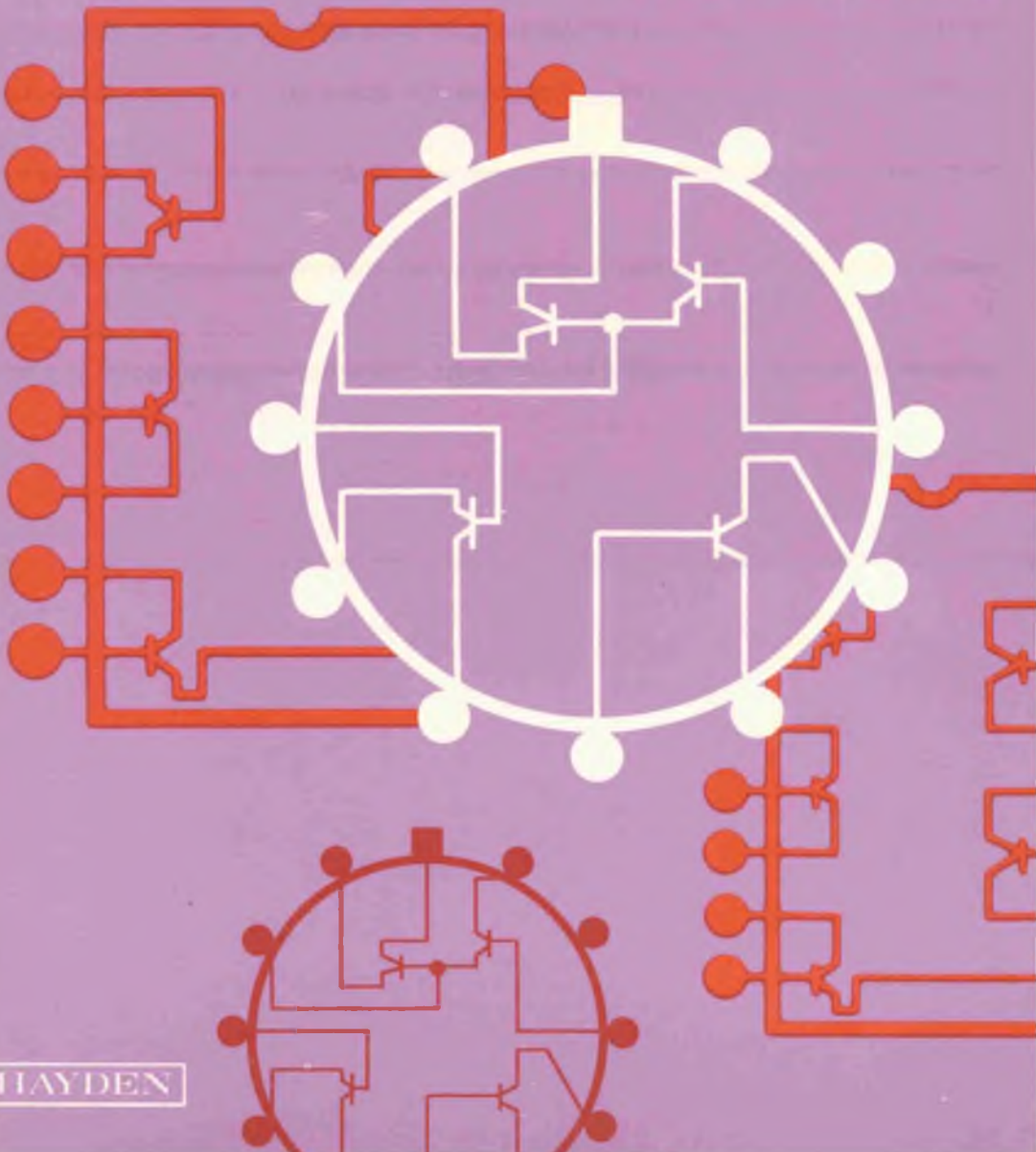


IC Array Cookbook

Walter G. Jung



HAYDEN

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updating it now.

Walt Jung
August 2016

IC Array Cookbook

Walter G. Jung



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IC Array Cookbook

Ebook Edition Notes, August 2016
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The original print version of *IC Array Cookbook* was first published in 1980, by Hayden Book Company Inc., as ISBN 0-8104-0762-0.

This 2016 Ebook edition makes all of the original book content available in modern, easily accessible form. To create this Ebook, a 1st printing copy was scanned at 600DPI resolution, and the resulting page images are reproduced herein, in the form of a bookmarked and searchable PDF file. Only minor changes to the text were made (for various typos), plus the addition of these Ebook Edition Notes.

It was thought originally that catalog portions of the Appendices would be omitted, due to the major changes in device availability from 1980 to present. But, from an archival standpoint, these 30-odd pages of original catalog data sheets are actually best retained, since they are not readily accessible. So, for current device availability, an Internet search is the best answer. One such example is the [LM3046 \(Texas Instruments CA3046 second source\)](#).

Note that the distributor information of Appendices A and B is largely obsolete today, but it is also included, for archival reasons.

An original book index is included for completeness, but the Ebook PDF search function will be more useful. *Note that a nine page offset exists between the PDF page numbers and the original book's page numbers! Thus, the "IC Array Cookbook page 1" becomes "IC Array Cookbook Ebook page 10".*

Please note that this Ebook is a limited edition. Comments and feedback are welcome at the above email address.

Preface

Integrated circuit devices are currently available to satisfy a wide variety of applications, both digital and linear in nature. Yet, there are always application requirements that cannot be directly (or optimally) satisfied by standard, off-the-shelf IC devices. Nevertheless, these more specialized or lower-volume applications can still profit from the application of IC device characteristics through the use of *IC arrays*. An IC array, as the name implies, is simply an array of active IC circuit components—transistors of various types, diodes, and the like. Packaged in uncommitted form, such devices still retain the typical IC characteristics of high density, matched specifications, and low cost. Their outstanding attribute is their inherent flexibility—a feature that allows easy implementations of high-performance custom designs over a broad range of applications.

Once the fairly simple rules of IC circuit design are appreciated, IC arrays may be applied to achieve efficient circuit functions almost as readily as the more common IC components, such as operational amplifiers. Indeed, the special characteristics of IC array devices often allow circuits to be implemented that would be otherwise prohibitive.

This book treats the theory and practical application of IC arrays, with the emphasis on the latter. It is divided into three parts. Part I is an introduction, which covers basic IC circuit concepts and the range of IC array types available. Part II is a circuit applications section, which illustrates uses of IC arrays within a large number of circuit subgroup types, such as ac and dc amplifiers, differential amplifiers, regulator and power circuits, wideband circuits, oscillators, gain controls, and miscellaneous other uses. Part III consists of appendixes, including selected data sheets, manufacturers' source information and device cross references, and a distributor listing.

The book is written in a down-to-earth, practical style like the author's previous *IC Op Amp Cookbook*, *IC Timer Cookbook*, and *IC Converter Cookbook*. All circuits are presented with specified component values; a description of operation, range, and limits of operation; and

suggestions for modifications and alternative uses. End-of-chapter bibliographic references will aid the reader seeking further background.

The author would like to express sincere thanks to Hal Wittlinger, Bob Rauth, and Walter Dennen of the RCA Solid State Division for their assistance in the preparation of this book. Also, general thanks go to the RCA Solid State Division for allowing the use of their technical literature within portions of this book.

My thanks also go to my wife, Anne, who once again produced the typed manuscript, and to my research assistants, Jeannie and Mark.

WALTER G. JUNG

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