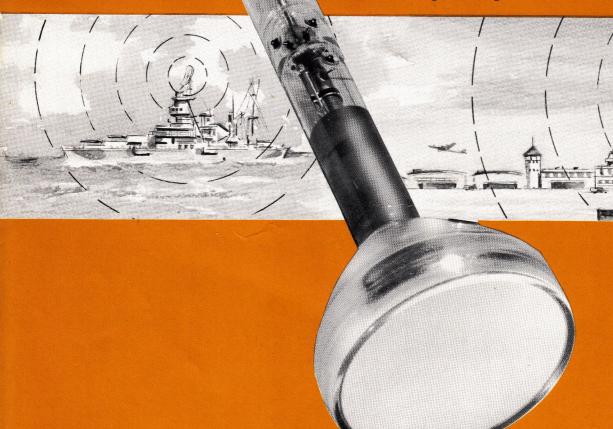


new microwave display device



BETTER PERFORMANCE

GREATER SIMPLICITY

IMPROVED RELIABILITY

The new SYLVANIA WAMOSCOPE

Increased Reliability through Reduction of Tube and Component Complement

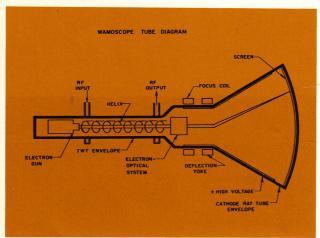
The New Sylvania WAMOSCOPE

WHAT IS IT?

Wamoscope — wave-modulated oscilloscope — a microwave tube combining in one envelope, the three functions of amplification, detection, and visual display. The type 6762 Wamoscope now available, has a 5 inch screen, a long-persistance aluminized phosphor, and provides for intensity modulated displays. It is magnetically deflected and focused and operates over the frequency band of 2000 to 4000 megacycles.

HOW DOES IT OPERATE?

The Wamoscope's operation is based on velocity-sorting the electrons which emerge from the end of the helix of the traveling wave tube section.



An electron beam is velocity and current modulated in accordance with the amplitude of the input rf signal to the traveling wave tube section. The velocity modulated beam then enters an electron-optical system which serves as a velocity sorting mechanism. This system allows only those electrons which have been accelerated above a pre-set velocity, to continue on to the cathode ray tube screen.

THE WAMOSCOPE GIVES BETTER PERFORMANCE GREATER SIMPLICITY IMPROVED RELIABILITY

The WAMOSCOPE, amplifying, detecting and displaying the signals on its fluorescent screen, efficiently carries out almost all of the functions of a complete conventional radar receiver!

BETTER PERFORMANCE

The signal sensitivity of the Wamoscope is superior to conventional video amplifier and cathode ray tube systems in wide band applications, since it has a constant driving point impedance independent of bandwidth. Note the curve which indicates comparison of CRT and Wamoscope driving power requirements as a function of signal bandwidth. Wide band tuned-radio-frequency (trf) receivers with better signal sensitivities may also be readily instrumented.

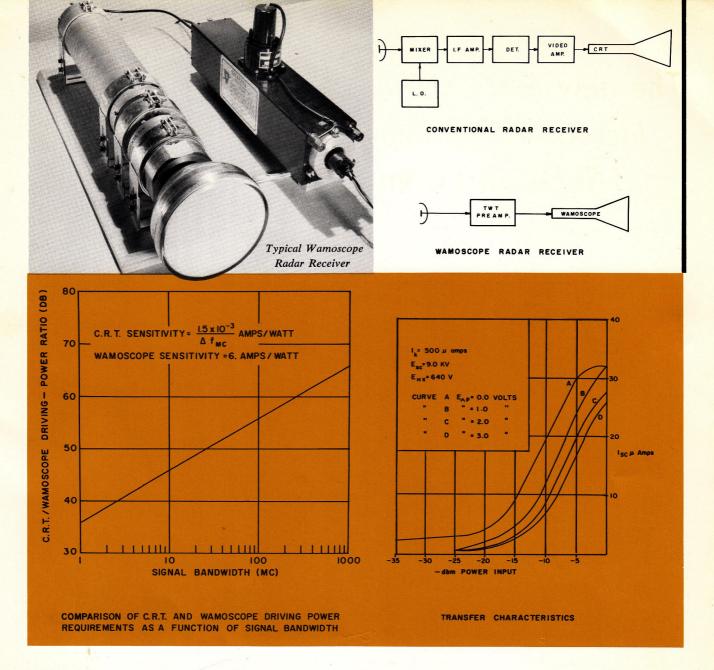
GREATER SIMPLICITY

The use of a Wamoscope eliminates the local oscillator, mixer, intermediate frequency amplifier, detector, video amplifier, and assorted circuitry found in the conventional receiver. Note the block diagram which compares the two receivers.

IMPROVED RELIABILITY

Elimination of tubes and components in the equipment reduces potential sources of failure, misadjustments of circuit elements, and "down-time" for maintenance.

Development of the new Sylvania Wamoscope was sponsored by the United States Naval Research Laboratory.



DATA ON WAMOSCOPE TYPE 6762

A. General Characteristics

ELECTRICAL
Heater Voltage
Heater Current
Focusing methodmagnetic
Deflecting methodmagnetic
Deflecting angle (approx.)52°
Phosphor
Overall length
Minimum useful screen diameter . 41/4 inches
Base small shell duodecal
12 pin
Solenoid No. 23905 supplied
with tube.

B. Typical Operating Conditions

Anode voltage (dc)
Grid No. 1 voltage (dc)0 volts
Grid No. 2 voltage (dc)85 volts
Grid No. 3 voltage (dc)600 volts
Grid No. 4 voltage (dc)3 to 10 volts
Helix voltage (dc)640 volts
Deflection plates (for centering)(dc) helix voltage
± 75 volts
Helix focusing solenoid field
strength125 gauss
Cathode current 1 milliampere
Center frequency3000 megacycles
Bandwidth2000 megacycles
Maximum sensitivity 40 dbm

PRODUCED BY SYLVANIA TO FULFILL TODAY'S NEEDS, THE WAMOSCOPE IS DESIGNED AND ENGINEERED TO MEET TOMORROW'S EXACTING TESTS.



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