

GENERAL

Jeppesen Enroute Charts are compiled and constructed using the best available aeronautical and topographical reference charts. Most Jeppesen Enroute Charts use the Lambert Conformal Conic projection. The design is intended primarily for airway instrument navigation to be referenced to cockpit instruments.

Charts are identified by code letters for world areas covered by a series, by parenthetical letters for the altitude coverage, and by numbers for the individual chart. For example, P(H/L)2 is a chart of the Pacific series covering both high and low altitude operations and is number 2 of the series. E(HI)3 and E(LO) 10 are charts of the European series covering high and low altitude operations respectively.

To use the Low Altitude and High/Low Altitude Enroute Charts, use the small index map on the cover panel to locate the major city closest to your desired area. These names are the major locations shown within each chart panel and are indicated along the "zigdex" at the top of the chart. Open the chart to the panel desired and follow your flight progress by turning the folds like the pages of a book. It is seldom necessary to completely unfold the chart. Although the High Altitude Charts do not have this "zigdex" feature, they may be used in the same way.

When the folded chart is opened at one of the zigdex numbers, the exposed portion of the chart is subdivided into four sections by a vertical and a horizontal fold. Each of the sections is labeled at the margin as A, B, C, or D. A combination of the panel number and the lettered section in which it falls is used to simplify finding a location referenced in the Enroute Chart NOTAMS or in the communications tabulation. For example, p5C means you will find the referenced item on panel 5 in section C.

Unless otherwise indicated, all bearings and radials are magnetic; enroute distances are in nautical miles; vertical measurements of elevation are in feet above mean sea level; enroute altitudes are either in feet above mean sea level (based on QNH altimeter setting) or clearly expressed as flight levels (FL) (based on standard altimeter setting of 29.92 inches of Mercury or 1013.2 millibars or Hectopascals); and all times are Coordinated Universal Time (UTC) unless labeled local time (LT).

Enroute communications are shown on the charts or tabulated on the end folds where they may be referred to with a minimum of paper turning. Terminal communications are also provided in the tabulations except on charts designed solely for high altitude operations. The end panel tabulations refer to the location of the facility on an area chart (if one exists) by a 4-letter identifier, as well as to the location within a panel and section of the Enroute Chart.

Due to congestion of airspace information within large metropolitan areas, complete off airway information is not always shown on Enroute Charts. These areas are supplemented by Area Charts at larger chart scales with complete information. They should be used for all flights when arriving or departing an airport within an Area Chart.

On the Enroute Charts, the Area Charts are identified by a shaded symbol on the cover panel, and a shaded dashed line, with location name, and Airport identifier on the Enroute Chart.

Enroute and Area Charts are supplemented by Enroute Chart NOTAMS when significant changes occur between revision dates. Chart revision dates are always on a Friday (chart completion and/or mailing dates). Following this date a short concise note explains the significant changes made.

Chart EFFECTIVE dates other than EFFECTIVE UPON RECEIPT are provided when significant changes have been charted which will become effective on the date indicated.

Chart symbols are portrayed on the following pages with an explanation of their use. Reference should be made to the Chart Glossary for a more complete explanation of terms. This legend covers all Enroute and Area Charts. Chart symbols on the following pages may not appear on each chart.

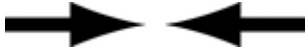
JEPPESEN IFR ENROUTE PLOTTER INSTRUCTIONS — ENROUTE AND AREA CHARTS

MILEAGES

Most Enroute and Area Chart mileages are represented on the plotter. Check the top margin of the chart in use for the correct scale. All chart scales, and all plotter scales, are in nautical miles.

BEARINGS AND COURSES

The plotter centerline is highlighted by arrows from each compass rose.



Position the plotter centerline over the desired track to be flown. Slide the plotter left or right along the track until one of the compass roses is centered over the desired navaid.

If the centerline arrow on the compass rose points in the SAME direction as your flight, read the radial or bearing at the north tick extending from the navaid.

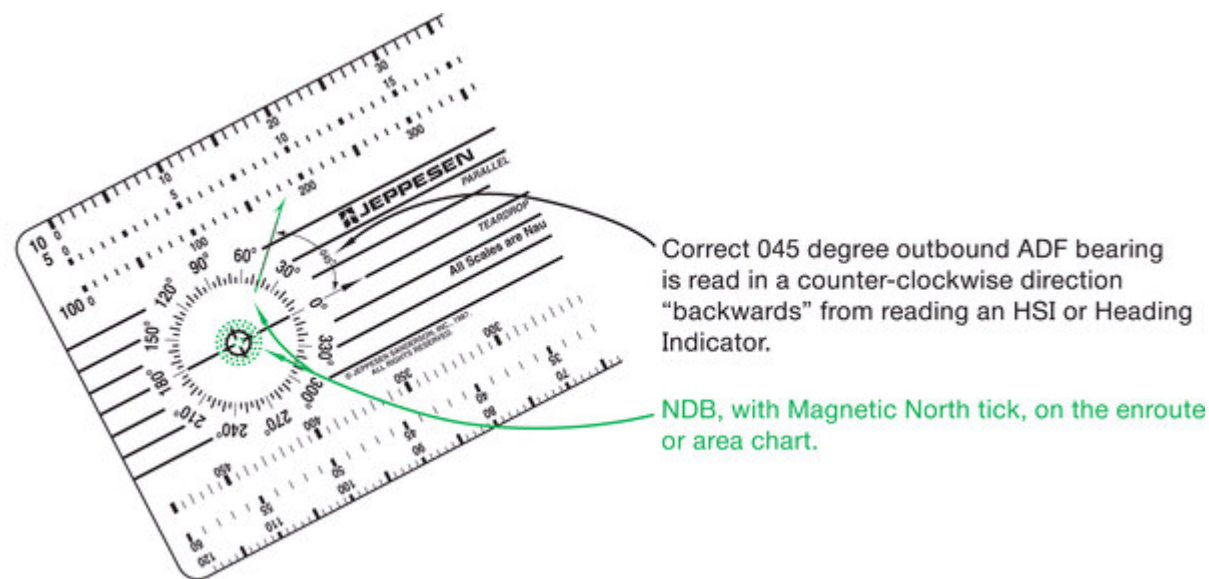
If the centerline arrow on the compass rose points OPPOSITE to the direction of flight, the radial or bearing is the reciprocal of the number read at the navaid's north magnetic tick.

NOTE:

If your earlier version plotter does not depict the arrows be sure the plotter is positioned so that the 360° position on the compass rose points in the SAME direction as your flight.

The compass rose is read in a counter-clockwise direction.

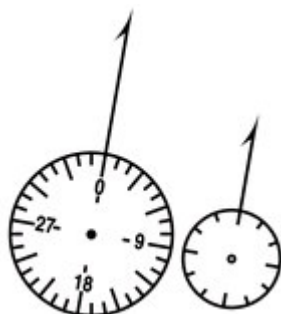
Example:



ENROUTE CHART LEGEND

The following legend pages briefly explain symbology used on Enroute Charts worldwide. **Not all items apply in all areas.** Refer to Chart Glossary for more complete definitions of items.

NAVAID SYMBOLS



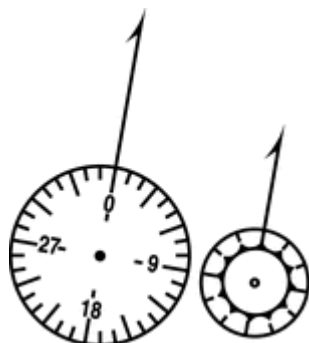
VOR (VHF Omnidirectional Range)



TACAN (Tactical Air Navigation) or DME (Distance Measuring Equipment)



Terminal class TACAN



VORTAC/VORDME



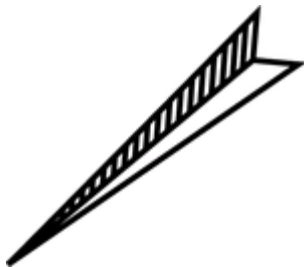
NDB (Nondirectional Radio Beacon)



Compass Locator (Charted only when providing an enroute function or TWEB); or a SABH class radio beacon.



Magnetic north ticks on navigational facilities fit compass roses on IFR Enroute Chart Plotters, making it possible to measure the magnetic bearing of any track.



LOC, LDA, or SDF Front Course



LOC Back Course



MLS Course

FAN MARKERS



Elliptical Pattern



Bone Pattern



Fan Marker and NDB

BROADCAST STATION

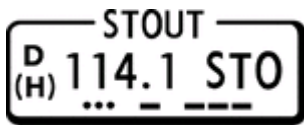


Commercial

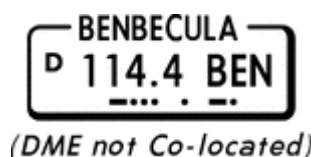
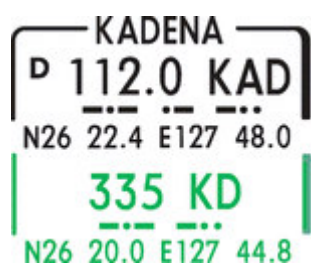


Armed Forces Radio Station

NAVAID IDENTIFICATION



Navaid identification is given in shadow box when navaid is airway or route component, with frequency, identifier, and Morse Code. DME capability is indicated by a small "D" preceding the VOR frequency at frequency paired nav aids. VOR and VORTAC nav aid operational ranges are identified (when known) within the nav aid

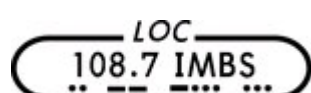


MOODY
113.3 VAD
TAC-80

KENNEY
254 ENY
- - - - -

LIPTON
TAC-88 LPT
(114.1)

GRAND VIEW
D 115.4 GND
- - - - -



LAYTON
- - - - -

ATF 122.8/5NM
DRCO 125.7
CANADIAN INSET
LA SARRE QUE
CSR8 1048-47

box except on USA and Canada charts. (T) represents Terminal; (L) represents Low Altitude; and (H) represents High Altitude.

On High/Low altitude Enroute Charts, geographical coordinates (latitude and longitude) are shown for nav aids forming high or all altitude airways and routes. On Area Charts, geographical coordinates are shown when nav aid is airway or route component.

Some L/MF nav aids are combined in the shadow box even though they are not part of the airway/route structure, except on US and CA charts. They are used for course guidance over lengthy route segments when airway/track is designated into a VOR.

When VOR and TAC/DME antennas are not co-located, a notation "DME not Co-located" is shown below the nav aid box.

Off-airway nav aids are unboxed on Low and High/Low charts. TACAN/DME channel is shown when VOR nav aid has a frequency paired DME capability. When an L/MF nav aid performs an enroute function, the Morse Code of its identification letters are shown.

When TACAN or DME are not frequency paired with the VOR, the TACAN is identified separately. The "Ghost" VOR frequency, shown in parentheses, enables civilian tuning of DME facility.

The nav aid frequency and identification are located below the location name of the airport when the nav aid name, location name, and airport name are the same.

LOC, SDF, LDA and MLS nav aids are identified by a round cornered box when they perform an enroute function. Frequency identification and Morse Code are provided. DME is included when nav aid and DME are frequency paired.

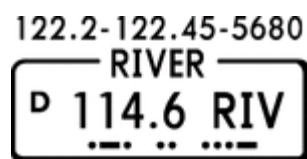
Fan Marker name and code.

Dial-up Remote Communications Outlet (DRCO) (Canada). Connects pilot with an ATS unit via a commercial telephone line. See Canada Air Traffic Control for details.

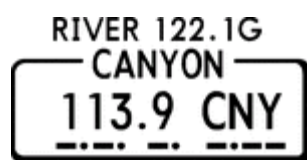
COMMUNICATIONS

RADIO FREQUENCIES

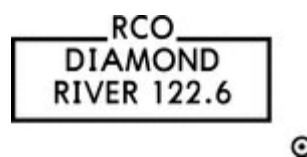
Frequencies for radio communications are included above NAVAID names, when voice is available through the NAVAID. These frequencies are also shown at other remoted locations.



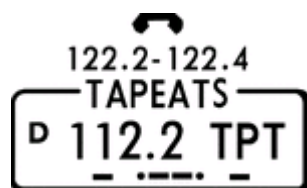
River Radio transmits on 114.6 and transmits and receives on 122.2, 122.45 MHz and HF frequency 5680.



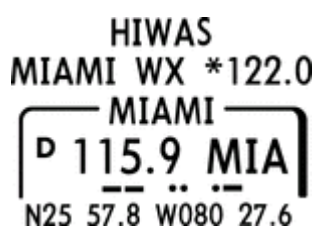
River Radio (RIV) guards (receives) on 122.1 and transmits through Canyon VOR on 113.9.



River Radio transmits and receives on 122.6 located at Diamond. Small circle enclosing dot denotes remote communication site.



Tapeats Radio transmits and receives on 122.2 and 122.4. Telephone symbol indicates additional frequencies in communications panel listed under Tapeats.



HIWAS — Hazardous Inflight Weather Advisory Service. Broadcasts SIGMETS, AIRMETS and PIREPS continuously over VOR frequency.



River Radio transmits and receives at Phantom on 122.3. Additionally, Phantom Radio transmits and receives on 122.6.



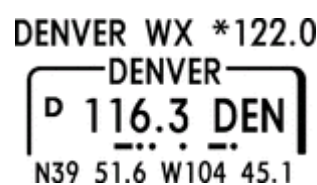
River Radio transmits through Lava VOR on 115.3, but is not capable of receiving transmissions through the VOR site.



Grand Radio is located at the airport and transmits and receives on 122.2 and 122.6. Additionally, Grand Radio provides LAA (Local Airport Advisory) on 123.6.



Terminal Radio frequencies and service may be included over airport or location name. Radio call is included when different than airport or location name. Mandatory Frequencies (MF), Aerodrome Traffic Frequencies (ATF) or UNICOM (U) frequencies include contact distance when other than the standard 5 nm.



US "Enroute Flight Advisory Service". Ident of controlling station to call, using (name of station) FLIGHT WATCH on 122.0 MHz. Charted above VORs associated with controlling station and remotod outlets. Service is not continuous.


VIRAC
RADIO

The telephone symbol indicates additional communications may be found in the communications tabulation after the associated NAVAID or location name. Telephone symbol does not necessarily mean that voice is available through the NAVAID.


CRYSTAL
116.1 CRT
-.-. -.-. -

SECTOR 2
MANILA
CONTROL
119.3 126.1
128.2 130.1

Call and frequencies of Control Service for use within graphically portrayed Radio Frequency Sector Boundaries.

Call sign "CONTROL" and / or "RADAR" is omitted in all communication boxes in several regions.

BELGRADE
WX
126.40

Plain language inflight weather station with name and frequency.

ADELAIDE
124.3

SOUTH EASTERN
RADIO
2869 4678
5526 8876

Call and frequencies of control or unit service. For use within geographical defined radio boundaries.

CENTER
SYDNEY
118.5 119.7
123.4 125.6

RADIO
NASSAU
E CAR
124.2
5566 6537
8871 13344

Call and frequency of enroute service or control unit. SINGLE SIDE BAND capabilities are available unless specified otherwise.

ACC
TORONTO (R)
(LONDON)
119.4

Remote air-to-ground antenna for direct communications with control center. Center is named in large type and name of remote site is in parentheses below followed by appropriate VHF frequencies.

NAVAID/COMMUNICATION DATA

CHICAGO
121.4

(May be Shutdown)
(May be Test Only)
(May not be Comsnd)

Operational status at date of publication. Refer to Chart NOTAMS for current status, including substitute routes for VOR and VORTAC shutdowns.

(TWEB)
MAYBE
326 MBY
--- ---

(TWEB) indicates continuous automatic weather broadcast is provided on the facility frequency.

(WX)
EAST BAY
362 EZB
. ---

Class SABH radio beacons of limited navigation suitability indicate their primary purpose of continuous automatic weather broadcast by (WX).

(R)

SAARBRUKEN
343 SBN
... ---

Enroute Radar capability. (All domestic U.S. Centers are radar equipped so (R) is omitted from domestic U.S. Center boxes.)

Underline shown below navaid identifier indicates Beat Frequency Oscillator (BFO) required to hear Morse Code identifier.

*

H + 04 & 15(1)

FOG:H + 02 & 08

Asterisk indicates navaid operation or service not continuous.

Marine beacon operation times. Transmission begins at 4 minutes past the hour and every 15 minutes thereafter in this illustration; other times will be indicated. Number in parentheses gives duration in minutes of transmission.

Facility operates in fog only at times indicated.

RESTRICTED AIRSPACE

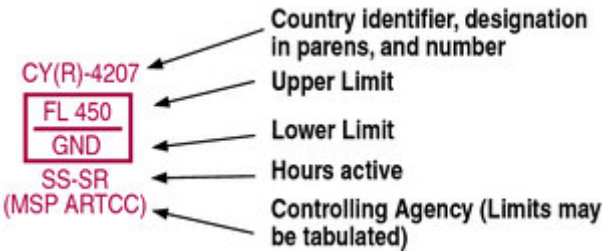
(Not shown on Eastern Hemisphere chart series when vertical limits are below 2000 feet AGL)



Restricted airspace. The accompanying label indicates it as prohibited, restricted, danger, etc.



Training, Alert, Caution, and Military Operations Areas.



• ED (R)-7



Dot indicates permanent activation on some chart series.

R-6001



(JAX ARTCC)

On USA charts K (indicating USA) and parens around the designating letter are omitted.



When restricted airspace areas overlap, a line is shown on the outer edge of each area through the area of overlap.

RESTRICTED AIRSPACE DESIGNATION

A-Alert	T-Training
C-Caution	W-Warning
D-Danger	TRA-Temporary Reserved Airspace
P-Prohibited	TSA - Temporary Segregated Area
R-Restricted	MOA-Military Operations Area

Canadian Alert Area Suffixes

(A) Acrobatic	(S) Soaring
(H) Hang Gliding	(T) Training
(P) Parachute Dropping	

AIRPORTS

Civil		Military		
IFR	VFR	IFR	VFR	
				Airports
				Seaplane Base
				Heliports

(LAA)	LAA Local Airport Advisory
(AFIS)	AFIS (Aerodrome Flight Information Service)
(ALA)	Authorized Landing Area

DENVER COLO
-Intl
KDEN 5431-160

Location name - IFR published procedure filed under this name with ICAO/Jeppesen NavData indicator. Airport elevation and longest runway length to nearest 100 feet with 70 feet as the dividing point (add 00).

Tidjikja
GOND 1316-52s

Location name - VFR airport, no procedure published by Jeppesen. "s" indicates soft surface otherwise hard surface.

AIRWAY AND ROUTE COMPONENTS
AIRWAY AND ROUTES CENTER LINES

	Airway/Route
	Diversionsary Route
	Overlying High Altitude Airway/Route
	Oceanic Transition Route
	RNAV Airway/Route

FIXES

		Compulsory Reporting Point
		Non-Compulsory Reporting Point
		Low Altitude Compulsory Reporting Point
		Low Altitude Non-Compulsory Reporting Point.
		Mileage Break/Turning Point
		RNAV Waypoint
	  	

Meteorological report required (unless instructed otherwise), giving air temperature, wind, icing, turbulence, clouds and other significant weather. Report to controlling ground station, or station indicated.



Holding Pattern. DME figures, when provided, give the DME distance of the fix as the first figure followed by the outbound limit as the second figure.



Length of holding pattern in minutes when other than standard.

(ABROC)

Database identifiers are enclosed in brackets [ABROC]. Database identifiers are officially designated by the controlling authority or they may be derived by Jeppesen. In either case, these identifiers have no ATC function and should not be used in filing flight plans nor should they be used when communicating with ATC. They are shown only to enable the pilot to maintain orientation when using charts in concert with database navigation systems.

LIMON
V-8 7500 NW
(MRA 7000)

Fix name with Minimum Crossing Altitude (MCA) showing airway, altitude, and direction, and Minimum Reception Altitude (MRA).

KULAFU (KLF)

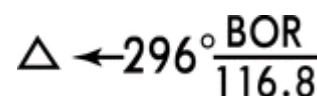


Official fix name (with country assigned identifier in parentheses). Several countries throughout the world assign identifiers for use in flight plans.

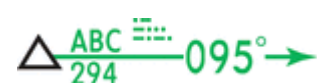
LF bearings forming a fix are to the navaid.



VHF radials forming a fix are from the navaid.



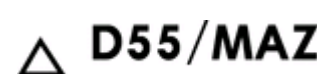
VHF frequency and identifier included when off chart or remoted.



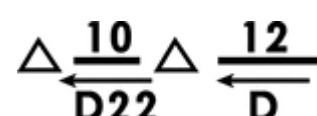
LF frequency, identifier and Morse Code included when off chart or remoted.



Arrow along airway points from the navaid designating the reporting point. Other published radials may be used if they are greater than 30 degrees from the airway being used and are not beyond the COP.



Fix formed by 55 DME from MAZ navaid.



"D" indicates DME fix and distance from the station that provides the DME mileage.

AIRWAY INFORMATION

V 168

Airway and route designators. Negative (white letters in black) designators are used for distinction.

ATS

ATS-Designated route without published identifier

AWY 4

AWY-Airway
B-Blue, Bravo

BR 7

BR-Bahama Route, Canada Bravo Route

D

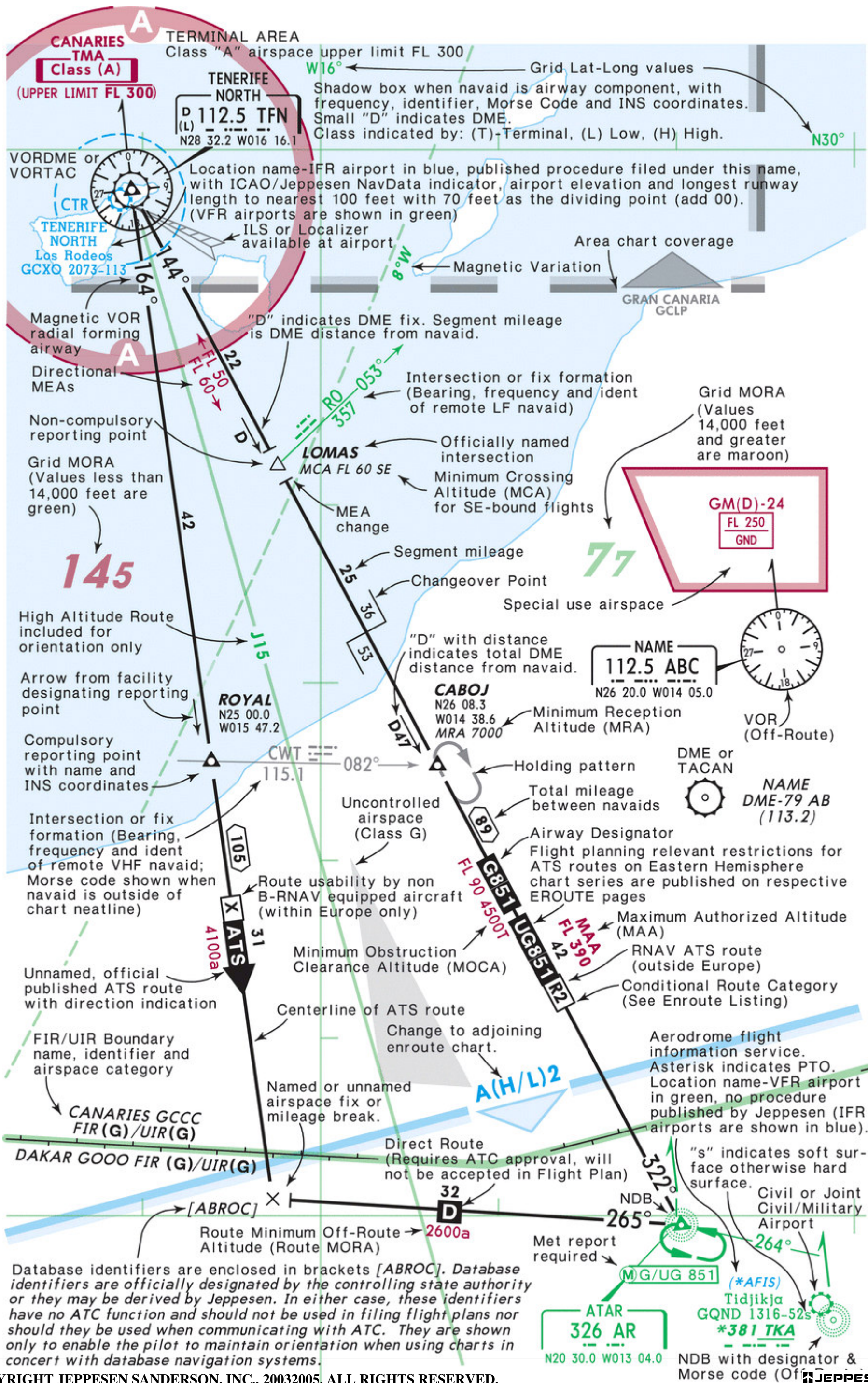
Direct Route
F-(suffix) Advisory service only

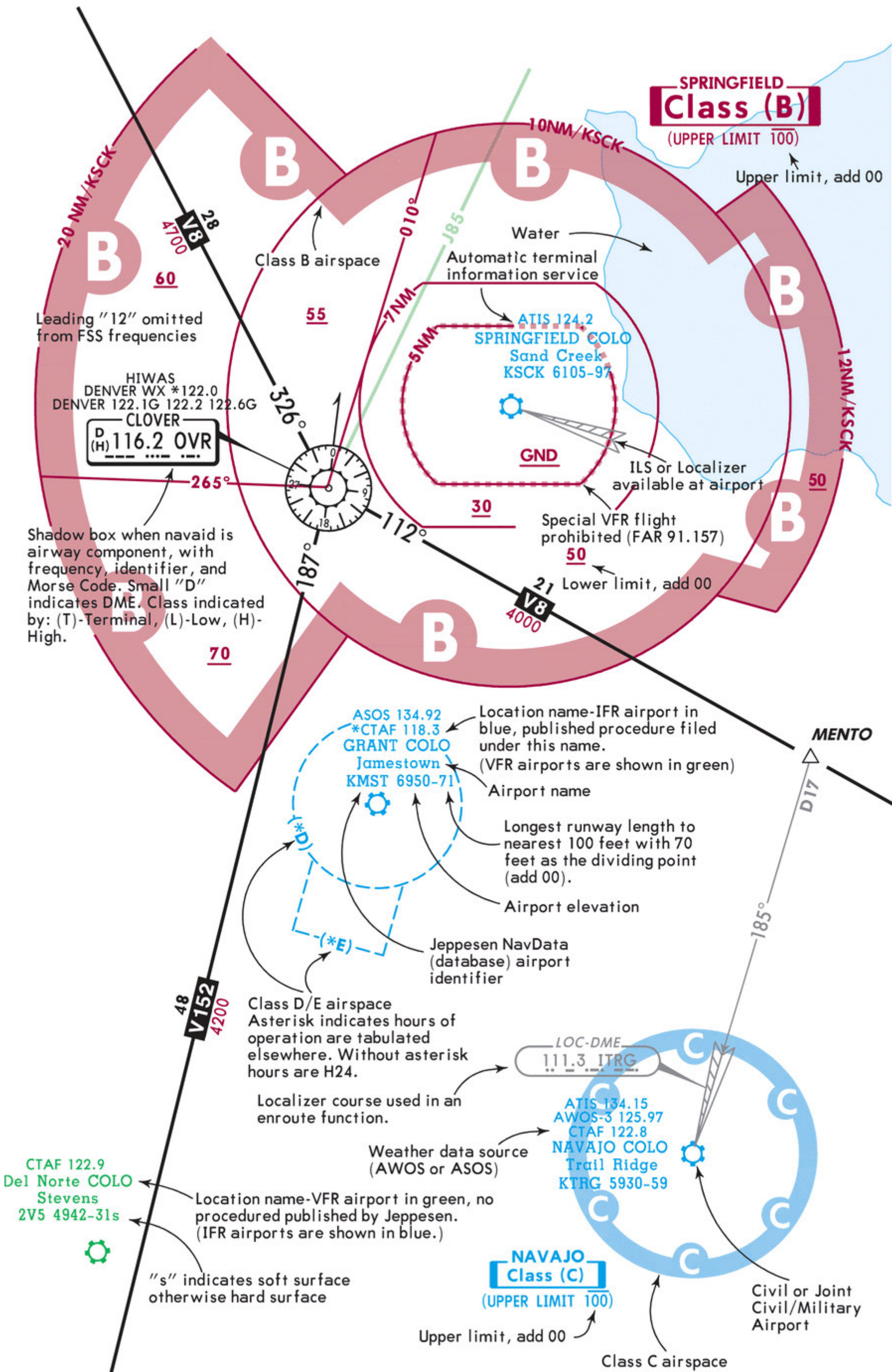
DOM

DOM-Domestic Route. Use by foreign operators requires special authorization.

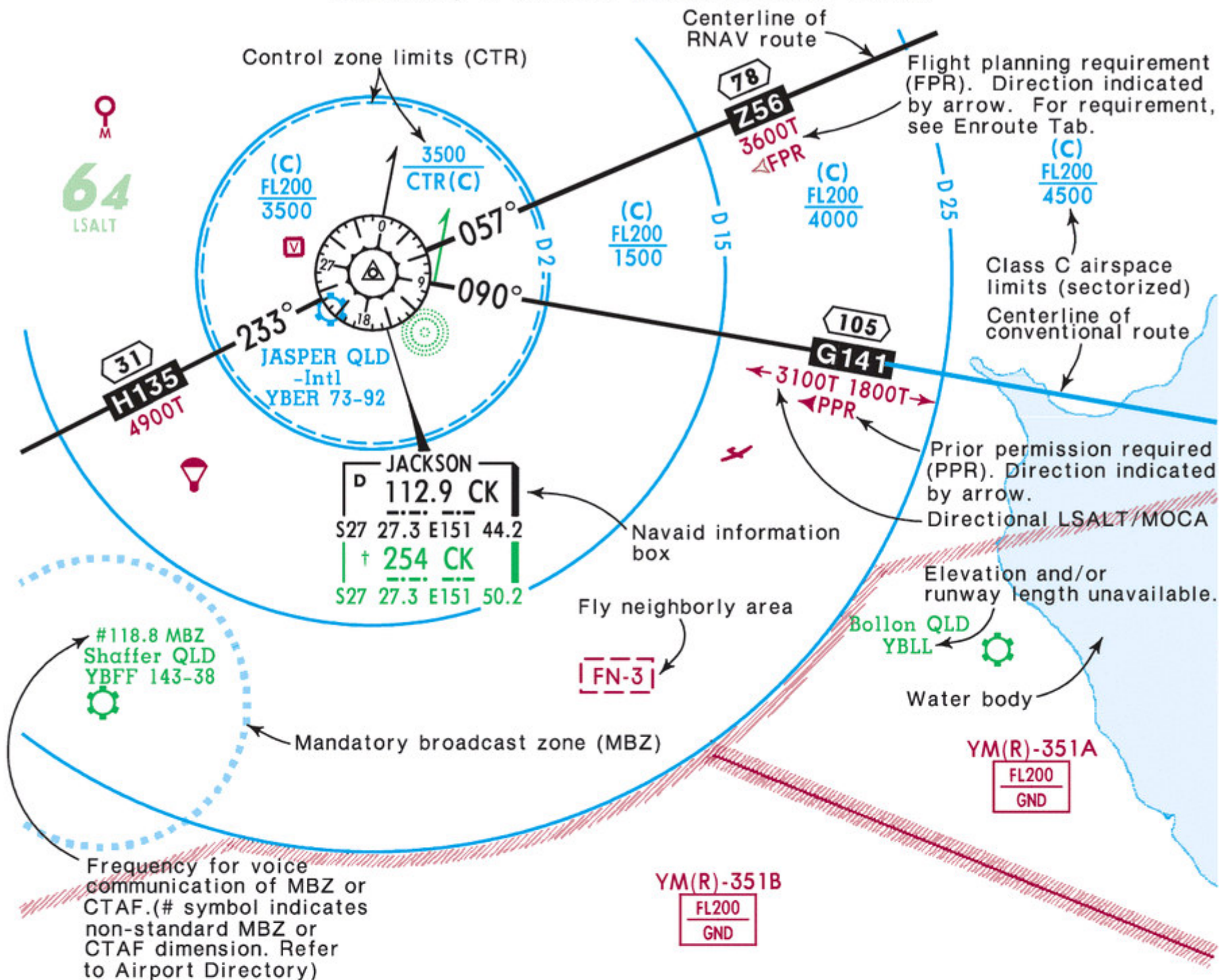
G 78

G-Green, Golf
G-(suffix) Flight Information only
GR-Gulf Route
H or HL-High Level
J-Jet
L-(suffix) L/MF airway





The symbology explained on these pages pertain specifically to Australia Enroute and Area charts.



SPECIAL ACTIVITY AREAS

- ✈ Ultra-light activity above 500' AGL.
- ✈ Hang glider activity above 5000' AGL.
- ✈ Model aircraft activity above 300' AGL.
- 🎈 Meteorology balloon ascents.
- 🎈 Manned balloon ascents.
- 🎈 Parachute jumping area.
- ✈ Glider Operations.
- ✈ Gliders Launching.
- 📺 Airport within VHF range of responsible ATS unit.
- # Non-standard CTAF and MBZ, see airport directory for dimensions.
- † Navaid limitation, see Radio Aids page AU-37 (applicable only for Australia domestic services).

REPORTING POINTS (AUSTRALIA)

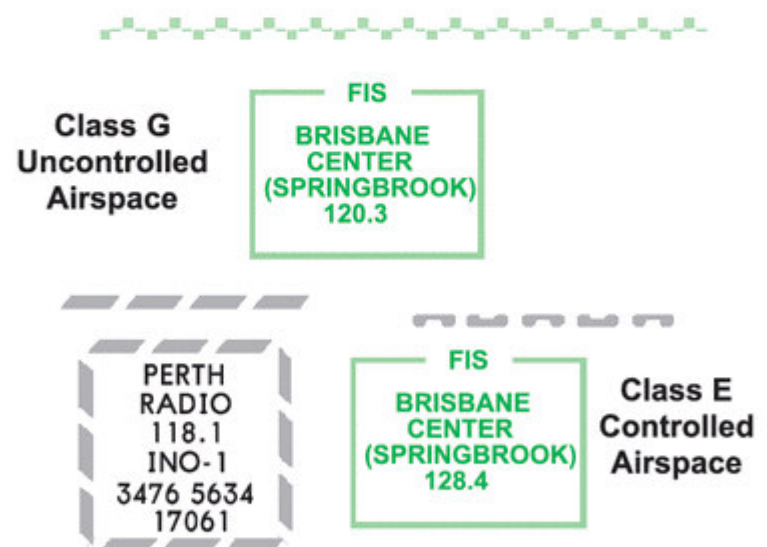
COMPULSORY for all aircraft.

- ▲ All altitude
- ▲ Low altitude

ON-REQUEST 300 KT TAS or more.
COMPULSORY Under 300 KT TAS.

- ▲ All altitude

AIR TRAFFIC SERVICE UNITS & BOUNDARIES



ROUTE DESIGNATORS

Conventional Routes:

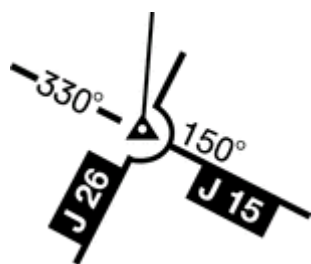
- A,B,G,R: Regional
- H (one-way), J (two-way): Domestic
- V (one-way), W (two-way): Predominantly low-level domestic

RNAV Routes:

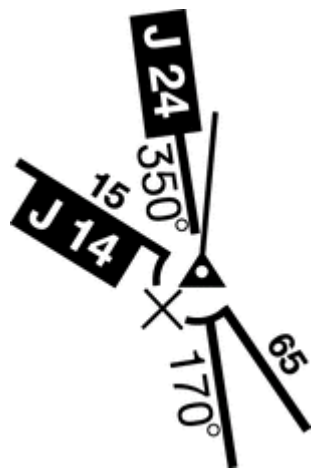
- L,M,N: Regional (Tasman)
- Q: 180°-359° domestic
- Y: 360°-179° domestic
- T: Two-way domestic
- Z: Two-way low-level domestic

AIRWAY NAVAID/REPORTING POINT BY-PASS

When an airway passes over or turns at a navaid or reporting point, but the navaid is not to be utilized for course guidance and/or no report is required, the airway centerline passes around the symbol. In cases where a by-pass symbol cannot be used, an explanatory note is included.



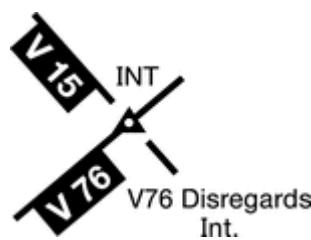
Airway J26 does not utilize the navaid or reporting point.



Airway J14 turns at the navaid or reporting point but does not utilize them. A mileage break "X" is included to further indicate a turn point.



Airway V76 does not utilize the navaid. A note indicating the proper use of the navaid is included.



Airway V76 does not utilize the Int. A note indicating the proper use of the Int is included.

BOUNDARIES



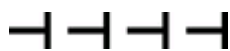
ADIZ, DEWIZ and CADIZ



FIR, UIR, ARTCC or OCA boundary.



International boundary.



Time zone boundary.



QNH/QNE-boundaries.



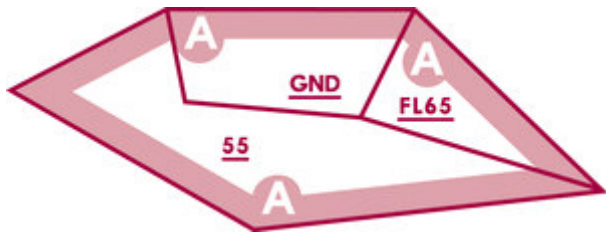
RVSM boundary

ICAO AIRSPACE CLASSIFICATIONS

Airspace classification is designated by the letters **(A)** thru **(G)** . Classification **(A)** represents the highest level of control and

(G) represents uncontrolled airspace. The definition of each classification is found in the Glossary portion of this section and the Enroute and Air Traffic Control section of this manual. The airspace classification letter is displayed in association with the airspace type and vertical limits.

AIRSPACE CLASS "A"



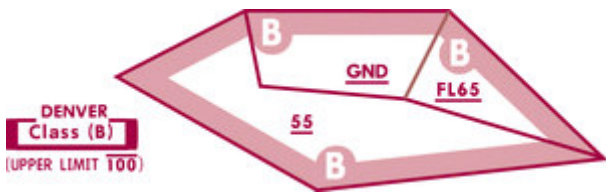
STAVANGER
UTA
Class (A)
(LOWER LIMIT FL195)

Lower limits may be used if it results in a clearer presentation (i.e. "stacked" airspace).

LONDON
TMA
Class (A)

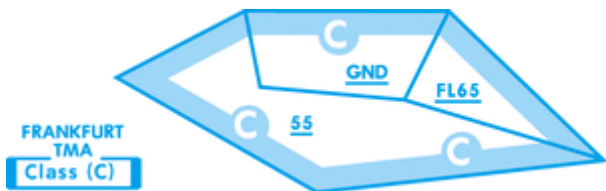
Upper limits omitted if at or above plane of division on a low chart.

AIRSPACE CLASS "B"



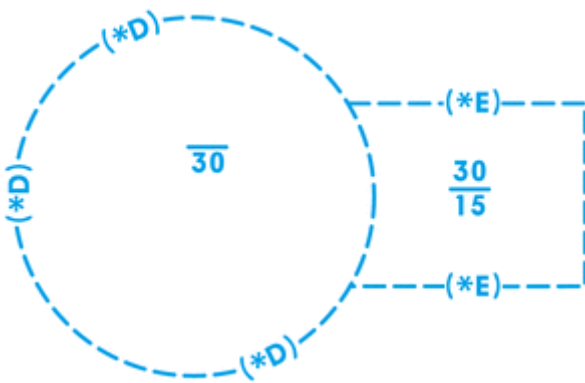
DENVER
Class (B)
(UPPER LIMIT 100)

AIRSPACE CLASS "C"



FRANKFURT
TMA
Class (C)

AIRSPACE CLASS "D & E"



Asterisk indicates hours of operation are not continuous. In such cases, operational hours will be tabulated elsewhere. Without asterisk hours are H24.



Controlled airspace shown in white.
Uncontrolled airspace shown as a tint.



Controlled airway/route.



Uncontrolled airway or advisory route.



Radio Frequency Sector Boundary.

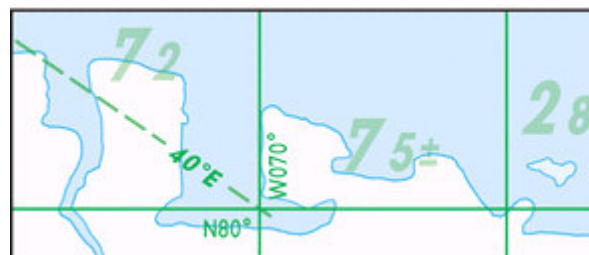


Radio boundaries of control or service unit.



Boundaries within TMAs or CTAs defining different altitude limits and/or sectorizations.

ORIENTATION



Grid shown at the intersection of units of latitude and longitude or by complete line.

Magnetic variation isogonic lines are indicated at the edge of the chart or are extended fully across the chart in a continuous dashed line.

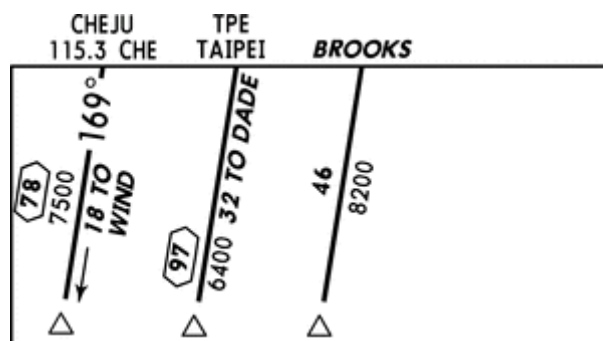
Shorelines and large inland lakes are shown.

Grid Minimum Off-Route Altitude (Grid MORA) in hundreds of feet provides reference point clearance within the section outlined by latitude and longitude lines. Grid MORA values followed by a +/- denote doubtful accuracy, but are believed to provide sufficient reference point clearance.

BORDER INFORMATION



This area overlapped by charts indicated.



To Notes: Name outside the neatline is the next airway navaid to which the total mileage is given. Navaid identification is shown on all charts series. Reporting point name is shown when it is the airway termination.

To Notes: Name inside the neatline is the first reporting point outside the chart coverage to which the mileage and MEA are shown.

Airway lead information: The frequency and identifier of an off-chart navaid are shown when the navaid designates an on-chart reporting point, changeover point or course change.

MISCELLANEOUS



Outline indicates coverage of a separate Area Chart. Information within this outline for terminal operation may be skeletonized. The Area Chart should be referred to if departure or destination airport is within this boundary to ensure pertinent information is available.



On Enroute Chart coverage diagrams, shaded symbol denotes Area Chart coverage. Area Chart name is included with shaded symbol.



Outline indicates an area covered elsewhere on the same or adjoining chart in enlarged scale. Information within this outline may be skeletonized.



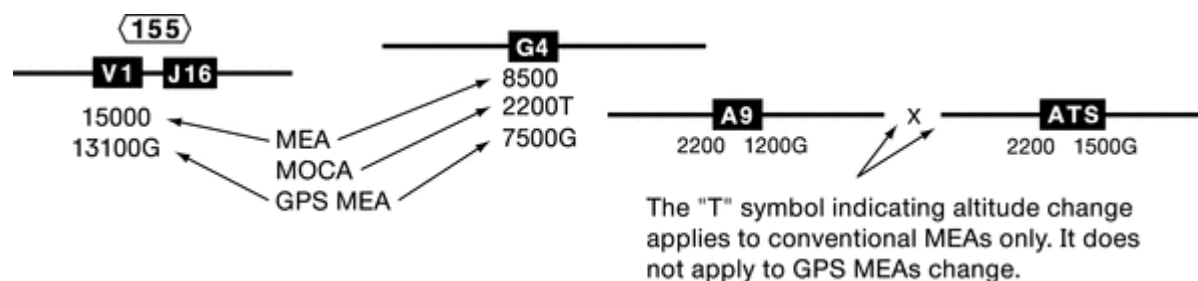
Ball Flags: Number or letter symbol used to index information not shown at the point of applicability, but carried in a like-identified note within the same panel, or in one place on a separate panel.



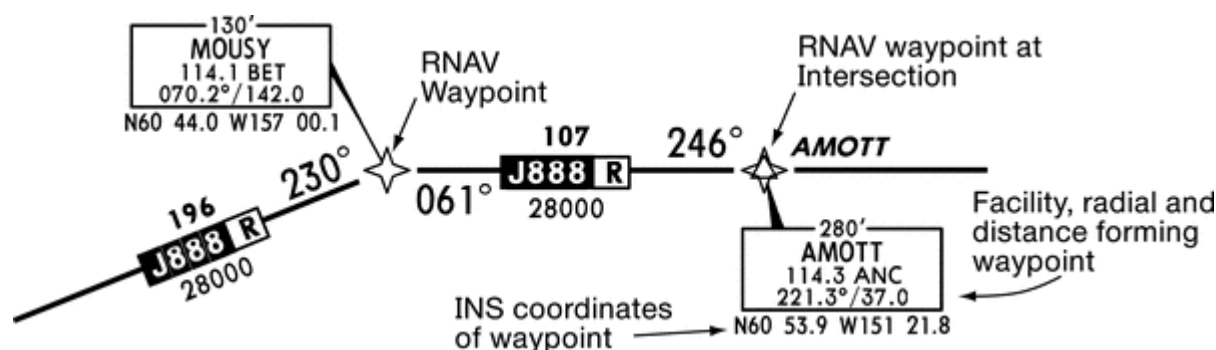
Reference number for INS Coordinates. These coordinates are tabulated elsewhere on the chart and identified in a like manner.

U.S. GPS MEAs

GPS MEAs are supplemental to and lower than the regular MEA. GPS MEAs are not established for every route, or for every route segment. The absence of a GPS MEA means one has not been provided and the regular route MEA applies. A GPS MEA may be higher than, equivalent to, but not lower than a Minimum Obstruction Clearance Altitude (MOCA) associated with a given route segment.



U.S. SERIES 800 AND 900 DESIGNATED RNAV ROUTES



AUSTRALIA AND CANADA T RNAV ROUTES

