TANK ON TANK
DIGITAL

SCENARIO EDITOR

DESIGN YOUR OWN TANK ON TANK SCENARIOS

Welcome to our scenario design guide! We hope you find these instructions understandable and useful. There are two appendices at the end of the guide containing the unit lists and an error list.

Let's get started. The first thing to do is enable Scenario Editing from the in-game menu. Click 'Options' from the main menu and then check the box next to 'Scenario Development'.

You will need to quit the game and restart Tank on Tank to complete the process.

'Show in Explorer' (or 'Show in Finder', if you use a Mac) opens Windows Explorer to the folder containing the example files we use in this manual. This is also the location where you will store your scenario files. The game will look for scenario files in this location every time you load it to play.

Once the game is running again, select 'Play Solo' from the game menu and you should see a new Module called 'Show Map'. Select this module and you will see all available maps in the game. Additionally, you get an Example module that contains some example scenarios. With the first scenario, we will attempt to explain how to create your own scenarios.

When editing scenarios for Tank on Tank Digital, you will only use the in-game map to help identify hex coordinates and unit orientation. You can use the G-key on your keyboard to toggle on/off the hex grid coordinates and a compass rose which points to each of the six hex sides. '1' always points to North on all game maps. This will help you determine unit orientation on the map.

(TIP: Remember, the top of a unit counter is considered the front facing.)

(**Reminder:** Currently, the only thing the map is used for is locating hex coordinates and seeing the compass rose for direction. This data will be used in the scenario design process describe next.)

GETTING STARTED WITH THE HEADER LINE – LINETYPE 0

A scenario file is just a simple text document that contains a header line which provides details, such as the name of the scenario, the map used in the scenario, number of scenario turns, which armies will be used, what direction on the map they will fight towards, followed by several lines that define the units and their position/orientation on the map, Airstrikes and Victory Point locations/values.

You can see an example of a small scenario above. We will focus on the first line, which is the header line, used to define the scenario in various ways. Let's break it down piece by piece so we can see what each part does. Notice that each part of the header line is separated by a semi-colon.

`0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;`

The first item, in this case a zero (0), is known as a LineType and it defines this particular line as a header line. There are six different LineTypes used in scenario design, as follows:

 0 = Header Line in a scenario – defines scenario parameters

 1 = Used to create a unit, set its position on the map and turn of appearance

 2 = Used to create a Victory Point location on the map and set its VP value

 3 = Used to define Level 2 Bonus A units (only used in campaign scenarios)

 4 = Used to define Level 2 Bonus B units (only used in campaign scenarios)

 5 = Used to define Level 2 Bonus C units (only used in campaign scenarios)

We will return to the other LineTypes later in the guide. For now, let us remain focused on the various parts of the header line and their meanings.

`0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;`

The next item in the header line is the scenario name, in this case 'The Bridge'. This will be referred to in both modules and campaigns when we get to the part of the guide for designing those.

(TIP: Exact spelling is very important when referring to scenario names in modules and campaigns.)

`0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;`

The next number, another zero (0), defines this part of the scenario as the level for single player. There are three levels used in Tank on Tank Digital scenario design, as follows:

 0 = single player section (play against the AI in a single scenario)

 2 = campaign section (play against the AI over several scenarios with bonus units)

 4 = multiplayer section (play against a live opponent online)

Each level of a scenario can be defined differently from the other levels in terms of unit composition, unit placement and so on, or all levels can be exact duplicates of each other. This allows the designer to create specific

versions of a scenario for each type of gameplay. A human opponent will behave differently than the AI, so the multiplayer level might be designed a little differently than the single player or campaign level, for instance.

```
0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;
```

The next item defines the map name for your scenario. In our example the map is named 'BRiver', for map BRiver. There are around 25 unique maps available in the game, though some are just variants of other maps. Most maps are defined for summer and winter. Some have had rivers or extra woods added to change the configuration. A few are custom designed maps only found in the digital game at this time. A list of map names is provided at the end of this document.

(NOTE: You cannot change the orientation of the map, either in design or during gameplay)

```
0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;
```

The next number defines the number of turns in the game. In our example we have defined only four (4) turns for the entire game, making for a short, sharp firefight. It is only an example, after all.

```
0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;
```

The two numbers located after the turn number will define the direction on the map each side fights toward. This is important for the AI, so it knows which way to go to find the bad guys. This will be set by using one of the six numbers found on the directional rose displayed on your in-game map. Do not set these numbers to the same value for both sides or the AI will behave erratically. In our example these are defined as follows:

1st number = 1   **(Axis Scenario Direction - can be set between 1-6)**

2nd number = 2   **(Allied Scenario Direction - can be set between 1-6)**

```
0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;
```

The next four header items define the faction and nation of each side. Factions can be set to one of two options, **Axis** or **Allied**. Nations can be **American**, **German** or **Russian**. The faction is always defined before the nation. In our example these items are defined as follows:

PlayerA Faction = Allied   **PlayerA Nation = American**

PlayerB Faction = Axis   **PlayerB Nation = German**

(NOTE: The order in which factions/nations are defined in the header is important. Whichever faction/nation is defined first will always go first in a scenario when play begins.)

```
0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;
```

The next item defines the name of the module this scenario will appear in. The module name could be something like 'Eastfront' or 'Barbarossa', or for our sample scenario, '**Module Example**'. We will get into creating modules a little later on in this document.

```
0;The Bridge;0;BRiver;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;
```

Now we have the recommended AI faction, which is set to be the 'Axis' in our example. When designing scenarios for play against the AI, one side may be better for the player and one better for the AI. Using this option will automatically set the player faction checkbox in the single player scenario list. As the player, you are free to change this option before starting the scenario, unless the designer has disabled that option. We'll see how to enable/disable certain options and features when we get to the section on scenario switches.

Last on the header line, but certainly not least, you may include the name of the scenario author. This will appear in the game UI during play of any scenario. This is entirely optional.

SCENARIO SWITCHES

There are a few switches you can use at the very end of the header line, placed just after the scenario designers name, but before any comments, that allow you to control certain game features. Here is the list with a brief explanation of what each one does:

NoAiChange - Player cannot switch sides in the scenario before play

NoMulti - Scenario will not appear in the multiplayer scenario list

NoWinter - Scenario will not be affected by winter weather (no dice rolls)

This next group can only be used one at a time, you cannot combine them together. These are used exclusively for testing campaign scenario design:

TestBonusA - Allows testing a scenario with 'Bonus A' unit(s) included

TestBonusB - Allows testing a scenario with 'Bonus B' unit(s) included

TestBonusC - Allows testing a scenario with 'Bonus C' unit(s) included

TestNoBonus - Allows testing a scenario with no bonus units included

DEFINING UNIT COUNTERS ON THE MAP – LINETYPE1

Alright, now that we have set the scenario parameters properly, we will take a look at the next LineType, which is one (1). LineType '1' allows you to define a unit counter and its position on the map. Using a similar structure to the header line, defining units will make up the bulk of a scenario file. As before, a semi-colon separates each part of the unit definition. Without further delay, here we go:

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

Start by setting the LineType to '1'. You are telling the game to create a counter on the map.

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

This is the scenario name. Be sure to type this exactly as it appears in the header line.

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

Set the level for the scenario. The '0' indicates a single player scenario design. This should match the level number set in the header line.

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

This is the first of two hex coordinate numbers. This is the vertical hex row number.

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

This is the second of two hex coordinate numbers. This is the horizontal hex row number.

The two hex coordinates together are the exact hex location on the map for the unit being created. In our example, the unit will be placed on the map at hex coordinate 6.22.

(Tip: Coordinates for Reinforcements are usually on hexes adjacent to edges of the map)

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

This number sets the unit facing for the counter being created. This value is set to one of the six hex sides. This unit is set to face direction '1'. Direction '1' is also considered North on all game maps.

(TIP: Remember to look at the compass rose on the in-game map. This will help determine what direction the top (front) of the unit counter should face when placed on the map.)

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

This sets the faction the unit will fight for, either **Axis** or **Allied**.

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

This number sets the exact unit counter to be placed on the map. '10' = a standard Sherman tank. All unit counters are assigned a unit number. You will be provided with a list of units and their equivalent unit number at the end of this document.

```
1;The Bridge;0;6;22;1;Allied;10;0;
```

This number sets the turn the unit will appear on the map. The '0' here means the unit will begin on the map at game start. This number can be set equal to any turn number; recall that the number of turns for a scenario is set in the parameters of the header line.

THE AIRSTRIKE – A SPECIAL CASE UNIT

Now we will take a look at how to define an Airstrike. Airstrikes are considered units for purposes of scenario design. We will use the same basic structure as for other units, with a few caveats.

An Airstrike is different from other unit types. While an airplane does fly over the battlefield when attacking a hex, it does not appear on the map until the Airstrike is activated. The target hex for the Airstrike won't be set until the time of activation during game play, so both unit hex coordinates will be set to zero (0;0). Airstrikes enter the map from a random direction, so unit facing will also be set to zero (0). All other line items will be the same as any other unit. To match our ongoing example:

1;The Bridge;0;0;0;0;Allied;0;5;

The line above uses the LineType '1' to create a unit; the scenario name = 'Scenario1'; level '0' = single player; hex coordinates are '0' and '0'; unit facing is '0'; this Airstrike is designated for the Allied side; the unit number for an Airstrike is zero (0); this Airstrike will appear on turn 5.

IMPROVED POSITION – GIVING TROOPS SOME COVER

1;The Bridge;0;5;12;1;Allied;10;5;IP;

You can place an Improved Position (IP) marker with a unit when you create it. To do this, you simple add 'IP' to the end of the unit line. Be sure it is separated from the other line items by a semi-colon. An IP in a hex provides a +1 defensive terrain modifier to the unit that occupies that hex. Soft Targets use their higher defensive value when located in an IP. In Tank on Tank Digital, any unit may occupy an IP. This differs from the board game rules.

VICTORY POINT LOCATIONS AND VALUES – LINETYPE 2

Victory Point (VP) locations can be set anywhere on the map to signify objectives in your scenarios. You can have multiple VP hexes and they can belong to either or both sides at game start, but they cannot be set to neutral. You must have at least 1VP on the map. If there are no VP, or the VP are equal for both teams, you will get an error.

The value of a VP hex can be whatever you like, but we recommend setting each one relatively low. The least important objective might be set to only 1VP, a more important objective might be set to 2-3VP, while the ultimate goal could be set to 5VP.

```
2;The Bridge;0;5;20;German;1;
```

Set the LineType to '2', which tells the game you are creating a VP location on the map.

```
2;The Bridge;0;5;20;German;1;
```

Set the scenario name to match the header line. Are you seeing a pattern yet?

```
2;The Bridge;0;5;20;German;1;
```

Set the level for the scenario. '0' = single player.

```
2;The Bridge;0;5;20;German;1;
```

Set the vertical hex row number for the VP hex.

```
2;The Bridge;0;5;20;German;1;
```

Set the horizontal hex row number for the VP hex.

```
2;The Bridge;0;5;20;German;1;
```

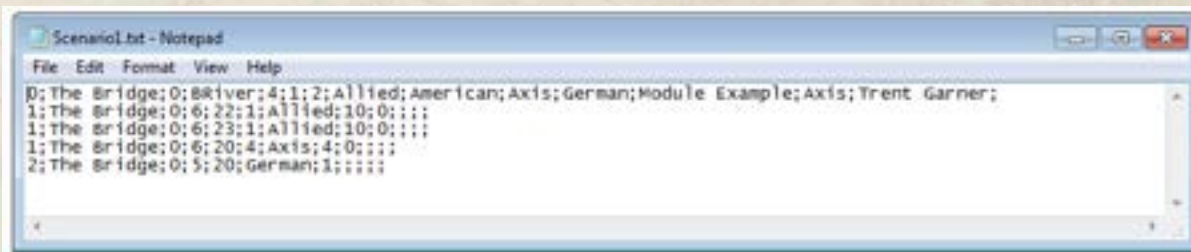This VP hex will belong to the German player when the game starts.

```
2;The Bridge;0;5;20;German;1;
```

This VP hex will be worth 1VP for the side that holds the hex, or was the last to pass through the hex.

As you can see, the structure for each LineType is quite similar and follows a standard pattern. Once you get the hang of it, scenario design isn't really difficult at all.

(TIP: You can use copy/paste to speed up the editing process by duplicating the unit lines quickly. If you know you will have ten allied units, for instance, create the first unit line manually, then simply copy/paste that line nine times. Now edit each line to change the unit type and facing, as well as hex location. This is much faster than typing out each line manually.)

SUMMARY – WRAPING THINGS UP

```
Scenario1.txt - Notepad
File  Edit  Format  View  Help
0;The Bridge;0;8River;4;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;
1;The Bridge;0;6;22;1;Allied;10;0;;;;
1;The Bridge;0;6;23;1;Allied;10;0;;;;
1;The Bridge;0;6;20;4;Axis;4;0;;;;
2;The Bridge;0;5;20;German;1;;;;;
```
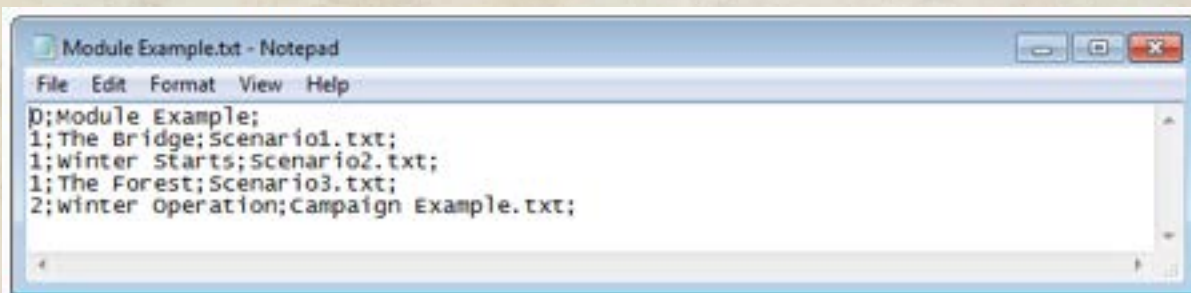
Now that we've got a solid foundation for the scenario file structure, let's look at our sample scenario again. This scenario pits the Germans against the Americans. It places two American units (2 Sherman tanks) and one German unit (a German Infantry) on the map at game start. There is one VP hex location for the German and it is worth 1VP.

MODULE DESIGN – HOW TO MAKE YOUR SCENARIO APPEAR IN THE GAME

We will now go over the steps required to add your scenario to a module file so that the scenario will appear in-game on the scenario list. Not surprisingly, the module file will have a similar structure to the scenario file, though it will contain fewer lines in most cases.

Our example scenario is part of a module named **Module Example**, which contains three scenarios. In order for your scenario to appear in the list of scenarios in-game, it must have an entry in a module file. Our scenario is the first in the example module file below. The second scenario is named 'Winter Starts' and the filename is 'Scenario2.txt'. The third Scenario is named 'The Forest' and the filename is 'Scenario3.txt'. These are demo scenarios with just a handful of units on a small map.

Let's take a look at an example module file:

```
Module Example.txt - Notepad
File  Edit  Format  View  Help
0;Module Example;
1;The Bridge;Scenario1.txt;
1;Winter Starts;Scenario2.txt;
1;The Forest;Scenario3.txt;
2;Winter Operation;Campaign Example.txt;
```

The first line is our header line for the module file. The LineType is '0', indicating header line. The exact module name is the next item on this line. This is what will appear on the game menu. As always, separate each item on a line using a semi-colon.

The second line defines the first scenario in the module. The LineType is set to '1', indicating that this line identifies a specific scenario by name, followed by its actual filename. Be sure the filename matches exactly or the module does not appear in the game menu.
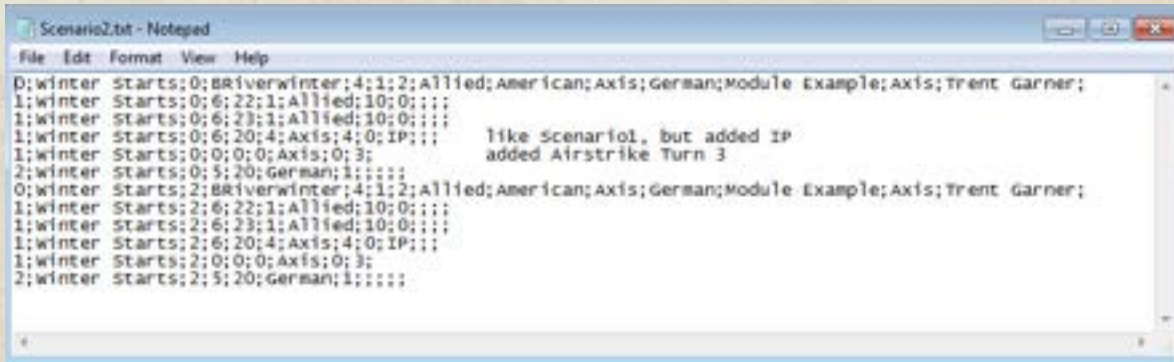
The third line defines the second scenario in the module. The LineType is set to '1', indicating that this line identifies a specific scenario by name, followed by its actual filename. Again, be sure the filename matches exactly. And so on.

You can add more scenarios to the module file as required for your purposes. That is about all there is to creating a module file, but it must be done for your scenario to appear on the in-game menu.

DESIGNING CAMPAIGN SCENARIOS

Now we move into the process for designing scenarios that will be part of a campaign. The structure for campaign scenarios is identical to the single player scenario. Start with a header line, but set the level to '2', which tells the game that this will be a campaign scenario. You must also set the level to '2' for all unit and VP lines that follow this header. This assures that the units and VP appear properly in your campaign scenario. The rest of the header line and all unit and VP lines are arranged and work exactly as they do for single player scenario design.

You can include the campaign design in the same file as the single player design, so that one text file is all you need for your scenario to work in both game modes. Let's take a closer look:

You can clearly see two separate header lines in this example. They look identical at first, but on closer inspection, you'll notice the number right after the map name is different in each header. The first header you may recognize as our single player scenario header, with the level set to '0'. The second header has the level set to '2'. You can also see that all lines below each header have matching levels for their respective header.

Something else you will notice in our example is that both levels are basically identical designs. You can make your campaign design exactly the same as the single player design, or you can make it entirely different, one does not affect the other. In our example we have chosen to mirror the single player design in our campaign scenario.

The addition of an Improved Position (IP), an Airstrike and comments will be our next focus.

Zooming in to these two lines in particular, you can see two more examples of how to include IPs and Airstrikes in your scenario. Note the comments to the far right of each line, just outside the last semi-colon. The game will ignore all comments, so feel free to add as many as you like.

CAMPAIGNS – ADDING BONUS UNITS

If you have played a campaign in Tank on Tank Digital, you know that after winning a scenario you will be given the chance to pick between several bonus units, which will be added to your forces in the next battle. We will now discuss how to add these bonus units to a campaign.

We will start with a scenario file that already has both a Level 0 and a Level 2 header line. This time however, the two levels will not be identical to one another. We will be adding LineType 3-4-5 to the Level 2 section, which tells the game to create the Bonus Units that you see between campaign scenarios, assuming you are successful as a commander. Each line corresponds to one Bonus Unit choice, so using all three LineTypes will allow you to present three Bonus Unit choices for players in your campaign.

So, let's have a look at the third scenario file in our campaign:

```
Scenario3.txt - Notepad
File  Edit  Format  View  Help
0;The Forest;0;Cwinter1;10;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;Nowinter;
1;The Forest;0;15;16;2;Allied;51;0;
1;The Forest;0;14;15;3;Allied;10;0;
1;The Forest;0;13;16;3;Allied;10;0;                        comment: not in Campaign Section
1;The Forest;0;16;15;3;Allied;57;0;
1;The Forest;0;22;17;6;Axis;4;0;
1;The Forest;0;23;16;5;Axis;5;0;
1;The Forest;0;31;22;6;Axis;61;2;
1;The Forest;0;23;25;1;Axis;9;3;
2;The Forest;0;22;17;German;2;
2;The Forest;0;24;20;German;5;
0;The Forest;2;Cwinter1;10;1;2;Allied;American;Axis;German;Module Example;Axis;Trent Garner;Nowinter;
1;The Forest;2;15;16;2;Allied;51;0;
1;The Forest;2;14;15;3;Allied;10;0;
1;The Forest;2;16;15;3;Allied;57;0;
1;The Forest;2;22;17;6;Axis;4;0;
1;The Forest;2;23;16;5;Axis;5;0;
1;The Forest;2;31;22;6;Axis;61;2;
1;The Forest;2;23;25;1;Axis;9;3;
1;The Forest;2;21;19;6;Axis;5;0;                        comment: not in Single Player Section
2;The Forest;2;22;17;German;2;
2;The Forest;2;24;20;German;5;
3;The Forest;2;13;16;3;Allied;10;0;Sherman at Start;        comment: This is Bonus A
4;The Forest;2;13;16;3;Allied;47;4;Sherman Ace in Turn 4;    comment: This is Bonus B
5;The Forest;2;0;0;0;Allied;0;4;overwritten by next line;
5;The Forest;2;0;0;0;Allied;0;7;5;Airstrikes in Turn 4 and 7;  comment: Both Airstrikes Bonus C
```

Immediately you notice there is a lot more going on here than either of the two previous scenario designs. There are more lines under each header section so you know this is a larger scenario. If you take a minute to inspect each section, you will notice they are similar to each other, but there are also quite a few differences. Pay particular attention to the comments, as these not only point out the major differences, but they also explain the purpose of each line where they appear.

The purpose of Level 0 is one of two things: is will be the scenario at the start of a campaign, or it will be the scenario you play if you have lost the previous scenario during the campaign. Level 2 is the scenario you play if you have won the previous scenario during the campaign, presenting with the Bonus Unit choices.

(NOTE: Level 2 section is not required in a scenario that starts a campaign, because you will not be presented with Bonus Units before a campaign starts.)

```
1;The Forest;0;13;16;3;Allied;10;0;                        comment: not in Campaign Section
```

Looking at our first commented line, the comment tells us this line will not appear in the campaign section (Level 2). We can verify this by looking at Level 2, noting that the commented line is indeed missing from this section. The Bonus Units in Level 2 will give the player a number of units to choose from, which are considered replacements for the unit removed from Level 0. You can remove more than one unit from Level 0, but we chose to remove only one in our example. It is recommended that the Bonus Unit(s) are roughly equal in value to the unit(s) removed from Level 0. This can help maintain balance in the scenario design.

You may recall that each Level of a scenario can be identical, or they can be different from each other. Perhaps you want the campaign scenario to play out differently, or be a little more challenging than the single player design. It gives you flexibility as the designer.

Let's look at our next commented line, which appears in Level 2:

```
1;The Forest;2;21;19;6;Axis;5;0;                        comment: not in Single Player Section
```

The comment here tells us that this line does not appear in Level 1. Interestingly, this unit is added to the scenario as a standard scenario unit, it is not one of our Bonus Units. Keep in mind that even a minor change like this can alter the balance of a scenario tremendously. Be sure to playtest your changes thoroughly if decide to make each Level different.

```
3;The Forest;2;13;16;3;Allied;10;0;Sherman at Start;        comment: This is Bonus A
4;The Forest;2;13;16;3;Allied;47;4;Sherman Ace in Turn 4;    comment: This is Bonus B
5;The Forest;2;0;0;0;Allied;0;4;overwritten by next line;
5;The Forest;2;0;0;0;Allied;0;7;5;Airstrikes in Turn 4 and 7;  comment: Both Airstrikes Bonus C
```

Moving on to the Bonus Units, which is the final difference between Level 0 and Level 2. You can see that LineType 3-4-5 are all used here. These lines define the Bonus Units that you want a player to see between campaign scenarios. We will take each line and break it down into a little more detail.

```
3;The Forest;2;13;16;3;Allied;10;0;Sherman at Start;        comment: This is Bonus A
```

The LineType is set to '3', identifying this line as a Bonus A unit line. The unit is defined just like any other unit, but at the end of the unit line, before the comments section, we see 'Sherman at start'. This part of the line defines the text that appears with Bonus Units in the game menu between missions. We use it to identify the unit type and the turn that unit will appear in the game.

```
4;The Forest;2;13;16;3;Allied;47;4;Sherman Ace in Turn 4;        comment: This is Bonus B
```

LineType 4 sets up the Bonus B unit option for the scenario, in this case a 'Sherman Ace on turn 4'.

```
5;The Forest;2;0;0;0;Allied;0;4;overwritten by next line;
5;The Forest;2;0;0;0;Allied;0;7;5;Airstrikes in Turn 4 and 7;  comment: Both Airstrikes Bonus C
```

LineType 5 sets the Bonus C unit option for the scenario. Notice that there are two lines here set to LineType 5. We have decided to provide two units for Bonus C, in this case two Airstrikes. However, the two units can be any units of your choice, mixing and matching units is also permissible. You could have a Panther Tank and an Airstrike, or an M30 and an Mounted Infantry unit.

When you put units on two lines like this for one LineType, the descriptive text section for the second line is the only text that will be used on the game menu, the first line will be ignored. I like to put the exact same text on both lines myself, but you don't have to put anything on the first line, you can just leave it blank if you want. Our note here just reminds us that the first line doesn't matter, it will be overwritten by the text on the second line.

CAMPAIGNS – CREATING A CAMPAIGN FILE

Alright, we are now ready to tie everything together into a campaign file. The campaign file is similar to the module file. If you want your campaign to appear in the game, you must create a campaign file and add it to the game with the names of your scenarios in the order you want them to appear.
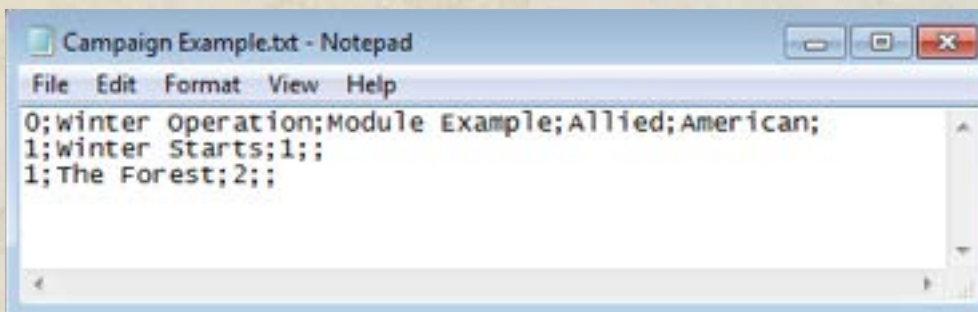
We start with LineType 0 for a header line; the name of the Campaign 'Winter Operation'; the associate module name 'Module Example'; the player faction 'Allied'; the player nation 'American'.

The second line uses LineType 1 for a scenario; the name of the scenario 'Winter Starts'; the numeral '1' indicating this is the first scenario in the campaign.

The third line also uses LineType 1; the name of the scenario 'The Forest'; the numeral '2' indicating this is the second scenario in the campaign.

If you had more scenarios to include, you would create the additional lines as necessary for each scenario you wanted to include, setting the order of the scenarios appropriately. Once this file is saved to the game folder with your scenarios, your campaign will appear in the game on the game menu under Campaigns.

DESIGNING MULTIPLAYER SCENARIOS

By now you should be fairly familiar with how to design scenarios for the game. Designing multiplayer scenarios is nearly identical to designing single player and campaign scenarios. You just need to create your header line, being sure to set the level to '4', telling the game that this is a multiplayer scenario. All unit and VP lines must also be set to level '4'. The rest of the header line and all unit and VP lines are arranged and work exactly as they do for single player scenario design.

You can include the multiplayer design in the same file as the single player and campaign designs, so that one text file is all you need for your scenario to work in all three game modes. The header lines act as the separator between each section. You can also leave blank space between each section if it helps, it will not affect how the game parses the data in the scenario file.

(**TIME SAVER:** You can copy and paste a finished single player scenario design, pasting it back into the same document at the bottom. Now edit only the newly pasted data by changing the level in each line from a '0' to a '4', starting with the header line and working your way down. Easy as that, your scenario design is now ready to work in both single player and multiplayer mode!)

For your multiplayer design to appear in the multiplayer scenario list, the scenario must be included in a module file, just like for a single player scenario. If you have included single player and multiplayer designs in the same text file, adding your scenario to one module is enough to make it appear in both game modes.

This guide has attempted to cover everything you need to know to create your own scenarios and make them appear in the game menu for the various game modes. We hope you enjoy designing your own scenarios for Tank on Tank Digital.

At the end of this guide you will find an Appendix, which contains the unit list for each country in the game, as well as a list of errors and their meaning. This should help you more easily troubleshoot potential design problems.

Be sure to drop by the Lock 'N Load forums if you have any questions or need assistance with scenario editing. Our friendly staff will be happy to help!

Trent Garner

APPENDIX 1

UNIT LISTS – These are the unit lists for each country, including unit number and in-game stats:

	ALLIED AMERICAN				
UnitName	CounterName	Range	Defense	Movement	Nation
0	Airstrike				
7	Pershing	3	10	2	American
44	Pershing ACE	3	10	2	American
45	Pershing HQ	3	10	2	American
46	Pershing HQ ACE	3	10	2	American
1	Wolverine	3	8	3	American
50	Wolverine ACE	3	8	3	American
51	Wolverine HQ	3	8	3	American
52	Wolverine HQ ACE	3	8	3	American
2	US Infantry	1	7 / 10	1	American
66	US Infantry HQ	1	7 / 10	1	American
59	US Infantry ACE	1	7 / 10	1	American
58	US Armored Infantry	1	9 / 9	2	American
10	Sherman	2	9	2	American
47	Sherman ACE	2	9	2	American
48	Sherman HQ	2	9	2	American
49	ShermanHQ ACE	2	9	2	American
20	Priest	5	8	1	American
21	Howitzer 105mm	6	7 / 9	0	American
56	AmericanAT	1	7 /10	1	American
57	M8	1	8	3	American
72	Mounted Howitzer 105mm	0	7	2	American
73	Mounted American AT Gun	0	7	3	American

AXIS GERMAN

UnitName	CounterName	Range	Defense	Movement	Nation
0	Airstrike				
3	PanzerIV	2	9	2	German
36	PanzerIV ACE	2	9	2	German
6	PanzerIV HQ	2	9	2	German
37	PanzerIV HQ ACE	2	9	2	German
4	German Infantry	1	7 / 10	1	German
67	German Infantry HQ	1	7 / 10	1	German
19	GermanArmored Infantry	1	9 / 9	2	German
5	GermanAT	3	8 / 9	1	German
8	KingTiger	3	12	1	German
38	KingTiger ACE	3	12	1	German
39	KingTiger HQ	3	12	1	German
40	KingTiger HQ ACE	3	12	1	German
61	Puma	2	8	3	German
62	Puma ACE	2	8	3	German
63	Puma HQ	2	8	3	German
64	Puma HQ ACE	2	8	3	German
60	German10cmM14	6	7 / 9	0	German
9	Panther	3	10	2	German
41	Panther ACE	3	10	2	German
42	Panther HQ	3	10	2	German
43	Panther HQ ACE	3	10	2	German
14	Tiger	3	11	1	German
53	Tiger ACE	3	11	1	German
54	Tiger HQ	3	11	1	German
55	TigerHQ ACE	3	11	1	German
22	Wespe	6	8	1	German
74	Mounted10cm M14	0	7	2	German
75	Mounted German AT	0	7	2	German

ALLIED RUSSIAN

UnitName	CounterName	Range	Defense	Movement	Nation
0	Airstrike				
11	T34	2	9	2	Russian
12	T34 HQ	2	9	2	Russian
25	T34 ACE	2	9	2	Russian
26	T34 HQ ACE	2	9	2	Russian
17	T3485	3	9	2	Russian
18	T3485 HQ	3	9	2	Russian
30	T3485 ACE	3	9	2	Russian
31	T3485 HQ ACE	3	9	2	Russian
13	IS2	3	11	1	Russian
28	IS2 HQ	3	11	1	Russian
27	IS2 ACE	3	11	1	Russian
29	IS2 HQ ACE	3	11	1	Russian
32	KV85	3	10	1	Russian
34	KV85 HQ	3	10	1	Russian
33	KV85 ACE	3	10	1	Russian
35	KV85HQ ACE	3	10	1	Russian
16	Russian AT	2	7 / 10	1	Russian
15	Russian Infantry	1	7 / 10	1	Russian
68	RussianInfantry HQ	1	7 / 10	1	Russian
23	Katyusha	5	7	2	Russian
24	M30	6	7 / 9	0	Russian
65	Russian Armored Infantry	1	9 / 9	2	Russian
69	Mounted Russian Infantry	0	7	2	Russian
70	Mounted Russian AT	0	7	2	Russian
71	Mounted Russian M30	0	7	2	Russian

APPENDIX 2

ERROR LIST - Following is a list of errors and causes to help you troubleshoot scenario designs. When you load your scenario the program checks for errors; if any errors exist in your design, the scenario will not start and you see will the errors in the game menu Scenario list:

Error	1	Player-A Faction equals Player-B Faction
Error	2	Player-A Nation equals Player-B Nation
Error	3	Player-A Faction not Axis or Allied
	3	Player-B Faction not Axis or Allied
Error	4	Player-A Nation is not German, American or Russian
	4	Player-B Nation is not German, American or Russian
Error	5	AxisScenarioDirection < 1 or AxisScenarioDirection
	5	AlliedScenarioDirection < 1 or AlliedScenarioDirection
Error	6	no Mapname
	6	wrong Mapname
Error	7	Number of Turns not between 3 and 18
Error	8	Victory Point Location with VPs > 10 not allowed
Error	9	Axis VPs equals Allied PVs
Error	10	Nation is not German, American or Russian
Error	11	Hex x.y not on Map
Error	12	Direction not between 1 and 6
Error	13	Faction not Axis or Allied
Error	14	BonusA: empty
Error	15	BonusB: empty
Error	16	BonusC: empty
Error	17	Unit does not fit its nation
Error	18	Unit cannot be found in the modules
Error	19	Not more than 45 Victory Points allowed (VP + kills)