# IFR AERONAUTICAL CHART SYMBOLS

IFR Enroute Low/High Altitude (U.S. & Alaska Charts)
AIRPORTS 43
RADIO AIDS TO NAVIGATION 44
AIRSPACE INFORMATION 45
NAVIGATIONAL AND PROCEDURAL INFORMATION 48
CULTURE
HYDROGRAPHY
TOPOGRAPHY
Oceanic Route Charts
North Atlantic and North Pacific Route Charts
AIRPORTS 50
RADIO AIDS TO NAVIGATION 50
AIRSPACE INFORMATION 50
NAVIGATIONAL AND PROCEDURAL INFORMATION 51
CULTURAL BOUNDARIES 51
HYDROGRAPHY 51

# GENERAL INFORMATION

Symbols shown are for the Instrument Flight Rules (IFR) Enroute Low and High Altitude Charts.

# IFR ENROUTE LOW/HIGH ALTITUDE U.S. & ALASKA CHARTS

	AIRPORTS		AIRPORTS
AIRPORT DATA	LOW/HIGH ALTITUDE  Airports/Seaplane bases shown in BLUE and GREEN have an approved Instrument Approach Procedure	CIVIL	LOW/ HIGH ALTITUDE
	published. Those in BLUE have an approved DoD Instrument Approach Procedure and/or DoD RADAR MINIMA published in DoD FLIPS or FAA TPP. Airports/Seaplane bases shown in BROWN do not have a published Instrument Approach Procedure.	CIVIL AND MILITARY	LOW/ HIGH ALTITUDE
	All IAP Airports are shown on the Low Altituide Charts.  Non-IAP Airports shown on the U.S. Low Altitude Charts have a minimum hard surface runway of 3000'.  Non-IAP Airports shown on the Alaska Low Altitude Charts have a minimum hard or soft	MILITARY	LOW/ HIGH ALTITUDE
	surface runway of 3000'.  Airports shown on the U.S. High Altitude Charts have a minimum hard surface runway of 5000'.  Airports shown on the Alaska High Altitude Charts have a minimum hard or soft surface runway of 4000'.	SEAPLANE - CIVIL	LOW ALTITUDE
	Associated city names for public airports are shown above or preceding the airport name. If airport name and city name are the same, only the airport name is shown. City names for military and private airports are not shown.  The airport identifier in parentheses follows the airport name or Pvt.  Airport symbol may be offset for enroute navigational aids.	HELIPORT	LOW ALTITUDE  (B) (B) (C)
AIRPORT DATA DEPICTION	LOW ALTITUDE - U.S.& ALASKA  Associated City Name Identifier Identifier tabulation for times of operation.  MARTINSBURG Airport Eastern WW Rgni (MRB) Elevation Part-time Part-time or established by NOTAM. See A/G tabulation for times of operation.  In Alaska see Supplement Alaska  Automatic 280 0 * 43s Longest runway length to nearest 100 feet with 70 feet as the dividing point (add 00) indicates soft surface Lighting copobility:  L Lighting available Part-time Frequency indicates soft surface Service  Lighting available Part-time or on request  For complete information consult the Airport / Facility Directory or FLIP IFR Supplement.  1. Airport elevation given in feet above or below mean sea level.  2. Pvt - Private use, not available to general public.  3. A solid line box enclosing the airport name indicates FAR 91 fixed-wing special VFR flight is prohibited  5. pro following the airport name indicates Class C or Class D Airspace.  6. There is no A/G tabulation on Alaska Low Altitude Charts.  7. Airport symbol may be offset for enroute navigational aids.  8. Associated city names for public airports are shown above or preceding the airport name. If airport name and city name are the same, only the airport name is shown. The airport identifier in parentheses follows the airport name. City names for military and private airports are not shown.		
	Associated City Name  Airport Joe Foss Fld (FSD)  Airport Name		
	Airport GALENA Associated Name Edward G Pitka Sr (GAL) Airport Elevation 15 72s Longest runway length to nearest 100 feet with 70 feet as the dividing point (add 00) s indicates soft		

# RADIO AIDS TO NAVIGATION VHF LOW/ HIGH ALTITUDE **OMNIDIRECTIONAL** VHF / UHF Data is depicted in Black LF / MF Data is depicted in Brown **RADIO RANGE** (VOR) **DISTANCE MEASURING EQUIPMENT (DME)** TACTICAL COMPASS ROSES are oriented to Magnetic North of the NAVAID which may not be adjusted to the charted isogonic values. AIR **NAVIGATION** (TACAN) VORTAC VOR VOR / DME TACAN "L" and "T" Category Radio Aids located off Jet Routes are depicted in screen black. **NON-DIRECTIONAL** LOW/ HIGH ALTITUDE RADIO BEACON (NDB) **MARINE** NDB or RBN with **RADIO BEACON** Magnetic North Indicator (RBN) UHF NDB NDB with DME **COMPASS LOW ALTITUDE LOCATOR BEACON** ILS LOCALIZER LOW ALTITUDE ILS Localizer Course with additional navigation function. VOR/DME RNAV HIGH ALTITUDE - ALASKA **WAYPOINT DATA** NAME N00°00.00′ W00°00.00′ 000.0 NME 000.0°-00.0 Coordinates Radial/Distance (Facility to Waypoint) Frequency Identifier 1 Reference Facility Elevation **RNAV** LOW/ HIGH ALTITUDE WAYPOINT ◆ NAMEE

# RADIO AIDS TO NAVIGATION

NAVIGATION and COMMUNICATION **BOXES** 

# LOW/ HIGH ALTITUDE

VOR with TACAN compatible DME

Underline indicates No Voice Transmitted on this frequency

TACAN channels are without voice but not underlined



Overprint of affected data indicates Abnormal Status, i.e. CHECK NOTAMS/DIRECTORY

Frequency Protection - usable range 25 NM at 12000' AGL

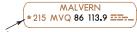
(Y) TACAN must be placed in "Y" mode to receive distance information

ASOS/AWOS - Automated Surface A Observing Station/Automated Weather Observing Station

HIWAS - Hazardous Infliaht 0 Weather Advisory Service

TWEB - Transcribed Weather Broadcast

For terminal weather frequency see A / G Voice Communication Tab under associated airport. (U.S. Low only)



NDB with DME DME channel and paired VHF frequency are shown

> WICHITA 113.8 ICT 85 =--N37°44.70′ W97°35.03′

FSS associated with a NAVAID

123.6 122.65 (EL DORADO ELD)

Name and identifier of FSS not associated with NAVAID

Shadow NAVAID Boxes indicate Flight Service Station (FSS) locations. Frequencies 122.2, 255.4 and emergency 121.5 and 243.0 are normally available at all FSSs and are not shown. All other frequencies are shown above the box.

Certain FSSs provide Local Airport Advisory (LAA) on 123.6.

Frequencies transmit and receive except those followed by R or T: R - Receive only T - Transmit only

In Canada, shadow boxes indicate FSSs with standard group frequencies of 121.5, 126.7 and 243.0.

JONESBORO 122.55

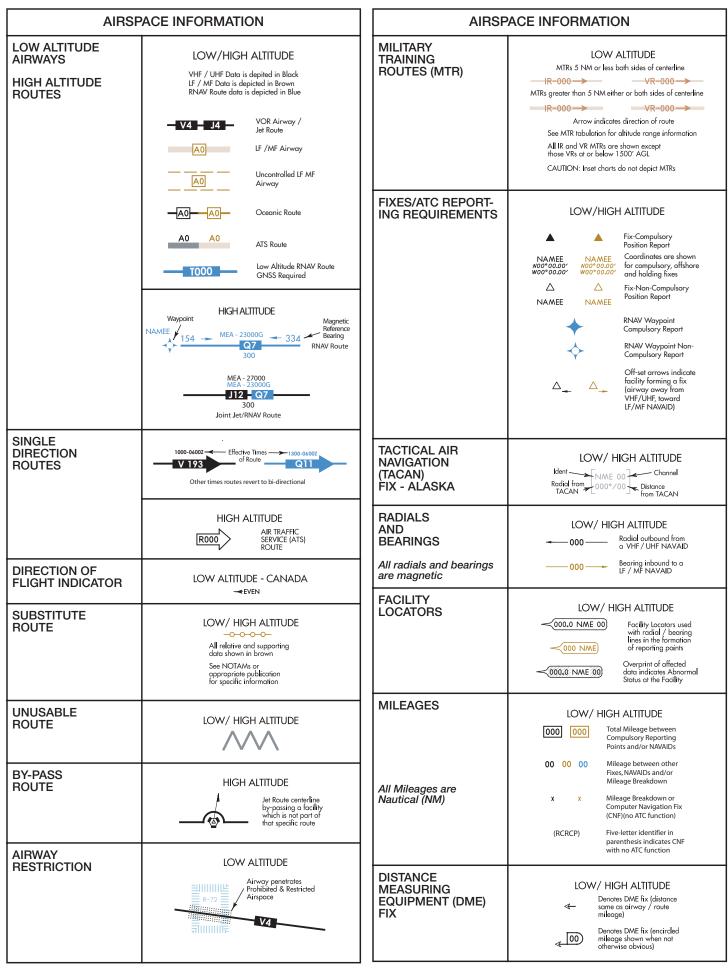
Remote Communications Outlet (RCO) FSS name and remoted frequency are shown

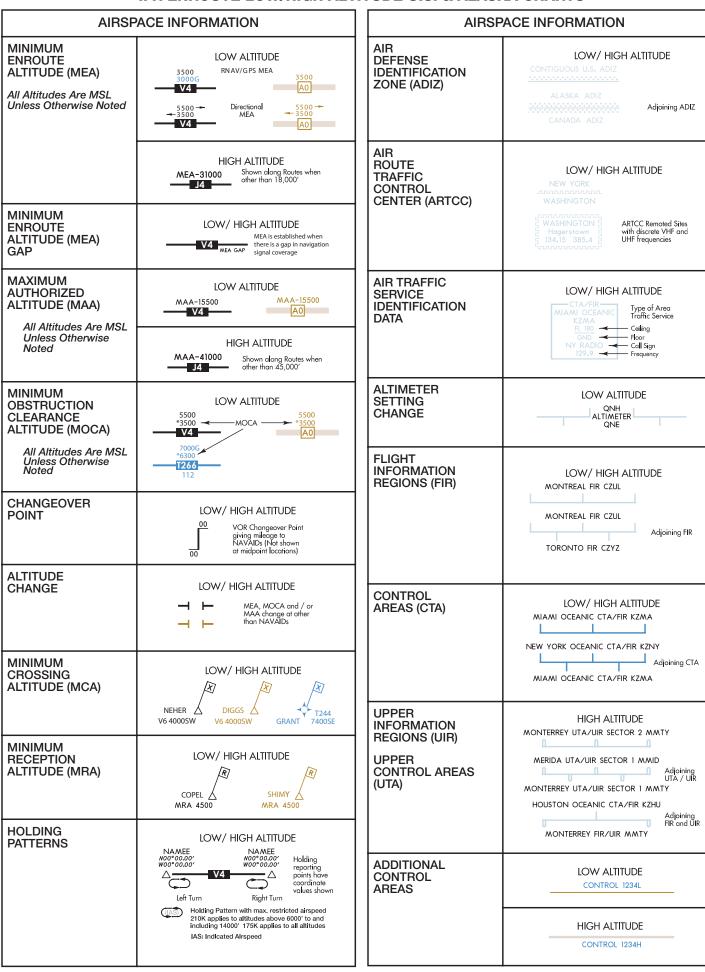


Thin Line NAVAID Boxes without frequencies and controlling FSS name indicate no FSS frequencies available. Frequencies positioned above thin line boxes are remoted to the NAVAID sites. Other frequencies at the controlling FSS named are available, however, altitude and terrain may determine their reception.

Morse Code is not shown in NAVAID boxes on High Altitude Charts.

O Flight Service Station (FSS), Remote Communications Outlet (RCO) or Automated Weather Observing Station (AWOS/ASOS) not associated with a charted NAVAID or airport.





## AIRSPACE INFORMATION

# **OFF ROUTE** OBSTRUCTION **CLEARANCE ALTITUDE** (OROCA)

#### IOW AITITUDE

Example: 12,500 feet

OROCA is computed similarly to the Maximun Elevation Figure (MEF) found on Visual charts except that it provides an additional vertical buffer of 1,000 feet in designated non-mountainous areas and a 2,000 foot vertical buffer in designated mountainous areas within the United States.

## SPECIAL USE **AIRSPACE**

#### LOW/ HIGH ALTITUDE

P - Prohibited Area R - Restricted Area W - Warning Area

Low Only A - Alert Area

Canada Only CYR - Restricted Area CYD - Danger Area CYA - Advisory Area

Caribbean Only D - Danger Area

In the Caribbean, the first 2 letters represent the country code, i.e. MY: Bahamas, MU: Cuba



Internal lines delimit separation of the same Special Use Areas or Exclusion Areas

SEE AIRSPACE TABULATION ON EACH CHART FOR COMPLETE INFORMATION ON:

AREA IDENTIFICATION
EFFECTIVE ALTITUDE
OPERATING TIME
CONTROLLING AGENCY VOICE CALL

### SPECIAL USE **AIRSPACE** Continued

# LOW ALTITUDE

MOA - Military Operations Area



Internal lines delimit separation of the same Special Use Area or Exclusion Areas

SEE AIRSPACE TABULATION ON EACH CHART FOR COMPLETE INFORMATION ON:

AREA IDENTIFICATION EFFECTIVE ALTITUDE CONTROLLING AGENCY VOICE CALL

# AIRSPACE INFORMATION

## CONTROLLED **AIRSPACE**

### HIGH ALTITUDE

CLASS A AIRSPACE

Open Area (White)

That airspace from 18,000′ MSL to and including FL 600, including the airspace overlying the waters within 12 NM of the coast of the contiguous United States and Alaska and designated offshore areas, excluding Santa Barbara Island, Farallon Island, the airspace south of latitude 25 04′00″N, the Alaska peninsula west of longitude 160 00′00″W, and the airspace less than 1,500′ AGL.

That airspace from 18,000' MSL to and including FL 450, including Santa Barbara Island, Farallon Island, the Alaska peninsula west of longitude 160 00'00"W, and designated offshore areas.

# LOW ALTITUDE

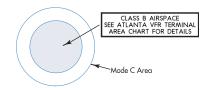
CLASS B AIRSPACE

Screened Blue with a Solid Blue Outline

That airspace from the surface to 10,000' MSL (unless otherwise designated) surrounding the nation's busiest airports. Each Class B airspace area is individually tailored and consists of a surface area and two or more layers.

> MODE C AREA A Solid Blue Outline

That airspace within 30 NM of the primary airports of Class B airspace and within 10 NM of designated airports. Mode-C transponder equipment is required. (see FAR 91.215)



## LOW ALTITUDE

CLASS C AIRSPACE

Screened Blue with a Solid Blue Dashed Outline

That airspace from the surface to 4,000' (unless otherwise designated) above the elevation of selected airports (charted in MSI). The normal radius of the outer limits of Class C airspace is 10 NM. Class C airspace is otherwise C airspace is also indicated by the letter C in a box following the airport name.



# LOW ALTITUDE

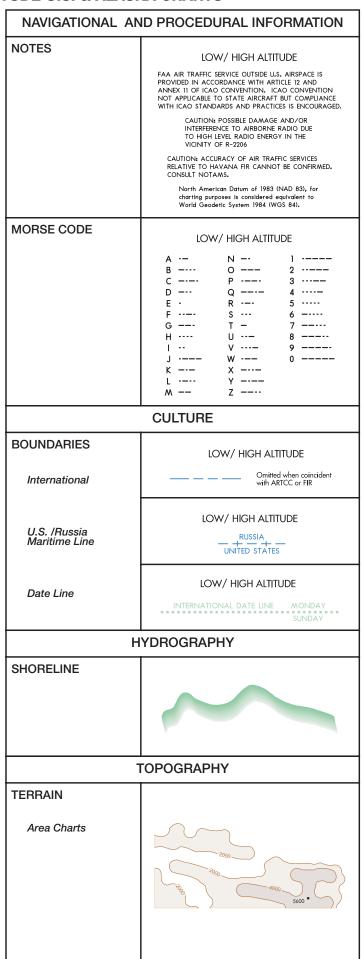
CLASS D AIRSPACE

Open Area (White)

That airspace, from the surface to 2,500' (unless otherwise designated) above the airport elevation (charted in MSL), surrounding those airports that have an operational control tower. Class D airspace is indicated by the letter D in a box following the airport name.

AIRSPACE INFORMATION		NAVIGATIONAL AND PROCEDURAL INFORMATION		
CONTROLLED AIRSPACE	LOW ALTITUDE  CLASS E AIRSPACE  Open Area (White)  That controlled airspace below 14,500' MSL which	ISOGONIC LINE AND VALUE	LOW/ HIGH ALTITUDE  ———————————————————————————————————	
	is not Class B, C, or D.  Federal airways from 1,200' AGL to but not including 18,000' MSL (unless otherwise specified).  Other designated control areas below 14,500' MSL.  Not Charted  That airspace from 14,500' MSL to but not including 18,000' MSL, including the airspace overlying the waters within 12 NM of the coast of the contiguous United States and Alaska and designated offshore areas, excluding the Alaska peninsula west of longitude 160 00'00"W and the airspace less than 1,500' AGL.	TIME ZONE	LOW/ HIGH ALTITUDE  Central Std	
CONTROLLED AIRSPACE Canada Only	LOW ALTITUDE  CLASS B AIRSPACE  Screened Brown Checkered Area	ENLARGEMENT AREA	LOW/ HIGH ALTITUDE  JACKSONVILLE  AREA CHART A-1	
	Controlled airspace above 12,500' MSL	MATCH MARK	LOW ALTITUDE - ALASKA HIGH ALTITUDE - U.S.	
UNCONTROLLED AIRSPACE	LOW/ HIGH ALTITUDE  CLASS G AIRSPACE  Screened Brown Area  Low Altitude  That portion of the airspace below 14,500' MSL that has not been designated as Class B, C, D or E airspace.  High Altitude  That portion of the airspace from 18,000' MSL and above that has not been designated as Class A airspace.		5/1	
CANADIAN AIRSPACE  Appropriate notes as required may be shown.	HIGH ALTITUDE  AIRSPACE CLASSIFICATION (SEE CANADA FLIGHT SUPPLEMENT) AND OPERATIONAL REQUIREMENTS (SEE DOD AREA PLANNING AP/1) MAY DIFFER BETWEEN CANADA AND UNITED STATES  NOTE: REFER TO CURRENT CANADIAN CHARTS AND FLIGHT INFORMATION PUBLICATIONS FOR INFORMATION WITHIN CANADIAN AIRSPACE			
AIRSPACE OUTSIDE OF U.S.  Other than Canada  Appropriate notes as required may be shown.	NOTE: REFER TO CURRENT DOD (NGA) CHARTS AND FLIGHT INFORMATION PUBLICATIONS FOR INFORMATION OUTSIDE OF U.S. AIRSPACE			

## NAVIGATIONAL AND PROCEDURAL INFORMATION **CRUISING** LOW ALTITUDE **ALTITUDES** U.S. only EVEN ODD Thousands VFR or ON TOP VFR or EVEN ON TOP Thousands ODD Thousands Plus 500' 500' 180 VFR above 3000' AGL unless otherwise authorized by ATC IFR outside controlled airspace IFR within controlled airspace as assigned by ATC All courses are magnetic HIGH ALTITUDE 18,000' MSL to FL280 \* 170°M FL's FL's 180 190 200 210 220 230 240 250 260 270 350°M 180° 280 VFR or VFR On Top add 500' No VFR flights within Class A Airspace above 3000' AGL unless otherwise authorized by ATC. RVSM Levels FL290 to FL410 FL's 290 300 310 320 330 340 350 360 370 380 390 350°M - 180° 410 No VFR or VFR On Top authorized above FL285 in RVSM airspace. FL430 and Above FI's FI's 430 450 470 490 510 530 550 570 PS 0°M 180° IFR within controlled airspace as assigned by ATC All courses are magnetic



			ECHARIS
	AIRPORTS		
AIRPORT DATA	Airport of Entry letter ICAO Ider	(AOE) are shown tifier	with four
LANDPLANE-CIVIL Refueling and repair facilities for normal traffic.	+ HONOLULU INTL (PHNL)		
LANDPLANE-CIVIL AND MILITARY Refueling and repair facilities for normal traffic.	→ HILO INTL (PHTO)		
LANDPLANE- MILITARY Refueling and repair facilities for normal traffic.	⊚ KALAELOA (PHJR)		
RADIO	AIDS TO NAVIG	ATION	
VHF OMNIDIRECTIONAL RADIO RANGE (VOR)	VOR	•	
DISTANCE	VOR / DME	•	
MEASURING EQUIPMENT (DME)	VORTAC TACAN	<ul><li>•</li><li>•</li></ul>	$\bigcirc$
TACTICAL AIR NAVIGATION (TACAN)		NARC	NPRC
NON-DIRECTIONAL RADIO BEACON (NDB)	NDB	•	•
DISTANCE MEASURING EQUIPMENT (DME)	NDB / DME	<ul><li>NARC</li></ul>	NPRC
IDENTIFICATION BOX			
	N	28°12.2′ Latitu	Frequency de & itude
	Identification NQM 347 LF / MF Frequency CHAN 93 TACAN Channel N28*12.2' W177*22.8' Latitude & Longitude		
AIRSPACE INFORMATION			
AIR TRAFFIC SER- VICE (ATS) OCEANIC ROUTES	A450 283	Identification Mileage	
Note: Mileages are Nautical (NM)	UB891 114	UHF Caribbean Mileage	Identification
ATS SINGLE DIREC- TION ROUTE	_	A450	
AERIAL REFUELING TRACKS	AR-900 FL 180/2		'ay
	AR-903 E FL 180/2		'ay

Acionautical information 50			
AIRSPACE INFORMATION			
AIR DEFENSE IDENTIFICATION ZONE (ADIZ)	HAWAIIAN ADIZ TAIWAN ADIZ JAPAN ADIZ		
AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC)	SEATTLE (ZSE) 		
FLIGHT INFORMATION REGIONS (FIR) and/or (CTA)	HONOLULU FIR PHZH  HONIARA FIR ANAU  HONOLULU FIR PHZH		
UPPER INFORMATION REGIONS (UIR)	JAKARTA UIR WIIZ    MERIDA UTA / UIR MMID		
UPPER CONTROL AREAS (UTA)	MAZATIAN UTA / UIR MMZT  MEXICO FIR / UIR MMFR  1		
OCEANIC CONTROL AREAS (OCA) and /or (CTA /FIR)	OAKLAND OCEANIC CTA / FIR KZAK L TOKYO FIR / OCA RTG L NAHA FIR / OCA RORG		
ADDITIONAL OCEANIC CONTROL AREAS	CONTROL 1485		
Note: Limits not shown when coinci- dent with Warning Areas.			
BUFFER ZONE	Teeth point to area		
NON-FREE FLYING ZONE	Teeth point to area		
NORTH ATLANTIC / MINIMUM NAVIGATION PERFORMANCE SPECIFICATIONS (NAT/MNPS)	**************************************		
REPORTING POINTS	Name — ARTOP Latitude & N20°52.7' Longitude W80°00.0'		
SPECIAL USE AIRSPACE	W-470 W517		
Warning Area	NARC NPRC		
Special Use	ATLANTIC FLEET WEAPONS RANGE		
12 Mile Limit			
UNCONTROLLED AIRSPACE			

51	OCEANIC ROUTE CHARTS	Acronaution inio		
NAVIGATIONAL AND PROCEDURAL INFORMATION		CULTURAL BOUNDARIES		
MILEAGE CIRCLES		INTERNATIONAL		
Note: Mileages are Nautical (NM)	100 NM	MARITIME	RUSSIA UNITED STATES	
Time Zone Note: All time is Coordinated Uni- versal (Standard) Time (UTC)	+3=UTC +2 <b>=</b> UTC	DATE LINE	MONDAY SUNDAY	
Overlap Marks				
NPRC Only	SW			
COMPASS ROSE  Note: Compass Roses oriented to Magnetic North	MN			
	330 30//	HYDROGRAPHY		
	800000000000000000000000000000000000000	SHORELINES		
NOTES WARNING	AIRCRAFT INFRINGING UPON NON FREE FLYING TERRITORY MAY BE FIRED UPON WITHOUT WARNING  UNLISTED RADIO EMISSIONS FROM THIS AREA MAY CONSTITUTE A NAVIGATION HAZARD OR RESULT IN BORDER OVERFLIGHT UNLESS UNUSUAL PRECAUTION IS EXERCISED.			