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# On sourcing

TOEs and ORBATs are considered classified information. That is why you won't find original document sourcing here. Gathering this information from direct sourcing is also illegal. Most of this is presented "as is" for that exact reason and formation numbers are dropped. Where applicable, general sourcing will be used.

## Part 1 - Motor-rifle battalion

This is presented in an ascending order from squad to battalion unit size. We have deliberately ignored Staff and battalion command, signals and comms platoons, battalion supply platoons and medical platoons. Russian army has three main types of motor-rifle battalions - BMP, BTR and MTLB. Unless the type is specified, consider universal application.

- 1. Some squads in CMBS tend to have both PKP's and PKM's. That is a dubious combination unconfirmed by actual deployment personnel or exercise reports. PKP shares 80% of the kit with PKM, so general replacement happened very quickly. However, there are some remote formations that still have only PKM's. To note, they more than likely don't apply to CMBS rapid deployment scenario. It is important to note though, a few BMP battalions that still have not received PKP's, use RPK-74M's on squad level. BMP Battalions that have received PKP's use them both on platoon and squad level. There are two variants of a platoon HQ either having the MG team (2 members) or not having it. Consequently BMP platoons can either have 4xPKP, 3xPKP or 1xPKM+3xRPK-74M. The more proliferated setup, which should be CMBS standard, is the 3xPKP.
- 2. PKM with a tripod mount is called PKMS<sup>1</sup>. Effectively the tripod mount has not been used since the late 80's. That is due to two things, necessary accuracy dictated by PKM's SAW role was achievable without the mount devaluing increased weight over marginal accuracy gain.
- 3. Standard squad carried ammo for PKP/PKM is 600 rounds<sup>2</sup>. 2 ammo boxes of 200 rounds and 2 ammo boxes of 100 rounds. Those are either split between MG and assistant, or carried by the MG gunner altogether. Current MG rounds carried are overabundant, even if considering that each squad member carries an additional 100 round box like in the Chechen campaign, the MG load is overrepresented.
- 4- AKS74U for RPG carrier is no longer the only option. The swap to AK-74M for RPG operators begun back in 1994. Both variations tend to crop up from time to time, so it is only fair to

<sup>&</sup>lt;sup>1</sup> PK, PKM, PKS, PKMS, PKB, PKMB and PKT manual page 1. MoD Published, 1979.

<sup>&</sup>lt;sup>2</sup> The Military Balance 2013. — P. 370.

assume both are still in valid service. It is hard to determine which variation is the preferred one by the army.

- 5. Starting from the 80's AGS operators were armed with AKS74U's. Somewhere from mid-90's they begun switching them to AK-74M's, so both rifle variants can be found<sup>3</sup>. PM's are not considered an effective infantry weapon in the Russian army and can only be found as a sidearm on officers.
- 6. With most brigades, SVD operators are moved out of general motor-rifle companies into a specialised marksman platoons. As such, SVD's are not generally present in motor-rifle companies at all and are overabundant in CMBS, especially in current BMP companies. Scenario makes should take note that snipers from a marksman platoons are usually re-incorporated into motor-rifle companies for actual combat, these marksmen sections of 4 are usually incorporated into company HQ's. Sections of 2 are sometimes assigned to platoon HQ's.
- 7. Originally we said that most BMP motor-rifle companies had 11 vehicles, 3 per platoon and 2 for command and that it was a leftover from when companies had a organic MANPADS section. That caused a lot of internal discussion, with some active duty personnel reporting they have 10 BMP's per company while others reporting they have 11. Originally, all TOEs stretching to beginning of 90's have 11 BMP's. However there is now overwhelming evidence that 10 BMPs structure might be just as proliferated if not more. Overall, the best course of action is up to developers on this one. Views on this one are fairly polarized, so we suggest both structures be included. There are alternative, "strengthened", brigade companies with organic AGL's. These companies have 12 (one AGL squad) or 14 (full AGL platoon of 3 squads) BMP vehicles. Some experimental ORBATS also include 4 BMP's per platoon instead of 3, but I am not sure this variation should be considered until it is more widespread.
- 8. Every company is equipped with a short-range radar recon station and has one trained operator for it. They are usually attached to the command squad. These have been standard issue since late 60's. First such station, PSNR-1, was introduced to service in 1966, albeit not on company level back then. SBR-3, the first doppler radar station for company-level use was introduced into active service in 1976. In tactically application, this recon station is similar to company-level small UAVs used by the US army. In terms of CMBS, there are two stations that need to be covered: SBR-3 "Fara-U" from 1976 and SBR-5 "Fara-1" introduced into service in 1999. Ultimately the code for this is already in game with BRM-1 and 3 using PSNR-5 and PSNR-5M. Marrying it with tripod code seems like the best solution to us.

General Specs (SBR-3)<sup>4 5</sup> are: Operators - 1 Operational band - Unknown

https://www.youtube.com/watch?v=SnLp\_exJ\_XY, https://www.youtube.com/watch?v=viDPHTspWWU

<sup>&</sup>lt;sup>4</sup> NPO Strela, manufacturer, <a href="http://www.npostrela.com/ru/products/museum/81/205/">http://www.npostrela.com/ru/products/museum/81/205/</a>

<sup>&</sup>lt;sup>5</sup> Recon Sgt. Handbook. MoD Published, 1989

Effective coverage - Distance 3km, azimuth scanning unknown. Effective detection - Man 900m, Vehicle 2.5-3km. Average detection error - Unknown Operation time - 8 hours at 20 °C, 2 hours at -40 °C Weight - 18.5kg. Deployment time - 5 mins.

SBR-3 visual reference material:

http://i.imgur.com/2P4IJFG.jpg http://i.imgur.com/RqZ73QX.jpg http://i.imgur.com/50tyFIU.png http://i.imgur.com/01LmrDL.jpg

General Specs (SBR-5)<sup>6</sup> are:

Operators - 1

Operational band - 2cm (J) band

Effective coverage - Distance 5km, 24°/45°/90°/120° discrete levels of azimuth scanning.

Effective detection - Man 2km, Vehicle 4km

Average detection error - Distance 20m, 1° of angle error.

Operation time - 6 hours of autonomous operation from a battery.

Weight - 16.5kg regular, 10.5kg patrol variant.

Deployment time - 5 mins.

• SBR-5 visual reference material:

http://i.imgur.com/FJV0IZK.jpg http://i.imgur.com/ZqrHYek.jpg http://i.imgur.com/rxyRuEN.jpg http://i.imgur.com/2FHK1M0.jpg

There is also Fara-PV allegedly in in service, and Fara-VR which passed army and state trials as of 2012. Getting the regular SBR-3 first should be the first step though. As with any piece of equipment, there are pros and cons that should be reflected in CM. The major pro for ground radars is the relative transparency of foliage and small landscape variations. The con is that slow movement is very hard or impossible to detect depending on size of the object in question. Overall a major point of discussion was whether or not these stations are actually used by the army due to alleged lack of trained operators. We believe that reports of unskilled operators can be address with a lower experience rating when building scenarios, but should not exclude equipment from that available in CMBS. As you will see below, recon battalions and other more groomed formations also have these ground radars as standard-issue. Assuming that not one formation in all available brigades can handle standard issued equipment is a bit too big of a baseless assumption.

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<sup>&</sup>lt;sup>6</sup> NPO Strela, manufacturer, <a href="http://www.npostrela.com/ru/products/museum/81/206/">http://www.npostrela.com/ru/products/museum/81/206/</a>

- 9. The are no weapons platoons in BTR and MTLB companies. MG squads were dropped in early 90's due to sufficient MG saturation in line motor-rifle platoons. The proper current term is Anti-tank squad.
- 10. In CMBS BMP battalions are missing engineer and recon platoons found in their BTR and MTLB counterparts. Considering this and point 9, the minimal IRL BMP count per platoon is at least 41 and not 34 like we currently have in CMBS.
- 11. 2S34s have originally made it to battalion level integration, but were reported to have been only assigned in that role in experimental "Heavy" brigades, an OOB no longer practiced. Nona-SVK's also shared the same fate in a similar experimental OOB. However nice that might have been, we believe that 2S34s need to be removed from mortar selection for battalions. There are no foreseen plans to introduce 120 or 122mm SP Howitzers to battalion organic support at the moment.
- 12. Current motor-rifle battalion mortar support is comprised of 2S12 (120mm) and 2B9's (82mm), of which the latter is not present in CMBS. A general mortar battery is comprised of 2-4 platoons of 4 or 3 mortars in each platoon, and a command squad per platoon which is currently missing. Platoons have homogenous equipment, but batteries are generally mixed between 120mm and 82mm artillery pieces. In difference to general perception, 4 mortar platoons are more commonly integrated into current formations than 3 mortar ones. To add, every mortar platoon has one RPG-7 as available kit. Soviet ORBATs sometimes had "driver-AT operator" MOS description as well. Also battery HQ is comprised of 4 people, of which 1 is the driver as opposed to 5 as total like CMBS has it now. We also believe that taking signals squad out is an error, due to this formation being a defencive measure for the battery in case of enemy contact. This squad has 6 people including one driver and carries an RPG-7 in their vehicle.
- 13. MTLB and BTR battalion recon platoon looks differently IRL. It has four squads (1 command and 3 recon). First recon squad is a surveillance one, has 7 members including vehicle crew of 2 and is organised around a more powerful ground radar\*, a laser designator and two RATELO operators. This squad is directly plugged into the C4 network wherever that is deployed. This squad is armed with AK-74M's only, but carries an RPG-7 in their vehicle. Two other recon squads of 7 are organised more traditionally (like we already have in-game), except they also have a "senior-scout" role who by TOE's should have a VSS or comparative weapon.
- \*If first recon squad of battalion recon platoon is riding a BRM-1K, then the doppler station is a more powerful PNSR variant requiring 2 operators mounted on a vehicle. If any other vehicle is used, SBR-5 and derivatives are operated.
- 14. Engineer platoons have four squads IRL, with 1 command and 3 engineer squads. Equipment isn't necessarily an issue here since CM handles engineering with a very high degree of abstraction.

# Part 2 - Motor-rifle battalion general equipment observations

CMBS has over represented Motor-rifle NVG equipment. Night scopes, usually within 2+/3 GEN, are often assigned to AT gunner, Grenadier, MG gunner and Squad Leader. Currently there are no NVG monocles in service with motor-rifle troops. We are not sure how things will change in next two years. Collimator sights (2-4 x 1PN63 per squad) are also sometimes available. This would be more widespread in higher trained infantry such as recon battalions, but high-readiness motor-rifle battalions would also be fully supplied with these devices. Night binoculars of BN-2 (1PN50) and BN-3 (1PN94) type per squad are also standard issue equipment.

Perhaps a bit of an obvious one, but BMP-2M is not in Russian service, was never planned for it and there are currently no plans to introduce it in the future. It is in full blown Algerian service, so this vehicle might be best suited for future CMSF titles. If I had the choice, I would petition this vehicle's removal along with ERA BMP-3. The latter being a late 90's development which couldn't even make it to army trials.

With a high degree of confidence, I can say that BTR-82 with KPVT never entered service. MoD supply and procurement documents on this were never seen or heard of. Regular BTR-80's with KPVT though, are in active service by both the Russian, and Ukrainian armies. I think removing the 82 and introducing the 80 would be a good move towards authenticity.

- Naval Infantry BTR-80's, 2014, Caspian sea: <a href="http://i.imgur.com/TXhvLo9.jpg">http://i.imgur.com/TXhvLo9.jpg</a>
   http://i.imgur.com/VFBjozY.jpg
- Army BTR-80's, 2015, Unknown location: <a href="http://i.imgur.com/gfG5MB7.jpg">http://i.imgur.com/gfG5MB7.jpg</a>
   <a href="http://i.imgur.com/j40jXZx.jpg">http://i.imgur.com/j40jXZx.jpg</a>

BMP-1P on the other hand still remains in service in fair numbers\* (around 500 reported). Potentially these are vehicles used for training purposes. Additionally, this is a vehicle still used by the Ukrainian army in fair amounts I believe, and while I am against bringing junk to a CMBS setting, I would still value this over BMP-2M. It is a similar concept with the BTR-70M which is fairly active use.

- BMP-1P's in recent service:
   https://www.youtube.com/watch?v=GDCvTfuatYU
   http://i.imgur.com/ZLW8noa.jpg
   http://i.imgur.com/XtKEHsq.jpg
- BTR-70M's in recent service:

http://i.imgur.com/8Kf2ttX.jpg http://i.imgur.com/8Kf2ttX.jpg

\*Older equipment is often used for training, so its proliferation in active formations may be overstated.

2S24 isn't a mortar per say, it is a self propelled base for 2B24 mortar. Together then make 2K32 complex which isn't in service and there are no plans for it. I would consider removing this vehicle. They are in limited service by the ministry of interior - not the army<sup>7</sup>.

### Part 3 - AT battalion

In light of recent ATGM discussion, we decided to prepare another part, this time dedicated to antitank battalion. It is no secret that overall typical AT capabilities of an MR brigade may be subpar to contemporary conventional targets. However, CMBS AT bat. TOEs are not entirely accurate even to older TOEs which further diminishes typical CMBS MR brigade AT capabilities. Before we proceed, a distinction between Artillery Brigade AT battalion and Motor-Rifle Brigade AT battalion needs to be made. AB AT Battalions are much larger and are generally uniquely comprised of Sp. ATGMs such as Khrizantema and Shturm-S. They are not the focus of this though.

#### 1. MR AT battalions have the following equipment:

- a. All AT battalions have at least one battery of 2A29R "Rapira" (MT-12) guns. Currently Ukrainian side has the proper representation of this artillery formation with both off and on map deployment options available. This should also be done for the Russian side. In fact, a regular MT-12 battery for the Ukrainians is almost the same as it should be for the Russians. That said, there are some discrepancies. Every MT-12 battery has a recon squad of 5 people with a PNSR station. These squads come mounted on an MTLB. Battery and squad command being armed with just binoculars for both, Ukrainian and Russian side seems a little weird, please refer to point 3.
- b. Most AT battalions have 2 sp.ATGM batteries. Those batteries are made of two or three ATGM platoons. Each platoon has three ATGM vehicles (as in CMBS) \*To note, 9P149 batteries have MTLBs as command vehicles, 9P148 platoons have BRDM-2s.
- c. Around two thirds of all sp.ATGM batteries are Shturm-S. As of 2009 around 260 9P148 vehicles were reported by the Russian MoD as both in-storage and in-service<sup>8</sup>. For comparison, a total of 860 9P149 vehicles was available as of 2012<sup>9</sup>. We feel that rarity points need to be revised, swapping uncommon values between two vehicles.

<sup>&</sup>lt;sup>7</sup> http://www.nta-nn.ru/news/item/?ID=187269&v=print

<sup>&</sup>lt;sup>8</sup> Russian Arms, Military Technology, Analysis of Russian Army, 2012

<sup>&</sup>lt;sup>9</sup> Russian Arms, Military Technology, Analysis of Russian Army, 2012

- d. As of 2010 AT battalions begun receiving 9P163-2 "Kornet-T" complexes based on BMP-3's. Confirmed number of of received vehicle is 10 in 2010<sup>10</sup> and 20 in 2013<sup>11</sup>. Judging by government order 14-4-51/982/3K from 9.12.2013, a total of 200 9M113M and 9M113MF rockets were delivered. We don't want to assume there were more vehicles delivered to the army in the years 11, 12, 14 and 15, but that would be our fairest guess based on munitions order. This vehicle would be welcomed in CMBS.
- 9P163-2 "Kornet-T" visual reference material:

http://i.imgur.com/UacQFiA.jpg http://i.imgur.com/qbe5jml.jpg http://i.imgur.com/8Caqi7v.jpg http://i.imgur.com/MrYau8z.jpg http://i.imgur.com/xcmXiD4.jpg

To reiterate, Khrizantema is absent from AT Battalion equipment nomenclature, and is deployed only in artillery brigades.

- 2. Motor-rifle brigades have two common AT battalion structures:
  - Two batteries of three ATGM platoons plus one "Rapira" battery;
  - Two batteries of two ATGM platoons plus two "Rapira" batteries.

It might be worth reflecting both as official available typical formations. If not, then this nuance might be interesting to reflect in scenario building.

3. All command formations, from battery HQ's to battalion HQ have LPR-1 or equivalent (LPR-2/LPR-3). This piece of equipment was first seen in 1988 TOEs. It is also important to note that AT Battalion officers are usually artillery graduates and have respective knowledge.

# Part 4 - AT battalion general equipment observations

Currently thermobaric and regular HE rockets are universally ignored in CMBS. I've touched on them in the armor thread, but they are very relevant here too. Every ATGM system in Russian service today has both HEAT and HE munition option.

More advanced HE ammunitions are not always available for ATGM systems when they should be. One notable example is the 9M120 missile for Shturm-S system. I first had my doubts that it could be mounted and launched from a regular 9P159 vehicle, but the manufacturer's site says otherwise<sup>12</sup>.

<sup>&</sup>lt;sup>10</sup> http://vpk-news.ru/articles/7997

<sup>11</sup> http://expert.ru/2013/12/5/pochti-sovetskij-temp/

<sup>12</sup> http://zid.ru/products/defence/51/detail/163

As of 2014, Shturm-SM is in Service by the Russian MoD. Key difference to Shturm-S is thermal and TV equipment and standard issue 9M120 missile family. This also includes an HE airburst variant.

Despite all the web photos of stock Shturm-S being presented as SM, this is actually it: <a href="http://i.imgur.com/6RlaYfd.jpg">http://i.imgur.com/6RlaYfd.jpg</a>

While BRDM-2A (CMBS BRDM-2M) are in widespread service, we have been unable to identify similar chassis modifications for the 9P148 complex. As of now we believe this modification does not exist. The military balance 2015 reports Ru MoD fielding over 1000 BRDM-2's, but they have not been produced for 26 years, which means most of them are storage material. It is currently unknown if only BRDM-2A's remain in service, but that would be a fair guess.

## Part 5 - Recon battalion

By nature, recon traditionally is one of the more secretive operational activities which translates to very poor quality media coverage and lengthened research process. In that light we perfectly understand why CMBS chose the structures they chose, but they are more fictional than real. Due to that we decided to cover full OBRBAT instead of just TOE discrepancies like the last parts. It is still appropriate to start with small tool discrepancies first.

- 1. Currently GAZ 233014 "Tigr" has varying amount of seating places and crew places depending on which team rides what vehicle. The total amount of places (10) is right, however in reality in \*all\* the recon TOEs designated driver only takes up one place leaving 9 others for general use. In that light, we don't really see a need for that many variants within what should be one vehicle. I think it is best and most correct to handle Tigrs like BRDM-2 was handled in CM:A. 1 crew and the rest of the slots are up for the taking, including weapon operator slot.
- 2. Russian recon squads in game lack a lot of the designated equipment that makes them "recon" in the first place. No laser rangefinding binoculars (LPR-1/2/3 family), no ground radars (SBR and PNSR) and no thermal binoculars like the TPN-1. Essentially their role is abstracted to better equipped infantry which does not reflect their IRL purpose and operations. More on how equipment is distributed below.
- 3. We understand that CM doesn't dabble in technical micromanagement, but if the devs want to spice things up, seismic sensors could be included. This security operations equipment was standard issue to recon battalions from the 70's and mirrors similar equipment used by the US

Army infantry. These seismic sensors are the same type that mines use as well<sup>13</sup>. Here it is labelled "СД": <a href="http://i.imgur.com/LtF4Zj7.gif">http://i.imgur.com/LtF4Zj7.gif</a>

4. There is some strong evidence that points to BRDM-2s (or 2Ms) not being deployed for army recon duties since the switch to new brigade organisation in 2009. There are no recent photo-proofs from exercises involving BRDM-2 as a vehicle for recon units and it is not included in 2009+ TOEs. That leads us to believe BRDM-2 should be removed as a recon vehicle in CM.

Further we will examine a general structure of a recon battalion.

#### Structure:

#### Battalion HQ>

- Intelligence processing section
- HQ

#### Recon company>

- Company HQ
- Recon platoon (x3)

#### Tech company>

- Company HQ
- Recon (observation) platoon
- Tech platoon

#### COMINT company>

- Company HQ
- Information processing unit
- COMINT platoons (x3)
- ELINT platoon

#### Comms Platoon

Supply Platoon

Medical squad.

We will drop the examination of COMINT, comms, supply and medical formations as they are removed from a direct field role.

5.

- a. Battalion HQ comprises of two vehicles, which are hardly applicable to CMBS. The intelligence section of 4, including one driver rides an MT-LBU based command vehicle (PPRI-5) and serves as a center for all battalion information. Standard AK-74M for all men.
- b. HQ squad of three including one driver rides a command vehicle of a R-149BMR family. One particular TOE variant we have on hands shows MT-LBU based R-149BMRG, but

<sup>&</sup>lt;sup>13</sup> Engineering equipment and ammunition. Equipment manual and user guide, book six. MoD published 1989.

we are unsure if any R-149 command variant can't be used for the same roles, especially in BTR MRB's.

6.

- a. A recon company riding Tigers is comprised of three platoons. Company HQ though is made up of 9 people, including two drivers. One driver takes care of company command's Tiger, while another takes care of the truck with company's supplies and belonging. All men are armed with AK-74Ms. By available TOE, company HQ also has one thermal binocular of TPN-1 type. As of February this year there have been confirmed deliveries to recon troops<sup>14</sup>.
- b. Platoon is made of command and three squads. Platoon command of three (RATELO, Com. and Medic) do not have their own transport, and are all armed with AK-74Ms. First recon surveillance squad, much like in motor-rifle battalions, is made of 5 people including one driver and is based around an SBR-3 or SBR-5 station. One LPR laser rangefinding binocular is also present. This squad is armed with AK-74Ms and one RPG-7.
- c. Two other squads are of 8 people including one driver. Along with AK-74Ms, these squads have a VSS, one PKM and one RPG-7. These squads are also equipped with TPN-1s.
- 7. Structurally tracked companies appear the same with some minor differences. First recon surveillance squad rides a BRM, which eliminates SBR operator from squad composition. Tracked recon crew is made of two people, instead of one, adding one member to each squad. Company command has one BRM and one BMP. There are also BTR based recon companies, but not enough information is available to us. From what we have, they appear to be structured exactly the same as Tigr ones, for the exception of 2 crew instead of one driver.

8.

- a. Tech recon company HQ is comprised of 8 people including two drivers and two RATELO operators. All men are armed with AK-74Ms, and mount one Tigr and one truck with company's supplies.
- b. Recon observation platoon is made of one HQ (2 men including one medic) and three homogeneous recon observation squads of five including one driver. These squads are centered around one LPR laser rangefinding binocular, one RATELO operator and one TPN-1 thermal binocular. All men are armed with AK-74Ms.
- c. Tech recon platoon is structured very similarly to recon observation with some minor differences. It has only one officer acting as HQ, two tech recon companies of five (including driver) based around PNSR doppler stations and two signals station of five (including driver) based around 1K119 signals complex. The 1K119 complex is designed to track seismic activity through 8 separate sensors connected through two signal amplifiers. Operational range is between 5 and 23km depending on what connection is

<sup>14</sup> http://function.mil.ru/news\_page/country/more.htm?id=12006843@egNews

used. This equipment is out of CMBS combat scope, so we won't go into detail on what it does exactly.

9. UAV companies are a bit of a special thing. There are sometimes entirely separate (to the point of being a separate formation), and sometimes are included as a entities in recon battalion. Most southern MD UAV companies are not separate as far as we've managed to gather.

# Part 6 - Recon battalion general equipment observations

In a similar fashion to MR Battalion infantry, CM:BS Russian recon infantry seems to be oversupplied with NVG devices. First thing are monocles, of which none have hit the military service as of now. It would be fair to suppose some are available to recon troops in 2017, but to have every squad member have one NVG scope and one monocle is an overestimation of current and future (within 2017-2018) Russian army capabilities. From what active service personnel has informed us, a more authentic loadout would be every member having an night gun mounted optic and SL/ASL having one night binocular.

There are a few possible night binoculars available for infantry which were touched upon in motor-rifle section. Better supplied recon infantry would probably have access to BN-4 (1PN98 2+ gen adopted in 2006). No news of large day optics shipments have been heard, but 1P29<sup>15</sup> and 1P78-1<sup>16</sup> have been seen in recon-like, high readiness formations alongside 1P63 collimator sight. 1-2 magnification sights per recon squad therefore seems appropriate to us.

## Part 7 - Miscellaneous formations

- 1. Usually a Motor-rifle brigade has a sapper battalion, which is generally a lot more than one company. Current sapper manpower strength looks very under-represented, even if we abstract a lot of equipment and sapper duties from it. We don't exactly know what to suggest here, other than this needing re-evaluation by devs.
- 2. Sniper platoons aren't the only correct organisational structure, since motor-rifle brigades have been formed with sniper companies<sup>17</sup> as well. Most common sniper company structure is to have four platoons (structured like in CMBS) and one command squad of four people including one driver. It is a little weird that in CMBS the sniper platoon is considered separate, even though it is included in battalion itself. It is important to note that either one company per brigade or one platoon per battalion are possible, the two cannot exists simultaneously. Snipers are correctly represented working in pairs, however VSS is missing from their available equipment list. Usually at least one VSS per pair is available, giving a team infiltration and

<sup>15</sup> http://i.imaur.com/OKSLydE.jpg, http://i.imgur.com/DYRFKDp.jpg, http://i.imgur.com/Kh2IYm0.jpg

http://i.imgur.com/Ll3cXq6.jpg

<sup>17</sup> http://newsland.com/news/detail/id/802658/

defensive automatic fire capabilities. It is also worth noting that LPR devices are available per sniper team per TOE's, but we think that may be an official exaggeration of hi-tech proliferation in every sniper pair. Every platoon rides one truck each like MBR sniper platoons.

- 3. A usual RPO operator carries two launchers on his back<sup>18</sup>. Having more rockets then tubes as we see in CMBS is impossible because RPO-M's are single use. Usually these troops are grouped into squads of six including two vehicle operators, which leaves two RPO teams per squad. Both team-members carry two launchers. CMBS has 9 teams versus standard six, but we can't be certain that such strengthened variations don't exist.
- 4. Separate forward observer sections do not exist on their own in current Russian artillery structure. This role is taken over by battery integrated forward observers which are also present in CMBS. The properly translated term from Russian would be "artillery recon squads". Occasionally battery HQ might want to form a dedicated FO team, but that is covered by purchasable specialist teams. We cannot comment on how air controllers are deployed since they are related to the air force and we do not know of their arcane arts. From what we read, FACs are never really deployed without special forces support to accompany them and usually work fairly detached from line formations.

# Part 8 - Miscellaneous formations general equipment observations

Stating the obvious, tank variety in service by Russian tank battalions is missing from CMBS. Current nomenclature includes T-72B(1), T-72BA, T-72B3M, T-72B '89, T-80BV, T-80U, T-80UE-1 and T-80UA. Predominantly high readiness formations are equipped with T-72B3's (1K+ as of end of 2015 were delivered) and T-90A's, but it still isn't uncommon to find older vehicles. T-72 variants could be introduced with very little modelling effort.

RPO platoons sometimes ride BMO-T vehicle based on T-72. It is a very uncommon piece of kit (like MTLB 6MA), but at least a company of those were delivered back in 2009<sup>19</sup>. It is also assessed that at least two formations have them for their RPO teams.

We think current artillery operations in CMBS isn't represented authentically for 21st century MO. As August conflict of '08 has demonstrated, counter battery in a conventional scenario is so effective that it forces units to relocate after each short firemission. Artillery geolocation detection is organic to Russian and Ukrainian line brigades which have an artillery recon battery specifically centered around locating enemy guns. US army brigades have something very similarly organic called "field artillery battalion", of which some units engage specifically in counterbattery activities. This perhaps should eliminate long salvos from CM:BS and add a cool

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<sup>&</sup>lt;sup>18</sup> https://www.youtube.com/watch?v=Rit4TmidT5E

<sup>&</sup>lt;sup>19</sup> Tender 7-325744

down for platoons after each firemission. This, in turn, would level the playing field for direct contact units and would allow Battlefront to set realistic damage radius for artillery munitions.