

**REVISION OF THE VISUAL DOCKING GUIDANCE SYSTEM AT
SUARNABHUMI INTERNATIONAL AIRPORT**

With effect from 16 April 2015, the visual docking guidance system will be revised.
Related details as shown as follows:

1. Safety Procedures

1.1 GENERAL WARNING

The VDGS System has a built-in error detection program to inform the aircraft pilot of impending dangers during the docking procedure.

IF THE PILOT IS UNSURE OF THE INFORMATION, BEING SHOWN OF THE VDGS DISPLAY UNIT, HE MUST IMMEDIATE STOP THE AIRCRAFT AND OBTAIN FURTHER INFORMATION FOR CLEARANCE.

1.2 ITEMS TO CHECK BEFORE ENTERING THE STAND AREA

WARNING: THE PILOT SHALL NOT ENTER THE STAND AREA, UNLESS THE DOCKING SYSTEM FIRST IS SHOWING THE VERTICAL RUNNING ARROWS. THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE, UNLESS THESE ARROWS HAVE BEEN SUPERSEDED BY THE CLOSING RATE BAR.

WARNING: THE PILOT SHALL NOT ENTER THE STAND AREA, UNLESS THE AIRCRAFT TYPE DISPLAYED IS EQUAL TO THE APPROACHING AIRCRAFT. THE CORRECTNESS OF OTHER INFORMATION, SUCH AS "DOOR 2" SHALL ALSO BE CHECKED.

1.3 THE SBU MESSAGE



The message STOP SBU means that docking has been interrupted and has to be resumed only by manual guidance. **DO NOT TRY TO RESUME DOCKING WITHOUT MANUAL GUIDANCE.**

1.4 OVERSHOOT PROCEDURES

Passenger loading bridges will be activated in the range as follows:

- a) between 0.01-1.50 meters are normally serviceable.
- b) between 1.51 – 2.00 meters, passenger loading bridge called "L1" is only serviceable, if the PLB called "L2" is required, the aircraft shall push back to correct stop-position.
- c) the distance over 2.00 meters, passenger loading bridges are unserviceable, if required the aircraft shall pushed back to correct stop-position.
- d) ANY OVERSHOOT DISTANCE IS MADE BY A380, PUSH BACK TO CORRECT STOP POSITION IS NEEDED WHEN PASSENGER LOADING BRIDGES ARE REQUIRED.

2. Docking procedure

<p>START-OF-DOCKING</p> <p>The system is started by pressing one of the aircraft type buttons on the Operator Panel.</p> <p>When the button has been pressed, WAIT will be displayed.</p>	
<p>CAPTURE</p> <p>The floating arrows indicate that the system is activated and in capture mode, searching for an approaching aircraft.</p> <p>It shall be checked that the correct aircraft type is displayed. The lead-in line shall be followed.</p> <p>THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE, UNLESS THE ARROWS HAVE BEEN SUPERSEDED BY THE CLOSING RATE BAR.</p>	

TRACKING

When the aircraft has been caught by the laser, the floating arrow is replaced by the yellow centre line indicator.

A flashing red arrow indicates the direction to turn.

The vertical yellow arrow shows position in relation to the centre line. This indicator gives correct position and azimuth guidance.

**CLOSING RATE**

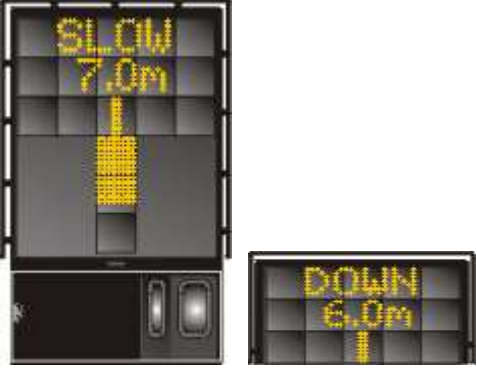


Display of digital countdown will start when the aircraft is 20 meters from stop position.

When the aircraft is less than 12 meters from the stop position, the closing rate is indicated by turning off one row of the centre line symbol per 0.5 meters, covered by the aircraft. Thus, when the last row is turned off, 0.5 meter remains to stop

**ALIGNED TO CENTRE**

The aircraft is eight meters from the stop position. The absence of direction arrow indicates an aircraft on the centre line.



<p>SLOW DOWN</p> <p>The aircraft is approaching faster than accepted speed, the system will show SLOW DOWN as a warning to the pilot.</p>	 <p>The image shows two cockpit displays. The larger display on the left shows the word 'SLOW' in yellow at the top, followed by 'DOWN' and '7.0m' in yellow. Below this is a yellow arrow pointing downwards. The smaller display on the right shows 'DOWN' in yellow at the top, followed by '5.0m' in yellow and a yellow arrow pointing downwards.</p>
<p>AZIMUTH GUIDANCE</p> <p>The aircraft is four meters from the stop-position. The yellow arrow indicates an aircraft to the right of the centre line, and the direction to turn.</p>	 <p>The image shows a cockpit display with 'B747' in yellow at the top, followed by '4.0m' in yellow. Below this is a yellow arrow pointing downwards and to the right, and a red arrow pointing to the right.</p>
<p>STOP POSITION REACHED</p> <p>When the correct stop-position is reached, the display will show STOP and red lights will be lit.</p>	 <p>The image shows a cockpit display with the word 'STOP' in yellow at the top. Below this are two red rectangular lights, one on the left and one on the right.</p>

<p>DOCKING COMPLETED</p> <p>When the aircraft has parked, OK will be displayed.</p>	
<p>OVERSHOOT</p> <p>If the aircraft has overshot the stop-position, TOO FAR will be displayed for <u>120 second</u>.</p>	

STOP SHORT

If the aircraft is found standing still but has not reached the intended stop position, the message **STOP OK** will be shown after a while.

**WAIT**

If some object is blocking the view toward the approaching aircraft or the detected aircraft is lost during docking before 12 meters to STOP, the display will show **WAIT**. The docking will continue as soon as the blocking object has disappeared or the system detects the aircraft again.

THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE, UNLESS THE "WAIT" MESSAGE HAS BEEN SUPERSEDED BY THE CLOSING RATE BAR.



BAD WEATHER CONDITION

During heavy fog, rain or snow, the visibility for the docking system can be reduced.

When the system is activated and in capture mode, the display will disable the floating arrows and display **SLOW** and the Aircraft Type.

As soon as the system detects the approaching aircraft, the vertical closing-rate bar will appear.

If the system has been configured in this mode to make a shortened ID verification (check of engine position excluded), the aircraft symbol will blink to give attention.

THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE, UNLESS THE CLOSING-RATE BAR IS SHOWN.

**AIRCRAFT VERIFICATION FAILURE**

During entry into the stand, the aircraft geometry is being checked. If, for any reason, aircraft verification is not made 12 meters before the stop-position, the display will first show WAIT and make a second verification check. If this fails STOP and ID FAIL will be displayed. The text will be alternating on the upper two rows of the display.

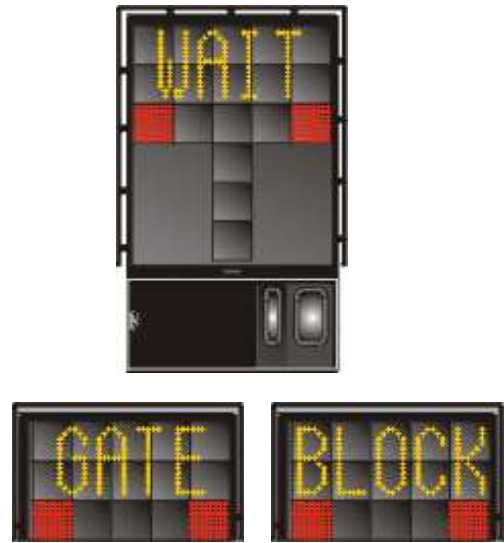
THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE WITHOUT MANUAL GUIDANCE, UNLESS THE WAIT MESSAGE HAS BEEN SUPERSEDED BY THE CLOSING RATE BAR.



GATE BLOCKED

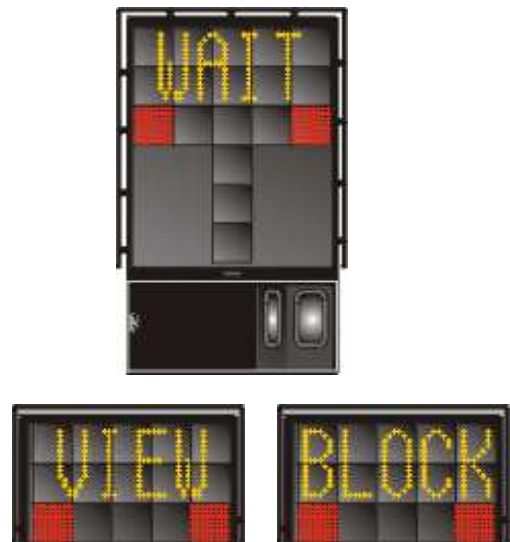
If an object is found blocking the view from the DGS to the planned stop position for the aircraft, the docking procedure will be halted with a wait and GATE BLOCK message. The docking procedure will resume as soon as the blocking object has been removed.

THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE WITHOUT MANUAL GUIDANCE, UNLESS THE WAIT MESSAGE HAS BEEN SUPERSEDED BY THE CLOSING RATE BAR.

**VIEW BLOCKED**

If the view towards the approaching aircraft is hindered, for instance by dirt on the window, the DGS will report a View blocked condition. Once the system is able to see the aircraft through the dirt, the message will be replaced with a closing rate display.

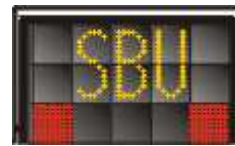
THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE WITHOUT MANUAL GUIDANCE, UNLESS THE WITH MESSAGE HAS BEEN SUPERSEDED BY THE CLOSING RATE BAR.



SBU-STOP

Any unrecoverable error during/the docking procedure will generate an SBU (safety back-up) condition. The display will show red stop bar and text STOP SBU.

A MANUAL BACKUP PROCEDURE MUST BE USED FOR DOCKING GUIDANCE

**TOO FAST**

If the aircraft approaches with a speed higher than the docking system can handle, the message STOP (with red squares) and TOO FAST will be displayed.

THE DOCKING SYSTEM MUST BE RE-STARTED OR THE DOCKING PROCEDURE COMPLETED BY MANUAL GUIDANCE.



EMERGENCY STOP

When the Emergency Stop button is pressed.
STOP is displayed.²




**CHOCKS ON**

CHOCK ON will be displayed, when the ground staff has put the chocks in front of the nose wheel and pressed the "Chocks On" button on the Operator Panel.

**MANUAL DOCKING**

When a docking is to be performed manually the system will display "MAN" on the tableau. The system will not give any guidance for the docking operation.



<p>ERROR</p> <p>If a system error occurs, the message ERROR is displayed with an error code. The code is used for maintenance purposes and explained elsewhere.</p>	
<p>SYSTEM BREAKDOWN</p> <p>In case of a severe system failure, the display will go black, except for a red stop indicator. A manual backup procedure must be used for docking guidance.</p>	
<p>POWER FAILURE</p> <p>In case of a power failure, the display will be completely black. A manual backup procedure must be used for docking guidance.</p>	

3. Emergency Stop button information

Emergency stop buttons are available at both of contact gates and remote parking stands. When unsafe situation is considered, the emergency stop button shall be pressed by bridge driver, marshaller or the ground engineer of the airline or handling agent.

Emergency stop buttons are installed in the locations as follows:

- a) at the control panel in the bridge cab
- b) at the bridge rotunda
- c) at the stand identification posts

Remark : The identification of passenger loading bridge (L1 or L2) is followed by aircraft door positions.

This AIC cancels AIC 3/06 Dated 23 November 2006.