The Swedish ak 5 upgrade program

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Agenda

- Current Swedish small arms
- Ongoing Swedish programs
- The ak 5 upgrade program
Current Swedish small arms

- 5.56 mm Ak 5
- 12.7 mm Barrett
- 12.7 mm HMG M2HB QCB
- 7.62 mm PSG 90
- 5.56 mm Minimi
- 40 mm AGL Mk 19
- 9 mm Glock 17
- 40 mm GL M203

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Some ongoing programs

- Red-dot sight
- Ammo (Green, APHC, Dim Tracer).
- Ak 5 upgrade.
- Barrett M107.
- Foreign weapons training kit.
- NLW.
- Ksp 58 upgrade.
- FN M3M HMG.
- Short range ammo.
- Future grenade launchers.
- FX simunition kits.
Development of the ak 5

- FN CAL 1966
- FN FNC 1976
- FN FNC 1981
- Ak 5 1983
Ak 5 = M16A2

The ak 5 and M16A2 are technology vice equal:

- 1/7” NATO twist barrel.
- Magazine.
- Iron sights.
- No rails.

The FNC was the original 1/7” rifle from the 1977-79 NATO-trials!

The M16A2 was the first 1/7” rifle adopted!
The existing ak 5 family

The ak 5 is designed by Fabrique National of Belgium, and produced under license by FFV Ordnance (now Saab Bofors Dynamics) located in Eskilstuna, Sweden.

<table>
<thead>
<tr>
<th>Data</th>
<th>ak 5</th>
<th>ak 5B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight unloaded (kg)</td>
<td>3.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>1010 (750)</td>
<td>1010 (750)</td>
</tr>
<tr>
<td>Barrel length (mm)</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td>Muzzle velocity (m/s)</td>
<td>930</td>
<td>930</td>
</tr>
<tr>
<td>Deliveries</td>
<td>1986-1999</td>
<td>1989</td>
</tr>
</tbody>
</table>
What to do?

- No cold war = still many brand new weapons in depots.
- The existing ak 5 is well known for its high reliability and robust design, but is not suitable for integration in the upcoming Swedish future soldier program.

- The users requested:
  - Rails.
  - Better ergonomics.

High pressure gas system with rotary bolt
Two alternatives

- Choice of buying a new weapon or modifying the existing.

- We choose to modify because of:
  - Lower risk.
  - Cheaper.
  - Quicker.

- The original manufacturer – Saab Bofors Dynamics – was chosen as the contractor.
Introduced changes on ak 5CF

- **Generally**
  - Black in stead of green.

- **Upper receiver**
  - MIL-STD 1913 rail on the upper part of the receiver.
  - New flash hider with better flash suppression.
  - Only one gas position.
  - New permanent bayonet lug for the ak 4 (G3) bayonet.
  - New hand guard with rail at 6 o’clock.

- **Lower receiver**
  - New adjustable butt stock.
  - New ambidextrous selector lever.
  - New pistol grip.
  - Automatic bolt catch.

- **Accessories**
  - New transparent plastic magazine.
  - Removable forward grip.
  - New tactical sling.

- **Removed**
  - Ordinary iron sights
  - Existing bolt catch

**Summary:**
- Rails.
- Ergonomics.
- Reliability.
User feedback

- 300 ak 5CF’s in troop trials 2003-2005.
- More than one million rounds fired!
- MRBS was 3500!
- Some weapons fired more than 12,000 round without any broken parts!
- Users were enthusiastic, but:
  - Weapon is too heavy!
  - Weapon is too long!
User priorities on ak 5C

1. MIL-STD 1913 rail
2. Barrel shortened to 350mm
3. Weight max 3.8kg.
5. New shoulder stock, adjustable in length
6. Hand guard, with full length MIL-STD 1913 rail at 6 o’clock, and 80mm rails at 9 and 3 o’clock.
7. New ambidextrous selector lever
8. Automatic bolt catch
9. Foldable emergency iron sights for ranges up to 300m
10. Transparent plastic magazines

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Mil-Std 1913 makes modularity possible!

US SOPMOD M4 Block 1 accessory kit
Program schedule

- Industry contract in October 2005.
- First deliveries in June 2006.
- Ak 5C will be the primary weapon for Swedish Soldiers in the EU Nordic Battle Group.
Swedish red dot sight for small arms

- Manufacturer: Aimpoint AB
- Type: Red dot sight
- Magnification: None
- Battery life: >10 years
- Rail: Mil-Std 1913
- Deliveries: 2003-2006
- Will be used on all rifles and machine guns.
Possible accessories for the Red dot sight

- 3X magnification?
- Off Axis Viewing Device?
- I²?
- Video?
Other accessories for ak 5C

- Transparent plastic magazine.
- Magazine clip.
- Front grip.
- Tactical sling.
- Laser pointer (visual and IR).
- Illuminator (visual and IR).
- Modification of M203 Grenade Launcher.
- Bayonet.
- Safety BFA.
- Modification of "Miles-type" laser force-on-force simulator.
- FX conversion kit.
- Telescopic sight.
- Bipod.
Ksp 58 upgrade

- The ksp 58 (MAG/GPMG/M240) was a development initiated by Sweden in the 1950’s.
- In use in Sweden since 1958.
- Deliveries from 2008.
Summary

- Sweden will upgrade at least 27,500 new AK 5 rifles.
- They will thereby remain modern for an additional 15 years.
- The Swedish soldier will therefore be equipped with a modern weapon at a moderate cost to the taxpayer.
Questions?