

INDEX TO *Electron* VOLUME 3

PART 1 • ALPHABETICAL

Additional Loudspeaker	11-5	GCA Box Score	6-17
Alterations to the U.S.S. Midway	2-1	GCA Box Score	7-15
Another GCA "Save"	9-17	GCA Box Score	8-19
Antenna System Design at Work	9-1	GCA Box Score	9-17
AS-45A/SPR-2 Antenna Coupler	6-14	GCA Box Score	10-21
Automatic Carriage Return for Radio Teletypewriters	4-11	GCA Box Score	11-5
Automatic Communication Methods	11-37	GCA Brings in Commercial DC-3	5-21
Basic Physics—Chapter 1—Measurement	1-16	Great-Circle Bearings	4-17
Basic Physics—Chapter 2—Concepts of Energy	2-21	Grid-Bias Batteries for Model UP Equipment	9-7
Basic Physics—Chapter 3—Properties of Matter	3-19	Ground-Controlled Approach	5-21
Basic Physics—Chapter 4—The Kinetic Theory	4-20	Grounded-Grid R-F Power Amplifier	5-15
Basic Physics—Chapter 5—Thermal Properties of Matter	5-22	Handset Extension for Type-23496 Remote Control Indicator	10-20
Basic Physics—Chapter 6—The Electrical Nature of Matter	6-23	High-Vacuum Rectifiers	2-11
Basic Physics—Chapter 7—Electrostatic Units	7-17	IBM Analysis of Tube Type	6-36
Basic Physics—Chapter 8—Current and Resistance	8-22	Improved Crystal Ovens for U-H-F Equipments	9-18
Basic Physics—Chapter 9—The Series Circuit	9-22	Index to Electron—Volume 2	2-29
Basic Physics—Chapter 10—The Parallel Circuit	10-22	Installation of Type-66147 U-H-F Antennas	9-9
Basic Physics—Chapter 11—Magnetism	11-26	Introductory Concepts to Microwaves	11-8
Bathothermograph Blister	1-13	Inventory Instructions	5-29
Bathothermograph Notes	7-11	JAA TLR System	1-1
Bathothermograph Repairs	3-17	Key Control Tester Panel	5-13
Blacklite Sonar Dial Illuminators	4-9	Location of Remote Control-Indicator Units	8-20
Cable Length in TDP-1 Equipment	5-14	Low Frequency Radioteletype	3-6
Calculating Great-Circle Bearings	1-14	Low Sensitivity on the SV-1 Radar	2-8
Care of Crystal Rectifiers and Mixers	6-15	Maintenance of Filament Rheostats	3-11
CG-21ACN Motor Dynamo Amplifier Unit Nameplate Change in Bathothermograph Allowance	9-20	Maintenance of Stand-Off Insulators	7-10
Change to Standard Distribution List	1-13	MAR Oscillator Circuit	7-16
Check Your Frequency Meters	7-16	Measurement of Antenna Characteristics	7-1
Chief of the Bureau of Ships, The	3-17	Measuring Antenna Patterns With Ship Models	8-1
Clarification of OCL Test Data	10-1	Measuring Set Amplifier	9-19
Condenser, The	5-12	Methods and Purposes of Screening Techniques	4-18
Corrosion in Model JT Sonar	10-2	Methods for Determination of Resistance of Power Sources	7-29
Crystals for U-H-F Emergency Frequency	3-24	Microfilm Copies of Drawings	7-16
Data Cards vs. Failure Reports	8-20	Mk 12 Radar Field Change	4-17
DBM Antenna Coupling Failure	7-10	ML-307A/AP Reflector, The	2-9
DCDI and DCRE Transferred	6-14	Model MBF Handsets	5-21
Decibel, The	5-12	Model OBU Components	3-12
Defective Dry Batteries	7-7	Model OMA Noise Level Monitor and Cavitation Indicator	10-9
Deputy and Assistant Chief of the Bureau of Ships	10-21	Model RCK Alignment Crystals	2-10
Design Trends in Sonar	11-1	Model RDG Lubrication Charts	1-12
Director U.S. Navy Underwater Sound Laboratory	12-	Model TDY Field Changes	1-12
Double Range Sweeps on the Mark 8	12-1	Model TDZ Modifications	2-20
Early Antenna Program at NEL	2-12	Model 28 Teletypewriter, The	12-
Effects of Electric Shock	6-10	Modernization of Shore Radio Stations	9-8
Electronic Ceilometer	9-12	More About Perchloric Acid Type Batteries	10-19
Electronic Circuits Under Plastic	3-9	More Microfilm Copies of Drawings	9-7
Electronic Equipment Lubricants	10-12	More Than Two Hundred Thousand	6-17
Electronic Equipment Records	3-14	Morfex Coupling Failures	8-16
Electronic Equipment Type Allowance Book Revisions	8-12	Mounting RBS-Series Receivers	3-18
Electronic Love	8-19	Moving Target Indication	5-1
Electronic Repair Kits	9-11	New Books	6-18
Electronic Supply Office	5-12	New Books	7-13
Electronic Technician Looks at Radiac, The	3-11	New Design of FM Receiver Detector	4-14
Electronics Division Publications	12-	New Issue Dates for Maintenance Bulletins	7-15
ERI? No, IFF	8-9	New Values of Electrical Units of Measurement	6-16
ERI or IFF?	3-16	New WWV Standard Broadcasts	2-16
Error in Field Change	1-13	Nutating Dipoles	2-13
Evolution of the Model JT	3-16	Obsolete Tubes	4-29
Failure of Paper Capacitors	11-7	Operating Mercury-Vapor Rectifiers	8-21
Fewer Loudspeakers in Congested Spaces	3-12	Ozone in the Earth's Atmosphere	11-7
Final Instruction Books	7-14	Painting Radar Antenna Hoods	8-19
Fire Control Radar Publications	8-11	Perchloric Acid Type Batteries	2-19
Frequency Meter Patching at Annapolis	12-	Performance of U-H-F Equipment	8-20
Frequency Shift Converters	8-16	Photoelectric Ceilometer	4-1
Frequency-Shift-Keying Spread	6-36	Portable Modulation Indicator	5-10
Gaskets for Waveguide Flanges	8-33	Preventive Maintenance and the ETM	3-12
GCA Box Score	3-24		
	5-21		

PART 1 • ALPHABETICAL

Procurement of Special GCA Parts	9-17	Telephone Handset Holders	4-10
Pulse Code Modulation	11-23	Teletype Pamphlet Stocks	3-11
QGA Hoist-Lower Mechanism	3-18	Teletype Test Panel	1-10
Quartz Crystal Care	3-10	Test For Proper IAGC Operation	2-11
Radar Performance and Operational Reports	3-15	This One Ring: The Bell	6-37
RADCM Modification Kit MX-833/SL	11-22	Training Error on JT Sonar	5-12
Reactivating TV Tubes	2-19	Transmitter Monitor	8-18
Re-Forming Electrolytic Capacitors	8-11	Type Allowance Book	3-18
Replacement of Crystals	9-21	Type AM-215/U Amplifiers	3-15
Replacement of SR-2 Air Pipes	2-18	Type CMX-49545 Speaker-Amplifier	3-15
Replacement Switch for the SV	3-16	Type-23497 Selector Control Unit	6-17
Replacing Mechanical Teletype Timers	9-19	Type-53349 Antenna Filter for TDZ	2-32
Report Your Field Changes	3-16	U-H-F Component Failures	7-15
Requisitions	3-14	U-H-F Crystals	6-22
Reserve Officer Training Duty	5-12	U-H-F Crystals—Correction	7-12
Retention of Model FRC Converters	9-21	U-H-F Equipment Installations	5-12
Searching With TDY-1 Antenna	3-18	U-H-F Selector Control Unit	2-10
Shanghai Heard From	11-5	Unauthorized Antenna Connections	5-14
Shipboard Teletypewriter Installations	10-18	Unprintable Remarks	9-17
Shockmounts on Channel Selector Unit	8-16	Unusual Radio Condition	2-8
Shorting the Indicator Unit Interlock Switch of the Model BN	11-4	U.S. Navy Electronics Laboratory, The	11-2
Signal Distribution Unit	3-1	U.S. Navy Underwater Sound Laboratory	12-2
Sonobuoy Frequencies Changed	7-13	Vacuum Tube Failure Terminology	11-6
SP/SP-1M Field Change Bulletins	3-15	Vacuum Tube Records and Signal Generators	9-29
Spare Hydrophones and Baffles	3-13	VLF Transmitters	6-1
Spare Parts for Loudspeakers	7-16	Volume Control Details	4-17
SR-3 and SR-6 Waveguide and Fittings	1-13	Want Some Standard Equipment? ANEESA	9-20
SU Troubles	2-8	Warning Plates for Small Craft	8-15
Submarine Antenna Insulators	7-16	Watch That Overload Switch	4-29
Submarine Loop Antennas	2-20	We Hear That—	9-21
Subminiatures vs. Standard Types	10-17	What is "Radiac"?	7-16
Subscription Fees for Commercial Publications	9-9	Wrong Crystals in TCS	3-17
Summary Reports of TTY Equipment	7-15	WWV Broadcasts—Improved Service	9-10
TBY Power Supplies	3-13	Zeroing Model SR-3 Synchros	3-24
TCK Reset Capacitor	3-13	2C39 Tubes Again	5-20
TEB Transmitter Trouble	2-12	6V6 Instead of 6K6	2-19

PART 2 • CLASSIFIED

COMMUNICATIONS EQUIPMENT

Model Letters:

MAR Oscillator Circuit	7-16
MBF Handsets, Model	5-21
RBO, 6V6 Instead of 6K6 in the	2-19
RBS-Series Receivers, Mounting	3-18
RCK Alignment Crystals, Model	2-10
RDG Lubrication Charts, Model	1-12
SCR-624, Failure of Capacitors in	3-12
TBY Power Supplies	3-13
TCK Filament Rheostats, Maintenance of	3-11
TCK Reset Capacitor	3-13
TCS, Wrong Crystals in	3-17
TDP-1 Equipment, Cable Length in	5-14
TDY Field Changes, Model	1-12
TDZ Modifications, Model	2-20
TDZ, Type-53349 Antenna Filter for	2-32
TEB Transmitter Trouble	2-12

Teletypewriter:

Automatic Carriage Return for Radio Teletypewriters	4-11
Automatic Communication Methods	11-37
FRC Converters, Retention of Model	9-21
Frequency-Shift-Keying Spread	8-33
FRF Frequency Shift Converters	6-36
Low-Frequency Radioteletype	3-6

Model 28 Teletypewriter, The	12-
Pamphlet Stocks, Teletype	3-11
Shipboard Teletypewriter Installations	10-18
Summary Reports of TTY Equipment	7-15
Test Panel, Teletype	1-10
Timers, Replacing Mechanical Teletype	9-19
UN, Amplifier Tube in Measuring Sets Used With the	9-19
UP, Amplifier Tube in Measuring Sets Used With the	9-19
UP Equipment, Grid-Bias Batteries for Model	9-7

General:

Amplifiers, Type AM-215/U	3-15
Antenna Characteristics, Measurement of	7-1
Antenna Connections, Unauthorized	5-14
Antenna Patterns With Ship Models, Measuring	8-1
Antenna Program at NEL, Early	6-10
Antenna System Design at Work	9-1
CEMB, New Issue Dates for the	7-15
Channel Selector Unit, Shockmounts on	8-16
Crystal Rectifiers and Mixers, Care of	6-15
Drawings, Microfilm Copies of	7-16
Drawings, More Microfilm Copies of	9-7
Electric Shock, Effects of	9-12
Electronic Repair Kits	5-12
Electronic Supply Office	3-11
Failure Report Forms, More than Two Hundred Thou- sand	6-17
Field Changes, Report Your	3-16
FM Receiver Detector, New Design of	4-14

PART 2 • CLASSIFIED

Frequency Meter Patching at Annapolis 8-16
 Frequency Meters, Check Your 3-17
 Great-Circle Bearings 4-17
 Great-Circle Bearings, Calculating 1-14
 Grounded-Grid R-F Power Amplifier 5-15
 Insulators, Maintenance of Stand-Off 7-10
 Insulators, Submarine Antenna 7-16
 Inventory Instructions 5-29
 Loop Antennas, Submarine 2-20
 Loudspeakers, Additional Quantity of Type-49546 11-5
 Loudspeakers in Congested Spaces, Fewer 7-14
 Loudspeakers, Spare Parts for 7-16
 Lubricants, Electronic Equipment 3-14
 Modulation Indicator, Portable 5-10
 Preventive Maintenance and the ETM 3-12
 Publications, Electronics Division 8-9
 Pulse Code Modulation 11-23
 Quartz Crystal Care 3-10
 Records, Electronic Equipment 8-12
 Remote Control Indicator, Handset Extension for Type-23496 10-20
 Remote Control-Indicator Units, Location of 8-20
 Requisitions 3-14
 Resistance of Power Sources, Methods for Determination of 7-29
 Screening Techniques, Methods and Purposes of 4-18
 Selector Control Unit, Type-23497 6-16
 Shore Radio Stations, Modernization of 9-8
 Signal Distribution Unit 3-1
 Speaker-Amplifier, Type CMX-49545 3-15
 Telephone Handset Holders 4-10
 Tester Panel, Key Control 5-13
 Transmitter Monitor 8-18
 Type-53349 Antenna Filter for TDZ 2-32
 U-H-F Antennas, Installation of Type-66147 9-9
 U-H-F Component Failures 7-15
 U-H-F Crystals 6-22
 U-H-F Crystals—Correction 7-12
 U-H-F Emergency Frequency, Crystals for 8-20
 U-H-F Equipment Installations 5-12
 U-H-F Equipment, Performance of 8-20
 U-H-F Equipment, Improved Crystal Ovens for 9-18
 U-H-F Selector Control Unit 2-10
 Unusual Radio Condition 2-8
 U.S.S. Midway, Alterations to the 2-1
 Vacuum Tube Failure Terminology 11-6
 VLF Transmitters 6-1
 Volume Control Details 4-17

RADAR

Model Letters:

BN, Shorting the Indicator Unit Interlock Switch of the Model 11-4
 Mark 8, Double Range Sweeps on the 2-12
 Mark 12 Radar Field Change 4-17
 Mark 34 Mod 2 High-Vacuum Rectifier 2-11
 Mark 34 Mods 2, 3 and 4, Error in Field Change No. 16 for the 3-16
 SP/1M Field Change Bulletins 3-15
 SP, Gaskets for Waveguide Flanges for the 3-24
 SP, Nameplate for the CG-21ACN Motor Dynamo Amplifier Unit Used With the 9-20
 SP Nutating Dipoles 2-13
 SP, Watch That Overload Switch in the 4-29
 SR-2 Air Pipes, Replacement of 2-18
 SR-3 Synchros, Zeroing Model 3-24
 SR-3 Waveguide and Fittings 1-13
 SR-6 Waveguide and Fittings 1-13
 SU Troubles 2-8
 SV, Morflex Coupling Failures in the 8-16
 SV, Replacement Switch for the 3-16
 SV-1 Radar, Low Sensitivity on the 2-8

General:

Antenna Hoods, Painting Radar 8-19
 Crystal Rectifiers and Mixers, Care of 6-15
 Drawings, Microfilm Copies of 7-16
 Drawings, More Microfilm Copies of 9-7
 Electric Shock, Effects of 9-12
 Electronic Repair Kits 5-12
 Electronic Supply Office 3-11
 Failure Report Forms, More Than Two Hundred Thousand 6-17
 Field Changes, Report Your 3-16
 IAGC Operation, Test for Proper 2-11
 IFF, ERI? No 3-16
 IFF, ERI or 1-13
 Inventory Instructions 5-29
 Lubricants, Electronic Equipment 3-14
 Microwaves, Introductory Concepts to 11-8
 Moving Target Indication 5-1
 Nutating Dipoles 2-13
 OBU Components, Model 3-12
 Performance and Operational Reports, Radar 3-15
 Preventive Maintenance and the ETM 3-12
 Publications, Electronics Division 8-9
 Publications, Fire Control Radar 12-
 Records, Electronic Equipment 8-12
 Reflector, The ML-307A/AP 2-9
 Requisitions 3-14
 RMB, New Issue Dates for the 7-15
 Screening Techniques, Methods and Purposes of 4-18
 U.S.S. Midway, Alterations to the 2-1
 Vacuum Tube Failure Terminology 11-6

SONAR

Model Letters:

JAA TLR System 1-1
 JT, Corrosion in the 3-24
 JT, Evolution of the Model 11-7
 JT, Spare Hydrophones and Baffles for the 3-13
 JT, Training Error on 5-12
 OMA Noise Level Monitor and Cavitation Indicator, Model 10-9
 QGA Blacklite Dial Illuminators 4-9
 QGA Hoist-Lower Mechanism 3-18
 QGB Blacklite Dial Illuminators 4-9

General:

Bathothermograph Allowance, Change in the 1-13
 Bathothermograph Blister 1-13
 Bathothermograph Notes 7-11
 Bathothermograph Repairs 3-17
 DCDI Transferred 5-12
 DCRE Transferred 5-12
 Design Trends in Sonar 12-
 Drawings, Microfilm Copies of 7-16
 Drawings, More Microfilm Copies of 9-7
 Electric Shock, Effects of 9-12
 Electronic Repair Kits 5-12
 Electronic Supply Office 3-11
 Failure Report Forms, More Than Two Hundred Thousand 6-17
 Field Changes, Report Your 3-16
 Inventory Instructions 5-29
 Lubricants, Electronic Equipment 3-14
 Preventive Maintenance and the ETM 3-12
 Publications, Electronics Division 8-9
 Records, Electronic Equipment 8-12
 Requisitions 3-14
 Screening Techniques, Methods and Purposes of 4-18

PART 2 • CLASSIFIED

Sonar Bulletin, New Issue Dates for the 7-15
 Sonobuoy Frequencies Changed 7-13
 U.S. Navy Underwater Sound Laboratory 12-2
 Vacuum Tube Failure Terminology 11-6

MISCELLANEOUS

Direction Finders:

DBM Antenna Coupling Failure 6-14

Homing:

GCA 5-21
 GCA Box Score 5-21
 GCA Box Score 6-17
 GCA Box Score 7-15
 GCA Box Score 8-19
 GCA Box Score 9-17
 GCA Box Score 10-21
 GCA Box Score 11-5
 GCA Brings in Commercial DC-3 5-21
 GCA Parts, Procurement of Special 9-17
 GCA "Save," Another 9-17
 GCA, Shanghai Reports on 11-5
 GCA Unprintable Remarks 9-17

Publications:

Books, New 6-18
 Books, New 7-13
 Distribution List, Change to Standard 7-16
 Instruction Books, Final 8-11
 Publications, Electronics Division 8-9
 Publications, Fire Control Radar 12-
 Subscription Fees for Commercial Publications 9-9
 TAB Revisions 8-19
 TAB (Type Allowance Book) 3-18

RADCM:

AS-45A/SPR-2 Antenna Coupler 6-14
 Modification Kit MX-833/SL, RADCM 11-22
 TDY Field Changes, Model 1-12
 TDY-1 Antenna, Searching With 3-18

Test Equipment:

Allowances, Signal Generator 9-29
 AN/UPM-2 Wavemeter Test Set, Replacement of Crystals in the
 Electronic Repair Kits 5-12
 OBU Components, Model 3-12
 OCL Test Data, Clarification of 5-12

Tubes:

IBM Analysis of Tube Type 6-36
 Obsolete Tubes 4-29
 Records, Vacuum Tube 9-29
 Rectifiers, High-Vacuum 2-11
 Rectifiers, Operating Mercury-Vapor 8-21
 Subminiatures vs. Standard Types 10-17
 Vacuum Tube Failure Terminology 11-6
 2C39 Tubes Again 5-20
 2P23 Image Orthicon, Reactivating the 2-19
 6K6, 6V6 Instead of the 2-19

6V6 Instead of 6K6 2-19
 1850 A Iconoscope, Reactivating the 2-19

General:

ANEESA—Want Some Standard Equipment? 9-20
 Antenna Characteristics, Measurement of 7-1
 Antenna Patterns With Ship Models, Measuring 8-1
 Antenna Program at NEL, Early 6-10
 Antenna System Design at Work 9-1
 Basic Physics—Chapter 1—Measurement 1-16
 Basic Physics—Chapter 2—Concepts of Energy 2-21
 Basic Physics—Chapter 3—Properties of Matter 3-19
 Basic Physics—Chapter 4—The Kinetic Theory 4-20
 Basic Physics—Chapter 5—Thermal Properties of Matter 5-22
 Basic Physics—Chapter 6—The Electrical Nature of Matter 6-23
 Basic Physics—Chapter 7—Electrostatic Units 7-17
 Basic Physics—Chapter 8—Current and Resistance 8-22
 Basic Physics—Chapter 9—The Series Circuit 9-22
 Basic Physics—Chapter 10—The Parallel Circuit 10-22
 Basic Physics—Chapter 11—Magnetism 11-26
 Batteries, Defective Dry 10-21
 Batteries, More About Perchloric Acid Type 10-19
 Batteries, Perchloric Acid Type 2-19
 Bell, This One Rings the 6-37
 Chief of the Bureau of Ships, The 10-1
 Condenser, The 10-2
 Crystal Rectifiers and Mixers, Care of 6-15
 Data Cards vs. Failure Reports 7-10
 Decibel, The 7-7
 Deputy and Assistant Chief of the Bureau of Ships 11-1
 Director U.S. Navy Underwater Sound Laboratory 12-1
 Electric Shock, Effects of 9-12
 Electrical Units of Measurement, New Values of 6-16
 Electrolytic Capacitors, Re-Forming 8-11
 Electronic Ceilometer 3-9
 Electronic Love 9-11
 Electronic Supply Office 3-11
 Failure Report Forms, More Than Two Hundred Thousand 6-17
 Field Changes, Report Your 3-16
 Great-Circle Bearings 4-17
 Great-Circle Bearings, Calculating 1-14
 Index to Electron—Volume 2 2-29
 Insulators, Maintenance of Standoff 7-10
 Inventory Instructions 5-29
 Lubricants, Electronic Equipment 3-14
 Microfilm Copies of Drawings 7-16
 Microfilm Copies of Drawings, More 9-7
 Microwaves, Introductory Concepts to 11-8
 Ozone in the Earth's Atmosphere 11-7
 Photoelectric Ceilometer 4-1
 Plastic, Electronic Circuits Under 10-12
 Preventive Maintenance and the ETM 3-12
 Printed Circuits (We hear that) 9-21
 Pulse Code Modulation 11-23
 Quartz Crystal Care 3-10
 Radiac, The Electronic Technician Looks at 12-
 "Radiac"?, What is 7-16
 Records, Electronic Equipment 8-12
 Requisitions 3-14
 Reserve Officer Training Duty 5-12
 Resistance of Power Sources, Methods for Determination of 7-29
 Screening Techniques, Methods and Purposes of 4-18
 Standard Equipment, Want Some, ANEESA— 9-20
 U.S. Navy Electronics Laboratory 11-2
 U.S. Navy Underwater Sound Laboratory 12-2
 U.S.S. Midway, Alterations to the 2-1
 Warning Plates for Small Craft 8-15
 WWV Broadcasts—Improved Service 9-10
 WWV Broadcasts, New 2-16