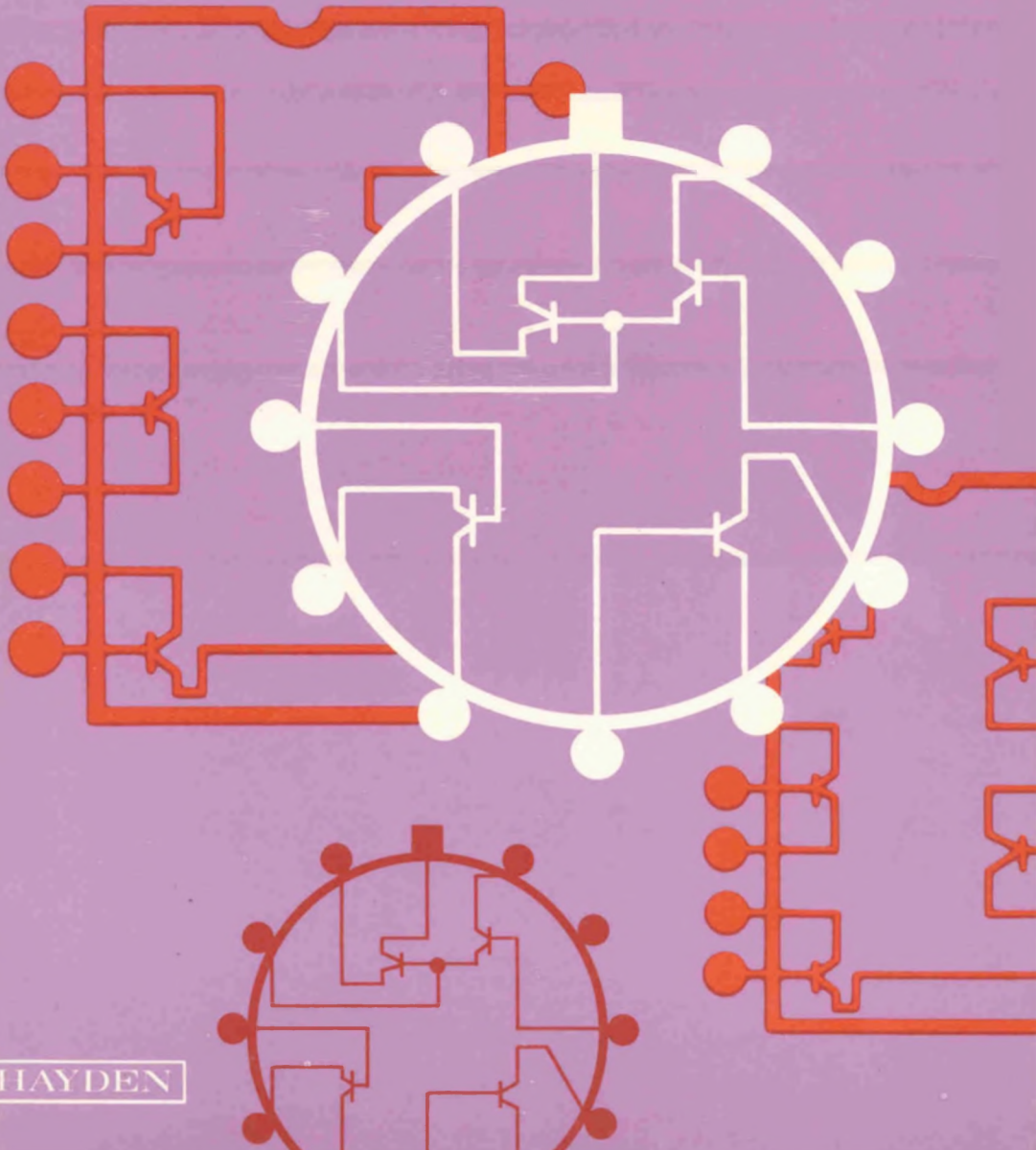


IC Array Cookbook

Walter G. Jung



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it in 1980, and
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

Contents

Part I Introduction to IC Arrays

1 IC Array Active Devices and Processes	1
<i>NPN Transistors</i> 2	
<i>PNP Transistors</i> 10	
<i>Diodes</i> 14	
2 Array Devices and Design Techniques	20
<i>Current Sources</i> 20	
<i>Voltage References</i> 27	
<i>Level Shifters</i> 34	
<i>Basic Amplifiers</i> 36	
<i>Composite Stages</i> 45	
<i>Buffer Stages</i> 47	
<i>Over-Current Protection</i> 49	
<i>Parasitic Action</i> 49	
3 IC Array Mini-Catalog	54
<i>General-purpose Arrays</i> 54	
<i>High-Current Devices</i> 56	
<i>Mixed Element</i> 57	
<i>Super-Beta Array</i> 58	
<i>Differential Amplifier Arrays</i> 60	
<i>High-Frequency Array</i> 60	
<i>Diode Arrays</i> 60	

Part II IC Applications Section

4 Voltage Regulator, Reference, and Power Supply Circuitry	64
<i>Simple Voltage Regulators</i> 64	
<i>Voltage References</i> 66	
<i>High Supply Rejection Reference Circuits</i> 68	
<i>Shunt Regulators</i> 73	
<i>Current Regulators</i> 78	
<i>Lab Power Supplies</i> 80	
5 Amplifier Circuit Techniques	83
<i>Emitter Followers (Common Collector Amplifiers)</i> 83	
<i>Low Power Biasing</i> 85	
<i>Adjustable and Zero Offset Emitter Followers</i> 86	
<i>Fixed Offset Emitter Follower</i> 86	
<i>Line Driver</i> 88	
<i>Common-Base Amplifier</i> 88	
<i>Feedback Summing Amplifier</i> 90	
<i>Wideband Common Emitter Amplifier</i> 91	
<i>Simple Common Emitter Amplifier</i> 92	
<i>Cascode Amplifiers</i> 93	
<i>Feedback Amplifiers</i> 94	

Low-Noise Amplifier 96
 Phono/Microphone Preamplifiers 97
 Wideband "Super-Beta" Amplifier 99
 Variable Gain Video Amplifier 100
 Video Line Receiver 101
 Instrumentation Amplifier 102
 Operational Amplifiers Using IC Arrays 103
 General-Purpose Op Amp 104
 Composite Amplifiers 106
 Temperature-Controlled Differential Pair Preamp 107
 Super-Beta Input Op Amp 108
 Comparators 109

6 Oscillators 113

Comparator Astable 113
 Emitter-Coupled Astables 115
 Stabilized Emitter-Coupled Oscillator 119
 General-Purpose Waveform Generator 120
 Triangle-to-Sine-Wave Converter 121
 High-Frequency Sine-Wave Oscillator 122
 Low-Frequency Sine-Wave Oscillator 124

7 Logic Stages 128

Gates 129
 Buffers 131
 One-Shot Multivibrator 132
 R-S Flip-Flop 133
 Logic Interfaces 134
 Power-Up Reset/Delay 136

8 Miscellaneous Circuits 138

Detectors 138
 Full-Wave Rectifiers 140
 Precision AC Metering Circuit 142
 Gain-Control Circuits 143
 Exponential-Control Law Circuit 147
 Switched Amplifiers 147
 Limiters, Clippers, and Clamps 151
 Zero-Offset Voltage Follower with Peak Limiting 155
 Bidirectional Current-Mode Limiter 157
 DC Restorer 157
 Zero-Crossing Detectors 158
 Interface Drivers 162
 Noise Generator 164

Appendix A: Selected Manufacturers' Data Sheets 167

Appendix B: IC Array Source Information 196

Appendix C: Mail Order Distributor Listing 197

Index 198