1581: Vincenzo Galilei’s (Galileo’s father’s) book establishes principles of acoustics & opera

1619: After reading Galilei, Johannes Kepler publishes 3rd law of orbital motion, used by modern satellites

1637: 1st opera ticket sold in Venice; opera houses begin to use acoustic ducts

1673: Athanasius Kircher proposes ducting music outside the opera house

By 1726: Thomas Lediard uses moving-image projection at Hamburg opera

1823: Voigtländer sells binocular opera glasses

1849: Jules Duboscq projects an electric-light sunrise effect at Paris Opéra

By 1880: Edward P. Fry listens to opera at home via telephone line

1881: Clément Ader sends stereo from Paris Opéra

1881: British patent for gas-jet-illuminated libretto display in opera house
1885: opera pay-cable service opens in Lisbon

1885: Discs become the first mass medium for music

1888: Edison’s motion-picture patent caveat says it is for opera

1893: To increase utilization of opera-by-phone lines, Tivadar Puskás creates the electronic newscast

1900: Horace Short broadcast of opera recordings via compressed-air amplifier from the top of the Eiffel Tower

1900: Lionel Mapleson makes first non-interfering location recordings at the Met

1906: The Telharmonium, a 200-ton synthesizer, sends opera music to restaurants

1934: Sarah Fischer stars in TV Carmen on BBC

1952: Carmen transmitted live to cinemas in 27 cities

1953: Carmen is first TV show in compatible-color seen at home

1976: 1st commercial digital audio recording is opera