



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Traffic Organization Policy

ORDER
JO 7210.629C

Effective Date:
February 01, 2016

SUBJ: Next Generation Weather Radar (NEXRAD) Weather and Radar Processor (WARP) Selectable Mosaic Generator (SMG) and the process to change an En Route Automation Modernization (ERAM), Micro En Route Automated Tracking System (MEARTS), and Advanced Technological Oceanic Procedures (ATOP) precipitation altitude strata and the corresponding Weather Filter Setting key label

1. Purpose of This Order. This draft order provides guidance for requesting and implementing precipitation altitude stratum change at the 21 Air Route Traffic Control Center (ARTCC), three Combined En Route and Approach (CERAP), and three Oceanic facilities where ERAM, MEARTS, and ATOP are located.

2. Audience. Air Traffic Organization, William J. Hughes Technical Center, Mike Monroney Aeronautical Center, and En Route and Oceanic air traffic control facilities.

3. Where Can I Find This Order? This order will be available on the MYFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/ and on the air traffic publications Web site at http://www.faa.gov/air_traffic/publications.

4. Cancellation. Order JO 7210.629B, Next Generation Weather Radar (NEXRAD) Weather and Radar Processor (WARP) Recommended Settings for Host, En Route Automation Modernization (ERAM), Ocean 21 Facilities, and Certain Micro En Route Automated Tracking System (MEARTS) Facilities is canceled when SMG is deployed to the facility.

5. Summary of Policy Changes. The procedural guidance in this draft order removes the requirement for fixed Weather Filter Setting key altitudes, i.e. 000-240, 240-600, 330-600, and 000-600, and allows facilities to request and implement new Weather Filter Setting key altitude strata to better align with facility Sector altitude strata. WARP precipitation stratification will be configurable in 1000 foot increments. The number of Weather Filter Setting keys remains unchanged at four.

6. Guidance. The following table describes the legacy Weather Filter Setting key stratum and the new WARP SMG products. If the facility does not request a new precipitation altitude stratum per Paragraph 7, then SMG will be deployed to the facility and configured to match the Existing Weather Filter Setting key stratum.

Generalized Sector's Control Altitude Stratum	Existing Weather Filter Setting Key	SMG Altitude Stratum	SMG Non-Weather Echo Removal	SMG Effective Range	SMG Latency (seconds)
Low	000-240	[Selectable] - 600	Enabled	248 nmi.	30-300
High	240-600	[Selectable] - 600	Enabled	248 nmi	30-300
Super High	330-600	[Selectable] - 600	Enabled	248 nmi	30-300
Composite	000-600	[Selectable] - 600	Enabled	248 nmi	30-300

7. Action. An en route or oceanic facility can request a change to one or more of the Weather Filter Setting key altitude stratum to more closely match that of the facility's Sectors. The facility representative can choose to define the precipitation altitude strata floor and ceiling in 1000 foot increments.

The Weather Filter Setting key label text is local adaptation. The WARP Prime Contractor Helpdesk and the Local Automation System Support Center (SSC) must make the SMG configuration and Weather Filter Setting key label text change simultaneously to prevent a mismatch between the precipitation altitude stratification and the Weather Filter Setting key label. The procedures for requesting and implementing a change to precipitation altitude stratification and the corresponding Weather Filter Setting key label are:

- The En Route or Oceanic facility Air Traffic Manager will make a written email request to the Program Office Field Manager (POFM) identifying the:
 - Desired new stratification,
 - Existing Weather Filter Setting key it is to replace, and
 - Desired timeframe for implementation.
- The POFM will forward the request to the WARP Program Office. WARP Program Office requests a lead-time of a minimum of 30 business days to allow sufficient Tech Ops and Prime Contractor coordination and System Support Directive (SSD) issuance.
- WARP Program Office will notify the POFM of approval and facility personnel will be responsible for submitting an Adaptation Request in lieu of a Local National Airspace System (NAS) Change Proposal (NCP). WARP Program Office will coordinate the approved change with WARP Second Level Engineering Support and the WARP Prime Contractor.
- WARP Second Level Engineering Support will issue an SSD and schedule the change with the WARP Prime Contractor and the Local Automation SSC.
- The Air Traffic Manager is responsible for identifying the applicable Weather Filter Setting key to be used for each Sector in a local directive and ensuring that controllers working operational positions are appropriately briefed on any changes to the Weather Filter Setting keys.

8. Distribution. This notice is distributed to the Air Traffic Organization, William J. Hughes Technical Center, Mike Monroney Aeronautical Center, and En Route and Oceanic air traffic control facilities.

9. Background. The new procedural guidance in this directive is based on the analyses, design, testing, and evaluation of SMG. The legacy WARP Baseline Mosaic Generator (BMG) produces precipitation mosaics that have 5-10 minute latency, limited coverage range, fixed altitude strata, and non-weather echo removal available for only one Weather Filter Setting key. SMG will reduce the latency to 0.5-5 minutes, double the coverage range to 248 nautical miles for all Weather Filter Setting keys, allow precipitation altitude strata to be selectable in 1000 foot increments, and enable non-weather echo removal for all Weather Filter Setting keys. In addition, the controllers will see an improvement to the mosaics' spatial resolution when SMG is deployed. There will be no changes to the number of Weather Filter Setting keys, nor any change to the precipitation intensity color representations. Existing procedure in FAA Order 7110.65, Air Traffic Control, Paragraph 2-6-4, Weather and Chaff services shall still be used to report any anomalies in NEXRAD WARP presentation.

SMG will help mitigate the following air traffic control safety issues and inefficiencies experienced by en route and oceanic controllers using BMG:

- Controller advised a pilot of oncoming weather and the pilot reported there was none because non-weather was displayed on the controller's situation display.
- Controller advised a pilot of oncoming weather and the pilot reported there was none because the controller's displayed precipitation was below the aircraft.
- A pilot requested a deviation around weather that was not displayed on the controller's situation display because the controller's precipitation data was latent or not displayed.

10. Safety Risk Management. Please refer to Safety Management Tracking System (SMTS) #00127.

Original signed by Heather Hemdal

December 18, 2015

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Date