Denver ARTCC

ORDER 7210.4B

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SUBJ: Scratchpad Entry and Coordination Procedures

This document establishes procedures for scratchpad entry and coordination at Unrestricted and Tier 2 Terminal Radar Approach Control (TRACON) and Radar Approach Control (RAPCON) facilities within the Denver ARTCC on VATSIM (vZDV). Controllers are required to be familiar with the provisions of this document and to exercise their best judgment if they encounter situations not covered by it. The provisions and procedures described herein are supplemental to vZDV Facility Policy and FAA Order JO 7110.65.

The information contained herein is to be used for flight simulation purposes only on the VATSIM network. It is not intended, nor should it be used for, real-world navigation. The Virtual Denver ARTCC is not affiliated with the FAA, the actual Denver ARTCC, or any governing aviation body.

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Record of Changes

Version	Description	Effective Date	Issued By
7210.4A	Initial Release	01/01/2025	HL
7210.4B	Updated entry procedures to more closely align with D01 procedures for an easier transition for students	04/01/2025	HL

Not for real world use.

Explanation of Changes

1-1-1. Purpose
Added language to include Tier 2 TRACONs and RAPCONs within vZDV to the scope of this document.

1-1-4. Cancellation
Added paragraph.

2-1-2. Automatic Arrival Scratchpad Entries
Modified language to make approach runway entries mandatory with an exception for practice approaches. Previously, approach assignment entries were used and suggested.

2-2-1. Usage
Modified language to make approach runway entries mandatory rather than approach assignment entries.

2-2-3. Approach Assignee
a. Added subparagraph a., which requires controllers to enter approach runways into Scratchpad #1 instead of abbreviated approach types.
b. Added subparagraph b., which requires controllers to enter approach types into Scratchpad #2 if they differ from the approach type advertised in the airport's ATIS.

2-2-4. Special Approach Variants
Deleted paragraph.

2-2-5. Entry Format
Deleted paragraph.

2-2-6. Approach Type/Variant Abbreviations
a. Recategorized paragraph to 2-2-4. Was previously 2-2-6.
b. Updated approach type reference to 2-2-3.b. Was previously 2-2-5.a.
c. Updated Table 2-2-1, adding LOC Y, LOC Z, HI-ILS, and HI-TACAN abbreviations. All abbreviations are now three letters instead of one.

2-3-1. Format
Added a note detailing exceptions to using Table 2-3-1 for Scratchpad #2 when the approach type is entered or the aircraft is conducting a practice approach.

2-3-2. Coordination
Added a note acknowledging that Table 2-3-1 is not all-encompassing and when verbal coordination may still be required.

2-3-3. Approved Entries
Updated Table 2-3-1, removing “PA” and “XOX” as approved entries.

3-1-1. Format

a. Added an exception to placing approved entries in Scratchpad #1 when the aircraft is conducting a practice approach.
b. Added a note detailing exceptions to using Table 3-1-1 for Scratchpad #2.

3-1-2. Coordination
Modified language for clarity and consistency.

3-1-3. Approved Entries

a. Updated Table 3-1-1, removing “PA,” “S,” and “XOX” as approved entries and adding “FS” as an approved entry.
b. Removed Note 2, which detailed supplemental entries when “PA” was used.

4-1-1. Usage
Added paragraph.

4-1-2. Coordination
Added paragraph.

4-1-3. Scratchpad #1
Added paragraph.

4-1-4. Scratchpad #2
Added paragraph.

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Chapter 1. Administrative

Section 1. Introduction

1-1-1. Purpose
This document establishes procedures for scratchpad entry and coordination at Unrestricted and Tier 2 Terminal Radar Approach Control (TRACON) and Radar Approach Control (RAPCON) facilities within the Denver ARTCC on VATSIM (vZDV).

1-1-2. Audience
All vZDV controllers and visitors contained within the vZDV and VATUSA roster.

1-1-3. Distribution
This document is authorized for unrestricted use and release and is available in the Resources Section of the vZDV Website.

1-1-4. Cancellation
This document cancels and supersedes ZDV Scratchpad Directive (7210.1A), effective January 1, 2025.

Section 2. Supplements

1-2-1. Requirements

All members listed on the vZDV roster that are authorized to control any Approach Control and/or Departure Control positions at facilities designated as “Unrestricted” or “Tier 2” in accordance with the VATSIM Global Controller Administration Policy (GCAP) must adhere to the provisions contained herein.

NOTE-

1. *Regardless of top-down status, scratchpad entry usage is mandatory for all radar positions.*
2. *Individual facility SOPs take precedence over this document. Should any contradiction appear in an individual facility’s SOP, those clauses contained in the SOP must be adhered to.*

1-2-2. Enroute Fourth-Line Data Entries

The provisions contained herein must not apply to Enroute controllers. A list of approved Fourth-Line Data entries for ERAM full data blocks may be found in FAA JO 7110.65, paragraph 5-4-10, as well as the ZDV ARTCC SOP.

Chapter 2. IFR Scratchpad Entries

Section 1. Automation

2-1-1. Automatic Departure Scratchpad Entries

At some facilities within the Denver ARTCC, Scratchpad #1 of certain departure aircraft full data blocks will automatically populate with the aircraft's exit fix or gate. This is primarily used as a memory aid and may be cleared at the departure controller's discretion.

2-1-2. Automatic Arrival Scratchpad Entries

At all facilities within the Denver ARTCC, Scratchpad #1 of an arrival aircraft's full data block will automatically populate with the aircraft's arrival airport, abbreviated to the FAA three-letter airport identifier. This is primarily used as a memory aid and must be overwritten with the approach runway scratchpad, entered in accordance with section 2-2, except when the aircraft is conducting practice approaches (see chapter 4).

Section 2. Approach Assignment

2-2-1. Usage
Regardless of the airport an IFR arrival aircraft is inbound to, all aircraft assigned an instrument approach must have, at a minimum, an approach runway scratchpad entry made in accordance with the provisions of this section, except when the aircraft is requesting a practice approach (see chapter 4).

2-2-2. Limitations
Scratchpad entries are limited to three (3) characters. Therefore, information contained in scratchpads must be heavily abbreviated. When making scratchpad entries to communicate an approach assignment, controllers must make entries in accordance with the procedures contained within this section.

2-2-3. Approach Assignee
The controller that is responsible for assigning an approach to pilots must:

a. Place the approach runway into Scratchpad #1 of the aircraft's full data block. Approach runways should be entered exactly as they appear and must not be abbreviated.

   EXAMPLE-
   1. *Runway 3 is entered as "3".*
   2. *Runway 13 is entered as "13".*
   3. *Runway 35R is entered as "35R".*

b. Place the approach type (e.g. ILS, RNAV, etc.) into Scratchpad #2 of the aircraft's full data block, abbreviated in accordance with paragraph 2-2-4, when an aircraft's assigned approach type differs from the approach type advertised in the destination airport's ATIS.

2-2-4. Approach Type/Variant Abbreviations
When abbreviating the approach type and variation in accordance with paragraph 2-2-3.b., Table 2-2-1 must be used.

Table 2-2-1. Approach Type and Variant Abbreviations

Approach Type/Variant	Scratchpad Entry
Visual	VIS
ILS	ILS
LOC	LOC
LOC Y	LOY
LOC Z	LOZ
RNAV	RNV
RNAV W	RNW
RNAV X	RNX
RNAV Y	RNY
RNAV Z	RNZ
VOR or VOR/DME	VOR
LDA	LDA
NDB	NDB
TACAN or TACAN Y	TAC
HI-ILS	HII
HI-TACAN or HI-TACAN Z	HIT
Contact	CON

Section 3. Other Approved Entry Usage

2-3-1. Format
Entries made in accordance with Table 2-3-1 must be placed in Scratchpad #2 of the aircraft's full data block.

NOTE-
When the approach type is entered into Scratchpad #2 in accordance with paragraph 2-2-3.b., or the missed approach instruction is entered into Scratchpad #2 in accordance with paragraph 4-1-4, scratchpad entries listed within this section should not be utilized and verbal coordination should be accomplished to transfer the information to other controllers.

2-3-2. Coordination
The entries listed in Table 2-3-1 shall be considered valid coordination when placed in Scratchpad #2 of an aircraft's full data block. If an approved entry from Table 2-3-1 is utilized, verbal coordination of the entered item is not required.

NOTE-
Table 2-3-1 is not all-encompassing of situations a controller may encounter, but covers the most common situations that would normally require coordination with another sector. Verbal coordination may still be required for unusual situations that are not covered in Table 2-3-1 and will affect another sector.

2-3-3. Approved Entries
The following entries listed in Table 2-3-1 may be utilized in accordance with the provisions of this section. Example entries are listed in Table 2-3-2.

Table 2-3-1. Approved Secondary Scratchpad Entries

Entry	Meaning
xxK	Aircraft assigned specific speed (speed in tens of knots).
Hxx	Aircraft assigned specific heading (heading in tens of degrees).
VS	Aircraft is maintaining visual separation from the aircraft directly ahead.
REQ	Pilot has a request.
S	Aircraft reported destination airport in sight.
HLD	Aircraft holding.

NOTE-
Entries in Table 2-3-1 with lowercase “xx” denote entries with several possible designators. See Table 2-3-2 for examples.

Table 2-3-2. IFR Primary Scratchpad Entry Examples

Entry	Meaning
18K	Aircraft assigned 180 knots.
21K	Aircraft assigned 210 knots.
H05	Aircraft assigned heading 050°.
H22	Aircraft assigned heading 220°.

Chapter 3. VFR Scratchpad Entries

Section 1. Usage

3-1-1. Format
Entries made in accordance with Table 3-1-1 must be placed in Scratchpad #1 of the aircraft's full data block, except when the aircraft is conducting a practice approach, in which case they must be placed in Scratchpad #2.

NOTE-
When the missed approach instruction is entered into Scratchpad #2 in accordance with paragraph 4-1-4, scratchpad entries listed within this section should not be utilized and verbal coordination should be accomplished to transfer the information to other controllers.

3-1-2. Coordination
The entries listed in Table 3-1-1 shall be considered valid coordination when placed in the appropriate scratchpad of an aircraft's full data block. If an approved entry from Table 3-1-1 is utilized, verbal coordination of the entered item is not required.

3-1-3. Approved Entries
The following entries listed in Table 3-1-1 may be utilized in accordance with the provisions of this section. Example entries are listed in Table 3-1-2.

Table 3-1-1. Approved VFR Scratchpad Entries

Entry	Meaning
Axx	Aircraft restricted at or above specific altitude (altitude in hundreds of feet).
Bxx	Aircraft restricted at or below specific altitude (altitude in hundreds of feet).
FS	Aircraft requesting full-stop landing.
TG	Aircraft requesting touch-and-go.
SG	Aircraft requesting stop-and-go.

NOTE-
Entries in Table 3-1-1 with lowercase "xx" denote entries with several possible designators. See Table 3-1-2 for examples.

Table 3-1-2. VFR Scratchpad Entry Examples

Entry	Meaning
A75	Aircraft restricted at or above 7,500 feet.
B85	Aircraft restricted at or below 8,500 feet.

Chapter 4. Practice Approaches

Section 1. General

4-1-1. Usage

When any aircraft is conducting a practice approach, regardless of the aircraft's flight rules, scratchpad entries must be made in accordance with this section. Entries into Scratchpad #1, as described in paragraph 4-1-3, are always required to be utilized.

4-1-2. Coordination

The entries listed in this section shall be considered valid coordination when placed in the appropriate scratchpad of an aircraft's full data block, as described in this section. If an approved entry is utilized, verbal coordination of the entered item is not required.

4-1-3. Scratchpad #1

When any aircraft is conducting a practice approach, an approach assignment scratchpad entry must be entered into Scratchpad #1. All practice approach assignment scratchpad entries must conform to the following format:

a. First character: Approach type and, if applicable, approach variation. Abbreviate in accordance with Table 4-1-1.

Table 4-1-1. Practice Approach Type and Variant Abbreviations

Approach Type/Variant	Scratchpad Entry
ILS	I
LOC	L
RNAV	R
RNAV Y	Y
RNAV Z	Z
VOR or VOR/DME	O
LDA	D
NDB	N
TACAN	T

NOTE-
RCA has multiple TACAN and LOC variations to Runway 13 and 31. Unless assigning the Z variation, write "T" or "L" in the first character to signify that the TACAN Y or LOC Y variation has been assigned. Aircraft must still be notified which variation of approach to expect. When assigning the Z variation, verbal coordination must be accomplished.

b. Second character: Runway number. If a runway number contains more than one number, abbreviate to use the second number. If the approach is classified as a circling approach only (no runway specified), utilize the approach variant (A, B, C, etc.).

EXAMPLE-
1. *Runway 8 would be abbreviated as "8."*
2. *Runway 15 would be abbreviated as "5."*

c. Third character: Runway designator (L/R/C), if applicable.

EXAMPLE-
Runway 35R would be abbreviated as "5R."

4-1-4. Scratchpad #2
When any aircraft is conducting a practice approach and the approach controller issues missed approach instructions (in lieu of the local controller issuing them), an approved entry listed in Table 4-1-2 must be entered into Scratchpad #2. Example entries are listed in Table 4-1-3.

Table 4-1-2. Practice Approach Missed Approach Instruction Entries

Entry	Meaning
PM	Aircraft instructed to fly the published missed approach procedure.
Mxx	Aircraft instructed to fly a specific heading upon missed approach (heading in tens of degrees).

NOTE-
1. *The lowercase "xx" in "Mxx" indicates that there are several possible designators for this entry. See Table 4-1-3 for examples.*
2. *The entries contained in Table 4-1-2 must take precedence over other scratchpad entries contained in Table 2-3-1 and/or Table 3-1-1. When information from the latter tables must be coordinated, verbal coordination should be accomplished.*

Table 4-1-3. Practice Approach Missed Approach Instruction Entry Examples

Entry	Meaning
M01	Aircraft instructed to fly heading 010° upon missed approach.
M17	Aircraft instructed to fly heading 170° upon missed approach.