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Digital Bazaar:

The Online Trade of Arms & Munitions
in Opposition-controlled Syria

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N.R. Jenzen-Jones & Charlie Randall

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Remember, all arms and munitions are dangerous. Treat all firearms as if they are loaded, and all munitions as if they are live, until you have personally confirmed otherwise. If you do not have specialist knowledge, never assume that arms or munitions are safe to handle until they have been inspected by a subject matter specialist. You should not approach, handle, move, operate, or modify arms and munitions unless explicitly trained to do so. If you encounter any unexploded ordnance (UXO) or explosive remnants of war (ERW), always remember the 'ARMS' acronym:

A**VOID** the area

R**ECORD** all relevant information

M**ARK** the area to warn others

S**EEK** assistance from the relevant authorities

Disclaimer

This report is presented for informational purposes only. It is not intended to provide instruction regarding the construction, handling, disposal, or modification of any weapons systems. Armament Research Services (ARES) strongly discourages non-qualified persons from handling arms and munitions. Arms or munitions of any variety should not be handled without the correct training, and then only in a manner consistent with such training. Subject matter experts, such as armourers, ATOs, and EOD specialists, should be consulted before interacting with arms and munitions. Make a full and informed appraisal of the local security situation before conducting any research related to arms or munitions.

Cover image: ARES CONMAT Database.

Table of Contents

Abbreviations & Acronyms	7
Introduction	10
Methodology	11
Data Collection	11
Data Compilation & Verification	11
Data Analysis	13
Confidential Sources	13
Online Arms Sales in Syria	14
General Trends	14
Craft Production & Modification of Small Arms	15
Describing the Dataset	23
Small Arms by Country of Origin	25
Small Arms by Make or Manufacturer	27
Arms & Munitions by Class, Group & Type	29
Small Arms	29
Handguns	29
Rifles	39
Manually Operated Rifles	57
Submachine Guns	59
Shotguns	62
Machine Guns	63
Obsolete Muzzle-loading Firearms	65
Light Weapons	66
Grenade Launchers	68
Man-portable Mortars	69
Light Rocket Launchers	70
Munitions	71
Small-calibre Cartridges	71
Medium-calibre Cartridges	75
Recoilless Gun Projectiles	77
Mortar Projectiles	78
Hand Grenades	78
Munitions Components	80
Blank-firing Weapons	81
Conclusion	84
Bibliography	85

Abbreviations & Acronyms

ACP	Automatic Colt Pistol (cartridges)
AK	<i>Avtomat Kalashnikova</i> ('Kalashnikov's automatic [rifle]') [Russian]
AMR	Anti-materiel rifle
AP	Armour-piercing (ammunition)
API-T	Armour-piercing incendiary tracer (ammunition)
AQI	al-Qaeda in Iraq
ARCS	ARES Arms & Munitions Classification System
CETME	<i>Centro de Estudios Tecnicos de Materiales Especiales</i> [Spanish]
CONMAT	ARES Conflict Materiel Database
CS	Confidential source
	2-chlorobenzylidene malononitrile (riot control agent)
CZ	<i>Česká zbrojovka</i> [Czech]
DDG	Delta Defence Group
DMR	Designated marksman rifle
DShK	<i>Degtyaryova-Shpagina Krupnokaliberny</i> (‘Degtyaryov-Shpagin large-calibre [machine gun]’) [Russian]
FMJ	Full metal jacket (ammunition)
FN Herstal	<i>Fabrique Nationale de Herstal</i> ('National Factory of Herstal') [French]
FSA	Free Syrian Army
Gen3	Generation 3 (when referring to Glock handguns)
GPMG	General-purpose machine gun
HE	High explosive (munition)
HEI	High explosive incendiary (munition)
HEDP	High explosive dual-purpose (munition)
HE-FRAG	High explosive fragmentation (munition)
HG	<i>Handgranate</i> ('hand grenade'; e.g., HG 85 grenade) [German]
HMG	Heavy machine gun
HTS	Hay'at Tahrir al-Sham [Arabic]

IDF	Israeli Defence Force
INDEP	<i>Indústrias Nacionais de Defesa EP</i> [Spanish]
IS	Islamic State
IZHMASH	<i>Izhévskey mashinostroítelny Zavod</i> ('Izhevsk Machine-Building Plant') [Russian]
JaN	<i>Jabhat al-Nusra</i> [Arabic]
Kbk	<i>Karabinek</i> ('carbine') [Polish]
LMG	Light machine gun
LR	Long Rifle (when referring to .22LR ammunition)
MAB	<i>Manufacture d'Armes de Bayonne</i> [French]
MAS	<i>Manufacture d'Armes de Saint-Etienne</i> [French]
MENA	Middle East and North Africa
MKE	<i>Makinave Kimya Endüstrisi Kurumu</i> (('Machinery and Chemical Industry Corporation')) [Turkish]
MP	<i>Maschinenpistole</i> ('sub-machine gun') [German]
NSVT	<i>Nikitina-Sokolova-Volkova</i> (these are the names of the weapon's primary designers) [Russian]
PAK	<i>Pistole Automatisch Knall</i> (cartridge) (lit. 'pistol automatic bang') [German]
PID	Positive identification
PK	<i>Pulemyot Kalashnikova</i> ('Kalashnikov's machine gun') [Russian]
PKM	<i>Pulemyot Kalashnikova Modernizirovanny</i> (Kalashnikov machine gun, Modernised) [Russian]
PM	<i>Pistolet Makarova</i> ('Makarov's Pistol') [Russian]
PP	<i>Polizeipistole</i> ('police pistol') [German]
PRB SA	<i>Poudreries Réunies de Belgique SA</i> [French]
PSL	<i>Pușcă Semiautomată cu Lunetă</i> (('semi-automatic rifle with telescopic sight')) [Romanian]
PW wz.	<i>Pistolet wojskowy wzor</i> ('military pistol model') [Polish]
R	Rimmed (when used as a suffix in a cartridge designation)
RCA	Riot control agent

RPD	<i>Ruchnoy Pulemyot Degtyaryova</i> (‘Degtyaryov’s hand-held machine gun’) [Russian]
RPG	<i>Ruchnoy Protivotankoviy Granatomyot</i> (‘hand-held anti-tank grenade launcher’) [Russian]
RPK	<i>Ruchnoy Pulemyot Kalashnikova</i> (‘Kalashnikov’s hand-held machine gun’) [Russian]
Sa vz.	<i>Samopal vzor</i> (‘sub-machine gun model’) [Czech]
SIG	Syrian Interim Government
SMG	Sub-machine gun
SNA	Syrian National Army
SSG	Syrian Salvation Government
StG	<i>Sturmgewehr</i> (‘assault rifle’) [German]
SVD	<i>Snayperskaya Vintovka Dragunova</i> (‘Dragunov’s sniper rifle’) [Russian]
Tba-6R1	<i>Uzun Tamburalı Bombaatar</i> (‘Long drum grenade launcher’) [Turkish]
TISAS	<i>Trabzon Silah Sanayi AS</i> [Turkish]
TRY	Turkish lira
TT	<i>Tula–Tokarev</i> (pistol) [Russian]
USD	United States dollar

Introduction

The ongoing conflict in Syria has permitted a large-scale trade in arms and munitions to flourish. The sustained fighting and insecurity drives significant demand for weapons and ammunition by the various parties to the conflict, with trades conducted through a variety of traditional and non-traditional methods. Many of these trades are advertised via online platforms and instant messaging applications, allowing for the remote analysis of a diverse range of weapons. The best data related to online trades originates from users in the North and North-western regions of the country. Accordingly, ARES has monitored these channels for more than 15 months (at the time of writing). Presented herein is an analysis of more than a full year of this monitoring activity, spanning November 2020 to November 2021.

This report was preceded by Research Note 11, *Analysing the Online Arms Trade in Opposition-controlled Syria*, which was released in February 2021 and covers the first three-month period addressed herein. The initial Research Note was supplemented by eight online-only updates published on *The Hoplite*—the ARES company blog—each covering one month from February 2021 to September 2021. This report incorporates all of the data and findings presented in the preceding outputs, supplementing these with additional coverage (up to and including November 2021) and both broader and deeper analysis, with particular attention paid to trends. The report relies upon a dataset comprising thousands of trades encompassing more than 3,700 items—mostly offers to sell one or more arms and/or munitions—made by participants in Syria’s online arms trade.

This research note presents a snapshot of the online arms market in opposition-controlled North and North-western Syria between 1 November 2020 and 30 November 2021. The report identifies a number of general trends, and presents the following key findings:

- Small arms, light weapons, and munitions manufactured in at least 28 contemporary or former states ¹were listed for sale on the online arms market in opposition-controlled Syria during the period of data collection;
- Most of the small arms listed for sale (excluding blank-firing pistols) were likely imported legally by the Syrian government (mostly from Eastern Bloc countries) during the Cold War, and were acquired by opposition fighters through leakages of state stocks at the beginning of the Syrian Civil War;
- Rifles were the most common type of lethal-purpose small arm in the dataset, accounting for nearly 58% of all small arm sales (and nearly 35% of total sales);
- Lethal-purpose handguns accounted for a smaller proportion of the dataset (less than 20% of all sales, and 32% of small arm sales) compared to the proportion documented by ARES in some other countries,² and these tended to be more expensive than other types of small arms;
- A wide variety of munitions were listed for sale during the data collection period, though this class was dominated by small- and medium-calibre cartridges, very few of which had consistent, discernible pricing nor were they typically available in significant quantities; and
- Blank-firing pistols and ammunition (often of Turkish make and manufacture) were documented frequently, proving popular for being inexpensive and readily convertible into crude lethal-purpose handguns.

1 Historical states are counted separately if they occupied significantly different territory than their successor states, such that they cannot be considered nationally or geographically synonymous. Thus, a distinction is drawn between the USSR and Russia, but not between the iterations of the modern state of Germany (including Nazi Germany, East Germany, West Germany, and the Federal Republic of Germany).

2 See, for example: Pérez, Ferguson & Jenzen-Jones, 2020.

Methodology

Data Collection

The original research informing this report is primarily based on raw data collected from online platforms and instant messaging applications used to facilitate the arms trade in opposition-controlled North and North-western Syria. The methodology employed with respect to collecting this information follows the proprietary *Open Source+* model established by prior ARES research.³ The dataset comprises 3,768 documented trades in small arms, light weapons, and munitions, with items offered for sale online by participants primarily operating in opposition-controlled North and North-western Syria. The primary source of this data was ‘groups’ and ‘channels’ on Telegram, a secure messaging application (see *Figure 1.1*).⁴ The groups were of varying size, had differing levels of member activity, and were monitored for different periods of time. Additional information beyond imagery—including the asking price, time and date of posting, and the seller’s details—was collected and recorded wherever possible. Almost all of the images in the dataset represent an individual sale. In some cases, an image represents various items that were sold separately. In other cases, arms are shown with additional accessories which were made available on an optional basis, or were not offered for sale. The core dataset was supplemented by additional, targeted collection which focused on contextual images and information gathered from other sources, including confidential sources located in Syria and elsewhere.

Data Compilation & Verification

The data were recorded in the *ARES Conflict Materiel (CONMAT) Database*,⁵ before being assessed and graded following established ARES data verification procedures to ensure data quality, source reliability, and, where possible, to obtain information on suppliers.⁶ A variety of criteria informed the initial assessment of the data, including the amount and quality of the material; the nature and credentials of the material’s source; the quality of any imagery, including key signs of staging;⁷ and any available meta-information. Once data had been gathered, a review was undertaken, duplicates removed, and individual entries graded according to their perceived credibility and reliability. Entries that did not meet the given requirements were cut.

Blank-firing Weapons

The dataset contained a large number of blank-firing handguns (mostly of a type functionally similar to self-loading pistols), some of which had been converted to fire lethal-purpose ammunition.⁸ Blank-firing handguns are abundant in the region, and their conversion is often effected to provide an affordable alternative to commercially available lethal-purpose handguns, which are limited in supply and command

3 For recent examples, see: Shanley & Mick F., 2021; Pérez, Ferguson & Jenzen-Jones, 2020.

4 For information on the differences between groups and channels on Telegram, see: <<https://telegram.org/faq#q-what-39s-the-difference-between-groups-and-channels>> & <https://telegram.org/faq_channels>.

5 Note that some information was recorded using *Silah Report* databases and subsequently transferred to ARES databases.

6 See, for example: Jenzen-Jones & McCollum, 2017; Pérez, Ferguson & Jenzen-Jones, 2020; Jenzen-Jones & Pérez, 2020.

7 While in other intelligence contexts ‘staging’ may denote a more nefarious or intentionally misleading intent, the main consideration for this report was the inclusion of imagery showing weapons that were clearly not in the possession of the poster. These were carefully removed from the dataset.

8 Note that, if not modified to fire lethal-purpose ammunition, blank-firing handguns are not considered firearms (or small arms) and are not classified under ARCS (Jenzen-Jones & Ferguson, 2020). The legal restrictions they may be subject to vary considerably around the world.

relatively high prices.⁹ Due to the quality and availability of the data collected, it is often impossible to positively identify whether or not a given blank-firing weapon in the dataset has been converted to fire lethal-purpose ammunition. To ensure that dataset analysis remains consistent with the principles of ARCS and does not over-represent the number of converted firearms in Syria, blank-firing weapons have been separated from small arms within the data, and analysed independently of lethal-purpose handguns.¹⁰ Where they have been considered collectively with small arms, that fact is noted in the text.

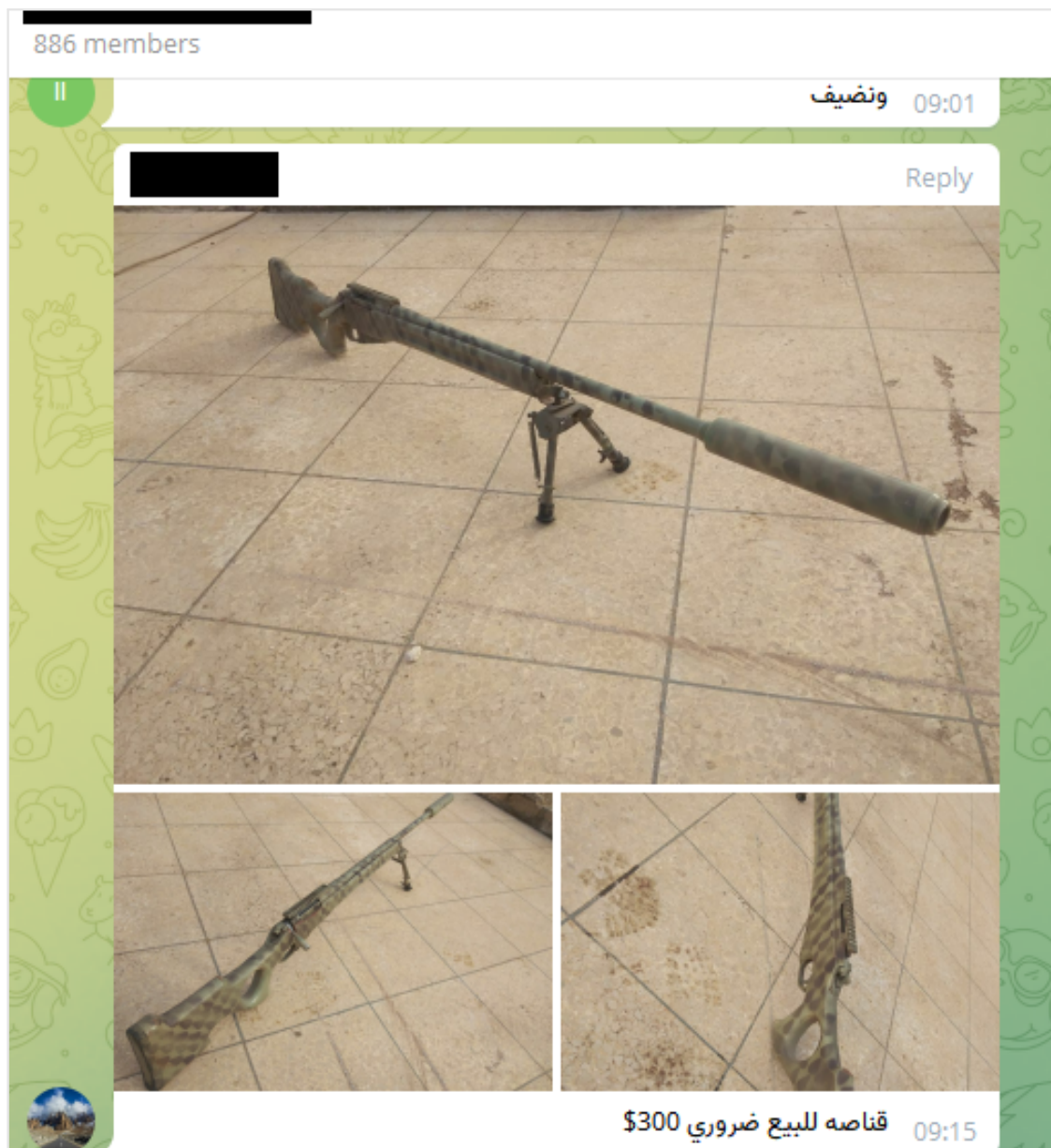


Figure 1.1 A screenshot of an example sales listing on the Telegram platform, showing an asking price of 300 USD. The seller is offering a Mosin–Nagant M91/30 manually-operated rifle, which has been fitted with an aftermarket bipod, stock, and suppressor. He refers to it as a “sniper [rifle]” (source: ARES CONMAT Database).

⁹ This is true in many conflict and post-conflict zones. See, for example: Jenzen-Jones & McCollum, 2017.

¹⁰ This is a core principle of ARCS and separates blank-firing pistols from converted blank-firing pistols by a key metric of capability (lethality) (Jenzen-Jones & Ferguson, 2020).

Data Analysis

Following compilation and verification, formal identification (positive identification; PID) was made based upon physical features and any visible markings, in accordance with the *ARES Arms & Munitions Classification System (ARCS)* (Jenzen-Jones, 2020). Any necessary caveats or limitations in the PID were noted. Items were then catalogued to include an assessment of country of origin, manufacturer, model, and calibre. This complete dataset was then analysed and cross-referenced with open-source material, as well as further confidential material previously held by ARES. Entries were again cross-checked by ARES personnel for duplication and errors. Finally, each entry was reviewed for accuracy by the authors and the technical reviewer in the course of preparing this article. Functions of the database program were utilised to produce summaries of national origins and composition by type (e.g., manually operated rifles, self-loading pistols, etc.). These were then tabulated and ordered to provide a general snapshot of the broad trends present in the dataset, which was again vetted for duplicate and erroneous entries. With the vetting process completed, the refined counts were used to calculate ratios and percentages relevant to the study. This information was compiled into tables and graphic outputs that visualise the prominence of items by country of origin. Finally, items of unknown national origin were reassessed to determine if they could be incorporated into the more general grouping of states by geopolitical bloc. For instance, some AK-pattern rifles of unknown national provenance are nevertheless easily attributable to a broader 'Eastern Bloc' group. This analysis diminishes the margin of error brought about by items of unknown national origin, but was primarily of benefit for internal purposes.

Confidential Sources

The data analysed in this paper is supported up by a number of interviews with several confidential sources (CS) operating within Syria. The interviews were conducted online using Telegram, Twitter, and Instagram. The majority of these sources are, or were, involved in the arms market in Syria. They include fighters (both local and foreign), arms dealers, and local journalists based in opposition-held areas in the north-western governorates of Syria (Aleppo and Idlib).

Online Arms Sales in Syria

General Trends

The Syrian arms market is very diverse, shaped by the century-long, dynamic influx of arms and munitions into Syria and the Middle East more generally. The supply of arms to Syria can be separated into three broad periods. During the colonial era, during which Syria was ruled first by the Ottoman Empire and then, following the First World War, by the French, arms were supplied largely by these colonial rulers. The French were particularly important during this period, establishing the modern Syrian Army and helping to equip this force with arms and munitions (Bou-Nacklie, 1993). Relics of this time can still be found in today's online arms markets in Syria, notably the MAS-36 bolt-action rifle and the MAB Model D self-loading pistol.

In the post-colonial era, after Syria gained its independence following the conclusion of the Second World War, the country moved politically closer to the Eastern Bloc states led by the Soviet Union (Aghayev, 2012). This would prove of particular importance during and after Syria's conflicts with its neighbouring state of Israel. During this time, Syria procured weapons from a plethora of Warsaw Pact countries in order to build-up—and later rebuild—its military for an anticipated conflict with Israel (Kirshin, 1998; Adamec, 2013; Schäfer 2018). Warsaw Pact countries, especially the Soviet Union, were eager to assist the Syrian government, broadening their engagement in the region in the face of the American influence represented by Israel (Kirshin, 1998). Many of the weapons supplied during this period continue to comprise a significant portion of the equipment of today's Syrian Army, as well as the arms of the Syrian opposition forces (Jones & Ness, 2013). Notable examples supplied during this period include a wide range of Soviet pattern arms and equipment, including: Makarov self-loading pistols; AKM series self-loading rifles; Mosin–Nagant series bolt-action rifles; PK series machine guns; and SVD designated marksman rifles. Additionally, Eastern Bloc nations provided Syria with Second World War-era surplus in the form of the German *Maschinenpistole* 43 (MP43), MP44, and *Sturmgewehr* 44 (StG 44) series of self-loading rifles (Shanley & Mick F., 2021a).

The beginning of the most recent period of significant arms ingress into Syria is marked by the commencement of armed conflict in Syria in 2011–2012. At this time, outside powers began to supply arms and munitions to the Syrian government and to various armed groups. Iran and Russia supplied the Syrian Government with weapons, whereas Saudi Arabia, Qatar, Turkey, and the United States of America supplied weapons to the Syrian opposition (ARES, n.d.; Bromley, 2013).¹¹ The manufacturers of these weapons are incredibly diverse, from the Bulgarian state-owned producer Arsenal, to Iran's Hadid Industries, and the Lake City Ammunition plant in the United States. Notable examples of weapons supplied during this period include M16A2 self-loading rifles supplied by the U.S. to opposition forces (Smallwood, 2015; ARES, 2015), AK-104 self-loading rifles supplied by Russia to the Syrian government (*Life*, 2016), and AM-50 Sayyad anti-materiel rifles (AMR) supplied by Iran to the Syrian government (Lyamin & Smallwood, 2014).

The majority of arms and munitions circulating in Syria clearly originate from Syrian government stockpiles, many of which have been lost or subject to leakage over the preceding decade. Most of these are likely to have left Syrian government control relatively early in the Syrian Civil War, during the period in which opposition forces regularly and successfully raided state armouries, and later captured Syrian military bases and their equipment. Arms also entered non-state control by way of the defection of Syrian forces to opposition groups. Another, less prevalent, method of leakage from government stock has been corruption of Syrian government officials, who sold weapons and munitions to opposition groups and factions (Shelton, 2012). A comparatively small proportion of the arms documented in this report are likely to have originated from weapons supplied to opposition forces in Syria by external actors following the commencement of

¹¹ The countries listed here are of course examples, and other states have also directly supplied arms to the various parties to the conflict—either openly or clandestinely.

hostilities, and only a very small number of lethal-purpose small arms are likely to have been imported into Syria for the express purpose of sale on the illicit market.

The Syrian government offers small arms licenses for civilians seeking to own pistols and hunting rifles, although it is not clear how widespread this practice is (Syrian Ministry of Interior, n.d.). The sale and ownership of small arms by both fighters and civilians is considered legal in the areas controlled by the two opposition governing bodies, the Syrian Salvation Government (SSG) (Idlib, HTS-backed) and the Syrian Interim Government (SIG) (Aleppo, SNA-backed). In certain areas, sellers and prospective owners may require a license. Beginning in 2018, the SSG implemented a license system for shops and individuals selling arms. This was reportedly intended to curb the unchecked proliferation of weapons due to increasing security threats against the SSG, and to HTS more generally (Syrian SG, 2021). A confidential source indicated to ARES that sellers in the Idlib Governorate are indeed required to obtain a license to sell arms and munitions, but that individuals buying and owning small arms and ammunition do not need a license. Additionally, the SSG announced in January 2021 the closure of shops selling weapons until 15 February 2021, due to repeated fatal explosions in these shops (Lihimayat al'ahali min 'aya, 2021).

In June 2019, the Syrian National Army (SNA) ordered arms dealers to cease selling weapons, which appears to have been largely unsuccessful. The SNA also announced in the same statement that they would issue licenses to sellers who met certain unstated conditions (Ahmed, 2019). Some local councils in the SIG region have introduced firearms licenses. The Afrin (Aleppo Governorate) city council, for example, has introduced a firearms license for hunting rifles and pistols (Afrin Local Council, 2019). However, a confidential source in the region noted that many people in the Aleppo Governorate buy and own weapons of any type without an issued license, and do not encounter any problems. Lack of effective government authority in these areas likely contribute to this ease of access.

The main target audience for the sellers participating in the online markets in north-western Syria that are examined in this report consists of fighters from one of the many armed opposition groups operating in the area. These combatants not only buy and sell weapons on these markets, but also buy accessories and other tactical equipment such as ballistic armour and load-bearing vests. Civilian participants also appear to account for a notable segment of the market, purchasing weapons primarily for self-protection and hunting. The opposition-held areas of both Aleppo and Idlib Governorate understandably feature high levels of crime, with theft and kidnappings being rather common occurrences. Nearly all sellers asked for United States dollars (USD) in exchange for their offered goods, as this is the main currency in opposition territory. Although both the SSG and SIG adopted the Turkish lira (TRY) as their official currency in June 2020 (Masri, 2021), sellers requesting lira were relatively few—almost entirely limited to trades involving Turkish-made shotguns and blank-firing pistols. In the dataset, all such trades were converted to USD using the prevailing exchange rate at the time of sale.

Craft Production & Modification of Small Arms

Craft-produced Suppressors

ARES researchers have documented several types of craft-produced suppressors in Syria, usually produced in an organised fashion by non-state armed groups. The type of suppressor shown in *Figure 2.1* is part of a family of craft-produced suppressors found in the Idlib governorate and therefore referred to as the 'Idlib-pattern' design. Another significant design documented in Syria was manufactured by the so-called Islamic State (IS) and these are therefore referred to as 'IS-pattern' craft-produced suppressors. The main exterior difference between the two patterns of suppressor are in their finishes. Idlib-pattern craft-produced suppressors feature a matte, metallic grey finish, whereas IS-pattern craft-produced suppressors

are painted a glossy black. The internal designs are even more significant in their differences. One variant of the Idlib-pattern suppressor employs small vents in the first third of the suppressor and the two or three centremost baffles (see *Figure 2.1*). This is somewhat similar in design to the American-made OSS brand of 'flow-through' suppressors. The IS-pattern suppressors use at least two distinct internal arrangements: one with several conjoined baffles with vents which are wrapped in cotton, and another which has several baffles, in a configuration more comparable to many modern suppressors (these are slid into the outer body of the suppressor and then screwed in place; see *Figures 2.2–2.4*). A confidential source familiar with the Idlib-pattern suppressors noted that they offer surprisingly good sound reduction but, because they are made out of aluminium, they are prone to damage and do not have long lifespans. Propaganda videos released by IS indicate a similar (if not higher) sound reduction when compared to the Idlib-pattern craft-produced suppressor.¹² Both IS and opposition groups in Idlib have produced suppressors to suit firearms chambered for various calibres, including 9 × 19 mm, 5.45 × 39 mm, 5.56 × 45 mm, 7.62 × 39 mm, 7.62 × 54R mm, 12.7 × 99 mm and 14.5 × 114 mm.



Figure 2.1 An Idlib-pattern craft-produced suppressor for sale in September 2019, with the internal components exposed (Source: ARES CONMAT).



Figure 2.2 Newly produced suppressors being painted the usual gloss black colour common to IS suppressors, in a video released in April 2015 by Wilayah Baghdad titled 'Give Me a Piece of Iron #2' (source: ARES CONMAT Database).

¹² ARES CONMAT Database.



Figure 2.3 A newly machined baffle shown off by a machinist in ‘Give Me a Piece of Iron #2’ (source: ARES CONMAT Database).

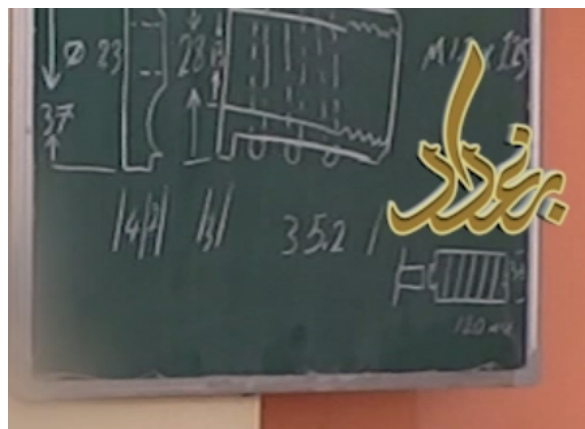


Figure 2.4 Drawings of the internals of an IS suppressor, from a video released in January or February 2015 by Wilayah Baghdad titled ‘Give Me a Piece of Iron #1’ (source: ARES CONMAT Database).

AKM Rifles Modified to AKS-74U Appearance

Several documented examples of AKM rifles modified to resemble the AKS-74U model have been recorded in the dataset. This process includes shortening the barrel, modifying the front trunnion, replacing the furniture, and adding an AKS-74U-style folding stock. During the Afghan-Soviet War (1979–1989), many commanders of Mujahideen groups carried captured AKS-74U rifles—including Osama Bin Laden. In subsequent years, further commanders of militants groups in the Middle East also began to carry AKS-74U rifles as a status symbol, including Abu Musab al-Zarqawi (former head of AQI), Abu Bakr al-Baghdadi (former head of IS), and Abu Mohammad al-Jolani (current head of HTS and formally JaN) (Mick F., 2021; Vining, 2016). This has contributed to their high price in the Syrian market (an average of 2,317 USD) and inspired the modified copies discussed below. However, these copies commanded only a fraction of the price of genuine AKS-74U rifles, with an average price of 544 USD recorded during the monitoring period.

To convert an AKM rifle (or RPK light machine gun) to look like an AKS-74U, major modifications are required. Beginning at the back of the rifle, the stock and rear trunnion are removed and replaced with either a genuine AKS-74 or AKS-74U rear trunnion and stock, or copies of such (see *Figure 2.5*). The receiver is cut on the front-left side and the stock-locking mechanism from an AKS-74 or AKS-74U (or a copy thereof) is installed. To be able to attach an AKS-74U-style top cover to the front trunnion (rear sight block), several centimetres of metal must be ground down and the rear sight has to be removed. Next, the AKS-74U-style hinged top cover is installed. The rifle’s furniture (notably the handguard) is replaced with AKS-74U-style furniture. The front sight block and the gas block are removed and the barrel is cut down to around 200 mm in length. Then, an AKS-74U front-sight-and-gas-block combination (or copy) is fitted (see *Figure 2.6*) and the barrel is threaded. Finally, an AKS-74U-style muzzle device is attached to the rifle.

These modifications require substantial knowledge of AK-pattern rifles and a workshop with sufficient tools. Many of the AKS-74U style converted rifles are offered by a single seller, suggesting there may be one particular gunsmith who has specialised in the production of these conversions. As the rifles in question have appeared with a wide range of groups, factions, and individuals, it is likely that the conversions are done by civilian gunsmiths, rather than those closely aligned with a particular armed group.



Figure 2.5 A Soviet AKM rifle, made in Tula, which has been converted to resemble an AKS-74U rifle. This example was offered for sale in mid-September 2021 for 510 USD. The picture offers a good view of the replaced rear trunnion (source: ARES CONMAT Database).



Figure 2.6 A Soviet RPK, manufactured in 1968, which has been converted to an AKS-74U-style rifle. This weapon was offered for sale in mid-October for 300 USD. It provides a good view of the retention catch for the side-folding stock and the modified front trunnion (source: ARES CONMAT Database).

Bullpup Conversions

A wide range of small arms have been converted from a conventional configuration to a 'bullpup' configuration. Bullpup firearms are those in which the firing grip is located in front of the breech (Ferguson, 2020, p. 24). ARES researchers have documented in the dataset bullpup conversions of the following self-loading firearms: AKM rifles, AK-74 rifles (see *Figure 2.7*), an RPK light-machine gun (LMG), and a PSL designated marksman rifle (DMR). Beyond the data collected for this report, the authors have observed bullpup conversions of RPK-74 LMGs, PKM general-purpose machine guns (GPMGs), and SVD DMRs.



Figure 2.7 An AK-74 converted to bullpup configuration, offered for sale in mid-April 2021 for 450 USD. Note the heightened front sight (source: ARES CONMAT Database).

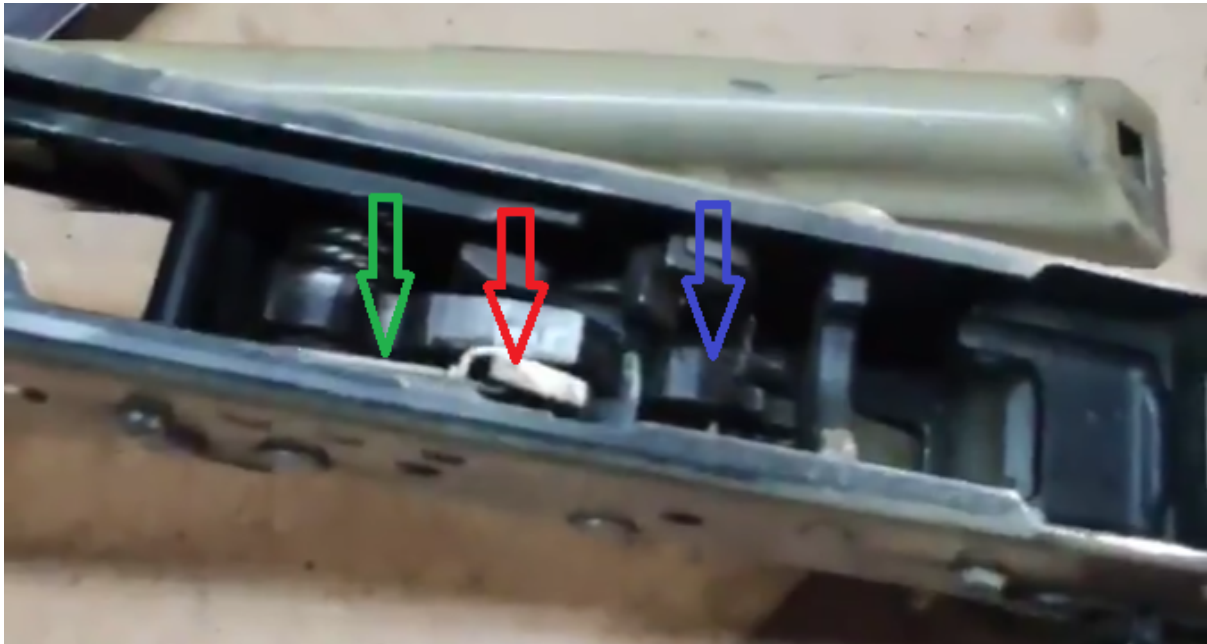


Figure 2.8 View of the trigger group of an RPK-74 converted to bullpup configuration. The green arrow indicates the wire used to connect the existing and new triggers; the red arrow the connection between the wire and the disconnecter; and the blue arrow the disconnecter (source: ARES CONMAT Database).

In general terms, the modification of a conventionally configured weapon to a bullpup layout is achieved by moving the trigger forward and producing an internal trigger mechanism. This is done by attaching a wire/cable or bar between the front and rear trigger mechanisms (see *Figure 2.8*). When the new trigger is pulled, the cable or trigger bar activates the existing trigger mechanism, which releases the hammer, causing it to strike the firing pin and firing the rifle. A craft-produced handguard is almost invariably fitted, and this either replaces both the upper and lower handguard, or only the lower handguard. This allows the forward positioning of the pistol grip and trigger. Some replacement handguards feature MIL-STD-1913 ('Picatinny') rails, which are used to attach vertical grips. The original stock also is removed and replaced by a simple butt-pad, typically fashioned either from wood or metal. Additional cushioning material may also be added.

Precision Rifle Modifications

The majority of bolt-action rifles documented, as well as some of the semi-automatic DMRs observed, were heavily modified. The modifications were generally aimed at increasing the effectiveness of the rifles, particularly as some of the examples observed are more than a hundred years old. The barrels of these weapons are often worn out, and thus inaccurate. This can pose a particular problem when the rifle is intended for precise use at longer distances. Given the abundance of self-loading rifles in the Syria conflict, this is the role that bolt-action weapons are most often tasked to fill on the battlefield. Gunsmiths in the Syrian governorate of Idlib have been particularly industrious in modifying old bolt-action rifles to create accurate platforms which are regularly used in long-range engagements.

The most important modification in revitalising venerable rifles for modern combat usage is the replacement of the barrel. Newly made barrels for these older rifles are rarely encountered in Syria, and so donor weapons are sought. In the case of the Mosin–Nagant series of rifles, barrels are typically replaced with those from the PK, PKT, or PKM series of GPMGs, as these weapons are chambered for the same 7.62 ×

54R mm cartridge. PK-series barrels are readily available locally and can significantly improve the rifle's accuracy. Fighters who have used Mosin–Nagant rifles fitted with PK-series barrels claim to be able to achieve more precise shots.¹³ Generally, when a Mosin–Nagant rifle is fitted with a PK, PKT, or PKM barrel, the stock is also replaced. The replacement is typically a more ergonomic, locally produced variant, typically crafted from wood but sometimes incorporating metal or polymer elements. Some features found in these replacement stocks include adjustable cheek rests and integrated bipod mounts. To be able to fit an optic mount over the action of the Mosin–Nagant design, the bolt-handle has to be modified. There are two main ways by which this is achieved. The first is by attaching a redesigned bolt-handle, which fits under the optic mount, at the same position on the bolt (see *Figure 2.9*); the second is by attaching a bolt-handle to the rear of the bolt (*Figure 2.10*).

Other rifles are also modified in the same manner. The barrels of SVD and PSL self-loading rifles (see *Figure 4.33*)—which are also chambered for the 7.62 × 54R mm cartridge—have been similarly replaced. In addition, one MAS-36 bolt-action rifle which featured a retrofitted barrel, chambered for the 7.62 × 51 mm cartridge instead of the original 7.5 × 54 mm chambering, was also documented in the dataset.



Figure 2.9 A Mosin–Nagant M91 bolt-action rifle that has been retrofitted with a PKT machine gun barrel, listed for sale in early March for 900 USD. Note the redesigned bolt-handle attached to the bolt in the same position as the original handle (source: ARES CONMAT Database).



Figure 2.10 A Mosin–Nagant M91 bolt-action rifle that has been retrofitted with a PKM barrel and a locally made stock which features an adjustable cheek rest and an integrated bipod mount, listed for sale in late April 2021 for 500 USD. Note the redesigned bolt-handle, which—unlike that in *Figure 2.9*—is attached to the rear of the bolt (source: ARES CONMAT Database).

13 As precise as 1 MoA at 100 m, according to some accounts.

Converted Blank-firing Weapons

Blank-firing weapons are amongst the most common items found in the Syrian arms market (accounting for around 19 per cent of the total dataset), but the majority of those listed for sale appear to be unmodified—only a few examples could be definitively identified as having been converted to fire lethal-purpose ammunition. Although blank-firing handguns offer considerably less utility than firearms in a conflict zone like North-western Syria, the weapons typically cost less than half the price of lethal-purpose handguns, and local gunsmiths can often modify them to chamber and fire live ammunition after an individual buys one (ARES, n.d.). In a blank-firing weapon, one or more metal rods or other obstructions block the barrel to prevent projectiles from passing through, whilst allowing the gasses generated when firing a blank cartridge to escape.



Figure 2.11 View of the chamber and barrel of a Turkish Lord T822 blank-firing pistol offered for sale in May 2021 (source: ARES CONMAT Database).

The conversion of a blank-firing weapon such that it is capable of firing lethal-purpose ammunition generally requires the replacement of this blocked barrel, often with a length of (typically unrifled) steel tubing or with a shortened length of barrel taken from a conventional firearm, such as an AK-pattern rifle.¹⁴ Because blank-firing pistols are almost invariably made of cheaper, lower-strength materials, they are frequently incapable of withstanding the pressure generated by firing so-called ‘full-power’ pistol cartridges, such as 9 × 19 mm or .45 ACP ammunition (see *Figure 2.11*; this example, whilst not offered for sale, was posted by a participant in an online marketplace as a warning). As a result, converted pistols are frequently chambered for less-powerful cartridges, including .380 ACP and .32 ACP (Ferguson & Jenzen-Jones, 2017).

¹⁴ Note that all of the blank-firing weapons identified as having been converted to be capable of firing lethal-purpose ammunition were of the ‘front-venting’ type. These weapons, as distinct from ‘side-venting’ and ‘top-venting’ designs, are significantly easier to convert to lethal-purpose use (Ferguson & Jenzen-Jones, 2021). In fact, whether converted or not, almost all blank-firing weapons documented in Syria by ARES have been of the front-venting type, whereas these designs are frequently legally restricted in most Western countries.



Figure 2.12 A Turkish Aksa Silah AK15 blank-firing pistol which has been converted to be capable of firing lethal-purpose cartridges, and subsequently experienced a catastrophic failure (source: ARES CONMAT Database).

Describing the Dataset

The 3,768 trades documented in the dataset are broken down by class in *Figure 3.1*, in accordance with the ARCS classification system. In keeping with the trends observed during previous ARES research examining the arms trade in Syria, 60% (2,264) of trades were for lethal-purpose small arms.¹⁵ The second most common class documented was munitions—including items such as small-, medium-, and large-calibre projectile ammunition, hand grenades, and rockets—which accounted for almost 20% (750) of documented trades. As noted previously, blank-firing pistols make up a considerable portion of the dataset, at about 19% (715) of documented trades. As noted in Shanley and Mick F., 2021a, this is a much greater proportion than typically documented in other conflict zones. Finally, a mere 1% of trades (39) were for light weapons. This is generally expected given the primarily individual nature of the marketplace in Syria, but is still lower than documented in other conflict zones, such as Iraq, Libya, and Yemen.¹⁶ In common with these other conflicts, however, confidential sources indicate that the trade in light weapons is primarily conducted by non-state armed groups, and rarely by individuals.

¹⁵ 'Lethal-purpose small arms' are distinguished in this report from blank firing pistols, even those that could possibly have been converted to fire lethal-purpose ammunition. This is because it was near-impossible to determine with certainty if a listed blank firing pistol had been converted in such a way in most cases.

¹⁶ ARES CONMAT Database and various reports.

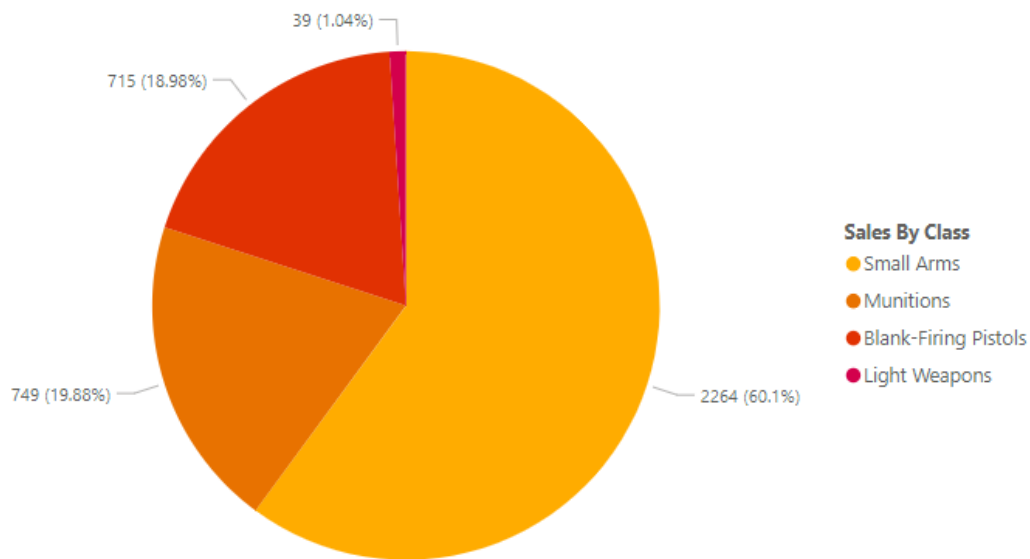


Figure 3.1 Sales contained in the dataset by ARCS class (source: ARES).

Within these categories, a considerable number of antique firearms (at least 34) were offered for sale, primarily in June 2021 across at least two distinct listings (see *Figure 3.2*). These weapons almost certainly originated from a private collection, having essentially zero value as combat implements in North-western Syria. Although research tends to focus on the procurement activities of combatants in conflict zones, civilian collectors also actively seek weapons in many of these areas. As a result, these weapons are included in the dataset under the category of small arms, although have been analysed separately from other small arms in this report, due to their very limited military utility.



Figure 3.2 A number of muzzle-loading flintlock and percussion pistols, amongst other types, offered for sale in North-western Syria in mid-June 2021 (source: ARES CONMAT Database).

The number of arms and munitions offered for sale varied somewhat by month, although most saw a number of offers in the range of 200 to 400, with an average of around 290 per month (see *Figure 3.3*). The most prolific month by number of arms and munitions offered for sale was June 2021, with 667 in total, whilst November 2020, July 2021, November 2021 had less than 200 recorded sales offers. In many cases, the disparity in sales offers between months was the direct result of a small number of large listings, comprising multiple firearms (or blank-firing weapons). With those excluded, less variation was observed over time.

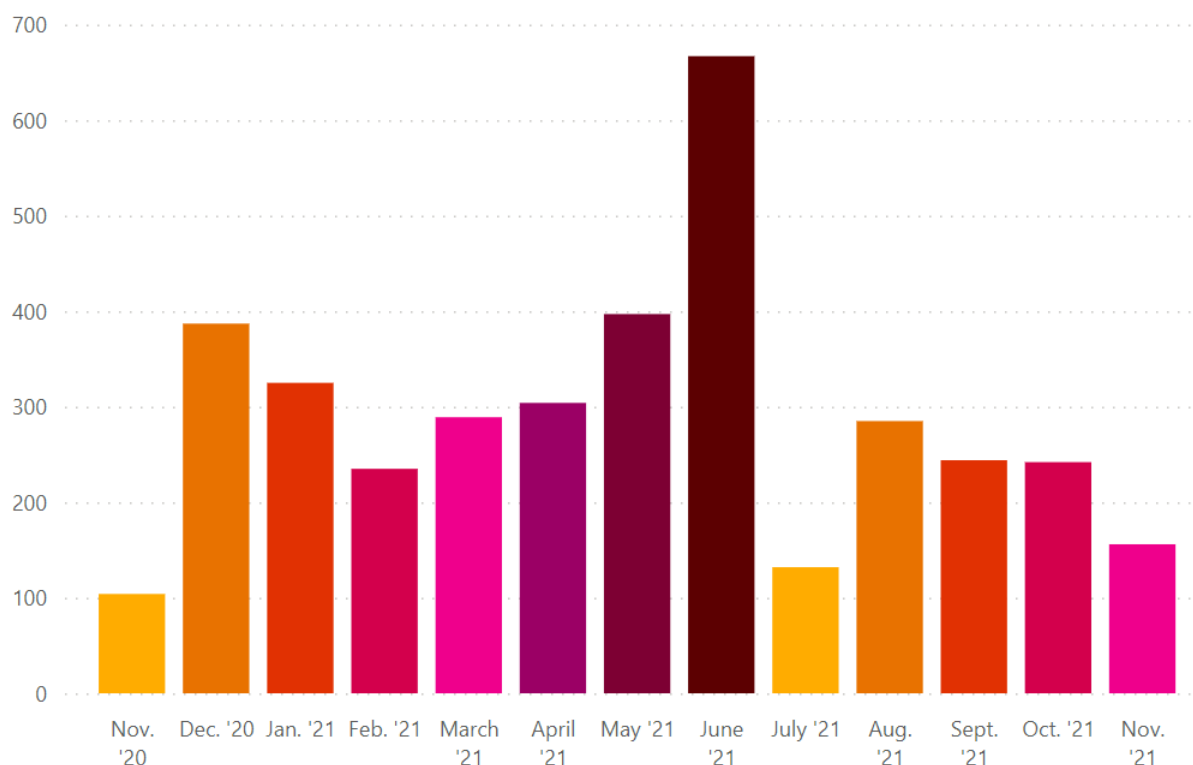


Figure 3.3 Total sales by month during the data collection period (source: ARES).

Small Arms by Country of Origin

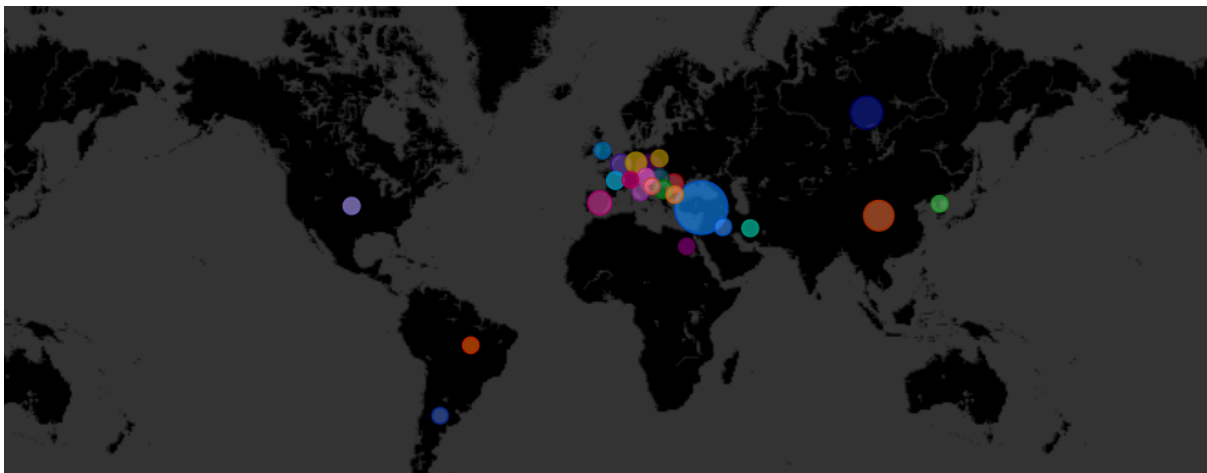
When blank-firing pistols are included,¹⁷ Turkey is the most common country of origin for small arms, represented by 715 of the 2,160 small arm trades (33%) with a discernible country of origin (see *Figure 3.4*). However, almost all of the Turkish items were blank-firing weapons; at least 684 of the 715 documented blank-firing weapons were of Turkish origin. The other listings of Turkish origin are primarily lethal-purpose self-loading pistols, but also include six SAR-308 AK-pattern self-loading rifles and one bolt-action rifle. The porous borders, close proximity of Turkey to Syria, and Turkish involvement in the Syrian conflict likely facilitates the transfer of arms. Excluding blank-firing weapons, the most common country of origin for small arms documented during the monitoring period is the former USSR and Russia, accounting for at least 321 listings.¹⁸ These encompass a wide range of groups, types, and sub-types, including self-loading

¹⁷ "Blank-firing pistols were included here in order to better demonstrate the broader national distribution of small arms and potential small arms as documented in the dataset" (Shanley and Mick F., 2021, fn. 8; emphasis in original).

¹⁸ Of these, 241 small arms originated from the USSR, and 15 small arms in the dataset could have been manufactured in either the USSR or Russian Federation based on unknown year of manufacture. At least 52 small arms definitively originated from the Russian Federation and not the USSR.

and manually operated rifles, sub-machine guns, self-loading pistols, and hand-held machine guns. This prevalence of Soviet/Russian small arms is unsurprising given the high quantity of Eastern bloc weaponry transferred to Syria during the Cold War (Kirshin, 1998) and the ongoing evidence of supply of some such arms in recent years (ARES, n.d.). For the same reasons, other Warsaw Pact states (particularly Czechoslovakia) are disproportionately represented in the dataset.

The next most common country of origin is China (274 listings), primarily due to the prevalence of Type 56 AK-derived self-loading rifle variants in Syria. However, 18 Chinese self-loading pistols were also documented, as were other self-loading rifles including five SKS and two CQ models. One Chinese hand-held machine gun is also recorded in the dataset. Not far behind China is Czechoslovakia, with 231 documented small arms. Interestingly, this includes 61 sub-machine guns, in addition to 114 self-loading rifles and 52 self-loading pistols, as well as one hand-held machine gun and three manually operated rifles. Rounding out the top five countries of origin for lethal-purpose small arms are Spain, with 148 items (most of which are self-loading pistols), and Belgium, with 90 small arms (most notably, 63 FN Herstal Hi-Power-pattern self-loading pistols). An additional 21 countries of origin account for the remaining 381 small arms for which country of origin could be conclusively determined. These include weapons originating in North Korea, Iran, Brazil, Switzerland, Germany, and the United States, among other historical and modern states. Additionally, some of the documented small arms were craft-produced, and are (if confirmed as locally produced) recorded with Syria as their country of origin.



Country of Origin	Number of Sales
Argentina	2
Austria	16
Belgium	90
Brazil	2
Bulgaria	18
China	274
Croatia	6
Czechoslovakia	231
Egypt	2
France	26

Country of Origin	Number of Sales
Germany	89
Hungary	50
Iran	6
Iraq	21
Italy	18
North Korea	4
Poland	11
Romania	52
Russia & Soviet Union	321
Serbia & Yugoslavia	38
Spain	148
Switzerland	1
Syria	3
Turkey	715
UK	3
USA	13

Figure 3.4 A map and table depicting the countries of origin for the small arms documented in the dataset (source: ARES).

Some small arms—particularly those patterns that were widely produced by several countries, such as TT, PM, and AK models—could not be identified with sufficient specificity to allow for the determination of their country of origin. This was primarily due to insufficient or low-quality imagery. Shotguns were similarly difficult to identify due to their simple design and the prevalence of copies. Nonetheless, it is likely that all or most of these are of Turkish origin. At least 34 obsolete, muzzle-loading weapons (both handguns and long guns) were documented, none of which were identifiable by country of origin (although ARES researchers recognised a few by their general style, which included North African and Ottoman examples) (Shanley and Mick F., 2021f).

Small Arms by Make or Manufacturer

Nearly 100 different makes and manufacturers¹⁹ were documented during the period of data collection (see *Figure 3.5*)—a very significant variety in producers, as suggested by the numerous countries of origin identified herein. If blank-firing pistols are included, the Turkish pistol make Lord is the most common, with 314 examples (of the total 1,615 listings with a discernible make, or 19%). The second most common make documented was the Czechoslovakian manufacturer Česká Zbrojovka,²⁰ with 230 listings. This is broadly consistent with the country-of-origin data; Czechoslovakia is the third-most-common country of origin and

¹⁹ “The ‘make’ of the weapon is generally analogous to a weapon’s ‘brand,’ and is typically marked on the weapon. In some cases, the weapon will be marked with the ‘make’ rather than ‘manufacturer’ [...] The ‘manufacturer’ of a weapon is the entity that actually produces that weapon.” (Jenzen-Jones & Ferguson, 2018a, p. 104).

²⁰ Including its predecessor and successor firms.

Česká Zbrojovka was its primary weapons manufacturer throughout the Cold War. Small arms in the dataset produced by Česká Zbrojovka are much more diverse than those of Lord, including handguns (such as the vz. 70 pistol), sub-machine guns (such as the Sa vz. 23 SMG), rifles (most notably Sa vz. 58-pattern rifles), and hand-held machine guns (one UK vz. 59 model was documented).

The third most common make/manufacturer was Turkish Aksa Arms with 212 items. As with Lord, this is a function of the high number of Turkish blank-firing pistols in the dataset. The fourth most common was the Soviet manufacturer Izhevsk (later IZHMAH),²¹ with 159 listings, primarily resulting from its production of AK-pattern self-loading rifles, PM self-loading pistols, and Mosin–Nagant-pattern manually operated rifles. The fifth most common was the Spanish manufacturer Star, with 108 listings. Its prominence in the dataset resulted from its handgun production, most notably its 9 × 19 mm Model B-pattern and Model 28-pattern pistols. However, other Star handguns are also found in the dataset, such as the Model FR (chambered for the .22 LR cartridge). A few Star Model Z84 sub-machine guns were also documented during the data collection period. Other notable makes include: the Soviet Tula Arms Plant; Turkey’s Retay, Ekol, and TİSAŞ; Belgium’s FN Herstal; Yugoslavia’s Zastava; Hungary’s Fegyver- és Gépgyár; Spain’s Llama-Gabilondo y Cia; North Korea’s First Machine Industry Bureau; the United States’ Colt; and Brazil’s Taurus. The reader should note that the make could not be conclusively determined for more than one thousand documented small arms. Even where a general type or pattern—and sometimes even a country of origin—could be determined, the manufacturer of a weapon was not always apparent from the available imagery. This is particularly the case for many of the widely-produced Eastern Bloc small arms, such as AK-pattern rifles, and PM- and TT-pattern pistols.

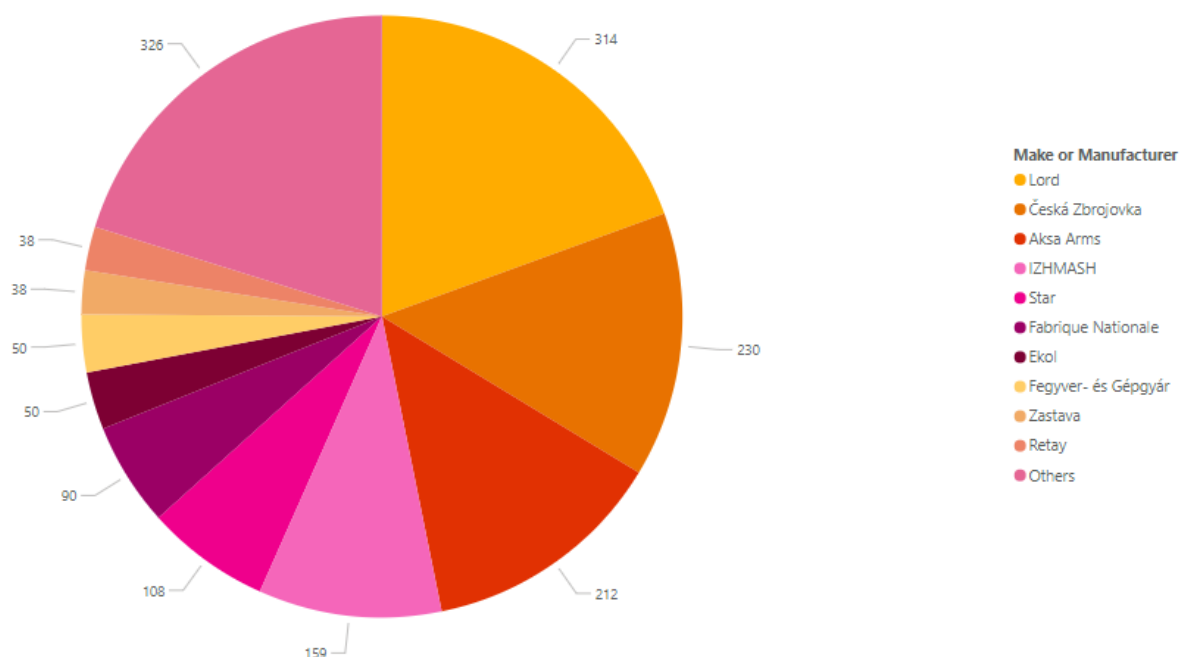


Figure 3.5 *Small arms in the dataset by make or manufacturer (source: ARES).*

²¹ Including predecessors and successors.

Arms & Munitions by Class, Group & Type

Small Arms

Of the 2,264 lethal-purpose small arms in the dataset, all could be identified at the ARCS Type level (see *Figure 4.1*). Of these, nearly 58% were rifles (1,305 examples). The majority of these were self-loading rifles—in fact, only 10% of the documented rifles were identified as manually operated. All but one of the manually-operated rifles documented were bolt-action designs, with the exception being a single-shot, break-open rifle. The bolt-action rifles were predominantly Mosin-Nagant pattern rifles and MAS-36 models. Handguns were the next-most common Type, accounting for nearly 32% of documented small arms (733 examples). This included 14 revolvers. The remaining Types included 80 sub-machine guns, 53 shotguns, and 59 hand-held machine guns.

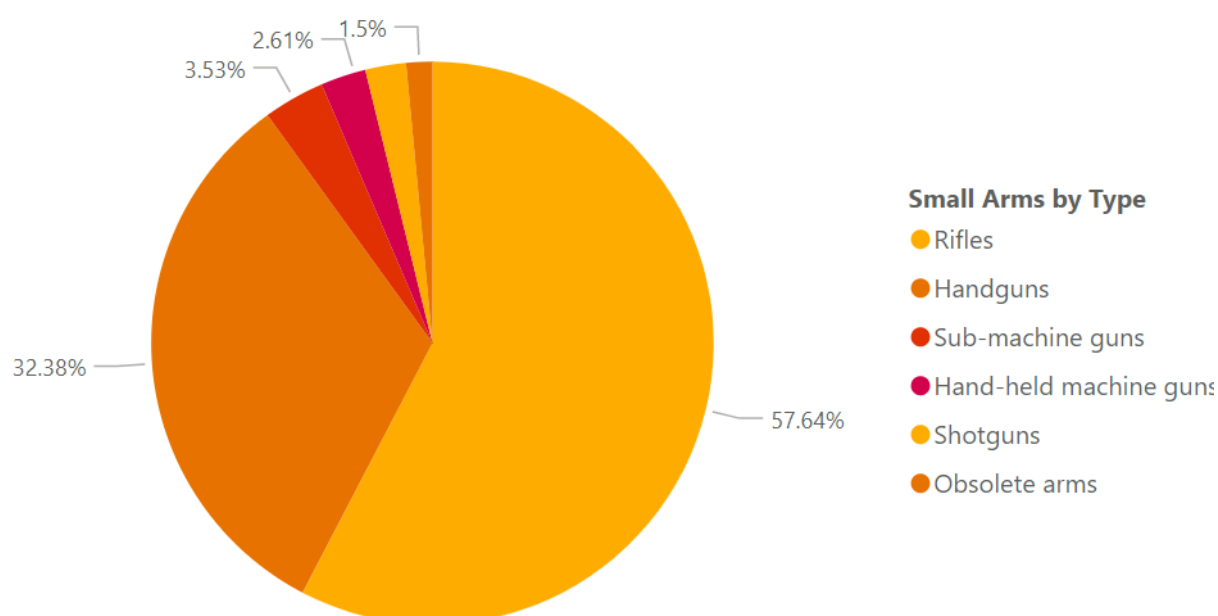


Figure 4.1 Small arms contained in the dataset by ARCS Type. Note that blank-firing pistols are not considered small arms, and muzzle-loading weapons are considered separately from their usual Type (e.g., handgun or rifle), shown here in an 'Obsolete arms' category.

Handguns

ARES researchers documented 1,448 different handgun offers during the period of data collection. Handguns (including blank-firing pistols) account for nearly 50 per cent of small arms captured in the dataset. This figure was largely driven by blank-firing pistols, which constituted 49 per cent of all handguns documented for sale during the period of data collection (see *Figure 4.2*). Once blank-firing weapons are eliminated from the analysis, lethal-purpose handguns account for 32 per cent of all lethal-purpose small arms contained within the dataset.

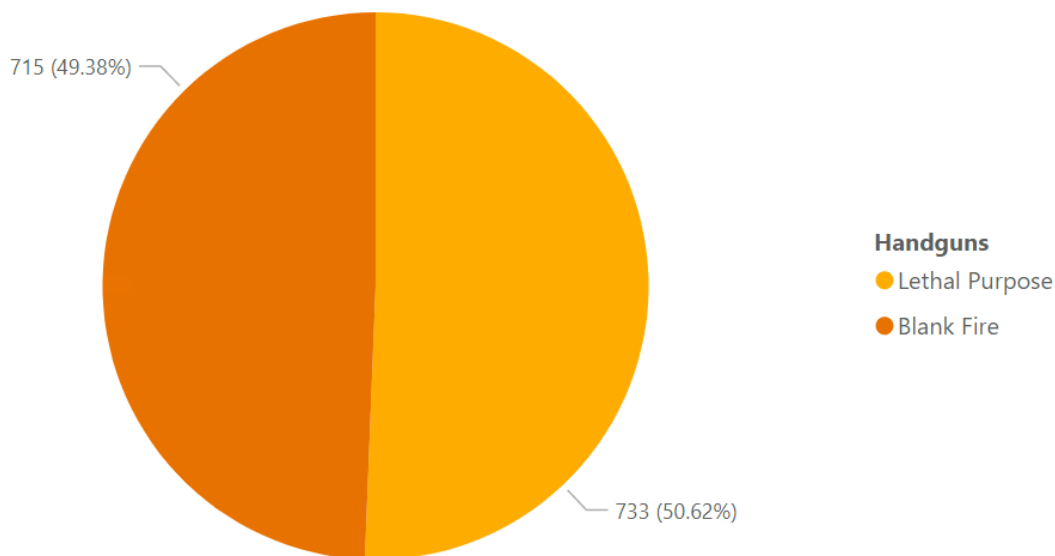


Figure 4.2 Lethal-purpose vs. blank-firing handguns (source: ARES).

All but 132 of the recorded handguns could be identified by pattern (the unknown-pattern pistols also include 17 craft-produced examples). The concealable nature of handguns may provide fewer legal and tactical advantages in an ongoing conflict zone like Syria than in other areas. This may explain why handguns constitute a substantially smaller portion (less than 50 per cent—even if blank-firing pistols are included—versus 77 per cent) of the dataset than was documented in Caracas in *ARES Research Report No. 10*. Additionally, the high relative prices of pistols compared to other small arms—as documented below—means that, for a fighter or civilian with limited resources, a handgun may simply be too expensive to purchase.²² Within the handguns category, self-loading pistols represent 98 per cent of all lethal-purpose handguns recorded. The remaining handguns consisted of 14 revolvers. A range of international lethal-purpose handgun manufacturers were observed, with almost 40 manufacturers from 20 different countries represented. In addition to the many recorded blank-firing handguns, several locally made self-loading pistols and other handguns with local modifications were documented (see below). Whilst lethal-purpose handguns in 9 calibres were observed, 9 × 19 mm was the dominant chambering, accounting for nearly 36 per cent of all examples in the dataset (see *Figure 4.3*).

Caliber	Number
.22 LR	29
.24 ACP	3
.32 ACP	50
.357 Magnum	1
.38 Special	1
.380 ACP	2
7.62 × 25 mm	123
9 × 18 mm	106
9 × 19 mm	261
TOTAL	576

Figure 4.3 Lethal-purpose handguns by calibre. The calibre of the other 156 lethal-purpose handguns could not be conclusively determined (source: ARES).

²² Confidential sources have told ARES that fighters earn between 25–150 USD per month, which means spending hundreds of USD on handguns as well as purchasing food and other necessities is, for many fighters, simply impossible.

TT-30 & TT-33-pattern Pistols

Although Syria's porous borders have allowed for large numbers of recently manufactured handguns to flow into the region under study, legacy designs—primarily of Soviet origin—remain the most popular lethal-purpose handguns documented during the period of data collection. TT-pattern (*Tula–Tokarev*; commonly just 'Tokarev') self-loading pistols were the most common lethal-purpose handguns documented, constituting nearly 16 per cent of all lethal-purpose handguns in the dataset (143 examples). Identifying specific models and national origins of firearms within a common pattern often requires clear, detailed images of markings and internal components. Given the remote nature of data collection underpinning this report, images of this nature are only occasionally obtainable. As a result, the majority of recorded TT-pattern weapons were not able to be identified with any greater specificity than 'TT-pattern pistol'. Whilst most of the unidentified TT-pattern weapons are likely of Soviet origin, some of them are almost certainly foreign copies. Of the TT-pattern firearms identifiable by model, Hungarian-made Tokagypst and Soviet-made TT-30 and TT-33 models were most common (at least 23 and 13 examples, respectively). Other regional copies were also identified. Yugoslavian Zastava M57 pistols (at least 7 examples; see *Figure 4.4*) and Chinese Type 54 pistols (at least 7 examples) were the second- and third-most common derivatives identified within the period of data collection. At least two Polish Radom PW wz. 33 pistols and one Hungarian 48M pistol were also recorded. All of these weapons were chambered for the 7.62 × 25 mm cartridge, excepting the Tokagypst models which were chambered for 9 × 19 mm. Even barring one particularly cheap outlier (85 USD), TT-pattern pistols were relatively inexpensive for handguns, ranging in price from 200 to 800 USD. The average cost of a TT-pattern pistol, less the outlier, was approximately 433 USD. Pricing data was available for 60 per cent of the recorded sales.



Figure 4.4 A Yugoslavian Zastava M57 self-loading pistol, a licensed copy of the Soviet TT-33 self-loading pistol. Note the markings and emblem on the grip, which depict a communist star surrounded by "SFRJ" (for 'Socijalistička Federativna Republika Jugoslavija'). This example was listed for sale in June 2021 with an asking price of 600 USD (source: ARES CONMAT Database).

PM-pattern Pistols

The second most common lethal-purpose handgun documented in the dataset was another Soviet-era handgun design—the PM (*Pistolet Makarova*; ‘Makarov’s Pistol’) self-loading pistol. PM-pattern handguns constituted 14 per cent of all lethal purpose handgun sales (106 examples). Like TT-pattern handguns, most documented offers of PM-pattern handguns could not be identified by model or country of origin, although they are also likely to be primarily of Soviet manufacture. Of the examples identifiable by model, the Soviet-made PM was the most common (at least 28 examples), but ARES also documented a considerable number of foreign-made copies. East German Pistole M (at least 14 examples; see *Figure 4.5*) and Hungarian PA-63 (at least 8 examples) models were the most common copies identified within the dataset. Additionally, at least one Polish FB P-64, three Bulgarian PM, and two Chinese Type 59 pistols were documented. All of these weapons were chambered for the 9 × 18 mm cartridge. Prices for PM-pattern pistols varied more than those of TT-pattern pistols, ranging from 150 USD to 1,000 USD. However, only two examples were documented at the 1,000 USD price point, and all other recorded examples were listed for no more than 700 USD. Even excluding the two highest-priced examples, PM-pattern pistols commanded higher asking prices than TT-pattern weapons—about 459 USD on average. Pricing data was available for 61 per cent of the recorded sales.



Figure 4.5 An East German Pistole M, a licensed copy of the Soviet PM self-loading pistol. This example was listed for sale in April 2021, with an asking price of 310 USD (source: ARES CONMAT Database).

Hi-Power-pattern Pistols

The *Fabrique Nationale Herstal* (FN Herstal) Hi-Power self-loading pistol was the third most common lethal-purpose handgun documented during the period of data collection. Hi-Power-pattern pistols constituted nearly 9 per cent of documented lethal-purpose handgun offers (66 examples). All but three of the recorded Hi-Power-pattern weapons were ‘true’ FN Herstal Hi-Power model handguns manufactured in Belgium (see *Figure 4.6*). Two of the remaining weapons could not be identified by specific model or nation of origin, but had physical characteristics (e.g., finish, furniture, markings) that indicated they were not manufactured by FN Herstal. The final example in the dataset was an Argentinian-made Hi-Power copy produced by the nationally owned *Fabricaciones Militares*. Hi-Power-pattern weapons documented by ARES were considerably more expensive in Syria than both PM- and TT-pattern handguns. Recorded prices ranged from 1,150 USD to 2,000 USD. The average cost of a Hi-power pattern weapon in the region was about 1,465 USD—around 1,000 USD more than that of a PM-pattern weapon. Pricing data was available for 67 per cent of recorded offers.



Figure 4.6 A Belgian FN Herstal Hi-Power self-loading pistol, listed for sale in April 2021 with an asking price of 1,425 USD. Note the “Fabrique Nationale” marking on the pistol’s slide (source: ARES CONMAT Database).

Star Model B-pattern Pistols

Spanish-made Star Model B self-loading pistols were the fourth most documented model of handgun in the dataset. Model B-pattern pistols accounted for more than 8 per cent of the documented lethal-purpose handgun offers (63 examples; see *Figure 4.7*). About 79 per cent of the documented Model B-pattern pistols were Model B handguns (50 examples), while the remaining 13 examples were Model BM weapons. Model B-pattern weapons commanded an average price of 807 USD, but prices varied substantially between Model B and Model BM weapons. There exists a wide range of prices for Model B pistols in the dataset—these pistols cost between 125 USD and 1,000 USD. Meanwhile, Model BM weapons were considerably more expensive, priced between 750 USD to 1,150 USD. Pricing data was available for 60 per cent of documented Model B pistol offers, but only 54 per cent of Model BM pistol offers.



Figure 4.7 A Spanish Star Model B self-loading pistol, listed for sale in August 2021 with an asking price of 750 USD (source: ARES CONMAT Database).

Other Lethal-purpose Handguns

The most commonly documented handguns in the dataset roughly align with previously documented trends in other conflict zones—unsurprising given the widespread proliferation of these models. Conflict-specific trends may be more readily interpreted from the nearly 54 per cent of documented lethal-purpose handguns which fall outside of the four most common patterns. Prolonged conflict, regional instability, porous borders, and foreign military aid have combined to generate a considerable degree of diversity among the lethal-purpose handguns documented in Syria. ARES analysts were able to interpret make and/or model information for nearly 69 per cent of these weapons (unknown examples include 19 craft-produced self-loading pistols, multiple revolvers, and a 1911-type self-loading pistol). Weapons from at least 15 historical or contemporary states were offered for sale. Most of these were self-loading pistols. ARES documented at least 52 pistols made by Czech producer *Česká zbrojovka Uherský Brod* (CZ) (including 36 CZ vz. 70 pistols, 6 CZ vz. 50 pistols, 4 CZ vz. 75 pistols, 3 CZ vz. 52 pistols, 2 Pistole Modell 27 pistols, and one CZ vz. 45 pistol); at least 42 pistols produced by Star (including 19 MOD. 28M pistols, 18 Model F/FR-pattern pistols, one Starlet-pattern pistol, one Firestar-pattern pistol, and one Gold Star 2002-pattern pistol); 25 handguns made by Spanish manufacturer Astra and copies (including five A-75 model pistols, a Modell 300 pistol, and a Cub Guernica Mod. 25 Auto Tactical pistol); 25 pistols made by *Llama-Gabilondo y Cia SA* of Spain; 20 pistols made by FN Herstal of Belgium (including 11 Model 1910-/Model 1922-pattern pistols, five Model 1903-pattern pistols, three Model 1922 pistols, and one Baby Browning-pattern pistol); at least 17 handguns made by Italian producer Beretta (including 9 Model 948-pattern pistols, two Model 92 pistols, two Model 71 pistols, and two M1935 pistols); at least 15 ZIGANA T model pistols made by Turkish firm TİSAŞ; 11 Glock 19 Gen3 pistols; eight Norinco-made pistols (including 6 NP-20 and two NZ-75-pattern pistols); nine Interarms-marked PPK/S pistols; at least 6 Iraqi Tariq pistols; five handguns made by Girsan of Turkey (including four MC-21 pistols and one MC 239 pistol); at least one self-loading handgun manufactured by Colt in the United States (a Colt 1903); at least two pistols made by SIG Sauer in Germany (with another SIG Sauer pistol from an unknown country of origin); at least four Croatian HS Produkt HS-9 pistols; three handguns produced by Sturm, Ruger & Co. in the United States (a P85 pistol, a P95 pistol,

and a Standard Model pistol) at least five pistols produced by Walther of Germany or copies (including four PP models and one PPK model); two French MAB Model D pistols; two Model BCF-66 pistols made by Unique in France; at least two Taurus pistols manufactured in Brazil; at least three Mauser 1914-pattern pistols; one 'Delta Defence Group 19' pistol;²³ one Argentinian Bersa Model 844 pistol; at least one Pistole 08-pattern pistol; one German 'Walther-style' pistol produced by Erma; at least one J.P. Sauer Model 1913 pistol; one Russian Baikal MP-446 Viking pistol (see below); and one Turkish Sarsilmaz K11 pistol. ARES also documented 14 revolvers, including Lawman, Diamondback, and M1927 models produced by Colt in the United States; an American Smith & Wesson Model 10; a French Charles-François Galand M1870; and an Italian-made Rossi design.

MP-446C Viking self-loading pistol

A single MP-446C—a sporting variant of the MP-446 Viking—was documented in the dataset (see *Figure 4.8*).²⁴ The MP-446 is the commercial version of the standard service pistol of the Russian military, the MP-443 Grach. It is manufactured by Kalashnikov Concern under its 'Baikal' brand (Moss, 2018). Visible markings indicate that this example is chambered for 9 × 19 mm (see *Figure 4.9*). The MP-446 self-loading pistol is very rare in Syria and does not appear to have been supplied to the Syrian military, however they have been recorded by ARES on the black market in neighbouring Iraq (ARES, n.d.). A source who is familiar with the black market in the region has suggested that the pistol may have come from Lebanon, which has supposedly imported the MP-446 directly from Russia during the five years prior to the 24 February invasion of Ukraine this year.²⁵



Figure 4.8 An MP-446C self-loading pistol offered for sale in north-western Syria in late December 2020 (source: ARES CONMAT Database).

23 See: Shanley & Mick F., 2021d.

24 This section is adapted from Shanley & Mick F., 2021a.

25 ARES interview with confidential source.



Figure 4.9 “9x19” markings on the MP-446C self-loading pistol (source: ARES CONMAT Database).

Glock 19 Gen3 self-loading pistols

Whilst Glock 19 Gen 3 self-loading pistols are not uncommon in Syria—11 are documented in the dataset, and many more have been seen in combat footage (ARES, n.d.)—the handgun depicted in *Figure 4.10* is noteworthy.²⁶ In general, Iraq is the most common immediate origin for the transfer of Glock handguns to Syria. In the mid-2000s, the United States supplied tens of thousands of Glock 19 pistols to Iraqi security forces, many of which were lost or captured by Islamic State fighters and other parties in subsequent years (Schmidt & Thompson, 2007; Chivers, 2006; ARES, n.d.). Through this mechanism—with supply often following tribal or ideological lines to fighters in neighbouring Syria—many of these pistols found their way across the border. However, this Glock 19 does not fit this pattern for multiple reasons. First, it is in unusually good condition and was offered with its purpose-built, factory carrying case. Second, while origin of the weapon is unknown, its serial number indicates that it was manufactured in 2009—meaning it is four to five years newer than those first supplied to Iraqi Security Forces by the United States. This suggests that this individual Glock 19 entered Syria through another route.

Unlike the Glock 19 Gen 3 self-loading pistol described above, the example depicted in *Figure 4.11* was likely supplied to Iraqi Security forces by the United States sometime in the mid-2000s. Though many of these pistols have since been diverted into Syria (Schmidt & Thompson 2007), this example is notable for the small attachment visible at the back of the weapon’s slide. This common aftermarket component renders the weapon capable of automatic fire (in a configuration sometimes referred to as a ‘machine pistol’). These adaptations are commonplace on black markets around the world²⁷, and are increasingly observed in Iraq and Syria, often as a status symbol (ARES, n.d.).

²⁶ This section is adapted from Shanley & Mick F., 2021b & 2021c.

²⁷ See, for example: Perez, Ferguson & Jenzen-Jones, 2020.



Figure 4.10 A Glock 19 Gen3 of uncommon, though unknown, origin for sale in North-western Syria in late February 2021. Its carrying case is seen in the background of the image (source: ARES CONMAT Database).



Figure 4.11 A Glock 19 Gen3 of uncommon, though unknown, origin for sale in North-western Syria in late February 2021. Its carrying case is seen in the background of the image (source: ARES CONMAT Database).

Delta Defence Group 19 self-loading pistol

This self-loading pistol (*Figure 4.12*), documented in April 2021 and bearing a strong external resemblance to the Austrian Glock designs, is marked to indicate it was manufactured by the elusive 'Delta Defence Group' (DDG).²⁸ Since at least 2019, weapons with "D.D.G." markings have been documented in the Middle East, predominantly in Iraq (Mick F., 2020). In addition to this Glock-style pistol, DDG appears to have manufactured other polymer-framed, double-action pistols (both compact and full-sized), as well as AR-15-pattern rifles. It is possible that DDG is not a legally registered company, as an extensive search by researchers at *Silah Report* has uncovered no publicly available information on the manufacturer (Mick F., 2020). It is believed that weapons with DDG markings are produced by a third-party 'white label' company, with links to other manufacturers.



Figure 4.12 A 'Delta Defence Group' 19 self-loading pistol offered for sale for 2,150 USD in North-western Syria in early April 2021 (source: ARES CONMAT Database).

²⁸ Adapted from Shanley & Mick F., 2021d.

J.P. Sauer Model 1913 self-loading pistol

The First World War-era J.P. Sauer Model 1913 self-loading pistol shown in *Figure 4.13* appeared for sale on the Syrian online arms market in July 2021.²⁹ The source of this weapon is unknown, as are the origins of many early-twentieth-century weapons found in Syria today. Some examples of the J.P. Sauer Model 1913 may have been imported by a civilian enthusiast, supplied to a local force by an external government, or left behind in Syria by occupying foreign armed forces during the 20th century.



Figure 4.13 A J.P. Sauer Model 1913 self-loading pistol chambered for the .32 ACP cartridge, offered for sale in Afrin, Aleppo in Syria in mid-July 2021 (source: ARES CONMAT Database).

Rifles

Rifles were the most commonly documented small arms during the period of data collection, accounting for almost 58 per cent of this portion of the dataset (1,305 examples). All but 11 of the rifles could be identified by pattern or model ('unidentified rifles' include three craft-produced rifles). The prevalence of rifles is unsurprising, given that in a conflict-zone like North-western Syria, rifles—particularly self-loading rifles—offer the most utility to both combatants and civilians. Self-loading rifles constituted 90 per cent of all rifle sales (at least 1,179 examples), reflecting their superior combat effectiveness when compared to manually-operated rifles in nearly all modern combat scenarios. All but two of the remaining 126 weapons were bolt-action rifles. The other manually-operated rifle was a single-shot, break-open weapon. ARES researchers were able to ascertain the national origin of more than 68 per cent of all documented rifle offers. Rifles of Soviet or Russian origin were the most common, accounting for slightly less than 20 per cent of all documented rifle sales. Chinese rifles were the next most common, representing more than 19 per cent of documented rifles.³⁰ Czech and German rifles followed, with approximately 9 and 5 per cent of documented rifle offers, respectively. In total, rifles from 23 different states were documented during the

²⁹ This section adapted from Shanley and Mick F., 2021g.

³⁰ This number does not include Type 56-pattern rifles that could not be identified by country of origin.

period under review. Over 75 per cent of all documented rifles were identified as AK-family weapons—unsurprising given the family’s nearly ubiquitous presence in conflict zones across the world, including Syria (ARES, n.d.). While AK-family weapons were the most common, there exists considerable diversity among the remaining rifles identified in this report. The nearly eleven-year-long conflict in Syria has allowed for vast quantities of weapons to flow into the region, and the durability of most small arms has ensured that many of the more obscure models in service have survived to be documented. In addition, it is common in Syria for rifles to be locally modified. Modifications are performed to fulfil the unmet tactical needs of local fighters (see *Figure 4.38*), to respond to regional supply constraints (*Figure 4.33*), and to create ‘prestige weapons’ (*Figure 4.17*). Whilst rifles chambered for 11 different calibres were observed, the 7.62 × 39 mm cartridge was the dominant chambering, accounting for 80 per cent of all examples in the dataset (see *Figure 4.14*).

Caliber	Number
7.62 × 39 mm	1048
7.62 × 52R mm	116
5.45 × 39 mm	59
7.62 × 51 mm	22
5.56 × 45 mm	19
7.5 × 54 mm	19
7.92 × 33 mm	6
.22 LR	2
7.92 × 57 mm	2
12.7 × 108 mm	1
12.7 × 99 mm	1
TOTAL	1295

Figure 4.14 *Rifles by calibre. The calibre of the remaining 11 rifles could not be definitively identified.*

AK-family Self-loading Rifles

Taken broadly, *Avtomat Kalashnikova* (AK)-family rifles were the most documented rifles in the dataset. The 981 identified examples originated from at least 14 nations. About 94 per cent of the documented AK-family rifles were chambered for the 7.62 × 39 mm cartridge (921 examples). The remaining AK-family rifles were chambered for the 5.45 × 39 mm cartridge (60 examples). The cost of AK-family rifles varied substantially, ranging from 50 USD to 3,000 USD,³¹ depending on the model and condition of the offer. Pricing data was only available for 59 per cent of the documented offers.

³¹ The 3,000 USD offer was an outlier; the next most expensive offer sat at 2,220 USD.

AKM-series Rifles

Unsurprisingly, AKM-series rifles (see *Figure 4.15*) were the most common 7.62 × 39 mm AK-family weapon documented in the dataset, constituting around 34 per cent of all AK-family weapons (at least 337 examples). These weapons ranged uniformly in price from 50 USD to 1,380 USD. However, the 1,380 USD sale was the only documented AKM-series rifle listed for above 600 USD. The average asking price for an AKM-series rifle was approximately 277 USD, with pricing data available for 61 per cent of the documented offers. Interestingly, at least 29 of the documented AKM and AKMS rifle offers were for weapons which had been locally converted to look like AKS-74U rifles (see *Figure 4.18*). These weapons ranged in price from 350 USD to 525 USD. While more expensive than the average AKM-series rifle price, locally converted ‘AKS-74U’ rifles are substantially less expensive than ‘true’ AKS-74U models.



Figure 4.15 An AKM self-loading rifle made by Tula in the Soviet Union, offered for sale in April 2021 with no public asking price (source: ARES CONMAT database).

Locally Modified Bullpup AKM Rifles

Self-loading rifles converted to a ‘bullpup’ configuration appear to have first appeared in notable numbers in the north-western Syrian province of Idlib at some point prior to late 2018, and they have become increasingly commonplace since then (Vining, 2018).³² These conversions are mostly seen in service with foreign fighters from Central Asia and the Caucasus fighting in Idlib (ARES, n.d.). Fighters from the Caucasus, especially, are said to favour rifles modified in this way.³³ The example pictured here (see *Figure 4.16*) was posted for sale by a Russian-speaking user. As noted, standard rifles are modified by moving the trigger and pistol grip forward, with the trigger linkage concealed under a locally fabricated handguard. The stock is dramatically shortened, essentially becoming a simple ‘cap’ for the rear of the receiver. This rifle also features a locally made flash hider.

Prior to September 2021, ARES had documented AKM rifles which had been converted into bullpup rifles, and AKM rifles which have been converted to resemble AKS-74U rifles.³⁴ However, in September 2021, the first documented example of an AKM been converted both to bullpup and to loosely resemble an AKS-74U was listed for sale (see *Figure 4.17*). The craftsmanship of the conversion is of comparatively high quality, which is unusual for locally produced bullpup rifle conversions. This may be a ‘status weapon’, given that the finish on the rifle is extremely uncommon among firearms used in armed conflict in Syria.

32 This section adapted from Shanley & Mick F., 2021a.

33 ARES interviews with confidential sources.

34 Adapted from Shanley & Mick F., 2021i.



Figure 4.16 An AKM-pattern self-loading rifle converted to a bullpup configuration, featuring a locally produced flash hider. This weapon was offered for sale for 450 USD in North-western Syria in early December 2020 (source: ARES CONMAT Database).



Figure 4.17 An AKM-pattern self-loading rifle converted to a bullpup configuration, featuring a locally produced flash hider. This weapon was offered for sale for 450 USD in North-western Syria in early December 2020 (source: ARES CONMAT Database).

AKM Rifle Modified to AKS-74U Appearance

Short-barrelled rifles—especially the AKS-74U—are prized within Syria, and are commensurately expensive.³⁵ As a result, a cottage industry specialised in modifying full-size rifles has sprung up. Donor weapons, most often AKM-pattern rifles, are shortened and modified to provide affordable alternatives to real AKS-74U rifles. Several rifles of this type were documented during the monitoring period. The base rifle for the conversion pictured (see *Figure 4.18*) was a Soviet AKM, with its trunnion markings indicating it was made at Tula in 1977 (see *Figure 4.19*). The rifle was cut down, the gas block has been replaced with what appears to be a locally produced component, the front trunnion has been modified to accept an AKS-74U-style top cover, and the receiver has been modified to accept a distinctive, side-folding ‘triangle’ stock. This is an extensive modification, which requires a degree of skill, knowledge of AK-pattern rifles, and access to a workshop and machine tools.



Figure 4.18 An AKM converted to look like an AKS-74U, offered for sale for 400 USD in north-western Syria in early November 2020 (source: ARES CONMAT Database).



Figure 4.19 Trunnion markings on an AKM converted to look like an AKS-74U, indicating it was produced at Tula in the Soviet Union in 1977 (Source: ARES CONMAT Database).

35 ARES interviews with confidential sources; ARES, n.d. This section adapted from Shanley & Mick F., 2021a.

Type 56-series Rifles

Type-56 series rifles (including Type 56, Type 56-1, and Type 56-2 models; see Figure 4.20) were the second most commonly documented AK-family weapon, constituting 26 per cent of all documented AK-family rifles offered for sale (at least 256 examples). Type 56-series rifles were relatively inexpensive, ranging in price from 75 USD to 460 USD (excepting three unusually expensive examples priced at 700 USD each). Excluding the aforementioned outliers, Type 56-series rifles commanded an average price of nearly 205 USD. Pricing data was only available for approximately 62 per cent of documented offers.



Figure 4.20 A Type 56-series rifle listed for sale in August 2021. Note the folding bayonet (source: ARES CONMAT database).

MPi-K-series Rifles

MPi-K-series rifles of East German manufacture emerged as a commonly documented AK-family weapon during the period of data collection. 62 MPi-K-series rifles were documented for sale in North-western Syria, constituting six per cent of all documented AK-family rifle offers. This number included 21 MPi-Km pattern rifles, 19 MPi-KmS rifles, and 22 MPi-KmS-72 rifles (see Figure 4.21). These weapons ranged in price from 140 to 400 USD, with only minor differences in price by model. The average cost of an MPi-K-series rifle was 232 USD. Pricing data was available for approximately 61 per cent of documented offers.



Figure 4.21 An East German MPi-KmS-72 self-loading rifle, listed for sale in August 2021 with an asking price of 250 USD (source: ARES CONMAT database).

AK-family Rifles Chambered for the 5.45 × 39 mm Cartridge

ARES analysis identified 60 AK-family weapons chambered for the 5.45 × 39 mm cartridge. The majority of these rifles (39 examples) were AK-74 model rifles. Additionally, 11 AK-74M rifles (see *Figure 4.22*), nine AKS-74U rifles (see *Figure 4.23*), and one Polish Kbk wz. 88 ‘Tantal’ rifle were identified. The relative scarcity of these weapons was reflected in their asking prices. Asking prices for AK-family weapons chambered for the 5.45 × 39 mm cartridge ranged from 450 to 3,000 USD. The average price was nearly 1,064 USD, although prices varied considerably by model. The single documented Kbk wz. 88 was listed at 650 USD. AK-74 rifles cost on average 906 USD (not including one outlier of 2,220 USD; data available for 64 per cent of offers). AK-74M rifles were more expensive, costing on average more than 965 USD (data available for 7 of 11 offers). Consistent with their status as a regional prestige weapon, AKS-74U rifles were the most expensive. The three offers containing pricing information cost 1,750 USD, 2,200 USD, and 3,000 USD. These extreme prices explain why locals have taken to modifying AKM rifles to fit the form factor of the AKS-74U.



Figure 4.22 An IZHMAASH AK-74M self-loading rifle, listed for sale in January 2021 with an asking price of 850 USD (source: ARES CONMAT database).



Figure 4.23 A Tula-make AKS-74U self-loading rifle, listed for sale in February 2021 with a notably high asking price of 3,000 USD—reflecting demand for such rifles. These high prices for authentic AKS-74U rifles are likely an important factor in explaining the various local conversions of AKM rifles to look like AKS-74U rifles (source: ARES CONMAT database).



Figure 4.24 A shortened AK-74-type self-loading rifle fitted with custom furniture and a 'pistol brace' stock, offered for sale in North-western Syria in mid-August 2021 (source: ARES CONMAT Database).

In August 2021, a heavily modified AK-74-type self-loading rifle (see *Figure 4.24*) was offered for sale for 1,250 USD. The rifle appears to have been shortened and retrofitted with new components to look like an AKS-74U model. Modifications include a new AKS-74U-style gas-block—likely manufactured locally in Syria—and an AKS-74U-style rear sight without an aperture. The furniture was also altered; the handguard was replaced with an example which features accessory rails (likely a Chinese component intended for airsoft guns) and a new pistol grip was fitted. Most interestingly, the rifle's stock has been replaced with a 'pistol brace' stock, notionally designed to be fastened to the shooter's forearm by a hook-and-loop strap. Pistol braces are popular in the United States as a means to circumvent legislation specifying a minimum barrel length for weapons legally considered 'rifles' (Maryland, 2010), but are an uncommon sight in Syria. Demand for U.S.-style pistol braces, like many other firearms trends in Syria and other conflict zones, is likely to have originated with social media. The authors have observed that several Syrian fighters follow U.S.-based firearms community 'influencers' on Instagram.

AK-103 and AK-103-2 Rifles

AK-103 and AK-103-2 rifles were among the more modern AK-family weapons to be documented during the period of data collection.³⁶ 14 AK-103 rifles, 23 AK-103-2 rifles (AK-103 with an additional three-round burst setting; see *Figure 4.25*), and one AK-104 rifle (the carbine variant of the AK-103) were documented on offer during the period of data collection. They were relatively expensive, costing between 700 USD and 1,500 USD. The documented average cost of an AK-103-series rifle was approximately 1,046 USD. Pricing data was available for almost 53 per cent of AK-103-series offers (no pricing data available for the single AK-104 sale).

³⁶ See *ARES Research Report No. 5* for more information on how these rifles have been used to study the illicit flow of small arms in the Middle East and North Africa (Jenzen-Jones, 2016).

The origin of AK-103-2 rifles listed for sale is particularly notable. In late 2003 or early 2004, the Gaddafi government ordered as many as 230,000 AK-103-2 rifles for the Libyan military. These weapons were delivered to Libya in 2004, 2007, and possibly later (Jenzen-Jones, 2016).³⁷ Ten AK-103-2 rifles were offered for sale in north-western Syria in December 2020, and several of these had visible serial numbers—all of which suggest they could have been sourced from Libya (See *Figure 4.25*).³⁸ In 2013, Reuters reported that a Libyan arms dealer claimed to have sent weapons to the Syrian opposition (Donati, Shennib & Bosalum, 2013). AK-103-2 rifles and other weapons originating in Libya have previously been documented by ARES in Syria, including during field work in 2018 (ARES, n.d.). A local source reported to ARES researchers that fighters of the Syrian National Army (SNA) who went to fight in Libya often returned with AK-103-2 rifles, which is consistent with the first appearance of these rifles on Syrian online markets.



Figure 4.25 An AK-103-2 offered for sale in north-western Syria in early December 2020. Markings indicate that it was most likely transferred from Russia to Libya under a 2007 contract (source: ARES CONMAT Database).

Other AK-family Rifles

There was a considerable degree of diversity among the other 228 AK-family weapons offered for sale during the period of data collection. Weapons from at least 12 different countries were identified. ARES documented: at least nine Hungarian AK-63-series rifles (including two AK-63D models and seven AK-63F models); at least 15 Bulgarian AKK-series rifles (including eight AKK models and seven AKKS models); at least seven AKS-pattern (including Type 2) rifles; at least eight Hungarian AMD-65 rifles; one Hungarian AMP-69 rifle; at least seven Polish Kbk AK-pattern weapons (including six Kbk AKMS rifles and one Kbk AKS model); at least four Iranian rifles (including a KLF, two KLS rifles, and a KLT); at least 28 Yugoslavian M70-series rifles (including at least one M70 model, at least one M70AB1 model, 12 M70AB2 models, seven M70AB3 models, three M70B1 models, and three M70B3 models); at least three Serbian M92 rifles; at least 36 Romanian PM md.-pattern rifles (including 26 PM md. 63 models, nine PM md. 65 models, and one PM md. 90); at least six Turkish SAR-308 rifles; at least 13 Iraqi Tabuk rifles;³⁹ at least three North Korean Type 68 rifles; and at least three Russian Vepr rifles. Additionally, at least 80 early models of Soviet AK rifles were

³⁷ See Jenzen-Jones, 2016 for details on the Libya order, including serial numbers and original documentation. Weapons from this order have since been documented by ARES in nearly a dozen countries in the Middle East and Africa (ARES, n.d.).

³⁸ Adapted from Shanley & Mick F., 2021a.

³⁹ These Tabuk rifles are specifically those intended for use in a general infantry role, rather than the Tabuk 'Sniper' model which is intended for use as a designated marksman rifle. Only one Tabuk 'Sniper' was recorded; see *Self-loading Precision Rifles*, p. 52.

documented, including one Type 1 AKS model, one Type 2 AK model, three Type 2 AKS models, 45 Type 3 AK models, and 27 Type 3 AKS models. 13 of these early Soviet rifles could not be definitively identified by model.



Figure 4.26 A North Korean Type 68 self-loading rifle offered for sale in north-western Syria in mid-July 2021 (source: ARES CONMAT Database).



Figure 4.27 Receiver and trunnion markings on a North Korean Type 68 rifle offered for sale in north-western Syria in mid-July 2021 (source: ARES CONMAT Database).

One uncommon weapon documented first in July 2021 was a North Korean Type 68 self-loading rifle, offered for sale for 200 USD (see *Figures 4.26 & 4.27*). The Type 68 is a North Korean copy of the AKM rifle. This weapon may have entered Syria during the 1970s, as part of a large supply of North Korean weapons which included small arms, light weapons (including anti-tank guided missiles and mortars), heavy weapons (including artillery guns and multiple-barrel rocket launchers), and ammunition (Bechtol, 2015). It is also possible that this rifle entered Syria as part of a more recent arms shipment, as North Korea has tried to export weapons and other military hardware into Syria as recently as 2014 (*World News*, 2013; Bechtol, 2015).



Figure 4.28 Turkish SAR-308 made by Sarsilmaz Arms for sale in North-western Syria in mid-September 2021 (source: ARES CONMAT Database).

The SAR-308 is an unlicensed copy of the AKM made in Turkey by Sarsilmaz Arms, documented in a sale by ARES researchers in September 2021.⁴⁰ The rifle's furniture, as shown in *Figure 4.28*, appears to be inspired by U.S. firearms accessory firm Magpul's range of AK furniture. Most likely introduced in late 2017 or early 2018, the SAR-308 is now in use with Turkish security forces (*Defence & Technology*, 2020). The weapon has also appeared in the hands of fighters of the Turkish-backed National Liberation Front near Aleppo (*medad. press*, 2018), a coalition consisting of primarily Free Syrian Army (FSA)-aligned groups backed by Turkey (Al-Khalidi, 2019).

Sa vz. 58-series Rifles

The second most common series of self-loading rifles documented during the data collection period is the Czechoslovakian designed and manufactured Samopal vzor 58 (Sa vz. 58) series, with 114 of these rifles documented out of the 1,179 total self-loading rifles (see *Figure 4.29*). Sa vz. 58-series self-loading rifles therefore represent nearly 10% of self-loading rifles in the dataset, and 5% of all lethal-purpose small arms recorded. All were manufactured by Česká Zbrojovka in Czechoslovakia, and all were chambered for the 7.62 × 39 mm cartridge. The vast majority (94 of 114, or 82%) of vz. 58 rifles recorded were the original Sa vz. 58 model, with a fixed wooden stock. The remaining 20 (roughly 18%) were Sa vz. 58 V model self-loading rifles, which feature a folding metal stock. The asking prices for Sa vz. 58-series rifles were relatively low and exhibited minimal variation, ranging from 50 USD to 170 USD with an average of approximately 89 USD. However, there was some disparity in average price between different models, with the vz. 58 averaging 85 USD and the vz. 58 V averaging 108 USD per listing. Even at the high end, therefore, vz. 58-series rifles are generally cheaper than AK-pattern rifles, primarily the result of the low supply (and thus presumably higher prices) for the vz. 58's proprietary magazine.⁴¹ Pricing data was available for 73 of the 114 total documented offers, or around 64%.

⁴⁰ Adapted from Shanley & Mick F., 2021i.

⁴¹ ARES interviews with confidential sources.



Figure 4.29 A vz. 58 rifle documented in the dataset (source: ARES CONMAT Database).

AR-type Self-loading Rifles

ARES researchers recorded only 15 AR-type self-loading rifles listed for sale during the period of data collection, or some 1% of all self-loading rifle offers. Whilst the relative scarcity of this rifle pattern compared with the ubiquitous AK-series of self-loading rifles makes sense, the reported percentage remains lower than an informal assessment of ARES CONMAT Database Syria data suggests should be expected. This may be explained, at least in part, by the possession of AR-type rifles by more formally organised non-state actors, and a corresponding lack of public trade in these weapons. Of the AR-type rifles for which the method of operation could be discerned, all but two featured an automatic setting—the exceptions being M16A2 model rifles which only have semi-automatic and three-round-burst settings. At least six of the documented AR-type rifles were produced in the United States (four M16A1 rifles and two M16A2 rifles), and at least two originated in China (CQ models). Other notable AR-type self-loading rifles documented include two locally assembled, counterfeit ‘Noveske’ rifles (see *Figure 4.31*), and an M16A1 similar to the shortened barrel Israeli Mekut’zrar variant (see *Figure 4.32*). All AR-type rifles for which the calibre could be identified were chambered for the 5.56 × 45 mm cartridge.



Figure 4.30 A heavily modified M16A1 for sale in North-western Syria in early March 2021 (source: ARES CONMAT Database).

The documented asking prices for AR-type self-loading rifles vary substantially, from 750 USD to 3,500 USD, with an average of 1,731 USD. These high prices are likely the result of the relative scarcity of AR-type rifles in the region and their prestigious reputation according to some fighters.⁴² The most expensive of the examples documented was the locally-assembled Noveske clone, whilst the cheapest was the Mekut-zrar variant. The documented M16 variants were generally more expensive than CQ variants, with the former

⁴² ARES interviews with confidential sources.

having an average asking price of 1,338 USD and the latter of 770 USD. However, it should be noted that price data was only available for 7 of the 15 total listings, or slightly less than 50%.

Whilst it appears to be a fairly typical, commercial AR-family weapon, the rifle shown in Figure 4.30 (documented in March 2021) is actually a heavily modified M16A1.⁴³ The barrel has been shortened from 20 inches (508 mm) to roughly 14 inches (355 mm), and the gas block has been either replaced or cut down to fit under the modern handguard with accessory rails. Interestingly, the rifle's carrying handle has been removed and a Picatinny-style rail has been affixed to the upper receiver. The weapon also features several aftermarket parts, including the muzzle device, handguard, pistol grip, buffer tube, and stock. Some M16A1 rifles documented in Syria have been determined to have entered the country via Lebanon, which acquired them from the United States from the 1970s (SIPRI, 2021).

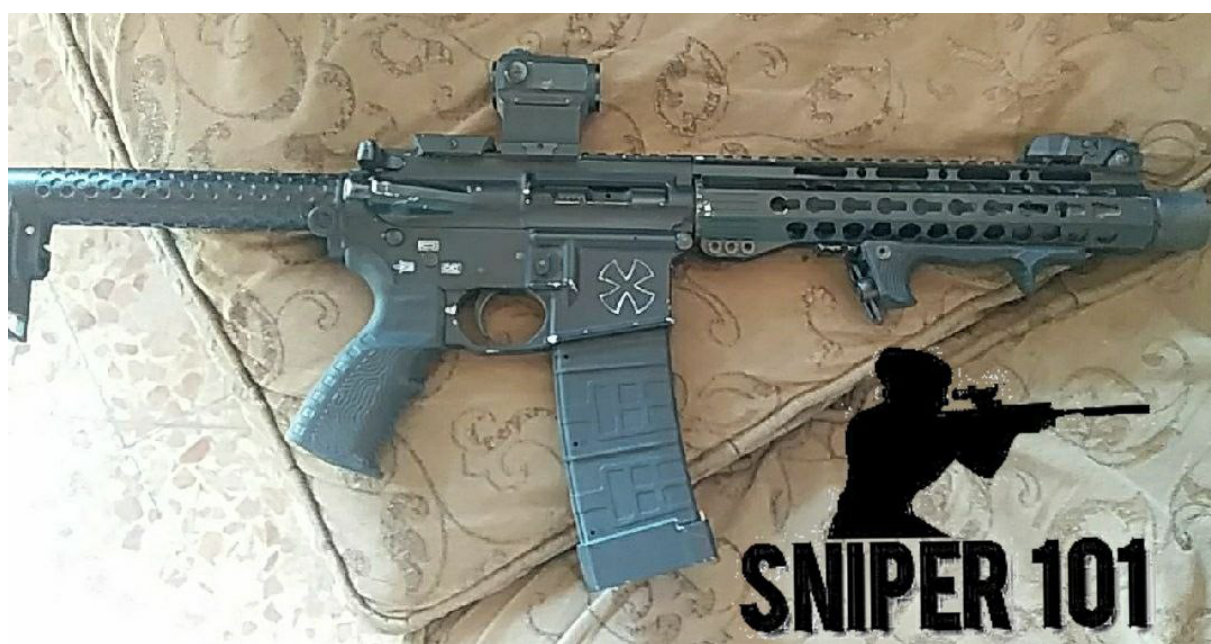


Figure 4.31 An AR-type rifle bearing a Noveske logo, offered for sale for 3,500 USD in mid-January 2021 (source: ARES CONMAT Database).

Over the past few years, several AR-type rifles bearing spurious Noveske⁴⁴ markings have been documented for sale in Syria, primarily in the northern province of Idlib (ARES, n.d.).⁴⁵ All of the previously documented examples appear to have a machined ('billet') lower receiver, marked with the Noveske logo, the word "Noveske", or both. However, upper receivers differ between the observed rifles, with the example pictured (see Figure 4.31) using what appears to be a modified M16A1 upper receiver. The rear sight and carrying handle have been removed and replaced with an accessory rail. The source of these spuriously marked rifles is unknown, but it is believed the lower receivers—complete with markings—entered Syria from an outside source, and the rifles were then locally assembled.⁴⁶

43 Adapted from Shanley & Mick F., 2021c.

44 Noveske is a high-end firearms manufacturer based in Grants Pass, Oregon, in the United States, specialising in AR-type rifles and components. See: <<https://noveske.com/>>.

45 Adapted from Shanley & Mick F., 2021a.

46 Other components may also have been imported, including 'billet' upper receivers.



Figure 4.32 An M16A1 shortened rifle offered for sale in North-western Syria in mid-June 2021 (source: ARES CONMAT Database).

The M16A1 rifle shown in *Figure 4.32*, documented in June 2021, has been modified in a manner which broadly resembles an Israeli Mekut'zrar Carbine.⁴⁷ Note the missing serial number, which was removed by cutting a piece out of the lower receiver. The weapon may have originated from Lebanon, as Israel is known to have supplied M16A1 rifles to the Lebanese Forces Party during the Lebanese Civil War (Laffin & Chappell, 1982). An ARES source notes that some of the weapons supplied to Lebanon were later sold to Syria following the outbreak of the Syrian Civil War.⁴⁸ It is unknown which belligerents received these weapons.

Self-loading Precision Rifles

ARES researchers documented 26 self-loading precision rifles listed for sale during the period of data collection. Models documented include SVD-series precision rifles (14 out of 26), Romanian PSL precision rifles⁴⁹ (11 out of 26) both of which are chambered for the 7.62 × 54R mm cartridge, as well as one Iraqi Tabuk 'Sniper' model rifle, which is chambered for the 7.62 × 39 mm cartridge. All of the documented self-loading precision rifles with a discernible method of operation are semi-automatic-only weapons. The asking prices for precision rifles ranged from 175 USD to 1,000 USD, with an average of about 523 USD. Price data was available for 13 of the 26 precision rifles in the dataset.

SVD-series Precision Rifles

Of the 14 *Snáyperskaya Vintóvka sistém'y Dragunóva* (SVD; often shortened to simply 'Dragunov')-series precision rifles in the dataset, at least one was manufactured in the Russian Federation, two more in the

47 The Mekut'zrar Carbine is essentially a shortened M16A1 (Colt 603) used in Israel Defense Forces (IDF) service.

48 ARES interviews with confidential sources.

49 As with the Tabuk 'Sniper', the PSL is technically an AK-type rifle, but is intended for the DMR role.

former Soviet Union, and another in Iran (its SVD variant, the Nakhjir).⁵⁰ At least two were manufactured by IZHMASH. Regarding prices, ‘Dragunov’ rifles ranged from 450 USD to 1,000 USD, with an average of 714 USD, making them the more expensive precision rifle model. It should be noted that one of the joint-most expensive SVD-series rifles (at 1,000 USD) was manufactured in 1994, likely making it a high demand weapon and serving as a slight outlier. However, no other year of manufacture data was available for these rifles. Price data was available for 7 of the 14 SVD-style rifles.



Figure 4.33 A modified SVD rifle offered for sale in north-western Syria in early August 2021 (source: ARES CONMAT Database).

An unusual SVD precision self-loading rifle fitted with a barrel taken from a PKM machine gun was documented for sale in August 2021, with an asking price of 600 USD (see *Figure 4.33*).⁵¹ As noted, this is often done to increase the rifle’s accuracy for use in a precision rifle role (ARES, n.d.). Over the last three years, the authors have observed an increase in the frequency with which Syrians have performed this procedure in modifying specifically SVD rifles. Heavier machine gun barrels are likely to reduce harmonic vibrations in the rifle barrel, thereby increasing its accuracy. The short supply of precision small arms in North-western Syria—as evidenced by the data presented above—has inspired fighters to modify their existing weapons with new barrels, furniture, and optics to increase the limited marksmanship potential of available rifles. This trend is similarly reflected in the region’s craft-manufactured anti-material rifles, discussed in the ARES February 2021 update (Shanley & Mick F., 2021b).

PSL Precision Rifles

The third-most common precision rifle in the dataset is the Romanian PSL model, a self-loading DMR built around the AK operating system (see *Figure 4.34*). Despite its external resemblance, it is not an SVD variant. Interestingly, at least three PSL rifles were converted locally into bullpup configurations, sometimes done to lighten the gun (especially when the barrels have been replaced with machine gun barrels).⁵² The documented PSL rifles were listed significantly cheaper than SVD-style rifles, with a range of 175 USD to 425 USD and an average of 300 USD. Price data was available for 6 of the 11 PSL rifles listed.

50 Another SVD-pattern rifle with features consistent with the Nakhjir was found in the dataset, but the model could not be confirmed with certainty.

51 Adapted from Shanley and Mick F., 2021h.

52 ARES interview with a confidential source.



Figure 4.34 A Romanian PSL precision rifle, listed for sale in September 2021 with an asking price of 425 USD (source: ARES CONMAT Database).

Other Self-loading Rifles

An additional 43 self-loading rifles not described above were documented by ARES researchers during the data collection period. They are not evenly distributed by method of operation, with at least 12 capable of semi-automatic-only fire, whereas at least 29 are capable of automatic fire. Four different calibres were documented among this group: 5.56 × 45 mm, 7.62 × 39 mm, 7.62 × 51 mm, and 7.92 × 33 mm. The majority of these rifles (29 out of 43) were chambered for the 7.62 × 39 mm or 7.62 × 51 mm cartridges. Some notable models of the remaining self-loading rifles include: at least 11 SKS rifles (including at least five of Chinese origin); two Austrian Steyr AUG models (see *Figure 4.35*); two Belgian FN Herstal FAL models; eight German Heckler & Koch G3-series rifles; six Nazi German MP43 and MP44 rifles; seven Spanish CETME-series rifles; one HK33-pattern rifle, one Swiss SG 543 (shortened-barrel SG 540 variant); one Belgian FN Herstal CAL Para; and one M14 of unknown origin. Three self-loading rifles could not be identified by model.

The asking prices for these rifles range from 38 USD to 500 USD, with an average of around 154 USD. The lowest priced of these self-loading rifles (the 38 USD listings) are German MP43 and MP44 models, while the highest priced was the CAL Para model, at 500 USD. Rifles chambered for the 7.62 × 51 mm cartridge had prices ranging from 85 USD to 350 USD with an average of almost 168 USD, whereas SKS prices (the only self-loading rifle in this category chambered for 7.62 × 39 mm ammunition) ranged from 50 USD to 130 USD, with an average of 106 USD. The most expensive of these rifles were chambered for the more modern 5.56 × 45 mm calibre (including the SG 543, CAL Para, HK33, and AUG variants), ranging from 360 USD to 500 USD with an average of 430 USD. However, the reader should note that pricing data was only available for 23 of the 43 self-loading rifles of this category, specifically including 4 out of 6 MP43 and MP44s, 12 out of 18 of rifles chambered for 7.62 × 51 mm, 5 out of 11 SKS rifles, and 2 out of 5 of rifles chambered for 5.56 × 45 mm.



Figure 4.35 A Steyr AUG offered for sale for 360 USD in north-western Syria in late April 2021 (source: ARES CONMAT Database).

The Austrian Steyr AUG self-loading rifle shown in *Figure 4.35* features similar modifications to a rifle used by the Malhama Tactical jihadist group, which is closely aligned with Tahrir al-Sham in Syria (ARES, n.d.). The original telescopic sight was sawn off and replaced with a length of accessory rail, and the entire weapon features a ‘Realtree’-style camouflage pattern, applied using the hydrographic method. Steyr AUG rifles were first documented in Syria in early 2013 (ARES, n.d.). Some of these rifles were reportedly supplied to opposition forces in Northern Syria via Turkey (Karouny, 2013). It is likely that these rifles originated in Saudi Arabia, which has previously supplied weapons to opposition forces in Syria (Angelovski, Patrucic & Marzouk, 2016). In the 1980s, Saudi Arabia purchased 50,000 AUG rifles, identified in previous reports by the early-production AUG rifle’s distinctive slotted muzzle device (these early guns are sometimes referred to as ‘A0’ rifles) (Staudinger, 2015). The guns documented in Syria—including this modified example—match these early AUG specifications, which lends support to the notion that they are Saudi weapons.



Figure 4.36 MP43/MP44 self-loading rifles offered for sale in Armanaz, Idlib, in early November 2020 (source: ARES CONMAT Database).

It is believed that, alongside other military equipment, *Maschinenpistole* 43 (MP43), MP44, and *Sturmgewehr* 44 (StG 44) rifles were supplied to Syria by one or more Eastern Bloc countries during the mid-20th century (see *Figure 4.36*).⁵³ Early in the Syrian conflict, stocks of this type of rifle were captured by opposition forces. Although these stockpiles included ammunition, supplies of 7.92 × 33 mm cartridges had been substantially depleted several years later, rendering the weapons unusable for all practical purposes (ARES, n.d.; Johnson, 2016). Some ammunition remains, but this appears to be in militarily insignificant quantities. As noted, only six of these rifles were documented in the dataset, likely as a result of their limited numbers and low ammunition availability.



Figure 4.37 Spanish CETME 58 modelo B for sale for 85 USD in north-western Syria in early October 2021 (source: ARES CONMAT database).

Also documented in the dataset was a singular CETME 58 modelo B (see *Figure 4.37*), the final prototype of the first production model of the Spanish CETME series of rifles (which was adopted by the Spanish military in 1957–58 as the '*Fusil de Asalto CETME modelo 1958 de 7'62mm*') (Johnston, Nelson, & Musgrave, 2010).⁵⁴ It was listed for only 85 USD in October 2021. The CETME 58 modelo B is very similar to the better-known modelo C, which was offered for sale 5 times during the period of data collection. However, unlike the modelo C, the CETME 58 modelo B is chambered for the 7.62 × 51 mm CETME Light cartridge (a variant of the 7.62 × 51 mm NATO cartridge with a reduced propellant charge) (Johnston, Nelson & Musgrave, 2010, pp. 41–42). It also features a distinctive rear sight location (which is much farther forward than the model C), foldable bipod, and a handguard made out of metal, rather than wood. In the 1970s, the Lebanese army adopted the CETME 58 modelo B to supplement their stocks of FN Herstal FAL rifles (Scarlata, 2009). It is likely that the rifle later leaked from government stocks and ended up in Syria via transfers between individuals or non-state actors.

⁵³ Adapted from Shanley & Mick F., 2021a.

⁵⁴ Adapted from Shanley & Mick F., 2021j.

Manually Operated Rifles

As well as self-loading rifles, ARES researchers documented 126 manually operated rifle listings during the data collection period, accounting for almost ten per cent of total rifle offers and more than five per cent of lethal-purpose firearm offers. Nearly all of the manually operated rifles in the dataset are bolt-action designs (125 of 126); the one exception is a break-open single-shot rifle. Additionally, while the majority of manually operated rifles (at least 110 of 126) were chambered for either the 7.62 × 54R mm (at least 91) or 7.5 × 54 mm (at least 19) cartridges, rifles in other calibres were also documented, including at least four rifles chambered for the 7.62 × 51 mm cartridge, two chambered for 7.92 × 57 mm Mauser, two more chambered for .22 LR, and one rifle chambered for each of the 12.7 × 108 mm and 12.7 × 99 mm (.50 BMG) cartridges. The dominance of the 7.62 × 54R mm calibre in the dataset is a result of the ubiquity of the Mosin–Nagant family rifles, which make up more than 71% of documented manually operated rifles (91 out of 126). Other manually operated rifle models in the dataset include at least 21 French MAS 36 rifles, two Kar. 98k-pattern rifles, two Czech CZ 455 rifles, two Croatian Elmech 992 rifles, one Czechoslovakian vz. 24 rifle, and one Austrian SSG-69 P1. Interestingly, an Iranian AM-50 Sayyad anti-materiel rifle was also listed for sale, likely entering Syria via an Iranian proxy. Lastly, three craft-produced manually operated rifles, including one craft-produced anti-materiel rifle, were documented.

Asking prices for manually operated rifles varied significantly, from as low as 12 USD to as high as 2,000 USD, with an average of 293 USD. The more expensive manually operated rifles tended to have been modified in some way, such as MAS 36 rifles chambered for the 7.62 × 51 mm cartridge (listed at 650 USD). This conversion was likely done locally using a machine gun barrel. Other manually operated rifles in the dataset have fairly low prices, with K98- and K98k-pattern rifles, for example, averaging an asking price of 100 USD. Pricing data was only available for 74 of the 126 manually operated rifles recorded.

Mosin–Nagant Bolt-action Rifles

The Mosin–Nagant family of rifles were by far the most common manually operated rifle in the dataset, which is consistent with the rifle's widespread diffusion and use in Syria and other conflict zones (ARES, n.d.). Three variants of the Mosin–Nagant were documented in the dataset: the Mosin–Nagant M91, the more prolific and improved Mosin–Nagant M91/30, and the M44 Carbine (a variant of the M91/30 with a shortened barrel and stock). Of the 91 Mosin–Nagant rifles documented, 67 (approximately 74%) were M91/30 models, 20 (approximately 22%) were M91 models, and 4 (approximately 4%) were M44 models. Pricing data was available for 66 per cent of these weapons. Whilst the most expensive Mosin–Nagant rifle was an M91/30 variant (2,000 USD), on average M91 variants were the priciest, with an average price of 492 USD, compared to 252 USD for M91/30 variants and 250 USD for M44 variants. The higher average asking price for M91 models reflects the fact that many of these had been substantially modified prior to sale.

MAS 36 Bolt-action Rifles

At least 21 French MAS 36 bolt-action rifles were recorded in the dataset. The example pictured in Figure 4.38, listed for sale in March 2021, has been heavily modified.⁵⁵ In fact, it appears that the only major original components are the receiver, trigger, and bolt. The stock has been replaced with a locally made example—most likely produced from aluminium—with an unusual side-folding buttstock configuration. The barrel has been replaced, with the seller noting that the weapon uses “Nato bullets”, indicating that it is most likely chambered for the 7.62 × 51 mm cartridge (ARES, n.d.). The weapon features several additional

55 Adapted from Shanley & Mick F., 2021c

accessories including a sling, a Bushnell-made scope, and a suppressor which appears to be locally made (most likely of the Idlib pattern). A sizeable quantity of MAS 36 rifles was given to the Syrian Army following the Second World War, and these weapons have been seen during the Syrian Civil War (Marduel, 2018; McCollum, 2019) and in ARES monitoring of online arms trade in Syria over previous years (ARES, n.d.).



Figure 4.38 A heavily modified MAS 36 bolt-action rifle offered for sale in north-western Syria in late March 2021 (source: ARES CONMAT Database).

Craft-produced Anti-materiel Rifles

Since the beginning of the Syrian Civil War, individuals and small groups have craft-produced anti-materiel rifles (AMRs) to meet a perceived tactical need of various non-state actors within the country (Ferguson, 2014).⁵⁶ In recent years, many of these rifles—including this sale, documented in February 2021—have demonstrated a significant improvement in craftsmanship over the crude weapons built in the early years of the conflict (Hays & Jenzen-Jones, 2018; ARES, n.d.). The example pictured in *Figure 4.39* features many locally made components, including the receiver, bolt, stock, rear monopod, bipod, and muzzle device. The barrel is sourced from a conventionally produced weapon, a common practice in Syria and elsewhere. The East-German-pattern grip is also a conventionally manufactured component, although in this case it may have originated in Iran. These grips are commonly incorporated fitted to locally-produced AMRs. This rifle was listed without a price, but a similar example was sold in 2019 for 5,000 USD (ARES, n.d.).

⁵⁶ Adapted from Shanley & Mick F., 2021b



Figure 4.39 A craft-produced anti-materiel rifle manufactured and offered for sale in North-western Syria in early February 2021 (source: ARES CONMAT Database).

Sub-machine Guns

Sub-machine guns (SMGs) comprise only a small proportion of firearm documented during the data collection period, with 80 examples (slightly more than 3 per cent of all lethal-purpose small arms offers). The vast majority of SMGs and PCCs documented (74 of 80, or slightly less than 93 per cent) were chambered for the 9 × 19 mm cartridge—unsurprising due to that calibre’s low cost and widespread global availability. The only exception to this in the dataset was the identification of six Soviet-manufactured PPSH-41 SMGs, which were chambered for the 7.62 × 25 mm Tokarev cartridge. Of the 74 SMGs chambered for 9 × 19 mm, at least 61 were of Czechoslovakian origin (for example, the Sa vz. 23; see *Figure 4.40*). Additionally, three Sterling-pattern SMGs were identified: two Sterling Mk. 4 (L2A3) models and one unidentified variant. Two Egyptian Port Said SMGs (licensed variants of the Swedish Carl Gustaf m/45) were also documented. Other SMGs chambered for 9 × 19 mm include three Spanish Star Model Z84, one Italian Beretta Model 38/42, one Austrian Steyr MPi 69, and three MP5A3 SMGs of unidentified origin. No so-called ‘pistol-calibre carbines’ (PCCs)⁵⁷ were documented.

Recorded prices for SMGs in the dataset vary widely, from 15 USD to as high as 1,200 USD, with the average price around 117 USD. However, there are a few outliers towards the high end of the scale which skew the average. For example, the three highest SMGs listed were an MP5A3 for 1,200 USD, an MPi 69 for 850 USD, and a Model Z84 for 400 USD. These Western sub-machine guns are much more expensive than Czechoslovakian and Russian SMGs, of which only three were listed for more than 125 USD (all of these exceptional sales including accessories). This could indicate that the higher-end SMGs serve primarily as a status symbol, as has been found to be the case in other conflict zones (ARES, n.d.). Pricing information was available for more than 70 per cent of the SMGs in the database.

⁵⁷ The term ‘pistol-calibre carbine’ is used herein to refer to firearms that have the general appearance of a sub-machine gun, but are restricted to semi-automatic-only fire. Whilst common in some other countries, these weapons are uncommon in Syria.



Figure 4.40 A Czech Sa vz. 23 sub-machine gun, listed for sale in August 2021 with an asking price of 50 USD. Note the fixed wooden stock, which distinguishes it from the Sa vz. 25. Czechoslovakian-manufactured SMGs were more common and cheaper than the other documented SMG models (source: ARES CONMAT Database).

Sa vz. 23 & Sa vz. 25 sub-machine guns

Of the 80 SMGs in the dataset, the Czech CZ (Česká zbrojovka) Sa vz. 23 and Sa vz. 25 models predominate, accounting for 61 examples. While most of these were Sa vz. 25 models (50), the two are examined together because they are both variants of the same design, with the Sa vz. 23 featuring a fixed stock and the Sa vz. 25 a folding stock. The listed prices of Sa vz. 25 SMGs ranged from 15 USD to 310 USD (with an average of 81 USD), whereas Sa vz. 23 SMGs varied significantly less, from 20 USD to 55 USD (average of 35 USD). Both had an average listed price lower than the average of all documented SMGs. This may result, in part, from the high price of 9 × 19 mm ammunition in Syria (around 0.50 USD per cartridge at the time of writing) (ARES, n.d.). The Sa vz. 25 was often offered for sale with prestigious accessories such as suppressors, which likely explains its higher average price. For example, one Sa vz. 25 with an asking price of 310 USD included a spare magazine, a suppressor, and other accessories. Pricing data was available for almost 91 per cent of Sa vz. 23-model SMGs, and 70 per cent of Sa vz. 25 model examples.

The Sa vz. 25 SMG shown in *Figure 4.41*, documented in October 2021, features several notable modifications.⁵⁸ Most notable is the addition of a suppressor, which has been integrated into the SMG—hence it being described by the seller as “internally [integrally] suppressed”. The suppressor appears to have been craft-produced in Syria, which implies that the modification of the weapon was done locally as well. Further, several accessory rails have been added (one sporting a forward grip) and the SMG features a tan paint job. This particular Sa vz. 25 appears to have been offered for sale by a foreign fighter, as the description accompanying the SMG was in Russian. Similarly modified Sa vz. 25 SMGs have been observed

⁵⁸ Adapted from Shanley & Mick F., 2021j.

with several Russian-speaking foreign fighters in Idlib (ARES, n.d.). One group, which goes by the name of Xhemati Alban ('Albanian group'), has released propaganda materials showing that they maintain their own workshop where they modify weaponry and produce suppressors (ARES, n.d.).



Figure 4.41 An integrally suppressed Czech SA vz. 25 sub-machine gun, listed for sale in north-western Syria for 310 USD in late October 2021 (source: ARES CONMAT Database).

PPSh-41 Sub-machine guns

Six Soviet-made Second World War-era PPSH-41 sub-machine guns were documented. The example shown in *Figure 4.42* is marked to indicate it was produced in 1944.⁵⁹ These weapons are rare in Syria, do not appear to have been used extensively during the Syrian Civil War, and have only appeared in social media posts shared by pro-Syrian Government fighters. It is likely that this weapon, documented in March 2021, originated in one of the several Eastern European countries believed to have supplied Second World War-era arms to Syria in the 1950s and 1960s (Adamec, 2013).



Figure 4.42 A PPSH-41 sub-machine gun, manufactured in 1944, offered for sale in North-western Syria in late March 2021 (source: ARES CONMAT Database).

59 Adapted from Shanley & Mick F., 2021c.

Beretta Model 1938 Sub-machine Gun

Although a small number of Beretta Model 1938/44 sub-machine guns have been used by the Free Syrian Army (Johnson, 2012) as far back as 2012, these weapons are rare in Syria.⁶⁰ In fact, only a single example of a Beretta Model 1938-pattern SMG was documented during the period of data collection (see *Figure 4.43*). The Beretta Model 1938/44—a simplified version of the Model 1938/42 which preceded it—was produced in the years following the Second World War and exported in unknown numbers to Syria. Thus, while this example from April 2021 could not be identified definitively as either a Model 1938/42 or Model 1938/44 from the available imagery, it is likely that it is of the latter pattern.



Figure 4.43 A PPSH-41 sub-machine gun, manufactured in 1944, offered for sale in North-western Syria in late March 2021 (source: ARES CONMAT Database).

Shotguns

ARES researchers recorded 53 different sales offers for shotguns during the data collection period, accounting for just two per cent of the total number of lethal-purpose small arms documented. This small proportion is likely a result of their limited utility in the Syrian conflict relative to self-loading rifles and handguns, due to their relatively short effective range and limited access to ammunition most suitable for use against human targets. Many of the shotguns documented were expressly advertised or viewed by market participants as civilian sporting weapons, destined for hunting rather than use in the conflict or even self-defence.⁶¹ The low number may also indicate a general scarcity of supply. Of the documented shotguns, 38 (roughly 72 per cent) were identified as manually operated shotguns, of which 14 were single-barrel break-open designs, 8 double-barrel break-open, and 17 pump-action. The other 14 guns (slightly less than 27 per cent) were self-loading shotguns (all semi-automatic only). Only one was readily identifiable by make and model: the Russian IJ-18 single-shot shotgun, manufactured by Baikal.⁶² The average price of a shotgun in the dataset was around 71 USD, but these prices vary significantly—from as low as 9 USD to as high as 300 USD. However, only eight examples were advertised at or above 100 USD, whereas 15 were listed below 50 USD.

⁶⁰ Adapted from Shanley & Mick F., 2021d.

⁶¹ ARES interviews with confidential sources.

⁶² Most of these were assessed to be Turkish in origin. Readers should note that it is often near-impossible to identify with certainty the model of an individual Turkish shotgun without a detailed examination of their markings. Turkish manufacturers often replicate other producers' designs, and several factories produce near-identical weapons for different buyers under a 'white label' approach.

These prices—significantly lower than those of self-loading pistols or rifles, despite much lower supply—indicate relatively little demand for shotguns relative to other small arms. The six most expensive shotguns (ranging from 125 to 300 USD) were double-barrel break-open designs, whereas five of the six cheapest (9 to 18 USD) were pump-action shotguns (the other being a single-shot break-open shotgun). However, pricing data was only available for 26 of the 53 shotguns recorded in the dataset.



Figure 4.44 A Turkish shotgun of unknown model, listed for sale in January 2021 without an asking price.

Machine Guns

59 hand-held machine guns were recorded during the period of data collection, making up slightly more than two per cent of all lethal purpose small arms sales (about the same percentage as shotguns). This small percentage is likely a result of the primarily individual participation within the online markets documented, especially considering that the primary utility of machine guns is found in their employment by squad-sized formations of fighters. Armed groups are also less likely to part with hand-held machine guns once they have access to them, reducing their supply. 30 of the 59 hand-held machine guns documented (nearly 51 per cent) were magazine-fed models, whilst 28 (47 per cent) were belt-fed models; the other was a North Korean Type 73, which can accept both belted ammunition and magazines. Most of the documented machine guns were chambered for Soviet-designed cartridge types, with at least 32 chambered for 7.62 × 39mm, 20 chambered for 7.62 × 54R mm, and 3 chambered for 5.45 × 39 mm. The sole documented machine gun known to be chambered for a NATO calibre cartridge was a Belgian MAG chambered for 7.62 × 51 mm. Of the 21 examples that could be identified by country of origin, 12 were manufactured in the former Soviet Union, four in Belgium, two in the former Yugoslavia, and one each from China, Czechoslovakia, Iraq, and North Korea. Some notable hand-held machine gun models listed for sale include at least four Soviet DP27 machine guns, three Belgian FN Herstal Model D machine guns, 13 PK-pattern machine guns, one North Korean Type 73, one Iraqi Al-Quds, and 20 RPK-pattern machine guns. In some cases, particularly with RPK-pattern weapons, end users have modified hand-held machine guns such that they function in most respects as automatic rifles. One documented modification of this type is a (sometimes drastic) shortening of the barrel.

Similar to SMGs, there is a wide range of documented prices for hand-held machine guns, from as low as 75 USD to 1,600 USD, and with an average of 448 USD. The higher-priced hand-held machine guns were either RPK-74 models (chambered for the 5.45 × 39 mm cartridge), listed for 600 USD, or PK-pattern machine guns, listed between 850 USD (for one with a Type 73 top cover; see *Figure 4.45*) and 1,600 USD. Since general-purpose machine guns (i.e., those chambered for ‘full-power’ rifle cartridges, such as the PK and PKM machine guns) are in high demand in Syria, prices for these firearms are often high.⁶³ Pricing data was available for 31 of the 59 hand-held machine guns documented.



Figure 4.45 A PK-pattern hand-held machine gun, listed for sale in May 2021. Its top cover has been replaced by the top cover from a North Korean Type 73. The asking price for this weapon was the lowest of all those recorded for PK-type firearms—just 850 USD (source: ARES CONMAT Database).

RPD Light Machine Guns

In addition to those hand-held machine guns listed above, Soviet 12 RPD models—a light machine gun designed in the 1940s—were documented in the dataset. In general, RPD light machine guns were relatively inexpensive, with an average asking price of around 167 USD per listing. This likely reflects the machine gun’s use of 7.62 × 39 mm ammunition and its less modern design compared to the RPK, which is chambered for the same cartridge. The example pictured in *Figure 4.46*, documented in August 2021, has been modified in Syria.



Figure 4.46 A modernised RPD light machine gun offered for sale in North-western Syria in May 2021 (source: ARES CONMAT Database).

63 ARES interviews with confidential sources.

Whilst many of the original parts remain on the weapon, most of the furniture has been replaced using polymer or metal components incorporating accessory rails. The weapon now features an AR-style stock and buffer tube, an AKM-style pistol grip, and a handguard with multiple 'Picatinny'-type accessory rails. Several ancillary devices have been fitted to the weapon, including an EOTech-style sight, a vertical foregrip, a bipod, and a compensator-type muzzle device. Another accessory rail and an AK-pattern rear sight have been welded to the weapon's top cover, and the front sight has been moved rearward and mounted to the gas block. This conversion may have been carried out primarily for cosmetic purposes, as RPD weapons are rarely used on the region's battlefields (ARES, n.d). Similar conversions have been documented in Iraq (Adham S., 2020).

Obsolete Muzzle-loading Firearms

A total of 34 antique muzzle-loading firearms were offered for sale during the period of data collection (see *Figure 4.47*). This includes 29 antique handguns and 5 antique muskets or rifles.⁶⁴ The antique firearms varied in their vintage and country of origin. Some likely date back to the early 19th century, whilst others are modern-day replicas. Most of the flintlock and percussion weapons have been identified by the authors as North African in style, and at least one pistol was likely of Ottoman origin. It is important to note that the weapons offered in these sales were "crudely made and/or in poor condition, and none hold any significant market value [as functioning firearms]" (Shanley & Mick F., 2021f). As such, these are almost certainly items intended for the collector or curio markets. Though this report has focused on weapons intended for active use by combatants or civilians, collectors and interested civilians are known to seek antique weapons like these in conflict zones.



Figure 4.47 A number of obsolete firearms offered for sale in North-western Syria in mid-June 2021. Note that not all of these are muzzle-loading weapons (source: ARES CONMAT Database).

64 In most cases, it was not possible to determine whether a muzzle-loading weapon's bore was rifled or not from the available imagery.

Light Weapons

Very few light weapons were recorded during the period of data collection, accounting for only 39 of 3,768 total database entries. All light weapons fell under the ARCS group designation of either Light Gun or Light Powered Munitions Launcher. Of the 39 documented light weapons (see *Figure 4.49*), 16 were light guns and 23 were light powered munitions. Of the light guns, four were heavy machine guns, six were recoilless guns, four were grenade launchers, and two were medium mortars. All 23 light powered munitions launchers were light rocket launchers. Notably, there were no guided missile launchers (either anti-tank or anti-aircraft types) documented during the period of data collection, despite their historical prevalence and demonstrated utility in the Syrian conflict. This is probably due to the same factors that limit light weapon trading in general—the online market documented in this report operates on a limited, individual scale and is not a primary venue for militant groups to buy and sell high-value arms and munitions. Additionally, the relative scarcity (compared to self-loading rifles, for example) and extreme utility of guided missiles in Syria means that groups with access to these weapons are likely to retain them. Additional supply to these groups usually comes from sources other than online marketplaces, such as external actors.

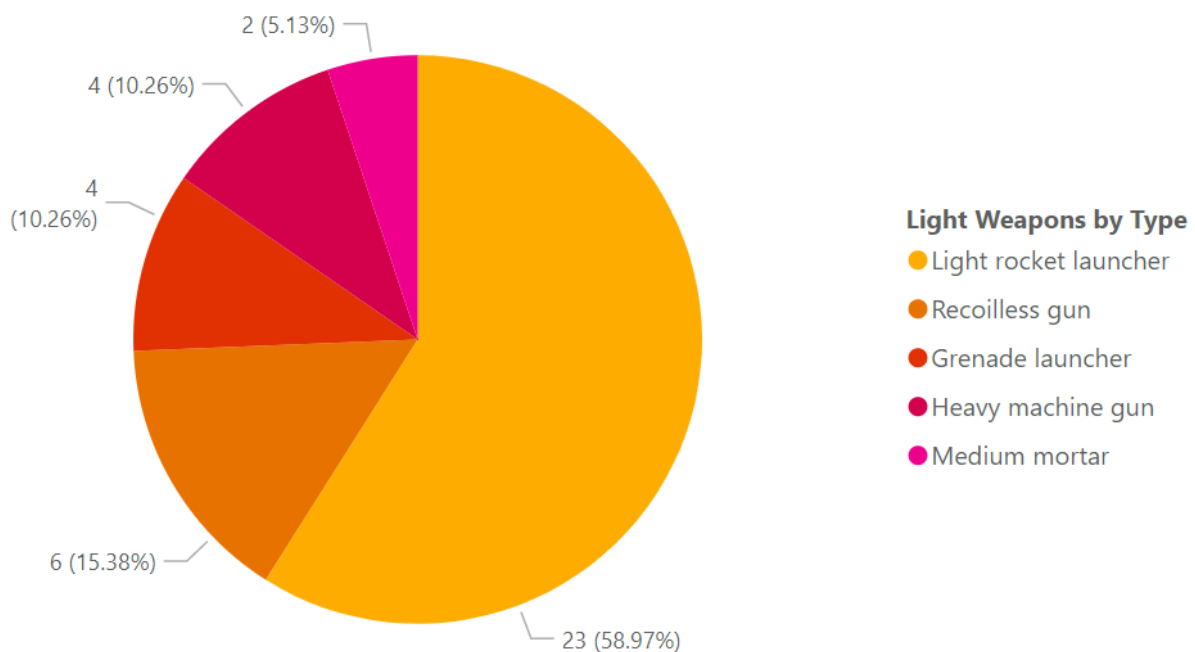


Figure 4.48 *Light weapons in the dataset by type.*

Heavy Machine Guns

Only four heavy machine guns (HMGs) were documented in the dataset, with only three of these being complete weapons. The three complete heavy machine guns documented were all belt-fed; two were Italian Breda-SAFAT models chambered for the 12.7 × 81SR mm cartridge, and the other was an NSVT heavy machine gun chambered for the 12.7 × 108 mm cartridge. The fourth recorded HMG was a critical component of a DShK-series weapon. The seller acknowledged that the weapon was “missing pieces” (ARES, n.d.).

Breda-SAFAT Heavy Machine Guns

The two Italian Breda-SAFAT HMGs in the dataset, shown in *Figure 4.49*, were documented in July 2021. These early-twentieth-century machine guns were designed to be used on the fighters, bombers, and other combat aircraft of the Italian air force and saw service during the Second World War.⁶⁵ HMGs of this model have been previously observed within Syria, fitted to Syrian Panzer IV Ausf. J tanks (ARES, n.d.; Objekt432Y, 2018). These tanks were sold to Syria by France and Czechoslovakia in the 1950s (Press, 2018). It is unknown if the tanks were sold to Syria already fitted with the Breda-SAFAT machine guns or if the weapons were sold separately and later fitted by Syrian government forces.



Figure 4.49 Two Breda-SAFAT heavy machine guns offered for sale in North-western Syria in mid-July 2021 (Source: ARES CONMAT Database).

Recoilless Weapons

Six recoilless weapons were recorded during the period of data collection, though only five were complete. Three RPG-7 shoulder-fired recoilless weapons were recorded, one of which was manufactured in Iran. Only one had a stated asking price (275 USD). A single Chinese type 69 model was documented, listed without an asking price. The trigger group of a Bulgarian RPG-7 was also recorded. Additionally, one Czechoslovakian Tarasnice 21 (T21) 82 mm recoilless weapon was listed for sale (without an asking price; see *Figure 4.50*). The T21 is a Cold War-era anti-tank recoilless weapon, most effective at 300 metres for direct fire. It is often seen mounted on a wheeled assembly that provides a stable, mobile platform for firing from the prone position, although it could also be shoulder fired (Siebert, n.d.).

65 Adapted from Shanley & Mick F., 2021g.



Figure 4.50 A Czechoslovakian Tarasnice 21 (T21) 82 mm recoilless weapon offered for sale in December 2020 (source: ARES CONMAT Database).

Grenade Launchers

Four grenade launchers were documented by ARES researchers in the data collection period. These include two Soviet/Russian GP-30 40 mm auxiliary under-barrel grenade launchers, one Turkish 40 mm Tba-6R1 (or Uzun Tamburalı Bombaatar; see Figure 4.50) shoulder-fired grenade launcher, and one 30 mm AGS-17-pattern automatic grenade launcher. No asking prices were provided for any of the four grenade launchers.



Figure 4.51 A Turkish MKE Tba-6R1 40 x 46SR mm grenade launcher offered for sale in North-western Syria in May 2021 (source: ARES CONMAT Database).

Despite the fact that the use of shoulder-fired, multi-shot grenade launchers (often revolver-type designs) have been extensively documented in Syria, they are relatively uncommon Syrian black markets for reasons common to other light weapons.⁶⁶ Most in use in Syria appear to be of Bulgarian, Chinese, or Croatian origin (ARES, n.d.). The example pictured in Figure 4.51, however, was produced in Turkey by the state-owned MKE company. The MKE Uzun Tamburalı Bombaatar ('Long Drum Grenade Launcher'; Tba-6R1) (see

⁶⁶ Adapted from Shanley & Mick F., 2021e.

MKE, n.d.) is of fairly conventional design, with a spring-powered revolver-type magazine loaded with six $40 \times 46\text{SR}$ mm cartridges. The Tba-6R1 pictured appears to be missing the standard-issue optical sight, and the tan colouration differs from the black shown in MKE's catalogues. Turkey has directly supplied several Syrian rebel groups with arms for a number of years (Al-Khalidi, 2019), and this weapon may be an indicator of such supply.

Man-portable Mortars

Only two mortars were documented during the period of data collection. Both were medium mortars—those firing projectiles of at least 70 mm in calibre but less than 100 mm in calibre (Jenzen-Jones, et al., 2020). One was a Soviet M37 82 mm mortar (*Figure 4.52*), whilst the other was a Yugoslavian M69A 81/82 mm mortar. Once again, neither came with a stated asking price.



Figure 4.52 A Turkish MKE Tba-6R1 $40 \times 46\text{SR}$ mm grenade launcher offered for sale in North-western Syria in May 2021 (source: ARES CONMAT Database).

Light Rocket Launchers

Of the 23 light rocket launchers in the dataset, six different models (five complete) could be discerned. The most common was the Turkish HAR-66 rocket launcher, a copy of the American-designed M72 LAW (specifically the M72A3 model), at least ten examples of which were recorded. An additional three M72 LAW-pattern rocket launchers—which could not be identified by make and model from available imagery—were also listed for sale. The M72-pattern rocket launchers had an average asking price of approximately 123 USD, with little variation between them. Five RPG-22 rocket launchers were also documented, all of which were manufactured in the former Soviet Union. The two that had published asking prices were listed for 100 and 125 USD. The fourth model listed for sale was the 68 mm Czechoslovakian RPG-75 rocket launcher (see Figure 4.53), comprising three listings with no stated prices. The last complete rocket launcher model documented was a single 83 mm RL-83 ‘Blindicide’, manufactured by Mecar SA of Belgium, with no asking price. Additionally, one Soviet-manufactured RPG-29 firing assembly was also offered for sale.

Figure 4.54 shows one of the HAR-66 rocket launchers, manufactured by Makina ve Kimya Endüstrisi (MKE) in Turkey.⁶⁷ These may have been supplied by Turkey to opposition groups they support in Syria (Al-Khalidi, 2019; Doherty & Bakr, 2012). Markings on the launcher indicate that the unit was assembled in 1993. In the Syrian conflict, HAR-66 rocket launchers and similar weapons are frequently used as anti-structure weapons rather than in their originally intended role as anti-tank weapons (ARES, n.d.).



Figure 4.53 A Czechoslovakian RPG-75 rocket launcher, listed for sale in August 2021 without an asking price (source: ARES CONMAT Database).



Figure 4.54 A Turkish MKE HAR-66 (M72 LAW copy) made in 1993, and offered for sale in late December 2020 (source: ARES CONMAT Database).

67 Adapted from Shanley & Mick F., 2021a.

Munitions

In total, 750 munitions were documented in the dataset (almost 20% of all sales), of which 747 could be conclusively identified by ARCS Group and/or Type or sub-Type (see *Figure 4.55*). The vast majority of munitions recorded for sale during the period of data collection were projectiles, including small- and medium-calibre cartridges, medium- and large-calibre recoilless cartridges, and mortar projectiles. A smaller number of thrown munitions (hand grenades) and a single Chinese Type 63 107 mm rocket were documented, as were 41 munitions components (fuzes, as well as expelling and propellant charges). Pricing data was only available for 123 of the 750 munitions listings, and asking prices were extremely inconsistent due to different types and quantities of munitions offered for sale, and the variation in pricing methods (sometimes given per cartridge, for example, and other times per group of munitions). As such, price data has generally been excluded from munitions analysis in this report.

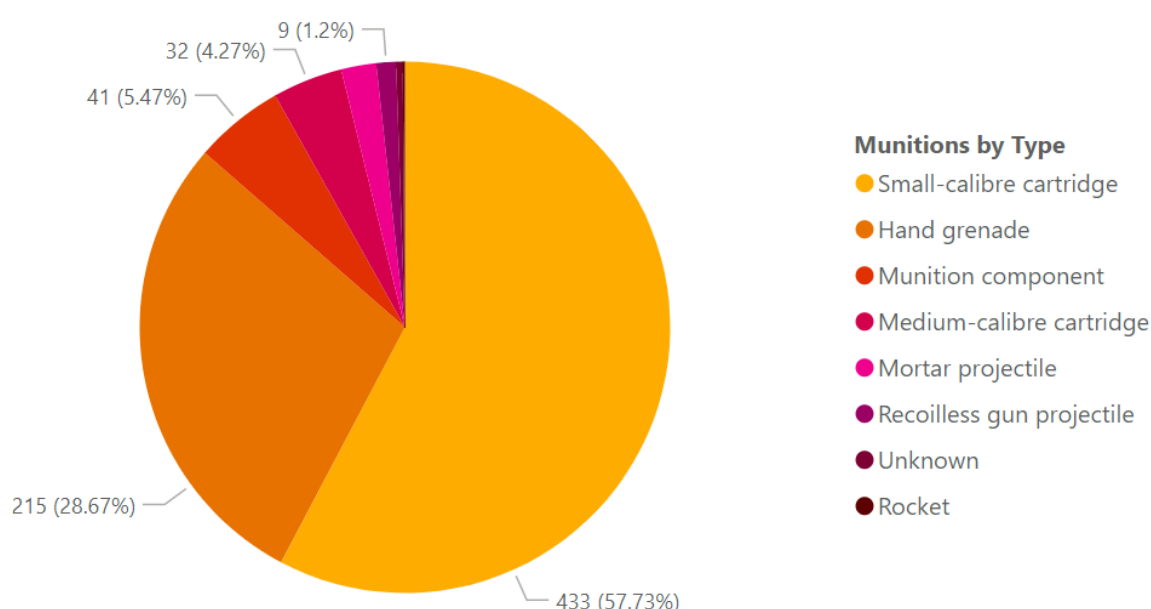


Figure 4.55 Munitions in the dataset by type or sub-type.

Small-calibre Cartridges

Small-calibre cartridges are those of less than 20 mm in calibre (Jenzen-Jones, 2020). The vast majority (362 out of 433, or slightly less than 84%) of small-calibre cartridges documented were handgun-calibre cartridges. The most common calibre of this type identified was 9 × 19 mm (at least 290 sales offers), of which almost all were Turkish (see *Figure 4.56*). The prevalence of Turkish ammunition can be explained, in part, by the low price of Turkish ammunition and the proximity of Syria to Turkey. Turkey is a relatively large producer and supplier of 9 × 19 mm ammunition. However, notable quantities of 9 × 18 mm ammunition (at least 35 listings) and 7.62 × 25 mm 'Tokarev' ammunition (at least 16 listings) were also recorded. Other handgun-calibre cartridges documented include .45 ACP (11.43 × 23 mm), .32 ACP (7.65 × 17SR mm), and .22 LR (5.6 × 15R mm).



Figure 4.56 A large grouping of Turkish of 9 × 19 mm cartridges offered for sale in North-western Syria in June 2021 (source: ARES CONMAT Database).

Rifle-calibre cartridges were much less common than handgun-calibre cartridges, accounting for only 63 listings. Of these, 36 sales offers were for 7.62 × 54R mm cartridges, 17 were for 7.62 × 39 mm cartridges, four were for 5.45 × 39 mm cartridges, and three were for 7.62 × 51 mm cartridges. Three sales offers could not be definitively identified by calibre. Six listings for heavy machine gun ammunition were also identified—five offering 12.7 × 99 mm (.50 BMG) cartridges for sale, and one offering 12.7 × 108 mm cartridges. One sale of loose 12-gauge shotgun shells was also documented, which is consistent with the few shotguns identified during the data collection period.



Figure 4.57 Syrian Defense Industries Corporation 7.62 × 51 mm cartridges offered for sale in north-western Syria in mid-December 2020 (source: ARES CONMAT Database).

Whilst the majority of ammunition documented in Syria is produced outside of the country, a small quantity of Syrian-made ammunition remains in circulation. The box of cartridges shown in *Figure 4.57* is marked “عافدلا لماعم قس سؤم” (“Defense Industries Corporation”)⁶⁸ and “ةدحتم لة ب ر ع لة ي ر و ه م ج لة” (“United Arab Republic”). This indicates that ammunition was produced between 1958 and 1961, when Syria was part of the union with Egypt known as the United Arab Republic. The cartridge headstamp (see *Figure 4.57*, left) indicates that the cartridges were produced in 1960 and are 7.62 × 51 mm NATO calibre ammunition, marked as “N7.62” in Arabic (for ‘7.62 mm NATO’). A comparison with earlier studies of small-calibre ammunition in Syria suggest that Syrian (and Iranian) ammunition is significantly less prevalent now than earlier in the conflict (Jenzen-Jones, 2014).



Figure 4.58 Belted 7.62 × 51 mm FMJ and tracer ammunition, produced in the United States in 2012, offered for sale in north-western Syria in late March 2021 (source: ARES CONMAT Database).

Another listing for 7.62 × 51 mm ammunition, offered for sale in North-western Syria, showed cartridges sold in a belted (linked) configuration. The headstamps on this ammunition (see *Figure 4.58*) indicate that the cartridges were manufactured by the Lake City Ammunition Plant in Independence, Missouri.⁶⁹ Visible headstamps on the different cartridges indicate years of production between 2008 and 2012. The ammunition includes both full metal jacket (FMJ; ball) and tracer rounds. Significant quantities of U.S.- made 7.62 × 51 mm ammunition—most commonly belted in ball-and-tracer combinations for use with general-purpose machine guns such as the M240—was supplied by the United States to Free Syria Army groups such as Division 30 (Smallwood, 2015; Jenzen-Jones, 2014). It is likely that the ammunition documented herein originated from these supplies.

⁶⁸ Adapted from Shanley & Mick F., 2021a.

⁶⁹ Adapted from Shanley & Mick F., 2021c.



Figure 4.59 A box of 12.7 × 108 mm BZT-44 API-T ammunition produced in 2015 by Igman d.d. in Bosnia & Herzegovina, and offered for sale in North-western Syria in early April 2021 (source: ARES CONMAT Database).

One of the less-common cartridges documented in the dataset was 12.7 × 108 mm BZT-44 API-T ammunition, with only one listing. The markings on the box of ammunition shown in *Figure 4.59* indicate that it was manufactured by Igman d.d. in Bosnia & Herzegovina, in 2015 (Igman d.d., n.d.). The tip colouration of red over silver, also shown in *Figure 4.59* (at right), is consistent with the markings on the packaging. This follows the NATO marking practice (Jenzen-Jones, 2018, p. 160), despite the Warsaw Pact 12.7 × 108 mm cartridge with a projectile design derived from the Soviet BZT-44 round. This is consistent with manufacturer documentation, and is often seen in Eastern European countries which are increasingly shifting their defence sectors to align more with NATO and the EU than with Russia. The number of loose cartridges in the sheet-metal box (104) is also consistent with manufacturer documentation (Igman d.d., n.d.). The ammunition pictured here is likely to have entered the country via supply lines which supported anti-government fighters.⁷⁰



Figure 4.60 A box of 12.7 × 108 mm BZT-44 API-T ammunition produced in 2015 by Igman d.d. in Bosnia & Herzegovina, and offered for sale in North-western Syria in early April 2021 (source: ARES CONMAT Database).

⁷⁰ ARES interviews with confidential sources.

In June 2021,⁷¹ a number of 9 mm PAK (*Pistole Automatisch Knall*; lit. 'pistol automatic bang', also rendered as *Pistole Automatik Knall*) blank cartridges, manufactured by Turaç Dış Ticaret Ltd. in Turkey and sold under their 'Kaiser' brand (see *Figure 4.60*) were recorded. Although the sale of blank-firing weapons was common during the period of data collection, the sale of blank cartridges often takes place beyond the view of social media monitoring. This June example was the first documented sale of blank cartridges since ARES began the monitoring period.



Figure 4.61 A box of 7.62 × 39 mm blank cartridges, likely of Soviet or Russian origin, offered for sale in north-western Syria in late-September 2021 (source: ARES CONMAT Database).

Later in 2021, another sale of blank cartridges was documented (see *Figure 4.61*). Unlike the 9 mm PAK blank cartridges, which are designed for use in purpose-built blank-firing weapons, this box of blank-firing ammunition is intended to be used in lethal-purpose rifles chambered for the 7.62 × 39 mm cartridge (although not generating a lethal effect). While the box appears to be unmarked, the physical characteristics of the cartridges, including the case coating, crimp geometry, and sealant colour, are consistent with cartridges produced in the Soviet Union or Russia. These rounds are sometimes used in Syria to provide a propelling charge for craft-produced cup-type grenade launchers which have been documented in the region (Maklad, 2018; ARES, n.d.).

Medium-calibre Cartridges

Thirty-two listings offering medium-calibre cartridges—those of at least 20 mm, but less than 57 mm in calibre (Jenzen-Jones, 2020)—for sale were recorded in the dataset, most of which (28 listings) were cartridges designed for use with grenade launchers. Models that were recorded include 9 Serbian HEDP 01 40 × 46SR mm cartridges, 14 VOG-25-pattern 40 mm cartridges, one VOG-37 40 mm cartridge, two South African M848 40 × 53SR mm cartridge, one Bulgarian AR 466 ABHE-SD airburst cartridge, and one

71 Shanley & Mick F., 2021f.

Bulgarian RLV-TB 40 × 46SR mm cartridge. One Belgian PRB anti-personnel rifle grenade was also listed for sale. Additionally, one high explosive incendiary (HEI) 30 × 165 mm cannon cartridge was documented, as was one 23 × 152B mm cannon cartridge. No asking prices were listed for any medium-calibre cartridges.



Figure 4.62 A Bulgarian Arsenal RLV-TB 40 × 46SR mm thermobaric grenade launcher cartridge offered for sale for 13 USD in north-western Syria in early November 2020 (source: ARES CONMAT Database).

One Bulgarian Arsenal RLV-TB 40 × 46SR mm thermobaric cartridge was documented, intended for use with NATO-type 40 mm grenade launchers (Arsenal, n.d.). The markings on the round (see *Figure 4.62*) indicate that it was manufactured in 2018, and hence entered Syria relatively recently. The proximate source of this munition is not known with certainty, but countries that have previously supplied Syrian opposition forces with weapons—including Saudi-Arabia, United Arab Emirates, and Turkey—have supplied Bulgarian arms and munitions to these forces before (Doherty & Bakr, 2012; Petkova, 2015; Angelovski, Petrucic & Marzouk, 2016).



Figure 4.63 At least two visible South African Denel PMP 40 × 53 mm HE-FRAG cartridges offered for sale in North-western Syria in late-August 2021 (source: ARES CONMAT Database).

Offered for sale at 15 USD per round, the South African Denel PMP M848-series 40 × 53 mm high explosive fragmentation (HE-FRAG) grenade launcher cartridges shown in *Figure 4.63* are rarely seen in Syria.⁷² These munitions may have entered Syria through Turkey, which recently purchased large quantities of ammunition from Denel (Plessis, 2020). Although the Turkish government insists that the munitions are to be used for military exercises within Turkey, the country has a well-documented history of providing weapons and ammunition to Syrian opposition forces (Al-Khalidi, 2019).

Recoilless Gun Projectiles

ARES researchers documented seven projectiles for the RPG-7 shoulder-fired recoilless weapon. Models include one PG-7M HEAT rocket-assisted projectile, one PG-7L HEAT rocket-assisted projectile, two OG-7 HE-FRAG projectiles, one PG-7R tandem-HEAT rocket-assisted projectile (see *Figure 4.64*), one TBG-7 thermobaric rocket-assisted projectile, and one Type 69 HE-FRAG airburst projectile. One RPG-7 projectile of unknown model was also documented. No asking prices were listed. Two large-calibre recoilless cartridges were also documented in the dataset.



Figure 4.64 A PG-7R tandem-HEAT rocket-assisted projectile (comprising, with propelling cartridge, the PG-7VR round), documented for sale in January 2021 with no asking price.

⁷² Adapted from Shanley & Mick F., 2021h.

Mortar Projectiles

Only 16 mortar projectiles were recorded in the dataset (2% of all documented munitions), consistent with the few documented mortar sales. Interestingly, the majority of these mortar projectiles were of Portuguese origin (12 of 16).⁷³ One other mortar projectile was identified as Yugoslavian or Serbian. All mortar projectiles could be identified by functional type. The majority were either smoke (9 of 16) or HE-FRAG (5 of 16) projectiles, however one practice and one illumination mortar projectile were also identified. Documented mortar projectile models include 9 Portuguese NR 462 smoke projectiles, two Portuguese NR 431 projectiles (one HE-FRAG and one practice), one Portuguese NR 473 illumination projectile, and one Yugoslavian/Serbian M91 HE-FRAG projectile. The remaining three mortar projectiles could not be identified by model. No mortar projectile was listed with an asking price.



Figure 4.65 Portuguese INDEP-made NR 431 60 mm HE mortar round (green) next to its practice variant (blue), put up for sale in October 2021 (source: ARES CONMAT Database).

The NR 431 60mm HE mortar projectile, listed for sale in October 2021 (see *Figure 4.65*), was made by the Portuguese company INDEP (Indústrias Nacionais de Defesa EP), which has been defunct since 2004 (Sequeira, 2007), under license from the Belgian company PRB SA (Poudreries Réunies de Belgique SA, defunct since 1990) (Berkenbaum, 1990).

Hand Grenades

ARES researchers documented a total of 215 hand grenades during the data collection period, accounting for almost 29% of the munitions dataset. This is a considerable proportion, and is likely the result of the high utility of anti-personnel grenades in the Syrian conflict. All of the documented hand grenades were HE-FRAG anti-personnel types, except for two lachrymatory grenades containing the riot control agent (RCA) 2-chlorobenzylidene malononitrile (CS). While the country of origin for the majority of hand grenades listed (158 of 215) could not be definitively identified, the vast majority of these were attributable to Eastern Bloc manufacturers during the Cold War period. Those hand grenades which could be identified by country of origin were predominantly from China (at least 21 listings), the former Yugoslavia (at least 12 listings), and Switzerland (at least 12 listings). Grenades from Hungary, Iran, and the former Soviet Union were also

⁷³ This is possibly the result of Portuguese arms transfers to Syria in the 1980s; see, for example: *Diário da Assembleia da República*, 1987.

identified. The most common model of hand grenade documented was the Soviet-designed F1, with at least 91 examples. Other notable models include at least 36 RGD-5 hand grenades, 19 Chinese Type 86P hand grenades, 14 American-designed Mk.2 hand grenades, 14 M50/52-pattern Yugoslavian hand grenades, nine Swiss HG-85 hand grenades (see *Figure 4.66*), five Hungarian 42/48 M hand grenades, and four Iranian D.I.O. Mil AP hand grenades. Additionally identified were five VOG-17M 30 × 29B HE-FRAG cartridges that had been converted into hand-held 'Hattabka'⁷⁴ fragmentation grenades, using M204A1 fuzes which may be of Turkish origin (see *Figure 4.67*).



Figure 4.66 Seven Swiss RUAG HG 85 hand grenades (alongside two M67 grenades) offered for sale in North-western Syria in early April 2021 (source: ARES CONMAT Database).



Figure 4.67 Five 'Hattabka' hand grenades offered for sale in North-western Syria in February 2021, with asking prices of approximately 3 USD each (source: ARES CONMAT).

⁷⁴ 'Hattabka' is a common name for craft-produced hand grenades, originating from the Chechen Wars. VOG-17M cartridges are often used as the basis for these munitions (Pribylov & Kravchenko, 2008; ARES, n.d.). The term 'Khattabka' is also used.

Swiss RUAG HG 85 hand grenades were documented in April 2021. Swiss weapons and munitions are uncommon in the Middle East in the region, making this single sale of seven examples noteworthy (ARES, n.d.). Markings on HG 85 and OHG 92 hand grenades documented by ARES throughout the Middle East and in North Africa are consistent with lot numbers known to be associated with an export of hand grenades from Switzerland to the United Arab Emirates which took place in 2003 and 2004. The UAE re-exported Swiss hand grenades to a number of countries, including providing them to non-state actors in Libya and Syria (ARES, 2016; Blick, 2018b). Those sent to Syria arrived no later than 2012 (*Schweizer Radio und Fernsehen*, 2018), and were subsequently used by the Islamic State (Blick, 2018a), amongst other groups. The grenades have subsequently proliferated to other MENA states (ARES, n.d.; ARES, 2018).

Munitions Components

Though most of the munitions documented in the dataset are fixed-type, the ongoing use of semi-fixed or separate-loading munitions in Syria means that munition components were occasionally listed for sale during the data collection period. In total, 41 were listed for sale during this period (approximately 5% of all munitions), consisting of 32 fuzes and 9 expelling or propellant charges. The fuze listings include five VP-7M fuzes, one MD-2 fuze, 22 Turkish MKE M204A1/A2 hand grenade fuzes, one F1-style hand grenade fuze, one Soviet MGZ-57 artillery fuze, and two fuze listings (including one sale advertising multiple fuzes) of unknown model. The documented expelling charges include one 40 mm PG-7PL expelling charge (see *Figure 4.68*), one 73 mm OG-15P expelling charge, four RPG-7-type expelling charges of unknown model, and three additional propellant charges. No components were listed with an asking price.



Figure 4.68 A PG-7PL (ПГ-7ПЛ) expelling charge offered for sale in Ma'arrat Misrin, Idlib Governorate, in March 2021 (source: ARES CONMAT Database).



Figure 4.69 Several MKE M204A1 hand grenade fuzes offered for sale in North-western Syria in late-June 2021 (source: ARES CONMAT Database).

In June 2021, a box of TM204A1-pattern hand grenade fuzes manufactured in Turkey by the state-owned Makina ve Kimya Endüstrisi Kurumu (MKE) were recorded (see *Figure 4.69*).⁷⁵ M204-series fuzes were developed in the United States and widely used with the American M26 hand grenade, but the simple and effective design has been widely copied around the world. MKE uses these fuzes with a number of their hand grenades, including their MK2 and MK3 high explosive fragmentation (defensive) models, as well as their MOD 48 high explosive (offensive) and MOD 56 riot control agent models (MKE, n.d.). The examples documented were MKE M204A2 models, manufactured in 1978.

Blank-firing Weapons

In Syria, blank-firing weapons are commonly converted to fire lethal-purpose ammunition.⁷⁶ These weapons, mostly blank-firing pistols, are converted locally by individuals and small organised groups. Converted blank-firing pistols offer an affordable alternative to factory-made, lethal-purpose self-loading pistols. Whereas a factory-made Glock 19 Gen3 may cost up to 2,800 USD in Syria, a blank-firing pistol converted to fire lethal-purpose ammunition—and visually resembling a Glock product—may be obtained for less than 100 USD. Given the scarcity of factory-made pistols in Syria, and their relatively high prices when encountered on online markets, blank-firing weapons are also much easier to access. Around 19% of all documented sales offers contained in the dataset were for blank-firing handguns (converted or not).

Every documented blank-firing handgun with a discernible nation of origin was Turkish—unsurprising given that nation’s proximity to Syria and the considerable number of Turkish blank-firing handgun manufacturers. Some of these weapons had already been converted for live ammunition, while other examples were only

⁷⁵ Adapted from Shanley & Mick F., 2021f.

⁷⁶ Adapted from Shanley & Mick F., 2021b. ARES has identified this phenomenon all over the world, in conflict zones and non-conflict zones, and in both developed and developing countries (ARES, n.d.).

capable of blank fire when documented. Because of material limitations and quality control issues, most of the converted blank-firing pistols which could be identified were chambered for the .380 ACP or .32 ACP cartridges. However, it was generally very challenging to determine from the available imagery whether or not a given blank-firing pistol had indeed been converted to be capable of firing live ammunition. Positive identifications were typically made possible only when the vendor posted images of a weapon's barrel to show that it had been converted. In general, most blank-firing pistols contained in the dataset (and all of those in this section of the report) were evaluated on the assumption that they had not been converted.



Figure 4.70 A single bulk sale of Lord T822 blank-firing pistols offered in north-western Syria in mid-February 2021, which consisted of 92 examples (source: ARES CONMAT Database).

A total of 715 blank-firing pistols were documented during the data collection period. Their prices were far lower than those of lethal-purpose pistols, with an average of 72 USD. While prices were only available for 285 of the documented blank-firing pistols, sufficient data is available to conclude that their low price is likely what drives individuals in Syria to purchase blank-firing weapons rather than their lethal-purpose counterparts. A large sale of blank-firing pistols documented in mid-February 2021 consisted of 92 examples of the most common blank-firing pistol in the region—the Turkish Lord T822—with 310 examples documented.⁷⁷ The prices for the Lord T822 ranged from 35 USD to 450 USD, with an average of about 60 USD, in line with blank-firing pistol prices in general. The February sale was the largest single sale of T822 pistols, but, unlike some other blank-firing pistols, they were consistently listed for sale throughout

⁷⁷ Adapted from Shanley & Mick F., 2021b.

the period of data collection. The packaging associated with this bulk sale, as seen in *Figure 4.70*, likely indicates the items were only recently transported into the country. They may have been smuggled from Turkey into Syria.



Figure 4.71 A large quantity of Aksa Silah AK14 blank-firing pistols offered for sale in north-western Syria in mid-June 2021 (source: ARES CONMAT Database).

The second-most common blank-firing pistol, behind the Lord T822, was the Turkish Aksa Silah AK14, with 137 listings. Its prevalence in that dataset was partially the result of a single large sale which happened in mid-June 2021 (Shanley and Mick F., 2021f). The prices for this model had a narrower range than the Lord T822 pistols, with a minimum of 38 USD and a maximum of 100 USD; however, an average of 79 USD per listing kept them generally in line with expected prices for blank-firing pistols. The packaging seen in *Figure 4.71*, associated with the June bulk sale, is similar to that seen in the February sale (see *Figure 4.70*). Indeed, the blank-firing pistols appear to have recently arrived in Idlib when photographed, and most likely were brought into the country directly from Turkey (where they were manufactured).

Other notable blank-firing pistol models include the Aksa Silah AK15, with 64 examples; the Ekol Special 99, with 45 examples; the Özkursan 922, with 24 examples; and the Retay G17, also with 24 examples. All of these are Turkish-made models. The vast majority of blank-firing pistols were chambered for either 9 mm PAK (at least 370 examples) or 8 mm PAK ammunition (at least 292 examples).

Conclusion

This report provides a limited insight into the online trade in small arms, light weapons, munitions, and other items in the opposition-controlled areas of Syria. As one would expect, the nearly decade-long conflict in that country has resulting in a wide range of arms and munitions circulating outside of state control. This conflict has enabled a large-scale arms trade to flourish, operating at a variety of levels. Depicted herein is perhaps its most basic expression: numerous small trades, primarily conducted on an individual basis, encompassing both active combatants and civilians alike. Whilst including some arms suitable almost exclusively for collectors (antique muzzle-loading firearms) and for civilian applications (break-open shotguns), the majority of the dataset is comprised of small arms suitable for warfare. Indeed, self-loading rifles—the primary infantry weapon with which the ongoing conflict in Syria is prosecuted—account for more than 50% of all small arms documented.

Another result of the sustained fighting in Syria is the ingenuity in arms production and modification that has arisen. Modifications to firearms were not uncommon within the dataset, and a modest number of craft-produced arms were also recorded. These are representative of a broader trend within Syria, where craft-produced arms and munitions have played a small but important role in the conflict, being developed and employed by non-state actors and the Syrian government alike. The weapons made from scratch within the country since the outbreak of hostilities have ranged from small arms to air-delivered chemical munitions.

Whilst many of the arms and munitions documented herein pre-date the conflict (with some dating back to Syria's colonial era), a significant proportion are likely to have entered the country since 2013. The routes these arms have taken are many and varied. Some have no doubt been smuggled across porous borders, some imported by the regime from allies such as Iran, and others supplied to the various non-state actors supported by regional (e.g., Turkey) and international (e.g., the United States) powers. Whilst this analysis looked only at the trade within opposition-held areas in north-western Syria, the majority of items documented by ARES are likely to have originated with, or passed through, Syrian government arsenals. The mechanics of battlefield capture, defection, and petty theft and corruption are likely all represented within this small snapshot of the trade. As the conflict continues, and sources continue to diversify, the types, makes, and models of arms and munitions represented herein will continue to broaden.



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