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**SUBJECT: THREAT UPDATE – TELEGRAM GROUP PUBLISHES A MANUAL FOR MANUFACTURE OF BALLOON IED CARRIERS**

**REFERENCES:** A) C-IED CoE S078/2021 – “Threat Analysis of Russian/Chechen Manual for Homemade Explosives and Hand Grenades”, 12 April 2020.  
B) C-IED CoE S087/2021 – “Threat Analysis from EFP manual distributed by Chechen Telegram group”, 20 April 2021.  
C) C-IED CoE S089/2021 – “Threat Analysis of Radio Control Device manual by Chechen Telegram group”, 21 April 2021.

**1- AIM**

This report intends to analyze the potential threat derivable from a specific manual for manufacture of balloon-based airborne platforms for improvised explosive devices (IED) regarding its reliability, easiness, didactical level, and effectiveness of final products.

**2- INTRODUCTION**

In the first months of 2021, a pdf-formatted manual “Шар-бомбардировщик” (“Balloon Bomber”) written in Russian language was distributed in a Telegram group mostly composed by Chechen nationals.

In the same line of previous works, the manual evidences some specific characteristics as follows:

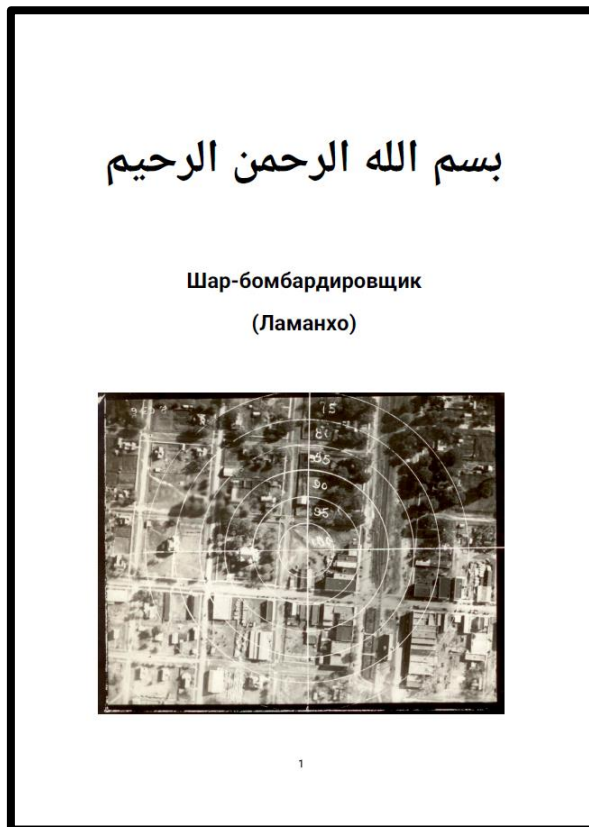
- Very didactical → well explained, step by step, supported by adequate pictures, safety tips, easy procedures, accessible materials, technical and tactical advisory, recommending safe training before making fully functional devices, showing pros and cons...
- Professional → estimated military education, short and concise explanations, best practices, expert assessment, safety first...
- Some ideological → various references to religion, discontinuous radical message, some jihadist expressions, although more tactical than ideological language...
- Highly visual → Some of the elements and actions are graphically shown beside any of the steps, big characters...

### **3- CONTENT OF THE MANUAL**

#### **3.1- Structure**

The manual is quite well organized in different chapters:

- Introduction
- Manufacture of explosives
- Design of improvised devices
- Design of the balloon vector
- Tactical tips



The manual is quite complete: along with manufacture of homemade explosives, the manual explains how to manufacture release systems, based on mechanical delay, pyrotechnic and radio control switches, able to release both explosive-fragmentation or incendiary devices.

#### **3.2- Manufacture of explosives**

The document covers the manufacture of:

- Triacetone Triperoxide (TATP)
- Hexamethylene Triperoxide Diamine (HMTD)
- Ammonium Nitrate Aluminum (ANAL)

The first two substances are considered as options for the primary explosive as part of the improvised detonator, while the ANAL is the main charge of choice.

### **3.2.1- TATP**

With regards to TATP making, it should be highlighted that:

- The process is well-explained, simple and effective;
- The manual is implicitly recommending the manufacture of small quantities each time for safety, instead of higher production of TATP;
- It is based on an alternate source for Hydrogen Peroxide as precursor;
- Testing results of the process as shown in the manual evidenced effectiveness;
- Production of 6-7 grams of TATP each time.

### **3.2.2- HMTD**

Related to the manufacture of HMTD:

- The process is well-explained, simple and effective;
- The manual is implicitly recommending the manufacture of small quantities each time for safety, instead of higher production of HMTD;
- As the process for HMTD manufacture is the typical one for improvised explosive, the results of the process are considered as fully effective, and easy to follow by amateur terrorists;
- Production of 10 grams of HMTD each time.

### **3.2.3- ANAL**

About the process for ANAL production:

- It is a very simple one: just grinding, mixing and drying;
- Several tips for better effectiveness are recommended (e.g. sealing of finished mixture until use).

As a partial assessment:

- Precursors are easily and safely acquirable in low quantities.
- As the process for ANAL manufacture is the typical one for improvised explosive (extremely simple), the results of the process are considered as fully effective, and easy to follow by amateur terrorists;

### **3.3- Design of improvised devices**

The manufacture processes of three different kind of IED are described.

#### **3.3.1- Explosive-fragmentation single improvised munition**

It is based on simple and easily available components.



#### **3.3.2- Incendiary single improvised munition**

It is based on the same design for explosive-fragmentation, although removing the shrapnel, and substituting ANAL by flammable material.

#### **3.3.3- Single cluster with several explosive-fragmentation improvised submunitions**

The basic submunition would be based on 50-100 ml plastic bottles filled with primary explosive, with shrapnel wrapped around them.

Those submunitions do not need any kind of fuze, due to the sensitivity of TATP/HMTD to impact.

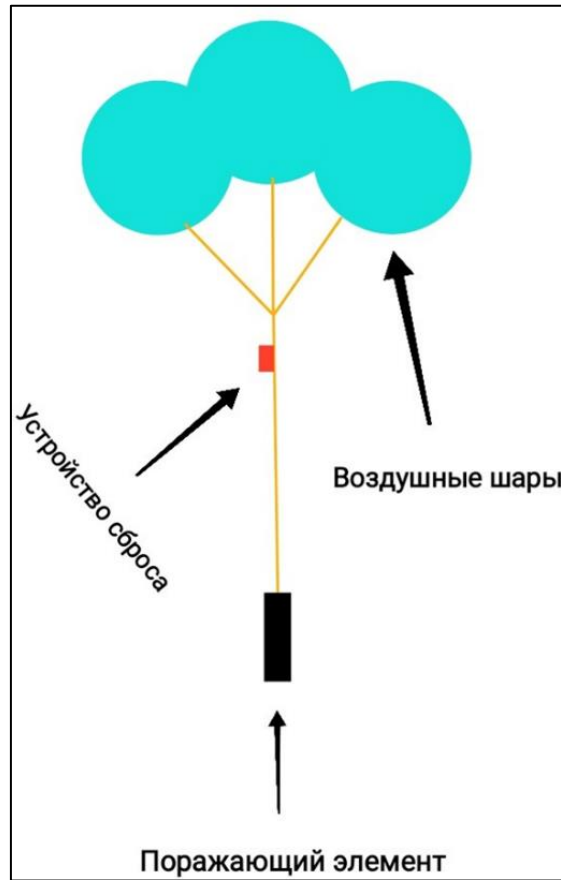
The cluster would be based on 5-litre plastic jar containing several submunitions: they would be released from the bottom after a pyrotechnic action.

Additionally, the manual includes the design for an inertial fuze to be used in occasion of soft terrain or presence of vegetation in the target area.

The improvised munition resulting from the inertial fuze would have the fuze allocated in tail position.

### 3.4. Design of balloon vector (carrier)

The balloon weapon system would count on: balloons, a releasing device, and an improvised munition.



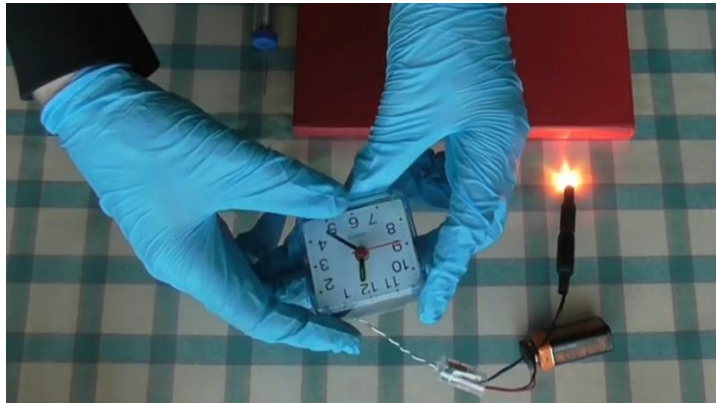
#### 3.4.1- Balloons

The manual includes instructions and recommendations about the design of the aerial vehicle along with choice of balloons and helium gas/range calculations.

### 3.4.2- Releasing device

Two options are shown: pyrotechnical and time delay switches.

It is relevant to highlight that nor the tools needed for the works are indicated, neither the successive steps to connect the different components are clearly and accurately described for an absolute novice to follow them; the author of the manual continuously recommends even the search and use of tutorial videos in Youtube.



Nice recommendations regarding how to improve/assure the power of the batteries are included.

### 3.5- Tactical tips

This chapter includes not only advantages and disadvantages of each procedure (incendiary or explosive-fragmentation single-cluster) and recommendations for target and momentum selection, but smart advice to avoid capture, tracking and investigation by the enemy.

It is relevant to highlight the didactical example for the planning of an attack over Moscow through analyzing several open websites (no tracking!) to support the calculations for design of balloon carrier, logistic needs, reconnaissance, acquisition of goods, and so on.

Again, the assessment for cyber defense, anticipation of enemy procedures, and protection of identity is extremely well conducted.

Finally, a direct reference to a statement from Holy Quran (Sura 4, An-Nisa: ayat 84) is included.

The document is closed with the first verse of the first surah of the Quran in Russian language.

## 4- CONCLUSIONS

It is quite rare to find such detailed instructions about how to design and manufacture balloon vectors for IED (with the exception of Gaza strip in Israel, where the related instructions are not made with that complete approach, much more simplified, and extremely less instructional).

With regards to homemade explosive manufacture, the referred manual is very accurate, concise, instructional and effective, while all the processes as described inside are easy and able to reach the expected objectives.

The calculations for balloon-carrier design are quite understandable and accurate.

Regarding electronic devices, the procedures as shown in the manual would require some basic skills in electronics by the potential manufacturer, and some processes of manufacture are not too well explained.

It is quite relevant the progressive increase in sharing jihadist propaganda from DAESH and frequent reference to “infidels” (“Khafir”, кафиры) in this Telegram group of analysis, which could be an indicator of a further change in that threat network’s dynamics.

The balloon-solution is cheap, simple, hard-to-track, and potentially very terrifying to Western societies (e.g. mass events) and most probably highly effective against economic interests, especially if connected with arson during Summer time in Europe and Northern America. Anyway, the referred manual would be potentially dangerous in wrong hands.

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Hoyo de Manzanares, 15 May 2021.  
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