

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD TERMINAL ARRIVAL (STAR)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
PIRAT (RNAV)	TWO	PIRAT.PIRAT2	ONE	02/28/2019	25APR2019

TRANSITION ROUTES:

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
ALCOA	ALCOA.PIRAT2	ALCOA	ALCOA						AT/ABOVE FL240
			SUPER	093.63	101.54	FL200	1200		AT/ABOVE FL210
			PASIF	087.11	33.21	15000	1200		AT/BELOW FL195
			PIRAT	059.46	13.49	5000	2200		AT/BELOW 15000
CINNY	CINNY.PIRAT2	CINNY	CINNY						AT/ABOVE FL270
			HUNTS	037.82	73.03	FL200	1200		AT/ABOVE FL210
			PASIF	038.55	26.17	15000	1200		AT/BELOW FL195
			PIRAT	059.46	13.49	5000	2200		AT/BELOW 15000
HUNTS	HUNTS.PIRAT2	HUNTS	HUNTS						AT/ABOVE FL210
			PASIF	038.55	26.17	15000	1200		AT/BELOW FL195
			PIRAT	059.46	13.49	5000	2200		AT/BELOW 15000
PAINT	PAINT.PIRAT2	PAINT	PAINT						
			SUPER	102.95	90.60	FL200	1200		AT/ABOVE FL210
			PASIF	087.11	33.21	15000	1200		AT/BELOW FL195
			PIRAT	059.46	13.49	5000	2200		AT/BELOW 15000
PASIF	PASIF.PIRAT2	PASIF	PASIF						AT/BELOW FL195
			PIRAT	059.46	13.49	5000	2200		AT/BELOW 15000
WUSES	WUSES.PIRAT2	WUSES	WUSES						
			SUPER	142.89	23.00	15000	1200		AT/ABOVE FL210
			PASIF	087.11	33.21	15000	1200		AT/BELOW FL195
			PIRAT	059.46	13.49	5000	2200		AT/BELOW 15000

ARRIVAL ROUTE DESCRIPTION:

LANDING KOAK/KSFO: FROM PIRAT ON TRACK 059.64/10.06 TO CROSS BRINY AT OR BELOW 12000 AND AT 250 KIAS, THEN ON TRACK 059.77/18.92 TO CROSS ARGGG AT 8000 AND AT 230 KIAS, THEN ON TRACK 059.77. EXPECT RADAR VECTORS TO ASSIGNED INSTRUMENT APPROACH.

PROCEDURAL DATA NOTES:

NOTE: RADAR REQUIRED

NOTE: RNAV 1

QUALITY
16
CHECKED

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PIRAT RNAV	TWO	PIRAT.PIRAT2	ONE	02/28/2019	25APR2019

NOTE: GPS REQUIRED

NOTE: TURBOJET AND TURBOPROP AIRCRAFT ONLY

NOTE: LANDING SFO EXPECT RUNWAY 28L/R UNLESS OTHERWISE ASSIGNED BY ATC.

NOTE: LANDING OAK EXPECT RUNWAY 28L/R OR 30 UNLESS OTHERWISE ASSIGNED BY ATC.

FIXES AND/OR HOLDING PATTERNS:

CHART HOLDING AT HUNTS: SW, LT, 037.82 INBOUND, 11 NM LEGS.

CHART HOLDING AT SUPER: W, LT, 093.63 INBOUND, 11 NM LEGS.

CHART HOLDING AT PASIF: SW, LT, 059.46 INBOUND, 10 NM LEGS.

CHART HOLDING AT PIRAT: SW, LT, 059.46 INBOUND, 10 NM LEGS.

CHART: SIDBY.

CHART: CYMBL.

CHART: FRNNY.

COMMUNICATIONS:

OAK ARTCC, NORCAL APPCH CON, SFO D-ATIS, SFO TWR, SFO GND CON, OAK D-ATIS, OAK TWR, OAK GND CON

AIRPORTS SERVED:

SAN FRANCISCO INTL AIRPORT, SAN FRANCISCO, CA (KSFO)

METROPOLITAN OAKLAND INTL AIRPORT, OAKLAND, CA (KOAK)

LOST COMMUNICATIONS PROCEDURE:

REMARKS:

ADDITIONAL FLIGHT DATA:

REFERENCE MAGNETIC VARIATION = KSFO 14E/2015

CHART: KSFO AIRPORT RUNWAYS.

CHART: KOAK AIRPORT RUNWAYS.

CHART AT ARGGG TERMINUS: LDG KOAK AND KSFO

DO NOT CHART MOCAs

QUALITY
16
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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
PIRAT RNAV	TWO	PIRAT.PIRAT2	ONE	02/28/2019	25APR2019
FLIGHT INSPECTED BY:				Digitally signed by JACOB POWERS Feb 25, 2019	
FLIGHT INSPECTION REVIEW NOT REQUIRED - PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-333) MEMO, OCT 3, 2018					
Name		Organization	Date	Signature	
DEVELOPED BY:				Digitally signed by JOSEPH L ZEDER Feb 25, 2019	
JOSEPH ZEDER		AJV-5442	10/01/2018		
Name		Organization	Date	Signature	
APPROVED BY:				Digitally signed by JACOB POWERS Feb 25, 2019	
MARLO N ROBINSON, MANAGER		AJV-5440			
Name		Organization	Date	Signature	

CHANGES:

1. ADDED: AT/BELOW 15000 AT PIRAT, ALL TRANSITIONS.

REASONS:

1. REQUESTED BY AIR TRAFFIC.



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STAR (DATA RECORD)

Arrival Name PIRAT RNAV	Number TWO	STAR Computer Code PIRAT.PIRAT2	Superseded Number ONE	Dated 02/28/2019	Effective Date 25APR2019
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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
ALCOA	374959.71N / 1255004.29W	Y		IF			AT/ABOVE FL240		ALCOA.PIRAT2
SUPER	371809.59N / 1234846.87W	Y	FB	TF	107.63	101.54	AT/ABOVE FL210	AT 280K	
PASIF	371138.00N / 1230800.00W	Y	FB	TF	101.11	33.21	AT/BELOW FL195	AT 260K	
PIRAT	371527.54N / 1225148.07W	Y	FB	TF	073.46	13.49	AT/BELOW 15000		
En Route Transition									
CINNY	361054.00N / 1244536.00W	Y		IF			AT/ABOVE FL270		CINNY.PIRAT2
HUNTS	365545.00N / 1233400.00W	Y	FB	TF	051.82	73.03	AT/ABOVE FL210	AT 280K	
PASIF	371138.00N / 1230800.00W	Y	FB	TF	052.55	26.17	AT/BELOW FL195	AT 260K	
PIRAT	371527.54N / 1225148.07W	Y	FB	TF	073.46	13.49	AT/BELOW 15000		
En Route Transition									
HUNTS	365545.00N / 1233400.00W	Y		IF			AT/ABOVE FL210	AT 280K	HUNTS.PIRAT2
PASIF	371138.00N / 1230800.00W	Y	FB	TF	052.55	26.17	AT/BELOW FL195	AT 260K	
PIRAT	371527.54N / 1225148.07W	Y	FB	TF	073.46	13.49	AT/BELOW 15000		
En Route Transition									
PAINT	380000.00N / 1253000.00W	Y		IF					PAINT.PIRAT2
SUPER	371809.59N / 1234846.87W	Y	FB	TF	116.95	90.60	AT/ABOVE FL210	AT 280K	
PASIF	371138.00N / 1230800.00W	Y	FB	TF	101.11	33.21	AT/BELOW FL195	AT 260K	
PIRAT	371527.54N / 1225148.07W	Y	FB	TF	073.46	13.49	AT/BELOW 15000		
En Route Transition									
PASIF	371138.00N / 1230800.00W	Y		IF			AT/BELOW FL195	AT 260K	SHRT.PIRAT2
PIRAT	371527.54N / 1225148.07W	Y	FB	TF	073.46	13.49	AT/BELOW 15000		
En Route Transition									
WUSES	373920.87N / 1240005.88W	Y		IF					WUSES.PIRAT2
SUPER	371809.59N / 1234846.87W	Y	FB	TF	156.89	23.00	AT/ABOVE FL210	AT 280K	



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PIRAT RNAV	TWO	PIRAT.PIRAT2	ONE	02/28/2019	25APR2019

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
PASIF	371138.00N / 1230800.00W	Y	FB	TF	101.11	33.21	AT/BELOW FL195	AT 260K	
PIRAT	371527.54N / 1225148.07W	Y	FB	TF	073.46	13.49	AT/BELOW 15000		

Common Route									
PIRAT	371527.54N / 1225148.07W	Y		IF					PIRAT.PIRAT2
BRINY	371817.14N / 1223941.96W	Y	FB	TF	073.64	10.06	AT/BELOW 12000	AT 250K	
ARGGG	372332.72N / 1221653.87W	Y	FO	TF	073.77	18.92	AT 8000	AT 230K	
KOAK/KSFO				FM	073.77				RECOMMENDED NAVAID: EHF VORTAC

