NAVDATA NAME CONVENTIONS
WAYPOINT IDENTIFIERS

Waypoint names entered into the navigation data base are limited to a maximum of five characters. Official waypoint names assigned by a country's aviation information authority often have other than five characters. For compatibility with the navigation data base, waypoint identifiers are assigned to all waypoints in accordance with the ground rules set forth as follows:

A. VOR, VORDME, VORTAC, TACAN and Non-Directional Beacons (NDB). Waypoints located at any of the above types of facilities will take on the official 1-, 2-, 3-, or 4-character identifier of the facility in question.

Examples:

Los Angeles VORTAC	LAX
Tyndall TACAN	PAM
Ft. Nelson NDB	YE
Newark NDB	EWR

B. NDB

NDB as Waypoint Concept

For systems employing the "NDB as Waypoint" concept, waypoints located at NDB's will be identified by the use of the station identifier followed by the alpha characters "NB".

Examples:

Ft. Nelson NDB	YENB
Newark NDB	EWRNB

C. Named RNAV Waypoints, Intersections and Reporting Points. In many countries, these waypoints are assigned unique 5-character names, with the identifier the same as the name. For waypoints not so named, identifiers are developed using the following rules sequentially until 5 or fewer character groups emerge.

1. One-Word Names

a. Use the full name if five characters or less are involved.

Examples:
ACRA, LOGAN, PIKE, DOT

b. Eliminate double letters.

Examples:
KIMMEL becomes KIMEL
COTTON becomes COTON
RABBITT becomes RABIT

c. Keep first letter, first vowel and last letter. Drop other vowels starting from right to left.

Examples:
ADOLPH becomes ADLPH
BAILEY becomes BAILY
BURWELL becomes BURWL

d. Drop consonants, starting from right to left.

Examples:
ANDREWS becomes ANDRS
BRIDGEPORT becomes BRIDT

2. Multiple Word Names

Use the first letter of the first word and abbreviate the last word using the above rules for one-word names to reduce it to four characters.

Examples:
CLEAR LAKE becomes CLAKE
ROUGH AND READY becomes RREDY

3. Phonetic Letter Names.

a. When an ICAO phonetic alpha character is used as a waypoint name (Alpha, Bravo, Charlie, etc.), use the rules established in paragraph C.1 above. When more than one waypoint in a country has the same phonetic name, obtain uniqueness by applying rule E below.

Examples:
Waypoint November becomes NOVMR
Waypoint Charlie becomes CHARE
Waypoint Alpha remains ALPHA

b. When a double phonetic, such as Tango India, is used as the waypoint name, use the rules established in paragraph C.2 above.

c. When a phonetic alpha character followed by a numeric and/or other alpha characters (A1, A1N, B2, etc.), is used as the waypoint name, it will appear the same in the data base as shown on aeronautical charts.

NAME CONVENTIONS
WAYPOINT IDENTIFIERS

D. Unnamed Waypoints

1. Unnamed Turn Points, Intersections and Bearing/Distance Waypoints (For bearing/distance waypoints on terminal area procedures, see paragraph F.2)

a. If an unnamed turn point, intersection or bearing/distance waypoint is colocated with a named waypoint or NAVAID station on a different route structure (e.g., low level or approach), the name or identifier of the colocated waypoint is used.

Example:
Unnamed turn point on J2 between Lake Charles (LCH) and New Orleans (MSY) VORTACs is coincidental with the Lafayette (LFT) low level VORTAC. LFT is used as the identifier code for the turn point.

b. Identifier codes for unnamed turn points, intersections or bearing/distance way-points that are not coincidental with named waypoints should be constructed by taking the identifier code of the reference NAVAID for the turn point/intersection/(bearing/distance waypoint) (expected to be the nearest NAVAID serving the airway structure in which it is located) and the distance from this NAVAID to the turn point/intersection/(bearing/distance waypoint). If the distance is 99 nautical miles or less, the NAVAID identifier is placed first, followed by the distance. If the distance is 100 nautical miles or more, the last two digits only are used and placed ahead of the NAVAID identifier.

Examples: TIZ15

NAVAID	DISTANCE	CODE
INW	18	INW18
CSN	106	06CSN

2. FIR, UIR and Controlled Airspace Reporting Positions

In cases where the government authority does not provide unique 5-letter or less waypoint names, and in cases where the government supplied name cannot be converted to a unique 5-letter identifier using rules C.1, C.2, and C.3, the following rules are applied in developing an identifier for such waypoints.

a. FIR - use the three characters "FIR" plus a numeric from 02 to 99. An identifier so developed is unique within the geographical area code.

Example: FIR09

b. UIR - use the three characters "UIR" plus a numeric from 02 to 99. an identifier so developed is unique within the geographical area code.

Example: UIR39

c. FIR/UIR - Use "FIR" and a numeric as indicated above.

Example: FIR69

d. Controlled Airspace - use the 3-letter characters for the type of controlled airspace plus a numeric from 02 to 99. These are Terminal Waypoints and as such are unique within the Terminal Area. Examples of controlled airspace types are:

TMA Terminal Control Area
CTA Control Area
CTR Control Zone
TIZ Traffic Information Zone
ATZ Aerodrome Traffic Zone

Examples: CTR03

NAME CONVENTIONS
WAYPOINT IDENTIFIERS

3. Reporting Positions Defined by Coordinates

Entry/Exit positions to Oceanic Control Areas are often defined by waypoints which are "undesignated", made available in source documentation as geographical coordinates (Latitude/ Longitude) expressed in full degrees. In cases where such positions are to be entered into the data base, the following rules are applied:

a. Positions in the northern hemisphere use the letters "N" and "E", the southern hemisphere use the letters "S" and "W" and numerics for latitude and longitude as follows:

(1) Latitude, use values provided by source. Latitude will always precede longitude.

(2) Longitude, use only the last two values of the three digit longitude value. Placement of the letter designator in the five character set indicates what the first digit is published as. The letter designator will be the last character if the longitude is less than 100 degrees and will be the third character if the longitude is 100 degrees or greater.

(3) The letter "N" is used for north latitude and west longitude. The letter "E" is used for north latitude and east longitude. The letter "S" is used for south latitude and east longitude. The letter "W" is used for south latitude and west longitude.

b. Examples:

N latitude/W longitude
N52 00/W075 00 = 5275N
N50 00/W040 00 = 5040N
N07 00/W008 00 = 0708N
N75 00/W170 00 = 75N70
N07 00/W120 00 = 07N20

N latitude/E longitude
N50 00/E020 00 = 5020E
N75 00/E050 00 = 7550E
N06 00/E008 00 = 0608E
N75 00/E150 00 = 75E50
N06 00/E110 00 = 06E10

S latitude/W longitude
S52 00/W075 00 = 5275W
S50 00/W040 00 = 5040W
S07 00/W008 00 = 0708W
S75 00/W170 00 = 75W70
S07 00/W120 00 = 07W20

S latitude/E longitude
S50 00/E020 00 = 5020S
S75 00/E050 00 = 7550S
S06 00/E008 00 = 0608S
S75 00/E150 00 = 75S50
S06 00/E110 00 = 06S10

E. Duplicate Identifiers

1. Should application of these rules result in more than one waypoint having the same identifier, a new identifier is generated for each waypoint by developing a four (or less) character identifier and adding a suffix number or letter.

Examples: SHAWNEE (COLO) SHAE1
SHAWNEE (CAL) SHAE2

2. If the suffix number reaches 10, start over with one and place the suffix in the fourth- character position. The original fourth character is placed in the fifth-character position.

Example: SHAWNEE (OKLA) SHA1E

F. Terminal Waypoints.

The following rules are applied in developing identifiers for waypoints used solely in terminal area procedures. Such waypoint identifiers will be unique only for the airport specified. A way-point identifier used in a terminal area cannot be repeated in that terminal area but can be used in an enroute area encompassed by the same geographical area code. Terminal way-point identifiers can be repeated in areas covered by different geographical codes. These identifier developing rules are only applied when the waypoints in question have not been assigned official names/identifiers by the government authority.

NAME CONVENTIONS
WAYPOINT IDENTIFIERS

1. Airport-Related Waypoints (Single Approach Procedure for given runway coded)

Single Approach Procedure for given runway coded and Waypoints common to more than one approach: The following two-character codes are to be added to the runway identifier to create an airport-related waypoint identifier when no named waypoint has been established by the government source for the fix type:

FF = Final Approach Fix
AF = Initial Approach Fix
IF = Intermediate Approach Fix
CF = Final Approach Course Fix
MA = Missed Aproach Point Fix
SD = Step-Down Fix

Note: if multiple step-down fix waypoints need to be created, replace "D" with another character, retain the "S".

RC = Runway Centerline Fix
RW = Runway Fix
* OM = Outer Marker Fix
* MM = Middle Marker Fix
* IM = Inner Marker Fix
* BM = Backcourse Marker Fix
TD = Touchdown point inboard of runway threshold

* See also rule G

Examples: FF36
MA09L

2. Airport-Related Waypoints (Multiple Approach Procedure for given runway coded.)

Multiple approach Procedures for a given runway coded for which common waypoints cannot be established:

The following two-character codes are to be added to the runway identifier to create an airport-related waypoint identifier when no named waypoint has been established by the government source for the fix type:

Fx = Final Approach Fix, where "x" equals the Type of procedure in question

Ax = Initial Approach Fix, where "x" equals the Type of procedure in question

Ix = Intermediate Approach Fix, where "x" equals the Type of procedure in question

Cx = Final Approach Course Fix, where "x" equals the Type of procedure in question

Mx = Missed Approach Point Fix, where "x" equals the Type of procedure in question

Sx = Step-Down Fix Note: if multiple step-down fix waypoints need to be created, replace "D" with another character, retain the "S".

Rx = Runway Centerline Fix, where "x" equals the Type of procedure in question

Tx = Touchdown Fix inboard of runway threshold, where "x" equals the Type of procedure in question

These procedure type characters do not appear on the Jeppesen Approach Charts.

NAME CONVENTIONS
WAYPOINT IDENTIFIERS

The convention above for Multiple Approaches/Multiple Waypoints result in the following table:

Waypoint Type	Route Type Addition					
	ILS(I)	ILS(L)	ILS(B)	VOR(D)	VOR(V)	VOR(S)
IAF	AI	AL	AB	AD	AV	AS
IF	II	IL	IB	ID	IV	IS
FACF	CI	CL	CB	CD	CV	CS
FAF	FI	FF	FB	FD	FV	FS
MAP	MI	ML	MB	MD	MV	MS
TDP	TI	TL	TB	TD	TV	TS
RCI	RI	RL	RB	RD	RV	RS
Step-Down	SI	SL	SB	SD	SV	SS
	NDB(N)	NDB(Q)	MLS(M)	RNAV(R)	TACAN(T)	LORAN(C)
IAF	AN	AQ	AM	AR	AT	AC
IF	IN	IQ	IM	IR	IT	IC
FACF	CN	CQ	CM	CR	CT	CC
FAF	FN	FQ	FM	FR	FT	FC
MAP	MN	MQ	MM	MR	MT	MC
TDP	TN	TQ	TM	TR	TT	TC
RCI	RN	RQ	RM	RR	RT	RC
Step-Down	SN	SQ	SM	SR	ST	SC
	IGS(G)	LDA(X)	SDF(Z)	FMS (F)	GPS(P)	HEL(H)
IAF	AG	AX	AZ	1F	AP	AH
IF	IG	IX	IZ	2F	IP	IH
FACF	CG	CX	CZ	3F	CP	CH
FAF	FG	FX	FZ	4F	FP	FH
MAP	MG	MX	MZ	5F	MP	MH
TDP	TG	TX	TZ	6F	TP	TH
RCI	RG	RX	RZ	7F	RP	RH
Step-Down	SG	SX	SZ	8F	SP	SH
	VOR C-T-L(E)	NDB C-T-L(U)	LOC C-T-L(J)	BAC C-T-L(K)	MLS (W)	MSL (Y)
IAF	AE	AU	AJ	AK	AW	AY
IF	IE	IU	IJ	IK	IW	IY
FACF	CE	CU	CJ	CK	CW	CY
FAF	FE	FU	FJ	FK	FW	FY
MAP	ME	MU	MJ	MK	MW	MY
TDP	TE	TU	TJ	TK	TW	TY
RCI	RE	RU	RJ	RK	RW	RY
Step-Down	SE	SU	SJ	SK	SW	SY

Note: "C-T-L" is "Circle-To-Land" Approach

the prefixes indicated in the table above assume that a unique geographical position (Latitude/Longitude) is required for each Waypoint and the "common waypoint" idea cannot be used. Should a single waypoints' geographical position be such that it will serve as the same waypoint type for more than one coded approach procedure, a "common waypoint"; the Single Approach/Common Waypoint convention shall be used.

Note on prefixes for FMS(F) Approach Waypoints:

As the majority of the prefixes generated using the standard convention and the Route Type "F" produced duplicates or two character codes that would be easily confused with other coded, the numerical/alpha/runway identifier concept is used.

NAME CONVENTIONS
WAYPOINT IDENTIFIERS

3. Bearing/Distance Waypoints

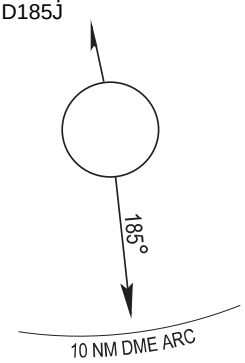
Identifiers are developed by the application of the following rules:

a. The first character is "D".

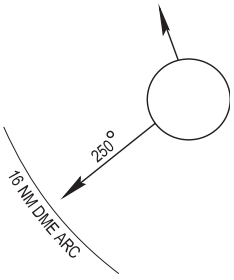
b. Characters 2 through 4 signify the VHF NAVAID radial on which the waypoint lies.

c. The last character is the DME arc radius defining the position of the waypoint on the radial. This radius is expressed as the equivalent letter of the alphabet, i.e., A = 1NM, G = 7NM, P = 16NM, etc.

Examples:
D185J



D250P



d. If distance is greater than 26NM, use the convention in paragraph D or E.

e. If the arc radius is provided in official government source as nautical miles and tenths of nautical miles, the letter of the alphabet will reflect values rounded to full nautical miles, i.e., 10.5nm = 11nm or K, 10.4nm = 10nm or J. All values between 0.1 and 1.4 will be character "A".

G. Approach Marker Identification Priority Convention

1. If the approach marker is named, use its name.

   Example: PIKKE OM Runway 26 will be PIKKE

2. If it is unnamed but an NDB, use the NDB ident followed by the letters NB.

   Example: Ft. Nelson LOM will be YENB

3. If it is unnamed and not an NDB, use letters OM followed by the runway number.

   Example: Outer Marker for Runway 26 becomes OM26

END OF NAME CONVENTIONS
WAYPOINT IDENTIFIERS