

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N.7110.424

Cancellation Date:
November 29, 2006

SUBJ: **PILOT/CONTROLLER GLOSSARY – ASDE**

- 1. PURPOSE.** This notice amends the definition of Airport Surface Detection Equipment and adds definitions for Safety Logic System and Safety Logic System Alerts.
- 2. DISTRIBUTION.** This notice is distributed to Air traffic Organization offices in Washington headquarters, Air Traffic Organization – Flight Service, Terminal, and Enroute Service Areas, The Mike Monroney Aeronautical Center, The William J. Hughes Technical Center, and all air traffic field facilities.
- 3. EFFECTIVE DATE.** This notice is effective November 30, 2005.
- 4. BACKGROUND.** With the introduction of ASDE-X and ASDE-3X into the National Airspace system, it is necessary to include these systems in the Pilot/Controller Glossary.
- 5. PROCEDURES.** The following changes, indicated in bold type, are implemented on the effective date of this notice. Definitions for Safety Logic System and Safety Logic System Alerts are added, and the definition of AMASS is deleted.

AIRPORT SURFACE DETECTION EQUIPMENT- **Surveillance** equipment specifically designed to detect aircraft, vehicular traffic, **and other objects, on the surface of an airport**, and to present the image on a tower **display**. Used to augment visual observation by tower personnel of aircraft and/or vehicular movements on runways and taxiways. **There are three ASDE systems deployed in the NAS:**

- a. ASDE-3 – a Surface Movement Radar.**
- b. ASDE-X – a system that uses an X-band Surface Movement Radar and multilateration. Data from these two sources are fused and presented on a digital display.**
- c. ASDE-3X – an ASDE-X system that uses the ASDE-3 Surface Movement Radar.**

Safety Logic System – A software enhancement to ASDE-3, ASDE-X, and ASDE-3X, that predicts the path of aircraft landing and/or departing, and/or vehicular movements on runways. Visual and aural alarms are activated when logic projects a potential collision. The Airport Movement Area Safety System (AMASS) is a safety logic system enhancement to the ASDE-3 and ASDE-3X systems. The Safety Logic System for ASDE-X is an integral part of the software program.

Distribution:

Initiated By: ATO-T Airspace Procedures

W-X, X-X, Y-1, Z-1(AT/TO/TR/TS)-2, A-X (AT)-3

Safety Logic System Alerts:

a. Alert - An actual situation involving two real safety logic tracks (aircraft/aircraft, aircraft/vehicle, or aircraft/other tangible object) that safety logic has predicted will result in an imminent collision, based upon the current set of Safety Logic parameters.

b. False Alert –

1. Alerts generated by one or more false surface-radar targets that the system has interpreted as real tracks and placed into safety logic.

2. Alerts in which the safety logic software did not perform correctly, based upon the design specifications and the current set of Safety Logic parameters.

c. Nuisance Alert – An alert in which one or more of the following is true:

1. The alert is generated by a known situation that is not considered an unsafe operation, such as LAHSO or other approved operations.

2. The alert is generated by inaccurate secondary radar data received by the Safety Logic system.

3. The alert is generated by surface radar targets caused by moderate or greater precipitation.

4. One or more of the aircraft involved in the alert is not intending to use a runway (i.e. helicopter, pipeline patrol, non Mode-C overflight, etc.).

d. Valid Non-Alert – A situation in which the safety logic software correctly determines that an alert is not required, based upon the design specifications and the current set of Safety Logic parameters.

e. Invalid Non-Alert – A situation in which the safety logic software did not issue an alert when an alert was required, based upon the design specifications.



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