

INDEX

- address groups, 149
- administrative check-off list, 8
- air filter cleaning, 223
- alphabet, phonetic, 119
- antennas, 110-115
 - half-wave, 110
 - hertz, 112
 - maintenance, 223
 - quarter-wave, 112
 - shipboard, 113
 - VHF-UHF, 114
 - whip, 113
 - wire, 113
 - shore type, 114
 - conical, 115
 - rhombic, 115
 - sleeve, 115
 - standing wave, 111
 - wavelength formula, 112
- armed Forces Courier Service, 157
- armed Forces Operation Order, 139
 - body, 169
 - ending, 172
 - heading, 169
- availabilities, 236
- battle bill, 179
 - billet numbers, 180
 - readiness conditions, 181
- battle problems, 218
- paring maintenance, 223
- billet analysis, 205
- bills, ships, 179-188
 - administrative, 182-185
 - battle, 179
 - emergency, 187
 - operational, 184-187
 - operational readiness, 181
 - visit search, 186
 - watch, quarter, and station, 188
- broadcast transmission, 41
- brushes, generators, maintenance, 223
- books, locker, assignments, 182
- bill signs, visual signaling, 147, 149
 - address groups, 149
 - numerical pennants, 148
 - special prosigns, 149
 - tactical, 148
 - task organization, 148
- Calling, answering procedure, 123
- Campaign plan, 167
- Casualty reports, 220
- Classified material handling, 150-164
- Classroom training, 211
- Cleaning maintenance bill, 182
- Clearances, security, 165
- Codress messages, 27
- Communications afloat, 28-47
 - administrative command, 28
 - broadcasts, 41
 - coastal/harbor radiotelephone use, 42
 - departure preparation, 47
 - enlisted billets, 36
 - entering/leaving port, 44-47
 - files used, 37
 - fleet operations, 29
 - frequency plans, 31
 - log use, 38
 - message processing, 38-40
 - net operations, 30
 - officer billets, 34-36
 - shipboard organization, 32-37
 - ship-shore circuits, 42
 - space utilization, 36
 - standard plans, 44
 - tactical command, 28
- Communications ashore, 48-67
 - broadcast method, 65
 - circuit types, 63
 - commercial teletypewriter exchange, 63
 - intercept method, 66
 - NAVCOMMSTA's, 48-60
 - NCS system, 48
 - networks, 61
 - radio transmissions, 64-66
 - receipt method, 66
 - ship-shore circuits, 66
- Communication circuits, 63
- Communication concepts, 121-130
 - continental air defense, 122
 - electronic countermeasures, 123

INDEX

- Communication concepts—Continued
 - electronic intelligence, (ELINT), 128
 - electronic warfare, 123
 - search and rescue, 121
- Communication drills, 200
- Communication equipment, 95-117
 - antennas, 110-116
 - designating systems, 95
 - diodes, 96
 - facsimile equipment, 116
 - multi-element tubes, 98
 - oscillators, 98
 - receivers, 107-110
 - teletypewriters, 117
 - transmitters, 99-107
 - triodes, 97
- Communication officers' duties, 7-10
 - administrative check-off list, 8
 - publication security, 8
 - relief letter, 9
 - relieving process, 9
- Contingency plan, 168
- Convoy communications, 68-81
 - acknowledgements, 78
 - all-around procedure, 78
 - call signs, 74
 - condition A, 74
 - flaghoist signaling, 76
 - flashing light, 77
 - intra-convoy, 73
 - mercast system, 72
 - pyrotechnics use, 80
 - radio readiness, 74
 - radiotelephone, 80
 - sound signaling, 78
 - visual call signs, 75
- Convoys, 67-71
 - commodore, 68
 - conferences, 72
 - liaison officer duties, 69
 - masters, 68
 - naval control of, 71
 - personnel organization, 67
 - radio officer duties, 68-70
- Coordinated Shipboard Allowance List, 239
 - ordering parts, 240
 - sample list, 241
- Coronetting, 42
- Cryptoboard members, 36
- Cryptographic security, 163
- Current Ship's Maintenance Project (CSMP), 226
- Defense communications, 6
- Directives, 167-177
 - annexes appendices, 173
 - body, 169
 - communication annex, 173
 - distribution list, 174
 - ending, 172
 - heading, 169
 - operation order, 169-177
 - operation plan, 168
 - types of, 167
- Division officer duties, 179-193
 - administrative bills, 190-193
 - condition watches, 180
 - division organization, 179
 - entering, leaving port, 44-47
 - operational bills, 184-187
 - performance evaluation, 190-193
 - personnel assignment, 182
 - ships bills, 179-189
 - training, 190, 196
- Document security, 157
- Duplex circuit, 63
- Electron tube maintenance, 222
- Emergency bills, 187
- Entering and leaving port duties, 44-47
- Equipment maintenance, 221-227
- FAX format, 55
- Files, communication, 37
- Flaghoist signaling, 134-143
 - alphabetical numerical flags, 138
 - call signs, 147-149
 - cancelling, 143
 - emergency signals, 141
 - execution signal, 141
 - governing pennants, 140
 - maneuvering, 136
 - numeral pennants, 139
 - reading, 135
 - terms, 135
- Flashing light signaling, 143
- Fleet broadcasts, 41
- Fleet Training Command, 217
- Frequency assignments, 31
- General messages, 13
- Half-duplex circuit, 63
- Incoming messages, 38
 - classified, 39
 - internal routing, 39
- Inspections, equipment,

NAVAL COMMUNICATIONS

- Intercept method, transmission, 66
- Investigations, security, 165
- Job order, work request, 238
- Landing party bill, 185
- Lesson plans, 200
- Letter of instruction, 167
- Logs, communication, 38
- Man overboard bill, 187
- Maintenance, equipment, 221-241
 - air filters, 223
 - antennas, 223
 - bearings, 223
 - brushes, 223
 - electron tubes, 222
 - motors, 222
- Maintenance program (PMS), 228-239
 - COSAL, 239-241
 - data collection system, 236
 - manuals, records, 234
 - organization, 233
 - Planned Maintenance System, 232
 - POMSEE, 231
 - regular overhaul, 236
 - repairs, shipyard, 236
 - spare parts, 239
 - work requests, 238
- Maintenance records, 226-232
 - CSMP, 226
 - Electronic Performance and Operational Report, 227-230
 - Failure/Replacement Report, 228, 231
 - Material history record, 226
 - Operational Time LOG, 228-232
- MERCAST system, 72
- Merchant ship communications, 67-80
- Messages, 11-27
 - address groups, 14
 - addressees, 11
 - analyses of, 22-25
 - basic format, 22
 - call signs, 12-15
 - classes of, 11
 - designators, 15
 - general types, 13
 - intra-service suffixes, 63
 - military form, 27
 - multiple-address, 53
 - operating signals, 21
 - plain language, 25
 - precedence table, 18
 - procedure signs, 17-21
 - prosigns, 20
 - prowords, 120
 - radiotelegraph format, 23
 - radiotelephone, 120-123
 - routing indicators, 15
 - time reckoning, 15
 - torn tape system, 52
- Message transmissions to the fleet, 64-66
- Microphone techniques, 118
- Military messages, 25-27
- Mobile Technical Unit (MOTU), 226
- Motors, generators, maintenance, 222
- Multiplex circuit, 63
- Naval communications, 1-10
 - basic principles, 3
 - communication officer duties, 7-10
 - elements of, 5
 - equipment used, 3
 - history of, 1
 - joint allied, 6
 - major elements, 5
 - Military Affiliate Radio System, 7
 - Office of Naval Communications, 5
 - policy, 2
 - principles of, 3
 - shore establishment, 5
 - sound communications, 4
 - telecommunications, 3
 - visual communications, 4
- Naval Radio Stations, 56-59
- NAVCOMMSTA, 48-60
 - circuit control, 55
 - communication department, 50
 - control center, 56
 - crypto center messages, 52
 - facsimile center functions, 55
 - Naval Radio Station (R), 56
 - Naval Radio Station (T), 57
 - officer duties, 57-59
 - organization, 49-52
 - relay room, 54
 - relay station functions, 52
 - security group, 59
- NAVCOMMU, 60
- NTX format, 52
- Numeral pennants, 139
- Oceanographic broadcasts, 123
- Oceanographic reports, 217
- On-the-job training, 211
- Operation plan, 168
- OpOrders, 168-178
 - message form, 177
- Outgoing messages, 40
- Outline plan, 168

INDEX

- Overhaul procedure, 236-239
 - arrival conference, 238
 - availabilities, 236
 - progress report, 239
 - work request, 238
- Phonetic alphabet, 119
- Personnel assignment bill, 182
- Plaindress messages, 27
- Planned Maintenance System, 232
- POMSEE program, 231
- Prize crew bill, 186
- Progress charts, training, 213
- Pronouncing numerals, 119
- Prowords, 120-123
- Publications, visual signaling, 146
- Radiofrequency propagation principles, 81-91
 - atmospheric propagation, 83
 - diffraction, 84
 - reflection, 83
 - refraction, 83
 - trapping, 84
 - determination, prediction system, 92
 - fading, 91
 - frequency blackouts, 91
 - frequency designations, 83
 - ionospheric propagation, 88-90
 - nonstandard propagation, 85
 - radio wave formation, 86
 - R - F energy, 82
 - satellite communications, 93
 - wave characteristics, 82
- Radiotelephone procedures, 118-130
 - acknowledgements, 128
 - authentication, 129
 - calling, answering, 123
 - cancelling, 127
 - clearing traffic, 125
 - error correction, 127
 - executive method, 128
 - read back, 127
 - relay procedure, 129
 - message format, 120
 - microphone techniques, 118
 - net opening, 130
 - operating procedures, 123-131
 - phonetic alphabet, 119
 - pronouncing numerals, 119
 - prowords, 120-123
 - radio check, 129
 - repetitions, 126
 - verifications, 127
- Radiotelephone security, 159-162
- Radio wave formation, 86
- RATT frequency, 56
- Ready for sea training, 215
- Receipt method, transmitting, 66
- Receivers, 107-111
 - function of, 107
 - maintenance, 222
 - selectivity, 108
 - sensitivity measuring, 107
 - superheterodyne, 108
 - tuned frequency, 108
 - volume control, 109
- Records, reports, 227-232
 - CSMP, 226
 - Electronic Performance and Operational Report, 227
 - Failure/Replacement Report, 228
 - maintenance, 226-232
 - material history card, 226
 - operational time log, 228-232
 - training, 205-209
- Replenishment at sea bill, 184
- Rescue, assistance, bill, 185
- RSP custodian, 35
- Safety precautions, 223-225
 - cathode ray tubes, 224
 - cleaning electronic equipment, 223
 - electric current, 224
 - radiation hazards, 105-107
- Security, 150
 - accountability, 154
 - Armed Forces Couriour Service, 157
 - circuit discipline, 162
 - classifications, 150-152
 - document marking, 152
 - downgrading procedures, 152
 - groups, 152
 - restricted data, 151
 - control officers, 162
 - cryptographic, 163
 - custodial, 154
 - dissemination criteria, 158
 - downgrading material, 152
 - material destruction, 158
 - physical, 153
 - stowage, 153
 - table of equivalents, 155
 - transmission, 157
 - transmission security, 159-162
- Security clearances, 165
- Self-study course use, 211
- Semaphone signaling, 144-146
 - alphabet, 145
 - sample message, 146
- Ships bells, 179-189

NAVAL COMMUNICATIONS

- Ship-shore communications, 42
- Shipyard overhaul, 236-239
- Signaling, visual, 132-149
 - call signs, 147-149
 - flaghoist, 134-143
 - flashing light, 143
 - publications on, 146
 - semaphone, 144-146
- Single-sideband circuit (SSB), 64
- Special sea detail bill, 184

- Time conversion table, 17
- Time zone chart, 16
- Top secret control officer, 162
- Torn-tape system, 52
- Training 195-220
 - battle problems, 218
 - billet analysis, 205
 - classroom, 211
 - communication drills, 199
 - division officer duties, 196
 - during overhaul, 213
 - evaluation of, 213
 - Fleet Training Command, 217
 - group instruction periods, 210
 - individual ship exercises (ISE), 215
 - lesson plan, 200
 - long range, 200
 - mobile technical unit (MOTU), 226
 - new personnel, 212
 - officer records, 209
 - on-the-job, 211
 - organization for, 195
 - practical factors, 207
 - planning board, 195
 - priority establishing, program control, 212
 - program organization, 197
 - progress charts, 213
 - quarterly schedule, 202
 - ready-for-sea, 215
 - records, 205
 - refresher courses, 215
 - responsibility for, 219
 - schedule of, 200
 - self-study courses, 211
 - training officer, 196
 - weekly schedule for, 202-204
- Transmission security, 159-162
- Transmitters, 99-107
 - amplitude modulation, 101
 - continuous wave (CW), 101
 - emission classification, 99
 - grid-bias modulator, 103
 - harmonics, 100
 - maintenance transmitter, 222
 - modulated continuous wave, 103
 - radiation hazards, 105
 - personnel, 105
 - ordnance, 106
 - Single sideband transmission, 104
- Transmitting methods (ashore), 66
- Type of ships training, 218
 - competitive year, 219
 - during overhaul, 213
 - ready for sea, 215
 - individual ship exercises, 215

- Visit, search, boarding bill, 186
- Visual signaling, 132-149
 - call signs, 147-149
 - flaghoist signaling, 134-143
 - flashing light, 143
 - signal bridge, 132
 - signalman duties, 133
 - publications, 146
 - semaphone, 144-146
- Visual transmission security, 161

- Warning order, 167
- Watch Quarter and Station Bill, 189
- Watch officer (CWO), 35
- Watch organization, 180
- Waves, radio, propagation of, 81-91
- Weekly training schedules, 202-204
- Work request, job order, 238