

# Contents

<b>Foreword</b> .....	<b>i</b>
<b>Introduction</b> .....	<b>iii</b>
<b>Contents</b> .....	<b>vii</b>
<b>Abbreviations and Acronyms</b> .....	<b>ix</b>
<b>Glossary</b> .....	<b>xiii</b>
<b>Chapter 1: Search and Rescue in Australia</b> .....	<b>1</b>
1.1 SAR System Organisation.....	1
1.2 SAR Coordination.....	5
1.3 Overview.....	14
1.4 Search and Rescue Resources.....	20
1.5 Public Relations.....	21
<b>Chapter 2: Communications</b> .....	<b>27</b>
2.1 Overview.....	27
2.2 Distress and Emergency Signals.....	27
2.3 Global Maritime Distress and Safety System.....	29
2.4 Emergency Signalling Devices.....	30
2.5 COSPAS-SARSAT Distress Beacon Detection System.....	31
2.6 Other Types of Distress Alerting Devices.....	33
2.7 Radar SAR Transponder (SART).....	33
2.8 Communications in Support of SAR Operations.....	34
2.9 Communications Facilities.....	35
<b>Chapter 3: Awareness and Initial Action</b> .....	<b>41</b>
3.1 Awareness and Notification.....	41
3.2 SAR Stages.....	41
3.3 SAR Incidents.....	42
3.4 Emergency Phases.....	43
3.5 Awareness Stage.....	45
3.6 Sequence of SAR Events.....	49
3.7 Communication Checks.....	52
3.8 Intelligence Gathering and Assessment.....	54
<b>Chapter 4: Search Planning and Evaluation</b> .....	<b>67</b>
4.2 Search Planning Steps.....	67
4.3 Datum Definition.....	69
4.4 Search Stages.....	70
4.5 Factors Affecting Initial SAR Response.....	71
4.6 Basic Search Planning.....	72
4.7 Determination of Search Areas.....	76
4.8 Coastal Search Planning.....	88
<b>Chapter 5: Search Techniques and Operations</b> .....	<b>95</b>
5.1 Overview.....	95
5.2 General Guidelines for Searches.....	95
5.3 Search Area Coverage.....	97
5.4 Search Patterns.....	105
5.5 Visual Search.....	108
5.6 Flare Searches.....	118
5.7 Electronic Searches.....	119
5.8 SAR Unit Selection and Characteristics.....	124
5.9 Search Unit Allocation.....	130
5.10 SAR Crew Briefing.....	136
5.11 SAR Crew Debriefing.....	141
<b>Chapter 6: Rescue Planning Operations</b> .....	<b>143</b>
6.1 General.....	143
6.2 Preparation.....	143
6.3 Medical Assistance.....	143
6.4 Crashed Aircraft.....	144
6.5 Rescue on Land.....	144
6.6 Rescue at Sea.....	146
6.7 Supply Dropping and Delivery of Survival Equipment.....	148
<b>Chapter 7: Conclusion of SAR Operations</b> .....	<b>151</b>
7.2 Conclusion of a Successful SAR Action.....	151
7.3 Suspension of a Search when the Target is not Found.....	151
7.4 Reopening a Suspended Search.....	153
7.5 Records and Reports.....	153
7.6 Incident Debriefs.....	153

7.7 Case Studies .....	154
7.8 Performance Improvement .....	155
<b>Chapter 8: Training and Exercises .....</b>	<b>157</b>
8.1 General .....	157
8.2 National Training Framework .....	158
8.3 Search and Rescue Exercises .....	158
8.4 Training of Search and Rescue Units .....	159
8.5 Photographic Records .....	160
8.6 Liaison Visits .....	160
<b>Chapter 9: Emergency Assistance/Services (not Search and Rescue) provided by RCC Australia .....</b>	<b>161</b>
9.1 General .....	161
9.2 Safety Information .....	161
9.3 Unlawful Acts .....	161
9.4 Medical Assistance to Vessels at Sea .....	162
9.5 Emergencies .....	162
<b>Appendix A: Australian Search and Rescue Region .....</b>	<b>163</b>
<b>Appendix B: Search and Rescue Responsibilities and Functions .....</b>	<b>165</b>
<b>Appendix C: Inter-Government Agreement on National Search and Rescue Response Arrangements .....</b>	<b>167</b>
<b>Appendix D: Transfer of Overall Coordination or Request for RCC Australia Assistance .....</b>	<b>175</b>
<b>Appendix E: Distress and Emergency Signals .....</b>	<b>181</b>
<b>Appendix F: Maritime SAR Recognition Code (MAREC) .....</b>	<b>185</b>
<b>Appendix G: Plotting Symbols .....</b>	<b>201</b>
<b>Appendix H: Sighting &amp; Hearing (SHR) Techniques .....</b>	<b>203</b>
<b>Appendix I: Tables and Graphs .....</b>	<b>207</b>
<b>Appendix J: Probable Errors of Position .....</b>	<b>223</b>
<b>Appendix K: Worksheets .....</b>	<b>225</b>
<b>Appendix L: Aircraft Accident Site Precautions .....</b>	<b>235</b>
<b>Appendix M: Search and Rescue Units (SRU's) .....</b>	<b>237</b>
<b>Appendix N: RAAF SAR Equipment and Aircraft Capabilities .....</b>	<b>239</b>
<b>Appendix O: Royal Australian Navy Response .....</b>	<b>241</b>
<b>Appendix P: Memoranda of Understanding .....</b>	<b>243</b>