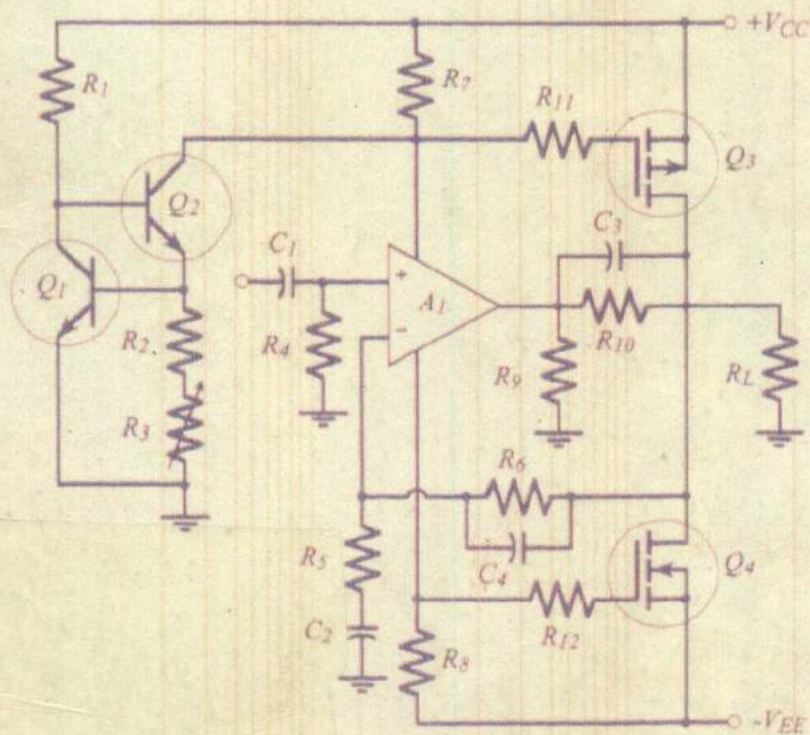


Fourth Edition

# Electronic Devices and Circuits

David A. Bell



# *Electronic Devices and Circuits*

 *Fourth Edition*

*David A. Bell*

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by David A. Bell

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# Preface

This book is intended for use as an electronics technology course text in colleges and universities, and as a reference text for practising professionals.

The objectives of the book are to provide clear explanations of the operation of all important electronics devices generally available today, and to show how each device is used in appropriate circuits. I am convinced that an understanding of devices and circuits is most easily achieved by learning how to design circuits. *Practical circuit design is usually quite simple; much simpler than some methods of circuit analysis.*

After discussing device operation, characteristics, and parameters, typical circuits using the device are explained. Then, circuit design and analysis are treated. Many practical examples are included in the text, using parameters from device manufacturers' data sheets. The circuit design procedure most often involves determining appropriate current and voltage levels, and then applying Ohm's law and the capacitor impedance equation. Most equations are derived, so that the student knows exactly what is going on. Instead of rigorous analysis methods, practical approximations are employed wherever possible.

Conventional current direction is used because it is the direction normally employed by device and integrated circuit manufacturers; also, because every device graphic symbol uses an arrowhead that indicates conventional current direction.

I am always grateful for suggestions that might improve my presentation of the material, or for additional topics that should be treated. Comments concerning this book would be very welcome.

*David Bell.*



