

# From Glass Tubes to Glass Cockpits

## *Avionics pilots grew up on*



While an increasing number of pilots fly with the power of a glass cockpit, many first learned to fly using these vintage avionics. The lower left vacuum tube beacon receiver, model AR-2A, was one of many radio devices manufactured by Harvey-Wells Electronics Co. of Southbridge, Massachusetts, from 1939 to 1960. Predominantly a ham radio manufacturer, Harvey-Wells dissolved in 1960 when it did not adapt to the growing single sideband technology.

Narco (National Aeronautical Radio Corp.), the world's oldest GA avionics manufacturer, produced this DME indicator (bottom center). The company's 1962 price list features a UDI-2R Remote DME package, complete with power supply, antenna, indicator, and power cable, for

\$2,550. It was promoted as an ideal unit for "installations with limited panel space."

Inventor and entrepreneur William Lear designed the VOR receiver (bottom right) and the Learradio ADF-6 control unit (top). Before his death in 1978, Lear received nearly 150 patents, including the car radio and the 8-track tape system.

For more historical information on avionics, visit these websites:

- [www.elliottaviation.com/wavelink/2001q4/wavart160.asp](http://www.elliottaviation.com/wavelink/2001q4/wavart160.asp)
- [www.narco-avionics.com](http://www.narco-avionics.com)
- [www.swedart.com/harvey](http://www.swedart.com/harvey)
- <http://en.wikipedia.org/wiki/Avionics>

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