## Aviation Enthusiast Book Club (a closed Facebook group)

## Russia's Air-Launched Weapons (Piotr Butowski)

## A book review by CDR Mark R Condeno, Philippines (1 December 2017)

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Two years ago, Russia stepped up its military presence in its involvement in the Syrian Civil War that begun in 2011, at first Military assistance was provided to the Syrian Forces from the refurbishment of its MI-24 Hind Attack helicopters to the delivery of the Buk Missile System. Three years later in October 2015, Russia unleashed its airpower with an airstrike at rebel strongholds in Rastan, Talbiseh, and Zafaraniya in the Homs province of Syria, utilizing SU-24 Fencer, SU-25 Frogfoot, SU-30 Flanker C and the SU-34 Fullback.

The airstrikes highlighted the air launched weapon systems fielded by the Russian Air Force, from the well-known Cold War era UPK-23-250 gunpod to the MDS-1 Self-Propelled Bottom Mine.

A lavishly and fascinating illustrated tome, notable aviation author Piotr Butowski (Russia's Warplanes Volume 1 & 2) completes the trilogy of coverage on the Russian Air Force with this volume. The book is divided into eight chapters commencing with the service strategic weapons divided into three sections with a brief coverage on the nuclear and a detailed discussion into the present and future level strategic missiles, such as the Kitchen, Kent, Kickback, Club-A and the Brahmos A and NG jointly develop with India.

The second chapter looks into the in-service and future Tactical Air to Surface Missiles (ASM). These covers the KH-25M, KH-31, KH-35 and KH-58, more known in their NATO designations as: Karen, Kedge, Kayak, Kilter while the GROM and KH-36 are talk about on the future TSAM sections. Apart from the primary missile's model the author also discusses its variants.

On the other hand, chapter three captures the Russian arrows of air combat maneuvers from their well-recognized NATO codenames: Aphid, Archer, Acrid, Alamo, Axehead air to air missiles (AAM's). Similar to the earlier sections, they are categorically arrange in to close combat AAM, medium and long range air to air missiles as well as future developments as exemplified by Vympel's Izdeliye 810 missile and NPO Novator K-100 AAM, both are then being eyed as part of the PAK FA's weapon's suite, though the former was the one selected and is now undergoing tests.

Consequently, chapter four cover's the portable anti-aircraft weapons used by the Russian ground troops and helicopter launched anti- tank weapons. Here readers would be treated with the cold war period Spiral anti-tank missile which is within the Hind attack helicopters weapons package, the Scallion or Vikhr-1 missile developed for the Hokum attack helicopter and for the SU-25 Frogfoot, the man portable SA-18 or NATO reporting name Igla-V is also discussed which was develop in 1983 and notably a part of the weapons load of every Russian attack helicopter.

Subsequently, aircraft bombs and rockets comprise the next two parts and again similar to the other sections, it is categorically arrange into those presently in service or part of the order of battle, as well as new types and those currently being develop for the future.

The final two chapters is another cache of information as the author talks about the machine guns, cannons, gun pods in current and future use for the attack helicopters and front-line fighter aircraft and Naval weapons that looks into the anti-submarine torpedoes, missiles, depth charges and the ubiquitous air dropped mines.

As a sea-service officer who has been on board a Kashin Class Destroyer I found this section a treasure trove of knowledge to supplement what I have learned a decade ago. The armaments include the Gsh 6-23 six-barrel cannon in use by the SU-24 Fencer attack aircraft and MIG-31 Foxhound interceptor and the Oryol, Orlan and Yastreb anti-submarine missiles. The aerial mines section is classified into four types: bottom, floating, rocket and self-propelled mines.

The copious range of facts provided per weapon characterizes the books strength. The author's coverage of the weapons history, technical specifications, guidance method and derivative's is to be lauded. The 24 specification's

table, 84 colored and black and white photographs and 6 drawings supplements the book. A brief introduction as to the book's objective and an abbreviation list along with logos of Russian Weapon's Company's is provided which is highly appreciated. Preferably the most updated tome on the subject, Russia's Air-launched Weapons is an essential element in the library of every Russian aviation enthusiast, historians, scale modelers, aircraft profilers and specifically the Fighter Pilots and the Intelligence Community.

Reviewed by CDR Mark R Condeno is currently the Officer In Charge of the PEFTOK Korean War Memorial Hall Museum under the Department of National Defense-Philippine Veterans Affairs Office. He is also the Projects Consultant of the Maritime Historical Branch, Fleet Marine Warfare Center, Philippine Navy. He is also a Graduate of the Aerospace Power Course, Air University, United States Air Force.