

## 1.1 操作控制单元的操作流程

操作控制单元采用触摸屏的控制方式，直接在面板上点击需要操作的内容，并进行操作。

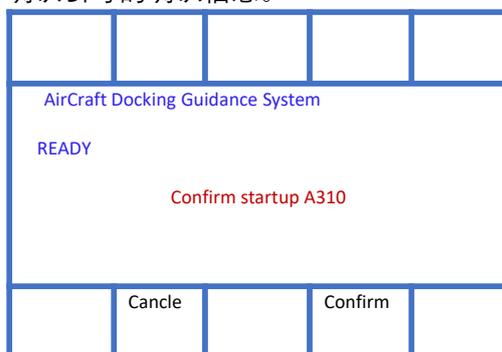
编号	说明																				
1 主界面	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Test</td> <td style="width: 25%;">Lock</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td colspan="4" style="text-align: center; padding: 10px;">                     Aircraft Docking Guidance System                       READY                 </td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Park on</td> <td style="text-align: center;">Start Dock</td> </tr> </table> </div> <ul style="list-style-type: none"> <li>✚ 界面有 5 个操作按钮</li> <li>✚ 中间区域是泊位系统当前的状态信息，</li> <li>✚ Park on：手动标记本泊位已停入飞机</li> <li>✚ 进入 test 界面，有 SetLED 及 WalkTest 选项，其中                         <ul style="list-style-type: none"> <li>SetLED 按钮：是对泊位显示大屏 LED 模块进行设置和测试：</li> <li>SetLED on :打开显示屏</li> <li>SetLED off: 关闭显示屏</li> <li>LED Ligh+：增加显示屏亮度</li> <li>LED Ligh-：减小显示屏亮度</li> </ul> </li> <li>✚ WalkTest 按钮：启动步行测试，开启确认后进入到下一级页面，选择要步行测试的机型</li> <li>✚ Lock:可以对操作控制单元进行锁定，按 Unlcok 后解锁</li> <li>✚ SartDock 按钮：启动引导，确认后进入到下一级，选择 要启动的机型</li> </ul>	Test	Lock			Aircraft Docking Guidance System  READY						Park on	Start Dock								
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4.StartDock	<p>按下 StartDock 按钮后，进入到下一级页面，显示内容如下：</p> <ul style="list-style-type: none"> <li>✚ 上方包括 5 个功能按钮：                         <ul style="list-style-type: none"> <li>➢ Aline</li> <li>➢ Back</li> </ul> </li> </ul> <p>第一个按钮 Aline 显示的当前选择的中心线,点击该按钮，可以选择其它的中心线,Bline 和 Cline,如果配置的话</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">A Line</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;">Back</td> </tr> <tr> <td colspan="4" style="text-align: center; padding: 5px;">AirCraft Docking Guidance System</td> </tr> <tr> <td style="text-align: center;">A310</td> <td style="text-align: center;">A319</td> <td style="text-align: center;">A320</td> <td style="text-align: center;">A321</td> </tr> <tr> <td style="text-align: center;">A330 -200</td> <td style="text-align: center;">A330 -300</td> <td style="text-align: center;">A340 -200</td> <td style="text-align: center;">A340 -300</td> </tr> <tr> <td></td> <td style="text-align: center;">Page Up</td> <td style="text-align: center;">1/2</td> <td style="text-align: center;">Page Down</td> </tr> </table> </div> <p>下方 5 个功能按钮，用于翻页和页面显示</p>	A Line			Back	AirCraft Docking Guidance System				A310	A319	A320	A321	A330 -200	A330 -300	A340 -200	A340 -300		Page Up	1/2	Page Down
A Line			Back																		
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A310	A319	A320	A321																		
A330 -200	A330 -300	A340 -200	A340 -300																		
	Page Up	1/2	Page Down																		

Pageup: 表示向上翻页;  
 1/2: 表示共有 2 页, 当前第一页  
 PageDown: 表示向下翻页, 当该中心线配置的机型超过了 5 个, 需要多页显示, 按该按钮进行向下翻页。

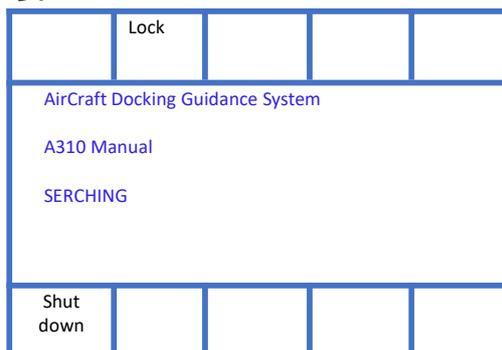
 中间部分显示配置的机型

- A310
- A219
- A320
- A 321
- A330-200
- A330-300
- 340-200
- A340-300

下方的 5 个按钮显示的当前配置的机型, 只要点击某个机型, 就会出现需要确认引导的确认信息。



点击 Confirm 按钮后, 中间的泊位设备状态信息显示为当前的信息, 如下图所示显示泊位正在搜索, 手动激活。如果与集成系统连接, 有航班信息, Manual 就会变为航班号。



如果想退出当前的引导, 可以按 shutDown, 提前结束引导

	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> </tr> <tr> <td colspan="6" style="text-align: center;">                 Aircraft Docking Guide System                  A310 Manual                  SERCHING                  Confirm Startup ShutDown?             </td> </tr> <tr> <td></td> <td style="text-align: center;">Cancel</td> <td></td> <td style="text-align: center;">Confirm</td> <td></td> <td></td> </tr> </table> <p>点击 Confirm 按钮，确认关闭当前的引导，系统进入原始界面</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: center;">Test</td> <td style="width: 15%; text-align: center;">Lock</td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> <tr> <td colspan="6" style="text-align: center;">                 Aircraft Docking Guidance System                   READY             </td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">Park on</td> <td></td> <td style="text-align: center;">Start Dock</td> <td></td> </tr> </table>							Aircraft Docking Guide System A310 Manual SERCHING Confirm Startup ShutDown?							Cancel		Confirm			Test	Lock					Aircraft Docking Guidance System  READY								Park on		Start Dock	
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<p>5.跟踪</p>	<p>跟踪：TRACKING XXm 泊位系统在引导过程中，显示距离停止线的米数，操作控制单元则显示</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%; text-align: center;">Lock</td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> <tr> <td colspan="6" style="text-align: center;">                 AirCraft Docking Guidance System                   A310 Walktest                   TRCKING 5.3m&gt;&gt;             </td> </tr> <tr> <td style="text-align: center;">Shut down</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Lock					AirCraft Docking Guidance System  A310 Walktest  TRCKING 5.3m>>						Shut down																							
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<p>7.减速</p>	<p>减速： SLOW 飞机在滑行过程中，速度超过设定的值，LED 大屏显示 SLOW，操作控制单元显示：</p> <table border="1" data-bbox="424 349 927 696"> <tr> <td></td> <td>Lock</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">AirCraft Docking Guidance System</td> </tr> <tr> <td colspan="5">A310 Manual</td> </tr> <tr> <td colspan="5">SLOW</td> </tr> <tr> <td>Shut down</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Lock				AirCraft Docking Guidance System					A310 Manual					SLOW					Shut down				
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<p>8.故障</p>	<p>泊位系统在引导过程中，出现系统故障，LED 大屏显示内部错误：INNERERROR,如镜子不动，步进电机故障，激光错误，或者是工控机设备故障</p> <table border="1" data-bbox="424 815 927 1162"> <tr> <td></td> <td>Lock</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">AirCraft Docking Guidance System</td> </tr> <tr> <td colspan="5">A310 Manual</td> </tr> <tr> <td colspan="5">INNER ERROR</td> </tr> <tr> <td>Shut down</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Lock				AirCraft Docking Guidance System					A310 Manual					INNER ERROR					Shut down				
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<p>9.ERROR IDfail</p>	<p>在飞机引导过程，飞机无法识别或与激活飞机不一致，显示 IDFAIL</p> <table border="1" data-bbox="424 1240 927 1588"> <tr> <td></td> <td>Lock</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">AirCraft Docking Guidance System</td> </tr> <tr> <td colspan="5">A310 Manual</td> </tr> <tr> <td colspan="5">ERROR IDFAIL</td> </tr> <tr> <td>Shut down</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Lock				AirCraft Docking Guidance System					A310 Manual					ERROR IDFAIL					Shut down				
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<p>10 . FINISH OK</p>	<p>泊位引导结束，显示操作控制单元显示 FINISH OK</p> <table border="1" data-bbox="424 1632 927 1973"> <tr> <td>Test</td> <td>Lock</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">AirCraft Docking Guidance System</td> </tr> <tr> <td colspan="5">A310 Manual</td> </tr> <tr> <td colspan="5">FINISH OK</td> </tr> <tr> <td></td> <td></td> <td>Park on</td> <td></td> <td></td> </tr> </table>	Test	Lock				AirCraft Docking Guidance System					A310 Manual					FINISH OK							Park on		
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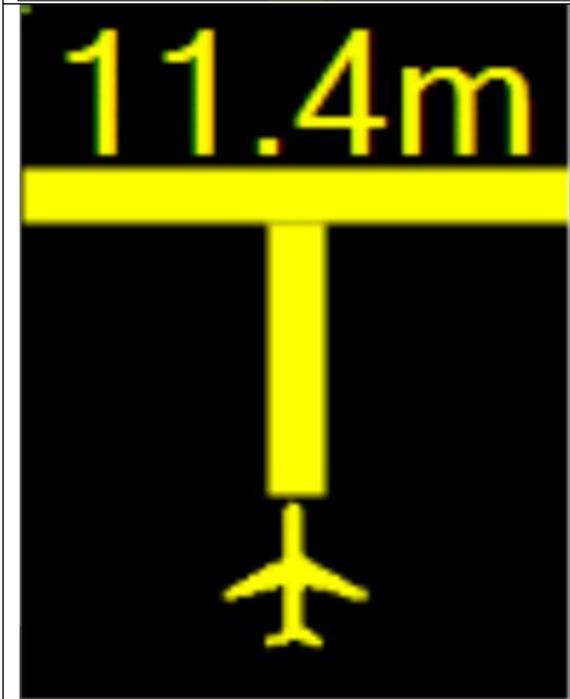
<p>11. Finish TOO FAR</p>	<p>如果飞机到达停止线后，继续向前滑行，停止超过1米 则显示 FINISH TOO FAR</p> <table border="1" data-bbox="424 349 927 696"> <tr> <td>Lock</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">                 AirCraft Docking Guidance System                  A310 Manual                  FINISH TOO FAR             </td> </tr> <tr> <td>Shut down</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Lock					AirCraft Docking Guidance System A310 Manual FINISH TOO FAR					Shut down				
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<p>12 . MISSING</p>	<p>引导过程出现跟踪丢失，显示单元显示 Error missing，操作控制单元显示 MISSING</p> <table border="1" data-bbox="424 777 927 1126"> <tr> <td>Lock</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">                 AirCraft Docking Guidance System                  A310 Manual                  FINISH MISSING             </td> </tr> <tr> <td>Shut down</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Lock					AirCraft Docking Guidance System A310 Manual FINISH MISSING					Shut down				
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<p>13 WALK test</p>	<p>可以通过 Walk Test 按钮，选中机型后确认</p> <table border="1" data-bbox="424 1167 927 1514"> <tr> <td>Lock</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">                 AirCraft Docking Guidance System                  READY                  Confirm startup A310             </td> </tr> <tr> <td>Cancle</td> <td></td> <td>Confirm</td> <td></td> <td></td> </tr> </table>	Lock					AirCraft Docking Guidance System READY Confirm startup A310					Cancle		Confirm		
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<p>14.Walk test serching</p>	<p>确认后，进入步行测试搜索阶段</p> <table border="1" data-bbox="424 1554 927 1904"> <tr> <td>Lock</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">                 AirCraft Docking Guidance System                  A310 Walktest                  SERCHING             </td> </tr> <tr> <td>Shut down</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Lock					AirCraft Docking Guidance System A310 Walktest SERCHING					Shut down				
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<p>15.Walk test tracking</p>	<p>搜索到目标后，对目标进行跟踪，显示当前的距离</p> <table border="1" data-bbox="424 1944 927 2018"> <tr> <td>Lock</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Lock														
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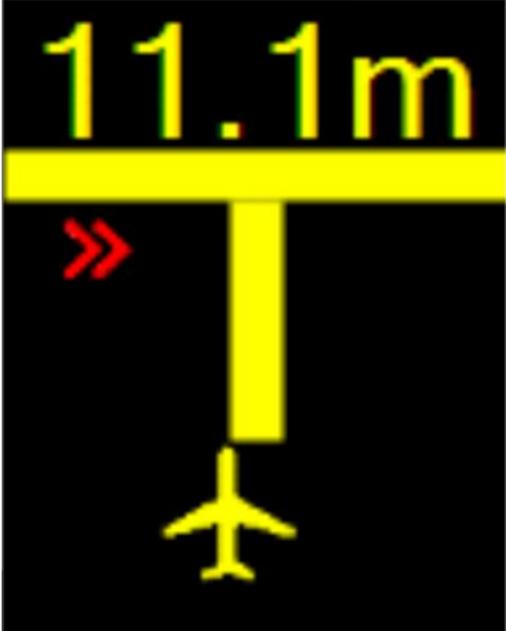
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16.Finish Ok	<p>到达停止线，显示 Finish OK</p> <table border="1"> <tr> <td>Test</td> <td>Lock</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5">AirCraft Docking Guidance System</td> </tr> <tr> <td colspan="5">A310 Walktest</td> </tr> <tr> <td colspan="5">FINISH OK</td> </tr> <tr> <td></td> <td></td> <td>Park on</td> <td></td> <td></td> </tr> </table>	Test	Lock				AirCraft Docking Guidance System					A310 Walktest					FINISH OK							Park on		
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4.1 引导流程

	<p>1. 步行测试</p> <p>交替显示机型及 Walktest 最上面显示步行测试信息，中间绿色分隔条 下面显示钟摆，表示在搜索。 步行测试从距离选择机型的停止线 10（米）可设定处开始扫描。</p>
	<p>2. 搜索飞机</p> <p>最上端显示机型如：A310，如果有航班号，则显示航班信息 钟摆代表泊位设备正在引导并搜索飞机。</p>

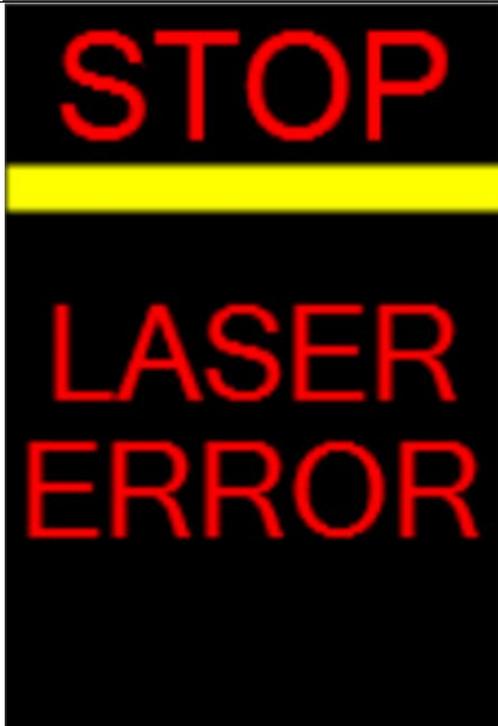
 The image shows a vertical LED display with a black background. At the top, the time '16:24' is displayed in large yellow characters. Below the time is a solid green horizontal bar. Underneath the bar, the number '302' is displayed in large yellow characters.	<p>3. 空闲状态 泊位设备当前处于空闲状态，显示机位号和当前的时间。</p>
 The image shows a vertical LED display with a black background. At the top, the word 'START' is displayed in large yellow characters. Below the word is a solid green horizontal bar. Underneath the bar, the word 'WAIT' is displayed in large yellow characters.	<p>4. 启动等待 表示泊位正在进行启动工作，此时无法引导，目标应该在识别区域外等待。</p>

 A vertical yellow bar with a horizontal yellow bar at the top. The text "A310" is displayed in yellow at the top.	<p>5. 引导飞机 此时已捕捉到飞机。 上面显示当前机型，黄色的字。 飞机在已经捕获到飞机，距离停止线超过 20m（可设置）时，只显示进度条，不显示距离信息。</p>
 A vertical yellow bar with a horizontal yellow bar at the top. The text "11.4m" is displayed in yellow at the top. A small yellow airplane icon is at the bottom of the vertical bar.	<p>6. 距离信息和柱状距离条 显示飞机离停止线小于 20m（可设置），提示飞机距离停止线的距离，小飞机显示飞机当前的位置相对中心线位置。</p>

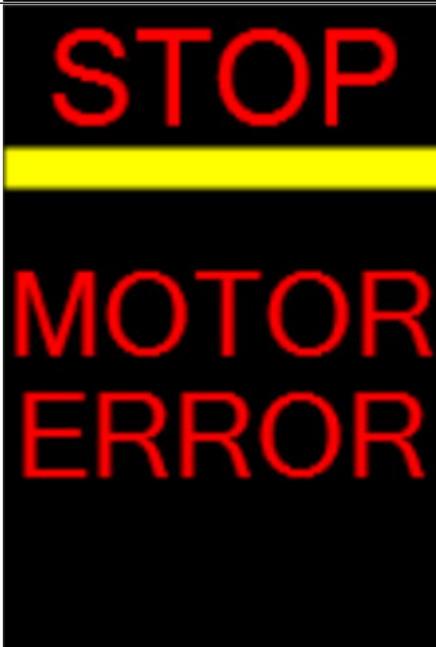
	<p>7. 偏移指示 飞机偏离中心线左侧，红色箭头表示飞机需要往右转，小飞机表示飞机偏离中心线的位置</p>
	<p>8. 需要减速 SLOW 飞机当前滑行的速度超过了预设的值，要求飞机减速。</p>

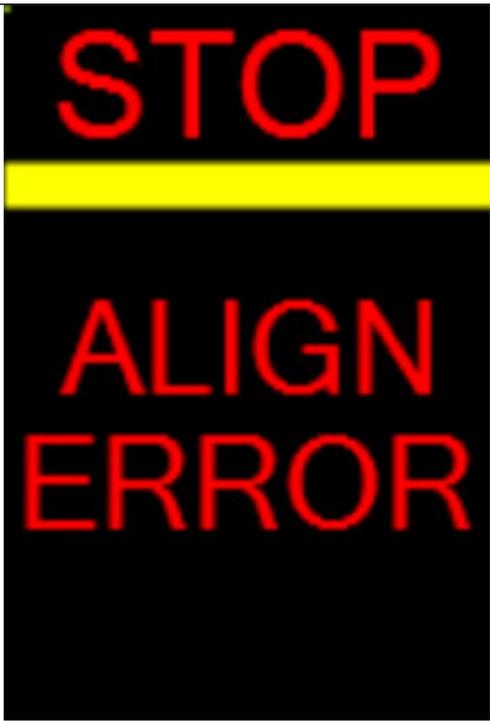
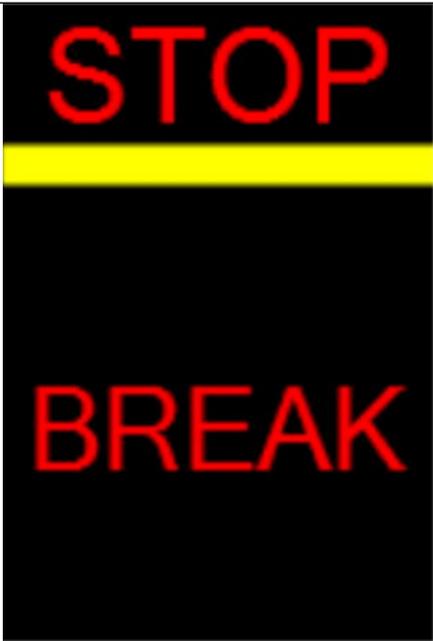
 A vertical rectangular sign with a black background. At the top, the word "STOP" is written in large, red, sans-serif capital letters. Below the text is a thick, horizontal yellow bar. Underneath the bar is a yellow silhouette of an airplane, viewed from the front, centered horizontally.	<p>9. 停止提示</p> <p>飞机已经到达停止线位置，显示红色的 STOP，要求飞机不能继续滑行。小飞机显示飞机到达停止线。</p>
 A vertical rectangular sign with a black background. At the top, the letters "OK" are written in large, green, sans-serif capital letters. Below the text is a thick, horizontal yellow bar. The bottom portion of the sign is black.	<p>10. 泊好</p> <p>OK</p> <p>代表飞机已经停泊好。</p> <p>飞机到达停止线后，已处于静止状态，这时显示绿色 OK</p>

 A vertical rectangular display with a black background. At the top, the word "STOP" is written in large, red, sans-serif capital letters. Below it is a thick, horizontal yellow bar. Underneath the bar, the words "TOO FAR" are written in the same red, sans-serif capital letters as "STOP".	<p>11. 滑过线</p> <p>STOP/TOO FAR</p> <p>飞机已经停止不动，机轮位置超过停止线的距离超过预设的值，这时显示 TOO FAR</p>
 A vertical rectangular display with a black background. At the top, the word "STOP" is written in large, red, sans-serif capital letters. Below it is a thick, horizontal yellow bar. Underneath the bar, the word "EMERGEN" is written in the same red, sans-serif capital letters as "STOP".	<p>12. 紧急停止</p> <p>由机务人员在紧急情况下要求停止飞机继续滑行，按下紧急停止按钮。这时显示 STOP 和 EMERGEN 要求飞机停止滑行。</p>

 泊位空闲显示界面：黑色背景，顶部显示黄色大写字母“READY”，下方有一条绿色水平装饰线，再下方显示黄色数字“302”。	<p>13. 机位空闲</p> <p>当该机位空闲时，泊位的显示大屏可以显示当前时间和机位号信息，也可根据需要显示其他信息。</p>
 故障提醒显示界面：黑色背景，顶部显示红色大写字母“STOP”，下方有一条黄色水平装饰线，再下方显示红色大写字母“LASER ERROR”。	<p>14. 故障提醒</p> <p>泊位设备在引导过程中激光器出现错误，导致无法机型引导，这时提示红色的 STOP 和 ERROR 故障信息</p>

 A black rectangular sign with red text. At the top, the word "STOP" is written in large, bold, red capital letters. Below it is a thick horizontal yellow bar. Underneath the bar, the words "ID" and "FAIL" are stacked vertically in large, bold, red capital letters.	<p>15. ID fail</p> <p>泊位设备在引导过程中出现飞机识别错误，泊位设备显示 Wait, ID Fail。提示飞机机型识别失败飞行员需要停止滑入。</p>
 A black rectangular sign with yellow text. At the top, the word "WAIT" is written in large, bold, yellow capital letters. Below it is a thick horizontal green bar. Underneath the bar, the aircraft model "B737-300" is written in large, bold, yellow capital letters.	<p>16. 目标暂时丢失</p> <p>飞机在滑行引导过程中，如果突然跟踪目标丢失，则显示错误，missing,泊位设备会在丢失附件继续检测飞机，直到重新发现飞机，并可以继续引导或超时报错。</p>

 <p>The image shows a vertical LED display with a black background. At the top, the word "STOP" is displayed in large red capital letters. Below it is a horizontal yellow bar. Underneath the bar, the words "RESET" and "ERROR" are displayed in large red capital letters, stacked vertically.</p>	<p>17. REST ERROR 泊位引导设备启动引导功能时，初始化失败。</p>
 <p>The image shows a vertical LED display with a black background. At the top, the word "STOP" is displayed in large red capital letters. Below it is a horizontal yellow bar. Underneath the bar, the words "MOTOR" and "ERROR" are displayed in large red capital letters, stacked vertically.</p>	<p>18. MOTOR ERROR 泊位引导设备出现步进电机模块故障，需要进行维修更换</p>

 The image shows a vertical LED display with a black background. At the top, the word "STOP" is displayed in large, red, sans-serif capital letters. Below "STOP" is a thick, horizontal yellow bar. Underneath the yellow bar, the words "ALIGN ERROR" are displayed in large, red, sans-serif capital letters, stacked vertically.	<p>19. ALIGN ERROR</p> <p>泊位引导设备出现校准错误，设备无法启动，需要人工引导。需要重新做一次校准或排查故障原因。</p>
 The image shows a vertical LED display with a black background. At the top, the word "STOP" is displayed in large, red, sans-serif capital letters. Below "STOP" is a thick, horizontal yellow bar. Underneath the yellow bar, the word "BREAK" is displayed in large, red, sans-serif capital letters.	<p>20. BEAK</p> <p>泊位引导设备出现主程序故障，报该错误，这时需要人工引导入位。</p>

## 1.2 引导流程图

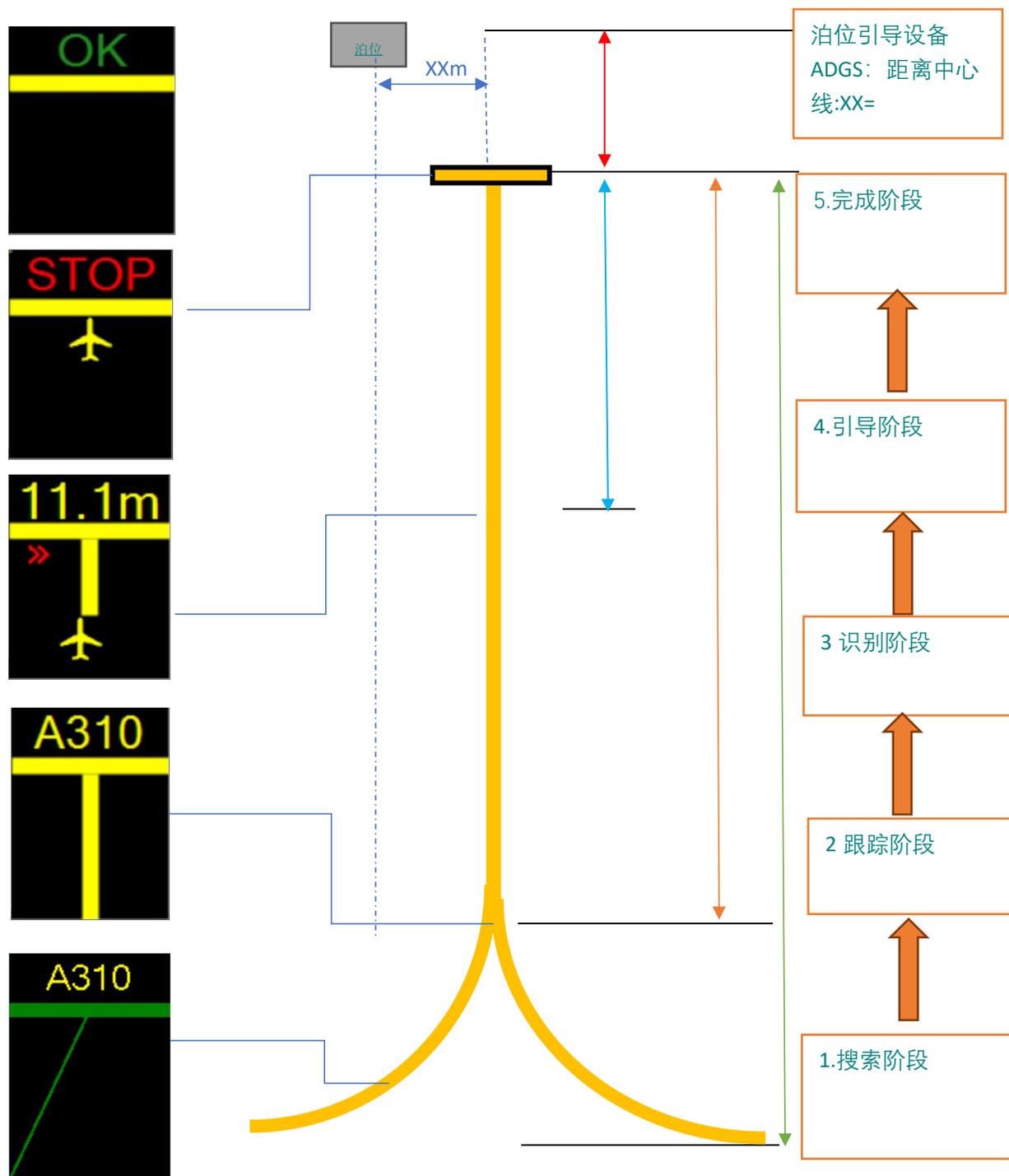


图 40.引导流程图

#### 引导过程：

- 1、搜索阶段：泊位设备在激活后进入搜索阶段，搜索的起始位置可配置。搜索阶段显示设备将显示 SEARCH 字样和机型信息；
- 2、跟踪阶段：泊位设备搜索到目标物体后，将进入跟踪阶段，在此阶段，将完成对目标物体的跟踪和锁定。一旦锁定目标，显示设备将显示锁定柱状线条及机型信息；若目标偏离中心线，则箭头指示偏离信息；若目标滑行速度过快，则显示 SLOW 字样，提示减速。
- 3、识别与引导阶段：泊位设备锁定目标后，将对目标进行识别操作，若机型错误，则显示 ID FAIL 字样。在某设定的距离（如 30 米）内，显示设备将显示接近距离的数值信息，接近距离的数值以整数米为单位，当距离停止线 3 米之内时，接近距离的数值将精确到小数点后一位。在引导阶段，显示设备还同时显示接近率和方位引导信息。
- 4、完成阶段：当目标物体接近或到达停止线时，显示设备将显示 STOP 字样（红色），当检测到目标物体完全停稳后，将显示 OK 字样（绿色）。如果超过停止线一定的距离（可配置），则显示 TOO FAR.