Installing track extensions on an M4, called grousers or duckbills
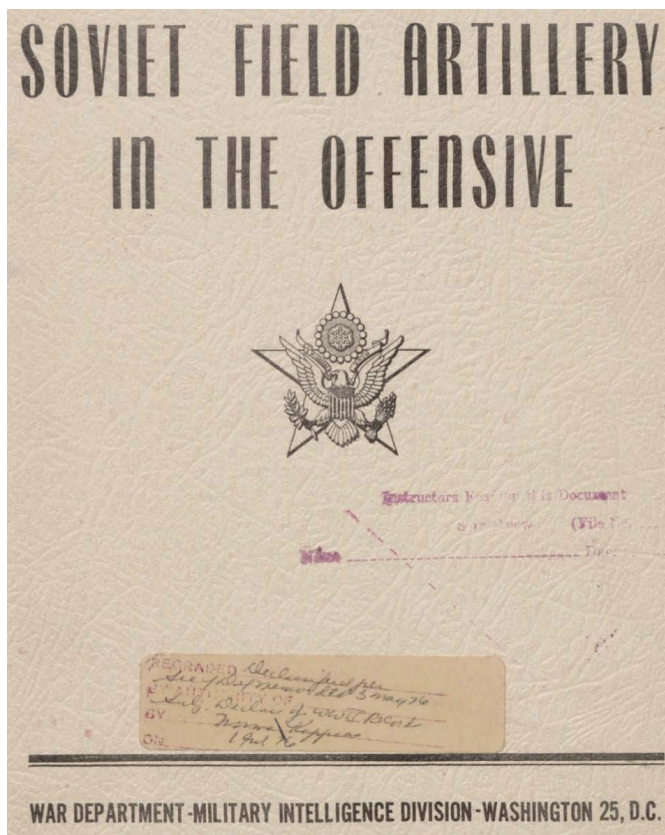
Duckbills
Tractics

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

#2 July 6, 2022.

Soviet Smoke

SOVIET FIELD ARTILLERY IN THE OFFENSIVE

WAR DEPARTMENT·MILITARY INTELLIGENCE DIVISION·WASHINGTON 25, D.C.

"Choice of Weapons. Soviet field artillery is closely comparable in most categories to that of the United States (Fig. 24, 25 and 26). Soviet doctrine in the choice of weapons and standards of expenditure against various targets may, therefore, be utilized with little modification as an initial point of study in this problem. Tactically, Soviet artillery may be divided into the following groups:

(1) 76-mm guns (M39 and 42), characterized by a high rate of fire, good muzzle velocity. and great maneu-

verability, are employed in close support of infantry (tanks), and especially for direct fire. Their primary missions are destruction of personnel and neutralization of infantry weapons in the open; anti-personnel barrages, destruction of tanks, vehicles, embrasures, and dragon's teeth by direct fire; and harassing fire. Secondary missions are accompanying barrages and concentrations; neutralization of artillery and mortars; establishment of smoke screens and destruction of wire. Exceptional missions are fire reconnaissance, destruction of light materiel with indirect fire, and destruction of minefields. And the same for the Soviet 122mm Field Howitzer.

(2) 122-mm howitzers (M38), the backbone of Soviet field artillery, are characterized by great flexibility in muzzle velocity and trajectory, very effective burst, and good maneuverability. (The 10/30 howitzer is employed when terrain prohibits the use of the M38.) They may be used for almost any mission except destruction of strong positions or for distant fire. Their primary missions are destruction of personnel and neutralization of infantry weapons in the open and under cover; antipersonnel barrages, accompanying barrages and concentrations; destruction of light field fortifications; neutralization or destruction of mortars; fire reconnaissance against camouflage and minefields or in conjunction with sound ranging; neutralization of artillery at medium ranges; establishment of smoke screens; and harassing fire. Secondary missions include: antitank defensive barrages; destruction of artillery; attack on fortified houses; destruction of wire; and destruction of tanks, ordnance, embrasures, antitank escarpments, and dragons teeth by direct fire. The destruction of minefields is an exceptional mission."

Errata

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

The above should read: *Pinned: goes prone. Fires with a -4 penalty in your phase (alternate fire) or the next turn (simultaneous fire)." Typo: Page 171 definition of "Pinned". Repeated word "for". See more in Parting Shot on the last page.

Q&A

Q. So, All the Move & Fire Charts in New Tractics are based on 1"=25m and best suited for Micro Armor?

If playing HO/15mm then increase all by 1.67 (though, I would simply make it 2x). Reason I ask, because Original Classic HO scale Tractics back in 70's I thought was 1"=25m for Armour and 1"=10m for Inf and you simply used Move & Fire charts as is.

A. Correct. The new version is the same. Vehicle ranges are based on 1"=25m and infantry roughly 1"=10m. Note the original was not written that way. The vehicle ranges were originally 1mm=1m or 1cm=10m. This converts to 1"=25m. Infantry ranges were based on "what felt right" for the scale of infantry (20mm) we were using. This scale turned out to be 1"=10m so a rifle that was accurate up to 250m had a range of 24". I suspect it may have been 250m or 25cm originally. The original version was in metric scale. The game can be played with 20-36mm figures and models no problem as is. Tanks only can be played with no changes. Micro armor will only give a better impression of how far tanks can shoot. I play it with 28mm figures and 1/48-50 scale vehicles. At cons I have been running the games with 20mm figures and 1/72 vehicles.

However, most gaming tables are too open. Average range of engagement in Europe was 800m. In Russia with the open steppes, it was tank vs. tank much greater. Up to 3000m although not often. 1500m for a Panther could be a good starting point.

I play Arc of Fire and it uses a 1"=5m for 20mm up or 1"=10m for 20mm down. Chain of Command is 1"=3m. This means a lot of weapons, most in fact, can fire the

length of a 12' table or more. Try keeping the armor, ATG, artillery ranges and reduce the infantry ranges from 1"=10m to 1"=25. 10/25=.4 so halving the infantry ranges in the charts works OK. You don't need to reduce the shell blast diameters or barrage areas at all. They are at 1"=25m so fit the 1/285 - 1/300 scale just fine.

Q. Basically, I've been playing Micro armor and halving all the ranges in the charts. And reducing the shell diameters to 1/3 - Joe McNally

A. When we were using 1/200 and 1/285 scale I used 5/8" cardboard counters for infantry. There was no infantry made at the time and I found at a convention the players had no idea of what the weapons were, in part because they were too small. A 5/8" counter with either a NATO or GERMAN map symbol colored by country was much easier to use. We will be publishing in DUCKBILLS rules for using stands of infantry or counters with TRACTICS if we haven't already.

Looks like I need to do an article expanding scales and how a game differs from actual combat. Funny how you shoot a lot more when you can get killed just to rattle the enemy so most of the ammunition fired does nothing. - Mike Reese

Mike's 28mm gaming tables look like this:

Italy or perhaps Russia if I used a different church. I ran British vs. Germans and Soviets vs. Germans on this table.

And his 15mm like this:

The above was a Normandy campaign map battle.

Auto-Search Variant

This is an early version I made of Updated Observation & Detection that does not require players to specify searches - Bill Owen**.** For each hidden element (or unit, so individuals, teams, vehicles or platoons) in Line of Sight, within *either* the Classic or Modified table's detection distance . Do not roll if a hidden element is **above** the table distance (or roll and disregard the result to keep the players guessing). Base chance to detect on **1D20** per hidden element based on the **best*** observer, not rolled for *each* observer.

Base roll or less to Detect:

Observer Type: Action (below)	Buttoned Up Vehicle	Unbuttoned or Foot Soldier
Moving	3	8
Stationary	8	18

Adjust chance to detect Hidden elements that are:

In: • Open +2 • Concealment -0

To: • Flank 50% • Rear 25% *Round any fraction down.*

Which is to say, the observer with the **best chance to spot. Examples:*

1. A **buttoned-up** and **moving** vehicle has line of sight to a hidden element that is **concealed behind a treeline:** to front spotting is 3 or less, to flank only a 1 spots (50% of 3=1.5 rounded down to 1), or to rear no chance (3x.25%=.75, rounded down to 0). If this is the only potential spotter in line of sight, roll as above.

2. But if another observer tank is **buttoned**, **moving**, and in LOS, though farther away can see the hidden element down a road next to the treeline in the **open** instead roll: to the front is a **5** or less (3+2), to the flank, **2** or less (50% of 5=2.5 rounded down to 2), or to the rear, only a **1** (25% of 5=1.25, rounded down to 1). But say there is a third observer as follows.

3. There is *stationary* observer that is **buttoned up** and even farther away from the hidden element, then roll its higher chance instead: 8 or less if facing the hidden element via the front, 4 or less if flank facing (8 x 50%=4) or through its rear facing 2 or less (8 x 25%=2).

If the **detecting observer is in communication**† with other units it can pass on the general location (still fully concealed) of the spotted unit. It can also do this by firing on the spotted unit.

†Remember infantry and tanks can't talk to each other unless infantry is on the unbuttoned tank or it has a phone: August 1944 US Army. Infantry and tank radios don't talk to each other. This was solved 1945 by putting an infantry radio in the US Platoon HQ tanks.

Mike adds: Prior to moving whether the vehicle is buttoned or unbuttoned needs to be stated (always). At the point it attempts to fire the AFV is still buttoned or unbuttoned. If unbuttoned observation is made that way, if buttoned observation is made that way. After engaging a target an AFV can immediately button up or unbutton. The tank commander drops down his hatch while dropping/swinging the hatch closed (or leaving it open). Soviet tanks with less than full 3-man turrets usually fought buttoned up. T34/76 almost has to as until the 1943 model there was no cupola to look out of so the TC had to look through a periscope or stand half-way out of the hatch with no one manning the gun.

Mike's Solo Variant

SOLO GAMING WITH TRACTICS. **TRACTICS** normally is played between two or more players. However, there are apparently a lot of solo gamers out there as well and we were asked for some help on how to play **TRACTICS** solo.

So, how would I go about playing **TRACTICS** solo?

If I was going solo I would use **NUTS! FINAL EDITION** and **COMPENDIUM**.

Two: The newer, fourth version (Final Edition) of **NUTS!** should have (I am looking at earlier versions) useful chapters including:

- A table for NPC units to Attack or Defend depending on the mission as well as a random unit generator. These rules provide you an opponent and missions.

- A campaign game. This is quite detailed. It allows you to land in Normandy with your platoon and fight your way to the Elbe River or fight as a Soviet platoon on the East Front for the entire war.

- You can fight as an Infantry Platoon with support or as an Armored Platoon with support.

- Rules for setting up a standard 6x4 table's terrain. This is a terrain generator.

- An infantry unit generator which I adapted to **TRACTICS** below.

- An AFV vehicle generator which looks pretty good —wonder how much of that is me? Actually, most of it.

NUTS! is published by **TwoHourWargames.com**. You can find it here:

https://www.twohourwargames.com/historical1.html

†*More free Tractics play aids at* wargamecampaign.wordpress.com/category/tractics/

1. You will need a copy of the basic rule book **NUTS!**

2. The **NUTS! COMPENDIUM** requires the basic book to be used. This book is what I call the TRACTICS SHOELACE BOOK. It provides tables for detail down to whether your shoelaces come untied while your figure is racing to cover under MG fire. Yea. More detail than **TRACTICS**.

3. **NUTS!** uses a system completely different from most rules if not all other rules on the market. You need the basic book to learn how to use the tables in that book to randomly build your infantry platoon or determine what tanks are in your tank platoon by the year of the war.

4. Determine when and where the battle will take place.

5. Roll the D6s needed to create your platoon.

6. Roll a random table using the tables in **NUTS!** and the **TRACTICS**' weather table.

7. Use **NUTS!** for determining your mission. If running a campaign use the rules in **NUTS!** for that. **NUTS!** will also determine the threat level and the number of PEF (Possible Enemy Forces) your unit is facing.

8. Use **TRACTICS** to game both sides but **NUTS!** to determine the strength and locations of possible hidden units on the table. Use **TRACTICS**' spotting table and the **NUTS!**'s PEF tables to determine if hidden PEF units exist or are dummies (Uses counters for hidden units). If a real unit the PEF tables will determine the formerly hidden unit's strength and its actions.

9. Continue play until you meet the mission conditions, or decide to withdraw. Play the withdrawal.

10. At the end of the mission use the campaign rules in **NUTS!** to determine which if any of your losses you get back from the medics, repair depot, or as replacements. This includes vehicles.

CONVERTING NUTS! TO TRACTICS.

The only real conversion necessary is to convert **NUTS!** to **TRACTICS** troop quality and morale.

1. **STARS and GRUNTS.** The STARS represent a figure on the table that is YOU. GRUNTS are everyone else. STARS rules can be implemented or ignored. In NUTS implementation gives you a saving roll for your STARS but that option isn't in TRACTICS.

2. **REPUTATION.** This is the quality of your troops. **NUTS!** does it by figure. I recommend doing it by squad for all but Soviet early war 1941-1943 (August) troops, which I would do by platoon. Base this on the TRACTICS morale tables. However, you can use the conversion below to apply it to individual figures if you want that level of detail.

REPUTATION is from Level 6 Elite to Level 1 Civilians. Page numbers reference **TRACTICS** pages. **NUTS!** uses a completely different method for troop quality and troop morale (reactions).

US Paratroops with a Handie Talkie radio

The following table directly converts Reputation in **NUTS!** to Morale in **TRACTICS**. It will usually have most of your troops at level 7.

It can be used to determine your morale directly using Reputation or you can use, as in the example, the **TRACTICS** morale charts to determine morale.

Reputation has to be determined in order to use a number of the **NUTS!** charts.

Reputation NUTS!	TRACTICS	Comments (Morale values are BASE #)
6+	9	Fanatics. They follow any order and have a morale value of 9.
5	Elite 8	Well equipped well trained troops. Page 106. May be Vet 1 or 2. Page 112. Morale can be high=8 or low=5 depending on time in combat.
4	Regular 7	Well Equipped draftees. Page 106. May be Vet 1 page 112. Morale 7
3	Green 6	All troops with no combat experience and normal training. Page 106. Morale 6 to 7.
2	Untrained 5	Troops with minimum training. Irregulars and Partisans without combat experience. The later may improve morale up to Green or Regular level (NUTS! = 3 or 4)to Morale 6 to 7 with combat experience.
1	Civilian 4	No training with weapons, or tactics, and prone to panic. Morale 4. Passing a morale check changes morale to 6. Considered Inept. Page 112
	Morale	Above are suggestions. Updated Morale tables can be used to determine unit morale. Page 109.

EXAMPLE: Using the **NUTS!** Table for determining a British Platoon in 1944 in Italy or Northwest Europe:

HQ: Officer or senior NCO (this is YOU). 1 each.
SGT. 1 each.
Weapons can be a pistol, rifle, or SMG.

Number of Sections (Squads) = 3. I roll for the first squad using the rules in **NUTS!** to determine:

- # of men in the section. The maximum number is given as 10. I roll and the section number is 10. The 2nd Section has 6 men, the 3rd Section is also understrength at 6 men.

- I roll for the squad Reputation instead of each figure (as in the **NUTS!** Book). Rep is 5. and I roll for each of the other squads as well. Squad 2 is REP 4, Squad 3 REP 4 as well. Rep 5 makes first squad a Veteran Elite and REP 4 the other two squads Regulars. My HQ I roll for my figure and the Platoon SGT. I am a REP 5 and my Platoon SGT a REP 4.

The NCO in each squad has a bolt action rifle. One man has a BREN LMG. The Junior NCO in the squads has a bolt action rifle. All of the other infantry have a bolt action rifle. One of the riflemen has to be the LMG assistant.

I go to **TRACTICS**' page 110 to determine my morale. The base morale is 7. My morale is rolled on the BASE MORALE MODIFIER Table using Table 1 Elites. I roll a 5 for a +2 morale. My morale is 9. My Platoon Sergeant gets a 2 rolled using Table 5 which is -1. His morale is 6. I do the same for 1st Squad, 2nd Squad, and 3rd Squad with the results of 1st Squad = 8, 2nd Squad = 5, 3rd Squad = 7.

As a result I have a platoon made up of: **NUTS!** Has a generic HQ. These two teams should be in a British HQ from 1943-1945. Prior to 1942 the Gunner would have a Boys AT rifle instead of the PIAT.

HQ: 1 Officer Veteran Elite Morale 9 with a SMG. ME! 1 Platoon Sgt Regular Morale 6 with a Rifle.
1 Gunner with PIAT, 1 Assistant Gunner with rifle. Morale 7.
1 Gunner with 2" mortar, 1 Assistant with rifle. Morale 7.

1st Squad Morale 8.
1 NCO with a rifle, 1 Gunner with a LMG, 1 Assistant Gunner with a rifle, 1 Jr NCO with a rifle, 6 riflemen with rifles. All have grenades.
2nd Squad Morale 5.
1 NCO with a rifle, 1 Gunner with a LMG, 1 Assistant Gunner with a rifle, 1 Jr NCO with a rifle, 2 riflemen with rifles. All have grenades.
3rd Squad Morale 7.

1 NCO with a rifle, 1 Gunner with a LMG, 1 Assistant Gunner with a rifle, 1 Jr NCO with a rifle, 2 riflemen with rifles. All have grenades.

A Jr (Junior) NCO can take over for a NCO if the NCO is lost. Without an NCO orders have to come from the Platoon HQ officer(s) and NCO(s).

NUTS! apparently does not have a Platoon HQ or Company HQ list. So we add one.

PLATOON HQ GENERATION TABLE

Elements	American	British	German	Soviet	Japanese
Officers	1	1	1 or 0	1	1
Senior NCO (Plt Sgt)	1	1	0 or 1	0	1
Radio men	1	0	0	0	0
Runners (rifles)	3	3	3	3	3
Heavy Weapons	1-2 Bazookas[1]	AT[2] & 2" Mortar	7.92mm AT rifle & 50mm mortar[3]	50mm mortar[4]	0[5]

NOTES:
[1] Company 1942-43 had 5 bazookas, 44-45 7 bazookas. Issued to platoons without crews. Radios introduced at platoon level 1942 (Walkie Talkie). 1945 introduced to squad level (Handy Talkie).
[2] British 1939-1943 AT is Boys ATR. 1943 Sicily – 1945 AT is a PIAT. British 2" mortar ammo mostly smoke. Each 2 man crew.
[3] German ammunition mostly HE. Removed from most Platoons by 1943. Company received 8cm mortars then. AT rifle replaced with tank assault weapons. AT rifles converted to grenade launchers.
[4] Soviets removed mortar from platoons in 1942.
[5] Japanese 4th Squad in Platoon with 3 teams 4 men each with 1 50mm mortar plus a squad leader for 13 total men. Platoon losses often forced dispersion of mortars with crews to the squads with one per squad which kept up their strength. This information is missing from **NUTS!**

ITALIANS same as British without the AT weapon and with a 45mm light mortar 2-man team.

FRENCH 1940 had 3 bolt action rifles with grenade throwers in the Platoon HQ, French in Italy armed as British and in Northwest Europe as Americans.

COMPANY HQ GENERATION

Elements[1]	American	British	German	Soviet	Japanese
Officers	1	1	1	2	1
Weapons	Carbine	Pistol	SMG	SMG x 2, Pistol	Pistol/ Sword
NCOs	1	1	1	-	1
Weapons	Carbine/ Rifle	Rifle/ SMG	SMG	-	Pistol/ Sword
Radio & Crew	2	2	2	-	-
Weapons	Carbines x 2	Rifle x 2	Pistol x 2	-	-
Runner	3	3	3	3	4
Weapons	Rifle x 3	Rifle x 3	Rifle x 3	Rifle or SMG x 3	Rifle x 4
Company Wpns. & Transport	Bazooka 1942 x 5 or 1944x 7, SMG x 7, Jeep w/ driver, 3 Medics	Universal Carrier /w BREN LMG, 3 PIAT, 1 BREN LMG	1943 2 x 8cm mortars, 1 LMG 1944-45 add attached 3 Pzshrk w/6 men, 3 pistol, 3 rifles	Medic	4th Plt with 3 50mm mortars & 13 men

NOTES:

[1] This list does not include clerks or supply elements although some may be assigned as drivers

[2] Runners. These often are assigned to HQ as runners from each platoon. This would reduce Platoon strength by 1.

[3] Transport includes only vehicles usable by the Company Commander or assigned to him. USA and British/Canadian companies usually had a minimum of one truck assigned and as many as three. German, Soviet, and Japanese had horses or mules and wagons in Company as transport for supplies. These three companies also had horse drawn wagons down to platoon level. In Italy and Japanese in Far East due to terrain may use mules for transport between supply head and forward troops.

Canadian Jeep patrol passes a Priest Kangaroo

British 2-pounder anti-tank gun

Duckbills

The Scoop from the OCG

Note: Mike's moniker is Old Cavalry Guy; below, him in 1972.

A Gamer asked: "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), or maybe only 30 degrees total (15 degrees each side).   How about if said Element was inside Hedgerow, should it spot out double that degrees, say 90 degrees (45 degrees either side)." - Joe McNally.

Response from Mike Reese: 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.

Note on Norman Hedgerows. The base of these was a dirt berm based on rocks removed from the fields and overgrown by brush and trees over centuries. German infantry would dig-in from the back of a Norman

Hedgerow to the front of it in the hedgerow's base creating a firing position with concealed openings on the opposite side for observation and firing. This was normally limited to positions for their LMG teams but individual or paired (2 men) positions were also used. This can't be done in a normal hedgerow as there is no base of dirt and rocks.

Note on improving positions. This was normally done if digging into any brush or in woods. A well done job removed underbrush under the trees and select brush. This allowed dug-in infantry, at ground level, to see under the trees and through the paths in the brush while troops walking couldn't see because the trees blocked their view at head height. Done correctly the attackers couldn't see where this work was done. Done badly and it alerted the attackers they were running into an enemy position.
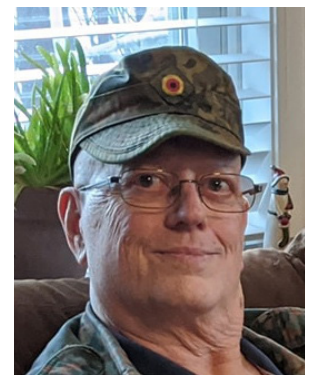
Mike in West German army surplus hat

Parting Shot

Mike's responses (plain) to Gamer Feedback (bold) on Shaped Charges and Casualties:

Examples - Panzerschreck Penetration should be 210mm and not 120mm listed in the rules;

This depends on a lot of factors. My sources all varied from 120mm up to 165mm with NO information of how the tests were set up. One source says it is the same as the US Bazooka (4 to 5 inches?)

Early US Bazooka is 75mm Pen., though later variants should be 100mm, and 125mm respectively.

2.36" Bazooka. 75mm North Africa and Sicily. 100mm after August 1943. (December 43 for Pacific)

US 3.5" Bazooka should be 280mm pen.

Up to 11" per Mr. Rottman which is 280mm. Correct from 150mm to 280mm penetration.

Panzerfaust 150 should be 280mm - 320mm pen.

I don't list the Panzerfaust 150 as it didn't see combat.

The 57mm M6A3 bazooka rocket can penetrate 125mm of armor IF it hits at 90 degrees. If it hits at over 30 degrees it is likely to bounce off and the penetration is less if it does go off. All of the penetrations by HEAT, especially the 3.5", have maximum penetrations at 90 degrees which is almost never achieved. As two sources state the M6A3 usually penetrated 100mm that number is OK.

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).

Correct. Should be 2 men were hit.

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.

Next sentence has to be changed to read: "A 1-3 would be the closest man, 4-5 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.

Tractics on a sand table at Gary Con, March 2022