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≱JEPPESEN JeppView for Windows

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General Information

Location: ST MAARTEN I ANT ICAO/IATA: TNCM / SXM

Lat/Long: N18° 02.46', W063° 06.54'

Elevation: 14 ft

Airport Use: Public

Daylight Savings: Not Observed UTC Conversion: +4:00 = UTC Magnetic Variation: 14.0° W

Fuel Types: 100 Octane (LL), 100-130 Octane, Jet A, Jet A-1

Customs: Yes Airport Type: IFR Landing Fee: Yes Control Tower: Yes Jet Start Unit: No LLWS Alert: No Beacon: Yes

Sunrise: 0956 Z Sunset: 2229 Z

Runway Information

Runway: 10

Length x Width: 7546 ft x 150 ft

Surface Type: asphalt TDZ-Elev: 12 ft

Lighting: Edge

Displaced Threshold: 328 ft

Runway: 28

Length x Width: 7546 ft x 150 ft

Surface Type: asphalt

TDZ-Elev: 9 ft Lighting: Edge

Communication Information

ATIS: 127.650

Juliana Tower: 118.700

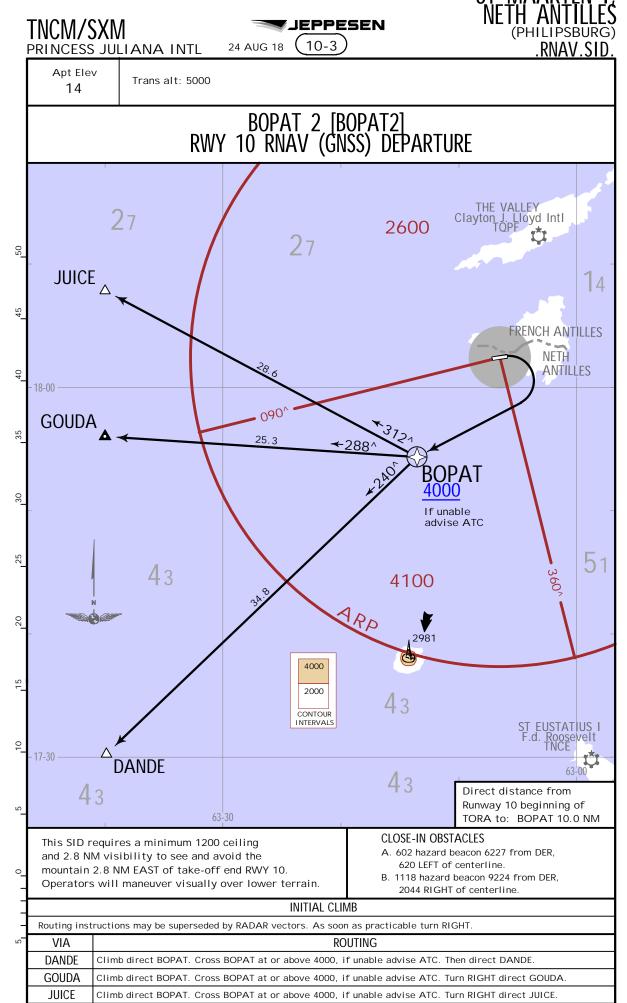
Juliana Clearance Delivery: 121.650

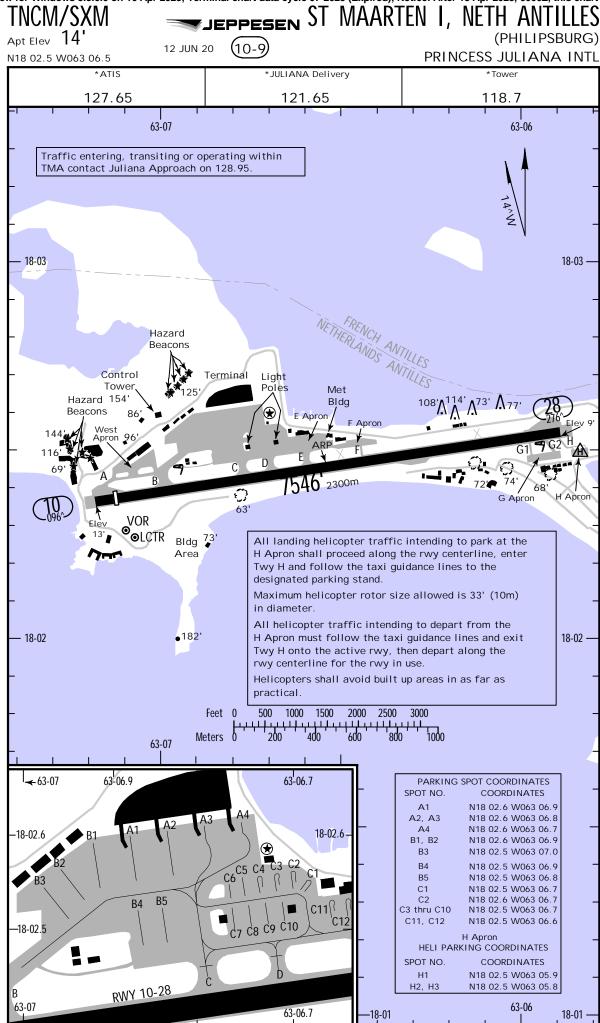
Juliana Approach: 128.950

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Juliana Approach: 118.700 Secondary





CHANGES:

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TNCM/SXM

JEPPESEN ST MAARTEN I, NETH ANTILLES (PHILIPSBURG)

(10-9A)

PRINCESS JULIANA INTL

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All landing aircraft utilizing the intermediate turning bay Rwy 10 shall make their turn to the RIGHT to avoid any injury to persons and/or damage to property south of the RWY.

Heavy aircraft are not permitted to turn at the intermediate turning bay $\ensuremath{\mathsf{Rwy}}\xspace\,10$ and shall proceed to the Rwy end and follow the turn guidance markings to make a RIGHT 180[^] turn.

12 JUN 20

All traffic intending to depart from Rwy 10 and requiring the use of the pre-threshold area are permitted to taxi across the red inset lights on Rwy 10 displaced threshold during backtracking.

	nd traffic circuit for	Rwy 10, lefthand circuit	for Rwy 28.				
		ADDITIONAL RU	JNWAY INFORMATION	N USABLE LENGTI	ıc	1	
			LANDING	BEYOND —	13		
RWY			Threshold	Glide Slope	TAKE-OFF	WIDTH	
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Std		T	AKE-OFF				
RL & RCLI	VI RL	RL or RCLM		Adequate Vis Ref			
DAY	NIGHT	DAY	DAY	DAY NIGHT			
R300m		D400m	D (1/E00	R/V500m		NIA	
		R400m	R7 V 500111		NA		
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VISUAL DOCKING GUIDANCE SYSTEMS

1. INTRODUCTION

The Safedock Docking Guidance System (DGS) is an automated "parking aid" system designed to safely guide the aircraft into gate to its assigned stop-position. It accomplishes this by actively tracking the aircraft while providing the pilot real-time visual feedback of "distance-to-go" and azimuth guidance in relation to the centerline and stop-position.

2. SAFETY PROCEDURES

2.2 GENERAL WARNING

The DGS has built-in features of self-diagnostics and gate area scanning checks to inform the aircraft pilot of problems that could affect the safety of the docking procedure. Refer to "section 4. ABNORMAL CONDITIONS" for futher details on these items.

If the pilot is unsure of the information being shown on the DGS Display unit, the aircraft SHOULD BE STOPPED IMMEDIATELY UNTIL further information for clearance HAS BEEN OBTAINED.

2.2 ITEMS TO CHECK BEFORE ENTERING THE STAND AREA

Although the DGS has built-in features of self-diagnostics and gate area scanning checks, the pilot should always use their judgement of safety should there be any items in the "obstacle free" area not captured by the DGS. In general, the aircraft should be stopped prior to further entry into the gate area if there is a presence of any object posing a question to the safety of the aircraft or personnel on the ground.

Upon entry to the gate area, the pilot should make a quick visual check of the gate area and verify that the DGS is displaying the vertical running arrows and correct aircraft type. If there is any concern in these checks, the aircraft should be stopped until the situation is corrected or $\hbox{manual guidance is provided.} \ \ \hbox{During the aircraft docking, the pilot should follow the guidance}$ of the DGS while staying alert for any items within his view posing a danger to the aircraft or personnel on the ground.

GENERAL PRECAUTIONS:

- THE PILOT SHALL NOT ENTER THE GATE AREA, UNLESS THE DOCKING SYSTEM IS SHOWING THE VERTICAL RUNNING ARROWS.
- THE PILOT SHALL NOT ENTER THE STAND AREA UNLESS THE AIRCRAFT TYPE AND ANY OTHER DISPLAYED INFORMATION IS CORRECT FOR THE AIRCRAFT THEY ARE DOCKING.
- THE PILOT MUST NOT PROCEED BEYOND THE BOARDING BRIDGE CAB, UNLESS THESE ARROWS HAVE BEEN REPLACED BY THE "CLOSING RATE BAR".

2.3 THE SBU MESSAGE

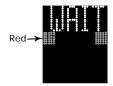
The message STOP SBU means that docking has been interrupted due to an unexpected error or hardware malfunction and has to be resumed by manual guidance. DO NOT RESUME DOCKING UNDER DGS-GUIDANCE UNDER THIS CONDITION.

3. AIRCRAFT DOCKING PROCEDURE

The following section is a detailed step-by-step approach to the stages of the docking routine indicating the typical events from start to completion.

3.1 START OF DOCKING (SELF-TEST)

Upon activating the DGS for aircraft docking, a self-test and calibration check is performed to confirm docking accuracy. During this time, the display will show "WAIT".

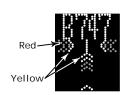


3.2 CAPTURE (INCOMING AIRCRAFT)

The rolling arrows indicate that the SAFEDOCK is searching the gate area looking to "capture" the arriving aircraft.

Check that the correct aircraft and sub-type are displayed. If not the docking may result in an ID-fail. Following this, the pilot should proceed into the gate area following the correct lead-in line or centerline.

DO NOT PROCEED PAST THE BOARDING BRIDGE CAB IF THE ROLLING ARROWS ARE NOT REPLACED BY THE "CLOSING RATE BAR". ALSO, KEEP AWARE OF ANY VISIBLE ITEMS POSING A DANGER TO THE SAFETY OF THE AIRCRAFT OR PERSONNEL ON THE GROUND.



1 DEC 06

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VISUAL DOCKING GUIDANCE SYSTEMS

3.3 TRACKING

When the DGS "captures" the approaching aircraft, the rolling arrows are replaced by a "yellow" closing rate bar". At this point, the DGS has captured the aircraft and is actively tracking it. The DGS is also in the process of verifying the approaching aircraft against that selected (as shown in the display).

A flashing RED arrow provides azimuth guidance and indicates the direction the pilot should steer the aircraft to the centerline.

The "closing rate bar" consists of a centerline indicator showing the aircraft in relation to the target stop-position.

3.4 CLOSING RATE

Digital countdown begins when the aircraft is 12 meters (or 40 feet) from its stop position. When the aircraft is within this distance, the "distance-to-go" closing rate indicator decreases by about one LED-row per 1.6 foot or half meter of movement.

Digital countdown resolution:

20 to 2 meters 1 40 to 8 feet 4 feet 1 meters 2 meters to STOP 0.2 meters | 8 feet to STOP 1 foot

The example shows the B747 aircraft 10m from the stop-position slightly offcenter to the left.

3.5 ALIGNED TO CENTER

When aligned to center, the RED direction arrows disappear indicating the aircraft is on center.

The example shows the B747 aircraft 8m from the stop-position and on-center.

3.6 SLOW DOWN

If the aircraft is approaching faster than the accepted speed, the system will show SLOW DOWN as a warning to the pilot.

The example now shows the B747 aircraft about 8m from the stop-position and still on-center yet needing to slow down.

3.7 AZIMUTH GUIDANCE

Centerline guidance countinues to the stop-position.

The example shows the B747 aircraft 4m from the stop-position, slightly off-center to the right.

3.8 STOP-POSITION REACHED

When the aircraft reaches its assigned stop-position, the display will show STOP with RED lights to each side.

3.9 DOCKING COMPLETED

After the aircraft is completely stopped, the OK message will be displayed.

3.10 OVERSHOOT (TOO FAR)

If the aircraft overshoots the stop-position, a TOO FAR will be displayed.

Note: The overshoot condition is usually triggered by the aircraft going more than 0.5m past the target stop-position. This may or may not create a concern for the boarding bridge to accommodate the overshoot position. The ground crew will be alerted to the situation by this message and then determine if the aircraft needs to be pushed back.

















1 DEC 06 (10-9F)

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VISUAL DOCKING GUIDANCE SYSTEMS

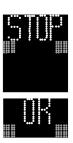
3.11 CHOCKS ON MESSAGE

The "Chocks On" is displayed to indicate that the chocks have been set in place to the aircraft wheels. This feature is available via button press on the Operator's Panel to provide or supplement the ground operator's responsibility to provide the status message to the pilot.



3.12 STOP SHORT

If the aircraft is stopped short and at a standstill but has not reached the intended stop position, the message STOP OK will be shown after



4. ABNORMAL CONDITIONS

If an object is blocking the view from the SAFEDOCK DGS laser-scanning unit toward the stop position of the selected aircraft type, the system will be unable to perform the docking procedure. When an object is detected between the laser scanning unit and the stop position for at least ten seconds, the DGS will halt the docking procedure and display a GATE BLOCK warning message. When the blocking object is removed, the docking procedure will be resumed. The same applies with an object detected in the "apron scan" area whereas the DGS will display an "APRON BLOCK" warning message. Note that the "apron scan" feature only covers the pilot's blind spot area when the aircraft requires a right turn into the gate. See further details later in this section for more info on this.

If an unrecoverable error occurs during a docking procedure, a SBU (Safety Back Up) condition exists. In this case an alternate method to guide aircraft to the stop position must be used, as the docking procedure cannot be completed. SBU stop conditions are:

- (a) A hardware failure.
- (b) Aircraft more than 3.5 degrees off centerline and less than 2m (6.5ft) to the stopposition
- View from Laser scanning unit to aircraft blocked with less than 2m (6.5ft) to the (c) stop-position.

WARNING: An object must never be placed in front of the DGS unit and closer than 1.5 meters (or 5 feet) to the laser window. Such an object would violate proper docking performance! Other abnormal or non-typical conditions that may occur are as follows:

4.1 WAIT

The WAIT message is displayed for various reasons and may be followed with further info. In general, it is an indication to the pilot that the DGS is not yet ready to guide or continue guiding the aircraft into the gate. The reasons may vary from startup self-testing, lost track of the aircraft, or large obstacles or personnel in the critical docking area or obstacle free zone. Basically, something that may compromise the docking or a safety concern.

When the problem is resolved or the blocking object has moved from the critical docking area, docking may continue. The DGS display must also show the "closing rate" bar and that it is back in docking mode AND tracking the aircraft.



THE PILOT MUST NOT PROCEED BEYOND THE BOARDING BRIDGE CAB UNLESS THE "WAIT" MESSAGE HAS BEEN REMOVED AND THE DGS INDICATES IT IS TRACKING THE AIRCRAFT INTO THE GATE AREA.

4.2 BRIDGE NOT IN POSITION

The "BR IN" message occurs when the Passenger Boarding Bridge (PBB) is interlocked to the DGS and is NOT safely stowed or parked in the proper parking position (or a defect in the wiring).

This message with the red-LEDs is indication to the pilot that aircraft docking MUST wait until ground personnel move the PBB into safe position away from the critical docking area.

THE PILOT MUST NOT PROCEED BEYOND THE BOARDING BRIDGE CAB UNLESS THE "BR IN" MESSAGE HAS BEEN REMOVED AND THE DGS INDICATES IT IS TRACKING THE AIRCRAFT INTO THE GATE AREA.



CHANGES: New chart.

1 DEC 06 (10-9G)

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VISUAL DOCKING GUIDANCE SYSTEMS

4.3 BAD WEATHER CONDITION (DOWN-GRADE)

During heavy fog, rain or snow, or any low visibility condition, the docking system goes into downgrade mode.

When operating at this mode, the display will deactivate the floating arrows and alternate between 'DOWN GRADE' and aircraft type. The DGS will continue operation but with reduced aircraft slow-down speed.

This message will be replaced by the closing rate bar, as soon as the system detects and captures the approaching aircraft.

THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE CAB UNLESS THE "DOWN GRADE" TEXT HAS BEEN REMOVED AND THE DGS INDICATES IT IS TRACKING THE AIRCRAFT INTO THE GATE AREA.



4.4 AIRCRAFT VERIFICATION FAILURE

After capture of the aircraft, the DGS checks its geometry against a stored profile. If, for any reason, aircraft verfication is not confirmed at 12 meters (or 40 feet) before the target stop-position, the display will show STOP followed by ID FAIL (alternating on the upper row of the display).

If the DGS is re-activated for the same aircraft type, docking can resume without aircraft verification. Note that such re-activation should be done only after the ground crew has verfied the correct aircraft type.

THE PILOT MUST NOT PROCEED BEYOND THE BOARDING BRIDGE CAB WITHOUT MANUAL GUIDANCE, UNLESS THE DOCKING HAS BEEN RE-ACTIVATED AND THE DGS INDICATES IT IS TRACKING THE AIRCRAFT INTO THE GATE AREA.





4.5 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 GATE BLOCK message. The docking procedure will resume as soon as the blocking object has been removed.

The "Gate Block" area covers the general scanning area of the approaching aircraft and where the aircraft body will be when parked as well as the area between the DGS and those points. In general, the message is provoked by large obstacles interfering this scanning area. This feature does not look for smaller interfering items on the apron.

THE PILOT MUST NOT PROCEED INTO THE GATE AREA WITHOUT MANUAL GUIDANCE, UNLESS THE "WAIT/GATE/BLOCK" MESSAGE HAS BEEN REMOVED AND THE DGS INDICATES IT IS TRACKING THE AIRCRAFT INTO THE GATE AREA.





4.6 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. If the system is able to see the aircraft through the dirty window, the message will be replaced with a closing rate display.

The difference between the "View Block" and the "Gate Block" feature is that the "View Block" feature looks for interference within 2m of distance from the laser and the "Gate Block" feature looks for interference past this distance.

THE PILOT MUST NOT PROCEED BEYOND THE BOARDING BRIDGE CAB WITHOUT MANUAL GUIDANCE, UNLESS THE WAIT MESSAGE HAS BEEN REMOVED AND THE DGS INDICATES IT IS AGAIN TRACKING THE AIRCRAFT INTO THE GATE AREA.



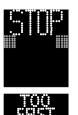


4.7 TOO FAST

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 aircraft docking must be re-started or the docking procedure completed by manual guidance.

THE PILOT MUST NOT PROCEED BEYOND THE BOARDING BRIDGE CAB WITHOUT MANUAL GUIDANCE, UNLESS THE DOCKING HAS BEEN RE-ACTIVATED AND THE DGS INDICATES IT IS TRACKING THE AIRCRAFT INTO THE GATE AREA.



1 DEC 06 (10-9H)

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PRINCESS JULIANA INTL

VISUAL DOCKING GUIDANCE SYSTEMS

4.8 ANOMALOUS ERROR, SBU-STOP

Any anomalous or unrecoverable error during the docking procedure will generate a SBU condition. A manual backup procedure must be used for docking guidance.

Note: An SBU-Stop may be followed by another error related to a hardware failure or other anomalous event.

THE PILOT MUST FOLLOW MANUAL GUIDANCE INTO THE GATE WHEN THE DGS DISPLAY IS IN THIS CONDITION.



Any error that occurs during the DGS operation will generate an ERROR message with an error code in the main display. Errors that occur during aircraft docking may be proceeded with an "SBU"

THE PILOT MUST FOLLOW MANUAL GUIDANCE INTO THE GATE WHEN THE DGS DISPLAY IS IN THIS CONDITION.



If the Emergency Stop button is pressed (by the ground operator), the display will show STOP with RED lights to each side.

The ground crew may activate this button to indicate a dangerous condition that requires aircraft motion to STOP and NOT continue its approach into the gate.

THE PILOT SHOULD STOP THE AIRCRAFT AT ANY TIME THE STOP MESSAGE IS DISPLAYED DURING DGS DOCKING GUIDANCE THEN FOLLOW MANUAL GUIDANCE.

4.11 NON-OPERATIONAL CONDITION

Should there be a hardware failure that interferes with the DGS ability to operate, the display will go blank with RED lights to each side. In such cases, the DGS cannot be used until the hardware failure has been resolved.

THE PILOT MUST FOLLOW MANUAL GUIDANCE INTO THE GATE WHEN THE DGS DISPLAY IS IN THIS CONDITION.

4.12 NO POWER (OR POWER FAILURE)

When the DGS is powered-Off, or in the case of a power failure, the display will be shown as completely black. Until power is restored, any aircraft shall be marshalled-in or towed-in to the gate.

THE PILOT MUST FOLLOW MANUAL GUIDANCE INTO THE GATE WHEN THE DGS DISPLAY IS IN THIS CONDITION.



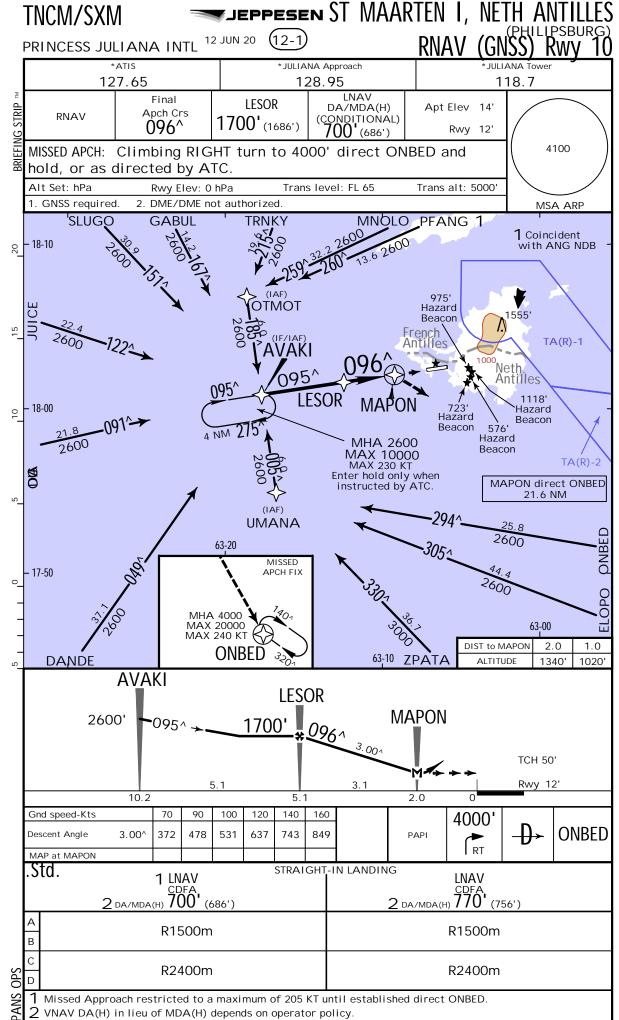


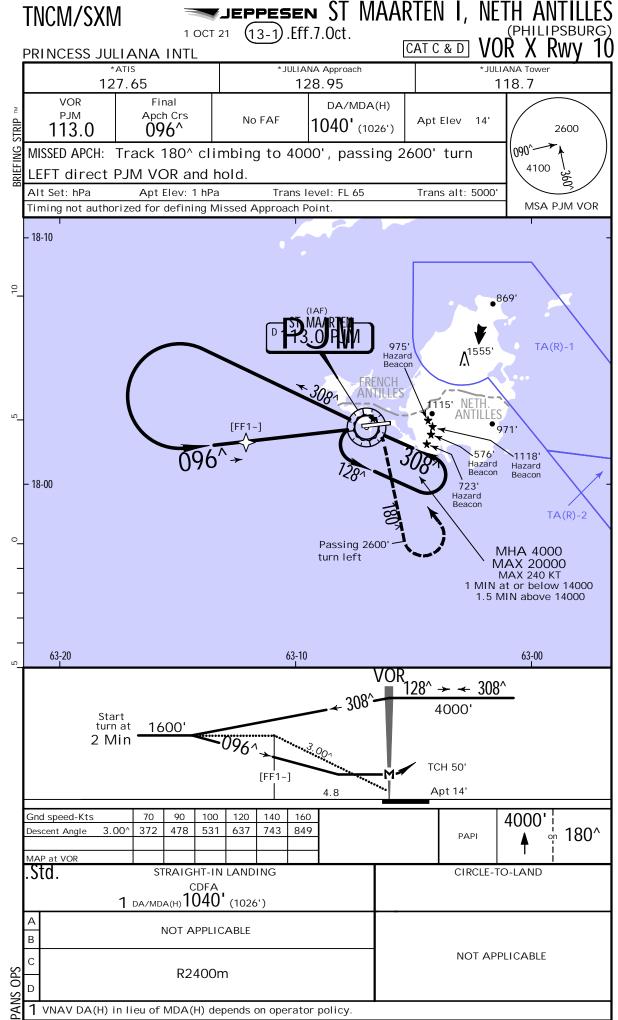


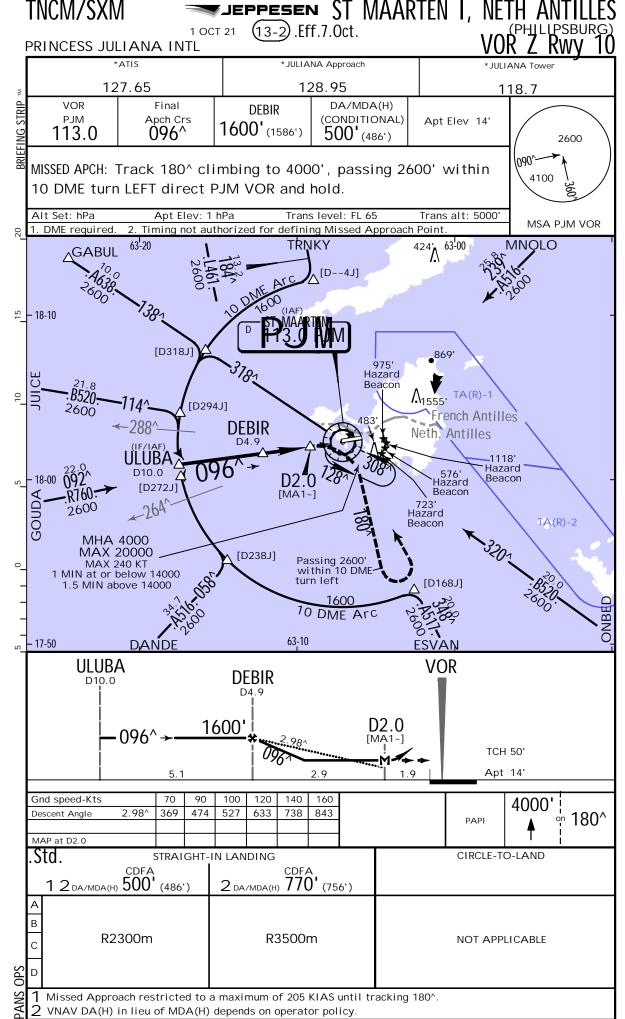


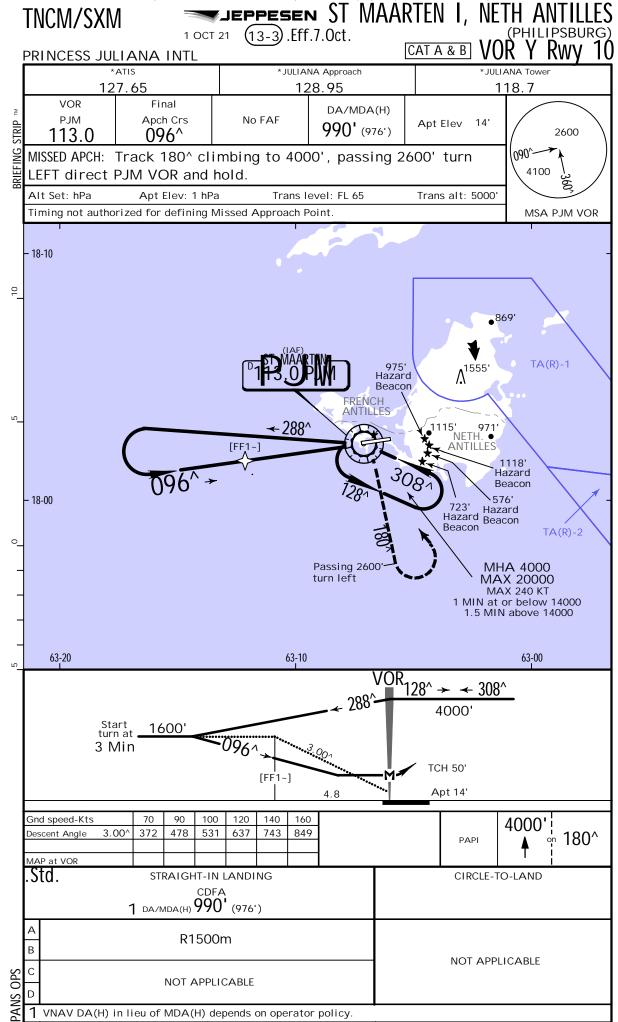


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Chart changes since cycle 06-2023

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT PROCEDURE IDENT INDEX REV DATE EFF DATE

ST MAARTEN I, (PRINCESS JULIANA INTL - TNCM)

Terminal Chart Change Notices
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TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport TNCM