since the Good brothers started it off in 1937.



Howard Bonner introduced this eight-channel Digimite system.

## A timeline of radio control for model airplanes in the United States

1937: Twins Walt and Bill Good, only age 21, made their first flights at the Kalamazoo MI, airport after adding RC to their 8-foot gas FF model named KG-8. 1937: Australian Ross Hull went to Elmira NY, and flew a 13-foot glider with RC. 1938: Walt and Bill Good built the first airplane designed for radio control, the Big Guff, and placed first at the AMA Nats. 1938: Leo Weiss describes an eight-channel, audio-tone reed system for model airplane radio control he had under development. 1938: A new type of tube was introduced for radio control that enabled the development of an ultrasensitive single-tube receiver: the RK-62 by Raytheon. 1939: Howard McEntee published twin-frequency transmitter details with schematics. 1941: Early multifunction single channel published by Thracy Petrides and Leon Hillman. 1940: During WW II, the U.S. Army and Navy used RC airplanes called Radioplanes as artillery target drones. 1946: FCC Order 130-C went into effect on March 1, 1946, and created the 6-meter band allocation for the amateur service as 50–54 MHz. 1949: First examination-free frequency allowed—465 MHz and 5-watt maximum

power. 1949: Ed Rockwood's multichannel system was the first commercial venture for an audio-frequency-modulated reed radio. 1952: 27.255 MHz available with no test and a 5-watt maximum. 1953: Frank Schmidt made and sold a complete, five-channel reed set based on the Rockwood design. 1954: Don Brown developed a Galloping Ghost system that might have been the first single-channel multicontrol system called the "crank system."



The National Model Aviation Museum displays many radios and visitors can leave Post-it notes detailing their recollections of these radios.

1955: Bramco Inc., in Detroit, entered the RC business with its Blue Chip reed system. 1956: Jack Albrecht built what is thought to be the first handheld transmitter. 1956: Bob Dunham started Orbit Electronics and produced a popular reed system. 1957: Walter Good published his TTPW transmitter for a dual-proportional system. 1957: Zel Ritchie built a handheld, solid-state version of Walt Good's TTPW transmitter. 1958: FCC granted five additional frequencies at 50 kHz spacing on the 27 MHz band. 1959: Ken Willard flew indoor model using an .020 engine weighing only 33/4 oz. 1959: Al Doig introduced his Ulti Multi closed-loop, feedback, non-wiggling, multiproportional system. 1959: Relayless reed system was flown by Louie Scheel and Ken Oliver. 1960: Bramco, Inc. introduced its Control Box Transmitter, which was advertised as the control box for controlling a model with the reflexes and coordination of a real pilot. 1960: First commercially available proportional system, Space Control, introduced by Zel Richie. Space Control was engineered by Hershel Toomim and produced by his company, Solidtronic, in Van Nuys CA. 1960: Don Baisden submitted a proposed article to Grid Leaks magazine on his single-channel Galloping Ghost

pulser and another for his rudder-only pulser, later kitted by Ace R/C. 1960: Howard McEntee came up with a simplified version of pulse proportional that used a single tone. and added the feature of being able to vary the pulse rate of the tone as well to get a second function with only one tone. 1961: Howard Bonner's relayless servo, the Transmite, became commercially available. 1961: First jet model flown with Dyna Pulse Jet and a reed radio system had Jerry Nelson as pilot. 1961: The hand-built Quadraplex transmitter and receiver were by Don Brown. Carl Schwab, who designed the electronics, provided advice and assistance by phone. 1962: ACL introduced its pioneering feedback proportional system in April 1962, including its incorporation of receiver and servos into an airborne "brick," 1962; The first commercial digital RC system flown by Doug Spreng. The radio was named Digicon. 1962: First commercially produced four-stick proportional radio, the Astroguide, by Klinetronics. 1963: Howard Bonner introduced this eight-channel Digimite system. 1964: Howard Bonner introduced the Transmite servo for relayless reed receivers, 1965; FCC granted five frequencies on the 72 MHz band with 40 kHz spacing, 1966; PCS's revolutionary low price of \$299.95 shook the RC world to its foundations and led to the demise of several competing manufacturers. 1968: Phil Kraft introduced his "Gold Medal Series" system after winning the gold medal at the Corsica, Italy, World Championship. 1968: The first Controlaire three-channel proportional prototypes were built to explore the concept of a more-affordable, three-channel alternative to Controlaire's full-house proportional system. 1968: Bob Elliot designed a servo amplifier that reduced the servo wires from six to three wires, 1969; FM and PCM receivers were introduced, 1975; Orbit debuted the Elite "super radio" at the March 1975 WRAM Show. It had an LCD display panel. 1975: Transmitter features were increased to servo reversing, adjustable travel, and dual rates. 1976: Mattel, the toy company, entered the RC hobby with its inexpensive singlechannel pulse-proportional system that sold for \$29.95. 1976: Kraft Systems introduced the first synthesized RC system. 1982: The first computer transmitter was introduced by JR Radio, 1987: The FCC granted additional channels on the 72 MHz band, 1988: The FCC granted additional channels on the 72 MHz band with 20 kHz spacing referred to as narrow band. 2004: Paul Beard developed DSM using 2.4 GHz. 2011: Futaba introduced FASST. 2012: Futaba introduced S.Bus protocol using one cable to control multiple servos. Credits: A brief summary of The History and Evolution of RC by Don Gray and Giuseppe Fascione, March 2006, RC Hall of Fame AMA Model Aviation Hall of Fame -Bob Notl bobrc@aol.com

## Sources:

Radio Control Hall of Fame www.rchalloffame.org AMA Model Aviation Hall of Fame www.modelaircraft.org/museum/hoflist.aspx AMA National Model Aviation Museum www.modelaircraft.org/museum