

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 17-02 – October 25 - 27, 2017

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 17-02-319

Subject:

Addition of specifications for VFR and Visual Segments on Copter Approach & Departure Procedures

Background/Discussion:

There are currently copter procedures in the NAS that include both IFR and VFR or Visual Segments. Visual segments have been assessed for obstacles and are defined by a course that may be flown using the bearing & distance provided on the procedure source document. VFR segments have NOT been assessed for obstacles and the pilot is expected to make his way following VFR rules and avoiding obstacles. On the procedure source document, a bearing & distance is provided, but the intention is NOT for the pilot to fly this course. The two distinct types of segments should be shown in different ways on the charts so that there is no confusion.

Recommendations:

Add charting for Visual/VFR segments of copter procedures as follows:

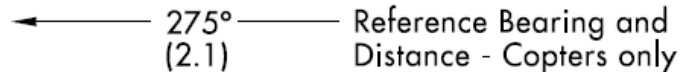
1. Visual Flight Path

The visual flight path shall be shown by a heavy dashed line symbol as illustrated below.



2. VFR Reference Bearing and Distance

The VFR segment on a copter procedure shall be shown by a thin solid line as illustrated:



Modify relevant chart legends as appropriate.

Comments:

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Date: October 24, 2017

Attachment #1

Proposed STAR/DP Legend

LEGEND 00000

LEGEND
STANDARD TERMINAL ARRIVAL (STAR) CHARTS
DEPARTURE PROCEDURE (DP) CHARTS
Applies to both STAR and DP Charts unless otherwise noted.

RADIO AIDS TO NAVIGATION

Compulsory:

- VOR
- VORTAC
- DME
- NDB/DME
- VOR/DME
- TACAN
- NDB

Non-Compulsory:

- VOR
- VORTAC
- DME
- NDB/DME
- VOR/DME
- TACAN
- NDB

LMM, LOM (Compass locator)

Marker Beacon

LOC (shown when installation is offset from its normal position off the end of the runway.) (DP)

LOC/DME

Localizer Course

SDF Course

(T) indicates frequency protection range (STAR)

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

Frequency: **ORLANDO**
112.25 (T) ORL Chan 59 (Y)
N28°32.56' W81°20.10'

Underline indicates no voice transmitted on this frequency

L-19, H-5 Enroute Chart Reference

DME or TACAN Channel

Coordinates: **PRAYS**
N38°58.30' W89°51.50'

Waypoint Name

Frequency: 112.7 CAP 187.1-56.2

Identifier Reference Facility Elevation

Radial-Distance (Facility to Waypoint)

ROUTES

4500 MEA-Minimum Enroute Altitude

*3500 MOCA-Minimum Obstruction Clearance Altitude

270° Departure Route • Arrival Route

(65) Mileage between Radio Aids, Reporting Points, and Route Breaks

Transition Route

R-275 Radial line and value

275° Reference Bearing and Distance - Copters only (2.1)

Visual Flight Path (DP)

..... Last Communications Track

V12 J80 Airway/Jet Route Identification

DP Holding Pattern STAR Holding Pattern

(IAS) (IAS)

Holding pattern with max. restricted airspeed (175K) applies to all altitudes (210K) applies to altitudes above 6000' to and including 14000'

SPECIAL USE AIRSPACE

R-352 R-Restricted W-Warning P-Prohibited A-Alert MOA-Military Operations Area

ALTITUDES

5500 2300 4800

Mandatory Altitude (Cross at) Minimum Altitude (Cross at or above) Maximum Altitude (Cross at or below)

15000 12000

Block Altitude

Altitude change at other than Radio Aids (STAR)

INDICATED AIRSPEED

175K 120K 250K

Mandatory Airspeed Minimum Airspeed Maximum Airspeed

AIRPORTS

(DP)

Civil Military Joint Civil-Military

Airports not served by the procedure shown in screened color (STAR)

Civil Military Joint Civil-Military

MISCELLANEOUS

Changeover Point

Distance not to scale (DP)

International Boundary (DP)

Air Defense Identification Zone

Takeoff Minimums and (Obstacle) Departure Procedures entry published. (DP)

LEGEND 00000

Attachment #2

Proposed Plainview Legend

LEGEND 00000 INSTRUMENT APPROACH PROCEDURES (CHARTS)

PLANVIEW SYMBOLS

TERMINAL ROUTES

HOLDING PATTERNS

Holding pattern with max. restricted airspeed: (175K) applies to all altitudes. (210K) applies to altitudes above 6000' to and including 14000'. Arrival Holding Pattern altitude restrictions will be indicated when they deviate from the adjacent leg. Limits will only be specified when they deviate from the standard. DME fixes may be shown.

RADIO AIDS TO NAVIGATION

110.1 Underline indicates No Voice transmitted on this frequency

Compulsory:

- VOR (solid circle)
- VORTAC (solid circle with T)
- DME (solid square)
- NDB (solid circle with N)
- VOR/DME (solid circle with D)
- TACAN (solid circle with T)
- NDB/DME (solid circle with N and D)

Non-Compulsory:

- VOR (open circle)
- VORTAC (open circle with T)
- DME (open square)
- NDB (open circle with N)
- VOR/DME (open circle with D)
- TACAN (open circle with T)
- NDB/DME (open circle with N and D)

LOM/LMM (Compass locator at Outer Marker/Middle Marker) (dashed line with arrow)

Marker Beacon (dashed line)

Marker beacons that are not specifically part of the procedure but underline the final approach course are shown in screened color. (screened dashed line)

Localizer (LOC/LDA) Course (dashed line with shading)

Right side shading- Front course; Left side shading- Back Course

SDF Course (dashed line with arrow)

LOC/DME (square with X)

LOC/LDA/SDF Transmitter (circle with X)

(shown when installation is offset from its normal position off the end of the runway.)

FIXES/ATC REPORTING REQUIREMENTS

Reporting Point

- Name (Compulsory) (solid triangle)
- Name (Non-Compulsory) (open triangle)
- Intersection (X)
- WAYPOINT (Compulsory) (solid diamond)
- WAYPOINT (Non-Compulsory) (open diamond)
- FLYOVER POINT (circle with dot)
- MAP WP (Flyover) (circle with dot and X)

Computer Navigation Fix (CNF) (x (NAME) (*x* omitted when it conflicts with runway pattern))

DME Distance (1.5) From Facility

AUSTN INT (ARC/DME/RNAV Fix)

R-198 Radial line and value

LR-198 Lead Radial

LB-198 Lead Bearing

198° Reference Bearing and Distance- (2.5) Copters only

ALTITUDES

3500 Mandatory Altitude 3000 Recommended Altitude

2500 Minimum Altitude 3000 Mandatory Block

4300 Maximum Altitude 3000 Altitude

INDICATED AIRSPEED

175K 120K 250R 180K

Mandatory Minimum Maximum Recommended

Airspeed Airspeed Airspeed Airspeed

Waypoint Data

Coordinates: N38°58.30' W89°51.50'

Frequency: 112.7 CAP 187.1°-56.2

Identifier: PRAYS

Reference Facility: 590

Elevation

Radial-Distance (Facility to Waypoint)

Waypoint Name

Primary Navaid with Coordinate Values

LIMA

114.5 LJM ---

Chan 92

S12°00.80'

W77°07.00'

Secondary Navaid

LMM

LIMA

248 NT ---

VHF Paired Frequency

SCOTT

Chan 59

SKE ---

(112.2)

LEGEND 00000

MEETING 17-02

Mike Webb, FAA/AFS-420 [briefed the issue](#). Mike stated that in the near future numerous public-use Copter Departures will be published. In the process of developing charting specifications for these procedures, it was discovered that there are currently copter procedures published that have a Visual segment and there are some that have a VFR segment. These have always been depicted in the same manner on the charts, but they have major differences. Visual segments have been assessed for obstacles and are defined by a course that may be flown using the bearing and distance provided. VFR segments have not been assessed for obstacles, there is no specific route to fly, and the pilot is responsible for avoiding obstacles. Although a reference bearing and distance may be supplied for VFR segments, this is not a course the aircraft is intended to follow. It is recommended that a new charting specification be put into place for the two distinct types of segments. Mike would like input on the proposed depiction options.

Mike [displayed examples](#) of how the segments are shown today, and examples of his recommendations for the depiction of visual segments and VFR segments. He is recommending that for visual segments, the current depiction of the heavy dashed line should remain. For VFR segments, he proposed two different depictions. The first is a thin solid line with the reference bearing and distance included on the line ([Slides #8 and #9](#)). The second is with no line depicted but the inclusion of the reference bearing and distance information located in proximity to the landing point.

Pilots in the room concurred with depiction of the visual segment with the heavy dashed line.

In regard to the proposed depiction of VFR segments, Tim Long, NGA, commented that if you show a line on a chart with a bearing and distance, a pilot will fly that line. This is dangerous as the line is not intended to be the course the pilot is to follow. Rich Boll, NBAA, agreed. There was concurrence from the pilots in the room for not showing a line on VFR segments as it could easily be mistakenly interpreted as a course to fly. There was no voiced support for depiction of linework on VFR segments.

Mike stated that he will work with Valerie Watson, FAA/AJV-553, on the specification changes. He also said he would work on socializing this change with the helicopter community.

STATUS: OPEN

ACTION: Valerie Watson, FAA/AJV-553, will draft a specification change for the depiction of VFR segments without the reference bearing depicted as a line.

MEETING 18-01

Valerie Watson, FAA/AJV-553, reviewed this issue. Valerie said that proposed Interagency Air Committee (IAC) specifications documents supporting the ACF-approved clarification of the charting of VFR and Visual Segments on Copter Approaches and Departures have been vetted and approved by FAA/AFS-400. These documents are now in the IAC signature process and

are due to be approved in the near future. Mike Webb, FAA/AFS-420, showed the audience the [chart examples of the changes](#). There was consensus to close this item.

STATUS: CLOSE