



Data Display Devices from Raytheon



New Raytheon Recording Storage Tubes extend your system capabilities

Two new miniature types, new high resolution tube added to Raytheon's broad line.

Raytheon's wide range of Recording Storage Tubes enable you to design additional capability into any system which stores and transfers electronic information. Applications include: scan conversion, stop motion, integration for signal-to-noise improvement, time delay or phase shift, correlation and slow-down video.

The new miniature types—Raytheon's CK1516 and CK1519—are designed for compact packaging, such as in airborne and space satellite applications. Both tubes provide high resolution and erase capability in a fraction of a second. The CK1521 is a new standard type featuring ultra-high resolution of 2500 TV lines and fast erasure in milliseconds.

Raytheon Recording Storage Tubes are electronic input-output

devices which feature: fast write, immediate and nondestructive read, long storage, high resolution, and fast erase. Information can be written and stored using sequential scan techniques or by random access writing. Erasure can be complete or selective. Dual and single gun types are available.

For more information or demonstrations, contact your Raytheon Regional Sales Office.



New Raytheon Projectoray* Tube produces more than double the light output of standard projection-type cathode ray tubes. The tube's light output is 30,000 foot lamberts, which results in a light level of 15-foot lamberts on a 3' x 4' lenticular screen.

The tube's expected minimum operating life is 500 hours—20 times the life of a standard projection tube.

The Projectoray's high light output and long life are due to its novel design. The design incorporates liquid cooling of the phosphor backplate. This allows the phosphor to be energized with a very intense electron beam. At high beam levels, very high peak light output is obtained. The light image is projected through a 5" optical window in the face of the tube. The electron gun is set at an angle to the phosphor and the deflection system compensates for keystone effects.



Datavue* Side-View Tubes. New Type CK8650, with numerals close to the front, permits wide-angle viewing. These side-view, in-line visual readout tubes display single numerals 0 through 9 or preselected symbols such as + and - signs. Their 5/8"-high characters are easily read from a distance of 30 feet. Less than \$5 each in 500 lots, they also cost less to use because the bezel and filter assembly can be eliminated and because their mating sockets are inexpensive.



Symbolray* CRT Tube. The new Raytheon CK1414 Symbolray tube provides alphanumeric inputs for computer readout devices. The tube's 2" target can be scanned electronically to select symbols, characters, and punctuation marks in sequence to form the readout on a display tube. This type has applications with data processing equipment as an economical method for generating characters for hard copy print-out or for cathode ray display. Design with 64 and 100 characters are available.



Dataray* Cathode Ray Tubes. Raytheon makes a wide range of industrial CRTs—including special types—in screen sizes from 7" to 24". Electrostatic, magnetic, and combination deflection types are available for writing alphanumeric characters while raster scanning. All standard phosphors are available and specific design requirements can be met. Combination deflection or "diddle plate" types include CK1395P (24" rectangular tube), CK1400P (21" rectangular), and CK1406P (17" rectangular).

For literature, call your Raytheon regional sales office. Or write to Raytheon Company, Components Division, Quincy, Mass. 02169.

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RAYTHEON

Industrial Components Operation—A single source for Circuit Modules/Control Knobs/Display Devices/Filters/Hybrid Thick-Film Circuits/Industrial Tubes/Optoelectronic Devices/Panel Hardware



New keyboard switches. These keyboard switches—an original Raytheon design—are low cost yet extremely reliable. They are ideal for computer input/output devices, learning and business machines, and other advanced information and control equipment.

Just a featherlight (2 1/2-oz.) touch activates the switch, providing momentary contact at a current rating of 0.25A, 32V.d.c. Life expectancy of the dry reed type is more than 100 million cycles. Bounce is less than 250 microseconds. Yet, these switches cost less than \$1 in production quantities.

The contact pins snap into 0.125" PC board, locking the switch firmly in place for automatic flow soldering—thereby reducing assembly time and costs.

All switches are made of high-quality materials: polycarbonate plastic, stainless steel, beryllium, copper and noble metals. Bases can be flat or sloped to a 10° angle.

These switches are available with a wide range of standard and custom cap shapes, sizes, colors and alphanumerics. The caps are hot die stamped, cured and backed with an epoxy coating to provide wear resistance and reduced glare.

Raytheon key switches are available in single- and double-level dry reed types and in single- and double-level wipe-action types.



Complete, custom-made keyboards—using the switches described above—are also available from Raytheon. These keyboards can be designed, built and shipped to you in minimum lead time. All assemblies are supplied with alphanumerics, symbols and coding to your specifications. They are also available with data lines, electronic interlock, connector to external power sources, and with or without case.