

Feature

FROM THE PAGES OF HISTORY

Linear Corporation



Photos

1. Founders Ted Farrell (left) and William Schanbacher, 1980.
2. Linear storefront, 1962.
3. First GDO radio controls, 1962.
4. Frequency Shift Keyed (FSK) remote controls, 1971.
5. Delta-3 controls, 1976.
6. Carlsbad headquarters, 1984.
7. The MiniT transmitter, 1985.
8. Moore-O-Matic Ultra-Lift GDO, 1980.

Source: Linear historical files.

Milestones

- 1961 ▶ Linear Corporation is founded by Ted Farrell, who serves as president and CEO. William A. Schanbacher joins the company as a co-principal, serving as chairman of the board. Linear opens as a retail operation in Los Angeles that sells and installs automatic garage door openers (GDOs).
- 1962 ▶ Linear manufactures its first GDO radio controls with transistors and glass tube amplifiers in large metal boxes. The encoding is a simple single audio tone on the RF carrier. The transmitter doesn't mount on the visor; it mounts under the car's hood!
- 1960s ▶ Throughout the decade, the company introduces new generations of single-tone radios featuring smaller, portable, visor-mounted, battery-powered transmitters.
- 1970 ▶ Linear manufactures Frequency Shift Keyed (FSK) remote controls. FSK transmitters are encoded by frequency modulating an audio tone on the RF carrier. FSK receivers are more secure than single-tone receivers. To activate, they require detecting the correct RF carrier frequency along with the shifting tone, reducing the chance of false operation.
- 1976 ▶ Linear introduces Delta-3 digitally coded radio controls that use custom proprietary integrated circuits. This allows the remote controls to provide a new level of reliability and security. The Delta-3 equipment can be field coded by simply setting a dipswitch. Nearly 30 years later, Delta-3 radio remote controls are still being manufactured and widely used.
- 1978 ▶ Linear's "Standard Digital" coding format facilitates the creation of multi-channel transmitters and receivers. Multiple receivers no longer must be "slaved" together, and transmitters feature more than one pushbutton.
- 1979 ▶ Linear acquires GDO manufacturer A.E. Moore Company of Waupaca, Wis., creates the Moore-O-Matic company, and designs a new type of GDO. The injection-molded bulkhead design of the screw-drive Model 838 opener weighs only 24 lbs., compared to previous 60-lb. GDOs. Its digital control board allows the opener to conform to demanding UL safety requirements.
- 1984 ▶ Linear moves its corporate headquarters 100 miles south of Los Angeles to a new 30,000-sq.-ft. building in Carlsbad, Calif.
- 1985 ▶ Linear develops the first million-code radio format. MegaCode radios eliminate the need to field code transmitters. Each transmitter is factory coded to a unique digital code.
- 1985 ▶ Transmitters reduce in size with the incorporation of SAW resonators. This component locks the transmitter on a specific radio frequency, eliminates the need for tuning, and prevents drift. Linear introduces the MiniT, the company's first miniature GDO transmitter.
- 1987 ▶ The cofounders of Linear sell the company to Nortek, Inc., of Providence, R.I.
- 1988 ▶ Grant Rummell becomes president of Linear.
- 1994 ▶ Linear enters the access control market, introducing its AccessMaster product line.
- 1996 ▶ The company's first telephone entry product, the AE-1, is introduced.
- 1998 ▶ Linear sells the assets of Moore-O-Matic to the Chamberlain Group.
- 1999 ▶ Linear acquires Stanley-Whistler's Multi-Elmac Multi-Code product line and begins manufacturing Multi-Code radios.
- 2001 ▶ Linear introduces a newly designed GDO, the company's first GDO branded with the Linear logo.
- 2003 ▶ Adding swing and slide gate openers to the growing product line, Linear acquires Operator Specialty Company (OSCO) of Casnovia, Mich.