Highway to the Reich by Geoff Barnard.

Highway to the Reich (HttR) was initially reviewed in Phoenix No.9 way back in September 1977, and apart from some errata notes has not been mentioned again. This I feel is a great pity, as I still consider that this game is one of SPI's greatest contributions to the Historical Simulation hobby, and I continue to have a deep love / hate relationship with the game; love for the wonderful parts of the game and hate for its many faults and problems.

The Game

For those who have passed the game by, briefly it is a very detailed study of the Market Garden operation involving four maps, 2 hour turns for daytime and company/troop/battery counters with step reduction. In many ways it does for World War I I what Terrible Swift Sword and Wellington's Victory have done for their respective earlier periods. HttR is very much a historian's toy in that the game sets out to demonstrate in practical terms, rather than by merely taking account in the system and combat values, much of the 'facts of life' of tactical World War II West Front action. Hence units have different modes and they have, as well as their numerical strength, a morale rating and an Effectiveness rating to represent their equipment and training. A fairly complex Combat Results Table attempts to show a high degree of relationship between mode and terrain, while an involved sequence of play gives a great deal of inter-relationship between the activities of the two sides. As well as rules for supply, there is a detailed System of Command and Subordination to encourage the correct use of the component parts of a formal organisation such as a division or brigade. Finally, and most important for a tactical game, terrain effects come into play nearly everywhere and the detailed maps include a lot of terrain to try to mess up even the very best of your play ideas.

The problems

The game does have problems - Boy, does it have problems! The most immediate symptom of this was the fact that SPI found it necessary to rewrite the rules and issue a 2nd Edition rule-book and play-aids rather than issue the usual errata sheets, so many were the errors and omissions. The game is above all BIG, with the 106 turns for the full Campaign it is quite a mouthful even if you don't need all the turns to arrive at a conclusion, so you can imagine what an extra burden faulty rules will be.

The system makes few concessions to playability. Even in the mini-scenarios using one map the quantity and complexity of combat calculations each turn, never mind the need to keep a careful eye on all the other rules, makes for hard work. Often there are severe problems of counter congestion, made even worse by the need to invert counters or to look underneath them for the strength marker - 1 regularly need to have a pair of tweezers to hand! By its very nature the game is completely incremental in that a lot of effort results in little happening. It is very very rare for a single phase to result in any dramatic event other than as a conclusion of a course of action covering a number of phases, probably in different turns. During this time, of course, the opponent will have had a number of opportunities to interfere in your plans, retreating or reinforcing for example. This fact adds further to the workload although it does also add to the realism of the game.

I must make an admission here - I've not yet been able to play the Campaign game although I have played the scenarios numerous times. I have many reports from groups or conventions where the whole game has been played to a conclusion well before Turn 106. Generally such games have involved multiple commanders and seem to have been greatly enjoyed. The Campaign game is considered to be an excellent simulation of the problems facing the opposing armies and of the results of those command decisions taken by the players during the course of the battle.

Over and above any problems as a game, HttR has many historical problems that affect its validity as a simulation in detail. Some of these are factual, where the designers have just made mistakes; some are understandable and some ought not to have been made. Many other problems are highly subjective, they are places where to my mind, and in the opinion of others, the design is at fault.

Anti tank guns

The most widely discussed 'error' is that relating to the high Effectiveness value given to anti-tank guns and, to a lesser extent, all artillery. As long as this value is used for the weapon doing its appointed task there is no problem. Obviously the system requires, for example, that a 17 pdr gun be very powerful against German tanks, while a heavy artillery unit should be able to make a mess of concentrated infantry caught out in the open. The problem comes when that single high Effectiveness (E) value is applied to other actions: anti-tank guns become very effective firing against infantry, as effective as powerful artillery units. This is certainly wrong as although such weapons did carry some high explosive ammunition it was always in short supply. The rules do penalise artillery units firing at armour, why they couldn't have done the reverse for anti-tank guns I don't know.

What is worse, that same E value is used in the determination of close action results. This is a two stage process, the first stage considers the relative morale and E values of the attacking and defending forces, allowing for terrain, and gives a Close Action

Value which is taken on to the second stage where odds come into play. Should a unit not achieve a sufficient Close Action Value, it suffers an automatic Attacker Disrupted, and the action proceeds no further. The result of this system is that no matter what the eventual odds will be, using the present rules infantry with their relatively low effectiveness cannot hope to attack anti-tank guns with their relatively high E levels. This is patently wrong in spite of SPI saying that the high cohesion of a gun unit justified this situation. The case is less clear for artillery units, not only would they have more men standing about able to fight, but they are, after all, weapons designed to be effective against infantry. However, the result of the present rules is that such an attack would immediately come to grief against the high E value of the artillery unit. Maybe the theory of all this is not so very bad, but in practical terms it means that anti-tank and artillery units become superweapons, being used by the gamer who has appreciated their strengths for all manner of utterly ridiculous purposes. I know, I've done it myself, and felt like a real cheat!

Attrition, Stacking and Travel

A second point is that the present rules give a high attrition rate which, though still slow in game terms, is far too high historically. All those long lines of tanks, infantry and other weapons blasting away at each other up to three times each turn are completely unhistorical, not only because they didn't have the ammunition to spare, it was generally just a pure waste of effort. Often it is a waste of effort in game terms but who's going to pass up the chance of that possible '2'?

The stacking limits too have come in for some sharp criticism. It is, I think, agreed that they are completely arbitrary in that SPI realised they needed limits and the numbers arrived at probably seemed as good as any! That is generally OK, it is only rarely that you need to fill a hex, but oddities do occur. Look for example at Frost's perimeter just north of the Arnhem bridge. That should be restricted to only one hex on historical grounds but a rough calculation indicates that he had about 24 to 30 stacking points of units with him (most of 2nd Battalion, a bit of 3rd, plus various divisional assets including engineers, anti-tank reconnaissance, artillery spotters etc), Yet the rules place a limit of 12 stacking points on the particular city hex!

I personally find the Travel Mode rules illogical in that if one assumes that being in this mode has your vehicles spread out along the road (at regular spacing?), then what determines the quantity of units you can fit into the hex is the length of road, NOT the type of terrain! 600 metres of road in a clear hex is just as big as 600m of road in a forest and city and should have the same capacity. The rule is obviously simplified a great deal, the designer may have found the thought of stacks being accidentally disrupted through overstacking rather fun but the idea is strange on historical grounds.

On top of these things, I've come across many minor niggles. There are mode illogicalities e.g. how does one tank disperse or concentrate, the lack of any 'digging in ' rules have been bemoaned, SPI have taken many liberties with the Order of Battle details of all the participants to fit their counter and rules format, there are no 'combined arms' factors to encourage armour/infantry cooperation, and there are many other little things that crop up. The problem is that HttR is a tactical /operational game, which tries to use a detailed tactical system to cover a specific historical sequence of events. It's one thing for SPI to design a system that, generally, works. It is quite another thing for that system to work a// the time. It is just too easy for someone like me to get out the detailed tactical accounts of the fighting and find some examples that are impossible to represent in HttR, or that HttR does represent but badly. In a way, that is why I find HttR so very fascinating, the game relates so very closely to the types of accounts I like studying (see the bibliography for details). I suppose one should be thankful that the game does cover what it does and try to add those extras that are needed yourself, and correct such errors as you can, hoping that SPI will continue their policy of adding further Errata/ Addenda like that dated December 1978 (which apart from corrections makes some very interesting changes to the abilities of 'pure' armour units to fight while in Travel mode).

The Scenarios.

I now propose to consider the particular historical problems of the four main scenarios so that players can work out the limitations of the games and consider whether these points are worth being corrected to make the games more accurate. Essentially, each scenario is severely flawed, the real problem is that in some cases the cure could be as bad as the fault!

Let's be logical and start with Map A. This is perhaps the most interesting of the single map scenarios and covers the drop of the 1st Airborne at Arnhem. Now, hands up those of you who've noticed that there's something wrong with British Serial 44! Who are those GP/1 xx fellows - we know, but SPI obviously don't! Unlike the US forces where the glider pilots just hung around after the landing getting in everyone's way, or went off sightseeing, the British glider pilots were trained to either attach themselves to their passengers or form up as infantry units and, either way, fight as organised infantry. Hence there are many references to the exploits of the lads from the Glider Pilot Regiment, even maybe references to them operating support weapons and anti-tank guns. However to suggest that they were a formed battalion as shown by serial 44 is ridiculous, especially as the rules allow this serial to abort or be destroyed just like any other! In fact in one game I played, this serial did abort back to England even though all the glider carried units arrived safely - somehow the glider pilots had landed their passengers and only *then* gone home! In truth Serial 44 should not exist. What should happen is that whenever glider-borne units land, a small unit of pure infantry should also appear. About 325 British gliders landed at Arnhem on September 17th, with 2 crew each that's 650 men, i.e. 26 strength points. Allowing for some landing losses the four 6-4 counters are about right

in number though the E rating given is quite spurious -the men had personal weapons only so a '2' would be better. The Heavy Weapon and Anti-tank counters provided are, as far as I can determine, a pure invention.

This scenario remains a big headache from a play balance point of view. In the original version it was far too easy for the Germans to stop the British advance dead while under the 2nd edition :t became too easy for the British to enter Arnhem town in strength, especially with the powerful antitank gun units. Now with the new amendment from the December '78 errata (which prevents the airborne troops from moving on the turn in which they landed) it becomes again too easy for the Germans to hold them back. I can't see any way around this except by yet more rules 'fixing' the game one way or another.

Apart from the very strange things the British can do with their anti-tank guns, that leaves just one big problem with this scenario - the Germans! Historically, the units of 9th and 10th SS were concerned with activities on both maps A and B, yet in the scenario only the reconnaissance units of 9th SS have any appropriate restrictions attached; even then they are incomplete as some of them came back to Arnhem after they'd secured the Nijmegen bridge, only to be shot up by Frost's men. As the game stands, a German player can easily apply the whole strength of 10th SS against the British perimeter whereas in fact most of this division was carrying out its instructions to cross the river by ferry onto the 'Island' and move towards Nijmegen. Certainly some of the division did fight in the area immediately near the Arnhem bridge so as to clear the bridge to facilitate their move south, but these were the minority of the division.

On map B there is a similar balance problem, in that whereas historically the US forces were slow to try to secure the Nijmegen bridge so allowing the Germans to get there first, in the present game they can capture it easily and have a reasonable chance of holding it although with some casualties. Obviously the 82nd division does have the East edge German arrivals to worry about, but in game terms these are far weaker than the historical threat the US troops had to cover, especially as the US player can check the German arrival details and act accordingly.

With Map C, it's the Germans who can mess things up. The arrival instructions for the German player are very flexible - to my mind too flexible, as they allow the German player to concentrate where the 101st Division is weakest, i.e. north of the Zuid-Willems Canal. If all the early German reinforcements enter on hexes 3301 and 3401 they have a good chance of holding Veghel and causing the maximum trouble over the vital rail and road bridges, in such a way that only 1 of the US regiments can attack them whilst in supply. This can give the Germans an easy victory, as the victory requirements do not include the importance of Best, which the Germans held vigorously, nor do they require the Germans to attain any sort of front along the west edge of the map south of the canal. Meanwhile the required positions of the US regimental HQs are specified! Again it's a matter of just how far you 'fix' the game to make the simulation, this scenario could do with less fixing for the US or more for the Germans.

The Map D scenario is, I feel, the strangest of the lot. In fact I believe it should properly be done away with. In the first place Rule 30.46, which requires the Allied advance 'to stick very close to the main road, should be obligatory rather than optional if for no other reason than that the road just north of the border was raised and Rule 10.12 should apply to it! The front of XXX Corps was, quite literally, only the width of that main highway. Certainly, units of XXX Corps should not operate east of about hex 0726 where there was VIII Corps with British 3rd and 11th Armoured divisions (3rd made an assault crossing over the canal towards Achel on the night of the 18/19th and entered Achel on the 20th, after which 11th Armoured drove north to Leende). Similarly, on the west edge of this map was XII Corps with 7th Armoured, 15th and 53rd Divisions. The latter attacked across the canal on the night of the 17/18th but only made slow progress north due to lack of roads and German resistance. Maybe it can be argued that these units fall outside the scope of the present game even if they are relevant to the campaign as a whole.

More important though, have you wondered who was holding the front line in the bridgehead over the canal? The answer is 50th Div. or, more particularly 231st Brigade (who SPI don't let you have, along with the rest of the division, until the Allies cross the Neder Rijn). In fact the 2nd Devons assisted in the breakout with orders to cover the road ½ way towards Valkensward while 1st Dorsets were to move up to cover the rest of the road to Valkensward and the town itself. All the while the 4.2" mortars of the 50th Division's Machine Gun battalion were giving superb fire support, or so says the history of the Dorsets. Hm, SPI have changed all this, but in their wisdom they have granted the consolation of allowing you to use ALL Guards Armoured Division in the breakout rather than just the Irish Guards tanks and infantry who were the only part of the division in action on the 17th. Furthermore, they very kindly give the division at full strength when in fact it had suffered some losses in earlier operations that had still not been made good.

Assuming the British player is tied to the road (as he should be) the German forces of KB Walther (a more or less weak divisional sized unit that ought to be treated under the rules as a formal organisation rather than as a collection of HQ-less units) are far too strong, such that I don't see any way the British can historically crack them. Their potential for blocking the road is much too great under the present rules even assuming the tanks in Eindhoven wait there as they in fact did. Note by the way that the units of 7th Para division should trace supply etc to the east edge of the map, never to KG Walther as the rest of their division is in fact just off that edge! However much the rest of the game may be an acceptable simulation, I feel that the Map D section is rubbish. One of these days I'll have to go through the unit war diaries and calculate their times of arrival onto map C and thereby abolish Map D altogether except as an exercise in 'slugfest'; I don't see any way the Mad 'blitz' attack of the Irish Guards can be represented within the framework of the present game. However, I'm still thinking ....

Game revisions

For some time I've been considering revisions to the game - I now propose to detail some that can easily be added with good effect on playability and realism. Many many more revisions will also be possible once thought up and tested, I do hope that as you're playing the game you will think "what changes/improvements can I make to improve the game and/or simulation", bearing in mind the practical limitations of a need to stick to the basic game system and the fact that we're stuck with the maps and counters. The system is, however, very flexible, as we shall see.

My first thought was to do something about the excess fire which both slows the game down and causes too rapid losses. Initially, I tried out an idea which I'd stolen from TSS, in that certain die results would result in automatic ammunition depletion, say using the 2, 3 and 4 results which are those most likely to cause losses. There was a possibility that different results could deplete the sides differently, this reflecting the armies peculiar problems of ammunition supply. This system did not really work due mainly to the present rather drastic results of being depleted; these may be too severe. So leaving things as they were before I tried fiddling the sequence of play. This eventually resulted in the complete removal of all the Conditional Fire Phases and the restriction of the Free Fire Phase to heavy weapons and artillery units only, though as an afterthought I included tanks firing at tanks and anti-tank guns firing at tanks. All other units just do not fire in the sense of bombardment. Rather than completely remove so much fire I extended the Opportunity Fire function to include entering a Zone of Control hex as well as leaving with the added proviso that a unit could only be fired at once per firing unit for each hex moved through rather than being fired at for both entering and leaving the same hex. This means that a unit being Close Actioned will have two Opportunity Fires; once as the attacking unit leaves the adjacent hex and once again as it enters the defender's hex.

In conjunction with this revision I decided it was about time there were a couple of fire modifiers. Now armour firing at non-armour targets, such as infantry and heavy weapons, has its E value halved, with fractions rounded down, while the E value of anti-tank guns firing at similar units is now 2. To a certain extent this change is not complete, there could be value in a whole set of weapons effectiveness modifiers, although the two alterations covered above are the main ones needed.

I do admit that the removal of so much of the fire in the game undermines the value of the ammunition supply rules as it means, for example, that infantry units which can only fire with Opportunity Fire are effectively immune from ammunition depletion. I think this is reasonable; references to such units running out of ammunition are rare as it was generally easy to find more - if the soldiers doing the firing ran out, other troops not so directly involved in fighting would have further supplies. Shells, mortar bombs, machine gun rounds etc are another matter, these did run out and could not be found by a 'pack and pocket search', as could small-arms ammunition. However, the supply rule requiring units to be within 10 hexes of their HQ is of .some historical value, as is shown in the disruption recovery chart, so I decided to use the same effect. Hence any unit more than 10 hex away suffers a -1 morale modifier should it be involved in close action, this seems to work well providing an incentive to keep formations together.

What are the effects of this change on play? The are various, the importance of artillery and heavy weapons (especially the mortars they include) causing enemy losses is increased as historically should be. Infantry units now have a much great tendency to pin each other down, this again is historical effect. The importance of close action i.e. combat at ranges of less than 600m, in spite the two opportunity fires, is now much greater The game now moves much faster, hence is 1(trouble to play, and losses are much slower EXCEPT where the real fighting is concentrated, giving more historical rate of attrition. I strongly recommend that you try this modification.

Close Action Modifications Chart

D E F E N D E R

A T T A C K E R

Effect on Defender \ Effect on Attacker	Infantry alone	Armour alone	Anti Tank Guns alone	Artillery always	Armour + Infantry Top 2 units together
Infantry	N.E.	Ex 1/2 / M -1	E = 2, S = 0 / N.E.	E = 2 / N.E.	N.E. / M -1
Armour	M -1 / Ex 1/2	N.E.	N.E.	E = 2 / N.E.	N.E. / Ex 1/2
Armour + Infantry Top 2 units together	M -1 / N.E.	Ex 1/2 / N.E.	N.E.	E = 2 / N.E.	N.E.

N.E. = no effect, go direct to 8.71.
When **E** = x1/2, round odd nos. down (i.e. 7x1/2=3)
KEY: E = Effectiveness **M** = Morale **S** = Strength

Fire Modifications
When firing at Infantry:
Armour   E = 1/2 (round down)
AT Guns   E = 2

Where Armour (excluding Armoured Inf.) plus Infantry are the top two units in a defending or attacking stack, and, where Infantry plus AT guns are the top two units in a defending stack being attacked by a stack including armour, then, the two units together may be considered as the top unit for the purposes of determining the C.A.V., and the best E value can be used regardless of which counter is actually top. N.B. The strength of an AT gun unit would still be considered to be zero. Inf stacked with AT guns do not suffer the morale loss.

The second major change was to concoct the above Close Action Modifications Chart, which is consulted before Table 8.71.

This chart has the following effects;

a) the problems of anti-tank guns are removed in line with the suggestion of SPI in Rule 23.7, in that they are now vulnerable to infantry attack if on their own,

b) a combined arms (armour and infantry or infantry and anti-tank guns) incentive is given, and

c) the rule regarding the top two units being counted as 'the top unit' does nothing more than extend the effect engineers have in a stack, and accepts the fact that really the units would be intermingled so as to be 'one unit' anyway.

In both b and c note that Rule 17.3 would still apply unless a suitable leader was present. Hence the two units stacking generally would have to be from the same division. Note also that while some unit types are heavily penalised while defending, the new fire rules do mean that they now get two opportunity fires when they still use their printed E value (except for tanks and anti-tank guns firing at infantry).

For the purposes of the above chart, heavy weapons, armoured infantry, engineers, recon and cavalry considered to be infantry, SP guns and armoured cars count with tanks as armour and flak counts as artillery. Also, where infantry and anti-tank guns or artillery are together as the top two units and are attacked by infantry, disregard the guns and use the E value of the infantry, regardless of which unit is actually on top, as in this situation the guns would have a poor E value and a strength of zero.

Should anyone have any queries, comments or possible additions to the above chart, please let me know.

Various other ideas for rule changes are being considered. My HttR PBM opponent George Hayward has worked out some special rules to cover Close Action in city hexes which under the present rules do not work at all well historically. George is thinking along the lines of greatly extending the results of all Close Actions, maybe by including a wider range of results and certainly more realism. I keep thinking of re-vamping the road movement system to represent correct road usage. Presently, for example, there is no relationship between the number of stacking points and the number of vehicles in a unit (a 4 stacking point unit of tanks may be just 4 vehicles, but a 4 stacking point unit of infantry may be about 10 to 12 vehicles needing 3 times the

road space). Another factor that needs adding is a digging in capability, on this level of simulation I would have thought it was an essential feature.

Well, I've said a great deal about HttR, I do hope I've awakened some latent interest in the game out there even if just because my revisions make it easier to play! So, get the game out, dust it off and start playing -if you don't have an opponent check with me about PBM HttR, you'd be surprised at how well it works for so seemingly complex a game (George and I, having completed the 1st Airborne scenario, are now happily playing the 1st Airborne and 82nd scenarios side by side so as to remove most of the historical problems of both. A full campaign game PBM is not impossible.) Above all, this game is a superb case study of the problems of applying a detailed tactical simulation system to actual events as you can so clearly relate the two.

For those of you who want to do some further study to find more oddities in the game I give the following very select bibliography, which assumes you know all the standard texts - these obviously cover just the Arnhem section of the battle.

Bauer, C The Battle of Arnhem (this is a quite detailed general account with, for its size, a lot of tactical detail, some fair maps and good personal recollections)

Angus, T Men at Arnhem, Leo Cooper 1976 (This is a superb story, slightly fictionalised, of the 156th Battalion of the Parachute Regiment at Arnhem, written by one of its company commanders. Hence it is, in effect, the story of a single HttR counter!)

Fairley, J Remember Arnhem, Pegasus Journal 1978 (this is worth its weight in gold, or maybe even crude oil, it is an almost man by man account of the 1st Airborne Reconnaissance Squadron during Arnhem, with amazing maps and masses of detail. The recon lads were mixed up with almost everything so it forms a superb general study of the battle, including detail and informed comment on the German side of the fighting. Buy it!)

Having read that lot, you're almost sure to come up with some more ideas on HttR, and if you do, I'd like to hear them. So write to me, Geoff Barnard, 39A Mill Street, Guisborough, Cleveland, TS14 6AG including a SSAE. Similarly if you want to find out about PBM HttR I'll be only too happy to discuss the subject and keep you informed of new developments. I still live in hope that SPI may yet do for HttR what they have now done for TSS and WV, namely produce a mini-game using the same system (Stonewall and Ney vs Wellington respectively). So far things don't look hopeful, maybe I'll have to try one myself. Obvious contenders are engagements involving units already in the game so I don't have to make new counters, e.g. the capture of the bridgehead over the canal on map D before the breakout or, for a more sloggy infantry game, there's the various actions involving 43rd and 50th divisions on 'The Island' between Nijmegen and Arnhem in October. The real problem will be finding sufficient detail on the Germans involved to make the game historically reasonable. Has anyone any better ideas?