

# OPERATION ALEPPO

**Russia's War in Syria**

**The Inside Story of  
Putin's Military  
Intervention in the  
Syrian War**

**TIM RIPLEY**

OPERATION ALEPPO:

RUSSIA'S WAR IN SYRIA

TIM RIPLEY

## *Operation Aleppo*

*Back Ground Material*

*Related to Chapters 9, 11, 12 & 13*

*Syrian Army during 2016*

*To Buy Operation Aleppo in paperback  
or Kindle e-book, visit:*

*[www.amazon.co.uk](http://www.amazon.co.uk) or [www.amazon.com](http://www.amazon.com)  
(then search Operation Aleppo by Tim Ripley)*

# Putin's "Ground Force" in Syria

## *The Syrian Arab Army in 2016*

Updated 27<sup>th</sup> August 2016

### The Syrian Battlefield

### Syrian "Style of Warfare"

### The "New" Syrian Army: Syrian Ground Forces after 5 years of Civil War

- Elite Combat Forces
- Syrian Arab Army Regular Units
- Pro-Government Militia
- Hizbullah and Allied Forces
- Command and Control
- ISTAR Operations
- Russian arms deliveries to Syrian Arab Army
- Assault Operations
- Syrian Tank Force
- Syrian Artillery and Fire Support
- Logistic and Engineering Operations
- Syria's Missile Brigades

### Detailed Order of Battle

#### SOURCES

This briefing is based in analysis of multiple sources, including:

1. Analysis of news media still and video imagery
2. Analysis of social media still and video imagery from Syria, Turkey and Russia. Syrian soldiers and militia fighters, Shia militia fighters and Russian servicemen incessantly post on-line photos of themselves and their fiends.
3. Syrian and Russian government news products
4. Google Earth and other commercial satellite imagery

By Geo-location and comparing the above, it is possible to gain a reasonable "ground truth" about what is happening on the ground.

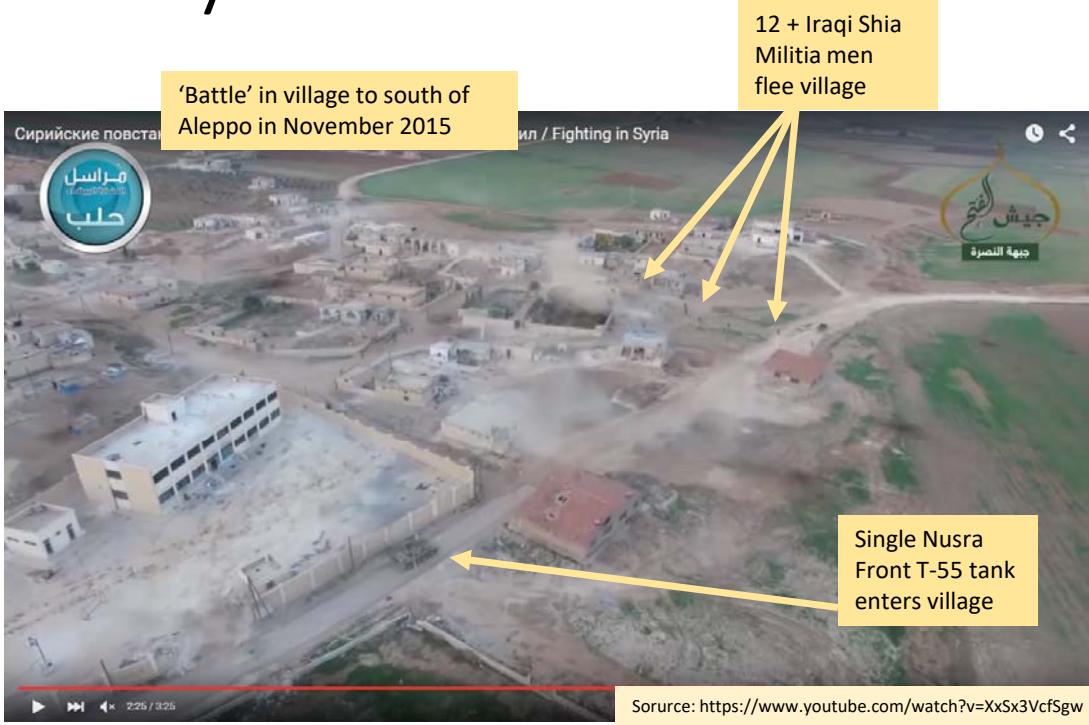
NOTE: All the images in this brief are all sourced from "raw" video imagery from Syria over the year



# Syrian Battlefield – January 2016

The Syrian War has some unique characteristics that have led to the Government forces to adapt to the organisation and tactics to keep fighting after four years of war:

- Much of Syria is what is termed an “empty battlefield”. The military units engaged are all relatively small, measured in hundreds at the top end. A battle in Syria is “big” if more than a couple of hundreds troops are involved, on rival sides. Often less than 20 combatants are killed in Syrian “battles”.
- Syria’s diverse terrain, means fighting takes places in urban, desert, mountain, village, forest and agriculture environments.
- All sides in the conflict have “long war strategies”. They have to keep their armies and populations fighting, year in year out. So they put great effort into maintaining morale of their troops and keeping them fighting, including manning the frontline in “shifts” and avoiding all out infantry assaults that might result in heavy casualties. Syrian units rarely spend more than 2-3 weeks at front at a time.
- None of the participants adhere to the Laws of Armed Conflict or other norms of behaviour



Source: @IvanSidorenko1



Source: SANA



Source: bm21\_grad



Source: SANA



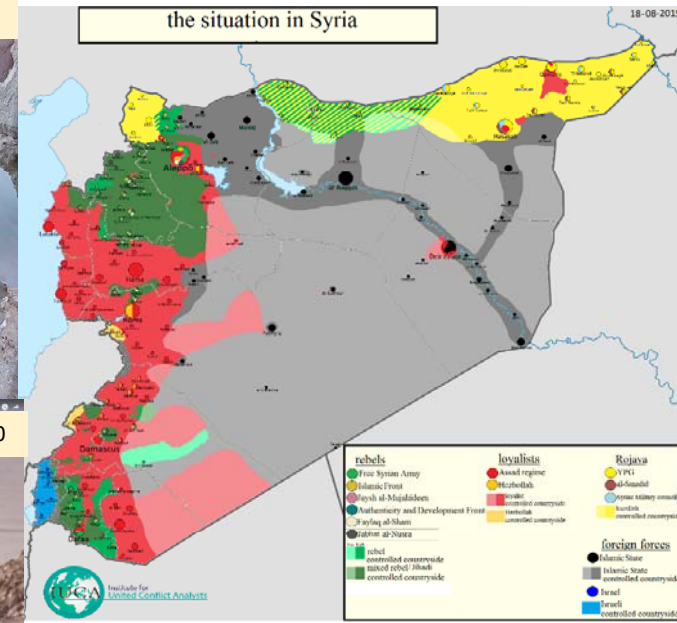
Source: SANA



# Syrian Style of Warfare

The Syrian Arab Army (SAA) and its allies have developed a distinct style of warfare.

- **Army of Four Corners.** This involves maintaining control over all of Syria's major cities, to act as a base for a future offensive to regain control of the country. Government troops are concentrated in the main urban areas – Aleppo, Dier ez Zor, Homs, Hama, Latakia/Tartus and Damascus and a few strategic roads on connecting them are also secured.
- **Siege Operations.** This has meant that war has taken on many of the characteristics of medieval siege warfare. Urban areas are secured by checkpoints, street barricades and improvised berm defences. Government forces used “punishment” bombardments by aircraft with so-called “barrel bombs”, rocket launchers and artillery to inflict “pain” on rebel civilians to deter future rebel attacks.
- **Offensive Operations.** Up to this summer, these have been of a limited nature, to achieve specific local objectives to “tidy up” the battlefield to improve the efficiency of defensive lines.



## War in 2016

Since the beginning of the Russian Intervention in September 2015, Syria military operations have changed considerably:

1. The tempo of operations have been stepped up considerably, with offensive operations simultaneously underway on multiple fronts, in every region of Syria.
2. Operations have been aimed at linking up several besieged enclaves. This is given big billing in government media in a bid to maintain morale and support for the offensive.
3. Co-operation with Russian, Iranian and other allied forces is now at the centre of Syrian operations.
4. The objectives of the operation are considerably more ambitious than previous Syrian offensives. The aim is to inflict decisive defeats on rebel forces across the length and breadth of Syria.
5. All Syrian offensive operations are supported by intense air, artillery and rocket fire.

# The 'New' Syrian Army

## Syrian Ground Forces after 4 years of Civil War

### Organisation.

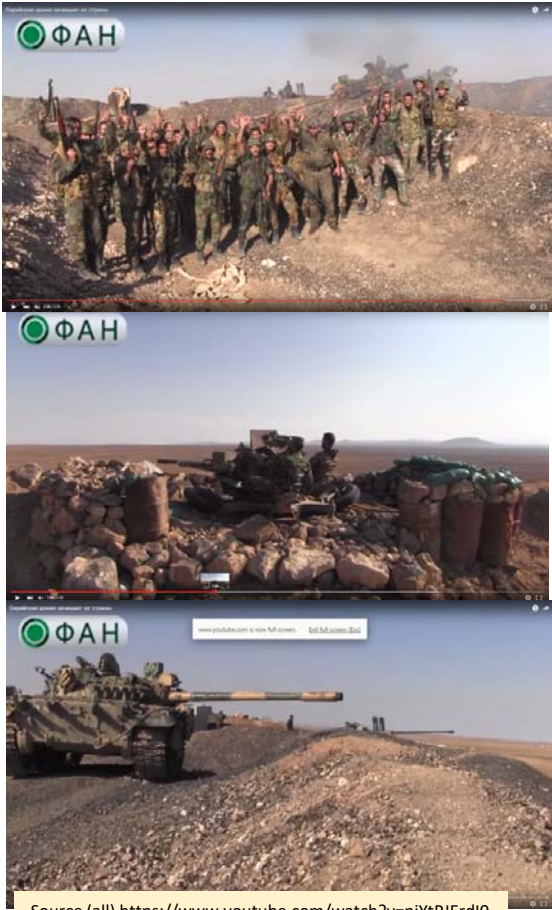
The old pre-civil war army based on a Soviet-style conscript model has broken down. The total strength of the Syrian Arab Army's regular units, excluding elite units, is now below 50,000.

There are now the main types of government forces:

- a. Elite Combat Units. Republican Guards, Special Forces and 4<sup>th</sup> Division. These are equipped for offensive combat operations, away from their home bases. Estimated only 30,000 troops in total.
- b. Regular Army Combat Units. These are the rump of the old 200,000 strong army. The command structure of divisions and brigades has remained largely intact, based around their original professional officers and technical NCOs. The number of rank and file conscript has dropped dramatically, so active most army brigades are between 25% to 30% of their pre-war strength. Estimated only 20,000 in total.
- c. Command, Training, Engineering, Maintenance and Logistic Staff. The core central staffs of the Syrian Arab Army are still functioning, providing support to frontline units, but on a smaller scale. They are estimated to be around 15,000 personnel strong, with almost all being professional officers. They are very loyal to the regime.
- d. Pro-Regime Militia Units. To provide "boots on the ground" to populate frontlines the Damascus government has turned to militia groups recruited from local areas. These units are co-ordinated by regular army headquarters to protect urban areas or sectors of frontline. Estimates vary between 100,000 to 150,000 of these fighters, but the 100,000 figure is probably the more accurate.
- e. Bases. The Syrian military relies on several large bases complexes with weapons depots, vehicle repair facilities and fuel supplies which sustain troops in the field. These bases also act as "anchors" for defensive lines, with Syrian commanders establishing defensive lines around the bases, which act as command and logistic hubs.

### Combat Brigades

The main ground combat unit of the Syrian military is the brigade or regiment, which are between 1,000 to 1,500 troops strong. For esprit de corps reasons these units retain their pre-civil war titles –tank, infantry, mechanised, artillery, special forces, airborne, republican guard brigades or regiments -but their internal organisation is very now different from their pre-war structure. Most active Syrian combat brigades are configured as self-contained all-arms units. They include an infantry battalion of some 500-600 troops, an armoured group of 10-20 tanks, some 30-40 armoured personnel carriers and an artillery group containing up to 12 self-propelled or towed 122mm guns, towed 152mm howitzers and BM-21 multiple launch rocket systems. They are backed by small command, logistic, combat engineering and support elements.



Source (all) <https://www.youtube.com/watch?v=niYtPJErDI0>



# Elite Combat Units

## Republican Guard

These are the elite units Syrian military, equipped for offensive operation and the protection of key government strong holds in the Damascus region. There are an estimated 12,000 members of this force, Each of its five combat brigades has 1,500 troops, including an infantry battalion of some 500-600 troops, an armoured group of 10-20 T-72 tanks, some 30-40 armoured troops carriers and an artillery group containing up to 12 self-propelled 122mm guns, towed 152mm howitzers and BM-21 multiple launch rocket systems.

## Special Forces Command

These are dubbed airborne forces and considered the best trained units in the Syrian Arab Army. There are some 10,000 troops in this force. Each airborne regiment has around 700-1000 troops.

## 4<sup>th</sup> Division

This is the Syrian army's only complete divisional-sized combat formation capable of offensive operations. It has the best combat equipment in the Syrian Army. It has an estimated 8,000 personnel. Each of its five combat brigades has 1,500-2,000 troops, including an infantry battalion of some 500-600 troops, an armoured group of 10-20 T-72 tanks, some 30-40 armoured troops carriers and an artillery group containing up to 12 self-propelled 122mm guns, towed 152mm howitzers and BM-21 multiple launch rocket systems. The 4<sup>th</sup> Division is the first Syrian unit to receive new Russian made T-90 tanks equipped with the Shtora missile defence system. Before the civil war it was known as the 4<sup>th</sup> Armoured Division but over the past year, the Syrian state media now refer to it as the 4<sup>th</sup> Mechanised Division. Three of its brigades are equipped with T-90 tanks, delivered between Nov 2015 and Jan 2016.

## Tiger Force

Formed in 2013 as the Syrian Arab Army's elite assault unit, the Tiger Force is commanded by Colonel Suhail al-Hassan. It is nearly always rapidly switched between crisis points around Syria for either major offensives or to counter-attack when regular Syrian units are in trouble. It is built around a number of battalions or combat team, which are estimated to have 300-400 troops each. These are, all named after big cats, including the Chetah Teams 3 & 6, the Al Rahhal battalions, the Fadi Al Shibany Unit, Al Shahin Groups, Al Sahabat Regiment. These are all-arms units with a combinations of T-72 tanks, BMP, ZSU-34-4 and 122mm self propelled guns.



Source: [@IvanSidorenko1](#)

Source: [https://www.youtube.com/watch?v=AKg3dPW\\_KKM](https://www.youtube.com/watch?v=AKg3dPW_KKM)

Source: [@IvanSidorenko1](#)



© timripley@hotmail.com



Republican Guard  
Vehicle tactical  
marking

Source:

[https://www.youtube.com/watch?v=9moZwP8bISs&oref=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9moZwP8bISs&has\\_verified=1](https://www.youtube.com/watch?v=9moZwP8bISs&oref=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9moZwP8bISs&has_verified=1)



<http://fr.sputniknews.com/photos/20151105/1019315749/syrie-palmyre-armee.html>

The elite units of the Syrian army control arms and supply depots around Damascus and Aleppo, which contain a "pool" tanks, vehicles and ammunitions that are used to replenish them during and after combat operations.

Estimated equipment holdings of the elite units include a 30+ T-90 tanks, some 300 T-72 tanks, 100 x BMP 2 troop carriers, 200+ BMP1 troop carriers, 100 artillery pieces and multiple launch rocket launchers.

Syrian elite forces are deployed as complete units for specific operations, rather taking turns to man frontlines.

# Syrian Arab Army – Regular Forces

These are the rump of the old army. The command structure of divisions and brigades has remained largely intact, based around their original professional officers and technical NCOs. The number of rank and file conscripts has dropped dramatically, so most army brigades are at between 25% to 30% of their pre-war strength. Estimated only 30,000 in total.

The rump of the Syrian Arab Army runs the military command and control infra-structure across Syria, via several corps and divisional headquarters.

There are now only 15-17 active Syrian Arab Army combat brigades based across Syria, compared to a pre-war total of 35. The balance of the Syrian Arab Army's brigades are reduced to cadre status – probably no more than 500 troops – looking after equipment stock piles, guarding their home garrison and training/supporting local National Defence Force militia.

Each active brigade has an estimated 1,000 troops, with a mix of capabilities including an infantry battalion of some 400-500 troops, an armoured group of 10-20 T-55 and T-72 tanks, assorted armoured troops carriers and an artillery group containing up to 12 122mm & 152mm artillery and BM-21 multiple launch rocket systems.

They usually operate close to their home logistic supply base.

Sub-units and personnel are rotated in shifts, so it is rare for the full strength of a Syrian Arab Army brigade to be committed to action for more than two to three weeks at a time.



D-30 122mm is the most common towed artillery in use with SAA brigades

Source  
[https://www.youtube.com/watch?v=9moZwP8bISs&oref=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9moZwP8bISs&has\\_verified=1](https://www.youtube.com/watch?v=9moZwP8bISs&oref=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9moZwP8bISs&has_verified=1)

Troops of Syrian 120<sup>th</sup> Armoured Brigade in Mahin

Source: [@DPRKJones](https://www.youtube.com/watch?v=niYtPJErId0)

Several up armoured vehicles, including BMPs and T-55s with anti-RPG screens, were captured from ISIS when the siege of Kwaieres airbase was lifted

Source: <http://sana.sy/en/?p=61465>



# Pro-Government Militia Groups

© timripley@hotmail.com

The main pro-government militia unit is the National Defence Force or NDF. This is a regionally based force, with each rural district, town, city district having their own dedicated NDF units. They are a light infantry force, equipped with infantry weapons and armed pick-up trucks or “technical”. Occasionally, NDF units operate T-62 tanks as static fire bases. This is being augmented by a new militia force, known as the Local Defence Force which operates around Aleppo.

There are also several militia groups linked to Pro-government political parties, such as the Syrian Ba’ath Party and Palestinian groups. A number of ethnic and religious militia groups have also been formed by Christian and Assyrian communities for self-defence. These are light infantry forces, equipped with infantry weapons and armed pick-up trucks or “technical”. The most famous militia unit is the such as the “Liwaa Suqour Al-Sahra” or Desert Hawks, which was formed from retired special forces soldiers who returned to duty.

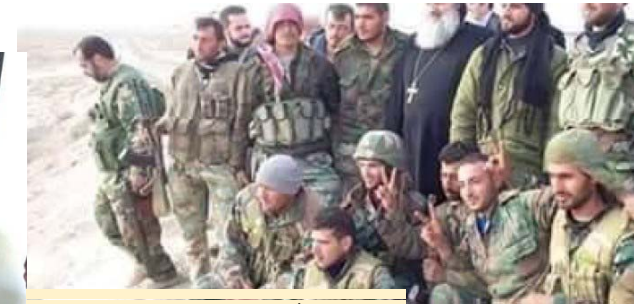
The militia groups provide the government’s main “ground holding” force, manning frontlines and providing internal security. Since September 2016, these militia forces have been used to hold ground captured by manoeuvre combat units, to varying degrees of success. Sub-units and personnel are rotated in shifts, so it is rare for the full strength of NDF and other militia units to be committed to action at any one time.

The fighting quality of NDF and other militia units vary. Some are akin, such as the Desert Hawks are akin to regular special forces in their capability. The bulk of the NDF is of mediocre calibre and on three occasions since September 2015 when NDF units have been left to hold ground captured by elite or regular units, they have had to fall back after being counter-attacked by ISIS or other rebel units.

In January and February 2016 the Syrian government launched a drive to form so-called “volunteer” and “self-defence” brigades to augment both the SAA and NDF units, holding ground and conducting rear area security tasks.



Source:  
<http://www.almasdarnews.com/article/the-silent-heroes-of-the-kuweires-offensive-the-ismaelis/>



Source: [@TheArabSource/](#)



Source:  
<https://www.youtube.com/watch?v=axqSmzEfZVA>

Source:  
<http://www.sonsoflibertyinternational.com/american-mesopotamian-organization-restore-nineveh-now/>



Source:  
[@TheArabSource/](#)



# Syria Volunteer Brigade Recruiting Events, January 2016

© timripley@hotmail.com



Self protection Squads at graduation parade in Aleppo, 23 Jan 16, SANA



Self protection Squads at graduation parade Darayya, 24 Jan 16 @IvanSidorenko1



145 Brigade parade in Banias, 27 Jan 16 @IvanSidorenko1



Volunteers Dier Ez Zor, 29 Jan 16 @DPPKJones



Volunteers in Dier Ez Zor, 29 Jan 16 FARS



Sons of Idlib event in Homs 24 Jan 16 @IvanSidorenko1



# Command and Control

A coalition command post has been set up in Damascus, to link Syrian, Russian, Iranian and other allied forces together into a joint operation. This is believed to be based in the Syrian Arab Army General Staff HQ. It is sometimes referred to as the Central Command, CentCom (copying the style of US Central Command) or Joint Operations Room. There is a specific Russian Army Co-ordination Group, which provides linkages to the Russia Air Force Operations Centre at Latakia airbase. Syrian Army commanders and headquarters on the main operational zones, in turn have Russian, Iranian and Hizbullah advisors and liaison officers on their staffs. The situation in Aleppo zone is very different, where Iranian Major General Qassem Soleimani is reported to be in overall command because of the large number of allied forces in the region



Iranian Revolutionary Guards Corps Quds Force commander, Major General Qassem Soleimani is a key figure in the operation in Syria. As well as being an Iranian George Clooney – with his own website – he is also a very charismatic and dynamic commander, who is credited with creating the Russian-Iranian-Syrian war plan. Iran state media describe him as the senior liaison officers between allied forces in Syria

## Iranian Advisors

The Iranian government has publicly acknowledged the presence of advisors with Syrian units. These are officers of general or colonel rank who are assigned to work with specific Iranian units. Since the end of September Iranian state media has announced the deaths of 14 named Iranian and 1 Hizbullah officers in Syria. They all had special forces, infantry or artillery backgrounds.



The Syrian army has also sent several of its top commanders to join the offensive, including Colonel Suheil al-Hassan (far left in sun glasses)



Russian off-duty soldier in Aleppo from his social media post. (The Russian are proving a liaison team to the Syria-allied CentCom in Aleppo to co-ordinate air strikes)

Source: <http://ruslanleviev.livejournal.com/44827.html#ayas>



Russian Army liaison team visits a Syrian Arab Army communications base.

Source: [@Syria Protector](https://twitter.com/Syria_Protector)



Source: FARS News Agency



# ISTAR and UAV Operations

During the 2015-16 Syrian offensive has featured extensive Intelligence, surveillance, targeting, acquisition and reconnaissance (ISTAR) operations involving both UAVs and ground-based remote sensors



Remote sensing camera seen in Dera'a  
Source:  
<https://www.youtube.com/watch?v=sGklmclOW3g>



An off the shelf 'hobby' drone in-use with Syrian troops of the Desert Hawks Brigade in Latakia province, January 2016. Imagery is being monitored in improvised command post.  
Source:  
<https://www.youtube.com/watch?v=G0q4H4eEOI8&app=desktop>



Ground surveillance sensor imagery being used to control a ATGW engagement near Aleppo in January 2016, from Ops Room (above)  
Source: <https://www.youtube.com/watch?v=vm3FbspEHIE>



Syrian NDF soldiers with Night Vision Goggles  
20 Feb 16 @IvanSidorenko1



# Russian Arms Supplies to SAA



T-72 tanks (above) and BMP-2 troop carriers (below) were delivered to Syria from Russia stocks In October 2015  
<http://zloy-odessit.livejournal.com/1502049.html>



New artillery delivered in October 2015 included the 2A65 MSTA-B 152mm long range howitzers, which has been used on the Mahin/Palmyra front.  
[https://www.youtube.com/watch?v=bSK\\_Ebje2S88&feature=youtu.be](https://www.youtube.com/watch?v=bSK_Ebje2S88&feature=youtu.be)



TOS-1 thermobaric warhead armed multiple launch rocket system were delivered in September and used in action in Latakia, Syria, 22<sup>nd</sup> October 2015  
<https://www.youtube.com/watch?v=A2O-g42eldw>



Every month since September 2015 around 20 Russian ships a month have delivered supplies to Syria  
 Source: <https://twitter.com/Yoruklsik>



T-90 - Russia's newest and best tanks were delivered to Syria from Russia stocks In November 2015. They have the Shtora defense system to defeat rebel ATGWs missiles  
 Source: [@IvanSidorenko1](https://twitter.com/IvanSidorenko1)



Syrian troops in Damascus in December 2015 were equipped with new Russian supplied helmets, body armour and the Iveco Lynx armoured truck. This is Russia's HUMVEE, with some 358 on order for the Russian Army  
 Source: [@SyriaProtector](https://twitter.com/SyriaProtector)

### What will Putin send next?

There are reports in the Syrian media that the Russians are to supply the S-300 anti-aircraft missile system. These would pose a series threat to US and UK aircraft and greatly complicate coalition air operation. This is intended to force western government to "ask" Assad's permission before they send their aircraft over Syria.

This picture emerged in November 2015, allegedly showing a S-300 in Syria but it is more likely to reloads for the Russian S-400 at Latakia AB.

Source: [@IvanSidorenko1](https://twitter.com/IvanSidorenko1)





# Assault Operations – Syrian Elite Units



4<sup>th</sup> Division assault troops. Note sleeping bags and machine gun tripod. They are prepared to hold ground and live out sidedfixed bases  
Source: <https://www.youtube.com/watch?v=Aws8gMFMjNA>



4<sup>th</sup> Division assault troops. Note new desert boots  
Source: <https://www.youtube.com/watch?v=1XYIPluyO7k>



4<sup>th</sup> Division troops move south out of Aleppo. Note new body armour  
Source: <https://www.youtube.com/watch?v=lym93cXgAUy>

The only Syrian infantry units that participate in direct assault operations against enemy positions are the troops of the Republican Guard, Airborne Regiments, Tiger Force and the 4<sup>th</sup> Division. Their morale and motivation looks high. They appear to have been supplied with new personnel equipment and uniforms .



4<sup>th</sup> Division assault troops advance across open terrain south of Aleppo in November 2015 and overrun a rebel position. Troop look well trained and motivated – otherwise they would be covering on the ground, rather than kneeling and returning aimed fire. Note Russian supplied desert camo.  
Sources: <https://www.youtube.com/watch?v=Eu5wCOYCwc8>  
[https://www.youtube.com/watch?v=AKg3dPW\\_KKM](https://www.youtube.com/watch?v=AKg3dPW_KKM)



The Syrian Tiger Force attacks an ISIS position east of Aleppo in December 2015.  
<https://www.youtube.com/watch?v=2E5TNdTpzTI>

Syrian assault operations involve the heavy use of fire power, including tube artillery, multiple launch rocket systems (MLRS), direct fire anti-aircraft guns, close air support from attack jets and Mi-24 attack helicopters. Complex fire plans are executed in close proximity to friendly assault troops. Fire power is used in a lavish fashion to ensure that enemy resistance is silenced before infantry are sent forward to clear enemy positions.

# Syrian Tank Force



Combined Infantry and Armour Operations  
Source: <https://www.youtube.com/watch?v=Aws8gMFMjNA>



Tanks carrying infantry  
Source: <https://www.youtube.com/watch?v=lym93cXgAUy>



Combined T-72/BMP column approaches rebel position  
Source: <https://www.youtube.com/watch?v=AX6pAyMq8F4>

Syrian tanks are being used in combined arms units with infantry in close co-operation, to provide mutual support to neutralise rebel TOW anti-tank guided missiles. Syrian tank crews appear to be well trained and experienced. When vehicles are hit by TOW ATGW the crews evacuate quickly and nearby vehicles continue with their tasks.



Main Type of Tank in use by elite units are variants of the T-72  
Source: <https://www.youtube.com/watch?v=axqSmzEfZVA>



Upgraded T-55 in service with the Republican Guard  
Source: SANA

## Syrian Main Battle Tank Inventory 2016

**T-90**  
Russia's newest and best tanks were first delivered to Syria from Russian MOD stocks between November 2015 and January 2016. They have the Shtora defense system to defeat rebel ATGWs missiles

**T-72**  
Some 700 were delivered to Syria including Ural, A, M1 and AV (with Kontakt-1 explosive reactive armour). Only some 300 are estimated to be left in SAA service, the majority with the Republican Guard and 4<sup>th</sup> Division

**T-55**  
This is the main tank of the SAA. Out of 1,200 delivered in the 1960s and 1970s, some 700 are left in the SAA inventory. Only half are believed to be in routine service, with the remainder in storage. Many have been up up-armoured with ERA or mesh anti-RPG screens.

**T-62**  
500 still in inventory out of 800 delivered in late 1960s/1970s but have not been modernised. Some 100 + issued to NDF, with remainder in storage.



T-90 in Aleppo, with the 4<sup>th</sup> Division during November 2015  
Source: [@IvanSidorenko1](https://twitter.com/IvanSidorenko1)



T-72 tank in Latakia province  
Source: SANA



# TOW missile jammers on Syrian tanks

Syrian Arab Army 4<sup>th</sup> Division T-72 in action north of Aleppo 1<sup>st</sup> Feb 2016

<https://www.youtube.com/watch?v=uVrtiwybou4>



@2Rook14



# Syrian Artillery and fire support



BM-21 Multiple Launch Rocket Launchers are present at most Syrian artillery fire positions  
Source:  
<https://www.youtube.com/watch?v=Eu5wCOYCwc8>



M46 152mm and D-30 122mm artillery in action south of Aleppo  
Source:  
<https://www.youtube.com/watch?v=axqSmzEfZVA>



ZSU-34-4 and armoured bulldozer. The anti-aircraft system is routinely used in the direct fire role  
Source:  
<https://www.youtube.com/watch?v=axqSmzEfZVA>



SAA MLRS fire on a rebel position in northern Latakia province  
<https://www.youtube.com/watch?v=lsxVPwrER0>



2S1 122mm self-propelled gun. Note Republican Guard Tactical Markings on rear of vehicle  
Source:  
[https://www.youtube.com/watch?v=9moZwP8bISs&oref=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9moZwP8bISs&has\\_verified=1](https://www.youtube.com/watch?v=9moZwP8bISs&oref=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D9moZwP8bISs&has_verified=1)

**The Syrian Arab Army's Artillery Edge**  
Artillery – tube and rocket - is one area where the SAA has an unchallenged advantage over its opponents, including ISIS, Nusra Front and other rebel groups. No other armed group in Syria has the tube artillery and MLRS that has the reach and mass of the SAA. Elite and regular combat brigades field some 300 122mm, 130mm and 152mm guns and 50+ MLRS deployed in frontline positions, with around 1000 in storage. Rebel groups to date have not been able to mass their captured or improvised guns and rockets to engage in counter-battery fire against SAA artillery.

**Tactical Employment**  
Syrian artillery is usually positioned well forward, giving the Syrians a significant "reach" into rebel territory, when combined with Russian & Iranian ISTAR assets. Syrian artillery and MLRS are now sustaining a heavy rate of fire (full MLRS salvos being fired rather than single rockets in old days)



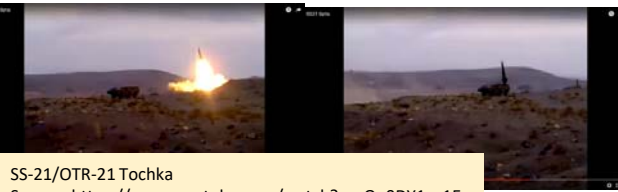
The largest rebel artillery unit, a Battery of 3 x D-20 122mm guns was seen near Dara'a January 2016, Source: via @julianroepke



# Syria's Missile Brigades in 2016



Source: A Syrian Scud missile launch  
<http://worlddefensereview.blogspot.co.uk/2012/07/syrian-ss-1c-scud-b-srbm-short-range.html>



SS-21/OTR-21 Tochka  
 Source: <https://www.youtube.com/watch?v=zOu0DY1zu1E>



FROG-7  
 Source: <http://jalopnik.com/5967940/syria-is-now-firing-scud-missiles-at-itself>



SS-1 Scud  
 Source: <http://worlddefensereview.blogspot.co.uk/2012/07/syrian-ss-1c-scud-b-srbm-short-range.html>

Syria has fielded ballistic missiles since the 1970s when the Soviet Union supplied it with SS-1/Scud variants and FROG-7 missiles. In the 1980s SS-21/OTR-21 Tochka missiles were delivered.

The Syrians formed three missile brigades, 96<sup>th</sup>, 155<sup>th</sup> and 156<sup>th</sup>, with some 42 Scud launchers and 18 FROG launchers. The 96<sup>th</sup> Brigade operated at Al Safirah in the Aleppo region and the other two were based at al Qatuyfah, north of Damascus. Each brigade has 300-400 security around launch zones.

Underground operations, launch vehicles, maintain missiles and provide vehicle shelters were built at these sites to protect the missile launcher vehicles and missile stock pile.

Field deployment sites were set up with more underground shelters at Hirjillah south of Damascus and Dumayr in the desert to the north east of the capital. This site has also been used as a missile test site.

The control of the Syrian missile force is uncertain with differing views on whether they are under Syrian Arab Army control or are part of the Republican Guard.

Since the start of the civil war in 2011, the Missile Brigades have been used regularly to bombard opposition controlled territory. Imagery of all the main Soviet-era supplied ballistic types being fired has appeared on several occasions since 2011. Most recently, at least two ballistic missile of an unspecified type were fired by Idlib province in November 2015. There is no evidence in the public domain about how many ballistic missiles remain in the Syrian arsenal.



al Qatuyfah missile base, with underground vehicle shelters. The site's importance can be gauged by the fact it has been repeatedly attacked by the Israeli air force, most recently in October 2015. Source: Google Earth.

## SPECIAL WEAPONS © timripley@hotmail.com

The Missile Brigades are believed to be responsible for bringing into service and operating any new missile and rocket systems acquired by the Syrian Military, including the BM-30 Smerch, TOS-1A and Iranian-supplied ballistic missiles



BM-30 Smerch multiple launch rocket system in Latakia province September 2015  
 Source: <http://defence-blog.com/army/in-syria-spotted-russian-bm-30-heavy-multiple-rocket-launcher.html>



Iranian-supplied Missiles during a test in Syria, 2013  
 Source: <http://brown-moses.blogspot.co.uk/2013/04/leaked-video-shows-scud-launches-by.html>



TOS-1A multiple launch rocket system in action in Latakia province October 2015  
 Source: <https://www.youtube.com/watch?v=A20-g42eldw>

## Islamic State Parade Scud in Raqqa

In June 2014 the Islamic State paraded a Scud. This is believed to have been a missile captured by the Free Syrian army in Sept 2013 in Dier Ez Zor after being abandoned by the Syrian military at a test site in the east of the country. This is the only Scud that appears to have been lost by the Syrian Missile Brigades.



# Syrian Ballistic Missile Strikes, 2016

SS-21 Tochka ballistic missile strikes have hit border crossings along the Turkish border in north west Syria on five occasions since 22<sup>nd</sup> Jan 16 when the border town of Samanda was hit. A sixth attack was claimed on Azaz during night 4/5 Feb 16 and a seventh strike was claimed on Maera on 21 Feb 16. Six SS-21 were reportedly fired on ISIS-held Khranesser on 23 Feb 16.

These missile strikes are aimed at hitting rebel rear bases, supply dumps and headquarters. They had significant “shock” and “terror” effect on local civilians



Hizbullah soldiers watch a Syrian 155<sup>th</sup> Missile Brigade SS-21 launch in northern Syria 30<sup>th</sup> Jan 16 against Azaz  
Source:  
<https://www.youtube.com/watch?v=N8hQ9eF9riA&feature=youtu.be>



Strike on Salaqin 25<sup>th</sup> Jan 16  
Source: @ibra\_joudeah



Kafr Lousin, Idlib, was hit on 26<sup>th</sup> Jan 16  
Source: via @AEJKhalil



9K52 Luma M launch north west Syria, 18 Feb 16  
Source: @orynxspioenkop



Northern Syria, 30th Jan 16  
Source: via @JulianRoepcke



# Syrian Army Logistics and Combat Engineering

© timripley@hotmail.com

T-55 bridge layer in action during assault on Aleppo thermal power station, 21 Feb 16  
 Source:  
<https://www.youtube.com/watch?v=Jxg5FnwSbTY&feature=youtu.be>



Russian ships have been delivering equipment and ammunition to the SAA via Tartus and Latakia ports  
 source

<https://informnapalm.org/en/tartus-as-the-russian-syrian-friendship-hub/>



SAA combat engineer units have been employed to clear routes through enemy positions, remove IEDs and to re-build the strategic Khanaser-Athriya supply route after it was re-captured from ISIS. Source: SANA



The SAA still has a sizeable force of low loaders to move tanks and other armoured vehicles across Syria to achieve strategic effect

Source:  
[@IvanSidorenko1](https://twitter.com/IvanSidorenko1)



The Al Safirah depot, south of Aleppo, is one of a network around the country which sustains SAA combat operations  
 Source: Google Earth



SAA armoured units are sustained in the field by supply trucks and fuel tankers, which take supplies to forward positions  
 Source:  
[@IvanSidorenko1](https://twitter.com/IvanSidorenko1)

# Syrian Army – War in the East against ISIS

© timripley@hotmail.com

## Total Troop Strength Committed to War in East

Republican Guard and Special Forces, 1,500+ troops  
SAA Regulars 9,000+ troops  
Militia & Allies, 8,000? Fighters

**Northern Homs/Hama Operational Zone**  
Syrian Arab Army  

- 47<sup>th</sup> Tank Brigade

Militia Forces  

- Homs NDF
- Mahardeh NDF
- Al-Salamiyah NDF
- Sons of Idlib Volunteer Brigade (formed 24 Jan 16 in Homs city)

**Troop Strength**  
 SAA Regulars 2,000 troops  
 Militia , 2,000 fighters

**Al Hasakah Operational Zone**  
 HQ Al Qamishli and Kawkab Military Base, Hasakah  
 Major General Hassan Mohamed & Brig. General Nizar Khadr  
 Syrian Arab Army  

- 121<sup>st</sup> Regiment
- 123rd Regiment
- Military Police Detachment (Col Shady Khaddour)
- 5<sup>th</sup> Border Guard Brigade

Militia (Cdr Abdel Kador Hammou)  

- “Gozarto Protection Forces” (Sootooro)
- Tayy Tribal Militia
- Sharabia Tribal Militia
- Al-Khabour guards

Allied Forces  

- Iranian Revolutionary Guard Corps unit
- Hizbullah unit?

**Troop Strength**  
 SAA Regulars 2,000 troops  
 Militia 3,000 fighters  
 Allies, 1,000 fighters?

**Palmyra/ Quraytayn Operational Zone**  
 Commander General Samir Sulieman?  
 Syrian Arab Army (SAA)  
 HQ 18<sup>th</sup> Tank Division  

- Republican Guard Bn, Commander Asif Ammar
- 67<sup>th</sup> Tank Brigade
- 60<sup>th</sup> Tank Brigade (Al-Sukhanah/T3 axis Jun-Jul)
- 81<sup>st</sup> Brigade (Mahin/al Quraytayn axis)
- 120<sup>th</sup> Armoured Brigade (Mahin/al Quraytayn axis)
- 64<sup>th</sup> Artillery Battalion

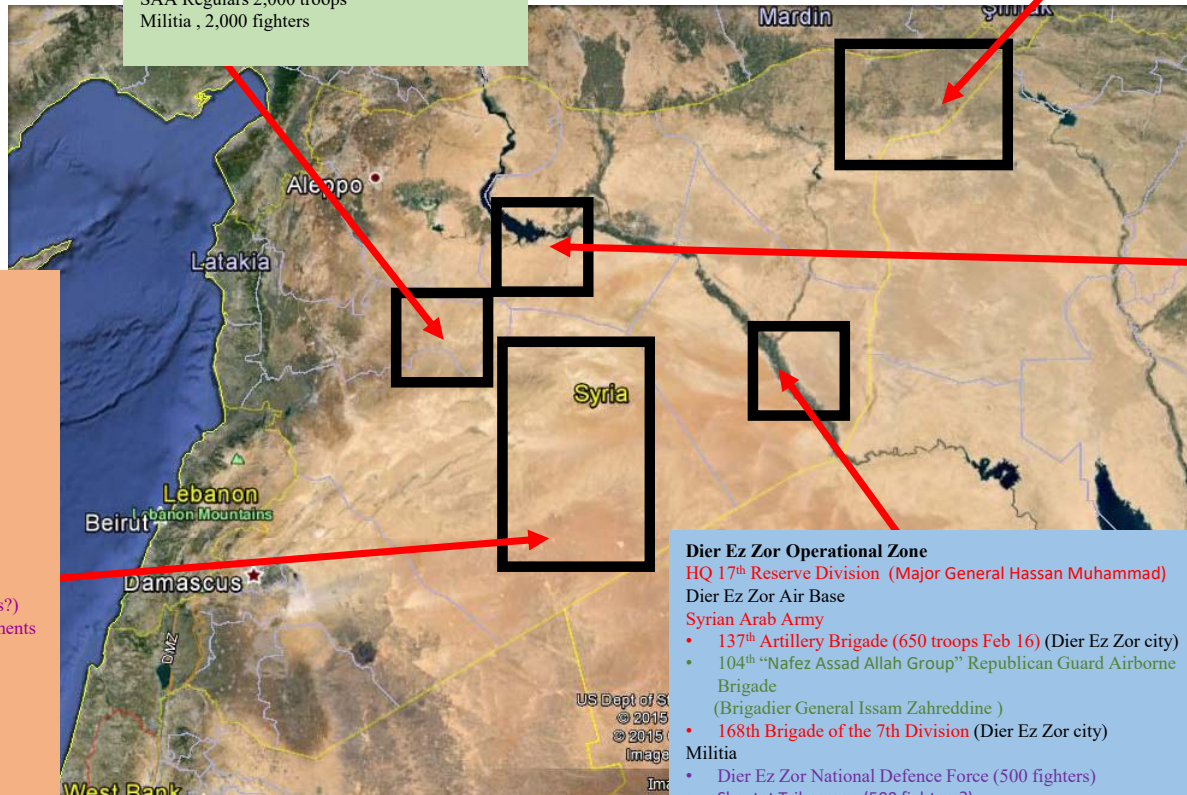
Militia Forces  

- Homs NDF unit
- NDF of Sadad
- Syrian Social Nationalist Party “Nisor al-Zubah”
- “Gozarto Protection Forces” (Sootooro) (200 fighters?)
- “Desert Lions” and “Qalamoun Shield” NDF detachments

Allied Forces  

- Iranian Revolutionary Guard Corps (IRGC) SF det
- Hizbullah unit (400 troops)
- Russian de-mining and Security Unit (1,000 troops) (Palmyra)
- Russian Orlan 10 UAV Detachment

**Troop Strength**  
 SAA Regulars 2,000-3,000 troops  
 Militia 1,000 fighters  
 Allies 2,000



**Ithriyah-Tadaqa Operational Zone**  
 Syrian Arab Army  

- 555<sup>th</sup> Special Forces Regiment/Brigade of 4<sup>th</sup> Division
- 47<sup>th</sup> Tank Brigade (Khrasanar front – south Axis)
- 66<sup>th</sup> Tank Brigade (Sheikh Hilal-Ithriyah Road front)

Militia Forces  

- NDF Golan Regiment (move to Ithia road region from Qunietra region 8 Feb 16, incl 3 x T-55, 4 x arty, 4 x MLRS, 14 technical, 1 x BMP) (probably returned to Golan early summer)
- Kataebat Al-Ba’ath, Brigade Group 134 (Al-Ba’ath Battalions) (arrive Ithiyah 8 Feb 16) (Khrasanar front – south Axis)
- Lions of General Intelligence (NDF unit)
- Lions of Eastern Region (NDF unit) (commander Captain Bassam Al Arsan)
- NDF Wares Al Yunus Group

Allied Units  

- Galilee Force (Palestinian militia)
- Russian Orlan 10 UAV detachment??

**Troop Strength**  
 SAA Regulars 1,000 troops  
 Militia 1,000 fighters  
 Allies, 400+ fighters + 50 Russians?

**Dier Ez Zor Operational Zone**  
 HQ 17<sup>th</sup> Reserve Division (Major General Hassan Muhammad)  
 Dier Ez Zor Air Base  
 Syrian Arab Army  

- 137<sup>th</sup> Artillery Brigade (650 troops Feb 16) (Dier Ez Zor city)
- 104<sup>th</sup> “Nafez Assad Allah Group” Republican Guard Airborne Brigade (Brigadier General Issam Zahreddine )
- 168<sup>th</sup> Brigade of the 7<sup>th</sup> Division (Dier Ez Zor city)

Militia  

- Dier Ez Zor National Defence Force (500 fighters)
- Shaytat Tribesmen (500 fighters?)

**Troop Strength**  
 SAA Regulars 3,000 troops  
 Militia, 1,000 fighters





# Syrian Army – Operations in Aleppo

## Total Troop Strength Committed against Aleppo

Republican Guard and Special Forces, 8,000+ troops  
 SAA Regulars 3,000+ troops  
 Militia 10,000? fighters  
 Allies, 8,000? fighters

**Aleppo North East Operation Zone**  
 •Kwieres Garrison (Major General Munzer Zamam) – 300 airforce troops  
 •Union of Forat Jarabulus Battalion (Commander Aref Ehmaid Al Jaber Abu Stayff)

### Units Identified Operating in Greater Aleppo Region

Syrian Arab Army  
 •Homs Leopards - Special Missions Regiment  
 •Elements 15<sup>th</sup> Special Forces Division (arrive 8 Aug )  
 •47 Special Forces Regiment  
 •800<sup>th</sup> Brigade SGR (arrive from Damascus on 25 Aug)  
 HQ 4<sup>th</sup> Mechanized Division + elements of Republican Guard (General Maher Al-Assad) 6,000 troops?)

- 154<sup>th</sup> Brigade
- 82<sup>nd</sup> Brigade
- 43<sup>rd</sup> Brigade??

#### Militia Forces

- Aleppo National Defence Forces, including "Baqir Brigade"
- Al-Ba'ath Battalions
- Liwaa Suqour Al-Sahra (Desert Hawks SF Brigade/unit)
- Liwa Usud al-Hussein (NDF militia unit)
- Mountain Group (NDF unit, Commander Suleiman)

#### Allied Forces

##### Russian

- Russian Orlan 10 UAV detachment
- MSTA B Battery 120<sup>th</sup> Russian Guards Artillery Regiment, with 4 x 152mm A65

##### Iranian

- Iranian Revolutionary Guard Corps UAV Detachment
- Firqa Fatayyemoun (Iranian/Afghani paramilitary) (200-300 fighters)

#### Lebanese Hezbollah

- Hezbollah brigade (Lebanese paramilitary)(375 fighter in late Dec 15?)
- Hezbollah Al Radwan Battalion

#### Palestinian

- Palestinian militia "Liwaa Al-Quds" (Jerusalem Brigade) (Yusuf Al Jasser battalion commander)
- Palestinian Commando Force

#### Iraqi

- Harakat Al-Nujaba (Iraqi paramilitary unit)
- Kataeb Hezbollah (Iraqi paramilitary)
- Asa'ib Ahl al-Haq Fighter's. "League of the Righteous"(Iraqi paramilitary)
- Liwa Imam Al-Baqer (Iraqi paramilitary) (Al Eiss front March 16)
- Group Master of Martyrs Brigade Steadfast Amirli (Iraqi paramilitary) (150+ fighters)
- Assado'llah Forces (Iraqi militia) (arrive Dec 15)
- 4<sup>th</sup> Brigade, Badr Military Wing (Iraqi paramilitary, arrive mid Dec 15) (600 fighters) Commander Haj Abu Hanan
- 8<sup>th</sup>? Brigade, Badr Military Wing (Iraqi paramilitary arrive Jan 16)
- Martyr Salem Haider Al Bekhitawy Regiment, Badr Military Wing (arrive from mid 12/15)
- Saraya al-Khorasani (Iraqi para-military) (arrive Mid 1/16)
- Kataeb Hezbollah (Iraqi paramilitary)
- Kata'ib Imam Ali Battalion (Iraqi paramilitary)
- Kata'ib Sayyid al-Shuhada (Iraqi paramilitary)
- Liwaa Abu Fadl Al-'Abbas (Iraqi paramilitary)

### North West Aleppo Operational Zone Commander Brigadier General Malik Aliyya

Syrian Arab Army  
 147<sup>th</sup> Special Forces Regiment (driven from Artillery base Aug 16)  
 83<sup>rd</sup> Republican Guard Battalion  
 Military Intelligence Shield Forces - Lions Den Battalion (arrive 6 Aug)  
 Militia Forces  
 • Zahraa and Nubl National Defence Force

### Aleppo city inner siege lines

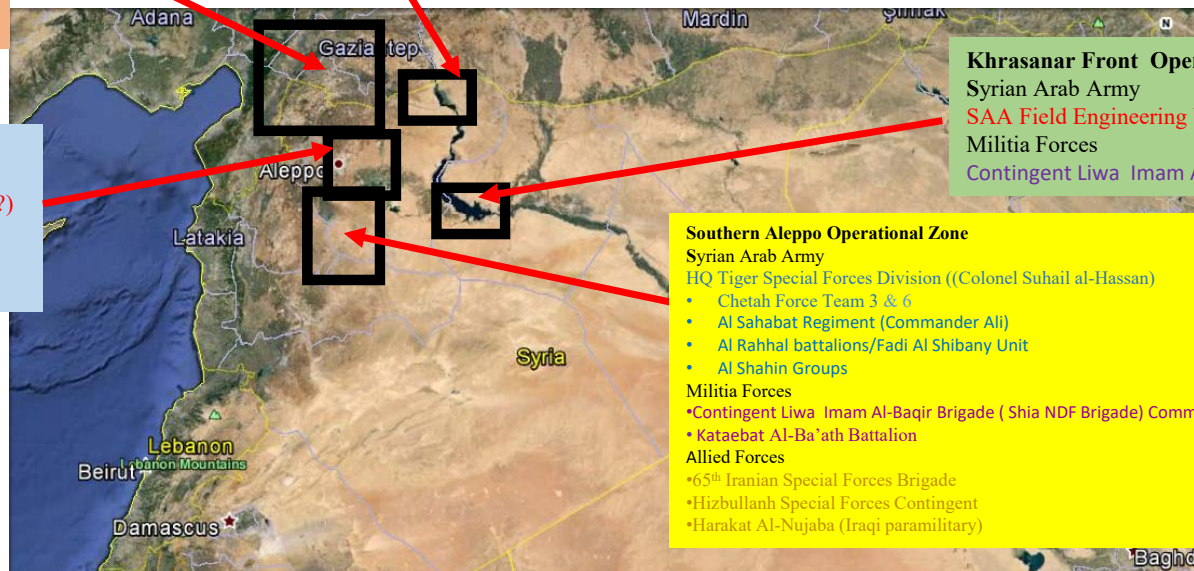
Syrian Arab Army  
 HQ 2<sup>nd</sup> Division (5 battalions, 2,500+?, 2 x Brigades?)  
 Militia Forces  
 • National Defence Forces (NDF) of Aleppo City  
 • Al-Ba'ath Battalions

### Khrasanar Front Operational Zone

Syrian Arab Army  
 SAA Field Engineering Unit  
 Militia Forces  
 Contingent Liwa Imam Al-Baqir Brigade ( Shia NDF Brigade)

### Southern Aleppo Operational Zone

Syrian Arab Army  
 HQ Tiger Special Forces Division ((Colonel Suhail al-Hassan)  
 • Chetah Force Team 3 & 6  
 • Al Sahabat Regiment (Commander Ali)  
 • Al Rahhal battalions/Fadi Al Shibany Unit  
 • Al Shahin Groups  
 Militia Forces  
 •Contingent Liwa Imam Al-Baqir Brigade ( Shia NDF Brigade) Commander Khaled al Daher  
 • Kataebat Al-Ba'ath Battalion  
 Allied Forces  
 •65<sup>th</sup> Iranian Special Forces Brigade  
 •Hizbullah Special Forces Contingent  
 •Harakat Al-Nujaba (Iraqi paramilitary)



# Syrian Army – Operations against the Idlib Pocket (Southern Flank)

Nusra Front and  
Free Syrian Army units  
30,000 +? fighters



**Total Troop Strength  
Committed against Idlib Pocket**  
Special Forces 4,000 troops  
SAA Regulars 2,000 troops  
Militia 5,000 fighters  
Allies, 1,500 fighters

**North Hama Operational Zone**  
Syrian Arab Army  
HQ 11<sup>th</sup> Tank Division (commander Major General Riyadh Asef Al Yunis)  

- 87<sup>th</sup> Tank Brigade
- 107<sup>th</sup> Republican Guard Brigade
- Hadi Special Forces Regiment

Militia Forces  

- Hama National Defence Force
- Suqayabiyah NDF Brigade
- Syrian Social Nationalist Party (SSNP) Militia of Suqayabiyah and Mhardeh
- Mhardeh NDF Brigade
- Al-Ba'ath Battalions
- Salah al-Asi Forces

Allied Troops  

- Hezbollah contingent?

**Troop Strength**  
Special Forces 2,000 troops  
SAA Regulars 1,000 troops  
Militia 2,000 fighters  
Allies, 500 fighters

**Shal al Grab/Latakia Operational Zone**  
Syrian Arab Army  
HQ 103<sup>rd</sup> Republican Guard Special Forces Brigade (in north Latakia)  

- 45<sup>th</sup> Special Forces Regiment (in north west of Hama)
- 48<sup>th</sup>?? Commando & Special Task Regiment
- Salah al asi Intrusion Force (SF unit) (Colonel Mahmoud Sabha)
- 33<sup>rd</sup> Commando Regiment (SF unit)
- Fawj Maghawir Al Bahar (Navy/Marines Special Forces unit)
- 2<sup>nd</sup> Battalion, 4<sup>th</sup> Corps ???

Militia Forces  

- Qurdha NDF
- Muqawama Souri (Syrian Resistance)
- Tempest Eagle (Nisor al-zubah) Syrian Social Nationalist Party
- Liwa Assad Allah al-Ghalib (shia militia unit)
- Fawj Maghawir Al-Bahar (NDF unit) (commander Ayman Jaber)
- Al Husein Lions Brigade
- 145<sup>th</sup> Volunteer Brigade (811 Men / 343 Women ) (formed Banias, 27 Jan 16)
- 4<sup>th</sup> Volunteer Brigade (600 strong) (formed in Homs, 24 Jan 16)
- Death Conquerors Group ( Commander Abu Yamen)

Allied Troops  

- Iranian Revolutionary Guard Corps (IRGC) Unit? (Iranian logistic base in Latakia)
- Russian Orlan 10 UAV Detachment
- Loyals of Iraq forces Musa Bin Jaafar brigade (Iraqi paramilitary unit)
- The Death Battalion - Imam Hussein Brigade - Mr Ali Karbala'i. (commander Sheikh Amjad al Bahadli Abu Karrar)

**Troop Strength**  
Special Forces 2,000  
SAA Regulars 1,000  
Militia a 3,000 fighters  
Allies, 1,000 fighters + 50 Russians

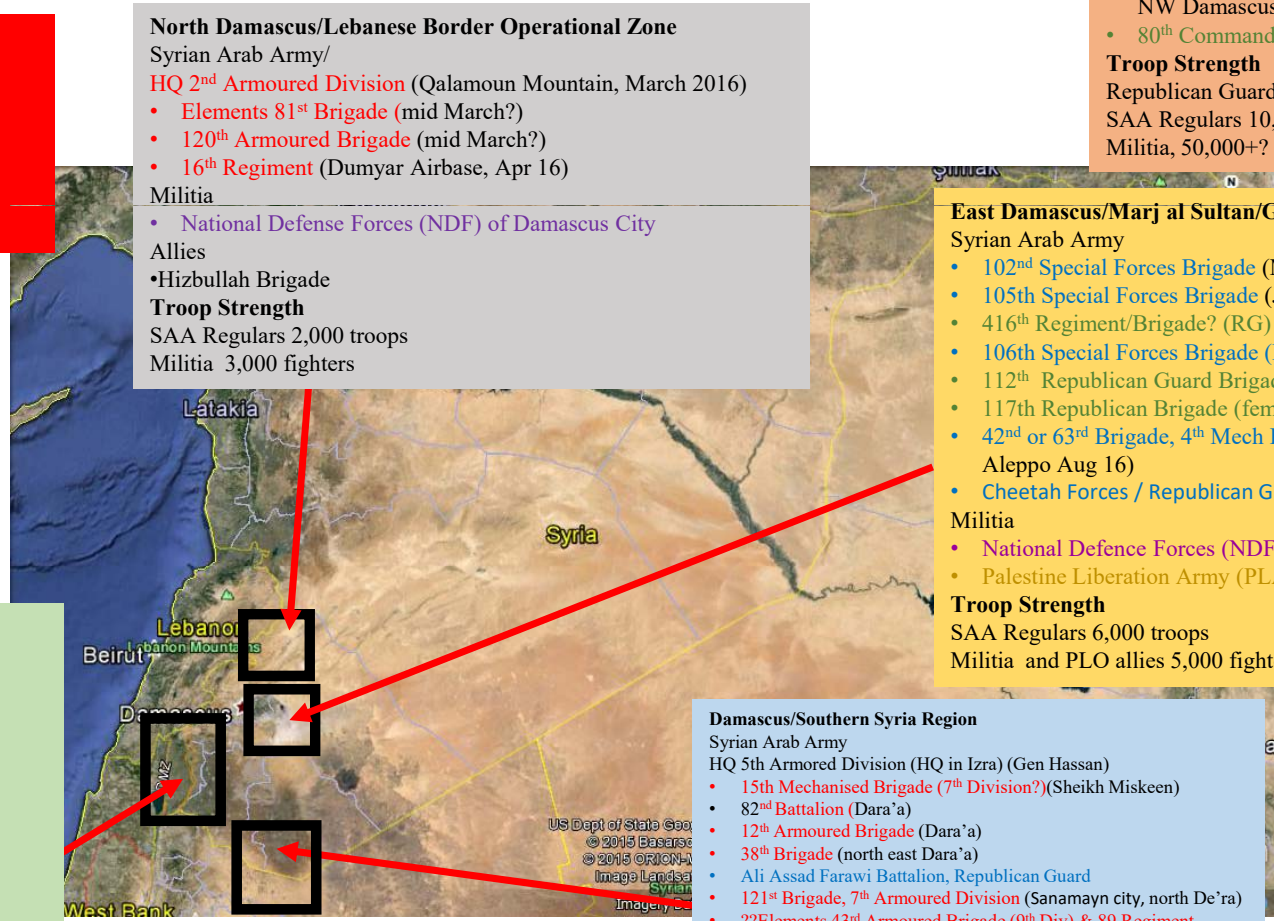




# Syrian Army – Greater Damascus Operational Zones

## Total Troop Strength In Greater Damascus Region

Special Forces 10,000+ troops  
 SAA Regulars 9,000 troops  
 Militia and Allies 55,000+ fighters



**North Damascus/Lebanese Border Operational Zone**  
 Syrian Arab Army/  
 HQ 2<sup>nd</sup> Armoured Division (Qalamoun Mountain, March 2016)  
 • Elements 81<sup>st</sup> Brigade (mid March?)  
 • 120<sup>th</sup> Armoured Brigade (mid March?)  
 • 16<sup>th</sup> Regiment (Dumyar Airbase, Apr 16)  
 Militia  
 • National Defense Forces (NDF) of Damascus City  
 Allies  
 • Hizbullah Brigade  
**Troop Strength**  
 SAA Regulars 2,000 troops  
 Militia 3,000 fighters

**Units in greater Damascus region**

- HQ 1<sup>st</sup> Armoured Division
- 101<sup>st</sup> Special Forces Regiment (Damascus)
- ?? Mech Brigade, 10<sup>th</sup> Armoured Division (Katina, NW Damascus)
- 80<sup>th</sup> Commando Battalion, SRG

**Troop Strength**  
 Republican Guard and Special Forces, 5,000+ troops  
 SAA Regulars 10,000+ troops  
 Militia, 50,000+? Fighters

**East Damascus/Marj al Sultan/Ghouta Operational Zone**  
 Syrian Arab Army  
 • 102<sup>nd</sup> Special Forces Brigade (Marj al Sultan/ East. Ghouta)  
 • 105<sup>th</sup> Special Forces Brigade (Jobar/ East. Ghouta)  
 • 416<sup>th</sup> Regiment/Brigade? (RG) (Marj al Sultan/ East. Ghouta)  
 • 106<sup>th</sup> Special Forces Brigade (East. Ghouta)  
 • 112<sup>th</sup> Republican Guard Brigade (female) (West, Ghouta)  
 • 117<sup>th</sup> Republican Brigade (female) (East. Ghouta)  
 • 42<sup>nd</sup> or 63<sup>rd</sup> Brigade, 4<sup>th</sup> Mech Division (Da'ayya, to be moved to Aleppo Aug 16)  
 • Cheetah Forces / Republican Guard "Castro Group" (East. Ghouta)  
 Militia  
 • National Defence Forces (NDF) of Damascus City  
 • Palestine Liberation Army (PLA) (Marj al Sultan)  
**Troop Strength**  
 SAA Regulars 6,000 troops  
 Militia and PLO allies 5,000 fighters

**Golan Region**  
 Syrian Arab Army  
 • HQ 9<sup>th</sup> Division  
 • 90<sup>th</sup> Infantry Brigade  
 Militia  
 • Liwaa Suqour Al-Quneitra (AKA Qunietra Hawks/Falcons) (NDF militia)  
 • Fouj Al-Joulan (pro-government militia)  
 • NDF Golan Regiment  
**Troop Strength**  
 SAA Regulars 2,000 troops  
 Militia 2,000 fighters

**Damascus/Southern Syria Region**  
 Syrian Arab Army  
 HQ 5<sup>th</sup> Armoured Division (HQ in Izra) (Gen Hassan)  
 • 15<sup>th</sup> Mechanised Brigade (7<sup>th</sup> Division?) (Sheikh Miskeen)  
 • 82<sup>nd</sup> Battalion (Dara'a)  
 • 12<sup>th</sup> Armoured Brigade (Dara'a)  
 • 38<sup>th</sup> Brigade (north east Dara'a)  
 • Ali Assad Farawi Battalion, Republican Guard  
 • 121<sup>st</sup> Brigade, 7<sup>th</sup> Armoured Division (Sanamayn city, north De'ra)  
 • ??Elements 43<sup>rd</sup> Armoured Brigade (9<sup>th</sup> Div) & 89 Regiment (arrive 25 Jan?)  
 Militia  
 • National Defence Forces (NDF) of Izra'a (north De'ra)  
 • SSNP Nussur al-Zaoubaa (The Tempest Eagles)  
**Troop Strength**  
 SAA Regulars 3,000 troops  
 Militia , 2,000 fighters



19 sept 17, Syrian Republican Guard, SS-21/OTR-21 Tochka

<https://www.youtube.com/watch?v=p075sso803w>

