

Contents

91 - Radio, telephone, navigation	1
1 MMI Infotainment system	1
1.1 General notes (up to week 21/09)	1
1.2 General notes (from week 22/09 onwards)	3
1.3 MMI basic/basic plus (up to week 21/09) - layout	8
1.4 MMI minimum equipment (from week 22/09 onwards) - layout	9
1.5 MMI (up to week 21/09) - layout	10
1.6 MMI maximum equipment (from week 22/09 onwards) - layout	11
1.7 Microphone unit in front roof module R164 (up to week 21/09) - overview	12
1.8 Microphone unit in front roof module R164 (from week 22/09 onwards) - overview	14
1.9 Overview of fitting locations - MMI basic/basic plus (up to week 21/09)	15
1.10 Overview of fitting locations - MMI (up to week 21/09)	17
1.11 Overview of fitting locations - MMI (from week 22/09 onwards)	19
1.12 Pin assignment	21
1.13 Removing and installing control unit for front display and information control panel J523, basic (up to week 21/09)	47
1.14 Removing and installing control unit for front display and information control panel J523, MMI for versions with left-hand drive (up to week 21/09)	50
1.15 Removing and installing control unit for front display and information control panel J523, MMI for versions with right-hand drive (up to week 21/09)	51
1.16 Removing and installing control unit 1 for information electronics J794	53
1.17 Removing and installing display (MMI basic)	54
1.18 Removing and installing MMI display (up to week 21/09)	55
1.19 Removing and installing MMI display (from week 22/09 onwards)	56
1.20 Removing and installing multimedia system operating unit E380	57
1.21 Removing and installing radio R, MMI (up to week 21/09)	58
1.22 Removing and installing radio R, MMI (from week 22/09 onwards)	60
1.23 Removing and installing digital radio R147 (up to week 21/09)	61
1.24 Removing and installing CD changer R41 (up to week 21/09)	62
1.25 Removing and installing CD changer R41 (from week 22/09 onwards)	64
2 MMI Infotainment system (USA)	66
2.1 General notes (up to week 44/09)	66
2.2 General notes (from week 45/09 onwards)	67
2.3 MMI (up to week 21/09) - layout	71
2.4 MMI (from week 22/09 onwards) - layout	72
2.5 Overview of fitting locations - MMI (up to week 21/09)	73
2.6 Overview of fitting locations - MMI (from week 22/09 onwards)	75
2.7 Pin assignment for radio R, MMI (from week 22/09 onwards)	76
2.8 Pin assignment for satellite radio R146 (up to week 21/09)	79
2.9 Removing and installing satellite radio R146 (up to week 21/09)	81
3 MMI Infotainment system (Japan)	83
3.1 General notes (up to week 21/09)	83
3.2 General notes (from week 22/09 onwards)	84
3.3 MMI (up to model year 2007) - layout	88
3.4 MMI (from model year 2008 onwards) - layout	89
3.5 MMI (from week 22/09 onwards) - layout	90
3.6 Overview of fitting locations - MMI (up to week 21/09)	91
3.7 Overview of fitting locations - MMI (from week 22/09 onwards)	93
3.8 Pin assignment for display and operating unit changeover unit J728	94
3.9 Pin assignment for MMI (from model year 2008 onwards)	95
3.10 Pin assignment for MMI (from week 22/09 onwards)	97
3.11 Removing and installing display and operating unit changeover unit J728	100
3.12 Removing and installing MiniDisc player R153	101

4	Sound systems	103
4.1	General notes	103
4.2	Sound systems - layout	104
4.3	Overview of fitting locations - loudspeakers (standard/BOSE)	109
4.4	Overview of fitting locations - loudspeakers (Bang & Olufsen)	111
4.5	Pin assignment for sound system standard (up to week 21/09)	113
4.6	Pin assignment for BOSE sound system (J525)	114
4.7	Pin assignment for Bang & Olufsen sound system (J525/J787)	116
4.8	Removing and installing digital sound package control unit J525	120
4.9	Removing and installing digital sound package control unit J525 (BOSE)	121
4.10	Removing and installing digital sound package control unit J525 (Bang & Olufsen)	123
4.11	Removing and installing digital sound package control unit 2 J787 (Bang & Olufsen)	124
4.12	Removing and installing centre loudspeaker R148	126
4.13	Removing and installing bass loudspeaker R100 (Bang & Olufsen)	126
4.14	Removing and installing rear left mid-range and bass loudspeaker R159/rear right mid-range and bass loudspeaker R160	127
4.15	Removing and installing front left treble loudspeaker R20/front right treble loudspeaker R22	127
4.16	Removing and installing rear left mid-range and bass loudspeaker R159/rear right mid-range and bass loudspeaker R160 (Bang & Olufsen)	128
4.17	Removing and installing rear left mid-range loudspeaker R105/rear right mid-range loudspeaker R106	129
4.18	Removing and installing front left bass loudspeaker R21/front right bass loudspeaker R23	130
4.19	Removing and installing front left bass loudspeaker R21/front right bass loudspeaker R23 (Bang & Olufsen)	130
4.20	Removing and installing front left mid-range loudspeaker R103/front right mid-range loudspeaker R104	131
4.21	Removing and installing front left mid-range loudspeaker R103/front right mid-range loudspeaker R104 (Bang & Olufsen)	132
4.22	Removing and installing rear left treble loudspeaker R14/rear right treble loudspeaker R16	132
4.23	Removing and installing front treble loudspeakers (R20/V344/R22/V345) - Bang & Olufsen	133
4.24	Removing and installing centre mid-range and treble loudspeaker R158	134
5	Telephone system	136
5.1	General notes (up to week 21/09)	136
5.2	General notes (from week 22/09 onwards)	137
5.3	Permanently installed telephone system (up to week 21/09) - layout	138
5.4	Mobile phone pre-installation (up to week 21/09) - layout	139
5.5	Bluetooth car phone (up to week 21/09) - layout	140
5.6	Mobile phone pre-installation (from week 22/09 onwards) - layout	141
5.7	Bluetooth car phone (from week 22/09 onwards) - layout	142
5.8	Pre-fitted components for mobile phone installation - layout	143
5.9	Bluetooth hands-free system - layout	144
5.10	Overview of fitting locations - telephone system	144
5.11	Pin assignment	146
5.12	Removing and installing telephone bracket R126 (centre armrest storage compartment)	161
5.13	Removing and installing telephone bracket R126 (centre armrest)	162
5.14	Removing and installing permanently installed telephone system	162
5.15	Removing and installing mobile phone pre-installation/Bluetooth car phone	164
5.16	Removing and installing aerial amplifier for mobile telephone R86	166
5.17	Removing and installing microphone unit in front roof module R164	166
5.18	Removing and installing aerial for Bluetooth R152 (centre console)	167
5.19	Adapting telephone handset R37 (permanently installed telephone)	168
6	Telephone system (USA)	170
6.1	General notes (up to week 21/09)	170
6.2	General notes (from week 22/09 onwards)	170

6.3	Mobile phone pre-installation (up to week 21/09) - layout	170
6.4	Bluetooth hands-free system (from week 22/09 onwards) - layout	171
6.5	Overview of fitting locations - telephone system	172
6.6	Pin assignment for mobile phone pre-installation (up to week 21/09)	173
6.7	Pin assignment for Bluetooth hands-free system	175
6.8	Removing and installing telephone bracket R126 (centre armrest storage compartment)	177
6.9	Removing and installing telephone transmitter and receiver unit R36	178
7	Telephone system (Japan)	181
7.1	General notes (up to week 21/09)	181
7.2	General notes (from week 22/09 onwards)	181
7.3	Mobile phone pre-installation (up to model year 2007) - layout	181
7.4	Mobile phone pre-installation (from model year 2008 onwards) - layout	182
7.5	Bluetooth hands-free system (from week 22/09 onwards) - layout	183
7.6	Overview of fitting locations - telephone system	184
7.7	Pin assignment for mobile phone pre-installation	185
7.8	Pin assignment for Bluetooth hands-free system	186
7.9	Removing and installing telephone transmitter and receiver unit R36	189
8	Navigation system	191
8.1	General notes (up to week 21/09)	191
8.2	General notes (from week 22/09 onwards)	191
8.3	Navigation system, MMI basic plus (up to week 21/09) - layout	191
8.4	Navigation system, MMI minimum equipment (from week 22/09 onwards) - layout	192
8.5	Navigation system, MMI (up to week 21/09) - layout	193
8.6	Navigation system, MMI maximum equipment (from week 22/09 onwards) - layout	194
8.7	Overview of fitting locations - navigation system (up to week 21/09)	195
8.8	Overview of fitting locations - navigation system (from week 22/09 onwards)	196
8.9	Pin assignment for navigation system basic plus (up to week 21/09)	197
8.10	Pin assignment for navigation system, MMI (up to week 21/09)	200
8.11	Pin assignment for navigation system, MMI (from week 22/09 onwards)	201
8.12	Removing and installing navigation system with CD drive control unit J401 (MMI)	204
8.13	Removing and installing bracket for navigation system with CD drive control unit J401	205
9	Navigation system (Japan)	207
9.1	General notes (up to week 21/09)	207
9.2	General notes (from week 22/09 onwards)	207
9.3	Navigation system, MMI (up to model year 2007) - layout	207
9.4	Navigation system MMI - layout (from model year 2008 onwards)	208
9.5	Navigation system, MMI (from week 22/09 onwards) - layout	209
9.6	Overview of fitting locations - navigation system (up to week 21/09)	210
9.7	Overview of fitting locations - navigation system (from week 22/09 onwards)	211
9.8	Pin assignment for navigation system (up to model year 2007)	212
9.9	Pin assignment for navigation system (from model year 2008 onwards)	214
9.10	Pin assignment for navigation system, MMI (from week 22/09 onwards)	216
9.11	Pin assignment for chip card reader control unit J676 (up to week 21/09)	219
9.12	Pin assignment for chip card reader control unit J676 (from week 22/09 onwards)	220
9.13	Removing and installing traffic data aerial R173	220
9.14	Removing and installing chip card reader control unit J676	221
10	TV system	223
10.1	General notes	223
10.2	TV system (up to week 21/09) - layout	223
10.3	TV system (from week 22/09 onwards) - layout	224
10.4	Overview of fitting locations - TV system	225
10.5	Pin assignment for TV tuner R78	226
10.6	Pin assignment for digital TV tuner R171	228
10.7	Removing and installing TV tuner R78/digital TV tuner R171	230
11	TV system (Japan)	232

11.1	General notes	232
11.2	TV system, MMI (up to week 21/09) - layout	232
11.3	TV system (from week 22/09 onwards) - layout	233
11.4	Overview of fitting locations - TV system	234
11.5	Pin assignment for TV tuner R78	236
11.6	Pin assignment for digital TV tuner R171	238
11.7	Removing and installing TV card reader R204 (from model year 2008 onwards)	239
12	Reversing camera system	241
12.1	General notes	241
12.2	Reversing camera system (up to week 21/09) - layout	241
12.3	Reversing camera system (from week 22/09 onwards) - layout	242
12.4	Overview of fitting locations - reversing camera system	243
12.5	Pin assignment for reversing camera system control unit J772	244
12.6	Removing and installing reversing camera system control unit J772	245
12.7	Removing and installing reversing camera R189	246
12.8	Calibrating reversing camera system	247
13	Direct vision system (Japan)	254
13.1	General notes	254
13.2	Direct vision system - layout	254
13.3	Overview of fitting locations - direct vision system	254
13.4	Pin assignment for display unit J145	255
13.5	Removing and installing display unit J145	256
14	Overhead view camera system	261
14.1	General notes	261
14.2	Overhead view camera system - layout	261
14.3	Overview of fitting locations - overhead view camera system	262
14.4	Pin assignment for control unit for overhead view camera J928	263
14.5	Removing and installing control unit for overhead view camera J928	264
14.6	Removing and installing rear overhead view camera R246	265
14.7	Removing and installing front overhead view camera R243	266
14.8	Calibrating overhead view camera system	267
15	Multifunction steering wheel	284
15.1	General notes	284
15.2	Overview (up to model year 2011)	284
15.3	4-spoke steering wheel - assembly overview (from model year 2012 onwards)	285
15.4	3-spoke steering wheel - assembly overview (from model year 2012 onwards)	285
15.5	Removing and installing multifunction buttons (up to model year 2011)	286
15.6	Removing and installing multifunction buttons in 4-spoke steering wheel (from model year 2012 onwards)	287
15.7	Removing and installing multifunction buttons in 3-spoke steering wheel (from model year 2012 onwards)	291
15.8	Removing and installing tiptronic switches (up to model year 2011)	294
15.9	Removing and installing tiptronic switches (from model year 2012 onwards)	295
16	Voice control system	297
16.1	General notes (up to week 21/09)	297
16.2	General notes (from week 22/09 onwards)	297
16.3	Layout in MMI (up to week 21/09)	297
16.4	Layout in MMI (from week 22/09 onwards)	298
16.5	Pin assignment for speech input control unit J507 (up to week 21/09)	299
16.6	Removing and installing speech input control unit J507 (up to week 21/09)	300
16.7	Removing and installing speech dialogue system (from week 22/09 onwards)	301
17	Renewing aerial wire for rear lid	303
17.1	General notes	303
17.2	Components and tools	303
17.3	Removing defective wiring harness	303

17.4	Installing replacement wiring harness	305
18	RSE plus (Rear Seat Entertainment system) - Blaupunkt	312
18.1	General notes	312
18.2	RSE plus system - layout	312
18.3	Overview of fitting locations - RSE plus system	313
18.4	Pin assignment for rear DVD changer R162 (DVC 03)	314
18.5	Pin assignment for rear DVD changer R162 (DVC 07)	315
18.6	Pin assignment for multimedia system control unit J650	316
18.7	Wiring for multimedia system control unit J650/display units/DVD	317
18.8	Connection beneath left seat/multimedia system control unit J650 (LCD cable)	321
18.9	Wiring for display unit in seat	324
18.10	Wiring for display unit in seat - display unit (from week 22/09 onwards)	325
18.11	Wiring for multimedia system control unit J650/additional connections unit for video and audio R176/voltage supply	327
18.12	Wiring for multimedia system control unit J650/TV tuner R78 (hybrid)	331
18.13	Pin assignment for TV tuner R78 (hybrid)	334
18.14	Wiring for multimedia system control unit J650/TV tuner R78 (analogue)	336
18.15	Pin assignment for TV tuner R78 (analogue)	338
18.16	Removing and installing retainer together with rear DVD changer R162	340
18.17	Removing and installing multimedia system control unit J650	340
18.18	Removing and installing rear DVD changer R162	342
18.19	Removing and installing additional connections unit for video and audio R176	343
18.20	Removing and installing display units/wiring in seat	344
18.21	Removing and installing storage tray for remote controls	350
19	RSE (Rear Seat Entertainment system) - Blaupunkt	352
19.1	General notes	352
19.2	RSE - layout	352
19.3	Overview of fitting locations - RSE	353
19.4	Pin assignment for rear DVD changer R162 (DVC 03)	353
19.5	Pin assignment for rear DVD changer R162 (DVC 07)	354
19.6	Pin assignment for multimedia system control unit J650	355
19.7	Wiring for multimedia system control unit J650/display units/DVD	356
19.8	Connection beneath left seat/multimedia system control unit J650 (LCD cable)	360
19.9	Display unit wiring in seat	363
19.10	Wiring for display unit in seat - display unit (from week 22/09 onwards)	364
19.11	Wiring for multimedia system control unit J650/additional connections unit for video and audio R176/voltage supply	366
19.12	Removing and installing retainer together with rear DVD changer R162	370
19.13	Removing and installing multimedia system control unit J650	371
19.14	Removing and installing rear DVD changer R162	371
19.15	Removing and installing additional connections unit for video and audio R176	372
19.16	Removing and installing display units/wiring in seat	373
19.17	Removing and installing storage tray for remote controls	379
20	Connection for external audio sources R199	381
20.1	General notes	381
20.2	Pin assignment for AMI (up to week 21/09)	381
20.3	Pin assignment for connection for external audio sources R199 (interface)	382
20.4	Removing and installing AMI (up to week 21/09)	383
21	Aerial system	385
21.1	General notes on MMI basic/basic plus (up to week 21/09)	385
21.2	General notes on MMI (up to week 21/09)	385
21.3	General notes on MMI (from week 22/09 onwards)	386
21.4	Overview of fitting locations - aerial systems	387
21.5	Pin assignment	388
21.6	Removing and installing aerial amplifier	396
21.7	Removing and installing radio, telephone and navigation system aerial R52	398