

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

N 8900.348

National Policy

Effective Date:
3/7/16

Cancellation Date:
3/7/17

SUBJ: OpSpec/MSpec/LOA C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations

1. Purpose of This Notice. This notice amends Operations Specification (OpSpec)/Management Specification (MSpec)/Letter of Authorization (LOA) C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations, and clarifies guidance for Federal Aviation Administration (FAA) inspectors to authorize and issue OpSpec/MSpec/LOA C063 to operators conducting airplane operations under Title 14 of the Code of Federal Regulations (14 CFR) parts 91 subpart K (part 91K), 121, 125 (including A125 Letter of Deviation Authority (LODA) holders), and 135. This notice amends C063 templates to accommodate the following bundling options:

- Advanced RNP (A-RNP), RNP 1, Tailored Arrivals (TA), RNAV 1;
- RNP 1, Radius to Fix (RF), TA, RNAV 1;
- RNP 1, RF, RNAV 1;
- RNP 1, TA, RNAV 1;
- RNP 1, RNAV 1; or
- RNAV 1.

2. Audience. The primary audience for this notice is certificate-holding district office (CHDO) and Flight Standards District Office (FSDO) principal inspectors (PI) and aviation safety inspectors (ASI). The secondary audience includes Flight Standards Service (AFS) branches and divisions in the regions and in headquarters (HQ).

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <http://fsims.avs.faa.gov>. Operators can find this notice on the FAA Web site at <http://fsims.faa.gov>. This notice is available to the public at http://www.faa.gov/regulations_policies/orders_notices.

4. Background for RNAV 1 and RNP 1 Operations. This change is necessary in order for United States policy guidance to reflect recent updates to International Civil Aviation Organization (ICAO) Document 9613, Performance Based Navigation (PBN) Manual (refer to AC 90-105A, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace, Appendices C,

H, and I). A-RNP is added as an option to the terminal environment for those operators who are operationally and functionally able to perform RF, parallel offset, and scalability. The bundling concept is incorporated into this revision of OpSpec/MSpec/LOA C063 and combines A-RNP with RNP 1, TA, and RNAV 1 for those who qualify with options for fewer PBN authorizations down to RNAV 1 only. Though not currently used in the United States, Fixed Radius Transition (FRT) and Time of Arrival Control (TOAC) may be added to the overall bundle for those who qualify. Bundling improves efficiency and reduces cost to the operator and the FAA.

5. Guidance. Detailed guidance for A-RNP and RNP 1 operations is available in the current edition of AC 90-105. The Flight Technologies and Procedures Division (AFS-400) developed this notice. This notice contains the following:

- The sample LOA C063 template in Appendix A applies to part 91.
- The sample MSpec C063 template in Appendix B applies to part 91K.
- The sample OpSpec C063 template in Appendix C applies to part 121.
- The sample OpSpec C063 template in Appendix D applies to part 121/135.
- The sample OpSpec C063 template in Appendix E applies to part 125.
- The sample LOA C063 template in Appendix F applies to part 125 LODA A125 holders.
- The sample OpSpec C063 template in Appendix G applies to part 135.

6. Action. This is a nonmandatory change to OpSpec C063. Operators should review and incorporate the new guidance in AC 90-105A into their flightcrew procedures and pilot training programs. The principal operations inspectors (POI) and operators should access current qualifications and determine where bundling and A-RNP may apply. Bundling will be enabled for future authorizations, but remains optional for those currently qualified for C063 operations.

7. Disposition. We will incorporate the information in this notice into FAA Order 8900.1 before this notice expires. Direct questions or comments concerning this notice to the Performance-Based Flight Systems Branch (AFS-470) at (202) 267-8806.



John Barbagallo
Deputy Director, Flight Standards Service

Appendix A. Sample LOA C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations: 14 CFR Part 91

Letter of Authorization

1. For part 91 operators, this letter of authorization is not required and is optional.

The Operator is authorized to conduct IFR RNAV 1 and/or RNP 1 instrument departure procedures (DP); RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) published in accordance with 14 CFR part 97; and/or Tailored Arrivals (TA) using approved RNAV systems to the airports and runways approved for such operations, and must conduct all such operations in accordance with the provisions of this letter of authorization.

2. Bundling Type Operation and Authorized Airplane/Equipment. In Table 1, listed under the Navigation Specification(s) are six bundled options starting with Advanced RNP (A-RNP), RNP 1, TA, and RNAV 1. Lesser bundles are also available with the following options: RNP 1, RF, TA, and RNAV 1; RNP 1, RF, and RNAV 1; RNP 1, TA, and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the operator must be qualified for the following advanced capabilities: scalability, Radius to Fix (RF), and parallel offset. Additionally, the A-RNP operator must have adequate continuity for the operation.

Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

| Airplane | Compliant RNAV System(s) and Software | | | Navigation Specification(s) | Additional Capabilities | Limitation and Provisions |
|---------------------------------|---------------------------------------|---------------------|-------------------------|---|-------------------------|------------------------------|
| M/M/S | Manufacturer | Model/ HW Part # | Software Part/Ver. # | | | |
| B-777-300ER, B-787-800, etc. | | | | A-RNP/RNP 1/ TA/RNAV 1 RNP 1/RF/TA/ RNAV 1 RNP 1/RF/ RNAV 1 RNP 1/TA/ RNAV 1 RNP 1/RNAV 1 RNAV 1 | FRT TOAC FRT/TOAC | GPS Required DME/DME Only |

3. Additional Capabilities. Fixed Radius Transition (FRT) and/or Time of Arrival Control (TOAC) may be selected in Table 1 under Additional Capabilities for those who qualify for A-RNP.

4. The operator must maintain the airplane and equipment listed in Table 1 using an established maintenance program that addresses the applicable RNAV requirements.

5. Flightcrew Qualifications. Flightcrews should not conduct operations approved by this letter of authorization until qualified in accordance with the Operator's training program for RNAV 1 and/or RNP 1 DPs, RNAV 1 and/or RNP 1 STAR operations, and/or TAs. Crew training conducted by [name of trainer].

6. Responsible Person. The responsible person for crew operations may be either an agent for service (who must be a U.S. citizen) or a person who is a U.S. citizen or who holds a U.S. pilot certificate and accepts responsibility for complying with the stated regulations by signing this document.

a. If the responsible person signing this letter of authorization relinquishes responsibility, this letter of authorization becomes invalid.

b. Enter the name, e-mail address, and telephone number of the responsible person signing this letter of authorization in Table 2.

Table 2 – Responsible Person

| Name | Email Address | Telephone |
|----------------------|----------------------|------------------|
| [LOAD Operator Data] | | |

Appendix B. Sample MSpec C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations: 14 CFR Part 91K

- a. The program manager is authorized to conduct IFR RNAV 1 and/or RNP 1 instrument departure procedures (DP); RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) published in accordance with 14 CFR part 97; and/or Tailored Arrivals (TA) using approved RNAV systems to the airports and runways approved for such operations, and must conduct all such operations in accordance with the provisions of these management specifications.
- b. Bundling and Authorized Airplane/Equipment. In Table 1, listed under Navigation Specification(s) are six bundled options starting with Advanced RNP (A-RNP), RNP 1, TA, and RNAV 1. Lesser bundles are also available with the following options: RNP 1, RF, TA, and RNAV 1; RNP 1, RF, and RNAV 1; RNP 1, TA, and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the program manager must be qualified for the following advanced capabilities: scalability, Radius to Fix (RF), and parallel offset. Additionally, the A-RNP program manager must have adequate continuity for the operation.

Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

| Airplane | Compliant RNAV System(s) and Software | | | Navigation Specification(s) | Additional Capabilities | Limitation and Provisions |
|------------------------------|---------------------------------------|-----------------|----------------------|---|-------------------------|------------------------------|
| | Manufacturer | Model/HW Part # | Software Part/Ver. # | | | |
| B-777-300ER, B-787-800, etc. | | | | A-RNP/RNP 1/ TA/RNAV 1 RNP 1/RF/TA/ RNAV 1 RNP 1/RF/ RNAV 1 RNP 1/TA/ RNAV 1 RNP 1/RNAV 1 RNAV 1 | FRT TOAC FRT/TOAC | GPS Required DME/DME Only |

- c. Additional Capabilities. Fixed Radius Transition (FRT) and/or Time of Arrival Control (TOAC) may be selected in Table 1 under Additional Capabilities for those who qualify for A-RNP.
- d. The program manager must maintain the airplane and equipment listed in Table 1 using an established maintenance program that addresses these RNAV requirements.
- e. Flightcrew Qualifications. Flightcrews must not conduct operations approved by this management specification until qualified in accordance with the program manager's approved training program for RNAV 1 and/or RNP 1 DPs, RNAV 1 and/or RNP 1 STAR operations, and/or TAs.

Appendix C. Sample OpSpec C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations: 14 CFR Part 121

a. The certificate holder is authorized to conduct IFR RNAV 1 and/or RNP 1 instrument departure procedures (DP); RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) published in accordance with 14 CFR part 97; and/or Tailored Arrivals (TA) using approved RNAV systems to the airports and runways approved for such operations, and must conduct all such operations in accordance with the provisions of these operations specifications.

b. Bundling and Authorized Airplane/Equipment. In Table 1, listed under Navigation Specification(s) are six bundled options starting with Advanced RNP (A-RNP), RNP 1, TA, and RNAV 1. Lesser bundles are also available with the following options: RNP 1, RF, TA, and RNAV 1; RNP 1, RF, and RNAV 1; RNP 1, TA, and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the certificate holder must be qualified for the following advanced capabilities: scalability, Radius to Fix (RF), and parallel offset. Additionally, the A-RNP certificate holder must have adequate continuity for the operation.

Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

| Airplane | Compliant RNAV System(s) and Software | | | Navigation Specification(s) | Additional Capabilities | Limitation and Provisions |
|------------------------------|---------------------------------------|-----------------|----------------------|---|-------------------------|---------------------------------|
| M/M/S | Manufacturer | Model/HW Part # | Software Part/Ver. # | | | |
| B-777-300ER, B-787-800, etc. | | | | A-RNP/RNP 1/ TA/RNAV 1 RNP 1/RF/TA/ RNAV 1 RNP 1/RF/ RNAV 1 RNP 1/TA/ RNAV 1 RNP 1/RNAV 1 RNAV 1 | FRT TOAC FRT/TOAC | GPS Required DME/DME Only |

c. Additional Capabilities. Fixed Radius Transition (FRT) and/or Time of Arrival Control (TOAC) may be selected in Table 1 under Additional Capabilities for those who qualify for A-RNP.

d. Flightcrew Qualifications. Flightcrews must not conduct operations approved by this operations specification until qualified in accordance with the certificate holder's approved training program for RNAV 1 and/or RNP 1 DPs, RNAV 1 and/or RNP 1 STARs operations, and/or TAs.

e. The certificate holder must maintain the airplane and equipment listed in Table 1 using an established maintenance program that addresses these RNAV requirements.

Appendix D. Sample OpSpec C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations: 14 CFR Part 121/135

- a. The certificate holder is authorized to conduct IFR RNAV 1 and/or RNP 1 instrument departure procedures (DP); RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) published in accordance with 14 CFR part 97; and/or Tailored Arrivals (TA) using approved RNAV systems to the airports and runways approved for such operations, and must conduct all such operations in accordance with the provisions of these operations specifications.
- b. Bundling and Authorized Airplane/Equipment. In Table 1, listed under Navigation Specification(s) are six bundled options starting with Advanced RNP (A-RNP), RNP 1, TA, and RNAV 1. Lesser bundles are also available with the following options: RNP 1, RF, TA, and RNAV 1; RNP 1, RF, and RNAV 1; RNP 1, TA, and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the certificate holder must be qualified for the following advanced capabilities: scalability, Radius to Fix (RF), and parallel offset. Additionally, the A-RNP certificate holder must have adequate continuity for the operation.

Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

| Airplane | Compliant RNAV System(s) and Software | | | Navigation Specification(s) | Additional Capabilities | Limitation and Provisions |
|------------------------------|---------------------------------------|-----------------|----------------------|---|-------------------------|------------------------------|
| | Manufacturer | Model/HW Part # | Software Part/Ver. # | | | |
| B-777-300ER, B-787-800, etc. | | | | A-RNP/RNP 1/TA/RNAV 1 RNP 1/RF/TA/RNAV 1 RNP 1/RF/RNAV 1 RNP 1/TA/RNAV 1 RNP 1/RNAV 1 RNAV 1 | FRT TOAC FRT/TOAC | GPS Required DME/DME Only |

- c. Additional Capabilities. Fixed Radius Transition (FRT) and/or Time of Arrival Control (TOAC) may be selected in Table 1 under Additional Capabilities for those who qualify for A-RNP.
- d. The certificate holder must maintain the airplane and equipment listed in Table 1 using an established maintenance program that addresses these RNAV requirements.
- e. Flightcrew Qualifications. Flightcrews must not conduct operations approved by this operations specification until qualified in accordance with the certificate holder's approved training program for RNAV 1 and/or RNP 1 DPs, RNAV 1 and/or RNP 1 STARs operations, and/or TAs.
- f. For part 135 operators that have no manuals, the approved procedures required for this authorization are as follows:

Appendix E. Sample OpSpec C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations: 14 CFR Part 125

a. The certificate holder is authorized to conduct IFR RNAV 1 and/or RNP 1 instrument departure procedures (DP); RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) published in accordance with 14 CFR part 97; and/or Tailored Arrivals (TA) using approved RNAV systems to the airports and runways approved for such operations, and must conduct all such operations in accordance with the provisions of these operations specifications.

b. Bundling and Authorized Airplane/Equipment. In Table 1, listed under Navigation Specification(s) are six bundled options starting with Advanced RNP (A-RNP), RNP 1, TA, and RNAV 1. Lesser bundles are also available with the following options: RNP 1, RF, TA, and RNAV 1; RNP 1, RF, and RNAV 1; RNP 1, TA, and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the certificate holder must be qualified for the following advanced capabilities: scalability, Radius to Fix (RF), and parallel offset. Additionally, the A-RNP certificate holder must have adequate continuity for the operation.

Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

| Airplane | Compliant RNAV System(s) and Software | | | Navigation Specification(s) | Additional Capabilities | Limitation and Provisions |
|------------------------------|---------------------------------------|-----------------|----------------------|---|-------------------------|------------------------------|
| M/M/S | Manufacturer | Model/HW Part # | Software Part/Ver. # | | | |
| B-777-300ER, B-787-800, etc. | | | | A-RNP/RNP 1/ TA/RNAV 1 RNP 1/RF/TA/ RNAV 1 RNP 1/RF/ RNAV 1 RNP 1/TA/ RNAV 1 RNP 1/RNAV 1 RNAV 1 | FRT TOAC FRT/TOAC | GPS Required DME/DME Only |

c. Additional Capabilities. Fixed Radius Transition (FRT) and/or Time of Arrival (TOAC) may be selected in Table 1 under Additional Capabilities for those who qualify for A-RNP.

d. The certificate holder must maintain the airplane and equipment listed in Table 1 using an established maintenance program that addresses these RNAV requirements.

e. Flightcrew Qualifications. Flightcrews must not conduct operations approved by this operations specification until qualified in accordance with the certificate holder's training program for RNAV 1 and/or RNP 1 DPs, RNAV 1 and/or RNP 1 STARs operations, and/or TAs.

Appendix F. Sample LOA C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations: 14 CFR Part 125 (LODA A125)

Letter of Authorization

1. The Operator/Company authorized to conduct operations in accordance with the Letter of Deviation Authority (LODA) A125 is authorized to conduct IFR RNAV 1 and/or RNP 1 instrument departure procedures (DP); RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) published in accordance with 14 CFR part 97; and/or Tailored Arrivals (TA) using approved RNAV systems to the airports and runways approved for such operations, and must conduct all such operations in accordance with the provisions of this letter of authorization.

2. Bundling and Authorized Airplane/Equipment. In Table 1, listed under Navigation Specification(s) are six bundled options starting with Advanced RNP (A-RNP), RNP 1, TA, and RNAV 1. Lesser bundles are also available with the following options: RNP 1, RF, TA, and RNAV 1; RNP 1, RF, and RNAV 1; RNP 1, TA, and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the Operator/Company must be qualified for the following advanced capabilities: scalability, Radius to Fix (RF), and parallel offset. Additionally, the A-RNP Operator/Company must have adequate continuity for the operation.

Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

| Airplane | Compliant RNAV System(s) and Software | | | Navigation Specification(s) | Additional Capabilities | Limitation and Provisions |
|------------------------------|---------------------------------------|--------------|-----------------|---|-------------------------|---------------------------------|
| | M/M/S | Manufacturer | Model/HW Part # | Software Part/Ver. # | | |
| B-777-300ER, B-787-800, etc. | | | | A-RNP/RNP 1/ TA/RNAV 1 RNP 1/RF/TA/ RNAV 1 RNP 1/RF/ RNAV 1 RNP 1/TA/ RNAV 1 RNP 1/RNAV 1 RNAV 1 | FRT TOAC FRT/TOAC | GPS Required DME/DME Only |

3. Additional Capabilities. Fixed Radius Transition (FRT) and/or Time of Arrival Control (TOAC) may be selected in Table 1 under Additional Capabilities for those who qualify for A-RNP.

4. The Operator/Company must maintain the airplane and equipment listed in Table 1 using an established maintenance program that addresses the applicable RNAV requirements.

5. Flightcrew Qualifications. Flightcrews should not conduct operations approved by this LOA until qualified in accordance with the Operator's/Company's training program for RNAV 1 and/or RNP 1 DPs, RNAV 1 and/or RNP 1 STAR operations, and/or TAs.

Appendix G. Sample OpSpec C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations: 14 CFR Part 135

a. The certificate holder is authorized to conduct IFR RNAV 1 and/or RNP 1 instrument departure procedures (DP); RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) published in accordance with 14 CFR part 97; and/or Tailored Arrivals (TA) using approved RNAV systems to the airports and runways approved for such operations, and must conduct all such operations in accordance with the provisions of these operations specifications.

b. Bundling and Authorized Airplane/Equipment. In Table 1, listed under Navigation Specification(s) are six bundled options starting with Advanced RNP (A-RNP), RNP 1, TA, and RNAV 1. Lesser bundles are also available with the following options: RNP 1, RF, TA, and RNAV 1; RNP 1, RF, and RNAV 1; RNP 1, TA, and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the certificate holder must be qualified for the following advanced capabilities: scalability, Radius to Fix (RF), and parallel offset. Additionally, the A-RNP certificate holder must have adequate continuity for the operation.

Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

| Airplane | Compliant RNAV System(s) and Software | | | Navigation Specification(s) | Additional Capabilities | Limitation and Provisions |
|------------------------------|---------------------------------------|-----------------|----------------------|---|-------------------------|---------------------------------|
| | Manufacturer | Model/HW Part # | Software Part/Ver. # | | | |
| B-777-300ER, B-787-800, etc. | | | | A-RNP/RNP 1/ TA/RNAV 1 RNP 1/RF/TA/ RNAV 1 RNP 1/RF/ RNAV 1 RNP 1/TA/ RNAV 1 RNP 1/RNAV 1 RNAV 1 | FRT TOAC FRT/TOAC | GPS Required DME/DME Only |

c. Additional Capabilities. Fixed Radius Transition (FRT) and/or Time of Arrival Control (TOAC) may be selected in Table 1 under Additional Capabilities for those who qualify for A-RNP.

d. The certificate holder must maintain the airplane and equipment listed in Table 1 above using an established maintenance program that addresses these RNAV requirements.

e. Flightcrew Qualifications. Flightcrews must not conduct operations approved by this operations specification until qualified in accordance with the certificate holder's approved training program for RNAV 1 and/or RNP 1 DPs, STARs operations, and/or TAs.

f. For part 135 operators that have no manuals, the approved procedures required for this authorization are as follows: