

# Description Docking Guidance System

Honeywell PA3+



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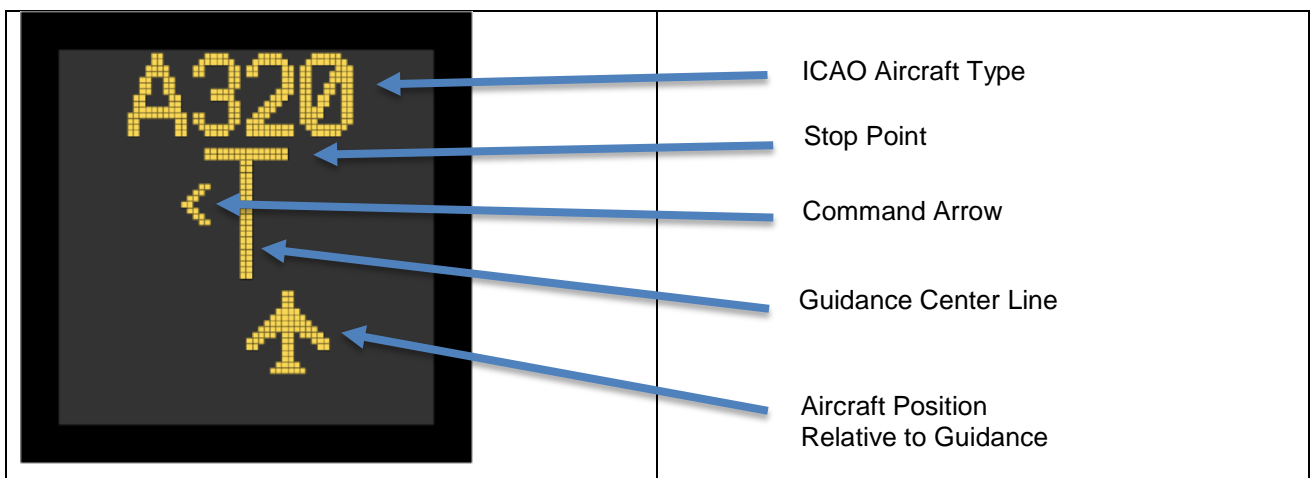
## 1. System Description

### 1.1. General

The Honeywell PA3+ Advanced Docking Guidance System is a camera-based docking guidance system (DGS). The following information provides a brief overview.

### 1.2. Pilot Display Unit (PDU)






The Pilot Display Unit provides the guidance information for flight crews for a safe and efficient parking of the aircraft at the desired stand. It also provides departure planning information such as TOBT, TSAT and TTOT.




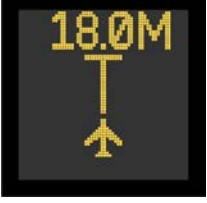










#### Information:



- Aircraft identification
- Actual aircraft position with reference to the Guidance Centre Line (GCL)
- Distance indicator for the last 30 meters
- Distance indication up to 1 decimal point from 3 meter to stop point
- Stopped information
- Correctly parked information
- Excessive speed information
- Stopped too far information
- Error information

## 2. Pilot Display Unit (PDU)




No.	Description	Display
1	IDLE MODE (display off)	
2	DGS ACTIVATION (preparing for docking)	
3	GATE READY FOR DOCKING Line 1: ICAO-A/C Type Line 2: ICAO Callsign (NOT YET OPERATIONAL)	
3	AIRCRAFT DETECTED When the aircraft is detected, only the aircraft type is displayed . However, when the aircraft reaches near to 30M from the stop point, the pilot will see distance-to-go closure rates in increments, as well as – Guidance Center Line (GCL) In this example, A320 is the aircraft type	
4	AIRCRAFT IDENTIFIED	







5	<p>AIRCRAFT TRACKING</p> <p>Line 1: Distance to stop point (here 30M). The countdown intervall at that distance is 5m.</p>	
6		
7	<p>COUNTDOWN INTERVALL CHANGE (20M)</p> <p>The countdown interval at that distance is 2m)</p>	
8		
9	<p>AIRCRAFT IS RIGHT OF CENTER LINE</p> <p>Slight correction to left hand side is required. Single arrow displayed.</p>	
10	<p>AIRCRAFT IS LEFT OF CENTER LINE</p> <p>Harder correction to right hand side is required. Double arrow displayed.</p>	

11	<p>INDICATED SPEED – SLOW IF TOO FAST</p> <p>SLOW is displayed if aircraft is approaching too fast and needs to slow down.</p>	
12	<p>COUNTDOWN INTERVALL CHANGE</p> <p>At 10m distance, the interval changes to 1m.</p>	
13		
14	<p>COUNTDOWN INTERVALL CHANGE</p> <p>At 3m, the intervall changes to 0.1m until reaching stop point</p>	
15		
16	<p>STOP</p> <p>Stop now, docking point reached, displayed in red and (flashing)</p>	

17	<p>OK</p> <p>Successful docking.</p>	
18	<p>TOO FAR</p> <p>Aircraft has gone beyond docking position.</p>	

### 3. Special Display Information

No.	Description	Display
1	<p>CONNECTION UNIT LOST</p> <p>Connection between TopBox and Display is not established (Fallback Image)</p>	
2	<p>ESTOP</p> <p>Line 1: STOP (flashing)</p> <p>Emergency stop has been activated.</p>	
3	<p>AIRCRAFT TYPE MISMATCH</p> <p>The aircraft identification failed.</p> <ol style="list-style-type: none"> <li>1. STOP (flashing)</li> <li>2. STOP/ID-Fail (static)</li> </ol>	

4	<p>DGS ERROR</p> <p>Error detected either in hard- or software.</p> <ol style="list-style-type: none"> <li>1. STOP (flashing)</li> <li>2. STOP/ERROR (static)</li> </ol>	
5	<p>OBSTACLE DETECTED (INBOUND ONLY)</p> <ol style="list-style-type: none"> <li>1. STOP (flashing)</li> <li>2. STOP/OBSTACLE (static)</li> </ol>	
6	<p>BRIDGE NOT IN CORRECT POSITION (INBOUND ONLY)</p> <ol style="list-style-type: none"> <li>1. STOP (flashing)</li> <li>2. STOP/BRIDGE NOT IN POSITIONS (static)</li> </ol>	
7	<p>HANDLING AND FUELLING STOP ACTIVE</p> <p>Display info at all PDU which are in status PARKED or FREE and not activated for an INBLOCK.</p>	
8	<p>DGS WITHOUT POWER</p>	
9	<p>BOOT SCREEN</p>	



#### 4. Departure Planning Information

No.	Description	Display
1	<p>FLIGHT PLANNED</p> <p>Line 1: IATA Flightnumber</p> <p>Line 2: empty</p> <p>Line 3: TOBT</p> <p>Line 4: TOBT-Time value + Z</p>	
2	<p>FLIGHT WITH ATC CLEARANCE (TSAT)</p> <p>Line 1: ATC CALLSIGN</p> <p>Line 2: empty</p> <p>Line 3: TSAT</p> <p>Line 4: TSAT-Time value + Z</p> <p>HINT: TSAT und TTOT will be shown alternating</p>	
3	<p>FLIGHT WITH ATC CLEARANCE (TTOT)</p> <p>Line 1: ATC CALLSIGN</p> <p>Line 2: empty</p> <p>Line 3: TTOT</p> <p>Line 4: TTOT-Time value + Z</p> <p>HINT: TSAT und TTOT will be shown alternating</p>	
4	<p>DGS OFFBLOCK DETECTED</p> <p>Line 1: AOBT</p> <p>Line 2: AOBT-Time value + Z</p> <p>Line 3: empty</p> <p>Line 4: empty</p>	
5	<p>TOBT EXPIRED</p>	

**IMPORTANT NOTE:**

**Do not proceed beyond the bridge unless a positive tracking of the aircraft has been established.**

**In any case where a safe docking process is not possible e.g. no guidance information displayed, error on display, obstacles in the path, wrong aircraft type, etc. stop the aircraft and request assistance from Apron Control.**

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