaya. 1765-1769: Burma under Hsinbyushin repels four invasions from Qing China, securing hegemony over the Shan states. 1766: Christian VII becomes king of Denmark. He was king of
Denmark to 1808. 1766-1799: Anglo-Mysore Wars. 1767: Taksin expels Burmese invaders and reunites Thailand under an authoritarian regime. 1768-1772: War of the Bar Confederation. 1769-1770: James Cook explores and maps New Zealand
and Australia. 1769-1773: The Bengal famine of 1770 kills one-third of the Bengal population. 1769: The French East India Company dissolves, only to be revived in 1785. 1769: French expeditions capture clove plants in Ambon, ending the Dutch East India Company's (VOC) monopoly of the plant. [23] 1770-1771: Famine in Czech lands kills hundreds.
of thousands. 1771: The Plague Riot in Moscow. 1771: The Plague Riot in Moscow. 1771: The Kalmyk Khanate dissolves as the territory becomes colonized by Russians. More than a hundred thousand Kalmyks migrate back to Qing Dzungaria. 1772: Gustav III of Sweden stages a coup d'état, becoming almost an absolute monarch. Encyclopédie, ou dictionnaire raisonné des sciences, des
arts et des métiers 1772-1779: Maratha Empire fights Britain and Raghunathrao's forces during the First Anglo-Maratha War. 1772-1795: The Partitions of Poland end the Polish-Lithuanian Commonwealth and erase Poland from the map for 123 years. 1773-1775: Pugachev's Rebellion, the largest peasant revolt in Russian history. 1773: East India
Company starts operations in Bengal to smuggle opium into China. 1775-1782: First Anglo-Maratha War. 1775-1783: American Revolutionary War. 1776: Several kongsi republics are founded by Chinese settlers in the island of Borneo. They are some of the first
becomes the first European to land on the Hawaiian Islands. 1778: Franco-American alliance signed. 1778: Spain acquires its first permanent holding in Africa from the Portuguese, which is administered by the newly-established La Plata Viceroyalty. 1778: Vietnam is reunified for the first time in 200 years by the Tay Son brothers. The Tây Son dynasty
has been established, terminating the Lê dynasty. 1779-1879: Xhosa Wars between British and Boer settlers and the Xhosas in the South African Republic. 1779-1783: Britain loses several islands and colonial outposts all over the world to the combined Franco-Spanish navy. 1779: Iran enters yet another period of conflict and civil war after the
prosperous reign of Karim Khan Zand. 1780: Outbreak of the indigenous rebellion against Spanish settlers. George Washington 1781: The city of Los Angeles is founded by Spanish settlers. George Washington 1781: The city of Los Angeles is founded by Spanish settlers.
Thailand is dissolved after a palace coup. 1783: The Treaty of Paris formally ends the American Revolutionary War. 1783: Russian annexation of Muslim mystic, leads a coalition of Muslim Caucasian tribes from throughout the Caucasus in a holy war against Russian settlers and military
bases in the Caucasus, as well as against local traditionalists, who followed the traditional customs and common law (Adat) rather than the theocratic Sharia. [24] 1785-1787: The Maratha-Mysore Wars concludes with an exchange of territories in the
Deccan. 1786-1787: Wolfgang Amadeus Mozart premieres The Marriage of Figaro and Don Giovanni. 1787: The Tuareg occupy Timbuktu until the 19th century. 1788-1790: Russo-Swedish War (1788-1790). 1788: Dutch Geert Adriaans Boomgaard (1788-1899) would become the
first generally accepted validated case of a supercentenarian on record. [25][26] Declaration of the Rights of Man and of the Citizen 1789: George Washington is elected the first President of the United States; he serves until 1797. 1789: Quang
Trung defeats the Qing army. 1789-1799: French Revolution. 1789: The Liège Revolution. 1789: The Erabant Revolution. 1789: The Inconfidência Mineira, an unsuccessful separatist movement in central Brazil led by Tiradentes 1791: Suppression of the Liège Revolution by Austrian forces and re-establishment of the Prince-Bishopric of Liège. 1791
1795: George Vancouver explores the world during the Vancouver Expedition. 1791-1804: The Haitian Revolution. 1791: Mozart premieres The Magic Flute. 1792-1805: The New York Stock & Exchange Board is founded. 1792: Polish-Russian War of
1792. 1792: Margaret Ann Neve (1792-1903) would become the first recorded female supercentenarian to reach the age of 110.[27][28] 1793: Upper Canada bans slavery. 1793: The largest yellow fever epidemic in American history kills as many as 5,000 people in Philadelphia, roughly 10% of the population.[29] 1793-1796: Revolt in the Vendée
against the French Republic at the time of the Revolution. 1794-1816: The Hawkesbury and Nepean Wars, which were a series of incidents between settlers and New South Wales Corps and the Aboriginal Australian clans of the Hawkesbury river in Sydney, Australia. 1795: The Marseillaise is officially adopted as the French national anthem. Napoleon
at the Bridge of the Arcole 1795: The Battle of Nu'uanu in the final days of King Kamehameha I's wars to unify the Hawaiian Islands. 1795-1796: Iran invades and devastates Georgia, prompting Russia to intervene and march on Tehran. 1796: Edward Jenner administers the first smallpox vaccination; smallpox killed an estimated 400,000 Europeans
each year during the 18th century, including five reigning monarchs. [30] 1796: War of the First Coalition: The Battle of Montenotte marks Napoleon Bonaparte's first victory as an army commander. 1796: The British eject the Dutch from Ceylon and South Africa. 1796-1804: The White Lotus Rebellion against the Manchu dynasty in China. 1797: John
Adams is elected the second President of the United States; he serves until 1801. 1798: The Irish Rebellion fails to overthrow British rule in Ireland. 1799: Austro-Russian forces under Alexander Suvorov liberates much of Italy
and Switzerland from French occupation. 1799: Coup of 18 Brumaire - Napoleon's coup d'etat brings the end of the French Revolution. 1799: Death of the French Revolution. 1799: Coup of 18 Brumaire - Napoleon's coup d'etat brings the end of the French Revolution. 1799: Death of the French Revolution
Dutch East Indies are established.[31] Main articles: Timeline of historic inventions § 18th century, and Timeline of scientific discoveries § 18th century The spinning jenny 1709: The first piano was built by Bartolomeo Cristofori 1711: Tuning fork was invented by John Shore 1712: Steam engine invented by Thomas Newcomen 1714: Mercury
thermometer by Daniel Gabriel Fahrenheit 1717: Diving bell was successfully tested by Edmond Halley, sustainable to a depth of 55 ft c. 1730: Octant navigational tool was developed by John Kay 1736: Europeans encountered rubber - the discovery was made by
Charles Marie de La Condamine while on expedition in South America. It was named in 1770 by Joseph Priestley c. 1740: Modern steel was developed by Benjamin Huntsman 1741: Vitus Bering discovers Alaska 1745: Leyden jar invented by Ewald Georg von Kleist was the first electrical capacitor 1751: Jacques de Vaucanson perfects the first
precision lathe 1752; Lightning rod invented by Benjamin Franklin 1753; The first clock to be built in the New World (North America) was invented by Benjamin Banneker. 1755; The tallest wooden Bodhisattva statue in the world is erected at Puning Temple, China. 1764; Spinning jenny created by James Hargreaves brought on the Industrial
Revolution 1765: James Watt enhances Newcomen's steam engine, allowing new steel technologies 1761: The problem of longitude was finally resolved by the fourth chronometer of John Harrison 1763: Thomas Bayes publishes first version of Bayes' theorem, paving the way for Bayesian probability 1768-1779: James Cook mapped the boundaries of
the Pacific Ocean and discovered many Pacific Islands 1774: Joseph Priestley discovers "dephlogisticated air", oxygen The Chinese Putuo Zongcheng Temple of Chengde, completed in 1771, during the reign of the Qianlong Emperor. 1775: Joseph Priestley's first synthesis of "phlogisticated nitrous air", nitrous oxide, "laughing gas" 1776: First improved
steam engines installed by James Watt 1776: Steamboat invented by Claude de Jouffroy 1777: Circular saw invented by Samuel Miller 1779: Photosynthesis was first discovered by Jam Ingenhousz 1781: William Herschel announces discovered by Jam Ingenho
Power loom invented by Edmund Cartwright 1785: Automatic flour mill invented by Oliver Evans 1786: Threshing machine invented by Andrew Meikle 1787: Jacques Charles discovers the law of conservation of mass, the basis for chemistry, and begins modern chemistry 1798: Edward Jenner publishes a
treatise about smallpox vaccination 1798: The Lithographic printing process invented by Alois Senefelder [33] 1799: Rosetta Stone discovered by Napoleon's troops Main articles: 18th century in literature and 18th century in philosophy 1703: The Love Suicides at Sonezaki by Chikamatsu first performed 1704-1717: One Thousand and One Nights
translated into French by Antoine Galland. The work becomes immensely popular throughout Europe. 1704: A Tale of a Tub by Jonathan Swift first published 1712: The Rape of the Lock by Alexander Pope (publication of first version) 1719: Robinson Crusoe by Daniel Defoe 1725: The New Science by Giambattista Vico 1726: Gulliver's Travels by
Jonathan Swift 1728: The Dunciad by Alexander Pope (publication of first version) 1744: A Little Pretty Pocket-Book becomes one of the first books marketed for children 1748: Chushingura (The Treasury of Loyal Retainers), popular Japanese puppet play, composed 1748: Clarissa; or, The History of a Young Lady by Samuel Richardson 1749: The
History of Tom Jones, a Foundling by Henry Fielding 1751: Elegy Written in a Country Churchyard by Thomas Gray published 1751-1785: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopédie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopedie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopedie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopedie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopedie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopedie 1755: A Dictionary of the English Language by Samuel Johnson 1758: The French Encyclopedie 1755: A Dictionary of the English Language by Samuel Johnson 1758: A Dictionary of the English Language by Samuel Johnson 1758: A Dictionary of the English Language by Samuel Johnson 1758: A Dictionary of the English Language by Samuel Johnson 1758: A Dictionary of the English Language by Samuel Johnson 1758: A Dictionary of the English Language by Samuel Johnson 1758: A
Adam Smith 1759-1767: Tristram Shandy by Laurence Sterne 1762: Emile: or, On Education by Jean-Jacques Rousseau 1774: The Sorrows of Young Werther by Goethe first published 1776: Ugetsu Monogatari (Tales of Moonlight and Rain) by Ueda Akinari 1776: The
Wealth of Nations, foundation of the Most Eminent English Poets by Samuel Johnson 1779-1782: Lives of the Most Eminent English Poets by Samuel Johnson 1781: Critique of Pure Reason
by Immanuel Kant (publication of first edition) 1781: The Robbers by Friedrich Schiller first published 1782: Les Liaisons dangereuses by Pierre Choderlos de Laclos 1786: Poems, Chiefly in the Scottish Dialect by Robert Burns 1787-1788: The Federalist Papers by Alexander Hamilton, James Madison, and John Jay 1788: Critique of Practical Reason by
Immanuel Kant 1789: Songs of Innocence by William Blake 1789: The Interesting Narrative of the Life of Olaudah Equiano 1790: Reflections on the Revolution in France by Edmund Burke 1791: Rights of Man by Thomas Paine 1792: A Vindication of the Rights
of Woman by Mary Wollstonecraft 1794: Songs of Experience by William Blake 1798: Lyrical Ballads by William Wordsworth and Samuel Taylor Coleridge 1798: An Essay on the Principle of Population published by Thomas Malthus (mid-18th century): The Dream of the Red Chamber (authorship attributed to Cao Xuegin), one of the most famous
Chinese novels 1711: Rinaldo, Handel's first opera for the London stage, premiered 1721: Brandenburg Concertos by J.S. Bach 1727: St Matthew Passion by J.S. Bach 1727: Zadok the Priest is composed by Handel for the coronation of
George II of Great Britain. It has been performed at every subsequent British coronation. 1733: Hippolyte et Aricie, first opera by Jean-Philippe Rameau 1741: Goldberg Variations for harpsichord published by Bach 1742: Messiah, oratorio by Handel premiered in Dublin 1749: Mass in B minor by J.S. Bach assembled in current form 1751: The Art of
Fugue by J.S. Bach 1762: Orfeo ed Euridice, first "reform opera" by Gluck, performed in Vienna 1786: The Marriage of Figaro, opera by Mozart 1791: The Magic Flute, opera by Mozart 1791-1795: London symphonies by Haydn 1798: The
Pathétique, piano sonata by Beethoven 1798: The Creation, oratorio by Haydn first performed Nolkov, Sergey. Concise History of Imperial Russia. Rowe, William T. China's Last Empire. Anderson, M. S. (1979). Historians and Eighteenth-Century Europe, 1715–1789. Oxford University Press. ISBN 978-0-19-822548-5. OCLC 185538307. Ribeiro,
Aileen (2002). Dress in Eighteenth-Century Europe 1715-1789 (revised ed.). Yale University Press. ISBN 978-0-300-09151-9. OCLC 186413657. A Baines, Paul (2004). The Long 18th Century. London: Arnold. ISBN 978-0-340-81372-0. A Marshall, P. J., ed. (2001). The Oxford History of the British Empire: Volume II: The Eighteenth Century (Oxford History).
History of the British Empire). Oxford University Press, USA. ISBN 978-0-19-924677-9. OCLC 174866045., "Introduction" by P. J. Marshall, page 1 ^ O'Gorman, Frank (1997). The Long Eighteenth Century: British Political and Social History 1688-1832 (The Arnold History of Britain Series). A Hodder Arnold Publication. ISBN 978-0-340-56751-7.
OCLC 243883533. ^ a b Chandra, Bipin. Modern India. India. A Campbell, John; Watts, William (1760). Memoirs of the Revolution in Bengal, anno Dom. 1757. A. Millar, London. Parthasarathi, Prasannan (2011), Why Europe Grew Rich and Asia Did Not: Global Economic Divergence, 1600-1850, Cambridge University Press, p. 207, ISBN 978-1-139-
49889-0 ^ Allana, Gulam (1988). Muslim political thought through the ages: 1562-1947 (2 ed.). Pennsylvania: Royal Book Company. p. 78. ISBN 9789694070919. Retrieved 18 January 2013. ^ "War of the Spanish Succession, 1701-1714". Historyofwar.org. Retrieved 25 April 2009. ^ Ricklefs (1991), page 82 ^ Historic
uk - heritage of britain accommodation guide (3 May 2007). "The history of Scotland - The Act of Union 1707". Historic-uk.com. Archived from the original on 8 April 2009. Archived from the original on 16 April 2009. Archived from the original on 1707". Historic-uk.com. 31 January 1910. Archived from the original on 18 April 2009.
April 2009. Retrieved 25 April 2009. ^ "List of Wars of the Crimean Tatars". Zum.de. Archived from the original on 12 March 2009. ^ "Len Milich: Anthropogenic Desertification vs 'Natural' Climate Trends". Ag. arizona.edu. 10 August 1997. Archived from the original on 11 February 2012. Retrieved 25 April 2009. ^ "Len Milich: Anthropogenic Desertification vs 'Natural' Climate Trends".
Wadsworth, Alfred P.; Mann, Julia De Lacy (1931). The Cotton Trade and Industrial Lancashire, 1600-1780. Manchester University Press. p. 433. OCLC 2859370. ^ "A guide to Scottish clans". Unique-cottages.co.uk. Archived from the original on 11 May 2008. Retrieved 25 April 2009. ^ "Saudi Arabia - The Saud Family and Wahhabi Islam".
Countrystudies.us. Retrieved 25 April 2009. ^ "History". Columbia University. ^ Ricklefs (1991), page 102 ^ "Fable A - Verified Supercentenarians (Listed Chronologically By Birth Date)". Archived from the original on 12
July 2016. Retrieved 9 November 2016. ^ Photo Gallery for Supercentenarians born before 1850, as of May 17, 2019 ^ Balfour-Pau, Glen (20 December 2005). Bagpipes in Babylon: A Lifetime in the Arab World and Beyond. I.B.Tauris, 2006. ISBN 9781845111519. ^ "The Harvey Family". Priaulx Library. 2005. Archived from the original on 22 October
2013. ^ "Yellow Fever Attacks Philadelphia, 1793". EyeWitness to History. Archived from the original on 7 June 2007. ^ Riedel S (2005). "Edward Jenner and the history of smallpox and vaccination". Proc (Bayl Univ Med Cent). 18 (1): 21-5. doi:10.1080/08998280.2005.11928028. PMC 1200696. PMID 16200144. ^ Ricklefs
(1991), page 106 ^ Encyclopædia Britannica's Great Inventions, Encyclopædia Britannica Archived August 7, 2008, at the Wayback Machine ^ Meggs, Philip B. A History of Graphic Design. (1998) John Wiley & Sons, Inc. p 146 ISBN 978-0-471-29198-5 Black, Jeremy and Roy Porter, eds. A Dictionary of Eighteenth-Century World History (1994) 890pp
Klekar, Cynthia. "Fictions of the Gift: Generosity and Obligation in Eighteenth-Century Studies: Wake Forest University, 2004. . Refereed. Langer, William. An Encyclopedia of World History (5th ed. 1973); highly detailed outline of events online free
Morris, Richard B. and Graham W. Irwin, eds. Harper Encyclopedia of the Modern World: A Concise Reference History from 1760 to the Present (1970) online; note there are two different books with identical authors and slightly different
titles. Their coverfage does not overlap. Milward, Alan S, and S. B. Saul, eds. The development of the economies of continental Europe, 1850-1914 (1977) online The Wallace Collection, London, houses one of the finest collections of 18th-century decorative arts from France, England and Italy, including paintings, furniture, porcelain and gold boxes.
Media related to 18th century at Wikimedia Commons Retrieved from 4 The following pages link to 18th century External tools (link count transcluding these entries Showing 50 items. View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)List of decades, centuries, and millennia (links | edit) Goths
(links | edit) Industrial espionage (links | edit) 1756 (links | e
edit) 1826 (links | edit) 1826 (links | edit) 1860 (links | edit) 
| edit) 1895 (links | edit) 1801 (links | edit) 1803 (links | edit
Retrieved from "WhatLinksHere/18th century" 1. Hold down (A) for about two seconds. Release the button when [SET] stops flashing. 2. Keep pressing (C) until the setting in the seguence shown below, 3. Configure the date and time settings. To reset the seconds to
00: Press (D). 1 is added to the minutes when the current count is between 30 and 59 seconds. To change other settings: Use the (D) and (B) buttons. 4.Repeat steps 2 through 3 to configure date and digital watch, the analog and the digital
times may not match up. For those that don't know, many Casio G Shock watches feature both a digital time to be the same, but there are various factors which can cause them to differ. The digital and analog time might not have
been synchronized properly right from the get-go, or something like a strong magnetic field may have caused the difference. Today we want to take you on a step-by-step tutorial on how to adjust the time on a G Shock analog and digital watch, specifically how to sync them so they are both the same. The Specific ModelThere are many different G Shock
models, so to make thing easier, we are going to use the G Shock 5146 as an example is because it features a standard button and adjustment format which the majority of models follow. Familiarizing Yourself With the Buttons Before you can start adjusting the analog and digital time on your
G Shock watch, you need to be familiar with the layout of the buttons as A, B, C, and D. A is the top left button, B the top right, C the bottom left, and D the bottom right. Time? It is important to note that you should
technically not have to change the analog time on your G Shock watch. When you adjust the digital time, once completed, the analog watch hands should adjust themselves, there are instances where the analog hands may not adjust themselves, the major themselves, the digital time. However, there are instances where the analog hands may not adjust themselves, the major themselves, the digital time.
sometimes not at all or not properly. If this happens to be the case for you, will cover how to change the analog time further below. Changing the Digital Time on the G Shock watch, you will need to do the following steps. First, you need to enter the time changing setting. To do this, hold down the A button
until you see the screen flashing. You should now see a code of 3 letters flashing. These 3 letters represent the city to which the watch is set to. You need to find the city which you reside in, and if the city which you reside in, and if the city is not included in the list, choose the city closest to yours (as long as it is in the same time zone). To select the appropriate city, use the B button to
cycle upwards or the D button to cycle downwards through the list. Once you have found the appropriate city, press the C button to move onto the next step. Now you need to select whether or not your city is in daylight savings time, press the D button to toggle it on. The D button will toggle daylight
savings time on and off. Choose the appropriate one and then press the C button to get to the next step. In this step, you will be able to choose from a 12 hour or 24 hour digital clock display. Use the D button to get to the next step. This step involves setting the actual
time, which includes seconds, minutes, and hours. First you will set the seconds. Use the D button to add seconds are set, press the C button. Now it is time to set the hour, and once again, use the D and B buttons to add or subtract hours. Once the hour is set, press the C button. Now it is time to set the hour, and once again, use the D and B buttons to add or subtract hours. Once the hour is set, press the C button.
process for the minutes, and then press C one last time to move onto the next step. Now it is time to select the date, so the year, month, and day, pressing C each time a selection is made. The final step is to set the duration of screen
illumination. Using the D button, you can toggle between LT1 (1.5 seconds of illumination) and LT3 (3 seconds of illumination). Once everything has been appropriately set, the analog watch hands should automatically adjust themselves to match the digital
time. However, if this does not happen, move onto the next section on how to adjust the analog time. Changing the Analog Time on the G ShockIf the analog time did not automatically adjust itself according to the digital time, a strong impact or a magnetic field may have affected the mechanical side of things. In order to fix this, you will need to adjust
the speed hand so it is pointing towards 9 o'clock, and so that the hour and minute hands are pointing at 12 o'clock. Do the following steps to complete this process. Press the D button to move the speed hand in a clockwise direction. Once the speed
hand gets to the 9 o'clock position, press the C button. Now, using the D button once again, adjust the hour and minute hands until they are pointing at the 12 o'clock position. Press the A button to go back into the timekeeping mode, the analog hands should automatically adjust
themselves to match the digital time. If you do not have success, repeat these steps again, and if it is still does not work, you will need to seek professional assistance. Related read: How To Set a Casio G Shock Digital WatchConclusionWe hope that we have been able to thoroughly explain how to adjust the time on your digital and analog G Shock
watch. If you are still having problems, you may need to seek professional help. When it comes to owning a G-Shock watch, accuracy and precision are key. These timepieces are renowned for their durability, but to truly harness their full potential, it is crucial to regularly adjust the time. Here are the reasons why adjusting the time on
```

your G-Shock watch is important: 1. Stay on schedule: Accurate timekeeping is essential in our fast-paced lives. Whether you have a busy work schedule or need to keep track of important events, having the correct time on your G-Shock watch ensures that you stay punctual and organized. 2. Maintain synchronization: Time synchronization is crucial, especially when it comes to activities that require precise timing. Whether you're an athlete timing your laps or a professional coordinating meetings, adjusting the time on your G-Shock watch ensures that you are in sync with others and can perform at your best. 3. Avoid confusion: Having the incorrect time on your watch can lead to confusion and

```
misunderstandings. It can cause you to miss appointments, arrive late for important events, or even mess up your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch, you can avoid unnecessary confusion and ensure smooth and hassle-free time on your G-Shock watch are smooth and has a smooth a
help conserve its battery life. Some G-Shock models have power-saving features that automatically turn off certain functions when the watch is not in use. By ensuring that the time is accurately set, you can maximize the efficiency of these power-saving features and extend the life of your G-Shock's battery. 5. Showcase style and professionalism: G
Shock watches are not only functional but also stylish accessories. By keeping the time properly adjusted, you present yourself as someone who values precision and attention to detail. Whether during business meetings or social gatherings, a well-maintained G-Shock watch reflects your professionalism and adds a touch of sophistication to your
overall appearance. Steps to Adjust the Time on a G-Shock Analog Watch Adjusting the time on your G-Shock analog watch is a simple process that can be done in a few easy steps. Here's a step-by-step guide on how to do it: Step 1: Pull the crown to the time-setting position: Locate the crown on the side of your G-Shock analog watch. Gently pull it out
to the first click, which is the time-setting position. This will allow you to adjust the time on your watch. Step 2: Rotate the crown clockwise or counterclockwise to move the hands of the watch. Take your time to align the hands with the correct time on a
reliable reference, such as your smartphone or a wall clock. Step 3: Push the crown back in: After you have set the correct time, gently pushed in to maintain the water resistance of your G-Shock watch. Step 4: Check the date and day settings: Some G-Shock analog watches
also have a date and day display. If your watch includes these features, you can adjust them by pulling the crown to the second click position. Rotate the crown to the second click position.
double-check that everything is accurately set. Give it a few minutes to ensure that the hands are moving smoothly and aligning with the correct time. By following these simple steps, you can easily adjust the time on your G-Shock analog watch, keeping it synchronized with your daily activities and maintaining accurate timekeeping. Steps to Adjust
the Time on a G-Shock Digital Watch Adjusting the time on your G-Shock digital watch is a straightforward process. Whether you're setting it for the first time or correcting the time on your G-Shock digital watch is a straightforward process. Whether you're setting it for the first time on your G-Shock digital watch is a straightforward process. Whether you're setting it for the first time on your G-Shock digital watch is a straightforward process. Whether you're setting it for the first time on your G-Shock digital watch is a straightforward process.
Shock digital watch. This button is usually positioned at the bottom left or right corner of the watch face. Press it once to enter the time-setting mode, use the mode button to cycle through the available modes until you reach the time display mode. This mode usually displays
the hours and minutes, allowing you to adjust the time. Step 3: Use the adjust button: With the time display mode selected, look for the adjust button until the time starts blinking. This indicates that you're in the time-setting mode. Step 4: Set the correct time: Once the time is blinking,
you can now adjust the hours and minutes. Use the mode button to switch between the hours and minutes, and use the adjust button to increase or decrease the values. Pay attention to AM and PM indicators if your watch uses a 12-hour format. Step 5: Confirm and save the time: After setting the correct time, press the adjust button to save the
changes. The blinking digits will stop, indicating that the time has been successfully adjusted. Wait for a few seconds, and the watch will exit the time displayed on your G-Shock digital watch is accurate. Compare it with a
reliable time source, such as your phone or a wall clock. By following these simple steps, you can easily adjust the time on your G-Shock digital watch, ensuring that it reflects the correct and accurate time for your daily activities. Troubleshooting Common Issues when Adjusting the Time While adjusting the time on a G-Shock watch is usually a
straightforward process, there may be some common issues that you could encounter. Here are some trouble shooting steps to help you resolve these issues: Issue 1: Difficulty pulling out the crown: If you're having trouble pulling out the crown on your G-Shock analog watch to adjust the time, make sure you're applying gentle but firm pressure. You
may need to use your fingernail or a small tool to help grip the crown. Avoid using excessive force to prevent damaging the watch. Issue 2: Hands not aligned with the correct time, try rotating the crown in the opposite direction and then back to the correct time
Sometimes, the gears inside the watch can get jammed, and this simple technique can help realign them. Issue 3: Digital watch not entering the time-setting mode when you press the mode button, ensure that you are pressing the correct button and holding it down for a few seconds. If
the watch still doesn't enter the time-setting mode, refer to the user manual or contact G-Shock customer support for further assistance. Issue 4: Incorrect time after you've made adjustments, check the AM/PM indicator and ensure that you've correctly
set the hours. Additionally, make sure that your watch is receiving a strong and consistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent timekeeping: If you notice that your G-Shock watch is consistent timekeeping: If you notice that your watch is receiving a strong and consistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal, as a weak signal can lead to incorrect time display. Issue 5: Inconsistent time signal can lead to incorrect time display. Inconsistent time signal can lead to incorrect time display. Income signal can lead to incorrect time display. Income signal can lead to incorrect time signal can lead to incorrect 
watch's timekeeping. Alternatively, consider having your watch serviced or recalibrated by a professional if the issue persists. Remember, if you encounter any persistent issues or are unsure about adjusting the time on your G-Shock watch, it's always best to refer to the user manual or seek assistance from an authorized G-Shock service center or
customer support. Tips for Maintaining Accurate Timekeeping on Your G-Shock Watch Educate timekeeping on your G-Shock watch is crucial for optimal performance and reliability. Here are some useful tips to help you keep your G-Shock watch is crucial for optimal performance and reliability. Here are some useful tips to help you keep your G-Shock watch is crucial for optimal performance and reliability.
timekeeping, which uses radio signals to automatically sync with the most accurate time source. Take advantage of this feature by periodically syncing your watch is always displaying the correct time, down to the second. 2. Avoid extreme temperature fluctuations: Extreme temperature changes can
affect the accuracy of your G-Shock watch's timekeeping errors. Try to avoid leaving your watch in hot cars, saunas, or freezing environments, as it may impact its timekeeping performance. 3. Service your watch in hot cars, saunas, or freezing environments, as it may impact its timekeeping performance.
your G-Shock watch may benefit from regular servicing. Consider having it professionally serviced every 2-3 years to ensure that the internal mechanisms are properly lubricated and calibrated. This can help maintain accurate timekeeping and prolong the lifespan of your watch. 4. Be cautious with magnetic fields: Strong magnetic fields can
negatively affect the accuracy of your G-Shock watch's timekeeping. Avoid placing your watch near powerful magnets, speakers, or electronic devices, as they may disrupt the watch's internal components. If you anticipate being exposed to magnetic fields, consider using a magnetic-resistant G-Shock model. 5. Keep your watch clean: Dirt, dust, and the components are the components. If you anticipate being exposed to magnetic fields, consider using a magnetic fields, consider using a magnetic fields, consider using a magnetic fields.
debris can interfere with the proper functioning of your G-Shock watch, including its timekeeping accuracy. Regularly clean your watch to remove any build-up on the case, crystal, and band. Use a soft cloth or a gentle cleaning solution specifically designed for watches to prevent scratching or damaging the materials. 6. Protect your watch from water
damage: G-Shock watches are renowned for their water resistance, but it's important to maintain this feature to ensure accurate timekeeping. Avoid exposing your watch to excessive water pressure, such as diving at depths beyond its specified water resistance. Additionally, regularly check the seals and gaskets to ensure they are intact and properly
functioning. By following these tips, you can help maintain accurate timekeeping on your G-Shock watch, ensuring that it continues to provide reliable and precise timekeeping functions. To learn more about these auto-synch technologies and features visit our G-
SHOCK Technology page, Radio page, GPS page, or Mobile Link page. The art of wearing a watch originally stemmed from practicality and unsurprisingly, wanting to know the time. Aside from their timekeeping... Read Rolex, without a doubt, remains one of the leading Swiss watchmakers in the entire horology industry. One of the mainstays in the
Rolex catalog, since the early 1950s, is the high-caliber Explorer. This particular collection... Watches have long been a staple accessory for both fashion and function. With the rise of smartwatches, the traditional wristwatch has had to evolve to stay relevant, and one way it has done so is... In any household, it is quite typical to have some old, broken
timepieces laying around, probably hidden in the bottom of a drawer. These items may just need new batteries, replace some parts, or may... Are you looking to buy your first watch? Wondering which type of watch suits your needs better? Check out this article to know more about what makes digital and analog watches different from each other...
My love of watches started almost 30 years ago when I inherited my grandfather's watch. A watch that is still in my collection and one of my most prized possessions although not the most valuable in terms of money. Known as "The Toughest Watch on the Planet," the G-Shock watch line from Casio certainly earns that distinction. Not just a hollow
marketing claim, the G-Shock is designed for the harshest environments on the planet. If ever you see an athlete or thrill-seeker within their element wearing a watch, it is more than likely a G-Shock model. G-Shock also made its mark both in the military and law enforcement industry. In this article, we will look at the illustrious and exciting history of
the G-Shock watch. History of G-Shock Watches To properly introduce what G-Shock is all about, it is best to start from the beginning and go through all the relevant milestones from there. So, let's begin. Where it All Began - Birth of the Toughest Watch on the Planet G-Shock first came into the picture when Casio's head of watch design, Kikuo Ibe,
formed a small team called "Team Tough." The team started development with this idea of a genuinely tough-as-hell in 1981. The core idea of the G-Shock was the "Triple 10" design criteria; Ibe and his team wanted to create a watch with s 10-ATM water resistance, battery life of up to 10 years and could withstand the impact from a 10-meter drop.
However, the path to achieving their goal design was long and arduous. The team went through over 200 prototypes before perfecting the design. It wasn't until Ibe saw a bouncing rubber ball in the local park that he got the idea for the exterior
absorbs all the impact. Hence, they based their design on this specific notion for the G-Shock model's casing. This is because G-Shock watches are hollow, with the primary timekeeping mechanism encased within a soft gel cushion. With these three main goals in mind,
Team Tough began developing the very first G-Shock Watch DW-5000C. The First Generation G-Shock Watch DW-5000C (Image: Casio) After two years in development and hundreds of redesigns and reiterations, Ibe and his team finally unveiled the first of many G-Shock models to come
- the G-Shock DW-5000C. Launched in April 1983, the DW-5000C came in two variations: the DW-5000C-1A (black and gold). Of course, the G-Shock watch line won't garner such a reputation for being just tough. The DW-5000C01B (black and gold).
from the typical wristwatch. The original G-Shock incorporated a countdown timer, stopwatch, alarm, 12/24-hour mode, and a backlight. These features and its impressive durability made it quite enticing for sports and outdoor enthusiasts. A Rough Start for the G-Shock Brand Interestingly enough, initial sales of the first-generation G-Shock watch
on Western shores. The commercial featured the DW-5200 as a hockey puck to highlight its toughness. The sales of the DW-5200 skyrocketed in America thanks in part to the Commercial was so iconic that a similarly-themed G-Shock ad was made in 2018 for the G-Shock GMW-B5000 model. While the G-Shock series began with the
DW-5000C model, the watch line didn't hit its stride until the DW-5200 model was released. Hence, the DW-5200 was dubbed the "Hero" model as it singlehandedly saved the G-Shock series. G-Shock's Rise to the Top While G-Shock debuted in the 80s, it wasn't until the 90s that the brand gained worldwide recognition. The 90s was indeed the golden
age of G-Shock as this was the decade that introduced a lot of the staple features that modern G-Shocks still use to this day. In addition to their highly practical and functional timepieces, G-Shock also burst through the mainstream with their limited edition models. These models were designed in collaboration with other famous artists, personalities,
and brands. The most recent limited edition G-Shock was the GD-X6900MNM-1, a model developed in partnership with rap icon Eminem. Check out our list of the most sought-after limited edition G-Shock was the GD-X6900MNM-1, a model developed in partnership with rap icon Eminem. Check out our list of the most sought-after limited edition G-Shock was the GD-X6900MNM-1, a model developed in partnership with rap icon Eminem.
MR-G watch line showed that G-Shock is not just a sports timepiece for casual wear but also a watch that you can wear during formal occasions. A More Feminine Touch - The Baby-G Watch Series G-Shock always had the reputation of being a highly masculine timepiece due to its applications and large design. But, of course, Casio understood that
there is a whole other market out there that they haven't cracked yet with G-Shock. Enter the Baby-G series debuted in 1994 with the charming DW-420, a more compact version that is just as tough as the original. Here is a complete
rundown on the main differences between the G-Shock and Baby-G series. Fortunately, G-Shock finally earning its spot in the market as a true powerhouse in the 90s, it is time to focus on revolutionizing the industry, which they did in the
2000s and beyond. During this era, Casio started developing G-Shock watches with outstanding features like the Twin Sensor, Triple Sensor, Bluetooth, Tough Solar, and Triple G Resist. Never Complacent and Constantly Evolving One of the most impressive aspects of G-Shock watches is how the series constantly reinvents itself. Not satisfied with
being known as the toughest, G-Shock continuously ups its game whenever possible. Here is a timeline rundown of all the notable features and innovations added throughout the years. 1989 AW-500E-1E (Image: Casio) The G-Shock AW-500 was the first in the series to feature analog timekeeping. 1992 G-Shock released the DW-6100 model three
years later, which featured a built-in thermometer. This year was also the debut of the DW-5900, which features the signature triple graph dial design. 1993 This year saw one of the most popular G-Shock model is the first to have a 200-meter ISO certification and is a highly
reliable dive watch. Along with the first G-Shock dive watch was the unveiling of the first G-Shock model to incorporate EL backlight technology, the DW-6600. 2000 G-Shock eagerly met the start of the new millennium as they introduced the first of their Master of G series models, the GW-100, a key feature was that it incorporated radio control
functionality. 2008 This year introduced the public to the G-9200 Riseman, the first to feature includes a compass and thermometer sensor, making the G-9200 an excellent pick for outdoor enthusiasts. 2009 GW-7900-1 (Image: Casio) A year later, a G-Shock model once again revolutionized the series
The GW-7900 model utilized a multi-band six radio-controlled feature and solar-powered batteries. Thus, ushering in the era of modern G-Shock multi-functionality. 2010 GRX5600A-4 - G Shock (Image: Casio) The GRX-5600 G-LIDE debuted during this year, and it is a pretty specific G-Shock watch for surfers, thanks to the tide graph feature. The
same year also saw the release of the GLX-6900 G-LIDE, which is a deluxe version that offered both a tide graph and moon data feature. 2012 Another notable milestone came in 2012 when Casio released the GW-4000 Gravitymaster and its revolutionary Triple G Resist design. The Triple G Resist build further enhanced the durable G-Shock design by
making it impact-resistant, centrifugal force-resistant, and vibration-resistant, and vibration-resistant. This year also saw the first G-Shock to have smartphone connectivity and a definite game-changer for the series. 2014 GWN-1000B-1B (Image: Casio) It is
definitely my favorite year in regards to G-Shock's history. 2014 was an innovative year for the watch line with entries like the GWN-1000 Gravitymaster also dropped simultaneously, which offered a patented Casio GPS Hybrid Wave Ceptor technology
2016 Another first came for the watch series with the first G-Shock with a built-in depth gauge, the GWF-D1000 Frogman. Also, they released the premium-grade GWN-Q1000 Gravitymaster, the first watch that comes with three-time
correction systems. 2018 Pushing the limits of what an outdoor watch can deliver, G-Shock unveiled the highly impressive GPR-B1000 Rangeman, the world's first solar-powered GPS navigation watch can deliver, G-Shock inveiled the highly impressive GPR-B1000 Rangeman, the world's first solar-powered GPS navigation watch.
heart rate monitor and GPS. Why Is It Called G-Shock? The head designer of G-Shock, Kikuo Ibe, wanted a watch that could withstand impacts and won't even bat an eye if dropped. As you would have guessed, the "G" stands for Gravity. It is a watch designed to survive the "shock" of the impact caused by gravity. It
is a pretty straightforward and cool name for a watch line that excels in delivering functionality and reliability. Have you purchased a new Casio G-Shock watch? G-Shock watch? G-Shock watch but could not figure out how to set the time? Are you looking to change the 12 or 24-hour time format on your G-Shock watch? G-Shock watch? G-Shock watch but could not figure out how to set the time? Are you looking to change the 12 or 24-hour time format on your G-Shock watch? G
can be very challenging to change or set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time. But do not worry now, you are at the right place! In this article, I will tell you a step-by-step process to set the time for the first time.
on the G-Shock Rangeman but normally there are 4-5 buttons on a G-Shock watch. The buttons that are used to set or change the time or time format on the watch and is used to get into or out of the watch configuration mode. Mode Button The Mode Button is on
the lower-left side of the watch and is used to toggle between different settings and modes. Reverse Button on the upper-right side of your GShock watch but it has some other name than the "Reverse" then do not
worry it acts exactly the same as the reverse button but just has a different name. Forward Button The Forward button is on the lower-right side of the watch has some other button in place of the forward button then do not worry it will work the same and just have a
different name. How To Set The Time On A Casio G-Shock Watch? Now let us try and change the time on the G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the Casio G-Shock watch by following the below mentioned simple steps: The watch that I have taken for reference is the case of 
this watch in the movie named Extraction. Step 1: Press and hold the Adjust button until you hear a beep sound or until something. You cannot change or select second's values but you can reset them to 00 by pressing the
Forward button. Step 3: Once you are done with changing the Seconds value, press the Mode button to decrease and the Forward button to increase the hour value. Step 5: Once you are done adjusting the hour value, press the Mode
button again until the minute's value on the timer starts blinking. Step 6: Set the desired minutes value. Use the Forward button to increase and the Reverse button to save and exit. Note: If you are wondering how to adjust the time on a G-
Shock analog-digital watch then do not worry, you need to follow the same steps mentioned above. Once you have change dhe time in 12-hour format. To change the time format
of your G-Shock to military time follow the below-mentioned steps: Step 1: Press and hold the Adjust button until you see the "12H" blinking on the screen. Step 3: Press the Forward button to change it to "24H". Step 4: Press
the Adjust button to save and exit. Step 5: Repeat all the above steps to change the time or time format. Is It Hard to Change the time or time format in G-Shock watches. It is pretty simple once you know the working of the different buttons and follow a step-by-step.
process. If you face any problem then you can start over from the very first step or you can tell me about the problem you are facing in the comments below! I will be happy to help! If you're planning to buy a new G-Shock watches. So, don't
forget to check them out. Series of watches by Casio since 1983 G-ShockProduct typeWatchesOwnerG-ShockCountryJapanIntroducedApril 1983; 42 years ago (1983-04)MarketsWorldwideWebsitegshock.casio.com The G-Shock is a line of watches manufactured by the Japanese electronics company Casio, designed to resist mechanical stress, shock and
vibration. G-Shock is an abbreviation for Gravitational Shock. The watches in the G-Shock line are designed primarily for sports, military and outdoors-oriented activities; all G-Shocks have a chronograph feature, 200 metre water resistance and an alarm, with either a digital display or a combination of analogue and digital displays.
Other features such as a countdown timer, world clock, and a backlight are included in most models. Newer high-end models in the line adjustment (known as WaveCeptor or Multi-Band) and Bluetooth time adjustment achieved by connecting the watch to a
watch which would have "triple 10" resistance, meaning it would have a battery life of 10 years, have a water resistance of 10 bar and could survive a fall of 10 meters. [2] A team of three individuals was selected by Ibe which was known as "team tough". The team had assembled and tested nearly 200 prototypes but were still not able to achieve the
conception criteria. During a visit to a playground, Ibe discovered that in a rubber ball, the centre of the shock during a bounce on a rough surface, which gave him the idea to implement that concept into the watch. With that in mind, the team set out to develop a watch using such a concept and in April 1983, the
first G-Shock, the DW-5000C, was launched.[3][4][5][6] The shock-resistant design on the original G-Shock has ten layers protecting the quartz timekeeping module, [4] including a urethane rubber bumper, the stainless steel case, the hardened mineral glass watch crystal, the stainless steel screwed down caseback, and the "floating module" where the
quartz mechanism floats free in a urethane foam cradle, with the outer buttons and LCD module attached with oblong button shafts. The strap of the watch is also designed to protect the module during a fall.[7] Initial sales of the G-Shock line were slow in Japan as people preferred dress watches. In order to promote the G-Shock worldwide, the
worldwide sales at 19 million units.[8] In 1985, Casio released the DW-5500C, which was the first G-Shock to feature a mud-resistant structure. Called the G-Shock-II due to the new construction feature, it was nicknamed "Mudman" by collectors due to its mud resistance capabilities. Casio would then go on to release a mud-resistant line of watches in
G-Shock to use a stainless steel case, leaving only a few speciality models in the line-up featuring the traditional metal case construction.[12][13] In 1993, Casio introduced the DW-6300 Frogman, which was the first ISO 6425 certified diver's watch in the G-Shock lineup.[14][13] The Frogman also marked the start of the MAN or "master of G" line of
Raysman (1998): First G-Shock to have tough solar battery recharging technology.[16] DW-9800 Wademan (1999): First G-Shock with directional sensor.[17] AW-571 Gaussman (1999): First G-Shock having magnetic field resistance.[18] DWG-100 Lungman (1999): First G-Shock with directional sensor.[19] GW-100 Antman (2000): First G-Shock with directional sensor.[17] AW-571 Gaussman (1999): First G-Shock manner (1999): First G-Shock with directional sensor.[18] DWG-100 Lungman (1999): First G-Shock manner (1999): 
having the capability to receive time calibration signal from a radio tower. [20] GW-9400 Rangeman (2013): First G-Shock having GPS-hybrid time reception technology. [22] GWN-Q1000 Gulfmaster (2016): First G-Shock having GPS-hybrid time reception technology.
backlights employing incandescent bulbs in earlier models.[13] The same year also saw Casio introducing the Baby-G branded G-Shock watch to feature full
metal construction. The "floating module" concept was retained by cushioning the module between the metal case and metal bezel of the watch and an air-tight glass packing was added to improve shock resistance. Initially featuring a digital display, the MRG line would go on to adopt a full analog display featuring stepper motors for each hand and
would be slotted as the top-of-the-line premium G-Shock lineup. [27] A G-Shock store in Sendai, Japan (2023) In 2008, Casio introduced the Tough Movement for high-end analyses the position of the watch hands by the passage of light via a small hole in
the dial. Every uneven reception of light by the phototransistor due to impact to the watch enables the stepper motors in the movement to correct the alignment of the hands requiring no manual adjustment of the watch. [28] A similar series to the Baby
G called the G-Shock Mini was introduced in 2009. It is 30% smaller than a regular G-Shock and was originally marketed for women. However, they were later released in unisex variants intended for people who have smaller wrists. This series was later replaced by the S-Series in 2014.[29][30] In 2013 in order to celebrate thirty years of the G-Shock
Casio arranged a party in New York and showcased new models as well as various prototypes of upcoming models. The party included a performance from the Colombian artist J Balvin with the founder of the brand
Kikuo Ibe also in attendance.[31] As part of the 40th anniversary celebrations, Casio also released an inspirational video package where Ibe visits his younger self back in 1982 in order to showcase the brand. [32] On 1 September 2017, Casio celebrated its 100 millionth
sale of G-Shocks worldwide.[8] Casio G-Shock Rangeman GPR-B1000 with GPS and bluetooth time synchronisation and tough solar technology. Many newer models feature metal (steel or titanium) bands and a mix of analogue-digital timekeeping, analogue
timekeeping or digital timekeeping. The DW models are standard battery-powered G-Shocks while GW models of the "B" prefix in its model name before the number are Bluetooth enabled, while those having the "P" prefix in the model name before the
number have GPS time reception or navigation capabilities. Twice a year, the basic models are introduced more frequently throughout the year. Special models are introduced more frequently throughout the year. Special models are introduced more frequently throughout the year.
often with popular fashion brands and artists, like A Bathing Ape (Bape), Stüssy,[33] Xlarge, Eric Haze, KIKS TYO, Nano Universe, Levi's, Lifted Research Group, as well as Coca-Cola, Pulp68 Skateshop, Lucky Strike and Marlboro. A USMC serviceman wearing a G-Shock G-100 along with a depth meter G-Shock watches are popular with mountaineers
firefighters, paramedics, people working in the offshore, police officers, astronauts, film directors (Tony Scott was often pictured wearing a GW-3000B, as are Ron Howard and Francis Ford Coppola) and soldiers. Ex-Special Forces-British SAS soldier Andy McNab mentions in several of his novels how his character Nick Stone relies on a G-Shock
watch. According to Mark Bowden's book Blackhawk Down, the DELTA Operators wore G-Shock watches during the combat events of 3 and 4 October 1993. The DW-5600E, DW-5600E module, replacing the usual 1545 module
 with module number 3229 (in 2010) increasing the full-auto calendar to the year 2099 instead of 2039 in the previous modules featuring a backlight consisting of a white LED illuminating the entire screen of the watch for an enhanced
seven year battery life replacing the previous modules which had employed the electroluminescent backlight and had only a stated two year battery life. [36] In 2009, Casio introduced the GW-M5610, a solar powered variant of the DW-5000C which was
an update to the earlier GW-M5600 model.[37] The GW-M5610 would spawn many variants, the most notable being the GW-5000 which was a steel cased screw-back variant like the original G-Shock but featured diamond like coating (dlc) on the case and caseback and the GW-S5600 which featured Casio's first application of carbon fibre in a watch
strap along with the use of titanium in the caseback, screws and buttons, making it the lightest G-Shock model available. The new module with 3495 module. The new module replaced the Electroluminescent backlight, made therein a caseback, screws and buttons, making it the lightest G-Shock model available. The new module replaced the Electroluminescent backlight, made therein a caseback, screws and buttons, making it the lightest G-Shock model available. The new module replaced the Electroluminescent backlight, made therein a caseback, screws and buttons, making it the lightest G-Shock model available. The new module replaced the Electroluminescent backlight for an LED backligh
home time visible in almost all watch modes and increased world time cities to incorporate cities having odd time differentials along with adding time-swap feature with the home time, the ability to set DD-MM and MM-DD formats for the date and day display, the ability to display the day of the week in different languages and added the ability to set
the count-down timer to 1 second.[38][39][40][41] In 2012, Casio released the GB-6900 and GB-5600 which were Bluetooth-enabled models of the watch using the models of the watch using the phone and receive notification alerts of the phone on the watch.
There was also a phone-find feature which allowed the users to find the smartphone with which the watch is paired in case it is misplaced. The phone would ring regardless of the ringtone setting on the press of a button on the watch is paired in case it is misplaced. The phone would ring regardless of the ringtone setting on the press of a button on the watch is paired in case it is misplaced. The phone would ring regardless of the ringtone setting on the press of a button on the watch is paired in case it is misplaced. The phone would ring regardless of the ringtone setting on the press of a button on the watch is paired in case it is misplaced.
been incorporated in many models including high-end variants. The Bluetooth lineup would be further expanded to incorporate tough solar and multi-band atomic time reception with the GW-B5600 (basic resin model) and the GMW-B5000 (full metal screw-back cased models) in 2018.[43][44] The series would later spawn a variant slotted in the MR-G
lineup of premium watches called the MRG-B5000 which sported full titanium construction for the case and bracelet as well as a sapphire watch glass in 2022. The MRG-B5000 is the first square model to incorporate a multi-piece bezel for improved shock resistance. [45] In October 2020, Casio introduced the AW-500 and the AW-M500 which were a
 homage to the original AW-500, which released in 1989 as the first G-Shock incorporating an analog movement. The AW-500 model is similar to the original with some significant differences, such as a resin case compared to the original with some significant differences.
featuring 24 hours measurement duration, an electroluminescent backlight and the hands located at the centre of the dial while the original AW-500 is a more premium model featuring full stainless-steel construction (i.e. case, bracelet and bezel) with the
a dual LED backlight (one LED for the analog display and one LED for the digital display for the digit
Triple Sensor with a digital compass, thermometer, and barometer/altimeter and were the first G-Shock watches to receive such technology. The MTG-S1000, GW-A1000, and GPW-1000 feature Triple G Resist which includes resistance to shock, centrifugal force, and vibration. In 2014, Casio introduced the GPS Hybrid Wave Ceptor feature in the
parts constructed of 18 Karat solid gold as part of the 35th anniversary celebrations of the G-Shock lineup. The watch featured premium finishes throughout its construction without compromising the basic shock resistance of a G-Shock. In 2019, Casio introduced the production version of the Dream Project which featured an upgraded module now
incorporating Bluetooth time reception capabilities in addition to the radiowave time reception and began taking reservations at select G-Shock boutiques in Japan. Thirty-five units of the Dream Project square would be produced, with each having a retail price of 7.7 million \( \) (69,500 US\( \) at 2019 exchange rates) excluding taxes making it the most
expensive G-Shock watch at the time.[47][48] In 2016, Casio released the GWN-Q1000 Gulfmaster, which was the first G-Shock to incorporate quad sensor, depth sensor and direction sensor). It was also the first G-Shock to incorporate quad sensors (pressure sensor, depth sensor, depth sensor, depth sensor and direction sensor). It was also the first G-Shock to incorporate quad sensors (pressure sensor, depth sensor). It was also the first G-Shock to incorporate quad sensors (pressure sensor). It was also the first G-Shock to incorporate quad sensors (pressure sensor). It was also the first G-Shock to incorporate quad sensors (pressure sensor) and direction sensor). It was also the first G-Shock to incorporate quad sensors (pressure sensor) and direction sensor (pressure sensor) are direction sensor (pressure sensor) and direction sensor (pressure sensor) and direction sensor (pressure sensor) are direction sensor (pressure sensor) and direction sensor (pressure sensor) are direction sensor (pressure sensor) and direction sensor (pressure sensor) are direction sensor (pressure sensor) and direction sensor (pressure sensor) are direction sensor (pressure sensor) and direction sensor (pressure sensor) are direction sensor (pressure sensor) are direction sensor (pressure sensor) and direction sensor (pressure sensor) are direction sensor (pressure 
is being worn by the user on the wrist. In addition to that, Casio offered every function offered on G-Shock to feature a depth sensor as well as the first G-Shock to have carbon reinforced polymer construction for the case. [23][49] In late 2018, Casio introduced the newest addition to the G-Shock to have carbon reinforced polymer construction for the case.
Shock Rangeman series of models. The GPR-B1000 is a GPS centred model, which can use the GPS receiver to maintain the exact time, down to the second. This model also has triple sensors (altimeter, barometer and compass) as well as a backtracking function which allows the user to return to the same point from where he started the journey by the
use of a map, a function which was previously exclusive for Casio's ProTrek line of watches. The watch also features Bluetooth connectivity which allows it to upload log data in the phone and also synchronise itself with the phone in order to keep perfect
time. The watch comes without a replaceable battery. The battery is either charged by solar cells present on the face of the watch, a first for a Casio watch. [50] In 2019, Casio released the GA-2100 which took design inspiration from the original DW-5000C but now
incorporated an analog-digital display. Due to the octagonal bezel shape bearing a strong resemblance to the Audemars Piguet Royal Oak, the watch to have a thickness of 11.8 mm, making it the thinnest G-Shock available as well as the
lightest analog digital model with a weight of 51 grams. The aforementioned characteristics allowed the model to achieve increased popularity among collectors.[51][52][53] A solar powered model with Bluetooth time reception capabilities called the GA-B2100 was released in 2022.[54] The 2100 series of G-Shock would later go on to span a full metal
variation, called the GM-B2100 in 2022.[55] An MRG variation based on the design called the MRG-B2100 was introduced in 2024.[56] In October 2023, Casio announced the "Dream Project # 2" (G-D001) as part of their 40th anniversary celebrations. The watch was designed by a team of young designers and generative AI which designed a full metal
solar cell technology used in satellites with light powering the solar cells through a small gap in the date window. The watch case, case back and band are constructed entirely of 18-karat hand polished solid gold with the watch coming with time keeping features standard on many G-Shock models such as a chronograph, alarm, dual time display and
multi-band 6 time reception technology. The watch comes with a special box with a special box with a special LED light inside the box to keep the watch charged during storage. Only one unit was produced with the watch auctioned off at Phillips
Auction House during The New York Watch Auction: NINE held in New York on 10 December 2023 with the winning bid amounting to US$400,050 (US$315,000 plus buyer's premium) making it the most expensive Casio and G-Shock watch ever produced.[57][58][59] The Multi-Band 6 is a radio control technology first introduced on the GW9200
Riseman in 2008[60] and is a successor to the Multi-Band 5 (which supported synchronisation with five atomic time transmitters around the world) and Wave Ceptor (which supported synchronisation with five atomic time transmitters around the world) and Wave Ceptor (which supported synchronisation with five atomic time transmitters around the world) and Wave Ceptor (which supported synchronisation with five atomic time transmitters present in the United States and Japan only) technologies. G-Shock watches with Multi-Band 6 technology can synchronisation with five atomic time transmitters around the world) and Wave Ceptor (which supported synchronisation with five atomic time transmitters present in the United States and Japan only) technologies.
with one of the six atomic time transmitters in the world in order to keep accurate time. The following is a list of the six atomic time transmitters: Japan Watches can tune in to two locations: The 40 kHz signal from the Haganeyama Transmitter at Mount Hagane
(Haganeyama). China Watches tune to the 68.5 kHz signal from BPC at Shangqiu. This is the newest additional signal; older multi-band 5 watches will not be able to connect to this signal from BPC at Shangqiu. This is the newest additional signal; older multi-band 5 watches will not be able to connect to this signal from WWVB at Fort
Collins. United Kingdom Watches tune to the 60 kHz MSF at Anthorn. Germany Watches tune to the 77.5 kHz low frequency time signal radio station DCF77 at Mainflingen. On 12 December 2017, the G-Shock earned the Guinness World Record drove a 24.97.
tonne truck over the Casio G-Shock DW5600E-1. The G-Shock is the first watch by any company being able to withstand the challenge. [61] Astronaut Thomas Reiter during the 2006 Expedition 14 wearing a G-Shock DW-5900 on the International Space Station Casio GWF-1000 Frogman The Master of G series is the speciality line of G-shocks which
were used to introduce new features that would eventually make their way to the standard production models. The lineup consists of:[62] Frogman Mudmaster Gulfmaster Gravitymaster Casio GLX-5600 These models were released in 1996,
designed and specifically made for the surfing market. The countdown timers on these models were designed to count down for surfing competitions, while some of the later models have a yacht timer, moon and tide graphs so a surfer can keep track of the progress while competing on the water. Many of these models came equipped with a pair of
series models had a translucent band. These models were branded as X-Treme for the Japanese domestic market. These models are identical to the surfing editions, and also released in 1996. They were designed for snowboarding and skateboarding competitions. The only difference is that these models came with nylon velcro bands
MRG-210 MRG-220 MRG-1000 MRG-1100 (Frogman) MRG-1200 MRG-3000 MRG-3000 MRG-3000 MRG-3000 MRG-3000 MRG-3000 MRG-8100 MRG-
December 2019. ^ a b Bonnier Corporation (September 2003). "Popular Science". The Popular Science Monthly. Bonnier Corporation: 24. ISSN 0161-7370. ^ Herve Borne (1 January 2005). "10 watches that changed the industry: The Casio G-Shock"
CNN. ^ a b Estlow, Ed (15 October 2013). "The History of the Casio G-Shock". Gear Patrol. Archived from the original on 17 July 2019. A b "Casio celebrates 100 million G-Shock Watch Blog". www.g-central.com. 31 August 2017. Retrieved 3 January 2018. ^ "Flashback Friday: First 'Mud
Resist' G-Shock a.k.a. G-Shock II Mudman DW-5500C-1". 6 September 2013. Retrieved 1 June 2022. ^ "DW-8400 MUDMAN users review by Hung Lo". 5 May 2005. Retrieved 1 June 2022. ^ a b "AW-500 and AWM-500: Revival of First Analog G-Shock Watch and Full Metal Screw-Back Edition". G-Central. 1 October 2020. Retrieved 2 June 2022. ^
"Casio G-Shock G-2000 model line (2000/2001)". 9 November 2011. Retrieved 1 June 2022. ^ "Series 6300 ::: Subseries DW-6300". Retrieved 1 June 2022. ^ "Series 6300 ::: Subseries DW-9300 Raysman First Tough Solar G-Shock by Bhree". 12 April
2004. Retrieved 1 June 2022. ^ "DW-9800". 30 March 2021. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dedicated to G-shock GW-100-1JF review: The forgotten son". 12 August 2021. Retrieved 1 June 2022. ^ "Dedicated to G-shock GW-100-1JF review: The forgotten son". 12 August 2021. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 18 October 2010. Retrieved 1 June 2022. ^ "Dw-9800". 
1A Watch Review". Retrieved 2 June 2022. ^ Biggs, John (8 October 2018). "The Casio Rangeman GPR-B1000 is a big watch for big adventures". Tech Crunch. Retrieved 2 June 2022. ^ "Baby-G". Casio. Retrieved 2 June 2022. ^ "The G-
SHOCK MRG-B2000 'Kachi-iro'". Hodinkee. Retrieved 31 May 2022. ^ "Casio Raises The Bar Again With Tough Recalibrating Radio Controlled Movement Using LED Precision System". 3 August 2008. Retrieved 2 June 2022. ^ "G-Shock Mini watches". G-Central. Retrieved 16 September 2019. ^ "G-SHOCK Unveils The S Series". Casio. 31 December
2014. Retrieved 31 May 2022. ^ "G-Shock 40th Anniversary Shock The World Live 2023". Casio. 9 November 2023. ^ "Stussy x GShock Collaboration Watches". www.stussy.com. Archived from the original on 9 January 2012. ^ "8 Watches Worn to
 Space". Gear Patrol. 4 March 2014. ...The Timex Datalink and various Casio G-Shock models (DW-5600C and 5600E, DW 6900, and DW 5900) have proven their merit, earning Nasa's qualification for manned space travel;... ^ Casio 3229 Module User's Guide last page; revision code: MA1012-A (refers to revision in the year 2010, month 12) ^ "G-Shock
 Japan releases DW-5600UE-1JF and DW-6900UB-9JF new standard models with LED light". www.gcentral.com. 30 November 2023. ^ "Review of the Casio G-Shock GW-M5610 — Immortal Classics with Solar Power & Radio Accuracy". 11 February 2022. Retrieved 31 May
2022. ^ "Casio G-Shock GW-S5600 Watches". Retrieved 31 May 2022. ^ "G-Shock GW-5000-1JF and Other Japan-only 5000 Series Watches". 27 September 2021. Retrieved 31 May 2022. ^ "Casio G-Shock GB-6900 Bluetooth watch review". 21 June
2012. ^ "Full-Metal G-Shock GMW-B5000: GMW-B5000D-1 & GMW-B5000TFG-9 Stainless Steel Screw-Back with Solar & Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 27 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 27 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 27 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 27 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 28 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 29 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 29 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 20 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 20 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin and Composite Bands". 20 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin Bands". 20 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, Multi-Band 6 Resin Squares with Resin Bands". 20 September 2018. Retrieved 31 May 2022. ^ "G-Shock GW-B5600BC: Tough Solar, Bluetooth, B
"The pricey G-Shock MRG-B5000 looks worth it in these videos". 1 March 2022. Retrieved 31 May 2022. "MTG-G1000 New G-Shock MT-G with GPS Hybrid Timekeeping - G-Central G-Shock Watch Fan Blog". www.g-central.com. 8 September 2015. Retrieved 22 July 2019. "Introducing the $70,000 G-Shock "Dream Project" in Solid, 18k Yellow
Gold". Retrieved 31 May 2022. ^ Pina, Zach (23 February 2020). "Unboxing th Solid Gold G-Shock G-D5000-9JR 'Dream Project' at Topper Jewelers". Retrieved 2 June 2022. ^ Biggs, John (8 October 2018). "The Casio Rangeman GPR-B1000 is a big watch for big
adventures". Tech Crunch, Retrieved 21 May 2019. Pennington, Cole (28 January 2020), "The Value Proposition The Cult Classic Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review)", G-Central, 23 March 2020, Retrieved 2 June 2022. Store Casio G-Shock GA-2100 Is So Popular (Review) Is So Po
Casio". 2 November 2021. Retrieved 2 June 2022. ^ Boxall, Andy (28 April 2022). "The tech-boosted G-Shock GA-B2100 watch is a great buy". Digital Trends. Retrieved 2 June 2022. ^ Weppelink, Jorg (21 February 2023). "Hands-On With The Golden Casio G-Shock "CasiOak" GM-B2100GD". Fratello Watches. Retrieved 30 March 2023. ^ "G-Shock GA-B2100 watch is a great buy".
MRG-B2100B-1A: First 2100-based MR-G series is a $4,800 CasiOak". G-Central. 28 May 2024. Retrieved 26 June 2024. ^ "Casio officially announces 40th Anniversary Dream Project #2 G-Shock G-D001 18k gold watch designed with Al assistance". www.g-central.com. 17 October 2023. ^ "G-SHOCK 40TH ANNIVERSARY DREAM PROJECT #2". G-Shock G-D001 18k gold watch designed with Al assistance with All assistance with Al
Shock. ^ "The one-of-one 18 karat gold G-Shock G-D001 sold for $400,050 at auction ($315K winning bid plus buyer's premium)". www.g-central.com. 10 December 2023. ^ Riche, Rhonda (30 November 2017). "A look back at the history of the Casio G-Shock". Watchoninsta. Retrieved 6 July 2020. ^ "Casio G-SHOCK Officially Breaks Guinness World".
Records Title". Casio. 12 December 2017. Retrieved 31 May 2022. ^ "Casio G-Shock Introduces Limited-Edition Dw6900 Timepieces". Archived from the original on 11 April 2020. Retrieved 11 April 2020. ^ "Standard Analog-Digital - Products". G-SHOCK -
CASIO. Retrieved 29 September 2020. ^ "MRG Series". Retrieved 31 May 2022. Wikimedia Commons has media related to G-Shock website Casio Protrek Shock Base - Biggest G-Shock Base - Biggest G-Shock Website Casio Protrek Shock Base - Biggest G-Shock Base - Biggest G
life without the distractions of a smartwatch or worrying about scratching a precious traditional watch. Still, it can be confusing to figure out how to set the time on one at first. I promise you it's not as complicated as it seems. In this article, we'll break down how to set the time on any G-SHOCK you might own. First, we'll take a look at the general G-
SHOCK button layout, then get into how to set the time on most models, followed by some more specific models and G-SHOCK you have. If you still have guestions, do not hesitate to drop us a comment below with your model, and we'll gladly help you out. Let's get
started! Let's look at the typical G-SHOCK button layout, which will make setting the time more obvious. There are four (sometimes 5) main buttons on a G-SHOCK watch. The Adjust button on the upper left is used to enter configuration mode.
currently viewing. Typically, when it is pressed, whatever setting is selected starts flashing on the screen, showing that it can now be adjusted. Next is the Mode button, located on the bottom left. There are usually four major modes in a G-SHOCK Watch: alarm mode, time-keeping mode, timer, and global time mode. Repeatedly pressing the mode
button allows the user to switch through modes until they find the desired mode they would like to use. Forward button, located on the forward button when not
adjusting settings. It can be used to turn on the watch's light-up display or to start/stop the chronograph or alarm. The exact function varies from watch to watch and will very clearly be written on it. Reverse Finally, the reverse is the opposite of the forward button. It moves any setting backward when in Adjust mode. Like the Forward button, the
Reverse button often has alternate usage when not in adjust mode. In some watches, it might light up the watch display or start the chronograph stopwatch. To give you the short and sweet answer that will work for most common digital G-SHOCK DW5600, but
these should apply just as well to most G-SHOCKS, especially those with a digital display. Ensure you are in the standard timekeeping mode (displaying the current time). If not, you can get into the timekeeping mode, press the ADJUST button, usually on the
top left. The seconds should start blinking. You can reset the seconds to 0 by hitting the upper right button on the bottom left, which should cause the hour forward until the current hour is set. While in this mode, pressing the REVERSE button on the bottom right to move the hour forward until the current hour is set.
will switch the time between 12 and 24-hour (military time) timekeeping. Press the MODE button again, which will cause the minutes to blink. Press the minutes to blink. Press the minutes to blink.
Press the upper right button to move the year forward and the bottom right to move it back until the current year is set. If you missed a step, you can press MODE again to cycle
through the seconds/hours/minutes/year/month/day, and use the adjust button to adjust it to the correct time. When finished, press the ADJUST button once again. This will return the watch to the normal timekeeping mode. You have now successfully set the time. An analog G-SHOCK doesn't just have a digital display but also hands like a traditional
watch to tell time and other features. For these instructions, we're going to be using my G-SHOCK CasiOAK 2110 as an example. Put the watch into "TIME" mode by pressing the mode button until it reaches "TIME" mode. A higher-pitched beep will let you know you're now in TIME mode. Press and hold the adjust button until you hear the watch
beep. Next, press the mode button to sort through the different settings available. With each press of the mode button, it will rotate between the hour, minute, and second hands, both on the digital, and analog displays. Once the correct option you wish to adjust, either analog or digital, is selected, you can move on to the next step. Adjust the
highlighted hour, minute, day, month, or year setting using the forward and reverse button, you guessed it, moves the hand forward, and the reverse button, you guessed it, moves the hand forward, and the reverse button, you guessed it, moves the hand forward, and the reverse button, you guessed it, moves the hand forward, and the reverse button, you guessed it, moves the hand forward, and the reverse button, you guessed it, moves the hand forward, and the reverse button, you guessed it, moves the hand forward, and the reverse button, you guessed it, moves the hand forward and reverse button.
again to confirm these changes and finish setting the time. Atomic G-SHOCKs use calibration radio signals from nearby transmitters to correct the time. They do this automatically and periodically (every night, for instance) or manually, and they are compatible with six transmission stations worldwide. There are two settings that will determine how
you set the time on one of these bad boys: auto-receive or manually receive. Auto receive operations in a day is successful, the watch will not perform the other auto-receive operations. An auto-receive operation may fail due
to physical conditions or obstructions or if the watch is not in World Time or time-keeping mode. The following steps outline how time is set to receive the signal to correct the time, usually at night), ensure that your watch is in time-keeping mode. If it is not,
navigate to this mode by pressing the mode button until you reach time-keeping mode. You should expect to find the watch's antenna at the 12 o'clock position. Hold the watch with this position facing the window. The watch will subsequently receive the signal and calibrate the time. This can take up to 16 minutes, but it usually takes between 3 and 8
minutes. Ensure you are in time-keeping mode. Hold down the bottom right button for at least two seconds or until "RC!" appears on the screen. When the reception starts, a signal level indicator appears on the screen. The time should now be synced. Using your
phone as a transmitter for your atomic G-Shock is only possible in Japan, North America, UK, Europe, and China. You may sometimes find that you are not in range of any national time transmitters, or the signal is disturbed by geographic land features, weather, structures, radio interference, or any number of problems that can affect time calibration
In this case, you can use your own transmitter, such as "Radio Wave Sync" used in the video below. Download a transmitter app such as "radio wave sync" which calibrates radio-controlled watches. Set the home city to a city covered by the radio stations
such as Tokyo. To do this, Press the mode button until WT appears on the screen, signifying you are in world time. Use the forward button to cypher through the city you want the watch to be set in. Press the adjust and reverse buttons at the same time to choose it. Your watch then adjusts its time. Disable automatic time
adjustment on your phone and change your phone time zone to the city you have chosen on your watch. Open the "radio station. Press the mode button on the G-SHOCK to enter receiving mode. The watch should display the date and time of the last time it synched with the radio station. Start the
manual receive by following the instructions in the previous section of this article, "Manual Receive." Hold the watch close to the speaker of your phone. Getting this right will take some practice. Because you will have to place
the watch very close to the phone and figure out which position allows the watch to receive the strongest signal. You will also need to stay silent throughout the operation. Be patient. This will take some time (no pun intended)! When the reception has ended (See Step 3 of the previous section), change your city back to your local city. Some G-
SHOCKs have Bluetooth capability and can be linked to a smartphone. While connected to a smartphone with your G-SHOCK, which you can then use to set the time. Enable the phone's Bluetooth. Check your
phone's manual for more information on how to do this. Pair the phone with the watch. Ensure that the phone is within a meter of the watch will automatically sync the time with your phone. Most G-SHOCKs can't change time zones automatically, except in
the case of Bluetooth-enabled watches. Once your G-SHOCK is linked to your phone via Bluetooth, follow these instructions to change the time zone. Hold the
adjust button for a few seconds to set your time zone. Ensure you are in time-keeping mode and hold down the screen. Release the button to cipher through the settings. When you reach the setting you want to change, such
as the hour, for instance, use the reverse and forward buttons to change the settings as desired. Repeat steps 3 and 4 to change any other settings. Press the adjust button once when you have finished setting the time. For more information, watch this information, watch this information and the setting the time on a G-SHOCK Mud master. Many G-SHOCKs are also
powered by solar energy. These watches are charged whenever their faces are exposed to sunlight. Setting the time on this variety is similar to the previous method depending on whether it is a digital G-SHOCK, analog, or Bluetooth. The solar watches are exposed to sunlight.
fantastic no-nonsense watches that can stand up to just about anything you throw at them. Setting the time on them can be confusing at first, with their many features, time zones, and settings to keep track of. But follow the instructions for your specific type of G-SHOCK in this article, or drop us a comment below, and we'll be happy to help!
Personal timepiece For other uses, see Watch (disambiguation). A modern wristwatch featuring solar charging and Bluetooth capabilities A 1983 Casio watch with touchscreen A watch is a timepiece carried or worn by a person. It is designed to maintain a consistent movement despite the motions caused by the person's activities. A wristwatch is worn
around the wrist, attached by a watch strap or another type of bracelet, including metal bands or leather straps. A pocket watch is carried in a pocket, often attached to a chain. A stopwatch is a type of watch that measures intervals of time. During most of their history, beginning in the 16th century, watches were mechanical devices, driven by
clockwork, powered by winding a mainspring, and keeping time with an oscillating balance wheel. These are known as mechanical watches.[1][2] In the 1960s the electronic quartz watch was invented, powered by a battery and keeping time with a vibrating quartz crystal. By the 1980s it had taken over most of the watch market, in what became
known as the quartz revolution (or the quartz revolution (or the quartz crisis in Switzerland, whose renowned watch industry it decimated).[3][4] In the 2010s, smartwatches emerged, small wrist-worn computers with touchscreens and with functions that go far beyond timekeeping. Modern watches often display the day, date, month, and year. Mechanical watches may have
extra features ("complications") such as moon-phase displays and different types of tourbillon. Quartz watches may even incorporate calculators, GPS[5] and Bluetooth technology or have heart-rate monitoring capabilities, and some use
radio clock technology to regularly correct the time. Most watches used mainly for timekeeping have guartz movements. But expensive collectible watches, valued more for their elaborate craftsmanship, aesthetic appeal, and glamorous design than for timekeeping, often have traditional mechanical movements, despite being less accurate and more
expensive than their electronic counterparts. [3][4][6] As of 2019, the most expensive watch ever sold at auction was the Patek Philippe Grandmaster Chime for US$31.2 million. [7] Main article: History of watches See also: History of timekeeping devices A pomander watch from 1530, which once belonged to Philip Melanchthon and is now in the
Walters Art Museum, Baltimore Watches evolved from portable spring-driven clocks, which first appeared in 15th-century beginning in the German cities of Nuremberg and Augsburg, were transitional in size between clocks and watches.[8] Nuremberg clockmaker
Peter Henlein (or Henle or Hele) (1485-1542) is often credited as the inventor of the watch.[9][10] However, other German clockmakers were creating miniature timepieces during this period, and there is no evidence Henlein was the first.[10][11] Watches were not widely worn in pockets until the 17th century. One account suggests that the word
 "watch" came from the Old English word woecce - which meant "watchman" - because town watchmen used the technology to keep track of their shifts at work.[12] Another says that the term came from 17th-century sailors, who used the new mechanisms to time the length of their shipboard watches (duty shifts).[13] A rise in accuracy occurred in
1657 with the addition of the balance spring to the balance wheel, an invention disputed both at the time and ever since between Robert Hooke and Christiaan Huygens. This innovation significantly improved the accuracy of watches, reducing errors from several hours a day[14] to approximately 10 minutes per day,[15] which led to the introduction of
the minute hand on watch faces in Britain around 1680 and in France by 1700.[16] The increased accuracy of the balance wheel focused attention on errors caused by other parts of the movement, igniting a two-century wave of watchmaking innovation. The first thing to be improved was the escapement. The verge escapement was replaced in quality
watches by the cylinder escapement, invented by Thomas Tompion in 1695 and further developed by Robert Hooke - allowed some increase in the volume of watch production, although finishing and assembling was still done by hand until
```

```
well into the 19th century. Founded in 1735, Blancpain is the oldest registered watch brand in the world. A major cause of error in balance-wheel timepieces, caused by changes in elasticity of the balance wheel invented in 1765 by Pierre Le Roy and
improved by Thomas Earnshaw (1749-1829). The lever escapement, the single most important technological breakthrough, though invented by Thomas Mudge in 1754[17] and improved by Josiah Emery in 1785,[18] only gradually came into use from about 1800 onwards, chiefly in Britain.[19] A watch drawn in Acta Eruditorum, 1737 The British
predominated in watch manufacture for much of the 17th and 18th centuries, but maintained a system of production that was geared towards high-quality products for the élite. [20] The British Watch Company modernized clock manufacture with mass-production techniques and the application of duplicating tools and machinery in 1843. In the United
 States, Aaron Lufkin Dennison started a factory in 1851 in Massachusetts that used interchangeable parts, and by 1861 a successful enterprise operated, incorporated as the Waltham Watch Company.[21] Early wristwatch by Waltham with a metal shrapnel guard over the crystal, worn by soldiers in World War I (German Clock Museum) Mappin &
Webb's campaign wristwatch, advertised as having been in production since 1898 The concept of the wristwatch goes back to the production of the very earliest watches in the 16th century. In 1571, Elizabeth I of England received a wristwatch, described as an "armed watch", from Robert Dudley. [22] 17th century French mathematician Blaise Pascal
is said to have worn a watch on his left-wrist.[23] The oldest surviving wristwatch (then described as a "bracelet watch") is one made in 1806, and given to Joséphine de Beauharnais.[22] From the beginning, wristwatch watch-maker
Abraham-Louis Brequet made a wristwatch for the Queen of Naples. [25] The first Swiss wristwatch was made in the year 1868 by the Swiss watch-maker Patek Philippe for Countess Koscowicz of Hungary. [26] [27] Wristwatches were first worn by military men towards the end of the 19th century, having increasingly recognized the importance of
synchronizing maneuvers during war without potentially revealing plans to the enemy through signaling. The Garstin Company of London patented a "Watch Wristlet" design in 1893, but probably produced similar designs from the 1880s, such as
during the Anglo-Burma War of 1885, [24] During the First Boer War of 1880-1881, the importance of coordinating troop movements and synchronizing attacks against highly mobile Boer insurgents became paramount, and the use of wristwatches subsequently became widespread among the officer class. The company Mappin & Webb began
production of their successful "campaign watch" for soldiers during the campaign in the Sudan in 1898 and accelerated production for the Second Boer War of 1899-1902 a few years later. [24] In continental Europe, Girard-Perregaux and other Swiss watchmakers began supplying German naval officers with wristwatches in about 1880. [22] Early
models were essentially standard pocket-watches fitted to a leather strap, but by the early 20th century, manufacturers began producing purpose-built wristwatch design with the now standard wire lugs in 1904, Louis Cartier produced a wristwatch to allow his friend Alberto
Santos-Dumont to check flight performance in his airship while keeping both hands on the controls as this proved difficult with a pocket watch. [28][29][30] Cartier still markets a line of Santos-Dumont watches and sunglasses. [31] A Vacheron Constantin patrimony wristwatch In 1905, Hans Wilsdorf moved to London, and set up his own business,
Wilsdorf & Davis, with his brother-in-law Alfred Davis, providing quality timepieces at affordable prices; the company became Rolex in 1915.[32] Wilsdorf was an early convert to the First World War of 1914-1918 dramatically shifted public
perceptions on the propriety of the man's wristwatch and opened up a mass market in the postwar era.[34] The creeping barrage artillery gunners and the infantry advancing behind the barrage. Service watches produced during the war were specially designed
for the rigors of trench warfare, with luminous dials and unbreakable glass. The UK War Office began issuing wristwatches to combatants from 1917.[35] By the end of the war, almost all enlisted men wore a wristwatch (or wristlet), and after they were demobilized, the fashion soon caught on: the British Horological Journal wrote in 1917, that "the
wristlet watch was little used by the sterner sex before the war, but now is seen on the wrist of nearly every man in uniform and of many men in civilian attire."[36] By 1930, the wristwatch vastly exceeded the pocket watch in market share by a decisive ratio of 50:1.[citation needed] John Harwood invented the first successful self-winding system in
1923. In anticipation of Harwood's patent for self-winding mechanisms expiry in 1930, Glycine founder Eugène Meylan started development on a self-winding system as a separate module into its watches in October 1930, and began
mass-producing automatic watches.[37] The Elgin National Watch Company and the Hamilton Watch Company pioneered the first electric watch.[38] The first electric movements used a battery as a power source to oscillate the balance wheel. During the 1950s, Elgin developed the model 725, while Hamilton released two models: the first, the
Hamilton 500, released on 3 January 1957, was produced into 1959. This model had problems with the contact wires misaligning, and the watches returned to Hamilton for alignment. The Hamilton 505, an improvement on the 500, proved more reliable: the contact wires were removed and a non-adjustable contact on the balance assembly delivered
the power to the balance wheel. Similar designs from many other watch companies followed. Another type of electric watch was developed by the Bulova company that used a tuning-fork resonator instead of a traditional balance wheel to 360 Hz with the
tuning-fork design. The commercial introduction of the Germ of the Seiko Astron 35SQ, and in 1970 in the form of the Omega Beta 21 was a revolutionary improvement in watch technology. In place of a balance wheel, which oscillated at perhaps 5 or 6 beats per second, these devices used a quartz-crystal resonator, which
vibrated at 8,192 Hz, driven by a battery-powered oscillator circuit.[39] Most quartz movements have been designed with frequencies as high as 262 kHz. Since the 1980s, more quartz movements have been marketed.[40] The Timex Datalink wristwatch was introduced in
1994.[41][42][43] The early Timex Datalink Smartwatches realized a wireless data transfer mode to receive data from a PC. Since then, many companies have released their own iterations of a smartwatch, such as the Apple Watch, Samsung Galaxy Watch, and Huawei Watch. A hybrid smartwatch is a fusion between a regular mechanical watch and a
smartwatch.[44] The movement and case are the basic parts of a watch. A watch band or bracelet is added to form a wristwatch; alternatively, a watch chain is added to form a pocket watch. The case is the outer covering of the watch. The case back is the back portion of the watch band or bracelet is added to form a wristwatch; alternatively, a watch chain is added to form a pocket watch. The case is the outer covering of the watch.
replacement) depends on the type of case backs, which are generally categorized into four types: Snap-off case backs (threaded case backs): the entire watch back must be rotated to unscrew from the case. Often it has 6 notches on the external part
of the case back. Screw back cases: tiny screws hold the case unibody: the only way into the case involves prying the crystal off the front of the window or watch glass, is the transparent part of the case that allows viewing the hands and the dial of the movement. Modern wristwatches almost always
use one of 4 materials:[46] Acrylic glass (plexiglass, hesalite glass): the most impact-resistant ("unbreakable"[47][48]), and therefore used in practically all low-cost watches. Mineral crystal: a tempered glass. Sapphire-coated mineral crystal
Synthetic sapphire crystal: the most scratch-resistant; it is difficult to cut and polish, causing watch crystal in place. [49] The lugs are small metal projections at both ends of the wristwatch case where the watch band attaches to the watch case. [49] The case and the
lugs are often machined from one solid piece of stainless steel. [50] Different kinds of movement, while the right one has a more common 12-hour dial and a "1s" quartz movement. A Russian mechanical
watch movement with exhibition case back, showing its movement. A so-called mystery watch, it is the first transparent watch, [51] c. 1890. The movement is fitted with a cylinder escapement. The movement is fitted with a cylinder escapement watch, [51] c. 1890. The movement is fitted with a cylinder escapement watch, [51] c. 1890. The movement is fitted with a cylinder escapement.
month, and day).[52] Movements may be entirely electronic (potentially with no moving parts), or they might be a blend of both. Most watches intended mainly for timekeeping today have electronic movements, with mechanical hands on the watch face indicating the time. Main article: Mechanical watch Compared to electronic
movements, mechanical watches are less accurate, often with errors of seconds per day; are sensitive to position, temperature, [54] and magnetism; [54] are costly to produce; require regular maintenance and adjustments; and are more prone to failures. Nevertheless, mechanical watches attract interest from consumers, particularly among watch
collectors. Skeleton watches are designed to display the mechanism for aesthetic purposes. A mechanism to control and limit the unwinding and winding parts of a spring, converting what would otherwise be a simple unwinding into a controlled and periodic energy release. The movement also uses a balance
wheel, together with the balance spring (also known as a hairspring), to control the gear system's motion in a manner analogous to the pendulum of a pendulu
tourbillon, they are expensive, and typically found in prestigious watches. The pin-lever escapement (called the Roskopf), which is a cheaper version of the fully levered movement, was manufactured in huge quantities by many Swiss manufacturers, as well as by Timex, until it was replaced by
quartz movements. [55][56][57] Introduced by Bulova in 1960, tuning-fork watches use a type of electromechanical movement with a precise frequency (most often 360 Hz) to drive a mechanical watch. The task of converting electronically pulsed fork vibration into rotary movements is done via two tiny jeweled fingers, called pawls. Tuning-fork
 watches were rendered obsolete when electronic quartz watches were developed. Traditional mechanical watch movements use a spiral spring called a mainspring as its power source that must be rewound periodically by the watch and
turning it. While most modern watches are designed to run 40 hours on a winding, requiring winding daily, some run for several days; a few have 192-hour mainsprings, requiring once-weekly winding. Main article: Automatic watch Automatic watch are designed to run 40 hours on a winding, requiring winding daily, some run for several days; a few have 192-hour mainsprings, requiring once-weekly winding.
spring. A Grand Seiko Automatic watch A self-winding or automatic watch is one that rewinds the mainspring of a mechanism was invented for pocket watches in 1770 by Abraham-Louis Perrelet,[58] but the first "self-winding", or "automatic", wristwatch was the
invention of a British watch repairer named John Harwood in 1923. This type of watch winds itself without requiring any special action by the wearer. It uses an eccentric weight, called a winding rotor, which rotates with the movement of the wearer.
automatically. Self-winding watches usually can also be wound manually to keep them running when not worn or if the wearer's wrist motions are inadequate to keep the watch wound. In April 2013, the Swatch Group launched the sistem51 wristwatch. It has a mechanical movement consisting of only 51 parts, [59] including 19 jewels and a novel self-
winding mechanism with a transparent oscillating weight.[60] Ten years after its introduction, it is still the only mechanical movement manufactured entirely on a fully automated assembly line, including adjustment of the balance wheel and the escapement for accuracy by laser.[61] The low parts count and the fully automated assembly make it an
inexpensive automatic Swiss watch. [62] See also: Electric watch and Quartz clock First quartz movements, also known as quartz movements.
to the crystal, which responds by changing its shape so, in combination with some electronic components, it functions as an oscillator. It resonates at a specific highly stable frequency, which is used to accurately pace a timekeeping mechanism. Most quartz movements are primarily electronic but are geared to drive mechanical hands on the face of
the watch to provide a traditional analog display of the time, a feature most consumers still prefer.[citation needed] In 1959 Seiko placed an order with Epson (a subsidiary company of Seiko and the 'brain' behind the quartz revolution) to start developing a quartz wristwatch. The project was codenamed 59A. By the 1964 Tokyo Summer Olympics,
Seiko had a working prototype of a portable quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototypes of an electronic quartz watch which was used as the time measurements throughout the event. [citation needed] The first prototype of an electronic quartz watch was used as the time measurement throughout the event. [citation needed] The first prototype of an electronic quartz watch was used as the time measurement throughout the event. [citation needed] The first prototype of an electronic quartz watch was used as the time measurement throughout the event. [citation needed] The first prototype of an electronic quartz watch was used as the time measurement throughout the electronic quartz watch was used as the electronic quartz watch
Switzerland. From 1965 through 1967 pioneering development work was done on a miniaturized 8192 Hz quartz oscillator, a thermo-compensation module, and an in-house-made, dedicated integrated circuit (unlike the hybrid circuits used in the later Seiko Astron wristwatch). As a result, the BETA 1 prototype set new timekeeping performance
records at the International Chronometric Competition held at the Observatory of Neuchâtel in 1967.[63] In 1970, 18 manufacturers exhibited production versions of the beta 21 wristwatch, including the Omega Electroquartz as well as Patek Philippe, Rolex Oysterquartz and Piaget. Quartz Movement of the Seiko Astron, 1969 (Deutsches
 Uhrenmuseum, Inv. 2010-006) The first quartz watch to enter production was the Seiko 35 SQ Astron, which hit the shelves on 25 December 1969, swiftly followed by the Swiss Beta 21, and then a year later the prototype of one of the world's most accurate wristwatches to date: the Omega Marine Chronometer. Since the technology having been
developed by contributions from Japanese, American and Swiss,[64] nobody could patent the whole movement of the quartz wristwatch, thus allowing other manufacturers to participate in the rapid growth and development of the quartz wristwatch, thus allowing other manufacturers to participate in the rapid growth and development of the quartz wristwatch market. This ended - in less than a decade - almost 100 years of dominance by the mechanical wristwatch
legacy. Modern quartz movements are produced in very large quantities, and even the cheapest wristwatches typically have quartz movement in a child's wristwatch may still be accurate to within half a second per day - ten times more
accurate than a mechanical movement.[65] After a consolidation of the mechanical watch industry in Switzerland during the 1970s, mass production of quartz wristwatches took off under the leadership of the Swatch Group of companies, a Swiss conglomerate with vertical control of the production of Swiss watches and related products. For quartz
wristwatches, subsidiaries of Swatch manufacture watch batteries (Renata), oscillators (Oscilloquartz, now Micro Crystal AG) and integrated circuits (Ebauches Electronic SA, renamed EM Microelectronic-Marin). The launch of the new SWATCH brand in 1983 was marked by bold new styling, design, and marketing. Today, the Swatch Group
maintains its position as the world's largest watch company. Seiko's efforts to combine the quartz and mechanical movements bore fruit after 20 years of research, leading to the introduction in 1999 and to the world in September 2005. The Spring Drive keeps time within quartz
standards without the use of a battery, using a traditional mechanical gear train powered by a spring, without the need for a balance wheel either. In 2010, Miyota (Citizen Watch) of Japan introduced a newly developed movement that uses a 3-pronged quartz crystal that was exclusively produced for Bulova to be used in the Precisionist or Accutron II
line, a new type of quartz watch with ultra-high frequency (262.144 kHz) which is claimed to be accurate to +/- 10 seconds a year and has a smooth sweeping second hand rather than one that jumps each second. [66] World's first radio clock wristwatch, Junghans Mega (analog model) Radio time signal watches are a type of electronic quartz watch
that synchronizes (time transfers) its time with an external time source such as in atomic clocks, time signals from GPS navigation satellites, the German DCF77 signal in Europe, WWVB in the US, and others. Movements of this type may, among others, synchronize the time of day and the date, the leap-year status and the state of daylight saving time
(on or off). However, other than the radio receiver, these watches are normal quartz watches are
electrical power in watches was as a substitute for the mainspring, to remove the need for winding. The first electrically powered watch, the Hamilton Electric 500, was released in 1957 by the Hamilton Watch Company of Lancaster, Pennsylvania. Watch batteries (strictly speaking cells, as a battery is composed of multiple cells) are specially designed
for their purpose. They are very small and provide tiny amounts of power continuously for very long periods (several years or more). In most cases, replacing the battery requires a trip to a watch-repair shop or watch dealer; this is especially true for watches that are water-resistant, as special tools and procedures are required for the watch to remain
water-resistant after battery replacement. Silver-oxide and lithium batteries are popular today; mercury batteries are used in some solar-powered watches.
Some electronic watches are powered by the movement of the wearer. For instance, Seiko's kinetic-powered quartz watches use the motion of the wearer's arm: turning a rotating weight which causes a tiny generator to supply power to charge a rechargeable battery that runs the watch. The concept is similar to that of self-winding spring movements
except that electrical power is generated instead of mechanical spring tension. Solar powered by light. A photovoltaic cell on the face (dial) of the watch converts light to electricity, which is used to charge a rechargeable battery or capacitor.
As long as the watch is regularly exposed to fairly strong light (such as sunlight), it never needs a battery replacement. Some models need only a few minutes of sunlight to provide weeks of energy (as in the Citizen Eco-Drive).
needed to power them (Synchronar, Nepro, Sicura, and some models by Cristalonic, Alba, Seiko, and Citizen). As the decades progressed and the efficiency of the solar cells increased while the power requirements of the movement and display decreased, solar watches began to be designed to look like other conventional watches.[67] A rarely used
power source is the temperature difference between the wearer's arm and the surrounding environment (as applied in the Citizen Eco-Drive Thermo). Poljot chronograph Casio AE12 LCA (liquid-crystal-analog) watch Traditionally, watches have displayed the time in analog form, with a numbered dial upon which are mounted at least a rotating hour
hand and a longer, rotating minute hand. Many watches also incorporate a third hand that shows the current second of the current minute. In quartz watches this second hand typically snaps to the next marker every second. In mechanical watches, the second hand may appear to glide continuously, though in fact it merely moves in smaller steps,
typically one-fifth to one-tenth of a second, corresponding to the balance wheel. With a duplex escapement, the hand advances every two beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel, typically 1/2-second; this happens every four beats (full period) of the balance wheel t
with the tri-synchro regulator of Spring Drive watches. All three hands are normally mechanical, physically rotating on the dial, although a few watches sold as jewelry or collectibles, and in these watches, the range of
different styles of hands, numbers, and other aspects of the analog dial is very broad. In watches sold for timekeeping, analog display remains very popular, as many people find it easier to read than digital display; but in timekeeping watches the emphasis is on clarity and accurate reading of the time under all conditions (clearly marked digits, easily
visible hands, large watch faces, etc.). They are specifically designed for the left wrist with the stem (the knob used for changing the time) on the right side of the watch from the watch is worn on the left wrist (as is traditionally
done). If one is left-handed and wears the watch on the right wrist, one has to remove the watch from the wrist to reset the time or to wind the watch. Analog watches, as well as clocks, are often marketed showing a display time of approximately 1:50 or 10:10. This creates a visually pleasing smile-like face on the upper half of the watch, in addition to
enclosing the manufacturer's name. Digital displays often show a time of 12:08, where the increase in the number of active segments or pixels gives a positive feeling. [68] Tissot, a Swiss luxury watchmaker, makes the Silen-T wristwatch with a touch-sensitive face that vibrates to help the user to tell time eyes-free. The bezel of the watch features
raised bumps at each hour mark; after briefly touching the hour, the watch vibrates continuously, and when the finger reaches the bump indicating the minute, the watch vibrates intermittently.[70] Eone Timepieces, a Washington
D.C.-based company, launched its first tactile analog wristwatch, the "Bradley", on 11 July 2013 on the Kickstarter website. The device is primarily designed for sight-impaired users, who can use the watch features raised marks at each hour and two moving,
magnetically attached ball bearings. One ball bearing, on the edge of the watch, indicates the hour, while the other, on the face, indicates the minute.[71][72] A digital display shows the time as a number, e.g., 12:08 instead of a short hand pointing towards the number 12 and a long hand 8/60 of the way around the dial. The digits are usually shown as
a seven-segment display. The first digital mechanical pocket watches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared. The first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared. The first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared. The first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century. In the 1920s, the first digital mechanical wristwatches appeared in the late 19th century with the late 19th century 
Bergey, the head of Hamilton's Pulsar division, said that he was inspired to make a digital timepiece by the then-futuristic digital clock that Hamilton themselves made for the 1968 science fiction film 2001: A Space Odyssey. On 4 April 1972, the Pulsar was finally ready, made in an 18-carat gold case and sold for $2,100. It had a red light-emitting
diode (LED) display. Digital LED watches were very expensive and out of reach to the common consumer until 1975, when Texas Instruments started to mass-produce LED watches inside a plastic case. These watches, which first retailed for only $20,[74] reduced to $10 in 1976, saw Pulsar lose $6 million and the Pulsar brand sold to Seiko.[75] A Casio
DBA-800 databank watch with phone dialling capabilities, c. 1987 An early LED watch that was rather problematic was The Black Watch made and sold by British company to cease production. Most watches with
LED displays required that the user press a button to see the time displayed for a few seconds because LEDs used so much power that they could not be kept operating continuously. Usually, the LED displays were superseded by liquid crystal
The first LCD watch with a six-digit LCD was the 1973 Seiko 06LC, although various forms of early LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as early as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as 1972 including the 1972 Gruen Teletime LCD watches with a four-digit display were marketed as 1972 including the 19
produced by the International Liquid Crystal Corporation of Cleveland, Ohio.[77] In Switzerland, Ebauches Electronic SA presented a prototype eight-digit LCD wristwatch showing time and date at the MUBA Fair, Basel, in March 1973, using a twisted nematic LCD manufactured by Brown, Boveri & Cie, Switzerland, which became the supplier of
LCDs to Casio for the CASIOTRON watch in 1974.[78] A problem with LCDs is that they use polarized light. If, for example, the user is wearing polarization of the display is roughly perpendicular to that of the glasses.[79][80] If the light that illuminates the display is
polarized, for example if it comes from a blue sky, the display may be difficult or impossible to read.[81] From the 1980s onward, digital watch technology vastly improved. In 1982, Seiko produced the Seiko TV Watch[82] that had a television screen built-in,[83] and Casio produced a digital watch with a thermometer (the TS-1000) as well as another
that could translate 1,500 Japanese words into English. In 1985, Casio produced the CFX-400 scientific calculator watch. In 1987, Casio produced one that would react to voice. In 1995, Timex released a watch that allowed the wearer to download and store data from a
mechanical wristwatch (1920s) A silver Pulsar LED watch from 1976 A Timex digital watch with an always-on display of the time and date A digital LCD watch with electroluminescent backlight Samsung Galaxy Watch series smartwatches with OLED displays This subsection needs additional citations for verification. Please help improve this article by
adding citations to reliable sources in this subsection. Unsourced material may be challenged and removed. Find sources: "Watch" - news · newspapers · books · scholar · JSTOR (June 2014) (Learn how and when to remove this message) An illuminated, so they
can be used in darkness. Various methods have been used to achieve this. Mechanical watches often have luminous paint on their hands and hour marks. In the mid-20th century, radioactive material was often used but produced small amounts of
radiation outside the watch that might have been hazardous.[84] Tritium was used as a replacement, since the radiation it produces has such low energy that it cannot penetrate a watch glass. However, tritium is expensive - it has to be made in a nuclear reactor - and it has a half-life of only about 12 years so the paint remains luminous for only a few
years. Nowadays, tritium is used in specialized watches, e.g., for military purposes (see Tritium illumination). For other purposes, luminous paint is sometimes used on analog displays, but no radioactive material is contained in it. This means that the display glows soon after being exposed to light and quickly fades. Watches that incorporate batteries
often have electric illumination in their displays. However, lights consume far more power than electronic watch movements. To conserve the battery, the light remains lit for a few seconds after the button is released, which allows the user to move the hand out of the way. Views of a
liquid crystal display, both with electroluminescent backlight switched on (top) and switched off (bottom) Digital LCD wristwatch Timex Ironman with electroluminescent backlight. The user had to press a button to light up the LEDs
which meant that the watch could not be read without the button being pressed, even in full daylight. In some types of watches, small incandescent lamps or LEDs illumination. Other watches use electroluminescent material to produce uniform
illumination of the background of the display, against which the hands or digits can be seen. Talking watches are available, intended for the blind or visually impaired. They speak the time out loud at the press of a button. This has the disadvantage of disturbing others nearby or at least alerting the non-deaf that the wearer is checking the time. Tactile
watches are preferred to avoid this awkwardness, but talking watches are preferred for those who are not confident in their ability to read a tactile watch reliably. Wristwatches with analog displays generally have a small knob, called the crown, that can be used to adjust the time and, in mechanical watches, wind the spring. Almost always, the crown
is located on the right-hand side of the watch so it can be worn of the left wrist for a right-handed individual. This makes it inconvenient to use if the watch is being worn on the right wrist. Some manufacturers offer "left-hand drive", aka "destro", configured watches which move the crown to the left side [85] making wearing the watch easier for left-
handed individuals. A rarer configuration is the bullhead watch. Bullhead watch are generally, but not exclusively, chronographs that are intended to be used as stopwatches off the wrist. Examples are the Citizen
Bullhead Change Timer[86] and the Omega Seamaster Bullhead.[87] Digital watches generally have push-buttons that can be used to make adjustments. These are usually equally easy to use on either wrist. A chronograph wristwatch by Audemars Piguet Breguet squelette watch 2933 with tourbillon Perpetual calendar wristwatch by Patek Philippe
Customarily, watches provide the time of day, giving at least the hour and minute, and often the second. Many also provide the current date, and some (called "complete calendar" or "triple date" watches) display the day of the week and the month as well. However, many watches also provide a great deal of information beyond the basics of time and
date. Some watches include alarms. Other elaborate and more expensive watches, both pocket and wrist models, also incorporate striking feature is an essential characteristic of true clocks and
distinguishes such watches from ordinary timepieces. This feature is available on most digital watches. A complication, which is the ability of the
 watch movement to function as a stopwatch, and the moonphase complication, which is a display of the lunar phase. Other more expensive complications include Tourbillon, Perpetual calendar, Minute repeater, and Equation of time. A truly complicated watch has many of these complications at once (see Calibre 89 from Patek Philippe for instance)
Some watches aimed at Muslims can both indicate the direction of Mecca[88] and have alarms that can be set for all daily prayer requirements.[89] Among watch enthusiasts, complicated watches are especially collectible. Some watches include a second 12-hour or 24-hour display for UTC or GMT. A physicians watch was used for measuring pulse,
administering medication or measuring anesthesia.[90] The similar-sounding terms chronograph and chronometer are often confused, although they mean altogether different things. A chronograph is a watch with an added duration timer, often a stopwatch complication (as explained above), while a chronometer watch is a timepiece that has met an
industry-standard test for performance under pre-defined conditions: a chronometer is a high quality mechanical or a thermo-compensated movement that has been tested and certified to operate within a certain standard of accuracy by the COSC (Contrôle Officiel Suisse des Chronomètres). The concepts are different but not mutually exclusive; so a
watch can be a chronograph, a chronometer, both, or neither. Timex Datalink USB Dress edition from 2003 with a dot matrix display; the Invasion video game is on the screen. Electronic sports watches, combining timekeeping with GPS and/or activity tracking, address the general fitness market and have the potential for commercial success (Garmin activity tracking).
Forerunner, Garmin Vivofit, Epson,[5] announced model of Swatch Touch series[91]). Braille watches have analog displays with raised bumps around the face to allow blind users to tell the time. Their digital equivalents use synthesised speech to speak the time on command. A so-called "Boule de Genève" (Geneva ball), c. 1890, 21.5k yellow gold. A
type of pendant watch intended to be used as an accessory for women. They usually came with a matching brooch or chain. Wristwatches and antique pocket watches are often appreciated as jewelry or as collectible works of art rather than just as timepieces. [92] This has created several different markets for wristwatches, ranging from very
inexpensive but accurate watches (intended for no other purpose than telling the correct time) to extremely expensive watches that serve mainly as personal adornment or as examples of high achievement in miniaturization and precision mechanical engineering. Traditionally, dress watches appropriate for informal (business), semi-formal, and formal
attire are gold, thin, simple, and plain, but increasingly rugged, complicated, or sports watches are considered by some to be acceptable for such attire. Some are made entirely of faceted sapphire (corundum). Many fashions and department stores
offer a variety of less-expensive, trendy, "costume" watches (usually for women), many of which are similar in quality to basic quartz timepieces but which feature bolder designs. In the 1980s, the Swiss Swatch company hired graphic designs and usually for women), many of which are similar in quality to basic quartz timepieces but which feature bolder designs. In the 1980s, the Swiss Swatch company hired graphic designs and usually for women), many of which are similar in quality to basic quartz timepieces but which feature bolder designs. In the 1980s, the Swiss Swatch company hired graphic designs and usually for women), many of which are similar in quality to basic quartz timepieces but which feature bolder designs. In the 1980s, the Swiss Swatch company hired graphic designs are similar in quality to basic quartz timepieces but which feature bolder designs.
expensive brand-name watches, constitutes an estimated US$1 billion market per year. [93] The Omega Speedmaster, selected by NASA for use on space missions in the 1960s The zero-gravity environment and other extreme conditions encountered by astronauts in space require the use of specially tested watches. The first-ever watch to be sent into
equipment, just a month before Gagarin's flight.[94] On 12 April 1961, Gagarin wore a Shturmanskie (a transliteration of Штурманские which actually means "navigator's") wristwatch during his historic first flight into space. The Shturmanskie was manufactured at the First Moscow Factory. Since 1964, the watches of the First Moscow Factory have
been marked by the trademark "Ποπέτ", transliterated as "POLJOT", which means "flight" in Russian and is a tribute to the many space trips its watches have accomplished. In the late 1970s, Poljot launched a new chrono movement, the 3133. With a 23 jewel movement and manual winding (43 hours), it was a modified Russian version of the Swiss
Valjoux 7734 of the early 1970s. Poljot 3133 were taken into space by astronauts from Russia, France, Germany and Ukraine. On the arm of Valeriy Polyakov, a Poljot 3133 were taken into space by astronauts from Russia, France, Germany and Ukraine. On the arm of Valeriy Polyakov, a Poljot 3133 were taken into space by astronauts from Russia, France, Germany and Ukraine. On the arm of Valeriy Polyakov, a Poljot 3133 were taken into space by astronauts from Russia, France, Germany and Ukraine.
78401 during STS 88. Through the 1960s, a large range of watches was tested for durability and precision under extreme temperature changes and vibrations. The Omega Speedmaster Professional was selected by NASA, the U.S. space agency, and it is mostly known thanks to astronaut Buzz Aldrin who wore it during the 1969 Apollo 11 Moon
landing. Heuer became the first Swiss watch in space thanks to a Heuer Stopwatch, worn by John Glenn in 1962 when he piloted the Friendship 7 on the first Swiss watch in space thanks to a Heuer Stopwatch, worn by John Glenn in 1962 when he piloted the Friendship 7 on the first Swiss watch in space thanks to a Heuer Stopwatch, worn by John Glenn in 1962 when he piloted the Friendship 7 on the first crewed U.S. orbital mission. The Breitling Navitimer Cosmonaute was designed with a 24-hour analog dial to avoid confusion between AM and PM, which are meaningless in space. It was first
worn in space by U.S. astronaut Scott Carpenter on 24 May 1962 in the Aurora 7 Mercury capsule. [96] Since 1994 Fortis is the exclusive supplier for crewed space authorized by the Russian Federal Space Administration (CNSA) astronauts wear the Fiyta [97] spacewatches. At BaselWorld, 2008, Seiko
announced the creation of the first watch ever designed specifically for a space walk, Spring Drive Spacewalk. Timex Datalink is flight certified by NASA for space travel. The Casio G-Shock DW-5600C and 5600E, DW 6900, and DW 5900 are Flight-Qualified for NASA space travel. [98][99]
Various Timex Datalink models were used both by cosmonauts and astronauts. Main article: Diving watch Seiko 7002-7020 Diver's 200 m on a 4-ring NATO style strap Watch construction may be water-resistant. These watches are sometimes called diving watches when they are suitable for scuba diving or saturation diving. The International
Organization for Standardization (ISO) issued a standard for water-resistant watches which also prohibits the term "waterproof" to be used with watches, which many countries have adopted. In the United States, advertising a watch as waterproof has been illegal since 1968, per Federal Trade Commission regulations regarding the "misrepresentation"
of protective features".[100][101][102] Water-resistance is achieved by the gaskets which forms a watertight seal, used in conjunction with a sealant applied on the case must also be tested in order to pass as water-resistant.[103] None of the tests defined by ISO 2281 for the Water Resistant mark are
 suitable to qualify a watch for scuba diving. Such watches are designed for everyday life and must be water-resistant during exercises such as swimming. They can be worn in different temperature and pressure conditions but are under no circumstances designed for scuba diving. The standards for diving watches are regulated by the ISO 6425
international standard. The watches are tested in static or still water under 125% of the rated (water) pressure, thus a watch with a 200-metre rating will be water-resistance is fundamentally different from non-dive watches, because every watch has to be fully
tested. Besides water resistance standards to a minimum of 100-metre depth rating, ISO 6425 also provides eight minimum requirements for mechanical diver's watches for mixed-gas saturation diving two additional ISO 6425
water-related work, or fishing. Water Resistant 50 m Suitable for swimming, white-water refting, non-snorkeling, swimming, snorkeling, sailing, and water sports. Not suitable for diving. Water Resistant 200 m Suitable for professional
marine activity and serious surface water sports. Suitable for diving at depths not requiring helium gas. Diver's 100 m Minimum ISO standard for scuba diving at depths not requiring helium gas. Typical ratings for contemporary diver's
watches. Diver's 300+ m helium safe Suitable for saturation diving (helium-enriched environment). Watches designed for helium mixed-gas diving will have additional markings to indicate this. Some watches use bar instead of meters, which may then be multiplied by 10, and then subtract 10 to be approximately equal to the rating based on metres.
Therefore, a 5 bar watch is equivalent to a 40-metre watch. Some watches are rated in atmospheres (atm), which are roughly equivalent to bar.[citation needed] Polimaster PM1603B dosimeter watch Watches with built-in geiger counters exist for contractors working in the nuclear industry and military personnel specializing in nuclear ordnance. The
first known example was the Raketa Atom of 1954.[106] A geiger counter watch was famously used in the 1965 James Bond movie Thunderball where Sean Connery's character uses a modified Breitling Top Time to find stolen nuclear warheads. Polimaster, Huatec, MTM Special Ops manufacture dosimeter watches. Main article: Direction-finding
watch There is a traditional method by which an analog watch can be used to locate north and south. The Sun appears to move in the sky over a 24-hour period while the hour hand of a 12-hour clock face takes twelve hours to complete one rotation. In the northern hemisphere, if the watch is rotated so that the hour hand points toward the Sun, the
point halfway between the hour hand and 12 o'clock will indicate south. For this method to work in the southern hemisphere, the 12 is pointed toward the Sun and the point halfway between the hour hand and 12 o'clock will indicate south. For this method is
 accurate enough to be used only at fairly high latitudes. Boule de Genève Clock Coin watch Complication List of 24-hour watch brands List of most expensive watch shock-resistant watch Smart watch Smart watch Smart watch Tachymeter (watch) Talking clock The Holya
Trinity Trench watch Watchmaker Obrey (watches) ^ "CWorld | Christopher Ward | QUARTZ VS AUTOMATIC". www.christopherward.com. Archived from the original on 27 November 2018. ^ "What is a Watch Movement? Quartz vs Automatic vs Manual vs Kinetic | Est.1897". est1897.co.uk. Archived from the original on 27 November 2018.
27 November 2018. Retrieved 27 November 2018. ^ a b "Four Revolutions: Part 1: A Concise History Of The Quartz Revolution - HODINKEE. Archived from the original on 30 May 2019. Retrieved 27 November 2018. ^ a b "Four Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolution - HODINKEE. Archived from the original on 30 May 2019. Retrieved 27 November 2018. ^ a b "Four Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolution - HODINKEE. Archived from the original on 30 May 2019. Retrieved 27 November 2018. ^ a b "Four Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Concise History Of The Quartz Revolutions: Part 1: A Conc
original on 27 November 2018. Retrieved 27 November 2018. ^ a b "Epson announces world's lightest GPS watch". The Verge, 21 February 2012. Archived from the original on 26 April 2012. ^ "Mechanical Watches Almost Disappeared Forever. Here's How They Didn't". Bloomberg.com. 4 January 2018. Archived from the
original on 18 November 2018. Retrieved 27 November 2018. Achieved 27 November 2018. Achieved 27 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 17 July 2020. Retrieved 17 July 2020. Achieved 27 November 2018. Achieved 27 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 17 July 2020. Achieved 27 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 17 July 2020. Achieved 27 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe's $31 Million Grandmaster Chime Becomes Most Expensive Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe Watch Ever Sold". Barrons. Archived from the original on 18 November 2019. "Patek Philippe Watch Ever Sold". Barrons. Archived from the Original Original Original Original Original Original Or
pp. 133-137. ISBN 0-7808-0008-7. {{cite book}}: ISBN / Date incompatibility (help) ^ Carlisle, Rodney P. (2004), Scientific American Inventions and Discoveries, USA: John Wiley & Sons, pp. 143, ISBN 0471244104, watch clock henlein. ^ a b Usher, Abbot Payson (1988). A History of Mechanical Inventions. Courier Dover. p. 305. ISBN 0-486-25593-X
Archived from the original on 3 July 2023. Retrieved 19 December 2022. ^ Dohrn-van Rossum, Gerhard (1997). History of the Hour: Clocks and Modern Temporal Orders. Univ. of Chicago Press. p. 121. ISBN 0-226-15510-2. Archived from the original on 3 July 2023. Retrieved 23 January 2023. ^ "Watch". The New Encyclopædia Britannica, 15th
Edition. Vol. 4. Encyclopædia Britannica, Inc. 1983. pp. 746-747. ISBN 0-85229-400-X. Retrieved 3 June 2012. ^ Haven, Kendall F. (2006). 100 Greatest Science Inventions of All Time. Libraries Unlimited. p. 65. ISBN 1-59158-264-4. Archived from the original on 3 July 2023. Retrieved 29 October 2020. ^ Milham 1945, p.226 ^ "A Revolution in
Timekeeping". A Walk Through Time. National Institute of Standards and Technology. 2004. Archived from the original on 3 July 2023. Retrieved 5 June 2018. ^ Forster, Jack. "The Tourbillon Chronicles: Birth Of The Tourbillon"
www.the1916company.com. Retrieved 2 October 2023. ^ "Timeline of Clocks and Watches". History of Watch. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking". WristCheck. Retrieved 2 October 2023. ^ Bajpai, Neha S. "An introduction to British watchmaking".
Press. ISBN 9781572305892. Archived from the original on 3 July 2023. Retrieved 7 February 2013. ^ Roe, Joseph Wickham (1916), English and American Tool Builders, New Haven, Connecticut: Yale University Press, LCCN 16011753, archived from the original on 3 July 2023, retrieved 12 November 2015. Reprinted by McGraw-Hill, New York and
 London, 1926 (LCCN 27-24075); and by Lindsay Publications, Inc., Bradley, Illinois, (ISBN 978-0-917914-73-7). a b c Bruton, Eric (2000). The History of Clocks & Watches. Little, Brown and Company. p. 183. ISBN 0316853550. Caws, Mary Ann (2017). Blaise Pascal: Miracles and Reason. Reaktion Books. p. 147. a b c "The Evolution of the
Wristwatch". Archived from the original on 8 December 2013. Retrieved 8 December 2013. Terrieved 8 December 2020. Selcher, David (23 October 2020). Selcher, David (23 October 2020). Terrieved 30 December 2020. Retrieved 30 December 2020. Selcher, David (23 October 2020).
2013). "Wrist Watches: From Battlefield to Fashion Accessory". The New York Times. Archived from the original on 23 October 2021. Retrieved 23 August 2016. A "Aviation Pioneer Scored A First in Watch-Wearing." The New York
Times, 25 October 1975. Retrieved: 21 July 2009. ^ 100 Designs/100 Years: A Celebration of the 20th Century (aka 100 Designs/100 Years: Innovative Designs of the 20th Century) (with Arlette Barré-Despond), Hove, UK: RotoVision, 1999 | ISBN 2-88046-442-0 ^ Cartier sunglasses. "Cartier sunglasses." (English). Archived 6 August 2012 at 100 Designs/100 Years: Innovative Designs/100 Years: Innovati
the Wayback Machine cartier.com. Retrieved: 9 December 2012. ^ Rolex Jubilee Vade Mecum published by the Rolex Watch Company in 1946. ^ Brozek, John E. "The History and Evolution of the Wristwatch". International Watch Magazine. Archived from the original on 11 June 2010. Retrieved: 4 March 2011. ^ Choi, David (May 2016). "WWI vets
popularized the most important accessory in a gentleman's wardrobe". Business Insider. Archived from the original on 24 June 2021. A Hoffman, Paul (2004). Wings of Madness: Alberto Santos-Dumont and the Invention of Flight. Hyperion Press. ISBN 0-7868-8571-8. A Ordnance Maintenance Wrist Watches, Pocket Watches, Pock
Stop Watches and Clocks. Read Books Ltd. 1945. ISBN 978-1-5287-6620-3. Archived from the original on 3 July 2021. {{cite book}}: ISBN / Date incompatibility (help) ^ Foskett, Stephen (19 July 2021). "Eugène Meylan, Glycine, and the Fight Over the First Automatic Watch". Grail Watch. Archived from the original on 1
July 2022. Retrieved 15 August 2022. ^ "Hamilton Electric: the Race to Create the World's First Battery-Powered Watch". wornandwound.com. 31 May 2018. Archived from the original on 2 July 2022. Retrieved 1 June 2022. ^ Frei, Armin H. (6 February 2020). "First-Hand: The First Quartz Wrist Watch". Engineering and Technology History Wiki
(ETHW). Archived from the original on 5 December 2021. Retrieved 5 December 2021. ^ Mondschein, Kenneth C. (15 September 2020). On Time: A History of Western Timekeeping. Johns Hopkins University Press. p. 166. ISBN 978-1-4214-3827-6. ^ Farion, Christine (31 October 2022). The Ultimate Guide to Informed Wearable Technology: A hands
on approach for creating wearables from prototype to purpose using Arduino systems. Packt Publishing Ltd. p. 6. ISBN 978-1-80324-447-1. Research & Development (Information not visible in web-based source.). Vol. 37. Chicago: Technical Publishing Company. 1 July 1995. p. 24. Timex and Microsoft Team Up on a Watch. BUSINESS
TECHNOLOGY. The New York Times. Reuters. 22 June 1994. p. 5. Retrieved 1 October 2024. Advances in Electronics and Electron Physics. Academic Press. 1 September 1980. p. 257. ISBN 978-0-08-057716-6. United States International Trade Commission. "Report to the Committee on Ways and Means on Watches and Parts Therefor" Archived
26 April 2023 at the Wayback Machine. 1977. p. 3 ^ "Mineral or Sapphire Glass - What is the Difference Between Watch Glasses?" Archived 26 September 2022 at the Wayback Machine. 2022. p. 486 ^ Oren Hartov. "Military
Watches of the World: Great Britain Part 1—The Boer War Through The Second World War" Archived 26 September 2022 at the Wayback Machine. ^ a b Katelyn Fogle. "10 Parts of a Watch Association. "What are the part names of watches?"
Archived 26 September 2022 at the Wayback Machine. ^ "Juan F. Déniz, The first transparent watch. Antiquarian Horology Journal" (PDF). Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF). Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) on 16 March 2018. Archived from the original (PDF) or 18 Ma
9238-0. ^ "Temperature". Advice on Your Timepiece. Tag Heuer. Archived from the original on 3 March 2011. ^ "The original pin-pallet". Archived from the original on 5 February 2012. Retrieved 27
May 2012. ^ "The Roskopf Watch". Musketeer.ch. Archived from the original on 1 April 2012. Retrieved 27 May 2012. ^ "Buffat The Roskopf watch". Watchmaking in Europe and China: Watches & Wonders". Richemont. Worldtempus. Archived from the
original on 11 October 2012. ^ Monika Schramm (29 June 2014). "Vollautomatisch vom Band". Frankfurter Allgemeine Zeitung (in German). Retrieved 24 September 2024. ^ Gisbert L. Brunner (19 October 2023). "Swatch Sistem51 - ein
Uhrwerk mit System". uhrenkosmos.com (in German). Retrieved 23 September 2024. ^ "Milestones: Pioneering Work on the Quartz Electronic Wristwatch, 1962-1967". ETHW. 31
December 2015. Archived from the original on 4 December 2021. Archived from the original on 4 December 2021. Archived from the original (PDF) on 13
October 2015. Retrieved 7 June 2016. ^ Quartz mechanisms usually have a resonant frequency of 32768 Hz, chosen for ease of use (being 215). Using a simple 15 stage divide-by-two circuit, this is turned into a 1 pulse per second signal responsible for the watch's timekeeping. ^ "Bulova introduces the most accurate watch in the world, the
Precisionist". Crunch gear. 23 March 2010. Archived from the original on 10 March 2011. Retrieved 8 July 2012. "History of the Solar Wristwatch". Soluhr.com. Archived from the original on 12 August 2007. Retrieved 17 January 2007. "Why Time Stands Still for Watchmakers". The New York Times. 28 November 2008. Archived from the original on 12 August 2007. "Why Time Stands Still for Watchmakers". The New York Times. 28 November 2008. Archived from the original on 12 August 2007. "Why Time Stands Still for Watchmakers". The New York Times. 28 November 2008. Archived from the original on 10 March 2011. Retrieved 17 January 2007. "Why Time Stands Still for Watchmakers". The New York Times. 28 November 2008. Archived from the original on 10 March 2011. Retrieved 17 January 2007. "Why Time Stands Still for Watchmakers". The New York Times. 28 November 2008. Archived from the original on 10 March 2011. Retrieved 17 January 2007. "Why Time Stands Still for Watchmakers". The New York Times. 28 November 2008. Archived from the original on 10 March 2011. Retrieved 17 January 2007. "Why Time Stands Still for Watchmakers". The New York Times. 28 November 2008. Archived from the original on 10 March 2011. Retrieved 18 January 2007. "Why Time Stands Still for Watchmakers". The New York Times 2008. Archived from the original on 10 March 2011. Retrieved 19 January 2007. "Why Times 2008. Archived from the original on 10 March 2011. Retrieved 19 January 2007. "Why Times 2008. Archived from the original on 10 March 2011. Retrieved 19 January 2007. "Why Times 2008. Archived from the original on 10 March 2011. Retrieved 19 January 2007. "Why Times 2008. Archived from the original on 10 March 2011. Retrieved 19 January 2007. "Why Times 2008. Archived from the original on 10 March 2011. Retrieved 19 January 2007. "Why Times 2008. Archived from the original on 10 March 2011. Retrieved 19 January 2008. Archived from the original ori
2017. ^ Anita Li (14 July 2013). "Innovative Tactile Watch Helps You 'Feel What Time it Is'". Mashable. Archived from the original on 16 July 2013. ^ Callum Borchers (12 July 2013). "Thanks to Kickstarter, tactile watch debuts". The Boston Globe. Archived from the original on 14 July 2013. A callum Borchers (12 July 2013). "Thanks to Kickstarter, tactile watch debuts". The Boston Globe. Archived from the original on 14 July 2013. A callum Borchers (12 July 2013). "Thanks to Kickstarter, tactile watch debuts".
Good Time: HILCO EC director donates prototype of world's first working digital watch to Smithsonian". Texas Co-op Power. February 2012. Archived from the original on 9 February 2012. Archived from the original on 9 February 2012. Archived from the original on 9 February 2013. Retrieved 21 July 2012. ^ ""TI $20 Watch", The Jerome and Dorothy Lemelson Center for the Study of Invention and Innovation, [Smithsonian Institution]".
Invention.smithsonian.org. Archived from the original on 18 August 2011. Retrieved 28 October 2017. ^ U.S. patent 4,096,550: Walter Boller, Marco Donati
Juerg Fingerle, Peter Wild, Illuminating Arrangement for a Field-Effect Liquid-Crystal Display as well as Fabrication of the Illuminating Arrangement, filed 15 October 1976. ^ "Casio TA-1000 Electronic Clock & Calculator". Magical Gadgets, Sightings & Brags. Pocket Calculator Show. Archived from the original on 15 April 2012.
Retrieved 17 January 2007. Peter J. Wild. "First-Hand:Liquid Crystal Display Evolution - Swiss Contributions". ETHW. Archived from the original on 3 July 2017. Retrieved 23 October 2011. Ostdiek, Vern; Bord, Donald (2012). Inquiry into Physics. Cengage Learning. p. 343. ISBN 978-1-133-71150-6. Extract of page 343 Breithaupt, Jim (2001).
Physics (illustrated ed.). Nelson Thornes. p. 151. ISBN 0-7487-6243-4. Extract of page 151 ^ Ge, Zhibing; Wu, Shin-Tson (2010). Transflective Liquid Crystal Displays. John Wiley & Sons. pp. 39-40. ISBN 978-0-470-68906-6. Extract of page 39-40 ^ "The Seiko TV Watch". HighTechies.com. Archived from the original on 6 October 2014. Retrieved 23
July 2014. ^ "T001 Instruction Manual" (PDF). Archived (PDF) from the original on 30 October 2012. Retrieved 27 May 2012. ^ "Alan's Vintage Watches". Radium Watch Dial Pattern. Archived from the original on 24 September 2015. Retrieved 16 April 2015. ^ "A Guide to "Destro": Watches from Sinn, Mühle, Citizen, and More - Worn & Wound".
Wornandwound.com. 10 May 2016. Archived from the original on 23 August 2017. Retrieved 28 October 2017. ^ "Muslim watches".
Watchismo. Archived from the original on 28 September 2015. Retrieved 14 April 2012. ^ "Islamic Watch & Clock". ALFAJR. Archived from the original on 4 April 2012. ^ Plug 2014, page 26 (German) ^ Nazanin Lankarani (21 January 2013).
"Buying Back a Forgotten Chinese Heritage". The New York Times. Archived from the original on 5 November 2020. Retrieved 22 January 2013. We try to explain why it makes sense to spend $500,000 on a watch. ^ "Havocscope Counterfeit Watches Market Value: $1 billion". Archived from the original on 6 May 2011. Retrieved 23 March 2011. ^
Burgess, Colin; Dubbs, Chris (2007). Animals in Space: From Research Rockets to the Space Shuttle (illustrated ed.). Springer Science & Business Media. p. 213. ISBN 978-0-387-49678-8. Extract of page 213 ^ "Russian Space Watches History". Netgrafik.ch. Archived from the original on 12 December 2020. Retrieved 27 May 2012. ^ "Navitimer, the
aviator favourite watch". Breitling. Archived from the original on 4 April 2018. Retrieved 17 January 2007. ^ "NASAexplores 5-8 Article: What Time is It?". 14 November 2006. Archived from the original on 14 November 2006. Retrieved 23 October
2011. ^ "NASAexplores - Express Lessons and Online Resources". 4 March 2008. Archived from the original on 27 December 2021. ^ Federal Trade Commission (16 June
1997). "FTC's Guides for Advertising and Marketing Watches Up for Review". FTC.gov. Archived (PDF) from the original on 27 December 2021. Retrieved 27 December 2021. A Code of Federal Regulations (1 January 1997). "16 CFR 245.5 - Misrepresentation of protective features" (PDF), govinfo.gov. Archived (PDF) from the original on 27 December 2021.
Retrieved 27 December 2001. ^ "Watch Industry Ouestions and Answers: Water-Resistance". The Watch Pages. 29 July 2020. Retrieved 14 November 2023. ^ "Watches". Jwnz.co.nz. Archived from the original on 18 February 2007. Retrieved 17 January 2007. Retrieved 17 January 2007. Retrieved 18 November 2023. ^ "Watches". Jwnz.co.nz. Archived from the original on 18 February 2007. Retrieved 19 July 2020. Retrieved 19 Ju
from the original on 15 July 2017. Retrieved 28 October 2017. ^ Beckett, Edmund, A Rudimentary Treatise on Clocks, Watches and Bells, 1903, from Project Gutenberg Berner, G.A., Illustrated Professional Dictionary of Horology, Federation of the Swiss Watch Industry FH 1961-2012 Daniels, George, Watchmaking, London: Philip Wilson Publishers,
1981 (reprinted 15 June 2011) De Carle, Donald, (Illustrations by E. A. Ayres), Practical Watch Repairing, 3rd edition, New York: Skyhorse Pub., 2008. ISBN 978-1-60239-357-8. Significant information on watches, their history, and inner workings. Denn, Mark, "The Tourbillon and How It Works," IEEE Control Systems Magazine, June 2010, IEEE
Control Systems Society, DOI 10.1109/MCS.2010.936291. Donzé, Pierre-Yves. "Dynamics of innovation in the electronic watch industry: a comparative business History 37.1 (2019): 120-145. online Donzé, Pierre-Yves (2022). The business of time: A global
history of the watch industry. Manchester University Press. Grafton, Edward, Horology, a popular sketch of clock and Watch Factories of America Past and Present by Henry G. Abbott (1888) Federation of the Swiss Watch Industry FH UK
patent GB218487, Improvements relating to wrist watches, 1923 patent resulting from John Harwood's invention of a practical self-winding watch mechanism. Media related to Watches at Wikimedia Commons Budget Watch Collecting At Wikimedia Collecting Budget Watch Collecting At Wikimedia Collecting Budget Watch Collecting At Wikimedia Col
guests for an info-packed hour of insights to elevate your next video project. Tune in on June 24 at 11am ET.Register NowEnjoy sharper detail, more accurate color, lifelike lighting, believable backgrounds, and more with our new model update. Your generated images will be more polished than ever. See What's NewExplore how consumers want to see
climate stories told today, and what that means for your visuals. Download Our Latest VisualGPS ReportWant to give your brand videos a cinematic edge? Join our visual experts and special guests for an info-packed hour of insights to elevate your next video project. Tune in on June 24 at 11am ET.Register NowEnjoy sharper detail, more accurate color,
lifelike lighting, believable backgrounds, and more with our new model update. Your generated images will be more polished than ever. See What's NewExplore how consumers want to see climate stories told today, and what that means for your visuals. Download Our Latest VisualGPS ReportWant to give your brand videos a cinematic edge? Join our
visual experts and special guests for an info-packed hour of insights to elevate your next video project. Tune in on June 24 at 11am ET.Register NowEnjoy sharper detail, more accurate color, lifelike lighting, believable backgrounds, and more with our new model update. Your generated images will be more polished than ever. See What's NewExplore
how consumers want to see climate stories told today, and what that means for your visuals. Download Our Latest VisualGPS Report If you have a G Shock analog and digital time display as well as an analog display, a
feature which many love. Of course, you want the analog time and the digital and analog time might not have been synchronized properly right from the get-go, or something like a strong magnetic field may have caused the difference. Today we want to take
you on a step-by-step tutorial on how to adjust the time on a G Shock analog and digital watch, specifically how to sync them so they are both the same. The Specific ModelThere are many different G Shock models, so to make thing easier, we are going to use the G Shock 5146 as an example. The reason we are using this particular model as an example
is because it features a standard button and adjustment format which the majority of models follow. Familiarizing Yourself With the Buttons that you will need to make the adjustments. To make things easier, we will
label the buttons as A, B, C, and D. A is the top left button, B the top right, C the bottom left, and D the bottom right. Do I Change the analog time on your G Shock watch. When you adjust the digital time, once completed, the analog watch hands
should adjust themselves to match the set time on the digital display. Therefore, we will cover how to change the analog time further below. Changing the
Digital Time on the G ShockTo change the digital time on your G Shock watch, you will need to do the following steps. First, you need to enter the time changing setting. To do this, hold down the A button until you see the screen flashing. You should now see a code of 3 letters represent the city to which the watch is set to. You
need to find the city which you reside in, and if the city is not included in the list, choose the city closest to yours (as long as it is in the same time zone). To select the appropriate city, use the B button to cycle downwards or the D button to cycle upwards or the D button to cycle downwards through the list. Once you have found the appropriate city, use the B button to cycle upwards or the D button to cycle upwards or 
next step. Now you need to select whether or not your city is currently in daylight savings time, press the D button to toggle it on. The D button to get to the next step. In this step, you will be able to choose from a
12 hour or 24 hour digital clock display. Use the D button to get to the next step. This step involves setting the actual time, which includes seconds, minutes, and hours. First you will set the seconds. Use the D button to get to the next step. This step involves setting the actual time, which includes seconds and the B button to subtract seconds.
Once the seconds are set, press the C button. Now it is time to set the hour, and once again, use the D and B buttons to add or subtract hours. Once the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and then press C once again, repeat this process for the minutes, and the minutes of th
same process as for setting the time, use the D and B buttons to select the respective year, month, and day, pressing C each time a selection is made. The final step is to set the duration of screen illumination). Once everything has been
appropriately set, press the A button to exit the settings menu. Remember that once you have the digital time set, the analog watch hands should automatically adjust themselves to match the digital time. However, if this does not happen, move onto the next section on how to adjust the analog time. Changing the Analog Time on the G ShockIf the
analog time did not automatically adjust itself according to the digital time, a strong impact or a magnetic field may have affected the mechanical side of things. In order to fix this, you will need to adjust the speed hand so it is pointing towards 9 o'clock, and so that the hour and minute hands are pointing at 12 o'clock. Do the following steps to
complete this process. Press the D button and hold it for 3 seconds. You should now see the letters "SUB" flashing on the screen. Use the D button to move the speed hand in a clockwise direction. Once the speed hand gets to the 9 o'clock position, press the C button. Now, using the D button once again, adjust the hour and minute hands until they are
pointing at the 12 o'clock position. Press the A button to go back into the timekeeping mode, the analog hands should automatically adjust themselves to match the digital time. If you do not have success, repeat these steps again, and if it is still does not work, you will need to seek
professional assistance. Related read: How To Set a Casio G Shock Digital WatchConclusionWe hope that we have been able to thoroughly explain how to adjust the time on your digital and analog G Shock watch. If you are still having problems, you may need to seek professional help. Known as "The Toughest Watch on the Planet," the G-Shock watch
line from Casio certainly earns that distinction. Not just a hollow marketing claim, the G-Shock is designed for the harshest environments on the planet. If ever you see an athlete or thrill-seeker within their element wearing a watch, it is more than likely a G-Shock model. G-Shock model its mark both in the military and law enforcement industry.
In this article, we will look at the illustrious and exciting history of G-Shock watch. History of G-Shock watch on the Planet G-Shock first
came into the picture when Casio's head of watch design, Kikuo Ibe, formed a small team called "Team Tough." The team started development with this idea of a genuinely tough-as-hell in 1981. The core idea of the G-Shock was the "Triple 10" design criteria; Ibe and his team wanted to create a watch with s 10-ATM water resistance, battery life of up
to 10 years and could withstand the impact from a 10-meter drop. However, the path to achieving their goal design was long and arduous. The team went through over 200 prototypes before perfecting the design. It wasn't until Ibe saw a bouncing rubber ball in the local park that he got the idea for the G-Shock's signature build. Ibe concluded that
the center of the ball doesn't suffer from any shocks as the exterior absorbs all the impact. Hence, they based their design on this specific notion for the G-Shock watches. This is because G-Shock watches are hollow, with the primary timekeeping mechanism
```

seasons within a soft pai confision. Will, these those made goals in mid. Team Tough piegos developing the very first CSRos. It book to you was to complete and release the first confision. Will, Called the Middle (1994) and the confision of the