

TAC II Combat Data System
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Introduction

TAC II is designed to be an addition to the miniature war gaming system that you are presently using. TAC II is not a complete gaming system in itself, (although an experienced modern war gamer could use TAC II alone without another game system). TAC II is intended to provide complete and updated information on modern NATO, Warsaw pact, and neutral countries' armored fighting vehicles. Due to the diversity of the various miniature war gaming rule systems that are available and being used today i came to the conclusion that if i was going to provide this sort of product i would have to do one of the following:

- A. Generate tables and graphs for all of the systems available today.
- Or
- B. Create a new combat system that can be used with any miniature war gaming system

The option that I chose was the latter, to create a new combat system supported by up-to-date data sheets that can be used with any miniature war gaming system.

In creating this new combat system I allowed for the use of many different game systems as well as different game scales. All distances and ranges are in meters so that you can use the ground scale specified by the game system that you are using.

All speeds are in meters per turn. If your game system uses two movement phases per turn you will need to half the movement value listed. The same is true for the rates of fire; they are listed as rate of fire per turn and must be halved if your game uses two fire phases.

TAC II is intended for use in systems that use 1 miniature to represent one vehicle. This is a system designed individual vehicles facing off with individual vehicles, not stands vs stands.

One thing you will need to use TAC II is a measuring tape marked in meters for your gaming system. For 1/285ths scale we find that 1" = 50 meters is a decent compromise between scale and playability. The easiest way to do this is visit your local fabric store and buy some ribbon and mark it off with a Sharpie permanent marker.

Combat system overview

TAC II is comprised of two main parts; The vehicle data Sheets and the Weapon Data Sheets. In addition to these data sheets there are shot tables for both conventional and ATGM weapons. Both types of data sheets will be described in detail later. The vehicle data sheets and weapon data sheets along with the shot tables are all you need for combat with the TAC II system.

It should be made clear that TAC II is not a war game rules set, it is only a combat system for the war gamer who has a set of rules but wants a better combat system with up-to-date data on a wide variety of vehicles. An experienced gamer could use the TAC II system alone without a rules system as long as they come up with their own sequence of play and rules regarding spotting and other features of play.

Vehicle data sheets

The vehicle data sheets have 18 columns, these columns contain all of the information that is needed to use the vehicles in a game. Each column will be explained in detail below.

Vehicle: this column lists the vehicle that the following Information refers to.

Movement

Open: This is the movement per turn (in meters) for the vehicle in open terrain. (off road movement)

Road: This is the road movement of the vehicle per turn (in meters).

Amphib: This is the amphibious movement of the vehicle per turn (in meters).

TH: this is the target hardness for the vehicle (this column may not apply to all same systems).

CH: This is the catastrophic hit probability in graduations of percent. Example: 01=10%, 02=20%, etc, (this column may not apply to all game systems).

Armor

Front: This is the frontal armor rating of the vehicle.

Oblique: This is the oblique armor rating of the vehicle.

Side: This is the side armor rating of the vehicle.

Defilade: This is the armor rating of the vehicle in a defilade position.

Overhead: This is the overhead (top) armor rating of the vehicle.

Rear: This is the rear armor rating of the vehicle.

Gun: This column lists the type of main weapon for the vehicle.

ROF: This is the rate of fire of the main weapon, listed in rounds per turn.

Cap: Number of rounds carried for the main weapon. Applies to rule systems that track ammo usage.

Max Target Range

Moving: Max range for the main weapon against a moving target (reference only, refer to gun data chart for range/accuracy details)

Stationary: Max range for the main weapon against a stationary target (reference only, refer to gun data chart for range/accuracy details)

TSSC: This is the target size & shape classification of the vehicle

| Soviet | | Movement | | | Target Hardness | CH | Armor | | | | | | Main Gun | | | Max Target Range | Max Target Range | TSSC | Notes |
|---------------------|------|----------|------|----|-----------------|-------|---------|------|----------|----------|------|---------------|----------|-----|--------|------------------|------------------|------|-------|
| Name | Open | Road | Amph | | | Front | Oblique | Side | Defilade | Overhead | Rear | Type | ROF | Cap | Moving | Stationary | | | |
| T-80 | 300 | 650 | | -8 | 1 | 180 | 120 | 60 | 160 | 50 | 40 | 125mm | 6 | 40 | 3400 | 3500 | | 23 | |
| T-72 | 300 | 600 | | -6 | 1 | 140 | 80 | 40 | 140 | 20 | 30 | 125mm | 5 | 40 | 3400 | 3500 | | 23 | |
| T-64 | 300 | 600 | | -6 | 1 | 10 | 60 | 30 | 10 | 10 | 20 | 125mm | 5 | 40 | 3400 | 3500 | | 23 | |
| T-62 | 250 | 500 | | -6 | 3 | 80 | 50 | 30 | 10 | 10 | 20 | 115mm | 4 | 40 | 3400 | 3500 | | 23 | |
| T-55 | 250 | 500 | | -6 | 3 | 80 | 50 | 30 | 80 | 20 | 20 | 100mm | 6 | 43 | 2500 | 2700 | | 22 | |
| PT-76 | 200 | 400 | 100 | -4 | 3 | 20 | 10 | 10 | 20 | 0 | 0 | 76mm | 12 | 40 | 2500 | 2500 | | 20 | |
| BMP-3 | 300 | 600 | 100 | -4 | 2 | 40 | 20 | 10 | 40 | 10 | 10 | 100mm | 4 | 20 | | | | 22 | |
| BMP-2 | 300 | 600 | 100 | -4 | 2 | 35 | 15 | 5 | 35 | 5 | 5 | 30mm Autocann | 4 | 25 | 2500 | 2500 | | 22 | |
| BMP-1 | 250 | 500 | 50 | -4 | 2 | 30 | 10 | 0 | 30 | 0 | 0 | 73mm | 2 | 30 | 1500 | 1600 | | 22 | |
| BMD | 300 | 600 | 50 | -4 | 2 | 30 | 10 | 0 | 30 | 0 | 0 | 73mm | 2 | 30 | 1500 | 1600 | | 18 | |
| BTR-60PK | 200 | 350 | 100 | -4 | 1 | 10 | 0 | 0 | 10 | 0 | 0 | 7.62mm SGMB | 4 | 20 | | | | 21 | |
| BTR-60PB | 250 | 600 | 100 | -3 | 1 | 10 | 0 | 0 | 10 | 0 | 0 | 14.5mm KPVT | 4 | 12 | | | | 22 | |
| BRDM-1 | 250 | 500 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14.5mm KPVT | 4 | 12 | | | | 18 | |
| BRDM-2 | 300 | 700 | 100 | -3 | 3 | 10 | 0 | 0 | 0 | 0 | 0 | 14.5mm KPVT | 4 | 12 | | | | 18 | |
| ZSU23/4 | 250 | 500 | | -4 | 1 | 20 | 0 | 0 | 20 | 0 | 0 | 23mm | 4 | 12 | 2500 | 2500 | | 21 | |
| ZSU57/2 | 250 | 500 | | -4 | 2 | 20 | 20 | 20 | 20 | 0 | 0 | 57mm | 4 | 8 | 3000 | 3000 | | 21 | |
| SA-8 Gecko | 250 | 600 | 50 | -3 | 2 | 20 | 20 | 20 | 20 | 0 | 0 | | | | | | | 26 | |
| ASU-57 | 200 | 400 | | -3 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 57mm | 4 | 30 | 3000 | 3000 | | 12 | |
| ASU85 | 200 | 400 | | -4 | 3 | 20 | 10 | 10 | 20 | 0 | 0 | 85mm | 4 | 40 | | | | 19 | |
| MT-LB Mover | 250 | 500 | | -4 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | | | | | | | 20 | |
| T-90 | 300 | 650 | | -8 | 1 | 190 | 120 | 60 | 190 | 50 | 40 | 125mm | 6 | 40 | 3400 | 3500 | | 23 | |
| T-80 U | 300 | 650 | | -8 | 1 | 180 | 120 | 60 | 180 | 50 | 40 | 125mm | 6 | 40 | 3400 | 3500 | | 23 | |
| T-72 Reactive Armor | 300 | 600 | | -6 | 1 | 150 | 90 | 50 | 150 | 40 | 40 | 125mm | 5 | 40 | 3400 | 3500 | | 23 | |
| T-80 Reactive Armor | 300 | 650 | | -8 | 1 | 190 | 120 | 60 | 190 | 50 | 40 | 125mm | 6 | 40 | 3400 | 3500 | | 23 | |

Weapon Data Sheets

The weapon data sheets are what you will use, in conjunction with the vehicle data sheets when you are ready to fire at another vehicle. These sheets contain all of the necessary information to fire a given round of ammunition at any target vehicle.

The weapon data sheets tell you which shot tables to use at various ranges for moving and stationary targets as well as penetration values at that range.

Column descriptions:

First column: The gun and ammo type (or missile type)

M or S: Designates if the data applies to moving or stationary targets

Table 1: Shows the range (in meters) at which you would use shot table one

Penetration: This column is the penetration factor of the weapon at that particular range envelope.

Table 2 – Table 6 are the same as above with data for their respective range envelopes.

| US/NATO | M or S | Table 1 | Penetration | Table 2 | Penetration | Table 3 | Penetration | Table 4 | Penetration | Table 5 | Penetration | Table 6 | Penetration |
|---------------------|--------|---------|-------------|----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
| 105mm APDS | M | 0-400 | 170 | 450-600 | 150 | 650-800 | 130 | 850-1500 | 130 | 1550-2300 | 110 | 2300-3500 | 90 |
| 105mm APDS | S | 0-500 | 170 | 550-800 | 150 | 850-1000 | 130 | 1050-1650 | 130 | 1700-2800 | 110 | 2850-3900 | 90 |
| 105mm HEAT | M | 0-250 | 160 | 300-500 | 160 | 550-750 | 160 | 800-1000 | 160 | 1050-1800 | 150 | 1850-2750 | 140 |
| 105mm HEAT | S | 0-500 | 160 | 550-800 | 160 | 850-1000 | 160 | 1050-1600 | 160 | 1650-2350 | 150 | 2400-2800 | 140 |
| 105mm HEP | M | 0-200 | 170 | 250-400 | 170 | 550-600 | 170 | 650-900 | 170 | 950-1400 | 160 | 1450-2000 | 150 |
| 105mm HEP | S | 0-250 | 170 | 300-500 | 170 | 550-750 | 170 | 800-1300 | 170 | 1350-1700 | 160 | 1750-2600 | 150 |
| 105mm Howitzer HEAT | M | 0-200 | 160 | 250-400 | 160 | 450-600 | 160 | 650-800 | 160 | 850-1300 | 160 | 1350-1700 | 160 |
| 105mm Howitzer HEAT | S | 0-200 | 160 | 250-400 | 160 | 450-600 | 160 | 650-800 | 160 | 850-1500 | 160 | 1550-2550 | 160 |
| 120mm APDS | M | 0-400 | 200 | 450-600 | 200 | 650-800 | 180 | 850-1500 | 180 | 1550-2300 | 140 | 2350-3500 | 120 |
| 120mm APDS | S | 0-500 | 200 | 550-800 | 200 | 850-1000 | 180 | 1050-1600 | 180 | 1650-2800 | 140 | 2850-3900 | 120 |
| 120mm HEAT | M | 0-250 | 190 | 300-500 | 190 | 550-750 | 160 | 800-1000 | 190 | 1050-1800 | 190 | 1850-2750 | 180 |
| 120mm HEAT | S | 0-500 | 190 | 550-800 | 190 | 850-1000 | 190 | 1050-1600 | 190 | 1650-2350 | 190 | 2400-2800 | 190 |
| 120mm HEP | M | 0-200 | 200 | 250-400 | 200 | 450-600 | 200 | 650-900 | 200 | 950-1400 | 200 | 1450-2000 | 200 |
| 120mm HEP | S | 0-250 | 200 | 300-500 | 200 | 550-750 | 200 | 800-1300 | 200 | 1350-1700 | 200 | 1750-2600 | 200 |
| 152mm Gun HEAT | S | 0-300 | 170 | 350-500 | 170 | 550-800 | 170 | 850-1100 | 170 | 1150-1800 | 170 | 1850-3000 | 160 |
| 152mm Gun HEAT | M | 0-200 | 170 | 250-300 | 170 | 350-500 | 170 | 550-600 | 170 | 650-1000 | 170 | 1050-1500 | 170 |
| 155mm Howitzer HE | M | 0-200 | 170 | 250-300 | 170 | 350-500 | 170 | 550-600 | 170 | 650-1000 | 170 | 1050-1500 | 170 |
| 155mm Howitzer HE | S | 0-300 | 170 | 350-500 | 170 | 550-800 | 170 | 850-1100 | 170 | 1150-1800 | 170 | 1850-3000 | 170 |
| 20mm Cannon | M or S | 0-200 | 40 | 250-350 | 40 | 400-500 | 30 | 550-650 | 30 | 700-1000 | 20 | 1050-2000 | 10 |
| 20mm Vulcan | M or S | 0-500 | 80 | 550-750 | 70 | 800-1000 | 60 | 1050-1500 | 50 | 1550-2000 | 40 | 2050-2500 | 30 |
| 25mm M242 | M or S | 0-500 | 120 | 550-1000 | 110 | 1050-1500 | 90 | 1550-2000 | 70 | 2050-2250 | 50 | 2300-3000 | 30 |
| 50 Cal Machine Gun | M or S | 0-200 | 30 | 250-350 | 30 | 400-500 | 20 | 550-650 | 20 | 700-800 | 10 | 800-1000 | 10 |
| 75mm Gun HEAT | M or S | 0-250 | 140 | 300-500 | 140 | 550-750 | 140 | 800-1000 | 140 | 1050-1600 | 140 | 1650-2000 | 130 |
| 90mm Gun HEAT | M or S | 0-250 | 150 | 300-500 | 150 | 550-750 | 150 | 800-1000 | 150 | 1050-1600 | 150 | 1650-2000 | 140 |

Combat Example (Weapons other than ATGM)

To understand the relationship between the weapon data sheets, vehicle data sheets and shot tables in combat resolution let's look at an example. In this example an M1A2 will be firing its 120mm gun loaded with APDS ammo at a stationary T-72 that is 900 meters away in the oblique configuration.

First we look at the weapon data sheet and see that the 120mm gun firing APDS at a stationary target at 900 meters uses Shot Table 3 and has a penetration factor of 180.

| US/NATO | M or S | Table 1 | Penetration | Table 2 | Penetration | Table 3 | Penetration | Table 4 | Penetration |
|---------------------|--------|---------|-------------|---------|-------------|----------|-------------|-----------|-------------|
| 105mm APDS | M | 0-400 | 170 | 450-600 | 150 | 650-800 | 130 | 850-1500 | 130 |
| 105mm APDS | S | 0-500 | 170 | 550-800 | 150 | 850-1000 | 130 | 1050-1650 | 130 |
| 105mm HEAT | M | 0-250 | 160 | 300-500 | 160 | 550-750 | 160 | 800-1000 | 160 |
| 105mm HEAT | S | 0-500 | 160 | 550-800 | 160 | 850-1000 | 160 | 1050-1600 | 160 |
| 105mm HEP | M | 0-200 | 170 | 250-400 | 170 | 550-600 | 170 | 650-900 | 170 |
| 105mm HEP | S | 0-250 | 170 | 300-500 | 170 | 550-750 | 170 | 800-1300 | 170 |
| 105mm Howitzer HEAT | M | 0-200 | 160 | 250-400 | 160 | 450-600 | 160 | 650-800 | 160 |
| 105mm Howitzer HEAT | S | 0-200 | 160 | 250-400 | 160 | 450-600 | 160 | 650-800 | 160 |
| 120mm APDS | M | 0-400 | 200 | 450-600 | 200 | 650-800 | 180 | 850-1500 | 180 |
| 120mm APDS | S | 0-500 | 200 | 550-800 | 200 | 850-1000 | 180 | 1050-1600 | 180 |
| 120mm HEAT | M | 0-250 | 190 | 300-500 | 190 | 550-750 | 160 | 800-1000 | 190 |
| 120mm HEAT | S | 0-500 | 190 | 550-800 | 190 | 850-1000 | 190 | 1050-1600 | 190 |
| 120mm HEP | M | 0-200 | 200 | 250-400 | 200 | 450-600 | 200 | 650-900 | 200 |
| 120mm HEP | S | 0-250 | 20 | 300-500 | 200 | 550-750 | 200 | 800-1300 | 200 |

Now we look at the vehicle data sheet for the target, the T-72. Here we see that the T-72 is TSSC (Target Size and Shape Class) 23 and has an armor rating of 80 in the oblique configuration. If your rule system uses "Catastrophic Hit" you will note that info now as well.

| Name | Movement | | | Target Hardness | CH | Armor | | | | | | Main Gun | | | Max Target Range | Max Target Range | TSSC |
|-------|----------|------|--------|-----------------|----|-------|---------|------|----------|----------|------|----------|-----|-----|------------------|------------------|------|
| | Open | Road | Amphib | | | Front | Oblique | Side | Defilade | Overhead | Rear | Type | ROF | Cap | | | |
| T-80 | 300 | 650 | | -8 | 1 | 180 | 120 | 60 | 180 | 50 | 40 | 125mm | 6 | 40 | 3400 | 3500 | 23 |
| T-72 | 300 | 600 | | -6 | 1 | 140 | 80 | 40 | 140 | 20 | 30 | 125mm | 5 | 40 | 3400 | 3500 | 23 |
| T-64 | 300 | 600 | | -6 | 1 | 10 | 60 | 30 | 10 | 10 | 20 | 125mm | 5 | 40 | 3400 | 3500 | 23 |
| T-62 | 250 | 500 | | -6 | 3 | 80 | 50 | 30 | 10 | 10 | 20 | 115mm | 4 | 40 | 3400 | 3500 | 23 |
| T-55 | 250 | 500 | | -6 | 3 | 80 | 50 | 30 | 80 | 20 | 20 | 100mm | 6 | 43 | 2500 | 2700 | 22 |
| PT-76 | 200 | 400 | 100 | -4 | 3 | 20 | 10 | 10 | 20 | 0 | 0 | 76mm | 12 | 40 | 2500 | 2500 | 20 |
| BMP-3 | 300 | 600 | 100 | -4 | 2 | 40 | 20 | 10 | 40 | 10 | 10 | 100mm | 4 | 20 | | | 22 |

Now the final bit, look at shot table number 3 and cross reference Oblique with TSSC 23 and you see there is a 71% chance of scoring a hit. Roll two d10 to generate a number between 0 and 100. Assuming a hit is achieved (roll of 71 or less) simply subtract the armor rating if the target (80) from the penetration factor of the round (180) and the shooting party must roll that number or less to penetrate. In this case the number is 100, therefore since it's impossible to roll more than 100 it's an automatic penetration. If you look back up to the vehicle data sheet you will notice that if the M1 was shooting at the front of the T-72 the roll to penetrate would be 40 or less (140-180).

| Shot Table Number 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|--|--|
| TSSC | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | | | | | |
| Defilade | 26 | 27 | 28 | 29 | 30 | 30 | 30 | 31 | 33 | 35 | 37 | 39 | 41 | 45 | 50 | 51 | 52 | 53 | 54 | 56 | 58 | 60 | 60 | 60 | | | | | | |
| Oblique | 58 | 59 | 60 | 61 | 63 | 65 | 67 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 71 | 73 | 75 | 77 | 79 | 80 | 80 | 80 | | | | | | |
| Side | 58 | 59 | 60 | 61 | 63 | 65 | 67 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 71 | 73 | 74 | 75 | 77 | 79 | 80 | | | | | | | |
| Ft / Rear | 48 | 49 | 50 | 51 | 53 | 55 | 57 | 59 | 60 | 60 | 61 | 62 | 63 | 65 | 67 | 69 | 69 | 70 | 70 | 70 | 70 | 70 | 71 | 72 | | | | | | |

