

List of figures	p. xiii
List of tables	p. xvii
Preface	p. xviii
Abbreviations	p. xxi
Terrestrial Telegraphy	p. 1
Things mechanical	p. 3
Shutter systems	p. 4
Chappe's telegraph	p. 6
Popham and the Admiralty installation	p. 8
Some semaphore systems in Europe	p. 14
Semaphore in the United States	p. 16
Operations	p. 17
References	p. 18
Early electrical ideas	p. 20
Electrostatic devices	p. 20
Electrochemical devices	p. 22
The 'needle' telegraphs	p. 24
Cooke and Wheatstone	p. 30
Telegraphy on the railways	p. 34
Dial telegraphs	p. 40
Codes and ciphers	p. 47
References	p. 49
Commercial telegraphy	p. 51
Morse and single-line working	p. 51
Telegraph companies in the United States	p. 57
Development in Britain	p. 69
The Telegraph Acts of 1868-69	p. 73
The Electric and International Telegraph Company	p. 74
The British and Irish Magnetic Telegraph Company	p. 77
The London and District Telegraph Company	p. 77
The United Kingdom Electric Telegraph Company	p. 78
The Universal Private Telegraph Company	p. 79
The Reuter's Telegram Company	p. 80
The Exchange Telegraph Company	p. 80
Faster, cheaper telegrams	p. 81
Recording and printing	p. 85
Overhead or underground?	p. 90
Telegraphy in British India	p. 94
References	p. 99
Military operations	p. 102

War in the Crimea	p. 103
The Indian Mutiny	p. 108
The American Civil War	p. 110
European conflicts	p. 115
African colonial wars	p. 117
The Nile and Egyptian campaigns	p. 119
The Boer War	p. 122
Early British Army telegraph training	p. 126
The Telegraph Battalion	p. 126
The Society of Telegraph Engineers	p. 127
British Army signalling	p. 128
References	p. 132
Submarine cables	p. 134
Leaving the land	p. 134
Gutta-percha	p. 135
Crossing the Channel	p. 138
The Siberian Telegraph	p. 142
Oceanic cables	p. 147
Theory and techniques	p. 148
Loading	p. 151
Sensitive detectors	p. 152
Atlantic crossing	p. 154
Links to South America	p. 156
Cable-laying technology	p. 158
A Committee of Inquiry	p. 160
A Cable to India ...	p. 162
... and further East	p. 168
The Australian connection	p. 171
The world encompassed	p. 174
References	p. 178
Aerial Telegraphy	p. 181
Marconi and the experimenters	p. 183
Beginnings	p. 184
Marconi	p. 186
Transatlantic attempt	p. 190
Spark and arc	p. 192
'Short spark' operation	p. 194
The electric arc	p. 200
The high-frequency alternator	p. 201
Frequency multiplication	p. 202

Production and power	p. 204
The 'Marconi system'	p. 206
Marconi high-power stations	p. 208
Duplex working	p. 210
Telefunken and Siemens	p. 210
Keying at high power	p. 215
Continuous waves in the United States	p. 215
References	p. 221
Telegraphy for peace ...	p. 224
The advent of thermionics	p. 225
Detection	p. 225
Amplification and oscillation	p. 227
Transmission	p. 229
Linking the Empire	p. 231
Cable and wireless	p. 238
Reuters and the news service	p. 240
Maritime communication	p. 240
Wireless training in the merchant navy	p. 244
Codes, telegrams and newspapers at sea	p. 246
Life-saving at sea	p. 248
International agreements	p. 254
Civil aviation	p. 257
The role of amateurs	p. 260
References	p. 262
... and at war	p. 266
Army wireless before 1914	p. 267
War on the ground, 1914-18	p. 268
Wireless direction-finding	p. 269
Trench warfare	p. 272
Wireless at the front	p. 276
Two military engagements	p. 281
The inter-war years	p. 284
War on the ground, 1939-45	p. 285
Line working	p. 286
The African campaigns	p. 288
Communication systems	p. 289
Across the Channel	p. 292
Army wireless in the Second World War	p. 294
Allied wireless equipment	p. 296
German Army wireless	p. 301

British Army training and recruitment	p. 304
References	p. 305
Military telegraphy at sea	p. 308
Wireless experiments at sea	p. 308
War at sea, 1914-18	p. 314
Shipboard wireless equipment	p. 317
The Naval wireless telegraph network	p. 322
Cable operations	p. 323
The shore stations	p. 324
The inter-war years	p. 327
War at sea, 1939-45	p. 329
Allied wireless equipment	p. 333
German wireless equipment	p. 337
Cable ships and cables	p. 340
British naval wireless training	p. 342
References	p. 345
Military telegraphy in the air	p. 348
The dirigible	p. 348
War in the air, 1914-18	p. 350
British airborne equipment	p. 353
Training telegraphists for air operations	p. 359
American airborne equipment	p. 360
German airborne equipment	p. 362
The inter-war years	p. 365
Use of shorter wavelengths	p. 367
The 1929 development programme	p. 369
War in the air, 1939-45	p. 370
British airborne equipment	p. 371
American airborne equipment	p. 376
German airborne equipment	p. 377
RAF wireless training	p. 383
References	p. 386
Epilogue	p. 389
The demise of Morse	p. 389
High-speed telegraphy	p. 390
Baudot and the new codes	p. 391
Keyboard machines	p. 396
The teleprinter	p. 397
Military use of the teleprinter	p. 398
Telegram, telex and the telephone	p. 399

The telex service	p. 399
Telephony by submarine cable and satellite	p. 401
The digital revolution	p. 403
References	p. 404
Index	p. 405

Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.