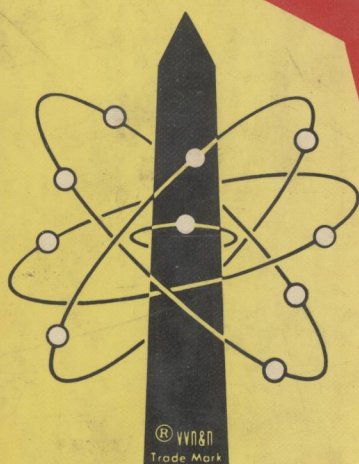


Basic Solid-State Electronics

VAN VALKENBURGH,
NOOGER & NEVILLE, INC.

COMPLETE COURSE
VOLUMES
1 THROUGH 5



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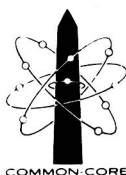
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Basic Solid-State Electronics

The Configuration and
Management of
Information Systems



VAN VALKENBURGH,
NOOGER & NEVILLE, INC.



COMPLETE COURSE
VOLUMES
1 THROUGH 5



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VOLUMES 1 THROUGH 5



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PREFACE

This series is essentially a redevelopment of our earlier work, *Basic Electronics*, originally developed as part of the COMMON CORE® Program — *Basic Electricity, Basic Electronics, Basic Synchros and Servomechanisms*, etc. — for the U.S. Navy during the years 1950-1954. At that time we were concerned with the prerequisite knowledge and skills for the vacuum tube technology of that day as applied primarily to radio communications equipment, radar, and sonar.

Technology wise, although electronics technology over the intervening years has changed *drastically and dramatically* via LSI, VLSI, etc., the concepts, purposes, and system building blocks functionally are *essentially the same* — that is, for *communications or information transfer* — with the notable exceptions being the advent of digital/logic switching circuits and their high-density packaging.

Systems wise, the really new aspects have been the internal incorporation of *management and control* functions — via digital formatting, processing, storage, retrieval, etc. — into “*intelligent*” *electronic systems* by means of computers and microprocessors.

Education wise, we faced ironically the same *fractionation* of subject matter as we did back in 1950-1954! Again, there appears to be no one place where a student can go to get a relatively *simple, clear overview* of what electronics is now all about. Again, we have tried to meet this need and challenge by presenting electronics in terms of an *Overall Information Management System*.

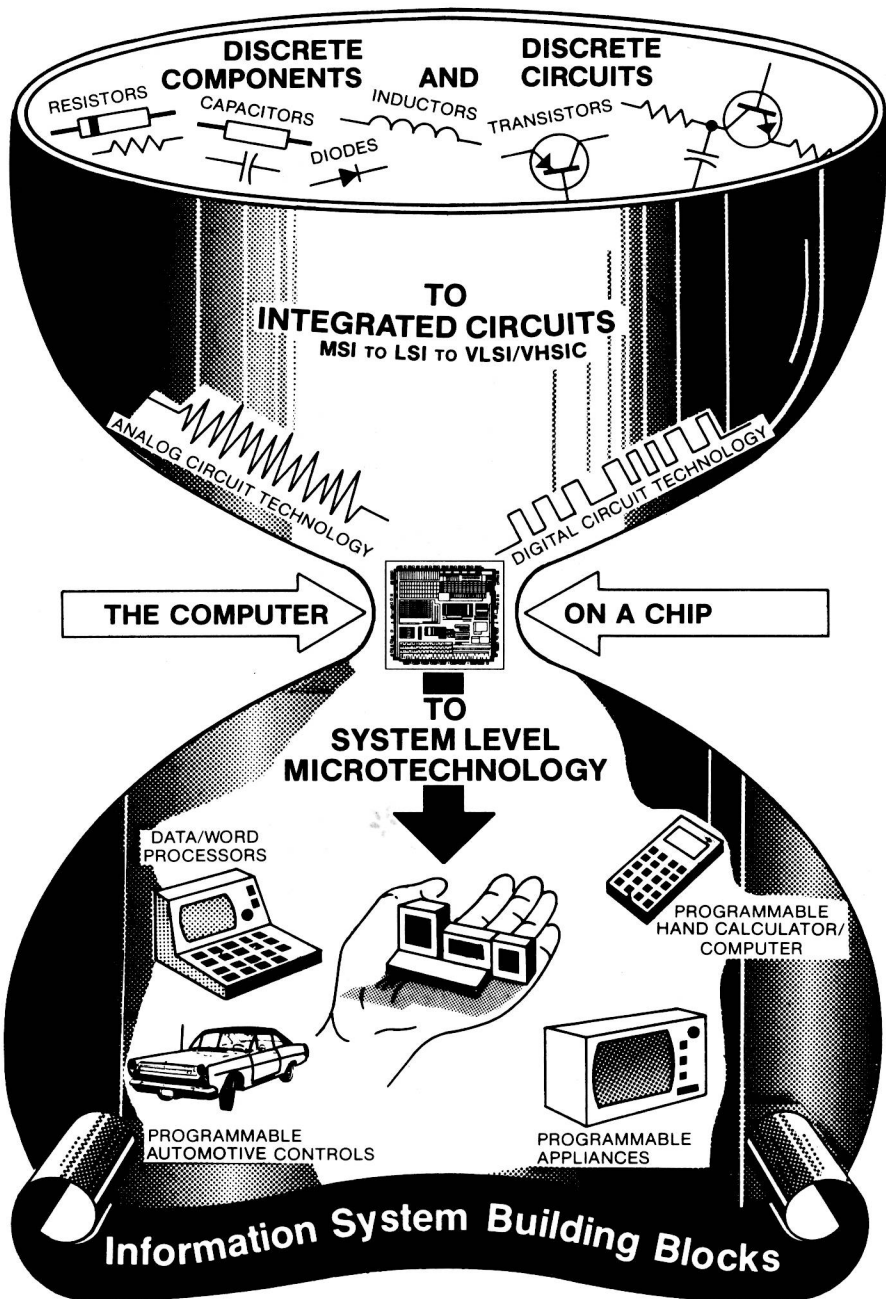
Format wise, we continue to use the original, innovative, basic text-format, system-design elements of the COMMON-CORE® Program — the Program by means of which over 100,000 U.S. Navy technicians have been trained along with hundreds of thousands more civilian students and technicians here and in South America, Europe, the Middle East, Asia, Australia, and Africa. This format of proved effectiveness — now incorporating individual learning/testing features and techniques within the texts themselves, and in the accompanying interactive student mastery tests — has withstood the test of time.

This, then, is our second effort in over 25 years to put the basics of electronics back together again by presenting electronics in terms of an *Overall Information Management System*, and in the form of the original innovative basic text-format, system-design elements so that an average person can learn what the basics of electronics — solid-state electronics — are all about.

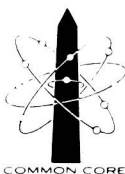
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ELECTRONIC TECHNOLOGY FROM



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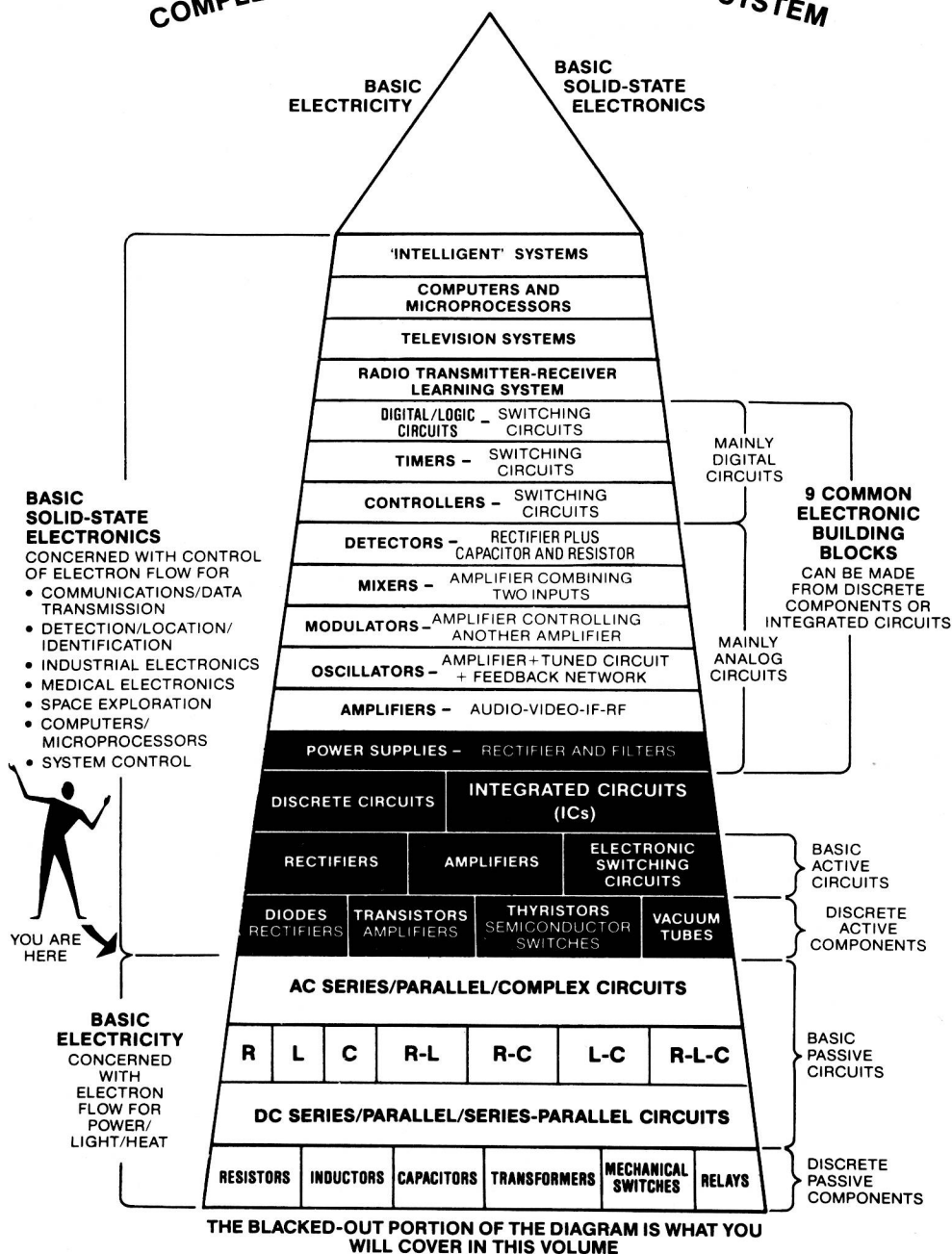


The Configuration and
Management of
Information Systems

INFORMATION SYSTEM BUILDING BLOCKS
VOL. I

BASIC CONCEPTS/CIRCUITS
ANALOG/DIGITAL BUILDING BLOCKS
DISCRETE/IC SEMICONDUCTOR DEVICES
RADIO TRANSCEIVER LEARNING SYSTEM
SIMPLE/REGULATED/BATTERY POWER SUPPLIES
SERVICING/TROUBLESHOOTING

COMPLETE COMMON-CORE® LEARNING SYSTEM



CONTENTS

VOLUME 1 — INFORMATION SYSTEM BUILDING BLOCKS

Basic Concepts; Semiconductor Devices; Discrete Components and Integrated Circuits; Passive Components R/L/C; Active Diode and Transistor Components; Simple Power Supplies/Rectifiers/Filters; Regulated Power Supplies; Inverters and Converters; Battery-Type Power Supplies; Servicing/Learning System Power Supply

BASIC CONCEPTS

INTRODUCTION TO ELECTRONICS

Overall Information Management System	1-1
Electronic Systems	1-5
A Brief History of Electronics	1-6
Controlling Current (Electron) Flow	1-9
The Three Basic Circuits/Nine Common Building Blocks	1-10
The Block Diagram — System Function	1-11

ELECTRONIC CIRCUIT BUILDING BLOCKS—

Analog and Digital

Radio Transmitter-Receiver Learning System	1-12
Radio Transmitter-Receiver Learning System — System-to-Parts Approach	1-13
Summary of Radio Transmitter-Receiver Operation	1-14
What Power Supplies Do	1-16
What Amplifiers Do	1-17
What Oscillators Do	1-18
What Modulators, Mixers, and Detectors Do	1-19
What Controllers, Timers, and Digital/Logic Circuits Do	1-20

ELECTRONIC CIRCUIT COMPONENTS

Discrete Electronic Components	1-21
Discrete Electronic Circuits	1-22
Diodes/Transistors/Thyristors — In Discrete Circuits	1-23
Discrete and Integrated Circuit Components	1-25
Schematic of MSI IC Amplifier	1-26
Integrated Circuits — MSI, LSI, VLSI, VHSIC	1-27
Vacuum Tubes	1-28

INTRODUCTION TO ELECTRONICS OVERVIEW

Review of Basic Concepts	1-29
Self-Test — Review Questions	1-30

SEMICONDUCTOR DEVICES

DISCRETE SEMICONDUCTOR DEVICES

Semiconductor Materials	1-31
N-Type Semiconductor Material	1-32
P-Type Semiconductor Material	1-33
The PN Junction	1-34
Reverse-Biased PN Junction	1-35
Forward-Biased PN Junction	1-36
The Semiconductor Diode (Use of Conventional Electron Flow) . .	1-37
Experiment/Application — Observing and Testing Diode Operation	1-40

BIPOLAR DEVICES

The Bipolar Transistor	1-41
Transistor Current Flow	1-43
Transistor Circuit Configurations	1-44
Transistor Current Gain	1-45
Transistor Voltage Gain	1-46
Transistor Power Gain	1-47
Transistor Operating Characteristics	1-49
Design and Fabrication	1-50
Experiment/Application — Transistor Characteristics — Common Collector	1-51
Experiment/Application — Transistor Characteristics — Common Emitter	1-53
Experiment/Application — Transistor Characteristics — Transistor as a Switch	1-54
Experiment/Application — Checking Transistors with an Ohmmeter	1-55
Thyristors — the SCR	1-56
Thyristors — The Triac and Diac	1-57

MOS DEVICES

Field-Effect Transistors — FET/MOSFET/MOS	1-58
IC MOS Devices — MSI, LSI, VLSI	1-60

SEMICONDUCTOR DEVICES OVERVIEW

Review of Semiconductor Devices	1-61
Self-Test — Review Questions	1-64

SIMPLE POWER SUPPLIES/RECTIFIERS/FILTERS

INTRODUCTION TO POWER SUPPLIES

Purpose of the Power Supply	1-65
Basic Components of a Simple Power Supply	1-66
Voltage Regulators	1-67

RECTIFIERS AND RECTIFICATION

Purpose of Rectifiers	1-68
The Rectifier	1-69
The Half-Wave Rectifier Circuit	1-70
The Full-Wave Rectifier Circuit	1-71
Experiment/Application — The Diode Rectifier	1-72
The Full-Wave Bridge Rectifier	1-73
Experiment/Application — The Full-Wave Bridge Rectifier	1-74

POWER SUPPLY FILTERS

The Purpose of Filters	1-75
The Capacitor in the Filter Circuit	1-76
The RC Filter	1-78
The Inductor in the Filter Circuit	1-80
Filter Configurations — Capacitor Input Filters	1-81
Experiment/Application — The Filter Circuit	1-82

MISCELLANEOUS POWER SUPPLY CIRCUITS

The Voltage Multiplier	1-83
----------------------------------	------

SIMPLE POWER SUPPLIES/RECTIFIERS/ FILTERS OVERVIEW

Review of Simple Power Supplies/Rectifiers/Filters	1-84
Self-Test — Review Questions	1-85

REGULATED POWER SUPPLIES

REGULATED POWER SUPPLIES

Purpose of Voltage Regulators	1-86
Simple Hand-Operated Voltage Regulator	1-87
Diode Regulators	1-88
Zener Diode Regulator	1-89
Zener Regulator with Supply Voltage Decrease	1-92
Zener Regulator with Supply Voltage Increase	1-93
Summary of Zener Regulator Operation	1-94
Experiment/Application — The Simple Zener Diode Regulator	1-95
Zener Diode — Transistor Regulator	1-97
Experiment/Application — Voltage Regulator with Pass Transistor	1-99
Feedback Regulators	1-100

Linear Series Regulator	1-101
A Simple Feedback Series Regulator	1-102
Switching Regulators	1-103

TYPICAL POWER SUPPLIES

Simple Half-Wave Rectified Zener-Regulated Battery Charger . .	1-105
Adjustable Voltage-Regulated Power Supply	1-105
Power Supply Using Three-Terminal IC Regulator	1-106
Low-Power IC Supplies	1-106
Experiment/Application — An IC Regulator	1-107

INVERTERS AND CONVERTERS

INVERTERS AND CONVERTERS

The Need for Inverters and Converters	1-108
The Driven Inverter	1-109
The Push-Pull Self-Excited Inverter	1-110
DC-to-DC Converters	1-112

REGULATED POWER SUPPLY/INVERTER AND CONVERTER OVERVIEW

Review of Regulated Power Supplies/Inverters and Converters . .	1-113
Self-Test — Review Questions	1-115

POWER SUPPLIES — SERVICING AND APPLICATION

SERVICING AC POWER SUPPLIES

Types of Failures	1-116
Step-by-Step Troubleshooting Procedure	1-118

BATTERY—TYPE POWER SUPPLIES

BATTERY POWER SUPPLIES

Features and Applications	1-120
Nonrechargeable Batteries	1-121
Rechargeable Batteries	1-122
Types of Dry Batteries	1-123
Carbon-Zinc Cell	1-124
Alkaline Cell	1-125
Mercury Cell	1-126
Lithium Cell	1-127
Nickel-Cadmium (Nicaid [®]) Cells	1-128
Lead Acid-Lead Dioxide Cell	1-130

SERVICING BATTERY POWER SUPPLIES

Nonrechargeable Battery Supplies	1-131
Rechargeable Battery Supplies	1-132

SERVICING/LEARNING SYSTEM POWER SUPPLY

INTRODUCTION TO SERVICING SOLID-STATE CIRCUITS

Circuit Boards	1-133
Block and Schematic Diagrams/Special Markings	1-134
Layouts, Photos, Wiring Diagrams, and Other Aids	1-136
Components Removal and Replacement	1-138
Other Aids to Servicing	1-139

RADIO TRANSMITTER — RECEIVER LEARNING SYSTEM POWER SUPPLY

Learning System Power Supply	1-140
Learning System Power Supply — Discrete Component Version. .	1-141
Learning System Power Supply — IC Version	1-143

SERVICING AND POWER SUPPLY OVERVIEW

Review of Servicing and Power Supplies	1-144
Self-Test — Review Questions	1-145

VOLUME 2 — AUDIO INFORMATION SYSTEMS

Amplification; Audio Amplifiers; Audio Systems; Sound Transducers; Public Address Systems; Hi-Fi Audio Systems; Video Amplifiers; IF Amplifiers; RF Amplifiers; Oscillators; Troubleshooting Amplifiers and Oscillators

BASIC AMPLIFICATION

INTRODUCTION TO AMPLIFICATION

Audio Information Systems	2-1
Amplification	2-2
Radio Transmitter-Receiver Learning System	2-3
Summary of Radio Transmitter-Receiver Operation	2-4
The Electromagnetic Frequency Spectrum	2-6
Types of Amplifiers — Audio, Video, IF, RF	2-10
The dB Measurement Scale	2-12

BASIC AMPLIFIER CHARACTERISTICS

Review of How Transistors Amplify	2-13
Common-Emitter Configuration	2-17
Common-Base Configuration	2-20

Common-Collector Configuration	2-21
Transistor Operating Point	2-22
Experiment/Application — Measuring Transistor Amplifier Parameters	2-26
Signal Clipping	2-28
Classes of Operation	2-29
Integrated Circuit Elements	2-30

BASIC AMPLIFICATION OVERVIEW

Review of Basic Amplification	2-31
Self-Test — Review Questions	2-33

AUDIO AMPLIFIERS

INTRODUCTION TO AUDIO AMPLIFIERS

Applications of Audio Amplifiers	2-34
Microphones and Loudspeakers	2-35
Multistage Amplifiers — Discrete and IC	2-37
Coupling Methods	2-38
Impedance Matching	2-40
Power Amplifiers	2-41
Frequency Response	2-42
Describing Amplifier Characteristics	2-45
Additional Audio Amplifier Terminology	2-46
Push-Pull Amplifier	2-47
Phase Inverters	2-49
Emitter-Coupled Push-Pull Amplifier	2-50
IC Differential Amplifier Circuits	2-51
Negative Feedback	2-53
Complementary Amplifier Stages	2-55
Experiment/Application — An IC Feedback Audio Amplifier	2-56
Experiment/Application — Measuring Frequency Response of an Amplifier	2-58
An IC Low-Level Preamplifier	2-59
An IC Power Amplifier	2-61
CB Transceiver Audio System	2-63

AUDIO AMPLIFIERS OVERVIEW

Review of Audio Amplifiers	2-65
Self-Test — Review Questions	2-66

BASIC AUDIO SYSTEMS

INTRODUCTION TO AUDIO SYSTEMS

Modern Audio Systems	2-67
Basic Principles of Sound	2-68

SOUND TRANSDUCERS

Introduction to Microphones	2-69
The Carbon Microphone	2-70
Crystal and Ceramic Microphones	2-71
Dynamic Microphones	2-72
Ribbon or Velocity Microphones	2-73
Directional Microphones	2-74
The Condenser or Capacitor Microphone	2-75
Conventional Headphones	2-76
Hi-Fi Headphones	2-77
Introduction to Dynamic Loudspeakers	2-78
Electrostatic Speakers	2-79
Horn-Type Speakers	2-80
Introduction to Hi-Fi Loudspeakers	2-81
Coaxial and Triaxial Hi-Fi Speakers	2-83
Crossover Networks	2-84
Loudspeaker Enclosures	2-86
Bass-Reflex Loudspeaker Enclosures	2-87
Acoustical-Suspension Speaker-Enclosure Systems	2-88
Phasing of Components	2-89
Experiment/Application — Measuring Speaker Impedance and Phasing	2-90

PUBLIC ADDRESS SYSTEMS

Amplifier Requirements	2-91
Special Problems	2-92

BASIC AUDIO SYSTEMS OVERVIEW

Review of Basic Audio Systems	2-93
Self-Test — Review Questions	2-94

HIGH-FIDELITY AUDIO SYSTEMS

Introduction to High-Fidelity Audio Systems	2-95
How Phonograph Records Are Made	2-97
Record Players	2-98
Record Player Turntables	2-99
Automatic Record Changers	2-100
Record Player Tone Arms	2-101
Record Player Cartridge and Stylus	2-102
Magnetic Tape Recorders — Basic Components	2-103
Magnetic Tape Recorders — Erasing and Recording	2-104
Magnetic Tape Recorders — Playback	2-105
Tape Transports	2-106
Noise Reduction — Analog (Dolby®)	2-109
Noise Reduction — Digital	2-110
Preamplifiers and Mixers	2-111

Preamplifiers and Mixers — Tone Control Circuits	2-112
Experiment/Application — Checking the Tone Control Circuit. .	2-115
Preamplifiers and Mixers — IC Preamplifier	2-116
Preamplifiers and Mixers — IC Mixer	2-117
Power Amplifiers	2-118
Power Amplifiers — Complementary-Symmetry Amplifier.	2-119
Power Amplifiers — Quasi-Complementary Symmetry Amplifier.	2-120
Basics of Stereophonic and Quadraphonic Systems	2-121

HIGH-FIDELITY AUDIO SYSTEMS OVERVIEW

Review of High-Fidelity Audio Systems	2-130
Self Test — Review Questions	2-132

VIDEO/IF/RF AMPLIFIERS AND OSCILLATORS

VIDEO AMPLIFIERS

Introducing the Video Amplifier	2-133
Distortion Caused by Poor Frequency Response.	2-134
IC Video Amplifiers	2-135

IF AMPLIFIERS

What IF Amplifiers Do	2-137
IF Amplifier Configuration	2-139
Review of Tuned Circuits	2-140
Typical IF Amplifier Stages	2-141
Automatic Gain Control.	2-142
Selectivity	2-143
Bandwidth Control Using Crystal Filters	2-144
Integrated Circuit IF Amplifiers	2-146
Other Examples of IF Amplifiers.	2-148
Experiment/Application — Checking Characteristics of an IF Amplifier.	2-150

RF AMPLIFIERS

What RF Amplifiers Do	2-151
Typical Receiver RF Amplifier Stage.	2-152
Bandwidth and Selectivity	2-153
Ganged Tuning and Tracking	2-154
Sensitivity Improvement — Receiver Noise	2-155
Typical RF Amplifier	2-156
MOSFET RF Amplifiers.	2-157
Integrated Circuit RF Amplifiers	2-158
Introduction to RF Power Amplifiers	2-159