

Installing track extensions on an M4, called grousers or duckbills

Duckbills



Extensions or "Variants" not included in the Second Edition†

#7 December 31, 2023

Scenario Ideas

Here are free references that one can download and peruse for scenario ideas. Mike Reese passed this along: https://sites.google.com/view/fieldmanuals. Field manuals are full of details about how the US Army did (and does) things. Wolfram's description is: "currently hosts 941* US Army Field Manuals and will expand to ca 2000 once I'm done organizing. Quite a lot of them contain TOE/Orbat information. The site will be strictly limited to only hosting the files (Orbats go elsewhere). I hope some of you might find this useful, and I'm open for feedback." Example from series seven: FM 7-10 Rifle Company, Infantry Company (1944).pdf some seem to have text OCR'ed. Click download rather than "Save As."

*As of October 24, 2023, 1056 have been uploaded.

Growing up, our family had the Army's 3 volumes of photo books on World War II. I went to the library to check out the other "green books" in the US Army in World War II series. Which was not a problem for me

because we lived downtown, and the library was kitty-corner from my ancient high school 5 blocks away. Our 6x10' sand table was in the basement of the shopping mall where we lived. Even the captioned photos were good for Tractics scenario ideas. Now, you can get it all for free on your computer: *US Army in World War II Series*



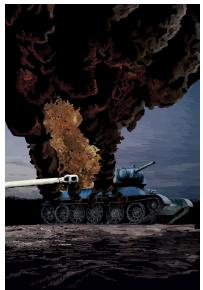


Sending up a flare about the release of Brew Up!

Sturmpistole - The Sturmpistole was a conversion of either Leuchtpistole 34's or Leuchtpistole 42's that added a padded buttstock and sights for firing Panzerwurfkörper 42, a HEAT grenade that could be used against enemy armor. It had a range of 69 m (75 yd) and could penetrate 80 mm (3.1 in) of RHA at 90 degrees. Range 75 yards. This one photo gives me an idea for a scenario!

Brew Up

Newly-published **Brew Up** was the *third* World War II rulebook that Leon Tucker produced. I could see that it fit between **Fast Rules** and **Tractics**, but the first edition was poorly laid out which reduced its utility. My goal was to compact the material into a smaller, 6x9" format with only a few dozen more half-size pages and much clearer charts. The basic rules are a bit less than half the 76 pages.



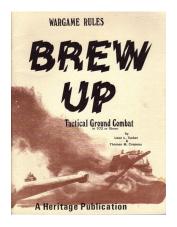


The cover art for this new edition of Brew Up is shown at

left above. It was produced by the UK illustrator, Matt White, who made it to echo the theme of the ruleset's original letter-sized cover. You can buy his artwork by clicking bere. The back cover is at right.



†More free Tractics, Fast Rules & Brew Up play aids at wargamecampaign.wordpress.com





Because of the handy 6x9" size, there a consolidated Game Reference Charts section in the back won't fit like in **Tractics** (or the centerfold with **Fast Rules**). So here are the options:

- 1. *Free downloadable charts* PDF that a gamer can print or re-arrange in a DTP program (for personal use).
- 2. **Buy a coil-bound,** heavy paper stock edition of just the ten pages of charts. The coil binding is on the short side, so when opened flat one sees two facing landscape-style pages which together equal four chart pages in the rulebook (of twenty total).

To-Hit rolls are *colored red* so that they are easy to find. Since there are bonus (plus) modifiers and one hits on dice roll *or higher* (the opposite of Tractics where the *base* To Hit is modified and number *or lower* is required). It uses two decimal dice (2D10) with the zero is actually zero and not ten. So a roll is from 0 to 18.

This means that multiple modifiers increase the impact faster than in Tractics where each plus or minus one each equals 5% precisely.

If this is not clear, see the screenshot of the page that summarizes the process (at lower left).

Duckbills Diversity

Starting today, Duckbills will feature articles for *all* three of our World War II rulesets: **Tractics**, **Fast Rules**, and **Brew Up**. We are doing this because some variants like Team Fire can be utilized for each ruleset and to reduce digital clutter.



Unless if the article is of gen-

eral interest, we will mark each that are specific to a given ruleset with a cover thumbnail.

To some gamers this may seem an unnecessary complication. However, once that they consider that this is a free newsletter, they may get over it.

this ruleset requires a **modified result or** *higher*, adjustments are *dice roll* **modifiers** rather than *Tractics'* base modifiers.

So a -1 penalty to hit a small tank means one *deducts* that from the dice total rolled. So if one rolls a 7, the modified roll is 6—that's a miss because one needs a modified roll of 7 *or higher* to hit—the To Hit roll range is written 7+. The required, *modified* roll—with bonus or penalty modifiers applied—for a hit and other successful results are **marked in red**.

A modified **to-hit** roll of **7+ is common in** *Brew Up*, hitting for tank fire, melee, grenades, and infantry's *single-shot* weapons. A *single figure* is hit with an *automatic weapon* with a modified roll of **7-12**, but the number of figures hit *increases* from **13+**. Concealed units are detected on **8+**. Melee on **10+**. Artillery hits with a modified roll of **15+**. That's a quick summary.



Additional Rules

Thanks are due to Mike Reese! He produced additional rules that just could not fit into our plan for the revised Brew Up rulebook. So they are presented here.

Multiple Rocket Launchers (MRL)

MRL can only be used in Pre-planned fires, and the target point should be determined on a map of the table with no idea of the actual placement of the opposing forces, only your own.

(Consider battery fire doing the same. The HE blast diameter should be used as the size of a square, and thus, the size of a battery blast area can be determined. $4 \times 155 \text{mm} = 10 \text{"x} 10 \text{"}$ square using $4 \times 5 \text{"}$ squares placed together. That likely can be converted to a chart by determining how the results are laid out. Square, Rectangle, Square, etc.)

Multiple Rocket Launchers only fire barrages. A German launcher on the SPW can fire 1 to 5 280mm rockets plus a 320mm flame rocket. The others fire 6 x 150mm or 5 x 210mm (200 something) or 10 150mm. No real problem for one launcher although the 10 x 150mm is 10 x 5" diameter or a 50 inch diameter using current barrage rules. And if the 6 launchers in the battery fire? Russians though fire 8 rockets, or 16 rockets from one truck. Their batteries are 8 trucks. Canada, USA fire from 24 sup to 60 on a mount (24 on a truck, 60 on a M4 tank mount. Canada had the Land Mattress with 24 or 60 tubes firing rockets that were 4.7-5") (120mm class).

Make a size for X number of rockets to cover X" \times L" or just a square inch size. The single launch rockets were usually large - 120 to 280mm in size. The 5-6 tubes 150mm. The larger number. Wikipedia states: "The weapon is less accurate than conventional artillery guns, but is extremely effective in saturation bom-

bardment. A battery of four BM-13 launchers could fire a salvo in 7–10 seconds that delivered 4.35 tons of high explosives over a 400,000-square-meter (4,300,000 sq ft) impact zone,[2] making its power roughly equivalent to that of 72 conventional artillery guns. "

That is 632 square meters. 632m/25m/inch = 24"x24" or ~2 foot x 2 foot square. A full battery of 8 would cover a 4' x 2' area. Each launcher covers a 12 x 12" area.

- 1. German MRL cover a 6x6" area per launcher.
- 2. Soviet, USA, Canadian MRL covers a 12 x 12" area.
- 3. Pattern can be:
- 4. Allies (Soviet, USA, Canadian MRL)
- 5. 1 lchr 12x12"
- 6. 2 lchr 12x24" wide or long.
- 7. 3 lchr 24x24"
- 8. 4 lchr 36x24" wide or long.
- 9. 5 lchr 36x36"
- 10. 6 lchr 48x36" wide or long.
- 11. 7 lchr 48x48"
- 12. 8 lchr 60x38" wide or long.
- 13. Germany.
- 14. Single 280-320mm 6x6"
- 15. 6 x 280-320mm 12x12"
- 16. Nebelwerfer
- 17. 1 lchr 6x6"
- 18. 2 lchr 12x6" wide or long
- 19. 3 lchr 12x12"
- 20. 4 lchr 18x12" wide or long
- 21. 5 lchr 18x18"
- 22. 6 lchr 24x18" wide or long
- 23. 7 lchr 24x24"
- 24. 8 lchr 30x24" wide or long
- 25. 9 lchr 30x30"
- 26. 10 lchr 36x30" wide or long



If fired at the same target point (i.e. all fire at one target, not a barrage centered on a target area) add 1 to the dmg roll for each added launcher up to 9.

Firing procedure. Determine the modified hit number needed using the Artillery Fire to Hit chart. Before rolling declare if the pattern will be wide or long.

Roll 2d10 for each launcher firing. All 17+ modified rolls are hits.

Use the # of launchers that hit to determine the size of the barrage. Place the barrage centered on the target point, if the area is not a square arrange according to the pattern declared before rolling, otherwise it is a square.

Go to the damage procedure for all units and terrain under the barrage.

Ignore misses.

Use the number of launchers hitting from the number fired to determine the size of the area.

Air Support

A final word on Air Support. As a platoon or company commander you really have no say in when or if you get air support . In most cases you will be told you will get it and the targets. That is about it. Control of heavy aircraft is at army level. Ground support aircraft at divisional level and once in a while regiment or battalion. Close air support of Guards Armored Division was at divisional level. US Combat commands at the equivalent of regimental level. So use air rarely and in most cases select a target , the aircraft and weapon loads attacking it, and the turn. Attacks before you arrive are recommended as everything on the ground is a nail.

Infrared Sights

Infrared or IR sights were used by the Germans in

1945 in very limited numbers on the Western and Eastern fronts. In all on both fronts the total number of vehicles actually in combat amounted to 30 Panther tanks outside Berlin, and a company of 251/1 half-tracks with IR for driving and carrying infantry whose main weapon were assault rifles with IR. Vehicles, perhaps Marder III, or towed Pak 40 equipped with IR may have been used against the British in 1945. The US Army used a few M1 carbines in Formosa with IR night sights against Japanese snipers at night.

Troop Quality

Crack or Elite Troops: Paratroops (except Russian), Rangers, Special Forces (SAS, SBS, Brandenburgers, Speznitze 1943+) Gurkha. The best-trained troops in the armies and special forces. Speznitze were Soviet infantry in the reconnaissance companies formed in the Soviet Tank and Mechanized Corps.

Veteran. In general USMC, German mountain troops, Long Range Reconnaissance Group Western Desert, Afrika Korps, German Panzer and Panzergrenadiers/ Schutzen 1941-1943, German Infantry Divisions 1940-41, US 1st Inf, 4th Armored, 1st Armored 1944, Canadian Infantry and Armour Divisions, British 7th Armoured, 51st Infantry and other divisions 1944 that served in North Africa and Sicily/Italy, Combat Engineers/Pioneers.

Italian Paratroops, Italian Armored Divisions. Soviet Guards Tank & Mechanized Corps 1944 on. Soviet Naval Infantry. Soviet Cavalry.

In general any unit that was either experienced, were specialists or especially gung-ho, or performed with exception from their first taste of battle.

Waffen SS 1942-1945. 1st, 2nd, 3rd, 5th, 9th, 10th, Waffen SS armored and Panzergrenadier divisions.

Japanese Infantry, Marines, Artillery,

Armor 1939-45.

German Trained Chinese Infantry.

French 2nd Armored, Free French, Free Polish, Polish Cavalry

Regular. US and British Infantry and Armored Divisions. Non-combat Engineers. German Infantry Divisions 1939 & 1942-45, Russian Infantry and regular armored units 1943-45, British Infantry, Indian Infantry, most regular Infantry Units such as 1940-42 Dutch, French, Polish, Belgian troops, other Allied nations. Italian infantry and artillery 1942-43 (North Africa)

Second Rate. Soviet armored units 1940-43. Soviet Infantry 1939-45 (Note: this varied tremendously by unit and year and even the tactical situation. Morale did as well.) French armor 1940. Italian Infantry 1940-41.

The above is Mr. Reese's opinion. Additionally, there are always exceptions. For example 1941 Russian infantry could fight tooth and nail, or throw away their weapons and surrender. You can use a random die roll for troops rolling at company or platoon level 1D6 with 1 Crack, 2 Veteran, 3-5 Regular, and 6 Second Rate. Adjust according to year and campaign.

Ruleset Comparison

Perhaps you have bought only one or none of our three World War II rulesets. The natural question is: *What are the differences*? See the table at right.

Note that *Tractics* has nine editions, all identical apart from binding, color printing, and shape of charts (the table below shows the lowest priced, perfect bound edition with black & white inner pages). *Fast Rules* also has a saddle-stitch edition from Lulu (Amazon is perfect bound). *Brew Up* has just one perfect bound edition.

Ruleset	Tractics (III)	Brew Up	Fast Rules
Size	242 pages 8.5x11"	76 pages 6x9"	24 pages 6.14x9.21"
Cost, from	\$25.95	\$18.95	\$15.95
E-version	\$19.00 PDF	None	\$9.97 Kindle
Play Aids	Various, see below	\$14.98 coil or free PDF	Free PDFs
Link	All Items or Amazon only	Amazon	Amazon Lulu \$15.50
Complexity	High	Low middle	Low
Basing	Same for all 3: individual tanks and guns; infantry either individually based or team/squad (the number of figures on team or squad bases do not matter).		
	or team/squ	iad (the number	of figures on
Tank armor granularity	or team/squ	iad (the number	of figures on
	or team/squ team or so Actual armor thickness in	nad (the number quad bases do no Ten classes	of figures on t matter). Six classes from** light to su-

*The revised 2023 edition changed the categories from letters A-J to 1-10 to make the "over-match" calculation easier (the bonus modifier when the penetration number is higher than the armor class number). More AFV types were included in the new edition.

**In the free variant PDF, descriptive categories (light, medium, heavy, etc.) are listed as the numbers one through six to make the "over-match" calculation easier. It also lists many more AFV types than come with the rules.

Tractics Q & A

Graham Hunt posted insightful comments and questions on the Facebook page about large HE hits and To Hit modifiers for various nations. Mike Reese responds.



Let me see if I can answer your questions. Answers are indented and condensed. – Mike Reese

From what I can gather, the 152 was powerful, having similar ranges as the Tiger and Panther tanks. The SU-152 was issued with HE only (mostly). Being a howitzer with low velocity it was less accurate than the Tiger and Panther.

I think we classified the gun at L40 as it was a gun/howitzer instead of a pure howitzer. Looking at the information available now we were correct (in 1971). The Soviet 152mm/L29 ML-20S howitzer/gun with a muzzle velocity of 655 m/s. It used HE, APHE, APBC (late 1944), HEAT, concrete piercing, and shrapnel ammunitions. Range was in the same category as the US 155mm Long Tom and greater than the German sFH18 149mm with a muzzle velocity of 520m/s. The M3 75mm tank gun HE shell velocity is 625m/second. The Soviet howitzer has a muzzle velocity slightly greater than the Sherman M3 75mm/L40 gun.

• In Tractics, the 152/L29 gun is listed as 152mm/L40. Is this a printing mistake, or a up rounding to save space by eliminating a range/penetration table for this gun?

I think it was an uprounding. The original rule set compared to this set had a large number of howitzers in the L40 class and no L30 class. This gun is correct as the L30 gun has the same muzzle velocity as a 75mm L40. Also, using a 150-155mm gun in direct fire as an anti-tank gun would be something neither Lee nor I would expect. The M12 HMC and Hummel make poor tank destroyers.

The 152mm hasn't much chance of penetrating the frontal armour of Tiger and Panther tanks (especially for HE) but the table for artillery hit automatic damage for 150mm or greater guns has it scrapping any tank and disabling all crew or killing them whether it penetrates or not. However, there are no penalties for the accuracy of a howitzer.

Page 65. 150+mm HE or HESH hit. Temporary General Damage for 1D6-1 turns. Crew is unconscious for 0-4 turns. You roll the 1D6 damage die for a result of 1 to 6 minus 1. If the roll is a "6" the crew is dead and the vehicle is out

of action for 5 turns (but needs another crew to repair the damage). On a roll of 1 the vehicle is still operational and the crew wakes up by their next turn. (the roll of 1d6=1-1=0). The crew is also unconscious for the remainder of the turn but they recover before the next turn. It says: *A Damage roll of 1 or less has no effect.

A 1D6-1 roll of 4 would have the damage last for 3 turns (4 minus 1) and the crew unconscious for three turns. As that means the AFV would be out of action for the three turns the crew is 'sleeping' and need a further 3 turns for the now awakened crew to repair the damage, it would not be until 7 turns later that the AFV is operational again.

• Does anyone use house rules for a penalty for Russian optics, and what size of penalty. A plain penalty or a reverse Range Finder penalty?

Not in this set but I have in other sets. In the other rule set (WRG1925-50) we reduced the maximum range a Russian tank could fire to 1250 meters. Over that range they couldn't shoot as they couldn't spot the target well enough to lay the gun. The ground scale was 1mm = 1 meter (the same as TRACTICS basic set unmodified for scale.) NOTE THAT the Soviet T34/76 has its rate of fire reduced to 1 because of the 2-man turret as well as its turret rotation. The TC is the gunner.

• an accuracy penalty for howitzer in Direct Fire Mode fire, and what size penalty?

Howitzers have a penalty already as in most cases their lower velocity results in the range band having a larger penalty at the same range. At 500 meters (50cm or 20") a German 75L24 gun range is the Short range band. A 75L70 (Panther or Firefly tank) that range is Point Blank range bland. For your 152mm L29 Soviet gun that is also Point Blank. This is due to the higher velocity and heavier shell the Soviet gun/howitzer has than the 75L24 gun.

• bonus to hit for German optics and what size bonus? Should the bonus be flat or be similar to the Range Finder bonuses? Were the German optics that much better than American optics to be rewarded with a bonus?

German optics were the best, probably. The

Soviets claim their optics were as good as the Germans but considering their high production rate and quality control problems that is unlikely. They may have been as good as the USA sights as they likely had US components in them.

On the other hand, situational awareness on German tanks, especially the Panther and Tiger tanks was worse than in US tanks, at least after the US started putting cupolas on the Sherman with the M4A1 (76) and M4A3 tanks. The only German who had any real view from those tanks was the Tank Commander. On the Sherman it was the TC and gunner and loader. That wasn't considered with all sides having the same chance to spot by the TC modified by him being buttoned or unbuttoned. The Soviet tanks until the T34/85 and IS-2 were introduced was even worse as far as knowing what was going on.

It all depends on the detail you are looking for. If you want to incorporate the above this is a suggestion.

1. Spotting.

- a. USA & British no changes.
- b. German AFV only TC can spot.
- c. Soviet light tanks and T34/76 have their spotting range reduced to ½ normal when the vehicle is buttoned up (to see forward the TC is standing or almost sitting on the turret roof with his legs through the turret hatch). The tank may only fire when buttoned up.
- d. "c" above applies to 1940 French, Polish, USA, Japanese tanks and all tanks without 3 man turret crew. Note that the KV series is considered to have a 2-man turret until the KV-85 is introduced.

2. German Gun sights.

- a. All German anti-tank and AFV guns have the Very Long and Extreme range band penalty when firing reduced by 2 as if they were using range finders for better gun sights. The Range Finder bonus if present would still apply.
- b. Soviet cannon firing direct have an added -1 penalty at all ranges.

Bill Owen adds: Tractics' fine-grained D20 modifier steps of 5% allows one to easily test variants addressing special cases like a big howitzer's accuracy. One could require 150/L29 to use the 74/L40's range bands (similar to 150L12 using 75/L30). *It does only fire every other turn.*

Errata Clarification Page 83 under UNIQUE WEAPONS. 152mm Russian ...HE penetration is more than usual 150mm 65mm. It has AP. No HEAT. May have Smoke. Should read as above except delete the 150mm from the sentence so it reads: "HE penetration is more than usual at 65mm..."



Consolidated Errata

Now that we have multiple Duckbills (DB) issues, we are consolidating *errata* from all so you have just one document to refer to. *The two starred items were corrected in all editions.

For Duckbills #1-6 all variants were for Tractics only but might be adapted to Brew Up & Fast Rules. Going forward, items specific to Tractics will have the abbreviation TR, Brew Up BU and Fast Rules FR. One will find links to free play aids consolidated in Duckbills.

For convenience we list Variants' titles but not their text.

When in a yellow highlight additional clarifications were added in *this* issue of Duckbills about an *old* issue.

DB#1 Q. Where are the **German 88mm guns**? A. They are classed as 90; see the discussion on pages 19-20.

*Pull-Out #11 (also on page 66) has a "3" on the 45° Slope Angle when it should be "4" like the 45° Qtr in the next column.

*The 2nd Runner on the Platoon HQ table (page 11) is blank. The same data applies as for the 1st Runner.

Examples of Play, page 160, Turn Sequence Phase 1: delete the asterisk (*) at the end of the 3rd sentence.



The modern weapon, Am, LAW, on the Infantry Weapons chart should be American LAW.

Clarification: **Out of Command**, pg. 27 'd' 2nd bullet It may not be clear here but a squad always has to have an order change rolled for if the order is issued by the Squad Leader. BUT, if the Platoon Leader or Plt Sgt or higher ranking leader is within 2" of the Squad leader and issues a new order to the squad then you don't have to roll to change the order.

Clarification: **Orders**, lower right, pg. 28: If the tanks were being run by a separate player—a "tanker" then I would not be doing his tank order arrows. He would.

Duckbills #1 Variants: Initiative, Flukes, Ammo Loads, Quick Reactions, Radio Net & Squad/Team Fire.

DB#2 *Typo*: Page 98 2nd column. "***Pinned**: goes prone. Fires with a -4 penalty for one in your next phase."

Q. When you have an element behind a High Hedgerow **what angle in degrees can he spot out**. I would think 45 degrees total (22.5 each side).

A. Elements in or behind concealing terrain which they have moved up to, or into, observe and fire out of that terrain with the same limitations as if in a building. 45 degrees while behind the terrain, 30 degrees if positioned in it, or 180 degrees if leaning out of the terrain in order to shoot. This would apply to hedgerows including Norman Hedgerows, bushes, or thick shrubbery. See page 45 second column. An **improved position** in or behind such terrain will allow all observation angles to be doubled. An improved position means that the unit has spent enough time to cut lanes of observation and fire in the terrain. This takes the same time as digging a 2-man foxhole. Seven turns. This does not include the time to dig in. See page 116.

The time to improve the position does not include the time to dig the position in the hedge. Instead of that sentence say that: Improving a position takes double the time to dig a 2-man foxhole position. Improving can also be carefully camouflaging the position, or applying overhead cover. Overhead cover requires material to hold the sandbags and dirt and turf over the position. To do all four—dig, improve spotting, add camouflage, add overhead cover would take 28 turns in total. This improved position is not done in a hurry but if you have the time it can be done. This type of position would be part of a prepared defense position.

Q. **Early US Bazooka** is 75mm Pen., though later variants should be 100mm, and 125mm respectively. A. 2.36" Bazooka. 75mm North Africa and Sicily. 100mm after August 1943. (December 1943 for Pacific)

Jan 1945 for 125mm Europe and in the Pacific issued but not used. NOTE: these dates are estimated.

Q. On page 170 of the **Infantry Combat examples**—3rd paragraph—MG34 casualties—it lists 2 casualties at first (which is correct), but then mentions 3 casualties in the next sentence (which is wrong). A. Correct. Should be 2 men were hit.

Q. Also, the number of **dice for determining who gets hit** of the five targets should be 1D5, or 1D6, ignoring the number 6 result and re-rolling, not the 2D6 mentioned in the play example.

A. Next sentence has to be changed to read: "A 1-3 would be the closest man, 4-6 the next closest." The example rolls 1D6 for each of the two casualties. He is spreading the hits among all five men, I am spreading the hits between the two closest men to the MG.

Duckbills #2 Variants: Soviet Smoke, Auto-Search, Solo Play.

DB#3 Informational correction that does not affect the game process. The **Petard Mortar** is now 230mm not 290mm. Mike found out someone actually measured the diameter and found it was 230mm. The 290 size was an error copying the wrong number in an original report passed on for 50+ years.

Q. If I say that if my tank moves 4.1 inches, out of it's 26 inch movement allowance, and then stops to fire I have to apply a movement penalty? Is that the case for the 2nd and subsequent firing in the same turn? A. Per Page 55, either movement penalties can be avoided by any turreted vehicles which moves no more than half their allowed distance over the prevailing terrain and whose rate of fire is halved, fractions rounded up. Or ... If you wanted to fire all three rounds you move your, say, 26" and fire three times. This fire would be from where you started your move, after you moved 13", and the third time after you moved the full 26". All three shots would be penalized as Firing While Moving. Note: Automatic weapon such as a 20mm Flak 38 fires bursts where the rules treat it as shots—i.e. RoF 4 is 4 bursts for an auto weapon such as on a 222 armored car, but 4 shots from a French 25mm AT gun. So for a fully automatic fire weapon the RoF of 4 could be all fired once at the same time rather than every 1/4th of the target's move using opportunity fire. We didn't specify which weapons were automatic—although restrict them to anti-aircraft weapons 40mm or smaller, which are the AA Machine Guns 12.7-15mm and the 20-40mm AA.

To actually answer your question yes, the second round would be from a stationary position but rate of fire is also halved. The rules are written so that if you move less than half with a turreted vehicle and halt, you can fire stationary



without the "firing while moving penalty" but you can only fire at one half your normal rate rounding up. If you fire while moving 4.1 inches and then halt to fire your rate of fire is half. If the normal rate of fire is three then you get two fires stationary. If the normal rate of fire is two then you halt and can fire one round stationary.

Instead of firing on the move during the 4.1" movement don't fire. Then, when you halt you will get either one shot (RoF2) or two shots (RoF3) stationary with no fire while moving penalty.

Duckbills #3 Variants: Team Fire.

DB#4 Bonus & Penalty Modifiers Clarifications: **Tractics** modifiers adjust the Base to hit. Bonuses (numbers with a plus sign) add to the Base and Penalties (numbers with a minus sign) subtract from the base. One must roll the adjusted Base or less to hit. Bonuses and penalties are not die roll modifiers.

HE/HESH vs. Spaced Armor Clarification: In the National Vehicle Data Categories rules about Armor page 76 (top of the right-hand column) explain how the plus, "+", in armor is Spaced Armor:

Clarification: **Armor Thickness** is shown in millimeters with any degree of "slope" in parenthesis and an added **spaced armor** plate after a plus sign. The two numbers should be added together before comparison of penetration by Armor Piercing rounds.

Addition: When Spaced Armor is hit by HESH and HE, page 68's left column Note mentions HESH's inability to penetrate spaced armor, it omits that the same inability to penetrate the second armor also applies to HE. Note: HESH and HE penetration blows that much earth or concrete off of any fortification it hits. HESH/ HE hitting a sandbag, spare tracks, wire, or metal screen, or spaced armor on a vehicle loses its "spalling effect" (HESH) against the vehicle itself! Likewise, HE can only penetrate the initial armor plate.

Churchill size Correction: British Churchill tanks are not LT (Large Tank) and are just ordinary medium tanks.

Duckbills #4 Variants: Penetration Spreadsheet, Zombies.

DB#5 No errata.

Duckbills #5 Variants: Tom Trinko's Penetration Spreadsheet; Scenarios; Photo Recon; Turn Record Play Aid; Sand Tables; Ground Scale Conversion.

DB#6 Where to find Abbreviations, Symbols and

AFV Index and quick links within the PDF version of Tractics.

IFM Classic & Modified Clarification that a non-penetration on Engine Grate still has 1-10 on D20 to Knock Out (GD) the tank,

Decoding ND & ED Clarification that No Damage and Explosive Destruction require a crew casualty roll.

Two types of ED Clarification of the difference between two types of ED +1 if in a crew compartment or −1 if in the engine compartment.

Single Compartment (like Stg III). Reminder that when hit means the modified roll is the number of casualties.

Duckbills #6 Variants: Gen Con 1971 Scenario.

DB#7 Scenario Ideas: sources for US Army Field Manuals & US Army green books. TR Q/A re large HE hits and To Hit modifiers. Errata clarification 152mm Russian artillery.

BU Additional Rules MRL, Air Support, Infrared Sights & Troop Quality.

Comparison of the three rulesets TR, BU & FR.

