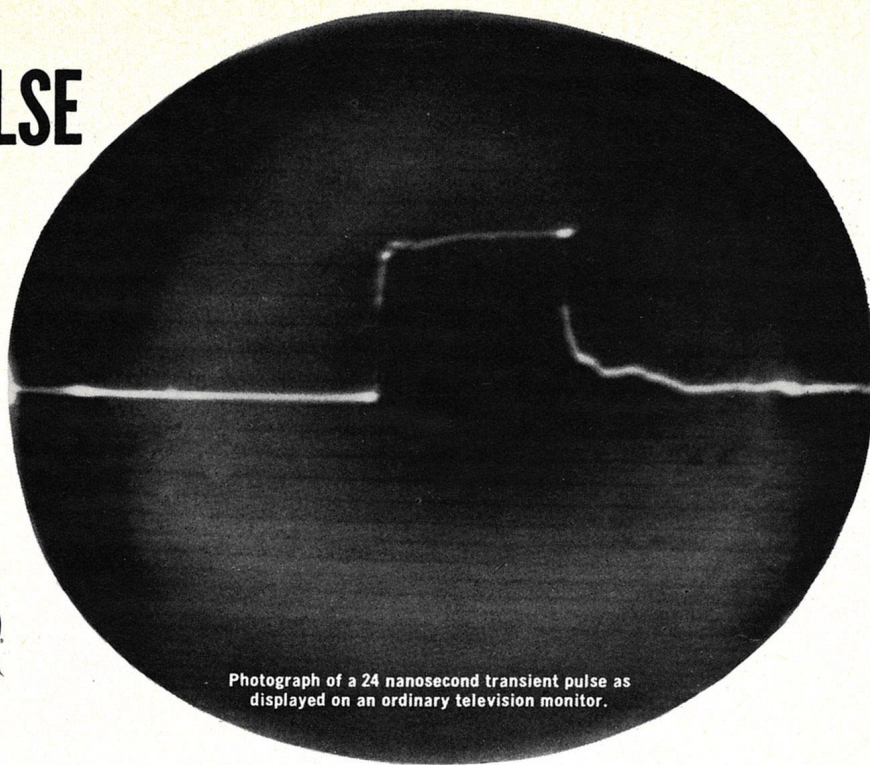
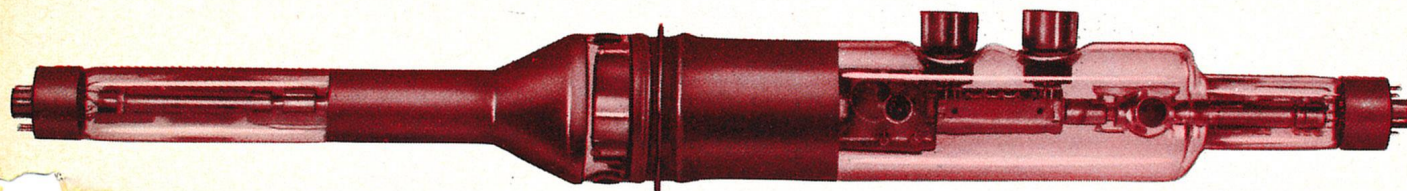


NANOSECOND PULSE FROM NEW RAULAND ULTRAFAST SCAN CONVERTER STORAGE TUBE



Photograph of a 24 nanosecond transient pulse as displayed on an ordinary television monitor.



Rauland has developed an ultrafast Scan Converter Storage Tube that records and stores transient phenomenon with pulse rise times in the range of a nanosecond or less. The unique design of the new Rauland R6253 tube permits slow scanning techniques to be used for the relay of transient pulse data over narrow band systems of 100 KC bandwidth or less. The pulse may also be recorded by conventional means—on magnetic tape, transmitted over inexpensive telemetry links, over communication cables, displayed on an ordinary television monitor and photographed using “box camera” exposure time. When displayed on a monitor, the tube

further allows unaided visual observation of extremely fast phenomenon for a period of several seconds. Relay or recording of pulses can be simultaneous with visual observation. The tube, consisting of separate writing and reading electron guns, is approximately 27 inches long and is 4 inches at its largest diameter. It utilizes a distributed deflection system for the writing side and either magnetic or electrostatic deflection for readout of high speed phenomenon. The tube is available with characteristic impedances of 50 or 125 ohms. The deflection system, being a continuous transmission line, allows the operation of several tubes in series.



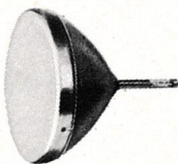
SCAN CONVERTER STORAGE TUBES

Resolution Capability of 1000 TV lines.
Erase Capability of 2 seconds or less.
Any combination of electrostatic or magnetic deflection is available.



FLAT FACE DISPLAY TUBES

Rauland's flat face tubes (16", 22", 24") minimize parallax error. Resolution capability of 1000 TV lines at a brightness of 100 foot-lamberts. We will suit your specific requirements with any type of radar display tube in any size with any type phosphor or gun.



HIGH-RESOLUTION, HIGH-BRIGHTNESS TUBE

Round 21" high voltage CRT will resolve at least 1000 TV lines at a brightness of 300-500 foot-lamberts. For displays under high ambient light conditions. Write or phone...



**The RAULAND
Corporation**

5600 JARVIS AVENUE
CHICAGO 48, ILL.
MULberry 5-5000

A subsidiary of

ZENITH®

Radio Corporation
Chicago, Illinois

ON READER-SERVICE CARD CIRCLE 57

THE



CORPORATION

5600 West Jarvis Avenue • Chicago 48, Illinois

TELEPHONE: 685-5000

Rauland type R-6253 or 6254

R-6253 125 ohm Z_o , 6254 50 ohm Z_o

Reading Gun

Heater Voltage	6.3 Volts
Heater Current	0.6 Amperes
Cathode	-1500
Grid 1	-1600 to -1500
Focus	-1175
Anode	ground
Read beam cut-off	-1525

Writing Gun

Heater Voltage	6.3 Volts
Heater Current	0.6 Amperes
Cathode	-10,000 Volts
Grid 1	-10,000 to -10,125
Focus	-7,500 (Approx.)
Anode	ground

Unblanking pulse to drive grid 1 to cathode potential

Target Assembly

Backplate	+20 Volts
Collector	+30 to +60
Shading	+35 to +90

Magnetic shield must extend from write base to cover region of deflection systems.

Collector capacity to ground about 25 pf.
Signal current the order of 1/10 ua into 50 k ohm load.
Suggest mixing signal current from shading ring to improve signal to background shading.