

## APPENDIX I

# GLOSSARY AND ACRONYMS

- A/A**-Air to air.
- AAB**-Aviation armament bulletin.
- AAC**-Aviation armament change.
- ABSLA**-Approved basic stock level of ammunition.
- ACM**-Air combat maneuver.
- AFB**-Airframe bulletin.
- AFC**-Airframe change.
- AFTER ENGINE TURNUP**-That time in the prior-to-launch phase when the pilot has completed his pretaxi checklist.
- AFTER LANDING/GROUND ABORT**-That time after landing or ground abort phase when the pilot has completed the after landing checklist.
- A/G**-Air to ground.
- AGM**-Air-launched, surface attack guided missile.
- AIM**-Air-launched, aerial intercept guided missile.
- AIMD**-Aviation intermediate maintenance department.
- AIRBORNE STORE**-Fuel and spray tanks, non-expendable training weapons, pods (refueling, gun, ECM, etc.). This includes all similar items intended for carriage by aircraft, including racks launchers, and detachable pylons that do not normally separate from the aircraft in flight.
- AIRBORNE WEAPON**-All missiles, rockets, bombs, mines, torpedoes, and all similar items intended for carriage by aircraft that are normally separated from the aircraft in flight.
- AIRCRAFT ARMAMENT SYSTEM**-Aircraft armament subsystems that, when interconnected, give the aircraft its airborne weapons/stores capability.
- AIRCRAFT CONFIGURATION**-The system and components required to carry or deliver a specific airborne weapon/store.
- AIRCRAFT LOAD PLAN**-A chart/form used to assign weapons to a particular bomb rack/station for loading.
- AMAC**-Aircraft monitor and control. Functional tests of the aircraft monitor and control system, release system, and jettison system for nuclear weapons.
- AOCS**-Aviation ordnance control station.
- ARM**-Antiradiation missile.
- ARM, ARMING**-The action that changes ammunition from a safe condition to a state of readiness for initiation.
- ASW**-Antisubmarine warfare.
- AT**-Arming time.
- ATM**-Air-launched, training, guided missile.
- AT/PERS**-High-explosive antitank/antipersonnel.
- ATR**-Ammunition transaction report.
- AUR**-All-up-round. The complete assembly of a weapon normally shipped to the operating forces. The weapon requires no assembly or functional checks before loading on the aircraft for delivery to the target.
- AVB**-Avionics bulletin.
- AVC**-Avionics change.
- AWB**-Airborne weapons bulletin.
- AWC**-Airborne weapons change.
- AYB**-Accessory bulletin.
- AYC**-Accessory change.
- BD**-Base detonating.
- BDU**-Bomb dummy unit.
- BEFORE ENGINE TURNUP**-That time in the prior-to-launch evolution when the pilot is commencing general aircraft ground inspection or checks and extending until the inspections or checks are complete.
- BIT, BITE**-Built-in test.
- BPDSMS**-Basic Point Defense Surface Missile System.
- CAD**-Cartridge-actuated device.

**CAIMS**-Conventional Ammunition Integrated Management System.

**CARTRIDGE**-A complete assembly consisting of an initiator and a pressure-producing propellant in a suitable case. Impulse cartridges have no projectiles. A cartridge may be electrically or mechanically fired.

**CAUTION**-An operating procedure, practice, or condition that, if not strictly observed, could result in damage to or destruction of equipment.

**CBU**-Cluster bomb unit. It consists of a number of bombs contained in a dispenser or clustering device and suspended from a bomb rack. A CBU may function while on the rack or after release.

**CCG**-Computer control group.

**CCO**-Combat cargo officer.

**CG**-Center of gravity.

**CHAFF**-A radar reflective material used to deceive or counteract unfriendly radar or destructive offensive ordnance.

**CHECKLIST**-An individual sequence of procedures bearing a title and constituting a part of a publication designated as the loading checklist.

**CINCLANTFLT**-Commander-in-Chief Atlantic Fleet.

**CINCPACFLT**-Commander-in-Chief Pacific Fleet.

**CNO**-Chief of Naval Operations.

**CO**-Commanding Officer.

**COG**-Cognizance symbol. Indicates the command, bureau, or office that has control over supply and/or distribution of the material.

**CONVENTIONAL WEAPONS**-Nonnuclear weapons. This excludes all biological weapons and generally excludes chemical weapons except for existing smoke, incendiary agents, and agents of riot-control weapons.

**CV**-Aircraft carrier.

**CVN**- Nuclear aircraft carrier

**DAAS**-Defense Automatic Addressing System.

**DEARMING AREA**-That area where a weapon is changed from a state of readiness for initiation to a safe condition. When forward-firing weapons are involved, the area ahead of the aircraft must be clear and kept clear until weapon safing procedures are completed.

**DODIC**-Department of Defense Identification Code.

**DOT**-Department of Transportation.

**DOWNLOADING**-An operation that removes airborne weapons/stores from aircraft.

**DROPPING SAFE**-Releasing an airborne weapon/store in a safe or unarmed condition so that it will not function upon impact.

**DST**-Destructor.

**DTRM**-Dual-thrust rocket motor.

**DUD**-Explosive ammunition that has failed to function.

**ECCM**-Electronic counter-countermeasures.

**ECM**-Electronic countermeasures.

**EEA**-External evidence of arming.

**EED**-Electroexplosive device.

**EMCON**-Emission control.

**EOD**-Explosive ordnance disposal.

**ERDL**-Extended range data link.

**EXPLOSIVE ORDNANCE DISPOSAL UNIT**- Personnel with special training and equipment who render explosive ordnance safe, make intelligence reports, and supervise the safe removal of ordnance.

**FCLP**-Field carrier landing practice.

**FFAR**-Folding-fin aircraft rocket.

**FFT**-For further transfer.

**FORWARD-FIRING WEAPONS**-Weapons, such as missiles, rockets, and guns, that are propelled in a forward direction.

**FSC**-Federal supply class.

**FUZE**-A term used for the mechanical or electrical device that initiates detonation of an explosive at a desired time.

**GBI**-Gains by inventory.

**GBU**-Guided bomb units.

**GCBS**-Ground controlled bombing system. Weapons are released from the aircraft by a controller on the ground.

**GCG**-Guidance control group.

**GCU**-Gun control unit.

**GP**-General purpose.

**GUIDED WEAPON**-A weapon that has no propulsion but does have guidance control capability.

**HARM**-High-speed, antiradiation missile.

**HDC**-Helicopter Direction Center.

**HE**-High explosive.

**HEAT**-High-explosive antitank.

**HE-FRAG**-High-explosive fragmentation.

**HEI**-High-explosive incendiary.

**HERO**-Hazardous electromagnetic radiation to ordnance.

**HTW**-Helicopter trap weapon.

**HUD**-Head-up display.

**HUNG WEAPON**-A weapon that accidentally remains attached to an aircraft after an attempt to release it from the rack.

**IF APPLICABLE**-Used to preface a step/procedure meaning that, when required, must be performed. When the step/procedure is not required, it may be omitted.

**IFOBRL**-In-flight operable bomb rack lock.

**IMER**-Improved multiple ejector rack

**INTERVALOMETER**-An electrical or electro-mechanical device that controls the release or firing of airborne weapons/stores at a specified interval or sequence.

**IPDSMS**-Improved Point Defense Surface Missile System.

**IPB**-Illustrated parts breakdown.

**IRRP**-Improved Rearming Rate Program.

**ITER**-Improved triple ejector rack

**IWHS**-Improved Weapons Handling System.

**JADM**-Joint Direct Attack Munition

**JATO**-Jet-assist takeoff.

**JETTISON**-Releasing of an airborne weapon or store by an emergency or secondary release system.

**JSOW**-Joint standoff weapon

**LABS**-Low altitude bombing system.

**LALS**-Linkless Ammunition Loading System.

**LBI**-Loss by inventory.

**LDGP**-Low-drag, general purpose.

**LEMA**-Linear electromechanical actuator.

**LGB**-Laser-guided bomb.

**LGTR**-Laser guided training round (LGTR).

**LSFFAR**-Low-spin, folding-fin, aircraft rocket.

**MACH**-A measurement of sonic speed under standard atmospheric conditions. Mach 1.0 is about 766 miles per hour.

**MDD**-Maintenance due date.

**MER**-Multiple ejector rack.

**MIARS**-Maintenance Information Automated Retrieval System.

**MILSTRIP**-Military Standard Requisitioning and Issue Procedures.

**MIM**-Maintenance instruction manual.

**MOAT**-Missile on aircraft test.

**MOD**-Modification.

**MOMAG**-Mobile mine assembly group.

**MRC**-Maintenance requirements card.

**NADEP**-Naval ammunition depot.

**NALC**-Naval ammunition logistics code.

**NAPI**-Naval Aeronautic Publications Index.

**NAR**-Naval ammunition reclassification.

**NATO**-North Atlantic Treaty Organization.

**NATOPS**-Naval Air Training and Operating Procedures Standardization.

**NATSF**-Naval Air Technical Services Facility.

**NAVAIRSYSCOM**-Naval Air Systems Command.

**NAVSEASYSYSCOM/NAVSEA**-Naval Sea Systems Command.

**NAVSUPSYSCOM/NAVSUP**-Naval Supply Systems Command.

**NIIN**-National item identification number.

**NOMMP**-Naval ordnance maintenance management program.

**NOTE**-An operating procedure, practice, or condition that is essential to highlight.

**NSN**-National stock number.

**NWS**-Naval weapons station.

**OD**-Ordnance data.

**OIC**-Officer in charge.

**OHO**-Ordnance handling officer.

**OJT**-On-the-job training.

**OP**-Ordnance publication.

**PD**-Point detonating.

**PMIC**-Periodic maintenance inspection cards.

**PMS**-Preventive Maintenance System.

**PWP**-Plasticized white phosphorus.

**Q-D**-Quantity-distance.

**RAC**-Rapid action change. Issued to provide timely information of changes to manuals.

**RADHAZ**-Radiation Hazards to Ordnance.

**RAT**-Ram air turbine.

**RDD**-Required delivery date.

**REARMING AREA**-That area where an operation that replenishes the prescribed airborne weapons/stores, ammunition, bombs, and other armament items for an aircraft is conducted. This operation may include fuzing and any stray voltage checks, as applicable.

**RELEASE AND CONTROL SYSTEM CHECK**-Functional test of an aircraft electrical/mechanical conventional weapon release and/or control subsystem.

**RF**-Radio frequency.

**RIM**-Ship-launched intercept-aerial guided missile.

**ROLMS**-Retail ordnance logistics management system

**RPM**-Rounds per minute.

**S&A**-Safety and arming device.

**SASS**-Special armament stowage space.

**SAT**-Safe air travel.

**SATS**-Short airfield tactical site.

**SEAM**-Sidewinder expanded acquisition mode. A means of slaving the AIM-9 optics to the air intercept radar to enhance tactical employment.

**SEB**-Support equipment bulletin.

**SEC**-Support equipment change.

**SLC**-Sonobuoy launch tube.

**SPCC**-Ships Parts Control Center.

**SRC**-Stores reliability card.

**STRAY VOLTAGE**-An undesired voltage existing between two specified points of a weapon system that is capable of producing a flow of current when a designated electrical measuring device is connected between the two points.

**SWL**-Safe working load.

**SWP**-Subordinate work package.

**TACO or TACCO**-Tactical coordinator.

**TALD**-Tactical air-launched decoy.

**TCB**-Target control system bulletin.

**TDD**-Target detecting device.

**TER**-Triple ejector rack.

**TMDC**-Type Maintenance Due code.

**TMINS**-Technical Manual Identification Numbering System.

**TPDR**-Technical Publication Deficiency Report.

**TRAMAN**-Training manual.

**UNO**-United Nations Organization.

**UIC**-Unit Identification Code.

**VER**-Vertical ejector rack.

**VT**-Proximity fuze, so called because the original devices contained one or more vacuum tubes.

**WAM**-Weapons assembly manual

**WARNING**-An operating procedure, practice, or condition that, if not correctly followed, could result in personal injury or loss of life.

## APPENDIX II

# REFERENCES USED TO DEVELOP THIS TRAMAN

**NOTE:** Although the following references were current when this TRAMAN was published, their continued currency cannot be assured. Therefore, you need to be sure that you are studying the latest revision.

### Chapter 1

*Airborne Weapons Assembly Manual, Mk 80/BLU Series Bombs, Mk 77 Fire Bombs, and Practice Bombs*, NAVAIR 11-140-5, Commander, Naval Air Systems Command, Washington, D.C., 1 April 2000.

*Airborne Weapons Assembly Manual, Paveway II, III, JDAM, and GBU's*, NAVAIR 11-140-10, Commander, Naval Air Systems Command, Washington, D.C., 1 April 2000.

*Airborne Weapons/Stores Loading Manual, Navy Model F-14A/B/D Aircraft*, NAVAIR 01-F14AAA-75, Commander, Naval Air Systems Command, Washington, D.C., 1 July 1998, Change 2 of 15 February 2000.

*Airborne Weapons/Stores Loading Manual, Navy Model F/A-18A/B/C/D Aircraft 161353 and Up*, A1-F18AE-LWS-000, Commander, Naval Air Systems Command, Washington, D.C., 1 May 1996, Change 4 of 15 June 1999.

*Airborne Weapons/Stores Loading Manual, Navy Model P-3 Aircraft*, NAVAIR 01-75PA-75, Commander, Naval Air Systems Command, Washington, D.C., 1 June 1997.

*Airborne Weapons/Stores Loading Manual, Navy Model S-3 Aircraft*, NAVAIR 01-S3AAA-75, Commander, Naval Air Systems Command, Washington, D.C., 1 August 1996.

*Aircraft General Purpose Bombs, Fire Bombs, Practice Bombs, and Components*, NAVAIR 11-5A-17, Commander, Naval Air Systems Command, Washington, D.C., 1 December 1998, Change 1 of 1 July 2000.

*Cluster Bomb Units*, NAVAIR 11-140-9, Commander, Naval Air Systems Command, Washington, D.C., 1 February 1998, Change 2 of 1 September 2000.

*Description and Characteristics Airborne Bomb and Rocket Fuze Manual*, NAVAIR 11-1F-2, Commander, Naval Air Systems Command, Washington, D.C., 1 September 1997, Change 1 of 1 December 1998.

*Dispenser and Mine Aircraft Weapon CBU-78/B (GATOR)*, NAVAIR 11-5A-33, Commander, Naval Air systems Command, Washington, D.C., 3 December 1987.

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*Naval Ordnance Maintenance Management Program (NOMMP), OPNAVINST 8000.16*, Chief of Naval Operations, Washington, D.C., 1 September 1999.

*United States Navy Ordnance Safety Precautions*, NAVSEA OP 3347, Second Revision, Commander, Naval Sea Systems Command, Washington, D.C., 15 February 1972, Change 13 of 1 December 1986.

## **Chapter 2**

*Aircraft Rocket Systems 2.75-inch and 5.0-inch*, NAVAIR-75A-92, Commander, Naval Air Systems Command, Washington, D.C., 30 June 1999.

*Description and Characteristics Airborne Bomb and Rocket Fuze Manual*, NAVAIR 11-1F-2, Commander, Naval Air Systems Command, Washington, D.C., 1 September 1997, Change 1 of 1 December 1998.

*Naval Ordnance Maintenance Management Program (NOMMP)*, OPNAVINST 8000.16, Chief of Naval Operations, Washington, D.C., 1 September 1999.

*United States Navy Ordnance Safety Precautions*, NAVSEA OP 3347, Second Revision, Commander, Naval Sea Systems Command, Washington, D.C., 15 February 1972, Change 13 of 1 December 1986.

## **Chapter 3**

*Aircraft Guided Missile Launcher, LAU-7/A Series*, NAVAIR 11-75A-54, Commander, Naval Air Systems Command, Washington, D.C., 1 February 1998.

*Aircraft Guided Missile Launcher, LAU-115/A, A/A, B/A, C/A*, AW-394AC-750-000, Commander Naval Air Systems Command, Washington, D.C., 1 June 1998.

*Aircraft Guided Missile Launcher, LAU-118(V)1/A*, NAVAIR 11-75A-78, Commander, Naval Air Systems Command, Washington, D.C., 1 May 1998.

*Aircraft Guided Missile Launcher, LAU-117A(V)2/A*, NAVAIR 11-75A-79, Commander, Naval Air Systems Command, Washington, D.C., 1 April 1993.

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## **Chapter 4**

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*Naval Ordnance Maintenance Management Program (NOMMP), OPNAVINST 8000.16*, Chief of Naval Operations, Washington, D.C., 1 September 1999.

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*United States Navy Ordnance Safety Precautions*, NAVSEA OP 3347, Second Revision, Commander, Naval Sea Systems Command, Washington, D.C., 15 February 1972, Change 13 of 1 December 1986.

## **Chapter 5**

*Airborne Weapons/Stores Loading Manual, Navy Model P-3 Aircraft*, NAVAIR 01-75PA-75, Commander, Naval Air Systems Command, Washington, D.C., 1 June 1997.

*Airborne Weapons/Stores Loading Manual, Navy Model S-3 Aircraft*, NAVAIR 01-S3AAA-75, Commander, Naval Air Systems Command, Washington, D.C., 1 August 1996.

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## **Chapter 6**

*Ammunition For Navy 20-MM/25-MM Aircraft Guns, Description, Characteristics, Safety, Maintenance and Packaging*, NAVAIR 11-1-119, Commander, Naval Air Systems Command, Washington, D.C., 30 September 1993.

*Ammunition Handling and Gun Drive System*, NAVAIR 11-95M61A1-2, Commander, Naval Air Systems Command, Washington, D.C., 1 March 1988.

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*United States Navy Ordnance Safety Precautions*, NAVSEA OP 3347, Second Revision, Commander, Naval Sea Systems Command, Washington, D.C., 15 February 1972, Change 13 of 1 December 1986.

## **Chapter 7**

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*Ammunition Handling and Gun Drive System*, NAVAIR 11-95M61A1-2, Commander, Naval Air Systems Command, Washington, D.C., 1 March 1988.

*Linkless Ammunition Loading System, Consisting of Conveyor System, Loader Ammunition transporter, Drum Unload Assembly, Drum Loader Assembly*, NAVAIR 19-1-125, Commander, Naval Air Systems Command, Washington, D.C., 1 March 1988

*Linkless Ammunition Loading System A/K32K-7*, NAVAIR 19-1-269, Commander, Naval Air Systems Command, Washington, D.C., 15 June 1996, Change 1 of 30 September 1998.

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## **Chapter 8**

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## **Chapter 9**

*Airborne Weapons Support Equipment Description and Characteristics*, NAVAIR 11-140-24, Commander, Naval Air Systems Command, Washington, D.C., 1 September 1990.

*Approved Handling Equipment For Weapons and Explosives*, NAVSEA OP 2173, Volume 1, and NAVAIR 19-100-1.1, Commander, Naval Sea Systems Command, Washington, D.C., 15 January 1994, Change 2 of 1 September 1996.

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## **Chapter 10**

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*Bomb Rack BRU-14/A and BRU-15/A*, NAVAIR 11-5E-18, Commander, Naval Air Systems Command, Washington, D.C., 1 April 1999.

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*Improved Multiple Ejector Rack (IMER) BRU-41/A, Improved Triple Ejector Rack (ITER) BRU-42/A, NAVAIR 11-75A-603, Commander, Naval Air Systems Command, Washington, D.C., 1 July 1999.*

*Multiple Ejector Rack (MER) and Triple Ejector Rack (TER), NAVAIR 11-75A-57, Commander, Naval Air Systems Command, Washington, D.C., 1 January 1996, Change 1 of 1 August 1996.*

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*Rack, Ejector Bomb BRU-10/B and Models BRU-11/B, BRU-10/A, BRU-11/A, NAVAIR 11-10C-20, Commander, Naval air systems Command, 1 February 1986, RAC 1 of 5 February 1987.*

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*United States Navy Ordnance Safety Precautions, NAVSEA OP 3347, Second Revision, Commander, Naval Sea Systems Command, Washington, D.C., 15 February 1972, Change 13 of 1 December 1986.*

## **Chapter 11**

*Airborne Weapons Packaging/Handling/Stowage (Shipboard), Volume I, NAVAIR 11-120A-1.1, Commander, Naval Air Systems Command, Washington, D.C., 15 July 1981, Change 10 of 30 March 1995.*

*Ammunition Afloat, NAVSEA OP 4, Fifth Revision, Commander, Naval Sea Systems Command, Washington, D.C., 15 February 1972, Change 19 of 1 August 1997.*

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*Ammunition and Explosives Ashore Safety Regulations for Handling, Storing, Production, Renovation and Shipping*, NAVSEA OP 5, Volume 1, Sixth Revision, Commander, Naval Sea Systems Command, Washington, D.C., 1 March 1995, Change 4 of 1 November 1999.

*Conventional Weapons Handling Procedures Manual (Ashore) NATOPS*, NAVAIR 00-80T-103, Commander, Naval Air Systems Command, Washington, D.C., 15 June 1990.

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## **Chapter 13**

*Airborne Weapons/Stores Loading Manual, Navy Model F-14A/B/D Aircraft*, NAVAIR 01-F14AAA-75, Commander, Naval Air Systems Command, Washington, D.C., 1 July 1998, Change 2 of 15 February 2000.

*Airborne Weapons/Stores Loading Manual, Navy Model F/A-18A/B/C/D Aircraft 161353 and Up*, A1-F18AE-LWS-000, Commander, Naval Air Systems Command, Washington, D.C., 1 May 1996, Change 4 of 15 June 1999.

*Airborne Weapons/Stores Loading Manual, Navy Model P-3 Aircraft*, NAVAIR 01-75PA-75, Commander, Naval Air Systems Command, Washington, D.C., 1 June 1997.

*Airborne Weapons/Stores Loading Manual, Navy Model S-3 Aircraft*, NAVAIR 01-S3AAA-75, Commander, Naval Air Systems Command, Washington, D.C., 1 August 1996.

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