

# Airman Knowledge Testing Supplement for Instrument Rating

# 2017

U.S. Department of Transportation  
**FEDERAL AVIATION ADMINISTRATION**  
Flight Standards Service

# Contents

<b>Preface</b> .....	<b>iii</b>
<b>Contents</b> .....	<b>v</b>
<b>Appendix 1</b> .....	<b>1</b>
<b>Legend 1.—Abbreviations</b> .....	<b>3</b>
<b>Legend 1A.—Abbreviations</b> .....	<b>4</b>
<b>Legend 1B.—Abbreviations</b> .....	<b>5</b>
<b>Legend 1C.—Abbreviations</b> .....	<b>6</b>
<b>Legend 1D.—Abbreviations</b> .....	<b>7</b>
<b>Legend 1E.—Abbreviations</b> .....	<b>8</b>
<b>Legend 1F.—Abbreviations</b> .....	<b>9</b>
<b>Legend 2.—Airport/Facility Directory</b> .....	<b>10</b>
<b>Legend 3.—Airport/Facility Directory</b> .....	<b>11</b>
<b>Legend 4.—Airport/Facility Directory</b> .....	<b>12</b>
<b>Legend 5.—Airport/Facility Directory</b> .....	<b>13</b>
<b>Legend 6.—Airport/Facility Directory</b> .....	<b>14</b>
<b>Legend 7.—Airport/Facility Directory</b> .....	<b>15</b>
<b>Legend 8.—Airport/Facility Directory</b> .....	<b>16</b>
<b>Legend 9.—Airport/Facility Directory</b> .....	<b>17</b>
<b>Legend 10.—Airport/Facility Directory</b> .....	<b>18</b>
<b>Legend 11.—Airport/Facility Directory</b> .....	<b>19</b>
<b>Legend 12.—Airport/Facility Directory</b> .....	<b>20</b>
<b>Legend 13.—Airport/Facility Directory</b> .....	<b>21</b>
<b>Legend 14.—Airport/Facility Directory</b> .....	<b>22</b>
<b>Legend 15.—Airport/Facility Directory</b> .....	<b>23</b>
<b>Legend 16.—Airport/Facility Directory</b> .....	<b>24</b>
<b>Legend 17.—Airport/Facility Directory</b> .....	<b>25</b>
<b>Legend 18.—Airport/Facility Directory</b> .....	<b>26</b>
<b>Legend 19.—Airport/Facility Directory</b> .....	<b>27</b>
<b>Legend 20.—Instrument Approach Procedures Explanation of Terms</b> .....	<b>28</b>
<b>Legend 21.—Instrument Approach Procedures Explanation of Terms</b> .....	<b>29</b>
<b>Legend 22.—General Information</b> .....	<b>30</b>
<b>Legend 23.—Abbreviations</b> .....	<b>31</b>
<b>Legend 23A.—Abbreviations</b> .....	<b>32</b>
<b>Legend 24.—Instrument Approach Procedures (Symbols)</b> .....	<b>33</b>
<b>Legend 25.—Instrument Approach Procedures (Symbols)</b> .....	<b>34</b>
<b>Legend 26.—Instrument Approach Procedures (Profile)</b> .....	<b>35</b>
<b>Legend 27.—Instrument Takeoff or Approach Procedure Charts, Rate-of-Climb/Descent Table</b> .....	<b>36</b>
<b>Legend 28.—Standard Arrival/Departure Charts</b> .....	<b>37</b>
<b>Legend 29.—Airport Diagram</b> .....	<b>38</b>
<b>Legend 30.—Approach Lighting Systems</b> .....	<b>39</b>
<b>Legend 31.—Approach Lighting System</b> .....	<b>40</b>
<b>Legend 32.—Inoperative Components or Visual Aids Table</b> .....	<b>41</b>
<b>Legend 33.—IFR En Route Low Altitude (U.S.)</b> .....	<b>42</b>
<b>Legend 34.—IFR En Route Low Altitude (U.S.)</b> .....	<b>43</b>
<b>Legend 35.—IFR En Route Low Altitude (U.S.)</b> .....	<b>44</b>

<b>Legend 36.—Aircraft Equipment Suffixes .....</b>	<b>45</b>
<b>Legend 37.—Air Navigation Radio Aids.....</b>	<b>46</b>
<b>Legend 38.—ILS Standard Characteristics and Terminology.....</b>	<b>47</b>
<b>Legend 39.—Temperature Conversion Chart.....</b>	<b>48</b>
<b>Appendix 2 .....</b>	<b>49</b>
<b>Figure 2.—Wind and Temperatures Aloft Forecast.....</b>	<b>51</b>
<b>Figure 3.—Standard Conversion Chart.....</b>	<b>52</b>
<b>Figure 4.—Weather Depiction Chart.....</b>	<b>53</b>
<b>Figure 5.—Symbol Used on Low-Level Significant Weather Prognostic Chart.....</b>	<b>54</b>
<b>Figure 7.—High-Level Significant Weather Prognostic Chart.....</b>	<b>55</b>
<b>Figure 13.—Microburst Section Chart.....</b>	<b>56</b>
<b>Figure 18.—U.S. Low-Level Significant Weather Prognostic Charts .....</b>	<b>57</b>
<b>Figure 19.—U.S. Low-Level Significant Weather Prognostic Charts .....</b>	<b>58</b>
<b>Figure 20.—High-Level Significant Weather Prognostic Chart.....</b>	<b>59</b>
<b>Figure 24.—En Route Low-Altitude Chart Segment.....</b>	<b>60</b>
<b>Figure 31.—En Route Low-Altitude Chart Segment.....</b>	<b>61</b>
<b>Figure 34.—En Route Low-Altitude Chart Segment.....</b>	<b>62</b>
<b>Figure 40.—En Route Low-Altitude Chart Segment.....</b>	<b>63</b>
<b>Figure 47.—En Route Low-Altitude Chart Segment.....</b>	<b>64</b>
<b>Figure 48.—CDI—NAV 1 .....</b>	<b>65</b>
<b>Figure 53.—En Route Low-Altitude Chart Segment.....</b>	<b>66</b>
<b>Figure 59.—En Route Low-Altitude Chart Segment.....</b>	<b>67</b>
<b>Figure 61.—CDI Indicator .....</b>	<b>68</b>
<b>Figure 64.—Excerpt from Chart Supplement (LFT).....</b>	<b>69</b>
<b>Figure 65.—En Route Low-Altitude Chart Segment.....</b>	<b>70</b>
<b>Figure 66.—CDI and OBS Indicators.....</b>	<b>71</b>
<b>Figure 67.—Localizer Symbol .....</b>	<b>72</b>
<b>Figure 71.—En Route Low-Altitude Chart Segment.....</b>	<b>73</b>
<b>Figure 71A.—CDI and OBS Indicators.....</b>	<b>74</b>
<b>Figure 76.—VOR Indications and Excerpts from Chart Supplement (HLN) .....</b>	<b>75</b>
<b>Figure 78.—En Route Low-Altitude Chart Segment.....</b>	<b>76</b>
<b>Figure 81.—Dual VOR System, VOT Check.....</b>	<b>77</b>
<b>Figure 82.—Dual VOR System, Accuracy Check.....</b>	<b>78</b>
<b>Figure 86.—CDI and OBS Indicators.....</b>	<b>79</b>
<b>Figure 87.—En Route Low-Altitude Chart Segment.....</b>	<b>80</b>
<b>Figure 88.—CDI and OBS Indicators.....</b>	<b>81</b>
<b>Figure 89.—En Route Low-Altitude Chart Segment.....</b>	<b>82</b>
<b>Figure 90.—CDI/OBS Indicators .....</b>	<b>83</b>
<b>Figure 91.—En Route Low-Altitude Chart Segment.....</b>	<b>84</b>
<b>Figure 94.—Application Examples for Holding Positions .....</b>	<b>85</b>
<b>Figure 95.—No. 1 and No. 2 NAV Presentation.....</b>	<b>86</b>
<b>Figure 96.—Aircraft Position and Direction of Flight.....</b>	<b>87</b>
<b>Figure 97.—HSI Presentation.....</b>	<b>88</b>
<b>Figure 98.—Aircraft Position.....</b>	<b>89</b>
<b>Figure 99.—HSI Presentation.....</b>	<b>90</b>
<b>Figure 106.—Aircraft Location Relative to VOR .....</b>	<b>91</b>
<b>Figure 109.—CDI Direction from VORTAC .....</b>	<b>92</b>
<b>Figure 110.—CDI Direction from VORTAC .....</b>	<b>93</b>
<b>Figure 111.—CDI Direction from VORTAC .....</b>	<b>94</b>
<b>Figure 112.—Holding Entry Procedure .....</b>	<b>95</b>

<b>Figure 113.</b> — <i>Aircraft Course and DME Indicator</i> .....	96
<b>Figure 114.</b> — <i>Aircraft Course and DME Indicator</i> .....	97
<b>Figure 115.</b> — <i>DME Fix with Holding Pattern</i> .....	98
<b>Figure 116.</b> — <i>Holding Entry Procedure</i> .....	99
<b>Figure 131.</b> — <i>VOR/DME RWY 33L</i> .....	100
<b>Figure 134.</b> — <i>2-BAR VASI</i> .....	101
<b>Figure 135.</b> — <i>3-BAR VASI</i> .....	102
<b>Figure 136.</b> — <i>Precision Approach Path Indicator (PAPI)</i> .....	103
<b>Figure 137.</b> — <i>Precision Instrument Runway</i> .....	104
<b>Figure 138.</b> — <i>Runway Legend</i> .....	105
<b>Figure 139.</b> — <i>Glide Slope and Localizer Illustration</i> .....	106
<b>Figure 140.</b> — <i>OBS, ILS, and GS Displacement</i> .....	107
<b>Figure 141.</b> — <i>OBS, ILS, and GS Displacement</i> .....	108
<b>Figure 142.</b> — <i>OBS, ILS, and GS Displacement</i> .....	109
<b>Figure 144.</b> — <i>Turn-and-Slip indicator</i> .....	110
<b>Figure 145.</b> — <i>Instrument Sequence (Unusual Attitude)</i> .....	111
<b>Figure 146.</b> — <i>Instrument Sequence (System Failed)</i> .....	112
<b>Figure 147.</b> — <i>Instrument Sequence (Unusual Attitude)</i> .....	113
<b>Figure 148.</b> — <i>Instrument Interpretation (System Malfunction)</i> .....	114
<b>Figure 149.</b> — <i>Instrument Interpretation (System Malfunction)</i> .....	115
<b>Figure 150.</b> — <i>Instrument Interpretation (Instrument Malfunction)</i> .....	116
<b>Figure 151.</b> — <i>Instrument Interpretation (Instrument Malfunction)</i> .....	117
<b>Figure 155.</b> — <i>Grand Junction Six Departure (JNC6.JNC)</i> .....	118
<b>Figure 156.</b> — <i>Grand Junction Hot Spots</i> .....	119
<b>Figure 157.</b> — <i>ILS RWY 11 (GJT)</i> .....	120
<b>Figure 158.</b> — <i>ILS RWY 11 (GJT)</i> .....	121
<b>Figure 159.</b> — <i>ILS/DME RWY 3 (DRO)</i> .....	122
<b>Figure 160.</b> — <i>ILS or LOC/DME RWY 16L (EUG)</i> .....	123
<b>Figure 161.</b> — <i>ILS or LOC/DME RWY 16R (EUG)</i> .....	124
<b>Figure 162.</b> — <i>Excerpt from Chart Supplement</i> .....	125
<b>Figure 163.</b> — <i>GNATS Six Departure (GNATS6.GNATS)</i> .....	126
<b>Figure 164.</b> — <i>GNATS Six Departure (GNATS6.GNATS)</i> .....	127
<b>Figure 165.</b> — <i>Excerpt from Chart Supplement</i> .....	128
<b>Figure 166.</b> — <i>Chart Supplement (HOT)</i> .....	129
<b>Figure 167.</b> — <i>BONHAM Six Arrival Transition Routes (BYP.BYP6) (DFW)</i> .....	130
<b>Figure 168.</b> — <i>BONHAM Six Arrival Routes (BYP.BYP6) (DFW)</i> .....	131
<b>Figure 169.</b> — <i>Excerpt from Chart Supplement (ADS)</i> .....	132
<b>Figure 170.</b> — <i>ILS or LOC RWY 33 (ADS)</i> .....	133
<b>Figure 171.</b> — <i>RNAV (GPS) RWY 33 (ADS)</i> .....	134
<b>Figure 172.</b> — <i>Excerpt from Chart Supplement</i> .....	135
<b>Figure 172A.</b> — <i>Excerpt from Chart Supplement</i> .....	136
<b>Figure 173.</b> — <i>Excerpt from Chart Supplement</i> .....	137
<b>Figure 174.</b> — <i>GLEN ROSE Nine Arrival (JEN.JEN9)</i> .....	138
<b>Figure 175.</b> — <i>GLEN ROSE Nine Arrival (JEN.JEN9)</i> .....	139
<b>Figure 176.</b> — <i>ILS-1 RWY 36L, Dallas-Fort Worth Intl.</i> .....	140
<b>Figure 176A.</b> — <i>ILS-1 RWY 36L, Dallas-Fort Worth Intl.</i> .....	141
<b>Figure 177.</b> — <i>Converging ILS RWY 36L (DFW)</i> .....	142
<b>Figure 178.</b> — <i>ILS or LOC Y RWY 13L (DAL)</i> .....	143
<b>Figure 179.</b> — <i>ILS or LOC RWY 31 (RBD)</i> .....	144
<b>Figure 180.</b> — <i>ILS or LOC/DME RWY 34 (GKY)</i> .....	145
<b>Figure 181.</b> — <i>Excerpt from Chart Supplement</i> .....	146

Figure 182.—GROMO Three Departure (GROMO3.GROMO) .....	147
Figure 183.—GROMO Three Departure (GROMO3.GROMO) .....	148
Figure 184.—Excerpt from Chart Supplement .....	149
Figure 185.—Airport Diagram - Portland INTL (PDX).....	150
Figure 186.—ILS or LOC RWY 10R (PDX) .....	151
Figure 187.—RNAV (GPS) X RWY 28L (PDX).....	152
Figure 188.—LOC/DME RWY 21 (PDX) .....	153
Figure 189.—HABUT Four Departure (HABUT4.GVO) (SBA) .....	154
Figure 190.—Excerpt from Chart Supplement .....	155
Figure 191.—RNAV (GPS) RWY 19 (PRB) .....	156
Figure 192.—VOR/DME-B (PRB).....	157
Figure 193.—Excerpts from Chart Supplement.....	158
Figure 194.—Excerpts from Chart Supplement.....	159
Figure 195.—Excerpt from Chart Supplement .....	160
Figure 196.—ILS or LOC RWY 4 (HOU).....	161
Figure 197.—RNAV (GPS) RWY 35L(DWH) .....	162
Figure 198.—Excerpt from Chart Supplement .....	163
Figure 199.—COPTER VOR/DME RWY 12 (HUM).....	164
Figure 200.—VOR RWY 12 (HUM).....	165
Figure 201.—Excerpt from Chart Supplement .....	166
Figure 202.—Airport Diagram: New Iberia/Acadiana RGNL (ARA) .....	167
Figure 203.—Excerpt from Chart Supplement .....	168
Figure 203A.—Excerpt from Chart Supplement.....	169
Figure 204.—Airport Diagram: New ORLEANS/LAKEFRONT (NEW).....	170
Figure 205.—Airport Diagram: Honolulu Intl (HNL) (PHNL).....	171
Figure 206.—Excerpt from Chart Supplement .....	172
Figure 208.—STELA One Arrival (STELA.STELA1) .....	174
Figure 209.—STELA One Arrival (STELA.STELA1) .....	175
Figure 210.—ILS or LOC RWY 6 (CAT I) (BDL).....	176
Figure 211.—STAKK Three Departure (STAKK3.STAKK) (HLN).....	177
Figure 212.—RNAV (GPS) RWY 28R (BIL) .....	178
Figure 213.—VOR/DME RWY 28R (BIL).....	179
Figure 214.—Excerpt from Chart Supplement .....	180
Figure 215.—GPS RWY 19 (TRK).....	181
Figure 216.—RENO Nine Departure (RENO9.FMG) (RNO).....	182
Figure 216A.—RENO Nine Departure (RENO9.FMG) (RNO).....	183
Figure 217.—ILS or LOC RWY 13 (DSM) .....	184
Figure 218.—RNAV (GPS) RWY 5 (DSM) .....	185
Figure 219.—RNAV (GPS)-A (RIR).....	186
Figure 220.—Takeoff Minimums and (Obstacle) Departure Procedures .....	187
Figure 221.—ILS or LOC RWY 24R (LAX).....	188
Figure 222.—ILS or LOC Z RWY 8 (BUR).....	189
Figure 223.—ILS or LOC RWY 31 (DSM) .....	190
Figure 224.—GPS RWY 16 (LXV).....	191
Figure 225.—Takeoff Minimums and (Obstacle) Departure Procedures .....	192
Figure 226.—Excerpt from Chart Supplement .....	193
Figure 227.—ILS or LOC RWY 35R (APA).....	194
Figure 228.—ILS or LOC RWY 31 (FFC).....	195
Figure 229.—RNAV (GPS) RWY 13 (FFC).....	196
Figure 230.—VOR/DME or GPS-A (7D3) .....	197
Figure 231.—Excerpt from Chart Supplement .....	198

<b>Figure 232.</b> — <i>LOC RWY 35 (DUC)</i> .....	199
<b>Figure 233.</b> — <i>RNAV (GPS) RWY 17 (DUC)</i> .....	200
<b>Figure 234.</b> — <i>ILS or LOC RWY 18 (LNK)</i> .....	201
<b>Figure 235.</b> — <i>RNAV (GPS) RWY 32 (LNK)</i> .....	202
<b>Figure 236.</b> — <i>ILS or RWY 32 (DHN)</i> .....	203
<b>Figure 237.</b> — <i>RNAV (GPS) RWY 10 (LHQ)</i> .....	204
<b>Figure 238.</b> — <i>RNAV (GPS) RWY 28 (LHQ)</i> .....	205
<b>Figure 239.</b> — <i>LOC RWY 28 (LHQ)</i> .....	206
<b>Figure 240.</b> — <i>VOR/DME RWY 36 (PUC)</i> .....	207
<b>Figure 241.</b> — <i>RNAV (GPS) RWY 36 (PUC)</i> .....	208
<b>Figure 242.</b> — <i>RNAV RWY 36 (LIT)</i> .....	209
<b>Figure 243.</b> — <i>RNAV (GPS) RWY 6 (ROA)</i> .....	210
<b>Figure 244.</b> — <i>LDA RWY 6 (ROA)</i> .....	211
<b>Figure 245.</b> — <i>RNAV (GPS)-B (CQX)</i> .....	212
<b>Figure 247.</b> — <i>ILS or RWY 9 (RAL)</i> .....	213
<b>Figure 248.</b> — <i>RNAV (GPS) RWY 27 (RAL)</i> .....	214
<b>Figure 249.</b> — <i>RNAV (GPS) RWY 30 (LBF)</i> .....	215
<b>Figure 250.</b> — <i>GPS RWY 3 (OWK)</i> .....	216
<b>Figure 251.</b> — <i>Airport Diagram: Osh Kosh/Wittman Regional (OSH)</i> .....	217
<b>Figure 252.</b> — <i>ILS or LOC RWY 36 (OSH)</i> .....	218
<b>Figure 253.</b> — <i>RNAV (GPS) RWY 18 (OSH)</i> .....	219
<b>Figure 254.</b> — <i>Airport Sign</i> .....	220
<b>Figure 255.</b> — <i>Two Signs</i> .....	221
<b>Figure 256.</b> — <i>Airport Diagram and Sign</i> .....	222
<b>Figure 257.</b> — <i>Taxiway Diagram and Sign</i> .....	223
<b>Figure 258.</b> — <i>Instrument Landing System (ILS) Critical Area Markings</i> .....	224
<b>Figure 259.</b> — <i>Airport Signs</i> .....	225
<b>Figure 260.</b> — <i>Graphical Forecast for Aviation</i> .....	226
<b>Figure 261.</b> — <i>Graphical Forecast for Aviation</i> .....	227
<b>Figure 262.</b> — <i>Graphical Forecast for Aviation</i> .....	228
<b>Figure 263.</b> — <i>Graphical Forecast for Aviation</i> .....	229
<b>Figure 264.</b> — <i>Graphical Forecast for Aviation</i> .....	230
<b>Figure 265.</b> — <i>Graphical Forecast for Aviation</i> .....	231
<b>Figure 266.</b> — <i>Graphical Forecast for Aviation</i> .....	232
<b>Figure 267.</b> — <i>Graphical Forecast for Aviation</i> .....	233
<b>Figure 268.</b> — <i>Graphical Forecast for Aviation</i> .....	234
<b>Figure 269.</b> — <i>Graphical Forecast for Aviation</i> .....	235
<b>Figure 270.</b> — <i>Graphical Forecast for Aviation</i> .....	236
<b>Figure 271.</b> — <i>Graphical Forecast for Aviation</i> .....	237

12

**AIRPORT/FACILITY DIRECTORY LEGEND**

**SAMPLE**

①  
**CITY NAME**  
 ②  
**AIRPORT NAME** (ALTERNATE NAME) (LTS)(KLTS) CIV/MIL 3 N UTC-6(-5DT) N34°41.93' W99°20.20'  
 200 B TPA-1000(800) AOE LRA Class IV, ARFF Index A NOTAM FILE ORL Not insp.  
 ③  
 ④  
 ⑤  
 ⑥  
 ⑦  
 ⑧  
**JACKSONVILLE COPTER**  
 H-4G, L-19C  
 IAP, DIAP, AD  
 ⑨

⑩  
**RWY 18-36:**H12004X200 (ASPH-CONC-GRVD)  
 S-90, D-160, 2D-300 PCN 80 R/B/W/T HIRL CL  
**RWY 18:** RLLS. MALSF. TDZL. REIL. PAPI(P2R)-GA 3.0° TCH 36'.  
 RVR-TMR. Thld dsplcd 300'. Trees. Rgt tfc. 0.3% up.  
**RWY 36:** ALSF1. 0.4% down.  
**RWY 09-27:** H6000X150 (ASPH) MIRL  
**RWY 173-353:** H3515X150 (ASPH-PFC) AUW PCN 59 F/A/W/T

⑪  
**LAND AND HOLD-SHORT OPERATIONS**  

LDG RWY	HOLD-SHORT POINT	AVBL LDG DIST
RWY 18	09-27	6500
RWY 36	09-27	5400

⑫  
**RUNWAY DECLARED DISTANCE INFORMATION**  
**RWY 18:** TORA-12004 TODA-12004 ASDA-11704 LDA-11504  
**RWY 36:** TORA-12004 TODA-12004 ASDA-12004 LDA-11704

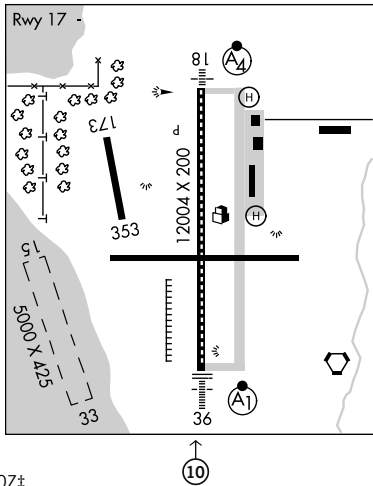
⑬  
**ARRESTING GEAR/SYSTEM**  
**RWY 18** HOOK E5 (65' OVRN) BAK-14 BAK-12B (1650')  
 BAK-14 BAK-12B (1087') HOOK E5 (74' OVRN) **RWY 36**  
 ⑭  
**SERVICE:** S4 FUEL 100LL, JET A OX 1, 3 LGT ACTIVATE MALSR Rwy  
 29, REIL Rwy 11, VASI Rwy 11, HIRL Rwy 11-29, PAPI Rwy 17  
 and Rwy 35, MIRL Rwy 17-35-CTAF. **MILITARY—A-GEAR** E-5  
 connected on dep end, disconnected on apch end.  
**JASU** 3(AM32A-60) 2(A/M32A-86) FUEL J8(Mil)(NC-100, A)  
**FLUID** W SP PRESAIR LOX OIL O-128 MAINT S1 Mon-Fri 1000-2200Z‡  
**TRAN ALERT** Avbl 1300-0200Z‡ svc limited weekends.

⑮  
**AIRPORT REMARKS:** Special Air Traffic Rules—Part 93, see Regulatory Notices. Attended 1200-0300Z‡. Parachute Jumping.  
 Deer invof arpt. Heavy jumbo jet training surface to 9000'. Twy A clsd indef. Flight Notification Service (ADCUS) avbl.  
 ⑯  
**MILITARY REMARKS:** ANG PPR/Official Business Only. Base OPS DSN 638-4390, C503-335-4222. Ctc Base OPS 15 minutes  
 prior to ldg and after dep. Limited tran parking.

⑰  
**AIRPORT MANAGER:** (580) 481-5739  
 ⑱  
**WEATHER DATA SOURCES:** AWOS-1 120.3 (202) 426-8000. LAWRS.  
 ⑲  
**COMMUNICATIONS:** SFA CTAF 122.8 UNICOM 122.95 ATIS 127.25 273.5 (202) 426-8003 PTD 372.2  
 NAME FSS (ORL) on arpt. 123.65 122.65 122.2  
 NAME RCO 112.2T 112.1R (NAME RADIO)  
 ⑳  
 NAME APP/DEP CON 128.35 257.725 (1200-0400Z‡)  
 TOWER 119.65 255.6 (1200-0400Z‡) GND CON 121.7 GCO 135.075 (ORLANDO CLNC) CLNC DEL 125.55  
 CPDLC D-HZWXR, D-TAXI, DCL (LOGON KMEM)  
 NAME COMD POST (GERONIMO) 311.0 321.4 6761 PMSV METRO 239.8 NAME OPS 257.5

㉑  
**AIRSPACE:** CLASS B See VFR Terminal Area Chart.  
 ㉒  
**VOR TEST FACILITY (VOT):** 116.7  
 ㉓  
**RADIO AIDS TO NAVIGATION:** NOTAM FILE ORL. VHF/DF ctc FSS.  
 (H) VORTAC 112.2 MCO Chan 59 N28°32.55' W81°20.12' at fld. 1110/8E.  
 (H) TACAN Chan 29 CBU (109.2) N28°32.65' W81°21.12' at fld. 1115/8E.  
**HERNY NDB (LOM)** 221 OR N28°37.40' W81°21.05' 177° 5.4 NM to fld.  
**ILS/DME** 108.5 I-ORL Chan 22 Rwy 18. Class IIE. LOM HERNY NDB.  
**ASR/PAR** (1200-0400Z‡)

㉔  
**COMM/NAV/WEATHER REMARKS:** Emerg frequency 121.5 not avbl at twr.  
 . . . . .  
**HELIPAD H1:** H100X75 (ASPH)  
**HELIPAD H2:** H60X60 (ASPH)  
**HELIPORT REMARKS:** Helipad H1 lctd on general aviation side and H2 lctd on air carrier side of arpt.  
 . . . . .  
 187 TPA 1000(813)  
**WATERWAY 15-33:** 5000X425 (WATER)  
**SEAPLANE REMARKS:** Birds roosting and feeding areas along river banks. Seaplanes operating adjacent to SW side of arpt not  
 visible from twr and are required to ctc twr.



All bearings and radials are magnetic unless otherwise specified. All mileages are nautical unless otherwise noted.  
 All times are Coordinated Universal Time (UTC) except as noted. All elevations are in feet above/below Mean Sea Level (MSL) unless otherwise noted.  
 The horizontal reference datum of this publication is North American Datum of 1983 (NAD83), which for charting purposes is considered equivalent to World  
 Geodetic System 1984 (WGS 84).

LEGEND 2.—Airport/Facility Directory.

AIRPORT/FACILITY DIRECTORY LEGEND

10

KETCH LEGEND

**RUNWAYS/LANDING AREAS**

Hard Surfaced . . . . .

Metil Surfaced . . . . .

Gravel, etc . . . . .

Light Lane . . . . .

Ski Landing Area or Water . . . . .

Under Construction . . . . .

Closed . . . . .

Helicopter Landings Area . . . . . H

Displaced Threshold . . . . .

Taxiway, Apron and Stopway . . . . .

**RADIO AIDS TO NAVIGATION**

VORTA . . . . .

R/DME . . . . .

TACA . . . . .

E . . . . .

**MISCELLANEOUS BASE AND CULTURAL FEATURES**

Building . . . . .

Center Line . . . . .

Fence . . . . .

Tower . . . . .

Wind Turbine . . . . .

Tank . . . . .

Oil Well . . . . .

Smoke Stack . . . . .

Instruction . . . . .

Controlling Obstruction . . . . . +5812

Tree . . . . .

Cultural Place . . . . .

Cut and Fill . . . . .

Relief and Depression . . . . .

Ditch . . . . .

Hill . . . . .

**MISCELLANEOUS AERONAUTICAL FEATURES**

Airport Beacon . . . . .

Wind Cone . . . . .

Landing Teal . . . . .

Tetrahedron . . . . .

Control Tower . . . . . or TWR

When control tower and rotating beacon are co-located beacon symbol will be placed and either identified as TWR.

**APPROACH LIGHTING SYSTEMS**

dot "•" portrayed with approach lighting letter identifier indicates sequenced flashing light (F) installed with the approach lighting system. Alternative symbology,

indicates pilot controlled lighting (PCL).

Runway Centerline Lighting . . . . .

Approach Lighting System ALSF- . . . . .

ALSF- . . . . .

Short Approach Lighting System ALS/SALS- . . . . .

A2 ALS/SALS- . . . . .

A3 Simplified Short Approach Lighting System (SSALR) with RAI . . . . .

A4 Medium Intensity Approach Lighting System (MALS and MALSF)/(SSALS) and SSALF . . . . .

A5 Medium Intensity Approach Lighting System (MALS) and RAI . . . . .

Omnidirectional Approach Lighting System (ODALS) . . . . .

Highway Parallel Row and Crossbar . . . . .

Force Overrun . . . . .

Visual Approach Slope Indicator with Standard Threshold Clearance provided

V2 Integrating Visual Approach Slope Indicator (PVASI)

V3 Visual Approach Slope Indicator with a threshold crossing height to accommodate long bodied or jumbo aircraft

V4 Tri-color Visual Approach Slope Indicator (TRCV)

V5 Approach Path Alignment Inel (APAP)

P Precision Approach Path Indicator (PAPI)

LEGEND 3.—Airport/Facility Directory.



**AIRPORT/FACILITY DIRECTORY LEGEND**

**LEGEND**

This directory is a listing of data on record with the FAA on public-use airports, military airports and selected private-use airports specifically requested by the Department of Defense (DoD) for which a DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures Publication. Additionally this listing contains data for associated terminal control facilities, air route traffic control centers, and radio aids to navigation within the conterminous United States, Puerto Rico and the Virgin Islands. Civil airports and joint Civil/Military airports which are open to the public are listed alphabetically by state, associated city and airport name and cross-referenced by airport name. Military airports and private-use (limited civil access) joint Military/Civil airports are listed alphabetically by state and official airport name and cross-referenced by associated city name. Nav aids, flight service stations and remote communication outlets that are associated with an airport, but with a different name, are listed alphabetically under their own name, as well as under the airport with which they are associated.

The listing of an airport as open to the public in this directory merely indicates the airport operator's willingness to accommodate transient aircraft, and does not represent that the airport conforms with any Federal or local standards, or that it has been approved for use on the part of the general public. Military airports, private-use airports, and private-use (limited civil access) joint Military/Civil airports are open to civil pilots only in an emergency or with prior permission. See Special Notice Section, Civil Use of Military Fields.

The information on obstructions is taken from reports submitted to the FAA. Obstruction data has not been verified in all cases. Pilots are cautioned that objects not indicated in this tabulation (or on the airports sketches and/or charts) may exist which can create a hazard to flight operation. Detailed specifics concerning services and facilities tabulated within this directory are contained in the Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

The legend items that follow explain in detail the contents of this Directory and are keyed to the circled numbers on the sample on the preceding pages.

**① CITY/AIRPORT NAME**

Civil and joint Civil/Military airports which are open to the public are listed alphabetically by state and associated city. Where the city name is different from the airport name the city name will appear on the line above the airport name. Airports with the same associated city name will be listed alphabetically by airport name and will be separated by a dashed rule line. A solid rule line will separate all others. FAA approved helipads and seaplane landing areas associated with a land airport will be separated by a dotted line. Military airports and private-use (limited civil access) joint Military/Civil airports are listed alphabetically by state and official airport name.

**② ALTERNATE NAME**

Alternate names, if any, will be shown in parentheses.

**③ LOCATION IDENTIFIER**

The location identifier is a three or four character FAA code followed by a four-character ICAO code, when assigned, to airports. If two different military codes are assigned, both codes will be shown with the primary operating agency's code listed first. These identifiers are used by ATC in lieu of the airport name in flight plans, flight strips and other written records and computer operations. Zeros will appear with a slash to differentiate them from the letter "O".

**④ OPERATING AGENCY**

Airports within this directory are classified into two categories, Military/Federal Government and Civil airports open to the general public, plus selected private-use airports. The operating agency is shown for military, private-use and joint use airports. The operating agency is shown by an abbreviation as listed below. When an organization is a tenant, the abbreviation is enclosed in parenthesis. No classification indicates the airport is open to the general public with no military tenant.

A	US Army	MC	Marine Corps
AFRC	Air Force Reserve Command	MIL/CIV	Joint Use Military/Civil Limited Civil Access
AF	US Air Force	N	Navy
ANG	Air National Guard	NAF	Naval Air Facility
AR	US Army Reserve	NAS	Naval Air Station
ARNG	US Army National Guard	NASA	National Air and Space Administration
CG	US Coast Guard	P	US Civil Airport Wherein Permit Covers Use by Transient Military Aircraft
CIV/MIL	Joint Use Civil/Military Open to the Public	PVT	Private Use Only (Closed to the Public)
DND	Department of National Defense Canada		

**⑤ AIRPORT LOCATION**

Airport location is expressed as distance and direction from the center of the associated city in nautical miles and cardinal points, e.g., 4 NE.

**⑥ TIME CONVERSION**

Hours of operation of all facilities are expressed in Coordinated Universal Time (UTC) and shown as "Z" time. The directory indicates the number of hours to be subtracted from UTC to obtain local standard time and local daylight saving time UTC-5(-4DT). The symbol ‡ indicates that during periods of Daylight Saving Time (DST) effective hours will be one hour earlier than shown. In those areas where daylight saving time is not observed the (-4DT) and ‡ will not be shown. Daylight saving time is in effect from 0200 local time the second Sunday in March to 0200 local time the first Sunday in November. Canada and all U.S. Conterminous States observe daylight saving time except Arizona and Puerto Rico, and the Virgin Islands. If the state observes daylight saving time and the operating times are other than daylight saving times, the operating hours will include the dates, times and no ‡ symbol will be shown, i.e., April 15-Aug 31 0630-1700Z, Sep 1-Apr 14 0600-1700Z.

LEGEND 4.—Airport/Facility Directory.

## AIRPORT/FACILITY DIRECTORY LEGEND

15

**⑦ GEOGRAPHIC POSITION OF AIRPORT—AIRPORT REFERENCE POINT (ARP)**

Positions are shown as hemisphere, degrees, minutes and hundredths of a minute and represent the approximate geometric center of all usable runway surfaces.

**⑧ CHARTS**

Charts refer to the Sectional Chart and Low and High Altitude Enroute Chart and panel on which the airport or facility is located. Helicopter Chart locations will be indicated as COPTER. IFR Gulf of Mexico West and IFR Gulf of Mexico Central will be depicted as GOMW and GOMC.

**⑨ INSTRUMENT APPROACH PROCEDURES, AIRPORT DIAGRAMS**

IAP indicates an airport for which a prescribed (Public Use) FAA Instrument Approach Procedure has been published. DIAP indicates an airport for which a prescribed DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures. See the Special Notice Section of this directory, Civil Use of Military Fields and the Aeronautical Information Manual 5-4-5 Instrument Approach Procedure Charts for additional information. AD indicates an airport for which an airport diagram has been published. Airport diagrams are located in the back of each Chart Supplement volume alphabetically by associated city and airport name.

**⑩ AIRPORT SKETCH**

The airport sketch, when provided, depicts the airport and related topographical information as seen from the air and should be used in conjunction with the text. It is intended as a guide for pilots in VFR conditions. Symbology that is not self-explanatory will be reflected in the sketch legend. The airport sketch will be oriented with True North at the top. Airport sketches will be added incrementally.

**⑪ ELEVATION**

The highest point of an airport's usable runways measured in feet from mean sea level. When elevation is sea level it will be indicated as "00". When elevation is below sea level a minus "-" sign will precede the figure.

**⑫ ROTATING LIGHT BEACON**

B indicates rotating beacon is available. Rotating beacons operate sunset to sunrise unless otherwise indicated in the AIRPORT REMARKS or MILITARY REMARKS segment of the airport entry.

**⑬ TRAFFIC PATTERN ALTITUDE**

Traffic Pattern Altitude (TPA)—The first figure shown is TPA above mean sea level. The second figure in parentheses is TPA above airport elevation. Multiple TPA shall be shown as "TPA—See Remarks" and detailed information shall be shown in the Airport or Military Remarks Section. Traffic pattern data for USAF bases, USN facilities, and U.S. Army airports (including those on which ACC or U.S. Army is a tenant) that deviate from standard pattern altitudes shall be shown in Military Remarks.

**⑭ AIRPORT OF ENTRY, LANDING RIGHTS, AND CUSTOMS USER FEE AIRPORTS**

U.S. CUSTOMS USER FEE AIRPORT—Private Aircraft operators are frequently required to pay the costs associated with customs processing.

AOE—Airport of Entry. A customs Airport of Entry where permission from U.S. Customs is not required to land. However, at least one hour advance notice of arrival is required.

LRA—Landing Rights Airport. Application for permission to land must be submitted in advance to U.S. Customs. At least one hour advance notice of arrival is required.

NOTE: Advance notice of arrival at both an AOE and LRA airport may be included in the flight plan when filed in Canada or Mexico. Where Flight Notification Service (ADCUS) is available the airport remark will indicate this service. This notice will also be treated as an application for permission to land in the case of an LRA. Although advance notice of arrival may be relayed to Customs through Mexico, Canada, and U.S. Communications facilities by flight plan, the aircraft operator is solely responsible for ensuring that Customs receives the notification. (See Customs, Immigration and Naturalization, Public Health and Agriculture Department requirements in the International Flight Information Manual for further details.)

## U.S. CUSTOMS AIR AND SEA PORTS, INSPECTORS AND AGENTS

Northeast Sector (New England and Atlantic States—ME to MD)	407-975-1740
Southeast Sector (Atlantic States—DC, WV, VA to FL)	407-975-1780
Central Sector (Interior of the US, including Gulf states—MS, AL, LA)	407-975-1760
Southwest East Sector (OK and eastern TX)	407-975-1840
Southwest West Sector (Western TX, NM and AZ)	407-975-1820
Pacific Sector (WA, OR, CA, HI and AK)	407-975-1800

**⑮ CERTIFICATED AIRPORT (14 CFR PART 139)**

Airports serving Department of Transportation certified carriers and certified under 14 CFR part 139 are indicated by the Class and the ARFF Index; e.g. Class I, ARFF Index A, which relates to the availability of crash, fire, rescue equipment. Class I airports can have an ARFF Index A through E, depending on the aircraft length and scheduled departures. Class II, III, and IV will always carry an Index A.

## AIRPORT CLASSIFICATIONS

Type of Air Carrier Operation	Class I	Class II	Class III	Class IV
Scheduled Air Carrier Aircraft with 31 or more passenger seats	X			
Unscheduled Air Carrier Aircraft with 31 or more passengers seats	X	X		X
Scheduled Air Carrier Aircraft with 10 to 30 passenger seats	X	X	X	

LEGEND 5.—Airport/Facility Directory.