TEKTRONIX FILM CATALOG

FREE EDUCATIONAL FILMS

TEKTRONIX, INC.

Tektronix, Inc. is the world's leading manufacturer of laboratory and industrial-grade cathode-ray oscilloscopes.

The oscilloscope is the major instrument for measuring changing phenomena. Its uses are limited only by the kinds and number of changes that man needs to know about. It is very difficult, in fact, to conceive of an "event" that an oscilloscope **couldn't** someday measure.

A laboratory oscilloscope can measure phenomena occurring in less than a millionth of a second, or longer than a minute. It electronically draws a graph, on its cathode-ray-tube screen, of some "event," so someone can measure the amount of that event and how long it lasts.

The largest oscilloscope user is the electronics industry, where it is the basic tool. But, thanks to man's fast-growing ability to convert other "events" to electrical signals, the oscilloscope is now essential in **every** area of economic or technical endeavor —measuring heat, sound, light, gravity, pressure, acceleration and a wide variety of other phenomena.

Tektronix, since its founding in 1946, has been consistently at the forefront of oscilloscope development. Many of its innovations—in manufacturing and marketing, as well as design—have since been adopted by competitors, a tribute to the company's pace-setting role.

In addition to its world headquarters in a beautiful 300-acre industrial park in Beaverton, near Portland, Oregon, Tektronix has 39 US field marketing offices and eight foreign subsidiaries, including manufacturing facilities in Japan, The Netherlands, London and the Isle of Guersey.

The company is known not only for its technical leadership but also for its industrial philosophy, which places maximum emphasis on individual dignity, personal growth and judgment, and minimum stress on arbitary methods, rules or restrictions.

THE TEKTRONIX FREE FILM PROGRAM

Tektronix films, produced by our own professional motion-picture group, reflect the company's strong interest in, and emphasis on, education.

Some require technical audiences; others describe our company and product in non-technical language.

Subject matter ranges from general and specific electronics education through explanations of oscilloscope concepts and applications, to descriptions of our company and its operation.

Although most of our films were produced primarily for internal use, they have been in great and growing demand for showings to industries and educational institutions, and have been used by several educational television channels.

All but **Tektronix - The World of Measurement** have been certified "Educational" (as distinguished from Advertising or Promotional) by the US Information Service.

Our films are provided at no cost to the viewer, other than a few cents for return postage.

TO ORDER A FILM

We hope to be able to supply the film you ask for, on the date you wish to view it. However, because of the large demand for outside showings, it may sometimes be impossible to do so.

To help us meet your needs, please do these two things:

1. Request the film as far in advance of showing date as you can.
2. Specify an alternative date, as second choice.

If you wish to buy a print of a Tektronix-produced film, you'll find a list of prices and part numbers at the back of this booklet.

For further information on any aspect of our program, please contact the Films Library, Tektronix, Inc., P. O. Box 500, Beaverton, Oregon 97005.

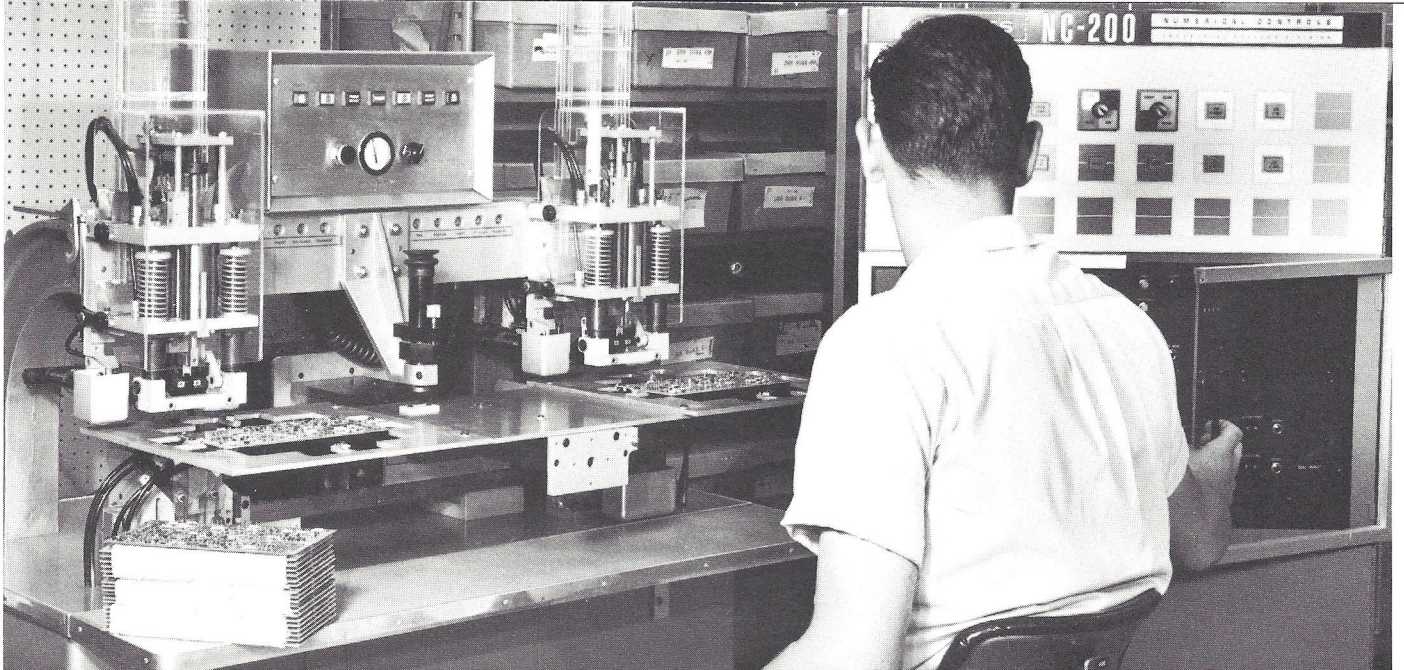
OUR COMPANY

Tektronix: The World of Measurement
25 minutes, color, 1966

This film introduces Tektronix and describes its product, the oscilloscope, and its importance in making precision measurements in a very wide variety of scientific and technical applications. The viewer receives a "tour" of our industrial park and its many buildings, highlighting our varied manufacturing processes: Component, cathode-ray tube, ceramics and transformer manufacture; toolmaking; metal fabrication; instrument assembly; testing, and calibration.

Tektronix on the Isle of Guernsey *22 minutes, color, 1962*

An important part of Tektronix' overseas activity is our manufacturing operation on the English Channel Isle of Guernsey. This film describes the island's history and shows its scenery, people and industry—particularly Tektronix' plant, depicting how it fits into the island's economy.


NC-200
NUMERICAL CONTROLS

TEKTRONIX OPERATIONS

Manufacturing an instrument as complex and sophisticated as the laboratory oscilloscope requires a complex and sophisticated operation, and a wide variety of refined processes and technical skills. Several of these are shown in the following four films.

Technology changes very rapidly; thus, some processes pictured have since been superseded. But the basic activities remain, and the extreme complexity of modern electronics manufacture is clearly described.

The Cathode-Ray Tube—Window to Electronics

35 minutes, color, 1961

The heart of the oscilloscope is its cathode-ray tube, on whose screen the measurements appear in graph form. This film shows the steps in the manufacture of this complex component. Using animated sequences, it explains briefly and simply how a cathode-ray tube works.

Ceramics and Electronics *22 minutes, color, 1961*

The importance of ceramic materials and processes in oscilloscope development and manufacture is described in this film. It shows the use of ceramic mounting strips and other parts in Tektronix' instruments. Steps in our manufacturing processes are pictured.

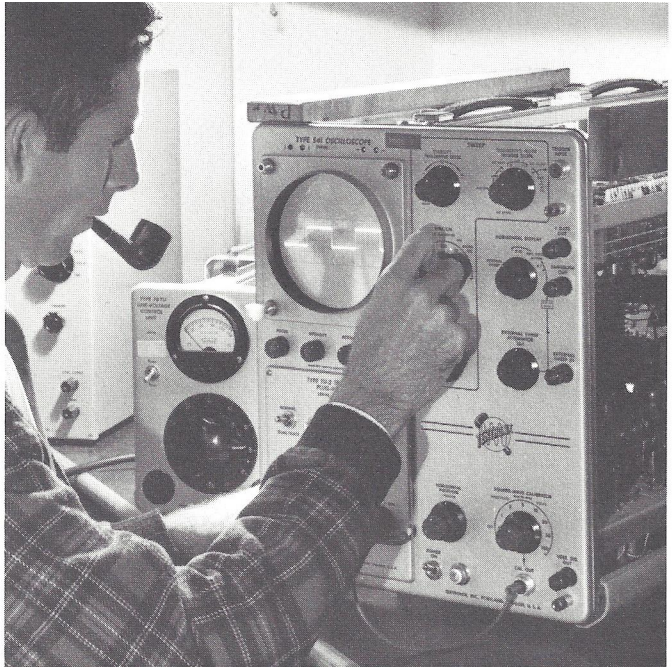
Instrument Assembly and Production Flow

27 minutes, color, 1961

Produced as an instructional motion picture, this film describes the flow through one of our manufacturing plants of raw materials and purchased and Tektronix-made parts, from receiving, through assembly and test, to shipment of the instrument.

Sounds of Progress *34 minutes, color, 1963*

Several Tektronix manufacturing activities are shown in this film, including metal, plastics, tooling, electrochemical and front-panel production.



OUR PRODUCT

The oscilloscope, which has been called as basic as the yardstick, is a major electronic measuring instrument.

By drawing a graph of an electrical "event"—which may occur in less than a billionth of a second— the oscilloscope lets you use your most important information-receiving sense—sight—to study otherwise invisible events.

The oscilloscope can graph any electrical event, or any quantity that can be turned into an electrical signal. It provides a virtually continuous measurement of some very rapid change.

Tektronix has produced a number of films, for non-technical audiences, describing how our instrument works, who uses it and in what ways. We have also produced a series of films of varying technical depth, explaining some applications of the instrument.

The following three films, which explain various aspects of the oscilloscope, require no technical knowledge of the viewer.

The Oscilloscope—What It Is, What It Does

9 minutes, color, 1961

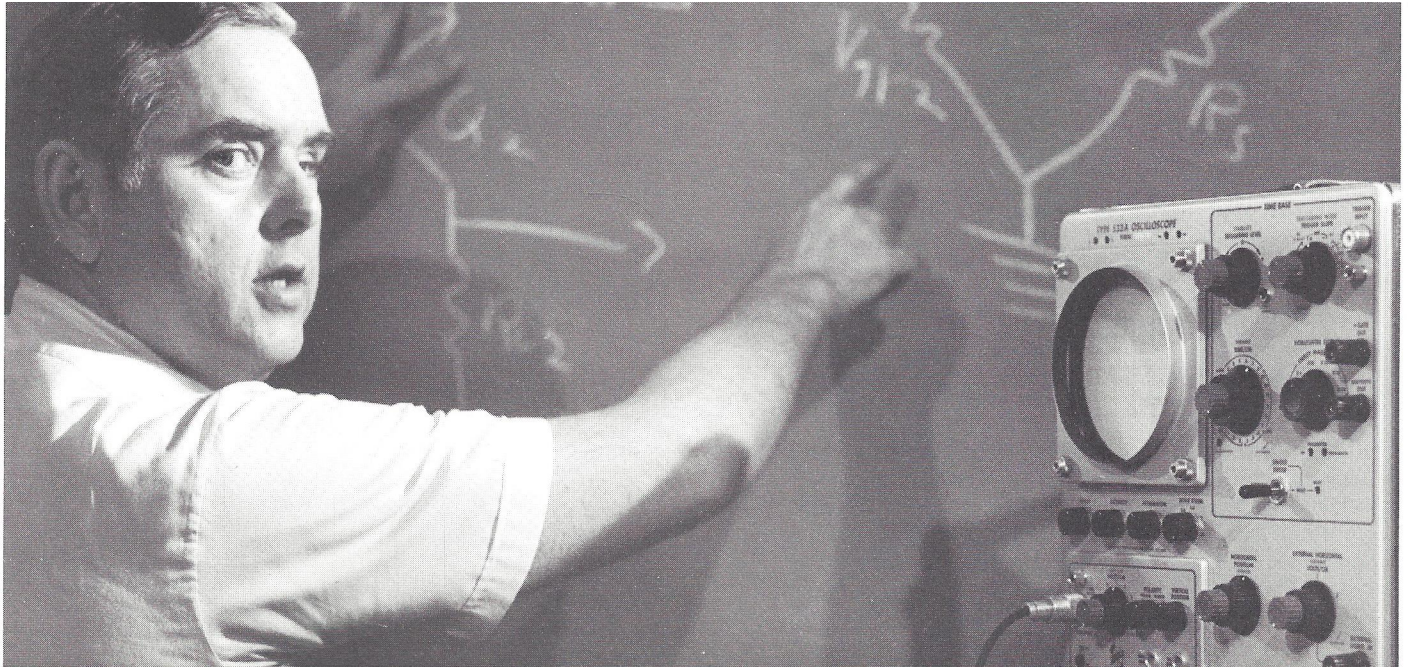
This non-technical explanation of the oscilloscope and its uses stresses the instrument's importance as a basic measuring tool for electronics in particular, and science and industry in general.

The Oscilloscope Draws a Graph *20 minutes, color, 1962*

How an oscilloscope works is described simply in words and pictures, in this non-technical film. The importance of an oscilloscope to science and industry is emphasized. The film tells how to read information that is graphed on the oscilloscope's cathode-ray tube screen.

Time and Quantity *27 minutes, black and white, 1962*

Originally presented as part of a television program, this film relates oscilloscope measurements to other measuring techniques. Dr. John Allen of Portland State College and Charles Sanford of Tektronix discuss the measurement of time and quantity, from billions of years to billionths of a second. The film stresses the oscilloscope's vital role in accurately measuring very small time segments.


TYPE 122A OSCILLOSCOPE
TIME BASE

SCIENTIFIC PRINCIPLES - ELECTRONICS CONCEPTS

These three filmed lectures, intended for a technical audience, describe new or simplified concepts and approaches to electronic problems.

Transresistance: A Simplified Approach to Transistor-Amplifier Analysis

23 minutes, black and white, 1966

Transresistance is a new concept of looking at transistors that permits rapid estimates of their operation in normal amplifier circuits. The approach is similar to understanding mutual conductance in vacuum-tube circuitry.

The viewer should have basic knowledge of electronics and some understanding of transistor operation. Although the film does not give examples or practical application of transresistance, it provides enough information so the student can set up examples and use the concept in amplifier analysis. Some transistor characteristics are depicted, using a special oscilloscope, the 575 transistor-curve tracer.

Thevenin's Theorem *12 minutes, black and white, 1964*

Thevenin's theorem is a simplified approach to solving an electronic circuit problem that otherwise would involve complex mathematics. A lecture by a technical instructor, this film explains the usefulness of the theorem and applies it to a practical example.

Solving the Unbalanced Bridge

17 minutes, black and white, 1964

Using "Thevenin's Theorem" as a basis, this lecture by a technical instructor takes a typical example—the unbalanced bridge—and shows how simply the problem is solved with the theorem. All that's required is Ohm's law, whereas the solution normally would require much mathematics, and three simultaneous equations.

SCIENTIFIC PRINCIPLES - THE OSCILLOSCOPE IN USE

The oscilloscope, an instrument of literally thousands of uses, performs many basic measurement functions. The following three films explain some fundamental characteristics of this instrument, and explain oscilloscope concepts and capabilities that the school electronics curriculum often does not cover.

The viewer of these films should have a basic knowledge of electrical and vacuum-tube theory.

Triode Plate Characteristics

16 minutes, black and white, 1965

An electronics technician can learn many things about a vacuum tube's behavior from a family of plate-characteristic curves. This film discusses plate curves for a typical triode, a 6DJ8, and shows how they reveal three basic characteristics: Amplification factor, AC plate resistance and transconductance.

A load line is plotted, to show how the amplification, or gain, of a simple amplifier circuit can be determined from the curves. A special oscilloscope, the characteristic-curve tracer, is shown, continuously displaying the curves of a tube in use.

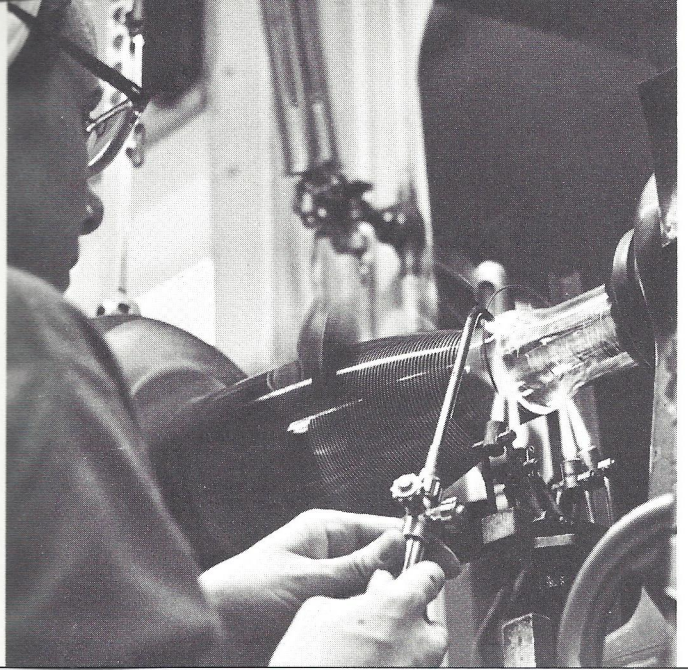
The Square Wave *25 minutes, black and white, 1963*

This film discusses the theory of square waves. It shows the use of the square-wave generator and oscilloscope, and of the information obtained from distortions.

Animated drawings depict the harmonic relationship of sine waves contained in a square wave. The importance of risetime in testing modern high-speed electronic equipment is stressed.

Transmission Lines *23 minutes, black and white, 1964*

The fundamentals of transmission lines are discussed, using animated drawings to depict the transmission of electrical energy along a line. A demonstration with an oscilloscope shows how reflections can occur in a line. Topics include characteristic impedance, the importance of proper termination, line losses, time delay and velocity factor.



SAFETY

Proper Handling of Cathode-Ray Tubes

20 minutes, color, 1962

A cathode-ray tube is intricate—and delicate. Abuse not only represents money lost but also presents a hazard. This film shows clearly the right and wrong ways to handle CRTs, and explains how to de-evacuate a cracked or otherwise defective tube.

PART NO.	TITLE	PRICE
067-0124-00	"CRT, Window to Electronics"	$203.00
067-0125-00	"The Oscilloscope—What It Is, What It Does"	$ 53.00
067-0126-00	"Instrument Assembly"	$149.00
067-0127-00	"Ceramics & Electronics"	$135.00
067-0129-00	"Proper Handling of CRTs"	$157.00
067-0130-00	"Time & Quantity"	$ 51.00
067-0131-00	"Tektronix on the Isle of Guernsey"	$157.00
067-0132-00	"The Oscilloscope Draws a Graph"	$78.00

PART NO.	TITLE	PRICE
067-0133-00	"Sounds of Progress"	$230.00
067-0134-00	"The Square Wave"	$ 47.00
067-0135-00	"Transmission Lines"	$ 44.00
067-0136-00	"Thevenin's Theorem"	$ 23.00
067-0137-00	"Solving the Unbalanced Bridge"	$ 33.00
067-0138-00	"Triode Plate Characteristics"	$ 32.00
067-0139-00	"Transresistance"	$ 40.00
067-0140-00	"Tektronix—The World of Measurement"	$165.00

TEKTRONIX, INC.
COMMUNICATIONS DEPARTMENT 1966