1

GRID BASED WARGAMING

Why are you off grid? **David Burden** talks us through his thought processes in the first of a two part piece on gaming without a ruler

Words and photography **David Burden**

In the minds of some wargamers it seems that if a game doesn't involve an expandable steel rule and an argument over whether unit A is just within charge range of unit B then it can't be a *proper* wargame. When articles do talk about gridded combat systems there also appears to be a natural assumption that the rules must be a "wargame-lite", or, heaven-forbid, a "board-game". Something like the ***Command and Colours*** system springs to mind, which whilst it has a growing popularity (particularly in newer incarnations such as ***Memoir 44*** and **Plastic Soldier Company's *World War 1*** game) it seems to exist in that netherworld between board-game and wargame.

However many rule sets do adopt a grid based approach, ***To The Strongest*** and **Peter Pig's *Poor Bloody Infantry*** being two of note. And of course SF gamers have used square grids for spaceship deck-plans for decades (*and the perennially popular hex grids for spaceship games. **Ed***). But why shouldn't ANY ruleset be playable using a grid based system?

In this first article I'll look at the pros and cons of grid based systems, at hex vs rectangular grids, and at the practicalities and challenges of playing a grid based game – with particular consideration of hex based grids where the challenges may be greatest. In the second article I'll take 3 or 4 modern non-gridded rule sets and see what is involved in converting them to grid play – and whether it works!

WHY GRIDS

So why should we be interested in playing a wargame on a grid? The advantages of grid based play are many fold:

- Distances for movement, firing and radius of command are absolute – a unit is either in range or not, no arguing, happy players and a faster game!

1 Firing across a Hexon River making it a 2 hex range.

2 A big Hexon Game at the West Midlands Military Show

3 A game of Dust Tactics in progress, crosses mark out the corners of the squares

- There is no need to get the ruler or measuring stick out for every move or fire, just count off the squares or hexes and you're done – again a faster game!
- Terrain elements have definite edges, no more debates about whether that unit is just in or out of the wood.
- Frontages and ground occupancy are also absolute, no debates about whether a unit can just squeeze through the gap, or if both battalions can occupy the top of that knoll.
- Remote play – as in play-by-email, or even play by Skype – suddenly becomes far more feasible.

All of these, bar the last, have two things in common – speed of play and less arguments over what's happening. Players can concentrate on the tactics, movement and combat – and surely that is what wargaming is all about – gaming conflict on the wargames table, not real conflict over it!

So why isn't everyone using grids already? Well gridded play does present some significant challenges:

- Your table needs to be marked out with a grid. Not an issue for a 2ft x 3ft boardgame, but a big issue for a 4ft x 6ft gaming table with variable terrain pieces.
- Movement and firing options will be restricted – whether its debating diagonal movement on square grids or facings on hex grids.
- The granularity of your rules for movement and firing will have to be based around a relatively large grid size (typically 4cm – 10cm) when you could otherwise quite happily use measurements down around 5mm.

In the sections that follow I'll try to address each of these in turn, and also look at the relative pros and cons of square and hex grids.

CREATING A GRID

There are three generic approaches to acquiring a gridded terrain: buy a pre-printed cloth (or board), buy a gridded terrain system, or make it yourself!

PRE-PRINTED CLOTHS

Several wargame companies such as **Tiny Wargames** and **TerrainMat** make pre-printed gridded mats. For the naval and aerial wargaming fraternity using gridded clothes has a very long history, so it's not surprising that such clothes are readily available in blue. However you can also get them in green and grey, and nowadays even with pre-printed terrain. The grid sizes are typically 3cm to 15cm, and we'll come onto the importance of grid size later. It will cost you about £65 for a pre-printed 6ft x 4ft cloth.

Whilst the normal approach is to use solid lines to mark the grid another alternative is to just put marks at the vertices. This is used to good effect in Simon Miller's demo games of ***To The Strongest***. Such an approach is well suited to large square grids, but would probably be totally confusing with a small hex grid!

GRIDDED TERRAIN SYSTEMS

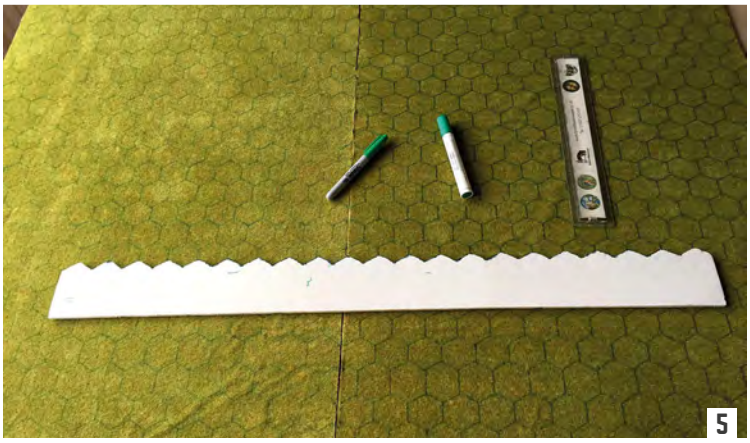
The other purchasing route involves terrain systems which are based around a grid. Whilst many companies make square terrain pieces (e.g. **Hawk Wargames** and **Total System Scenic**) they are typically too large to function as a grid in a wargame – although there's nothing to stop you trying to draw a grid on each piece.

The best known gridded terrain system is probably **Kallistra's Hexon** and their 10cm system. I must admit that when I first saw it I loved it, but also thought that it was something that I'd never be able to justify buying (my blog post of the time says "very nice if you've the space and budget"). A basic box of 21, 6-hex flocked terrain pieces will set you back about £75, and you need a couple of boxes or so for a 4ft x 6ft table. Then you need to think about second, and even third tiers, for hills, and then possibly **Kallistra's** own hex based road and river sections.

One of the reasons why I baulked at the potential cost of that first layout I saw though was that they had **Hexon** stacked up to 3 layers high for hills (and it covered about 1.8m x 3m). One trick I've found to reduce the number of true **Hexon** I need is to use 1.6mm ply hex sheets cut to the exact size of the **Hexon** 6-hex unit, and flocked to more-or-less match for the lowest height tier. Instantly I save on raising the whole of the rest of the terrain.

Whilst there are quite a few modular terrain systems aimed at RPGers (e.g. **Terra-Blocks**, **TERRATiles**, **Tilescape**, **Spartan Games'** new **Universal Modular Terrain System**) those for large scale wargamers look thinner on the ground, **Pedion's** 1ft tiles being one of the few feasible alternatives to **Hexon**.


4


5

4 Battalions in line and column on a hex grid

5 My hex boards and saw-tooth template

6 Distance measurement is simple on a grid…

MAKING IT YOURSELF

If you're on a budget, or have very specific ideas about what you want, then doing it yourself is the obvious route. When I first decided to use hex systems this is exactly what I did, drawing out 4cm hexes on a set of 18" x 36" ply boards covered in scatter mat. My method of creating the hexes was to use a 3' long saw-tooth template in exactly the same manner as described by Dillon Browne in *MW&BG* back in issue 363 (talk about parallel evolution)! Using this method I could do each board in about 45 minutes. And using a green felt tip meant that the lines didn't even stand out too much. Doing square grids would of course be even easier, and just doing square grid intersections easier still.

So with the DIY method a 4' x 6' table could be covered for about £12 in ply and £15 in scatter mats, and in about 6 hours of effort (knee pads recommended!).

Hopefully the message from this section is that getting a gridded surface to play on need not be as big a challenge as it first seems. Yes, it is unlikely that you'll be able to get a richly sculpted terrain feel, but if you want a practical, flexible surface on which to play games, and which is probably close to what you use on a day-to-day basis anyway, then a grid is definitely achievable.

CHOOSING A GRID SIZE

Having made a decision to use a grid then the next most important decision is what size grid to use. The grid needs to be small enough to give a reasonable resolution to movement and firing, but big enough to hold your troops and to not totally dominate the visual look of the board. Whilst there is some relationship to grid size and figure scale, the more important relationship is probably between grid size and unit (or figure) frontage.

One of the light-bulb moments for me in grid based gaming was when I realized that a unit didn't have to occupy a single hex. Being able to change between column and line is absolutely key for horse and musket games, but rationalizing that with keeping a unit in a single square or hex seemed impossible – raised as I was on the old **SPI** games of 1 counter = 1 hex. But it doesn't have to be that way – so now I standardize on a unit having a frontage of 1 hex when in column, and 2 hexes when in line.

The following table summarises what sort of battle/figure scale each grid size may best be suited for.

Grid Size	Best suited for…
<20mm	10mm skirmish
20mm – 30mm	15-20 mm skirmish
40mm – 50mm	25mm+ skirmish, 6mm "big battles"
50mm – 75mm	10mm "big battles"
75mm – 150mm	Any "big battle"
> 150mm	Zonal games

TERRAIN

When it comes to terrain you can either have the terrain shapes match the grid, or for smaller grids you can have more natural looking terrain shapes but continue the grid over them. At the smaller grid sizes grid shaped terrain can begin to give the table a very "SPI" boardgame look – not necessarily a bad thing.

LINEAR FEATURES

Where a hex grid can really cause problems is with linear features. On a board-game board it's pretty easy to draw rivers and hedges as hex-sides, but that's not so easy on the wargame table. There are two broad options. You can take the board-game approach and set your linear features to follow the hex sides, but with smaller scale hexes this can be a real issue, and even the best grain line gives a very wobbly river or hedge. But at least the rules can deal with crossing obstacles exactly as most wargames do – you move up to the obstacle and then cross it by moving into the next hex – the obstacle itself does not need to take up an appreciable part of the terrain.

The other option is to place the obstacle through the hex – as shown with **Hexon** river hexes. The problem now is that if a unit moves up to just before the river hex it will be at a 2 hex range from a unit on the "other" side of the river hex – unless we let both sides occupy the same river hex, but take it as read that they are on opposite sides

6

of the river! The **Hexon** rules take the latter approach, but personally I prefer the former, and your choice may very well depend on the type and period of game you are playing.

Roads are slightly less of an issue, and if roads are important for movement then you can have them running straight from hex side to hex side – but cross-roads then become sixty-degree-roads! However if roads are just eye-candy to help orientate the battlefield (particularly in pre-mechanised game where tactical road movement is less important) then there is no reason why they can't just ignore the hex grid.

Of course you don't need to stick to just hexes or just squares. I went to an interesting presentation by a US professional wargamer who designed wargames for the US military who said that they'd been experimenting, for boardgames at least, with having hexes for the rural terrain and then converting to squares for the urban terrain – it actually makes a lot of sense, even if not easy to implement!

CONVERTING RULE-SETS TO GRIDS

So we've got our gridded terrain laid out, but how do we use our favourite rule system with it?

In converting rules to work with grids (or in fact in writing your own rules for grids) there are two considerations.

First are those things which are specific to the rule-set. These include topics such as:

- Command distances and unit cohesion
- Movement distances
- Firing ranges and damage areas
- Occupancy

All are tied into what ground-scale you use, so how big each hex is in "real" terms. We'll look at these in more detail in Part 2 when we look at converting specific rule sets from a range of periods.

The second group are those things which are common across almost all gridded rule set implementations – solve them once and you know what to do for almost any rule set. These factors are:

- Dealing with diagonals (for square grids)
- Facings and flanks (primarily for hex grids)
- Line of sight

THE COMMON FACTORS

DIAGONALS

The minute any gamer is faced with a square grid the inevitable question is "are you allowed to move diagonals?" This is of course why the hex grid was invented! It is not just movement that is effected of course, but also range measurement. But if you do insist on using a square grid then the standard options are:

- No
- Yes
- Every other one!

Fantasy Flight's *Dust Weird War II* wargame, fought on a 10cm square grid, counts the first diagonal as 1, but all further diagonals as 2 just to be a little bit different!

Of course one neat solution to the square grid issue is to use offset squares – I've seen that work quite well in some games – but it's bound to run into issues when you start thinking about linear obstacles.

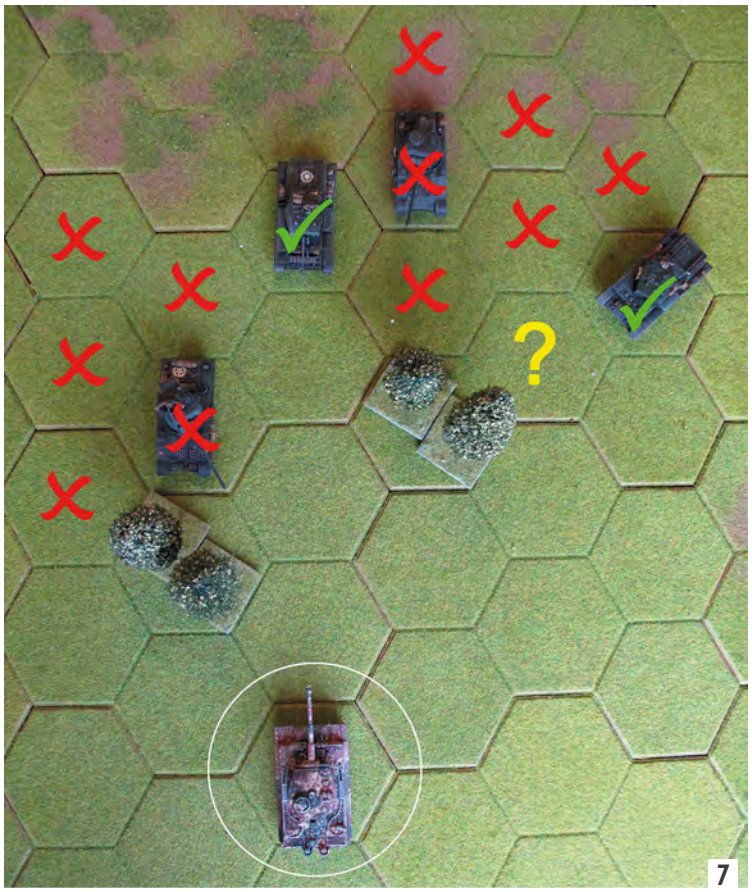
FACINGS AND FLANKS

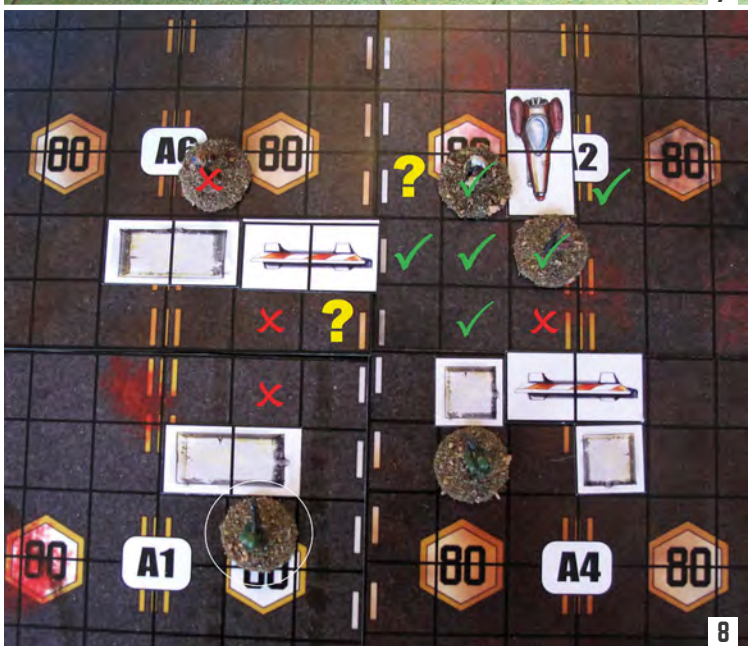
Whilst hexes nicely solve the diagonals issue they do of course raise the issue of which way is the unit facing. Should it face a flat side or a corner of the hex. In fact closely linked to this question is whether the hex grid itself should be orientated so its grain (the "row" of hexes) runs left-to-right across the battlefield (so parallel to your battle line), or front-to-back (so parallel with your likely line of advance). Personally I prefer the grain to run left-right so that my troops can be deployed in a long battle line, even though that means that they "face" a corner and have to move straight forward by tacking left then right!

Whichever choice you make you then you need to define what constitutes a flank attack (whether by cavalry or anti-tank gun) or a rear attack (likewise). Closely linked to decisions about facings are those of arc of fire. Most rules give units an arc of fire of between 60 and 180 degrees. With a hex grid there are some nice 60 and 120 degree lines to follow , but with squares we're back to the diagonal problem.

LINE OF SIGHT

Just as grids simplify movement they also hold the promise of being able to simplify line of sight. Does the corner of the wood just obscure that T72 from you Milan team or not? Whilst neither grid solves the whole problem it does reduce the number of situations that need a decision to a minimum, and once you agree on your interpretation of them a clear ruling can be made for all other cases. Note the illustrations which shows the typical line-of-sight decisions for both square and hex grid – with only a few points of contention which can generally be resolved by a common, and absolute, rule.





7 Line-of-sight on a hex grid

8 Line of sight on a square grid

For both pictures 7 and 8, the green ticks are a "yes, you can be seen" and the red crosses are – obviously – a "no you can't" but the question marks are the areas with an issue!

CONCLUSION

I hope that all this has given you something to think about, and encouraged you to be more open to the idea of conducting your wargames on a gridded terrain. Whilst there might be a bit of head scratching at first, whether its tweaking rules or trying to work out just where you move that hex template next to draw out an even set of hexes the end result is, I believe, well worth it. Playing on hexes is now my default choice, and faced with a "traditional" game I'm suddenly struck but actually how imprecise (or spuriously accurate) all the movement and firing is, not to mention the slowness and inconvenience of steel-rules all over the place. And I don't limit my hex gaming to my own rules and other gridded rule sets – whenever I look at a new set of rules more or less the first thing I do is see whether I can play it on hexes. That is something we'll look at in Part 2, when I'll examine how readily some popular rulesets can be converted to gridded, and particularly hex, play. ▪

PART TWO

1

GRID BASED WARGAMING

How to get on grid and on message with **David Burden** with part two of gaming without a ruler

Words and photography **David Burden**

Last month I looked at some of the generic advantages and challenges of using both hex and square grids to drive figure based wargames. In this second part I'll look at how readily you can convert existing non-grided rule sets to grid play by providing examples of four different conversions. In each case I'll use a hex grid as the target – since that often offers the most challenges, and is my grid of preference! The rules I'll look at represent a range of periods and force scales so let's address ***Sword and Spear***; ***Pike and Shotte***; ***Blucher***; and ***Chain of Command***.

As we've seen in part one, there are typically four key elements of the rules which will need converting:

- Movement distances (including charging)
- Firing distances (including spotting)
- Command and cohesion (and support) ranges
- Occupancy

In addition you'll also need to apply some of the generic considerations such as facing, flanks and grain discussed in the previous article. Hopefully working from these examples you should see how you could convert your favourite rule sets for hex play. I've deliberately avoided any naval, space or air wargames since many of those already use a grid approach, and the nature of the games makes grid play a far simpler proposition.

SWORD AND SPEAR

Sword and Spear (S&S) is currently my ancient rule set of choice, having dallied with ***DBA***, ***Impetus*** and ***To The Strongest***. The latter is of course designed to be played on a square grid, but the fact that I've chosen to convert S&S to grid play rather than just use To The Strongest emphasises the fact that your choice of rulesets shouldn't be guided by what surface it's designed to be played on, but rather on your preference for the actual mechanics and feel of the rules.

The first decision to be made is what size hexes to use. I have boards marked in both 4cm hexes, and the 10cm Hexon system. S&S has no fixed basing, as long as both players use the same. All distances

in S&S are measured in "Distance Units" (DU) and the rules say that "*It is recommended that one distance unit is equal to half of the frontage of a unit.*" Now it just happens that my Ancients are on 80mm bases (originally for Impetus), so on that basis, 1DU = 40mm – which just happens to be my small hex size. So suddenly converting S&S becomes very easy since whenever it says "DU" in the rulebook I substitute "hex".

It's not all going to be plain sailing though. As with many Ancients rules, S&S has the concept of groups, being units which are either "*To its sides, so in both side edge and front corner contact with it, or to its front and/or back, so in both front to rear edge corner contact with it.*" Of course with hexes we have 6 corners and no front or back, but just stating that a unit must be in a neighbouring hex is probably going to be OK.

The next issue we bump into (and again common to many Ancient rules) is that units can either "advance" (i.e. move straight forward) or "manoeuvre" (i.e. move in any direction and end with any facing). If we are moving along the grain of the hexes (see *Part 1*) then an advance is easy, but if we are moving across the grain then an advance will have to be more like a sailing ship tacking forward. The problem is complicated if a unit is only moving 1 hex a turn, since you need to ensure that you know which way to make the next tack. The only real solution is to try and play to the spirit of the rule, advances are as straight as you can go, manoeuvres are everything else, and try and resist the temptation for gamesmanship!

Zones of control require some consideration – they extend a charge move and base width forward of a unit, not the typical all-round ZOC of a hex boardgame. Again if the unit is facing along the grain this is the obvious row of hexes in front of the unit. If the unit is moving across the grain then it should be taken as "hop-scotch" pattern 2 then 1 then 2 hexes wide (and so on) – where the unit can legally make an advance move.

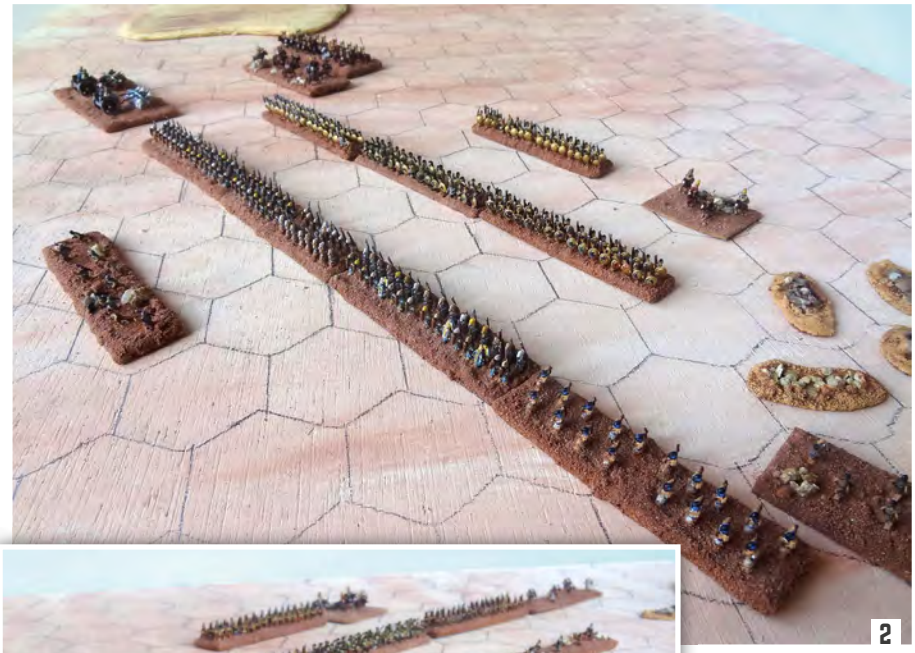
In S&S units in part contact with the enemy need to make a "sliding move" to line up their centres. However units can never face-off exactly on a hex grid – and so we have to take it that any units in a neighbouring hex to an enemy count as in contact, and don't need to make the sliding move. This also opens up another issue since, because you can't match units completely off against each other, then when one line of troops encounters one or more enemy units how do you decide where you might be able to get two-on-one?

The more generic considerations for flanks and rear from Part 1 need to be applied to considerations of melees, and similar logic to advances and zones of control applied to routs and discipline tests, but otherwise that's all we need to do to convert S&S to hex play. The 1DU=1hex conversion is so elegant that we don't even need to rewrite the Quick Reference Sheet!

PIKE & SHOTTE

Moving forward almost 2000 years how do grids work out for English Civil War (ECW) games? As an example let's try and convert the popular ***Pike & Shotte*** rules, and any solution will probably work just as well for their ***Black Powder*** stablemate.

Pike & Shotte is unit based, with (at 28mm) 8-20 models for a foot (shot) unit, 12-25 for a pike block and 6-12 for cavalry. Frontages are a flexible 80-200mm for infantry and 75mm – 150mm for Horse. My ECW force is in 20mm and the rule book suggests either using the 28mm bases and ranges, or halving them – I decided to stick with the given ranges and standardise on 16 figures for all foot units, giving a frontage of 80mm for the foot units (at 2 figures deep), which fits nicely into a 10cm (4") hex. Pike & Shotte leaves the actual basing up to you, and my figures are typically in 4 figure bases for foot or 2 figures for cavalry). For a unit based game such as Pike & Shotte, it makes a lot of sense to have one unit per hex (or per 2 hex if in line as for the cavalry), rather than using the smaller hex sizes and go for one base per hex.



2

3

1 Close up of lines closing in Pike and Shotte.

2 Sword and Spear in 6mm.

3 Chariots in Sword and Spear in 6mm.

Movement distances are in steps of 3" depending on unit type. This is slightly under our 4" hex, but equating each step to 1 hex makes life simple, and table distances are unlikely to be critical, so we have a movement scale of 1/2/3/4 hexes for (in order) artillery, infantry, cavalry and light cavalry.

Musket and artillery weapon ranges are again all divisible by 3", so a 3" = 1 hex conversion is again the sensible option. Medium range is defined as half-range, so we may have to round some up or down a hex – but artillery is not typically a big issue in ECW games!

Pike & Shotte has a 6" battalia cohesion distance, which we could interpret as 1 hex (4") or 2 hex (8", or even 2x3") – for cohesion I prefer to keep things tight so have gone for 1 hex – that is a maximum of one empty hex between two units in the same battalia. Orders become increasingly difficult with range, in blocks of 12" – i.e. every 3 hexes.

So all-in-all converting Pike & Shotte to play on large hexes is a pretty straight forward affair, and only a little bit more complicated than Sword & Spear.

BLUCHER

Napoleonics is probably my favourite period so when I heard all the buzz about Sam Mustafa's ***Blucher*** rules I just knew that I had to get them, and see how they'd play on a hex grid.

Whilst Blucher is very much a set of figures rules, the fact that it provides playing-card size cards with unit stats which can also be used as playing pieces *instead* of figures has led some to think of it as having something of a board-game feel about it – even though out the box it is all about an un-grided playing surface with distance measurement. But converting it to play on a grid does certainly make it more board-game-like – especially if you're using the cards.

The Blucher card is 3"x 2.2" (75 x 55 mm). The long length of the card is the unit frontage, and this is defined as 1 Base Width (1BW) – and is the basic unit of measure of the game.

With my two different hex grids this meant that I could either use two small hexes per card (giving 80mm frontage) – but with the card also extending over an odd array of hexes behind the front two, or I could go for the larger Hexon hexes which at 10cm would nicely take the Blucher cards. The Hexon choice certainly looked like the better option to me, although giving a ground scale slightly larger than designed for. And since my own 6mm Napoleonics are based in 75mm or 25mm (1/3rd of 75mm) frontage, then substituting my figures for the Blucher cards was simplicity itself.

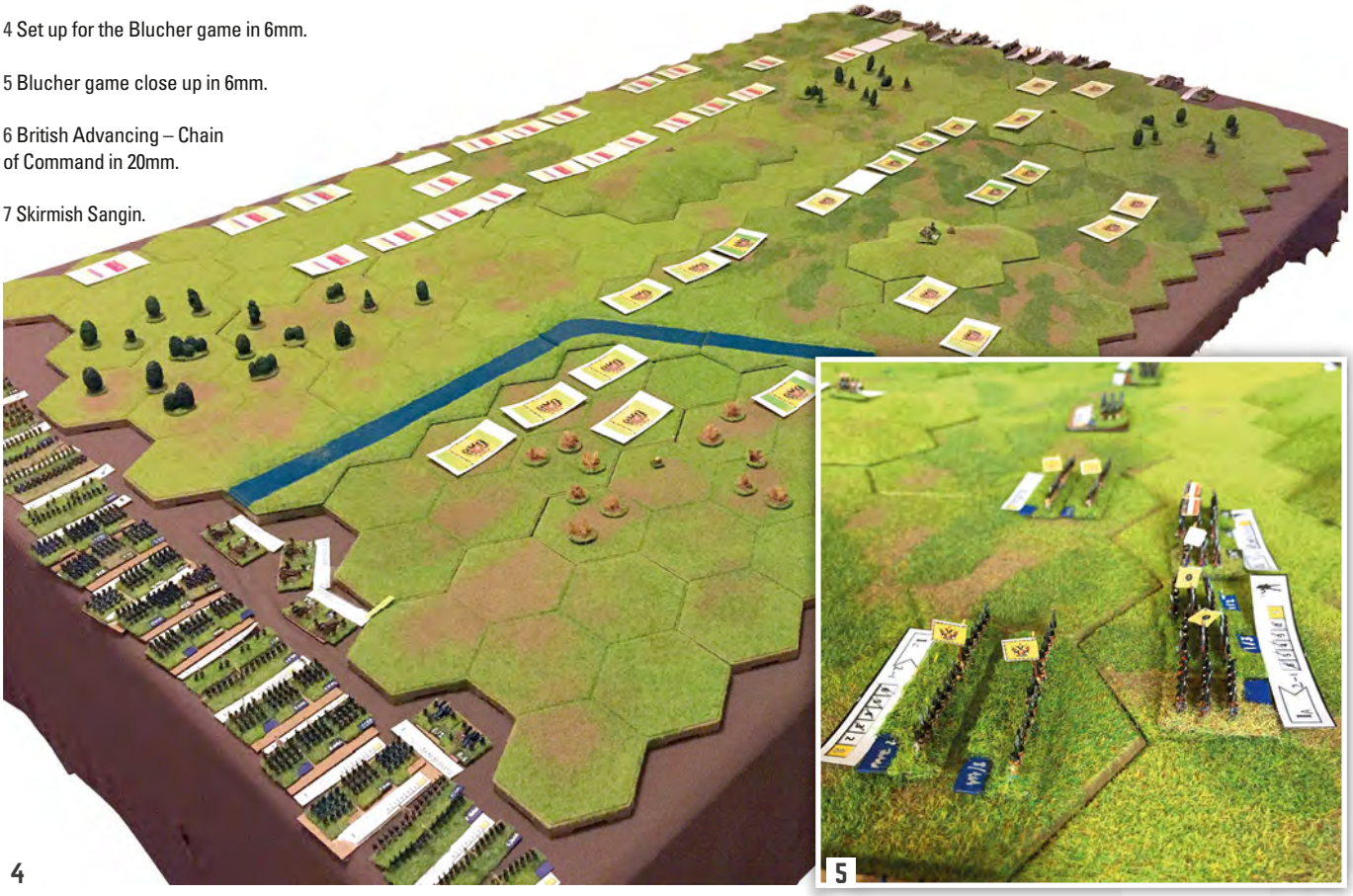
Movement for all units is in BW as marked on the cards – so no problem on the Hexon hexes, 1 BW = 1 hex. Every card also has a 45 degree frontal arc marked, but as discussed in Part 1 with hexes we really need to follow the natural grain to make sense, so the arc is likely to be a slightly wider 60 degrees. Hex norms also replace the Blucher definition of flanks and rear taken off the edges of the cards. Pivots (change of facing) just need to map to hex points or sides, and the use of a hex to contain the unit removes issues of interpenetration as it pivots. Although a 10cm hex could take two cards I decided to set a limit of one card/unit per hex – so no stacking. There are similar Zone of Control considerations as for S&S (here called Engagement Zones), and command

4 Set up for the Blucher game in 6mm.

5 Blucher game close up in 6mm.

6 British Advancing – Chain of Command in 20mm.

7 Skirmish Sangin.



4

5

cohesion is a simple 1 BW/hex, and a 2BW/hex command radius.

Firing ranges are also measured in BW and so are easily converted and the use of hexes also removes debates about firing through gaps as the minimum gap will always be a one hex/BW – bigger than the ½ BW specified by the rules. Retreats are measured in BW (not base depth as in some games), so –again – these work well with the hexes. Finally the rules include a square grid approach to urban areas, using 1BW square areas – again a nice translation to hex based urban areas.

Overall the conversion of Blucher to gridded play was even easier than for S&S. I played out the Along The Danube scenario to test everything out, and within the confines of the rules it all worked out very well, and gave a nice quick game – even if some of the combat results were a little odd.

It should be obvious by now that any rule set which uses movement and ranges based on unit widths is likely to work well with a grid with a comparable size. Another set which I've found works well – and is easy to convert – is the Baccus ***Polemos*** English Civil War rules, and if other **Polemos** rules are based on this house style, then the chances are that they will work well too.


7


6

CHAIN OF COMMAND

With Sword & Spear and Blucher we had 1 element = 1 unit rules, and with Pike & Shotte multiple elements = 1 unit. But how does a grid approach work when we get down to 1 element = 1 man?

As a one-time RPGer I'm used to playing skirmish games on half inch grids, designed for counters but which would just about take an unbased 15mm figure. With a modern 15mm figure based on 1p we're looking at a minimum of a 2cm hex, and for a 28mm on a 2p that's a minimum of 2.5cm. But can you imagine a 6' x 4' table covered in 2cm hexes or squares: it's enough to make your eyes go crazy!

Probably the biggest difference between skirmish games and those already discussed is the importance of terrain clutter. Whilst big hills, urban areas and rivers tend to be the key features in an Ancients or Horse and Musket game a skirmish game needs a table full of clutter where hedgerows, walls and even a burnt out truck can be key to the game. And if the grid is going to give us the clarity for movement, line of sight and firing that we're after from it, then the terrain features need to fit into the grid.

There is a strong case for using a square grid in urban games as then the buildings, walls, hedgerows and the like can all run in naturally straight lines and join each other at right angles – you just need to decide on a rule for the diagonals. Alternative Armies' HOF Fire Team skirmish rules use a 2cm (and a bit!) grid, and every other diagonal counts as two squares. Peter Pig's Poor Bloody Infantry uses a six inch grid, and so takes more of a zonal approach – something I must admit that I'd like to explore as it seems to be a valid way of dealing with games that are too big to be man-on-man skirmish, but too small to managed by a company or battalion force ruleset.

But how feasible is it to use the hex-grids I have to hand – 4cm and 10cm – for a skirmish game, something like ***Chain of Command*** (CoC) or ***Skirmish Sangin***? The biggest problem is where does the terrain go? Linear features can follow the hex grains – but it does mean that all joins end up being at 60 or 120 degrees. Not too bad for European towns, probably less so for American ones! Buildings need to have an agreed hex foot print – either as a base or to an agreed rule such that any hex more than half filled by the building counts as being in the building.

Laying out the terrain for a typical post-Normandy encounter having the terrain follow the hex lines actually doesn't look too bad at all. In fact is anything it avoids everything being at right-angles and looking parade-ground regular, whether using the 4cm or 10cm hexes. Applying a hex grid to a more urban game like Skirmish Sangin just doesn't look good at all – time for that square grid!

Next we need to decide the ground scale. CoC uses a ground scale of 12 inches = 40 yards, so 10cm hexes are about 4 inches (13 yards or so). Most of the weapon ranges in the rules though are in multiples of 3 inches (6", 9", 12", 18", 24" etc), so a better bet is to work on the basis that 1 hex = 3 inches in the rules, so those ranges just become 2,3,4,6,8 hexes. It means that the table nominally covers less real ground (as 12 inches of distance needs 4 hexes that are actually 4 inches in size, so 16 inches total!), but not sufficient difference to cause a big problem in a skirmish game. Movement distances are in dice throws: D6/2D6/3D6 inches, so using our 1 hex = 3" scale this means D2, D4 and D6 hexes – not wonderfully convenient but workable. The use of the

8 Chain of Command in 20mm.

grid does mean though that you'll no longer have a unit "just falling short" of a bit of cover – they are either in the hex or not, so the game begins to have a more zonal feel to it. For command and cohesion, CoC uses six, nine and twelve inch command ranges, so that's a nice easy 2/3/4 hexes. Unit integrity is 4 inches, so call that 1 hex. In fact to emphasis the zonal nature we may want to actually dictate that a team (~ 3 men) should *always* be in the same hex, and that a squad (~6 men) should never cover more than 3 (or even 2) hexes, although that may be a bit severe if each hex is only around 13yds!

In contrast the 4cm hex scale is certainly closer to the small square grid RPG approach. For Chain of Command a 4cm hex is about 5 yards. Having a maximum of two men in a 5 yard space seems not unreasonable in a combat situations (bringing back memories of the CSM shouting *"don't bunch, don't bunch"* as we went into a section attack!).

For distances and ranges using one 4cm hex = 1 inch makes conversion easy, but it does mean that our table suddenly needs to be one-and-a-half times bigger! Going for 1 hex = 2" means we can pack a bit more action on the table. In fact most of the key distances (cohesion, retirement, patrol marker movement, jump off etc) are actually even distances – so it's a good choice. The base tactical move though is on D6, but if we simply change that to D3 then it's problem solved (and D6 or 2D3 instead of 2D6 for a normal move, and 3D3 or perhaps 2D4 or even D3+D6 for "double") . Even with this only pistols and grenades have odd ranges, so it's no hardship to just round those up or down – I'm always in favour of rounding ranges and movement up to make for a more fluid game! (*Other than the fact that they are horrible to actually throw, I'd use d4s for all of those!* ***Ed.***)

In the end it may be figure scale that helps you decide. With 28mm figures 1 hex = 1" looks right, and at 15mm 1 hex = 2" seems the more sensible choice. Physical size limitations mean that occupancy limits are really set at 1 figure per hex for 28mm and 2 figures for 15mm. With 15mm we probably need to enforce a placement so it's obvious who is in the lead, and on which side, but an opponent should probably be able to engage either figure unless one is immediately blocking the other.

Vehicles are one big difference between WW2/modern games like Chain of Command and the earlier periods considered. With 10cm hexes most vehicles will sit nicely inside a single hex, but with the smaller hexes a vehicle could be covering 4 or even 6 hexes – and it won't be clear which! A hex shaped set of vehicles bases would be the best, if odd, solution – perhaps as a loose template so that they aren't permanently fixed.

So overall then converting the Chain of Command is a lot messier than for the other rules – from a combination of terrain, dice movement, figure scale and vehicle sizes issues. Whilst some of these may not exist in other similar rule sets many are characteristic of mechanized, urban and skirmish warfare. It may be that the solution is to push the scales further up or down – back to the half inch square grid or going for a 15cm or bigger zonal approach.

CONCLUSIONS

So 3 out of 4 ain't bad as they say. The fact that many modern rulesets use the base-width as the unit of measure makes the conversion to grid play very easy. Sensible rules writers also make sure that their distances use regular intervals so they are easy to remember – and that also aids the conversion to grids. Skirmish games, though, almost drive us back to the original 'square and hex grid' of the RPG – and in some ways that should not be too surprising – it just leaves the issue of how we scale that up to the whole dining table!

Hopefully these two articles have hoped to show you that perhaps there is a "third way" in wargaming – using grids to simplify and speed movement and decisions, but using rules which are as complex as you like in other factors – just because it's a grid they don't need to be simplistic. The fact that you can take almost any existing rule set and readily convert it to grid play means that there is no need to say goodbye to a favourite ruleset if you do move to a grid. And to my mind the grid means that we can focus our games not on rulers and disagreements but on generalship and tactics – and surely that's what our wargames should all be about! ▪