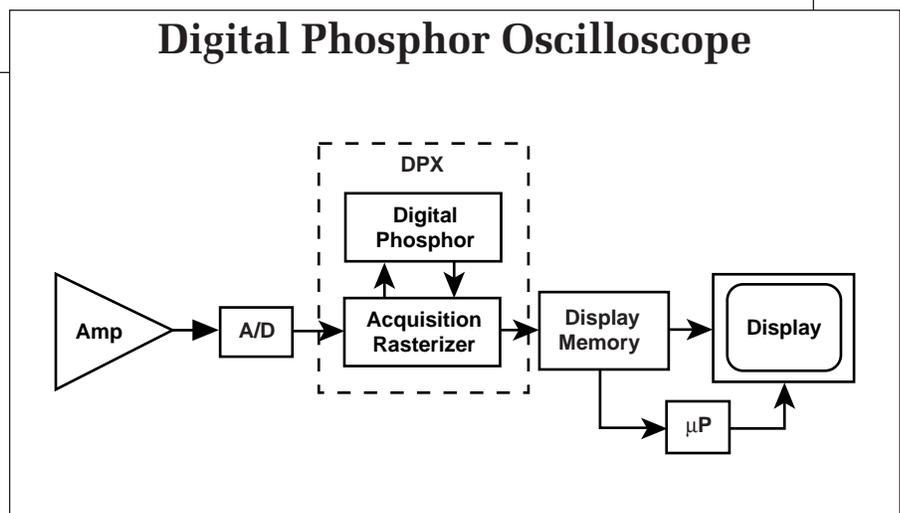
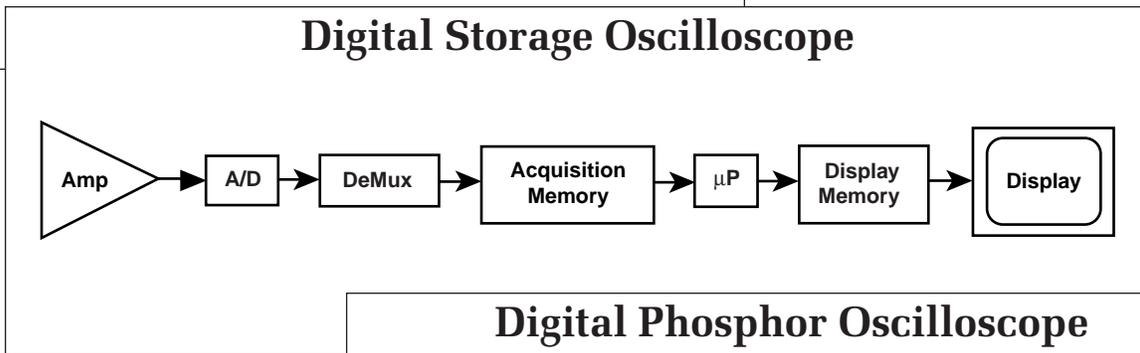
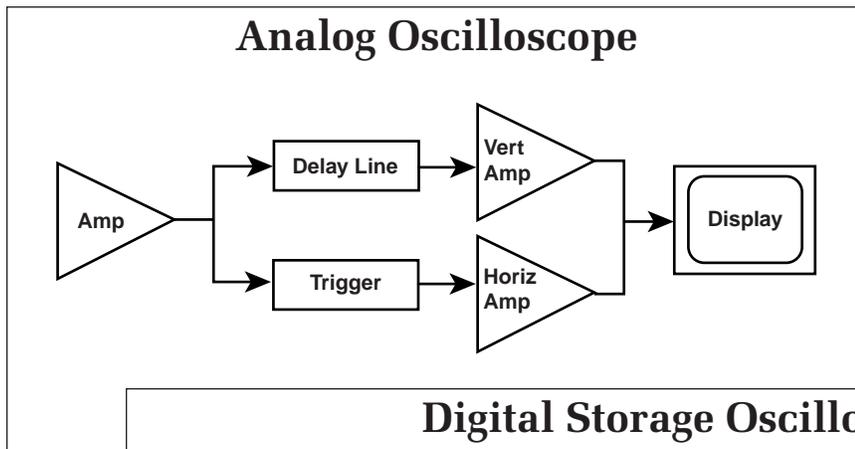


# XYZs of Oscilloscopes





# XYZs OF OSCILLOSCOPES

## INTRODUCTION

The *oscilloscope* is an essential tool if you plan to design or repair electronic equipment. It lets you “see” electrical signals.

Energy, vibrating particles, and other invisible forces are everywhere in our physical universe. Sensors can convert these forces into electrical signals that you can observe and study with an oscilloscope. Oscilloscopes let you “see” events that occur in a split second.

### Why Read This Book?

If you are a scientist, engineer, technician, or electronics hobbyist, you should know how to use an oscilloscope. The concepts presented here provide you with a good starting point.

If you are using an oscilloscope for the first time, read this book to get a solid understanding of oscilloscope basics. Then, read the manual provided with your oscilloscope to learn specific information about how to use it in your work. After reading this book, you will be able to:

- Describe how oscilloscopes work
- Describe the difference between *analog*, *digital storage*, and *digital phosphor oscilloscopes*
- Describe electrical *waveform* types
- Understand basic oscilloscope controls
- Take simple measurements

If you come across an unfamiliar term in this book, check the glossary in the back for a definition.

This book serves as a useful classroom aid. It includes vocabulary and multiple choice written exercises on oscilloscope theory and controls. You do not need any mathematical or electronics knowledge. This book emphasizes teaching you about oscilloscopes – how they work, how to choose the right one, and how to make it work for you.



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