Communication seems to be where it’s at in today’s marketplace. Buyers want to know more than the traditional what and how much of classic advertisements. Now it’s why, where, when and how as the consumer demands better information about the product, whatever it may be. The most obvious example is the oil cartel which spends millions on television advertising - not to praise their products in an already addicted public, but to convince their audience they are indeed performing a public service by finding new sources of energy and thus, incidentally, justifying high price increases. Whether you call it a survey, poll, feedback sheet or a questionnaire distributed in Allied Arcade, one person is left with the question and answer devices and questioners on a regular basis. Consumer responses are all mashed into the form of an ultimate aggregate buyer, desked out in computerese, and painted black and white for public consumption. Irrevocably the message is the same and translated freely bears a striking resemblance to “what’s good for General Motors is good for the USA.” Where have I heard that before?

All of this is a rather convoluted way of saying we are influenced by our letters. Like any corporation we receive hundreds of comments and complaints each week. And like most corporations, 90% of them find their way to the circular file with little difficulty. They’re all read, however (some are even answered), and we wouldn’t be human if we didn’t at least some of them influence our thinking. One such profound writer is the inspiration (cause for this column and his frank view of the gaming scene is reproduced below in entirety. Printing this letter does not necessarily constitute agreement with the points raised, but rather recognizes that such viewpoints exist. Our detailed response is not intended to denigrate other viewpoints or even suggest that our way of doing things is necessarily any better. It is intended merely to show our viewpoint on the subjects involved. Doubtless there are those who will write this off as more “chest thumping” on our part, but that’s the risk you take whenever you offer an opinion. Here’s John Ailen’s...
Since its release in July of 1975, TOBRUK has been surprisingly well received throughout the wargames community, although not without criticism. In general, players have welcomed the shot-for-shot, man-for-man realism of the game even when such realism tends to slow down play occasionally, as those who try to wade through scenarios Eight or Nine can attest, and most players welcome the truly innovative combat system as a refreshing change from the avalanche of games which have glutted the market in recent years. Some of the criticisms, however, are valid and well thought out and therefore deserve comment—not to refute them, but to explain further the assumptions and data behind the items to which they are directed. Perhaps by sharing these comments with all GENERAL readers, a better understanding of the game system may be achieved.

COMPLAINTS

Too Much Dice Rolling

The most common single complaint which reviewers and players alike have expressed concerns the amount of dice rolling necessary in the resolution of armor-armor combat. This was especially true before the inclusion of the AFV Initiation rule which forced players to wait until a target was within "effective range" before opening fire. There really is no solution to this problem within the shot-for-shot philosophy of the game. It has been suggested that, especially for the first scenarios where such advanced rules as Duelling and Ammunition Limits do not apply and round for round resolution is not required, a simplified combat system be used such as rolling once for each engagement and comparing the result to a required number for each target to damage it. Even in the early scenarios, however, just too much is lost in doing this. It would be difficult to allow for varying levels of damage (K, M, or F), for varying rates of fire between acquisition and continued engagement of a target, for improbable but realistic battle results such as a crew abandoning a vehicle which is not burning, and above all, more confusion would be generated by including two completely different combat systems in the game than any benefit which might be gained in the long run. Round-by-round evaluation is simply too much a part of TOBRUK to be replaced or altered without bringing on unwanted problems. Finally, it can always be asked if extra dice rolling is too high a price to pay for the realism which it provides.

There is No Terrain

A number of critics of the game have noted that indeed the desert areas surrounding the port of Tobruk are not completely flat, but are broken by low ridges which could be used for cover by AFV's in the battle. Of course this is true, although most of these ridges are nowhere near as prominent as movie scenes often portray and are really difficult to even spot. The Undulating Cover optional rule is meant to simulate the common practice by both sides of searching for and obtaining cover behind these slight ridges and please note that, with patience, entire large units can usually find it during play.

Over and over again during design and playtest of TOBRUK and its predecessors it was found that any more noticeable terrain than this caused each scenario to devolve into a battle of possession waged over the feature. In each case, little was discovered by players of the true relative value of weapons, which is what the game is all about. The only possible solution was to reduce further the scale of the playing board to allow for open space and terrain to be mixed, but this solution brought about unsolvable problems in computing artillery effectivness and tended to make the company-battalion unit scale of the game unrealistic. As before, its inclusion of the terrain was just not worth the cost.

But, there are undoubtedly those readers who find the above discussion hard to accept and for them the addition of prominent ridges can be tried. A "ridge" may be penciled on the map as follows:

with the centerline indicating the crest. If desired, several of these formations may be spotted across the map but it is suggested that only one be initially used. When several are used it is suggested that their creastlines run roughly parallel. Their effect upon play sounds simple but at the scale of the mapboard may be overwhelming. Very simply, they affect:

- Movement: All vehicle units expend two movement points for every hex totally inside of a ridge outline which is entered during movement even if this movement is parallel to the crest. Personnel units may enter one ridge hex every turn and are considered in Assault cover state when doing so, but may never run into a ridge hex. No heavy weapon unit may be manhandled onto or through a ridge hex, although man-portable units may be carried as usual. Entrenchment may be placed on ridge hexes.

And they affect:

- Combat: Any AFV unit lying on a hex containing a crestline is considered to be in partial defilade from enemy units lying on the opposite side of the crest; that is, from units lying on hexes which do not contain crestline and are across the crestline from the hexside which the unit crossed to enter the crest hex. As an example:
The Rates of Fire are Unrealistic

Several individuals have commented that the rates of fire of some large caliber weapons in the game may be incorrect. Obviously, the actual rate of fire of any weapon is a function of many variables but to include these variables in the game would have been unreasonable. The more obvious influencing factors were considered wherever possible but subjective and highly varying factors had to be ignored. These included:

- Crew-to-crew differences in training
- Fatigue build-up during long engagements
- Weapon malfunctions
- Ammunition handling problems
- Varying times and states of acquisition

If any player feels that his understanding of these effects is sufficient for an alteration of the rates of fire used in the game to be made, he by all means may do so. No highly varying part of TOBRUK or its data, especially in areas such as rates of fire, morale, etc., is claimed to be foolproof or without error and players who feel that their analysis of some number is more realistic than that used in the game can certainly use their own data during play. It might be pointed out, however, that massive research did go into every rule in the game wherever possible and any alterations of these rules should be done with care. Chart A illustrates this point for the case at hand, that of weapon rates of fire:

<table>
<thead>
<tr>
<th>Weapon</th>
<th>Published ROP's (rpm)</th>
<th>Game ROP's (Cont. rpm)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.92 ATR</td>
<td>6-15</td>
<td>10</td>
<td>Manual Feed</td>
</tr>
<tr>
<td>28/20 mm PAK</td>
<td>8-12</td>
<td>10</td>
<td>Manual Feed</td>
</tr>
<tr>
<td>20 mm BRED A</td>
<td>220-250 (cycle)</td>
<td>30</td>
<td>120 rpm practical ROF against aircraft</td>
</tr>
<tr>
<td>47 mm M19, 40</td>
<td>12-5</td>
<td>8</td>
<td>Cramped, uncomfortable two man turret hindered firing</td>
</tr>
<tr>
<td>47 mm ATG</td>
<td>7-14</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>50 mm short</td>
<td>8-16</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>50 mm long</td>
<td>8-16</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>50 mm PAK</td>
<td>12-16</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>75 mm L/18</td>
<td>4-8</td>
<td>4</td>
<td>Semovente was also cramped and uncomfortable</td>
</tr>
<tr>
<td>75 mm short</td>
<td>8-10</td>
<td>6</td>
<td>Figure of 8 rpm seemed high for support piece</td>
</tr>
<tr>
<td>76.2 mm (t)</td>
<td>10-15</td>
<td>6</td>
<td>The 10-15 range was for the ground-mounted ATG and seemed too high for the Matilda III with only a two man guncrew</td>
</tr>
<tr>
<td>75 mm LIG</td>
<td>6-12</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>88 mm FLAK</td>
<td>15-20</td>
<td>14</td>
<td>Game ROP slightly reduced due to dust (see below)</td>
</tr>
<tr>
<td>British:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55 cal ATR</td>
<td>10-15</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>37 mm</td>
<td>15-20</td>
<td>12</td>
<td>Reduced in both Grant and Stuart turrets because of two man crew (commander in Grant directed both guns)</td>
</tr>
<tr>
<td>2 pdr ATG</td>
<td>20-22</td>
<td>22</td>
<td>Tripod platform and assumed dust-free position (see below) dictated very high practical ROF</td>
</tr>
<tr>
<td>2 pdr Tank gun</td>
<td>No Data Available</td>
<td>12</td>
<td>Nowhere in the available literature were the tank-mounted 2 pdr ROP's stated, so estimates were made</td>
</tr>
<tr>
<td>40 mm Breda</td>
<td>120-140 (cycle)</td>
<td>70</td>
<td>Very stable cruciform platform allowed full &quot;practical&quot; ROF to be realized in the ground role. Very high ROF</td>
</tr>
<tr>
<td>6 pdr ATG</td>
<td>15-20</td>
<td>14</td>
<td>New weapon in Gazala battles with no prior training time reduced achievable ROF</td>
</tr>
<tr>
<td>75 mm (t) ATG</td>
<td>6-12</td>
<td>12</td>
<td>Some sources give a &quot;burst&quot; capability of 20 RPM</td>
</tr>
<tr>
<td>75 mm M2</td>
<td>No Data Available</td>
<td>6</td>
<td>Estimated</td>
</tr>
<tr>
<td>3&quot; howitzer</td>
<td>No Data Available</td>
<td>6</td>
<td>Estimated</td>
</tr>
<tr>
<td>25 pdr Arty</td>
<td>3-8</td>
<td>6</td>
<td>This rate could only be sustained for short times</td>
</tr>
</tbody>
</table>

In the above figures, note that in general ATG's were given full assessed ROP's in the game whereas AFV's were reduced. This was because it was assumed that ATG's were employed in prepared, fixed positions with anti-dust measures (oiling or watering areas of muzzle blast) in effect and therefore, no ROF reduction could be realistically expected except for the 88 whose muzzle blast was so large that any dust settling measures are assumed ineffective, while AFV's undoubtedly suffered from dust and exorbitant heat, which reduced ROF. Of interest, also note that no ROF figures appear for certain British weapons and in these cases careful estimates had to be made.

The Board is Not Geomorphic

Some people have noticed that in some scenarios the edge of the board acts as a significant "terrain" feature in much as victory or loss may be determined by how many units cross it and therefore get away. There is no general solution to this problem because in most cases the passage of large numbers of friendly units across such a line so far behind enemy positions would indeed constitute a victory. In some cases, however, such as in Scenario 2, where the curriers may get away simply by crossing the board edge and therefore escape, continuing the battle beyond the board edge may be worthwhile. It was short-sighted not to design the board sections to be geomorphic to allow for this.
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but a clumsy joining of any section to the edge in question probably will suffice for most cases and is recommended when both players concur.

The Movement Factors are Unrealistic

As in the case of rate of fire, considerable variation exists in the movement values used for vehicles in the game compared to published specifications for these vehicles. One additional constraint arose in the necessity to model vehicle rates in units of hexes per time period which really meant 75 meters per 30 seconds or 5.59 mph per hex. This required much averaging as the following table shows. As above, should any player feel that his assessment of these figures is better than those used in the game, there is absolutely no reason not to use his data during play. All figures are in miles per hour:

<table>
<thead>
<tr>
<th>AFV</th>
<th>Maximum Road Speed</th>
<th>Cross Country Speed</th>
<th>Game Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUIT</td>
<td>34-36</td>
<td>15-20</td>
<td>28</td>
</tr>
<tr>
<td>CRUSADER</td>
<td>30-32</td>
<td>12-15</td>
<td>22</td>
</tr>
<tr>
<td>GRANAT</td>
<td>22-26</td>
<td>10-20</td>
<td>17</td>
</tr>
<tr>
<td>VALENTINE</td>
<td>15</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>MATILDA</td>
<td>15</td>
<td>6-8</td>
<td>11</td>
</tr>
<tr>
<td>AMX</td>
<td>PZ III 39</td>
<td>25</td>
<td>11-12</td>
</tr>
<tr>
<td></td>
<td>PZ IV 101</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>M13-40</td>
<td>19-20</td>
<td>9-11</td>
</tr>
<tr>
<td>Semovente</td>
<td>20</td>
<td>7-8</td>
<td>11</td>
</tr>
</tbody>
</table>

Note that the game speed in general is higher than the purely cross-country figures and lower than the road rate. This was due to the assumed flatness and relatively solid surface over which most of the battles occurred. Additional items of information, such as the fact German tank attacks occurred at about 15 mph, were used to further rationalize the higher game speeds.

"Burst on Target" (BOT) is a Modern Term

And so it is, having been coined about 1954. The tactic of adjusting fire based upon observed hits, however, was universal as illustrated in the following passage from Take These Men by Cyril Joly:

"Driver, hail," I order. "Gunner, two-pounder—traverse left—on tank—German Mark III—eight five zero yards. Fire!" I watched Basset, rightfully turn the range-drum to the right range, saw him turn to his telescope and aim, noted out the corner of my eye that King was ready with the next round, and then the tank jolted slightly with the shock of the gun firing. Through the smoke and dust and the spurt of flame I watched intently through my binoculars the trace of the shot in flight. It curved upward slightly and almost slowly, and then it seemed to flatten swiftly towards the target. There was the unmistakable dull glow of a strike on steel. "Hit, Basset! Good shot! Fire again," I called. Another shot and another hit, and I called, "Good shot! But the bastard won't budge." (The Mark III later became Joly's tank.)

Certain ammunitions such as the 28/20 mm PAK APCNR round mounted nosecaps which emitted a flash upon impact to help in this sensing. The Alternating Fire Procedure Causes Unrealistic Firing

Some people have claimed that the game procedure of alternating weapon for weapon fires produces unreasonable situations in which vehicles or weapons which have not fired emerge as prime targets within a fire turn. Although these situations should average out to provide both sides with equal bonus or loss, there is no reason why players cannot secretly record weapon-target pairings in writing at the end of movement, conduct the firing based upon these plans, and allow every unit to fire. This simultaneous resolution would, of course, be very costly in terms of time, but at mutual player consent might be worthwhile under some circumstances.

The Italian Morale is too High

Morale is the single most subjective area of the game inasmuch as no really hard data exists. The common visage of hoards of Italians surrendering en masse to the British does not occur in any game scenario and this is no accident. The Italian units involved in all but Scenario 2 are drawn from the Italian XX Corps mobile divisions which were the pride of the Italian desert army. Rommel himself on many occasions highly praised the courage of these troops, and their weapons and supplies were always the best. Nonetheless, these morale estimates are no more chiseled in stone than are the ROF or speed figures and certainly any player can change them in play should he wish. The average Italian "pure infantry" unit would probably have a morale level of between ½ and ⅓ that used for game units and it is occasionally interesting to play Scenario 2, for example, using this reduced level.

There are Artwork Errors

Of course there are some artwork errors, but in general, the silhouettes are accurate down to the last knob. For purists who must know, obvious errors occur in the Stuart, Valentine, Crusader C.S., 2 pdr., 50 mm mortar, and Stuka counters.

There was No Such Weapon as the 150 mm K18 in the Desert

The author has had an interesting exchange with one TOBRUK player who, through his own research, has concluded that no 150 mm K18 weapons existed in the Afrika Korps. As to whether the weapon itself existed there can be no doubt, but the question of whether it appeared in Rommel's Army Artillery (Artilleriemandno 104) remains unresolved. Its inclusion as such in the game was based upon the assessment of the British official history, but this record is known to have occasioned the inclusion of the gun as a weapon, and this record is known to have occasioned the inclusion of the gun as a weapon, and so any facts from readers with knowledge in this area would be appreciated.

QUESTIONS:

In addition to the above complaints, many questions have been posed to Avalon Hill by TOBRUK players. Below are listed the more commonly appearing of these inquiries.

Why does APCR ammunition produce lower casualties in vehicles which have been pierced?

The piercing core of APCR is composed of sintered tungsten carbide and is of smaller diameter than a full-caliber round. Although when piercing very thick plates the APCR core will shatter like any shot and be highly lethal, this lethality still does not match that produced by APCBC rounds which explode inside the target. In addition, APCR cores passing through thinner plates in general will not shatter and may continue to fly straight through the target and out the other side. This phenomenon was often observed by gunners during the war and in such cases the lethality of the perforation was considerably reduced.

Can APCR ever be used against targets besides Matildas, Valentine's and Grants?

During 1942, shortly after the Gazala battles a severe tungsten shortage in Germany forced Hitler to prohibit the further manufacture of tungsten-ferro carbide ammunition in all but the smallest calibers. But, even before this edict went into effect, tungsten ammunition was regarded as a luxury and the tactical doctrine for its use was strictly enforced. This doctrine at first stated that only Matilda tanks were to be engaged with APCR and then only at very short ranges, but later the doctrine was expanded to cover use against any "heavy" tank. German field discipline being what it was at this time probably meant that this doctrine was carried out in the actual battle. However, APCR damage entries are made on the charts for the lighter British AFVs because it is assumed that APCR may be used against these targets whenever other AP ammo is exhausted.

The M15/40 tank was diesel powered. Why then is it so inflammable when pierced?

Most fires in AFVs occur not from stored fuel sources but from the ignition of stored ammunition or from fuel and lubricant spillage lying on the hull bottom under the firing compartment floor. Both of these key sources of potential fires are very difficult to prevent in the field; the first being a function of the ammunition storage arrangement of the vehicle and the overload doctrine of the unit to which the vehicle belongs; and the second being a function of the maintenance standards set by the
vehicle crew. The Germans were very aware of these facts and strictly enforced a doctrine of no ammo overload (which there is record that some crews ignored) and of strict maintenance (which really does not completely prevent lubricant and spillage build-up enough to stop fires upon penetration). The Indians, however, and to a lesser extent the British, were not as aware of these problems. The M13/40 was especially vulnerable having a very complex (and therefore oily) engine—drive train—turret traverse setup and having a large number of rounds of ammo crammed within its confined space.

What is the real difference between Registrations, Concentrations, and Barrages?

These three terms are modern nomenclatures for general artillery tactics which have existed since the beginning of observer-directed fire during World War I. They refer to the amount of "shooting-in" (British term) which has been done by the firing battery in the case of Registrations and Concentrations, or the immediate call for high-intensity interdiction fires for the defense of a ground unit in the case of Barrage. Registrations involve the shooting-in of only one weapon (often called the registration piece) in a battery for close estimation and the same column of the PZ IV E should read:

For those players who still have the earliest set of Damage Tables, the 'R' column on the PZ III H reads:

<table>
<thead>
<tr>
<th>WEAPON FIRING</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys ATR</td>
<td>F = 4</td>
</tr>
<tr>
<td>2 pdr.</td>
<td>K/C2 ≥ 10</td>
</tr>
<tr>
<td>37mm M6</td>
<td>F/C2(P3) ≥ 15</td>
</tr>
<tr>
<td>40mm Bofors</td>
<td>K/C2</td>
</tr>
<tr>
<td>6 pdr.</td>
<td>K/C3</td>
</tr>
<tr>
<td>75mm (I)</td>
<td>K/C3</td>
</tr>
<tr>
<td>75mm (II)</td>
<td>K/C3</td>
</tr>
<tr>
<td>75mm (M2)</td>
<td>K/C3</td>
</tr>
<tr>
<td>25 pdr.</td>
<td>K/C3</td>
</tr>
</tbody>
</table>

On the STUART Damage Table, for the 50 mm long:

- On the STUART Damage Table, for the 50 mm long APCR Flank—LH should read:
  \[ K = \frac{22}{(P4)} \leq 28 \]

- On the GRANT Damage Table, for the 50 mm long APCR Flank—LH should read:
  \[ K = \frac{22}{(P4)} \leq 28 \]

In Rule VIII, B.2., it is stated that Forward Observers do not affect the morale of other units in any way and this is incorrect. They affect all units exactly as any other HQ units do.

NEW GAME UNITS

One TOBRUK reviewer summarized the feeling of many players upon opening the box by saying that his first reaction was that much of the game was missing. He was referring to the exclusion from the game of all vehicles and weapons which have limited combat value and therefore would have served little in the game but to increase complexity. The most notable class of these units is the armored cars, but others could have been included which were in common use at Gazala but were not because the game was complex enough as it was.

For readers of THE GENERAL, however, who are supposedly dedicated enough to realism to require extra game options even at the cost of playability, listed below are the "marginal combatants" in the Gazala battles and rules for their use. Yes, others besides those listed did appear in very small numbers but until strong player response requests their inclusion, they will be ignored for now.

**Armored Cars**

Both sides in the desert war made extensive use of armored cars for reconnaissance purposes. Note they were not used very much for combat purposes because, compared to the main battle tanks and ATGs used by each side, the armored cars simply could not stand up. Speed alone cannot hope to compensate for the light armor and weak firepower of these vehicles—as inclusion of them in any game scenario or Firefight will show. For purists who choose to include the very complex "Camouflage" and "Visibility" Experimental Rules listed below, the inclusion of armored cars can make TOBRUK an even closer simulation of desert war.

In general, both sides operated armored cars separately from main battle elements and used them strictly for reconnaissance. Occasionally, there was no choice but to use them to fight the enemy's tanks—Scenario 5 in the game is a good example where an entire regiment of cars was trapped with the 150th Brigade—but losses in such encounters were usually unacceptable and so avoided.

An interesting clash often developed when one side would send an armored car unit to repecho the recon of such a unit from the other side. The basic unit of the 8th Army was the Troop consisting of one scout car (machin Gun armed) and three armored cars. Four of these Troops made a Squadron and three Squadrons a Regiment. As in the case of every other type, full-complement units were nonexistent in the battle and reduced or even scratch units were the norm.

The basic vehicles of these units at this time were the Humber Mark II, the Daimler Mark I and South African Marmon-Harrington Mark II.

**Humber Mark II**

This vehicle entered service with the British in 1941 and some were operational within the forces of smaller countries as late as the early 1960s. The car was fast and reliable, but the 15mm weapon for all its virtues was simply not powerful enough for effective combat. Realizing this, the Mark IV version of the car was up-armed with an American 37mm weapon later in the war.

**Nomenclature:** Humber Armored Car Mk II

**Weight:** 7.1 tons

**Maximum Road Speed:** 45 mph

**Flat Desert Speed:** 33 mph

**Maximum Armor:** 15mm

**Crew:** 3, 2 man turret

**Weapons:** 1—15mm Besa, 1 Besa MMG

**Use in Gazala:** Fast recon

**Comments:** Speed in reverse, 2 hexes per turn
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**Daimler Mark I**

This car is conceded by many sources to have been the most advanced armored car of World War II. It appeared in North Africa just before the Gazala campaign and displayed such features as well-sloped hard armor, a complete reverse driving capability, and most important, a 2 pounder main armament which placed its strike capability into the same class as the Matilda and Valentine heavy tanks.

- **Nomenclature:** Daimler 4x4 Armored Car
- **Weight:** 7.5 tons
- **Maximum Road Speed:** 50 mph
- **Flat Desert Speed:** 39 mph
- **Maximum Armor:** 16mm
- **Crew:** 3; 2 man turret
- **Use in Gazala:** Fast recon
- **Battles:**
- **Comments:** Good armor, weapon, speed and reliability. Very effective vehicle when used in proper role. Speed in reverse, 2.5 mph per turn.

**Marmon-Herrington Mark II**

This vehicle, in its four Marks, comprised the mainstay of South African armored car units throughout the war and was used by some British units. It was designed and built totally in the Union of South Africa with materials being imported from both Britain and the USA. Its most common version was the Mark II which proved to be a fast and reliable vehicle, but with only one boy's anti-tank rifle and one Bren light machinegun its armament was far too light for combat with its German or Italian counterparts. For this reason, numerous captured weapons were mounted instead of the normal turret and soon at least one up-armed Marmon-Herrington was expected to be included in any unit of troop size or above.

- **Nomenclature:** Armored Car, Marmon-Herrington Mk-II
- **Weight:** 6 tons
- **Maximum Road Speed:** 50 mph
- **Flat Desert Speed:** 39 mph
- **Maximum Armor:** 15mm
- **Crew:** 4; 2 man turret
- **Use in Gazala:** Fast recon
- **Battles:**
- **Comments:** Speed in reverse, 2.5 mph per turn. Often up-armed (Boys and Bren still carried) with captured weapons. Usually every third or fourth vehicle was so armed with the Italian 20mm Breda being the most common weapon mounted.

**Axis**

The basic armored car unit of the German forces at this time was the troop of three light (Sd Kfz 222) and 2 heavy (Sd Kfz 231 8-wheel) cars. Three of these troops plus one of 9 light cars comprised the Recce Abteilung of a Panzer regiment but, like every other unit in the desert, this organization often changed. No data could be found concerning the Italian unit composition but it must be assumed to have been relatively the same. The basic vehicles of these units at this time were the Sd Kfz 222 and Sd Kfz 231 already mentioned, and the Italian Autoblindo AB 40.

**Sd. Kfz 222**

This car was one of the most famed armored fighting vehicles of World War II. Produced throughout the war, it was found in all German forces essentially unchanged from its introduction to the war's end. Its 20 mm main armament could be used for both ground and air targets and placed the Sd. Kfz. 222 in good position when engaging British armored cars before the introduction of the Daimler. Some of these vehicles were given to the Chinese Nationalists.

- **Nomenclature:** Fiat Autoblindo AB 40
- **Weight:** 7.5 tons
- **Maximum Road Speed:** 50 mph
- **Flat Desert Speed:** 39 mph
- **Maximum Armor:** 9 mm
- **Crew:** 4; 1 man turret
- **Use in Gazala:** Fast recon
- **Battles:**
- **Comments:** Excellent vehicle used well by Italians and respected by British. Light armor was slight handicap. Full speed in reverse.

**Armed APC's**

The Germans would often mount redundant weapons on APC's to provide extra firepower for those units being carried. The most common weapon mounted was the 37 mm PAK due to its steady replacement by the 50 mm PAK in Afrika Korps units during this period. Inasmuch as the 37 mm PAK was not very effective as an ATG, it was left out of the published game for reasons previously.

**ARMORED CARS**

**NOTES FOR USE OF ARMORED CARS IN THE GAME**

Armored cars were used in the game exactly as are other AFVs. They are subject to the same movement and fire restrictions that tanks and self-propelled guns are with the exceptions that some may move at greater than one hex per turn in reverse (see above) and “rounds” fired by their main armament are actually automatic weapon bursts (except for the Daimler). The field of fire of every armored car turret is 360° and only one, the AB 40 has a hull machinegun and it fires over the vehicle’s rear instead of its front. The Hit Probability Table entries and Damage Tables for the armored cars are on separate sheets.

Several additions need to be made in some of the optional and experimental rules for the inclusion of armored cars as detailed in the following table:

<table>
<thead>
<tr>
<th>Car</th>
<th>Close Assault</th>
<th>Reliability (IV.G.2)</th>
<th>Towing (E.C.S.)</th>
<th>Sizing (V.I.B.1.)</th>
<th>Ammo Limits (E.D.2.)</th>
<th>Victory Points (Fireights)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sd.Kfz. 222</td>
<td>As Marder</td>
<td>11</td>
<td>As Quad</td>
<td>As Stuart</td>
<td>36 (AP or HE)</td>
<td>6 2 6</td>
</tr>
<tr>
<td>Sd.Kfz. 231</td>
<td>As Tank</td>
<td>10</td>
<td>As Sn. Kfz.</td>
<td>As Pz III</td>
<td>36 (AP or HE)</td>
<td>8 2 8</td>
</tr>
<tr>
<td>AB 40</td>
<td>As Tank</td>
<td>10, 12</td>
<td>As Sn. Kfz.</td>
<td>As Stuart</td>
<td>40 (AP or HE)</td>
<td>4 2 4</td>
</tr>
<tr>
<td>Humber</td>
<td>As Tank</td>
<td>11</td>
<td>As Sn. Kfz.</td>
<td>As Stuart</td>
<td>60 (AP only)</td>
<td>8 2 10</td>
</tr>
<tr>
<td>Daimler</td>
<td>As Tank</td>
<td>11</td>
<td>As Sn. Kfz.</td>
<td>As Stuart</td>
<td>46 (AP only)</td>
<td>8 2 7</td>
</tr>
<tr>
<td>M.H. Mk.II</td>
<td>As Tank</td>
<td>12</td>
<td>As Sn. Kfz.</td>
<td>As Stuart</td>
<td>24 (AP or HE)</td>
<td>5 2 7</td>
</tr>
</tbody>
</table>

Note that the quoted ammo limit for the Marmon-Herrington Mk. II only applies to vehicles which have been up-armed with 20 mm Breda weapons as mentioned previously.

Note that the cars are not vulnerable to fragmentation because all are assumed to mount tires of the bulletproof or “run-flat” type.
stated. As it remained in some units as a ground weapon (see below) and was mounted on a fair number of APC's, it will be included here.

The 250 and 251 series APC's both mounted the 37 mm PAK as the 250/10 and 251/10 models respectively. They were issued in theory to every platoon leader and companies commander but nowhere near these levels of deployment were generally achieved. In the game, an allocation of perhaps one or two of these vehicles out of every ten APC's involved is probably about right for the Gazala timeframe. As an option, players may wish to designate these vehicles to carry the 28/20 mm PAK instead. These versions also were appearing during this time but not in the same numbers as the vehicles carrying the 37 mm PAK. Rules for the use of these armed APC's are exactly the same as those for the Marder. For simplicity sake, assume the main armaments of the vehicles may only be used by personnel being transported and assume a baseload of 30 rounds (AP, APC or HE) for the 37 mm PAK or HE for the 28/20 may be carried in each. Optional Damage Tables for both the 250/10 and the 251/10 are presented separately as is the Hit Probability row for the 37 mm PAK.

**Tracker AFV's**

Several tanks and self-propelled guns which actually were used in the Gazala campaign by the Germans were purged out of the game, again for simplicity. However, readers might be interested so they are included here. As for armored cars and armed APC's, Hit Probability Table entries and Damage Tables for these vehicles are included on separate pages.

**Pz. Jag. 1B**

This vehicle was the first SPG to be adopted by the German Army and a number were still in use in the desert during the Gazala battles. Using a Panzer I chassis, the Pz. Jag. 1B mounted the excellent Czech 47 mm ATG whose performance roughly equaled the 50 mm short. Yet, the vehicle was handicapped by very thin armor and no machine guns. It did, however, serve well until superseded by the Marder. When used in the game, all Marder rules apply to the Pz. Jag. 1B as well except as noted below.

**Nomenclature:** Panzerjager 1B  
**Weight:** 5.7 tons  
**Maximum Road Speed:** 24 mph  
**Flat Desert Speed:** 17 mph  
**Maximum Armor:** 15 mm  
**Crew:** 3, 2 man gun position  
**Weapons:** 1-47 mm (t)  
**Use in Gazala Battles:** Tank destroyers  
**Comments:** Excellent Czech ATG jury-rigged onto Panzer I chassis. Very light armor and open top limited use but weapon could be effective.

**Pz. IV F2**

This tank, the Panzer IV “Special” is listed as part of the Afrika Korps reserve at the beginning of the Gazala Battles in May of 1942. Over the next six months it developed into the prime weapon of the German forces but its use at Gazala appears to have been forestalled by ammunition shortage until the final attack on Bir Hacheim and beyond. It therefore should not be included in any Scenario before 8 and then included in very small numbers, if at all. The tank itself was described as “magnificent” by Rommel and mounted a German long barrelled 75 mm weapon which was roughly equal to the Russian 76.2 mm piece on the Marder. Unlike the Marder, however, this vehicle was heavily armored all around and greatly eased supply problems by being an all German design. Modified late model Pz. IV's were used until very recently by Syrian forces and East German factories produced parts for them until the late 1960's!

**Nomenclature:** Panzerkampfwagen IV Model F  
**Weight:** 23.2 tons  
**Maximum Road Speed:** 25 mph  
**Flat Desert Speed:** 17 mph  
**Maximum Armor:** 50 mm  
**Crew:** 5, 3 man crew  
**Weapons:** 1-75 mm L/43, 2 MG34/42  
**Use in Gazala Battles:** Main battle tank  
**Comments:** Best tank in desert before appearance of Churchill but Sherman was good match at El Alamein and beyond. Very powerful main armor coupled to well-armored and reliable chassis insured immediate success.

**NEW WEAPONS**

Several weapons which were widely used by the Germans or Italians at Gazala were left out of **Tobruk** for various reasons. Like the armored cars and AFV's listed above, these weapons were only marginally effective as their inclusion in any game will show. Perhaps the only exception to this is the PAK 36 ground-mounted 76.2 mm Russian weapon, the same as on the Marder, which seems to have been deployed fairly widely throughout the Afrika Korps.

**20 mm Solothurn ATR**

This weapon was the standard light infantry anti-tank weapon of the Italian forces in the desert. Unlike its German and British counterparts, however, the Solothurn was cumbersome and heavy and really fitted into the class of a light ATG.
75 mm Italian AAA

This weapon was a medium velocity (1500 ft/sec) piece whose use in ground actions was only marginally successful but nonetheless widespread. The Germans would often place several of these weapons in positions with 88 mm FLAK guns and use them in the same way. Before the Alamein campaign, considerable numbers of these weapons were mounted on truck bodies for providing some mobility inasmuch as the normal mount had no mobility at all.

Nomenclature: Ansaldo 75 mm/26 AAA
Weight in Action: 4.5 tons
Crew: 7 men
Ammunition: AP and HE
Rate of Fire: 12 rpm
Comments: Not very lethal in use as anti-tank gun but constantly employed in this role to bolster 88mm FLAK defenses. Lack of mobility and low rate of fire further limited use. Refer below for use in game.

76.2 mm Russian Anti-Tank Gun

Due to the massive German victories in Russia during 1941 and 1942, large numbers of these weapons and much ammunition was captured intact. With typical thrift, the German army immediately put the weapons back into use on all fronts and even modified them for improved performance. One such modified version appeared in Africa with the Afrika Korps and was used extensively. For example, the organization plans for the 90th Light Division for the summer 1942 campaign lists no less than 56 modified 76.2 mm weapons distributed through the division's combat elements. How many of these weapons were mounted on self-propelled chassis is not known, but some certainly must have been towed. It was probably an error to have left the towed version out of the original TOBruk release.

Nomenclature: 7.62 cm PAK 36 (r)
Weight in Action: 3364 lbs.
Crew: 8 men
Ammunition: APCBC, APCR and HE
Rate of Fire: 14 rpm
Comments: Modified Russian Field/anti-tank gun. Low carriage, lightweight and high rate of fire. Designed to be used as prime equipment throughout the war.

37 mm PAK 35/36

This weapon was the standard ATG in use by German forces until its replacement beginning in 1941. Inasmuch as hundreds had been built by this time, however, no thought could be given to scrapping them and so they were used wherever their marginal utility could be realized. This meant that they could be found throughout German units being towed or mounted on any suitable chassis such as the 250 or 251 APCs (see above). In these configurations the PAK 35/36 served until the end of the war and so should have been included in the original release.

Nomenclature: 3.7 cm PAK 35/36
Weight in Action: 970 lbs.
Crew: 6 men
Ammunition: APC, APCR and HE
Rate of Fire: 14 rpm
Comments: Standard ATG throughout war although small hitting power limited use after 1941. Later in war special hollow charge stick grenade provided to increase anti-aircraft effectiveness.

150 mm SIG

This weapon was the companion piece to the 75 mm LIG in German infantry regiments, being usually deployed in a ratio of two to every six 75 mm weapons in the regimental cannon company. Like the 75 mm it was attached whenever necessary to any unit requiring direct support and could provide very effective fire due to its large, heavy shell.

20 mm FLAK 30 and Sd. Kfz. 10/4

World War II German units of all echelons were protected from air attack by FLAK weapons and supporting equipment which were usually organic to division. For example, the 90th Light Division had a total of 36-20 mm FLAK weapons, the 15th Panzer Division had 4-88-mm, 5-37-mm, and 16-20 mm FLAK weapons and so on. Although as always, the exact composition of any division FLAK element was never completely according to tables of organization and equipment, considerable effort was expended to assure that light coverage in the form of 20 mm guns, medium coverage through 37 mm weapons, and heavy 88 mm protection was usually available to all units in the desert. These weapons were often used to bolster the firepower of ground units and the 88 became legendary in this role. The 37 mm and 20 mm weapons were also often used for support and it was again probably an error to have left them out of the published version of the game. However, as players will undoubtedly notice if they do include them in play, their lack of protection and low hitting power severely curtail their use and so their inclusion should not radically change the outcome of any game.

Some effort was made throughout the war to provide these and other FLAK weapons with mobility through mounting on halftrucks. In the case of the Sd. Kfz. 10/4 (for the 20 mm) and the Sd. Kfz. 7/2 (for the 37 mm) vehicles, this effort may have been counter-productive due to their vulnerability to rifle-caliber and shelling inasmuch as they were unarmored. Use of the towed and self-propelled 37 mm and 20 mm FLAK weapons is explained below.
NEW EXPERIMENTAL RULES
Many possibly interesting experimental rules were left out of the game on purpose due to the extra complexity they would have caused. For GENERAL readers, however, the extra complexity may be acceptable and so these rules are presented here. A word of warning; the inclusion of many of these rules, and especially the Camouflage and Visibility options, may make a full TOBRUK scenario far too complicated for the average player and so it is recommended they be employed only in selected firefight games at first.

MISCELLANEOUS RULES
Light Density Minefields and Lanes
The minefield counters used in the game represent very densely laid areas and this is why they are so difficult to cross. Often, however, time or availability of mines forced infantry units to lay fields of much less density which were still almost always marked but which could be crossed fairly safely. To put this into the game is simple and interesting. At the beginning of play, the defender is allowed a certain number of minefield counters varying in density at mutual player agreement. On the back of each counter the field density is penciled in the form of the die roll above which must be rolled for attempted passage of the hex to be successful. Each counter is then placed on the board by the defender with this number concealed until a passage is attempted.

Also, most minefields contained secret lanes through which the laying side could safely pass. To allow for this in the game simply assume that any friendly unit may pass through a friendly mined hex after stopping for one full turn before entering it.

Camouflage and Concealment
The camouflaging of weapons was critical to desert survival but due to its extreme complexity no rules were presented in the game to allow for it. For serious players, however, the inclusion of these rules will radically improve the overall realism of the game. Players may, during the initial set-up, conceal any large weapon in a weapon pit, or any ATR, MMG, or mortar in any hex containing entrenchments. The location of such concealed weapons must be recorded in secret and the weapon and crew may be removed from the board.

Exposure only occurs when the weapon fires or whenever any enemy unit comes within "spotting" range of its position. These ranges are:

<table>
<thead>
<tr>
<th>Type of Weapon</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATR, MMG, or light mortar</td>
<td>1 hex</td>
</tr>
<tr>
<td>Medium mortars</td>
<td>2 hexes</td>
</tr>
<tr>
<td>20 mm FLAK, 28/290, 20 mm Breda, or 37 mm PK</td>
<td>3 hexes</td>
</tr>
<tr>
<td>47 mm (1) ATG, 50 mm PK</td>
<td>3 hexes</td>
</tr>
<tr>
<td>76.2 mm PK</td>
<td>6 hexes</td>
</tr>
<tr>
<td>75 mm LIG, 2 pdr. ATG, 37 mm FLAK</td>
<td>8 hexes</td>
</tr>
<tr>
<td>6 pdr. ATG, Bofors AAA, 150 mm SIG</td>
<td>8 hexes</td>
</tr>
<tr>
<td>25 pdr. Artillery, 75 mm (E) ATG</td>
<td>10 hexes</td>
</tr>
<tr>
<td>88 mm FLAK, 75 mm AAA</td>
<td>10 hexes</td>
</tr>
</tbody>
</table>

In a similar way units behind optional crest lines may be removed from the board until spotted.

Visibility
As in the case of Camouflage, adding visibility to the game entails complexities that may be unacceptable to many players. Visibility did play a significant part in the desert battles.

To use, assume that any unit beyond visible range may be fired upon or identified. Players may use blank counters to cover units and thus hide their identities.

<table>
<thead>
<tr>
<th>Scenario Number</th>
<th>Visibility Range (Hexes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Firesuits</td>
<td>24</td>
</tr>
</tbody>
</table>

INFANTRY RULES
Crawling
Infantry units may approach a position at the Crawling movement rate and in that cover state. The rate is one hex per two turns and the cover state is the same as Stationary.

Morale Loss Under Artillery Fire
Personnel units undergoing artillery bombardment are naturally shaken. To simulate this in the game, it is suggested that personnel be fired upon for effect with artillery or mortars at or below 105 mm in size lose one morale point per unit and those receiving above 105 mm fire for effect lose two points per unit.

Breaching the AT Ditch
Personnel units could breach AT ditches by blowing in their sides with explosives. To allow this common tactic in the game might be desirable. In play, assume that any infantry group of at least 20 men may blow in the walls of an AT trench hex (turning it into a hedgehog hex) by remaining for ten turns in the hex and not engaging in firing or melee. After breaching, vehicles may move through the AT trench hex in the same manner as minefields.

WEAPON AND ARTILLERY RULES
Barrier Barrage
Often in the desert war even AFV units would be forced to stop in front of an extremely heavy artillery fire zone although the chances of them being damaged by it were remote. This event may be simulated in the game by assuming that any hex which has been subjected to 200 fragmentation factors or more of indirect artillery or mortar fire during the indirect phase of a turn may not be entered by any unit during the next movement phase.

Airburst 88 mm HE
The 88 mm FLAK weapon was the only gun on the board to possess large time-fuzed HE ammunition for the engagement of aircraft. Often, these rounds were used against ground targets set to explode in the air—a very deadly tactic. To allow this in the game simply assume that an 88 may fire airburst HE against any target anywhere on the board after one turn of "ranging" rounds in which no damage is done. The airburst rounds produce much less fragmentation as the normal 88 mm HE round but they will reduce Full Cover to Good Cover for all units which are not in ACV's, bunkers or blockhouses, and they will not produce direct hits.

Dust Reduction of ROF
As mentioned previously, it was assumed in the game that all dug-in (in weapon pits) weapons were assumed to adopt anti-dust measures to prevent obscuration upon firing. When moved into the open, however, considerable dust would be raised by any large caliber weapon discharge and this may be reflected through a reduced ROF. In play assume that any weapon firing outside of a weapon pit has its ROF reduced by one-half, rounded down. This does not apply to AFV's, ATR's mortars or rifle caliber weapons.

Mortar OP's
When using the Camouflage and Visibility rules below and other occasions, situations may arise where mortar weapons would not be able to directly see a target. In these cases, allow any infantry HQ unit to act as a mortar forward observer for any friendly mortar. This is historically accurate for participants in the desert conflict.

ARMOR RULES
75 mm HEAT Ammunition
During the Gazala battles the Germans introduced hollow charge or HEAT rounds for use with the 75 mm short weapon on the Pz IV and with the 75 mm LIG. If used, it is suggested that very few if any dug-in vehicles (tank, tankette or weapon pit) be allowed in the game. The Damage Tables for all AFV's do not include 75 mm HEAT entries so they are summarized in a special table.

Reduced ROF Beyond Effective Range
Whenever AFV's and ATG's engaged targets beyond their "effective range" (by definition in the game, beyond the range where an unadjusted Hit Probability Number of "8" or better is required), it was usual practice in the desert for both sides to sense the full of shot to avoid wasting ammunition. To simulate this it is suggested that no target may be engaged (by AFV's or ATG's) beyond the unadjusted "8" range at higher than the firing weapon's initial ROF until the target is hit.

Field of Fire
This is a very strange sounding rule which may be of use in some scenarios. Its purpose is to prevent the running of personnel units from one state of full cover to another without being engaged by enemy units in the area. In this rule, any unit may indicate a straight line "field of fire" from itself through any hexes at the beginning of the movement phase of a turn. Any enemy units crossing or entering a hex containing part of the field of fire may be engaged by the firing unit at full acquisition ROF at whatever cover state exists within the hex crossed or entered. Naturally, units laying fields of fire in a turn may not fire except against enemy units crossing or entering the field.

Crew Intimidation
As in the case of personnel units, vehicle crews helpless in the face of overwhelming odds would often be forced to surrender. In this rule, this situation may be brought about for crews of M-and E-killed vehicles whenever their morale level is brought to zero exactly as in the case of Intimidation of Personnel.

Smoke Projectors
All AFV's in the game including the armored APC's and armored cars carry smoke projectors or candles for self defense. They were used in the real desert battles for providing a short smoke screen to allow the vehicles to retreat and this is how they may
be used in the game. Whenever a vehicle is forced to leave the board due to casualties or firepower damage, it may lay one smoke counter in any hex through which it moves to retreat from the board. The smoke may only be laid once, lasts two turns as artillery smoke, and affects play in the same way.

HE Hits on AFV's

In the standard game it was stated that the HE ammunition fired by the Crusader C.S. and 75 mm LIG weapons was ineffective except in achieving R or TR hits. In reality, however, this is an oversimplification. HE ammo from any weapon has some capability for damaging most AFV's. With the addition of the lighter armor this damage evaluation becomes important and so will be presented here. All HE results listed in the following table are for each round hit or burst hit.

If players include most or all of the above-listed Experimental Rules, TOBRUK should represent a nearly complete representation of desert war as revealed in historical accounts.

HE HIT DAMAGE TABLE

<table>
<thead>
<tr>
<th>Target</th>
<th>HE Round</th>
<th>FUH</th>
<th>FLH</th>
<th>FTUR</th>
<th>GM</th>
<th>SUH</th>
<th>SLH</th>
<th>STUR</th>
<th>RH</th>
<th>RTUR</th>
<th>R</th>
<th>(WH) TR</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hummer</td>
<td>20mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>28/20mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>37mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>M</td>
<td>F</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>47mm and above</td>
<td>K/C3</td>
<td>K/C1</td>
<td>K/C2</td>
<td>K/C2</td>
<td>K/C3</td>
<td>K/C1</td>
<td>K/C2</td>
<td>K</td>
<td>K/C2</td>
<td>K/C2</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Daimler</td>
<td>20mm to 26/20mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>37mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>47mm and above</td>
<td>K/C3</td>
<td>K/C1</td>
<td>K/C2</td>
<td>K/C2</td>
<td>K/C3</td>
<td>K/C1</td>
<td>K/C2</td>
<td>K</td>
<td>K/C2</td>
<td>K/C2</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>M.H. MK. II</td>
<td>20mm to 26/20mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>37mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>M3 Honey</td>
<td>20mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>37 to 50mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>M</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>75 to 88mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>F</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>150mm</td>
<td>C2(P4)</td>
<td>M(P2)</td>
<td>F(C2)</td>
<td>F</td>
<td>K/C2</td>
<td>K/C2</td>
<td>K/C2</td>
<td>F</td>
<td>K/C2</td>
<td>K/C2</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Crusader</td>
<td>20mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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Although STALINGRAD has been thoroughly discussed in many past issues of the GENERAL, one aspect of the game lacks a thorough summary. There have even been articles on German strategy: on historical variants, design analysis, and a summary of defensive techniques. But only a few articles have even eluded to the numerous offensive techniques available to the astute attacker when playing Stalingrad. Many players call these “offensive tactics” or “dirty tricks”. I call them a summary of experience and using the rules to the best advantage.

Probably the best way to introduce offensive techniques is through an analysis of the Combat Results Table. But probability is boring to many people and several articles have already been written analyzing the CRT. The results of this analysis stress 3-1 or better attacks with 1-3 soak-offs, 3-1 or better attacks guarantee the attacker will take the position, 1-3 soak-offs guarantee the best chance for the least loss to the attacker. Unfortunately, the more STALINGRAD becomes analyzed, the more the defender will find ways to prevent a German from using the 3-1, 1-3 strategy. Obviously, the 3-1, 1-3 strategy will work against beginners players but the more STALINGRAD becomes a “tournamnet” game at the conventions, the more you will find that your opponent is an intermediate level or expert STALINGRAD player.

In effect, the attacker is looking for three results on the Combat Results Table. He wants to take an enemy position, eliminate enemy units, and minimize his own losses. Based on these objectives, there is a priority of results that he must strive for. In order they are DELIM, DBack 2 or Exchange, ABack 2, and AElim. A strict analysis of just the CRT does not take into account the actual situation on the board. In effect, by properly attacking, the offensive player will find that he can change many DBack 2 results into DELIM results, or ABack 2 results into DELIM results (effectively an attacker advance). The trick is where to find the weakness in the defense. The purpose of this article, then, will be to show some punch holes into the offense, to turn a result that gives no advantage to the attacker, into a result that gives the advantage to the attacker. Admittedly, each of these techniques can be stopped. But in many instances, by threatening everywhere, the attacker can force the defender into a weak position and then capitalize on it.

There are four ways (that I have found so far) to take advantage of DBack results. Almost any player worth anything knows the first way: to use a 3-1 or better attack against a doubled position, advance after combat, and surround enemy units. The surrounded units are then either attacked at 3-1 or better odds or must counterattack in their turn at poor odds. Figure 9A shows an example of part of a novice player's opening Russian set-up. Not only has he left the German player 3-1 but he has also assured the loss of Brest by giving the German player an advance after combat. Normally, players of this quality are not found in conventions after the second round. So this situation will rarely occur. Figure 9B is similar to a recent contest in the GENERAL and is a good example of utilizing the advance after combat in conjunction with other attacks to take Moscow. Experienced players should be able to recognize the weakness of this situation immediately.

CHANGING DBACK 2'S INTO DELIM'S

1. USING THE ADVANCE

FIGURE 9A-I In this opening set-up position two units are poorly positioned: the 5-7-4 next to Brest-Litovsk should be attacked at 3-1, the 2-3-6 should be attacked at 1-3 or 5-1 (with a 1-3 soak-off against the 4-6-4). Appropriate soak-offs are made against the 7-4-5 and 12-7-4's. Note that although 1-3 is the best possible soak-off in terms of loss ratio, the German should not risk 5-5-5 unless he has to — they are very valuable units. Note that the 5-7-4 with the 2-3-6 will advance after combat against the 5-7-4. Similarly the 2-7-6 will advance after combat against the 2-3-6. In effect Brest-Litovsk must be surrounded.

FIGURE 9B-I In this position the F-7-6 is attacked at 3-1 and retreated to hex MM22 by the retreat path indicated in the illustration. German units then advance after combat and the Russian unit is eliminated in its combat phase.

2. USING THE PIN

A variation of the advance after combat is the pin. In effect this technique is a single attack that will surround an enemy unit: by retreating it properly, then advancing after combat. Figure 9A shows the standard second turn defense of the northern Nemunas hexes by many intermediate Russian players. It is 3-1 proof but not impenetrable. By taking a small risk (10 factors) and using the pin attack, a 1-2 becomes as effective as a 1-1 in eliminating the 7-10-4. Later in the game, as the Russian player loses units, he will become hard-pressed in either the north or south. In many games the situation as pictured in figure 9B occurs. Again the pin is used to turn a DBack 2 into a DELIM. The Russian unit is retreated to the hex indicated. German units advance and the Russian unit must counterattack at poor odds in its turn, resulting in its elimination.

3. USING THE WEATHER

One of the most dramatic methods of changing a DBack 2 into a DELIM when playing the Russians is to use the weather. Nothing is more enjoyable than retreating a German unit onto Lake Ladoga during a snow game-turn and watching it thaw if the lake thaws next turn. Admittedly, the best time to use the weather attack is during snow in March. April is a sure thaw turn and the unit will drown. Even an attack in February is useful because of the probability that the lakes will thaw in March. The situation illustrated in figure 9C occurred in a PB M game and is a perfect illustration of how to use the weather attack.

FIGURE 9C-I In this position the 5-5-4 is attacked at 3-1. If it retreats it is retreated to hex MM31 and will not be able to reach Stalingrad if the weather is poor (snow). If the weather changes to mud or clear the unit drowns, eliminating it.

4. USING POOR TERRAIN;

STRATEGIC ELIMINATION

The last method of changing a DBack 2 into a DELIM is very subtle. A player must understand that by pushing a unit into the “boondocks” that he has effectively strategically eliminated the unit. The poor terrain attack uses mountains, swamps, and the sea. The retreated units are either eliminated next turn, isolated, or rendered useless because of their position. Figure 9D renders the Russian unit useless by retreating it into the Crimea, though it is
sorely needed in the south. Figure #4b isolates the Russian unit by retreating it into the mountains in Hungary. And figure #4c uses the Pripyet Marshes to prevent the 7-10-4 from reaching Minsk and preventing a 3-1 on the city next turn.

Note that all of these techniques can be used with low odds attacks, effectively changing 1-2's into 1-1's since a DBack 2 becomes as useful as a DELim. The only difference is that the attacker risks less factors in an AElim.

5. USING OVERSTACKING

The only technique that I know of that will change ABack 2's into DBack 2's (gain terrain) was explained in an early issue of the GENERAL. The illustration in that article rarely occurs now since good players understand the technique and have compensated for it in their opening set-up. The most useful application of the overlapping attack usually occurs during the first winter when Russian mobility is lacking and there are few Russian units available to counterattack. Figure #5a uses the

CHANGING ABACK 2's INTO DRACK 2's

6. USING EXCHANGE ATTACK FACTORS AND 1-1's

Previously mentioned in Vol. 2 No. 5, p. 5 of the GENERAL, 1-1's can be used to break river lines, mountain ranges, and city positions. The attacks are riskier than 1-2's but offer many more rewards if they work. The technique involves attacking a hex of a river line at 1 with just the right units available for exchange. The remaining units can then advance after combat. Figure #6 illustrates the advance after 1-1's. Note that one large 1-1 is made, not 2 small 1-1's since the reason for the attack is to advance after combat. Probability favors the single attack since the Russian player would be able to counterattack at basic odds if only one attack succeeded, still holding the river line.

LESSEN YOUR LOSSES

7. USING 1-2's IN THE OPEN

Since exchanges benefit the Germans when they attack, 1-2's against a non-doubled position (in the open) can be used in an attempt to eliminate Russian units and/or terrain. Against two 4-6-4's or 4-6-6's the German player could attack with a 2-2-4 and a 4-4-4. In an exchange the Russian player must lose both units (twelve defense factors) while the German player loses six defense factors. Against two 5-7-4's, a 3-3-4 and a 4-4-4 will give the same effect. Against three 4-6-4's, nine attack factors are needed. Note that the same effect is not achieved with ten factors attacking two 5-7-4's and a 4-4-4. Obviously, 1-2's are risky but when you need to take risks to eliminate Russian units, 1-2's in the open are sometimes the best attack.

8. USING 1-1's IN THE OPEN

A variation of attack #7 is the 1-1 attack in the open, using just the right units for an exchange. Against two Russian 4-4-4's, the German should attack with three 4-4-4's. An exchange will not only take the 4's and give a better benefit ratio to the German (eight defense factors to twelve). The same effect occurs when two 5-7-4's are attacked by two 5-5-4's and a 4-4-4. Any stack in the open that is
stronger than this, however, is usually too strong to
be attacked at 1-1 from one hex. The German player
will need to use his valuable panzer corps in the
attack and infantry is more expendable because of
attacks will need to use his valuable panzer corps in the
than the greater threat offered by the German
stronger than this, however, is usually too strong to
player can prevent these attacks would be to
position. The Russian player will force
Russian player will err
the momentum. In this way the German player does
not lose the game because he fights against the laws
as well as his Russian opponent.

USING THE INDIRECT APPROACH
Of the eight attacks mentioned in this article, attacks #7 and #8 can least often be prevented by the
player. The only way that the Russian player can prevent these attacks would be to
allow numerous 3-1's against his position. Allowing 2-2's and 1-1's in the open is
often the Russian player will make a
minor error, giving the German player a chance to
use one of the other attacks that have been
mentioned. However, just blind luck that the
Russian player will err is no way to play the game. A
good German player will force the Russian player into a
position where he will give up one of the
attacks, or he must retreat. This forcing of the issue is
the purpose of the indirect approach.

Many articles have been written on the indirect
approach, but few examples have been included in
STALINGRAD articles. In a nut shell, the indirect
approach stresses German panzer corps in a
centralized position where they can attack as
many positions as possible on the next turn. Thus killer
packs are needed, behind the lines whenever they are
not being used for a specific attack. A "good" killer
panzer army would include four 8-8-6's, three 6-6-
6's, and two 5-5-4's. This combination of units can
successfully attack (at 3-1) a single doubled 5-7-4
from two hexes, a doubled 6-9-6 from three hexes
(with one soak-off), or a doubled 7-10-4 from three
hexes (with no soak-offs). Not only is the combinaiton
of units perfect for the attack, but it is also
perfect for the exchange. Thus the indirect approach
stresses centralized panzer reserves and counting
combat factors.

Another aspect of the indirect approach involves
certain "key" hexes on the mapboard. Hex Y24 can
only be "3-1 proofed" using both 7-10-4's—
otherwise the river line can be broken. This fact
leaves fewer strong units for the Russian player to
use to defend in the south during later stages of the
game. Hex AA22 is an excellent position to place
units perfect for the attack, but it is also
perfect for the exchange. Thus the indirect approach
stresses centralized panzer reserves and counting
combat factors.

WHEN TO TAKE RISKS
The final point of this article is to discuss when
the German player must take risks to win the game.
Obviously, if the Russian player is a novice,
the German player will never have to take risks. He can
win the game by surrounding units and attacking at
3-1 or better with 1-3 soak-offs. More often than not
the Russian player will prevent 3-1 attacks by
properly positioning his units, sacrificing only one or
two 2-3-6's per turn.

Now the German player is faced with a problem.
When should he take risky attacks—1-2's, 1-1's, and
2-1's? Obviously, these attacks must be made just at
the right moment, and not too often, just enough to
maintain the momentum. Experienced players say
that the more you play the more you learn when to
take risks. Even though you may think this is
passing the buck, it's the truth. There are some
guidelines, however.

You can obviously take risks early and make or
break the game early, but a more effective method is
to attack a few, selective, positions during the first
few turns, before the Russians get reinforcements
and/or 1-1's in the open; and a few, very few, 1-
2's or 1-1's or (ech!) 2-1's to break river lines or city
defense lines. The best time to take risks is during
the first winter when the Russian player lacks the
mobility to sufficiently plug up holes in the line. And
the most important turns in the game are February
and March of 1942 when the weather changes. An
effective break in the Russian line during those turns
will win the game for the Germans. Due to the
change in the weather and the fact that the Germans
move first. The Russians have no mobility to plug
up holes if the Germans have all the mobility to
exploit them.

THE GENERAL

COMMENT ON FIGURES #7 and #8–The purpose of the indirect
approach is to threaten 3-1 attacks on the turn after and, therefore,
take ground. The position listed in figure #7 is the position after
the Russian September 1941 move. Mud was rolled for October 1941
and snow is the weather for November. Figure #8 shows the German
October 1941 move and the resulting Russian move. Units were
placed in the north to perform three missions, every unit was moved
to the position shown for a purpose, to threaten a 3-1 attack an
enemy unit, or penetrate terrain. As a result units were forced to pull
back from Riga. The defense along the Divina was predictable and
forced the Depero defense shown in figure #8. And the objective of
the move was to make a pair of 1-2's against hexes FF29 and G912 to
change any

AREA TOP TEN

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The above players represent the 10 highest
verified (11+ rated games) of the 3,000 member
AREA pool. Players with an opponent qualifier
less than 1 were not calculated among the top
player ratings.

The "Times on List" statistic is considered as
"Consecutive" times on list. If a player slips off
of the Top 10 for any length of time his next
appearance is considered as his first.
The enjoyment of most wargames can be greatly increased by “blinding” them—that is, forcing each gamer to play the game with very limited knowledge of his opponent’s deployed sector. Even if the attacker can be easily arranged by separating the two players by a screen and having each one play on his own mapboard, play being regulated by an umpire. Many players have at one time or another experimented with various forms of blind gaming. The general idea in most versions I have seen is always the same: players use the standard game rules with only such modifications as are necessary to blind the game. At the beginning of his turn a player is told the positions of any enemy units that he can see. He then moves and fights according to the normal rules with umpire interference only when he blunders into an unseen enemy unit. A frequently played blindgame is SNIPER!, whose sighting rules are readily adaptable to blinding.

Blindgames offer far more excitement and realism than standard games. You cannot appreciate how much you have learned until you sit down behind the dividing screen and let your imagination go to work. The enemy lurks behind every tree and rock. You’re never quite sure what he’s up to, and you keep nervously checking your flanks and rear. I’ve derived great satirical pleasure from blindgames with beginners by frantically shuffling my biggest and meanest tank unit all over the battlefield, presenting my opponent with brief glimpses of my actual dispositions. The tactic accomplishes little of immediate military value, but the groans of confusion and frustration are hilarious.

The greatest enjoyment in blind games comes only after you have played a few and you realize that your opponent is every bit as blind as you are. This realization opens up a whole realm of new possibilities. Tactics that are idiotic in regular games offer opportunities for victory in a blindgame. You can try to sneak around your opponent’s flank, or you can attempt a sudden coup de main on a critical position. You can feint in one direction while thrusting in another; you can even attempt a pure bluff. All of these strategies can work in a blindgame.

More importantly, a blindgame can successfully simulate one of the most important and most neglected aspects of military operations—the fog of war. Few gamers seem to realize the crucial role played by limited intelligence in real warfare. Let us consider, for example, two pillars of modern military operations: the blitzkrieg armored offensive and the mobile defense. No wargame I have ever seen begins to adequately simulate these operations. Try to pull off “Siehschmitt” in FRANCE 1940—it doesn’t work. Try to eneicle your opponent’s forces in WAR IN THE EAST—it can’t be done against a competent player.

War in the East is a free kriegspiel. Both the blitzkrieg and mobile defense because both of these operations are built around limited intelligence factors. The blitzkrieg has three stages: 1) the secret massing of troops at the schwerpunkt; 2) the destruction of the enemy line at the schwerpunkt; and 3) the lunge by armored formations deep into the enemy’s rear areas. In the most successful blitzkrieg this lunge has always been a straight ahead, to-hell-with-the-flanks affair. Obviously, a blitzkrieg couldn’t get off the ground in a full intelligence game; the defender would see the build-up and reinforce the salient. Even if there were some line he could breach the line (a very rare occurrence in most games), he wouldn’t dare lung his armor forward. The defender, knowing his exact positions, could easily crush the breakthrough.

Similarly, the mobile defense is a pointless exercise in full intelligence wargames. Theoretically, the mobile defense requires the existence of armed reserves which can swing against the exposed flanks of a developing penetration and ease it in while it is still vulnerable. The battle’s outcome is normally determined by speed—can the attacker complete his breakthrough and bring infantry into the flanks before the defender’s armored reserves arrive? The Wunderwaffe of 1941/44 was considerably quicker than its Russian opponent, and thus was frequently able to defeat Russian penetrations, despite its numerical inferiority. Only when they had no mobile reserves left did their mobile defense fail. All of this cannot be simulated in a full intelligence game because the attacker would not lunge his tanks forward unless he knew that the defender would not be capable of cutting them off. Why should he stick his neck into a noose? The same thing applies to the defender. Why bother having reserves when you know exactly what the enemy is capable of doing. Stuff that armor into the line where it’ll do some good. It’s terribly unrealistic, but it’s standard practice in full intelligence games.

Blindgames offer one other possibility which, so far as I know, has not been explored by many gamers. Every blindgame requires an umpire; this umpire must be intimately familiar with the rules of the game and is probably a very skilled player himself. Yet the umpire’s responsibilities in a blindgame are limited to checking sighting and spotting, and resolving combat. His vast talents are being wasted. Should we not utilize these talents by giving the umpire more decision-making responsibility? I propose that we permit the umpire to make the rules rather than merely apply them. I propose that we allow him to determine on a case-by-case basis combat results, terrain effects, supply, morale, movement, and all the other factors normally laid out in the rules.

The idea of allowing an umpire to apply a military judgment to a situation rather than merely enforcing somebody else’s rules is not new. A hundred years ago military wargamers were debating the relative merits of free kriegspiel versus rigid kriegspiel. Rigid kriegspiel, the predominant system at the time, utilizes a large and complex set of rules which regulate all aspects of the game. The umpire’s role in such a game is merely to apply the rules. Rigid kriegspiel requires lengthy calculations and suffers from a lack of realism because no finite set of rules can truly simulate reality. Free kriegspiel is an effort to solve both of these limitations. In free kriegspiel, players are allowed to attempt any action they think reasonable; the umpire then determines the result of that attempt by applying his judgement to the situation.

Most players will immediately recognize that all of the commercial wargames currently on the market are rigid kriegspiel games. They have an absolute set of rules which are complicated and not particularly realistic. I am proposing that players bring free kriegspiel into civilian gaming.

There are objections to free kriegspiel. Free kriegspiel is arbitrary; important decisions are made at the whim of the umpire. Free kriegspiel is unpredictable in that the player does not know what the umpire will do; the player does not know the capabilities of his own units or even the rules that the umpire is using! A lot of players are put off by these uncertainties. They feel that they should know everything about their own units as well as the exact rules that the umpire is using. After all, how can they play the game if they don’t know the rules beforehand?

This insistence on knowing all is common to many wargamers. While freely admitting that the fog of war prevents them from knowing the dispositions of their enemy, they will steadfastly delay that the same fog of war applies to their own people. These players should study military history more closely; most military operations have been plagued by frequent errors and misunderstandings within the respective armies. Many a general has lamented that getting his own troops under control was harder than fighting the enemy. A classic example of this internal fog of war is provided by Napoleon’s Waterloo campaign. The invention of the radio went a long way to decrease the internal fog of war but the gains so made were for the most part nullified by the expansion of the combat zone, the decreasing density of troops on the battlefield, and for an increasing speed afforded to battles by motorization.

The fog of war is so pervasive that a commander cannot even know the capabilities of his own units with certainty. How can he be sure that his tanks can match precisely 8 hexes every day? The road might be cratered, or the crews might be tired, or maybe the fuel won’t get up to the tanks on schedule. Once the unit gets into combat, there’s no telling how hard it will fight. The same men who were demons yesterday might be lethargic today. Who can tell? Certainly not the guy who writes the rules.

Ultimately, the argument over how much a player should know boils down to a philosophical difference over the purposes of wargames. I tend to view a wargame as an enjoyable way to simulate history with a friend. Many players, however, treat wargames as a battle of wits between opponents. If I may digress for a moment, I would suggest that those who hold wargames to be tests of intellect belittle their ineffectiveness. In a serious match, the outcome of a game is usually decided by experience with the game-system rather than intellect. When equally experienced players meet, the outcome is usually decided by minor slips. I have played too many wargames to win by either winning tricks or using the radio. Despite this, there will always be a sizable group of people who play to win. These people will never appreciate free kriegspiel because it strips victory of any objective significance. Players whose main interest lies in having an enjoyable, intriguing, and realistic game will find the above objections insignificant. Indeed, the loose atmosphere of a free kriegspiel game encourages players to stop worrying about winning and to concentrate on good playing.

There do exist strong arguments in support of free kriegspiel. Foremost among these is the aimless, improvised realism argument—the blindness of free kriegspiel games vastly improves the realism of the simulation. But free kriegspiel provides realism over and above that provided by blindness. The open-ended nature of free kriegspiel permits the umpire to simulate reality as closely as he wishes. Moreover, the never-ending freedom of free kriegspiel games can make themselves felt in free kriegspiel. Crews can tire, one woods hex can be more thickly wooded than another, traffic jams can develop—the list of possibilities is endless. Furthermore, these minor details can be had without an extensive set of rules; the umpire applies them as they crop up. The umpire is "dirt" to a regular game can be "color" to a free kriegspiel game. Furthermore, free kriegspiel offers more room for variance than a rigid game. The umpire can juggle combat strengths, movement...
rates, or anything else he deems appropriate. Under these circumstances the game becomes less locked in; a player cannot rest assured that 3-1 surrounded is a sure kill. There's always the nagging possibility of something going wrong, and that keeps players honest.

Another big advantage of free kriegspiel lies in what it lacks—rules. Rules that don't exist don't have to be studied and memorized. It normally takes me 3-5 hours to familiarize myself with a particular set of rules and perhaps another 10 hours to master them. That's a big time investment! With free kriegspiel, that investment is unnecessary; a player can concentrate on playing the games rather than reading the rules. Furthermore, the elimination of rules destroys what is in my opinion the bane of wargames—entire artificial set of victory conditions? I don't know, but the very existence of a small set of victory conditions is enough to ruin the utility of an elimination of victory conditions. How many times have you found yourself in a situation in which you completely dispense with the standard rules. The umpire makes up a scenario, individually briefs each player on his situation and mission, and regulates the game. Players are free to attempt anything they want; the umpire determines the outcome. At this stage the aforementioned problem involving the player's desire to know more than the umpire is willing to tell can become severe. The natural tension associated with his brilliancy can make some people testy, and friction with the umpire is a common occurrence during this stage. The only solution I have found is the adoption of the absolute rule: "The umpire is always right, so don't argue with him." Eventually the problem iron itself out, after a player has experienced the frustration of umpiring he tends to be nicer to his umpires.

A special problem arises from every umpire's nice-guy instincts. Nobody should ever get plastered in a game like this so if one fellow is losing, give him a few reinforcements and maybe throw those decisions his way to even it out. Golly, this really is a sweet gesture but it makes very bland games—nobody can win. I remember a game in which my armor overran a weak position and raced halfway across the board to seize most of my victory objective—all on the first turn! The rest of the game saw me pulverizing the enemy infantry clinging to the remnants of the objective. I threw everything I had at them and inflicted huge casualties, but never enough to finish them and secure the objective. The umpire should have allowed the game to end quickly and had us start over.

The choice of a game for free kriegspiel should be made carefully, for an initial disaster will color all future efforts. Those unfamiliar with blind gaming should probably start with tactical games. These games have low unit counts (a great aid to the novice umpire) and benefit enormously from the blind treatment. I know of some professionals who have applied to the platoon level games. The unit density is still within the capabilities of the fledging umpire and the games have enormous potential with the free kriegspiel treatment. The complexities inherent to tactical combat may prove difficult, but an umpire with a certain amount of experience can normally feel quite safe. Operational level games are difficult for an umpire to run blind because of the high unit density but fortunately the mechanics of an operational situation are easily grasped. With careful work an operational game can be successful under free kriegspiel.

I shall close this article with two minor notes on mechanics. First, inasmuch as any blinded game requires two sets of boards and counters, there exists the possibility of counters from different games being mixed together. The culprit here is the umpire, who rushes to board A while still clutching counters from board B. He lays them down, forgets from where they came, and you've got problems. This mess is easily avoided by forbidding the umpire to pick up counters. Let him point.

Another problem is silence. All three participants want to be aware of the fact that the conversations between umpire and player contain valuable information for the other player. The novice umpire must be particularly careful to word his conversations so that they carry no significant military information. It infuriates a player to have his intact plans given away by a blabbermouth umpire.

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RUSSIAN CAMPAIGN

Variant Counters

(2) - 4  8 - 8  3 - 5  4 - 5

TOBruk Expansion Unit Counters

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All of the "Official Tournament Rules" listed on page 15 of the rulebook are in effect; both sides are at top morale.

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The winner will be the solution that guarantees the elimination of the most Persian units. (It's possible to get them ALL, but it's very tricky). No unit may enter a shaded hex for purposes of the contest. The Companion Cavalry is considered to be in melee with both the Bactrian and Indian Cavalry. The solution with the greatest probable kills will win between ties.

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**Unit Moved**

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**Final Hex Facing**

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**Unit(s) Attacked:**

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**Issue as a Whole...** (Rate from 1 to 10, with 1 equating excellent, 10 terrible)
Don Greenwood performed the development chores for WAR AT SEA and between prepublication testing and post-publication ignore at the hands of his wife has probably logged virtually dozens of WAR AT SEA games.

BRITISH TURN 1

At first glance the preponderance of British ships would indicate an easy win for His Majesty's navy. Yet, analysis of the starting forces reveals that the British can guarantee parity in only 3 of the 6 board areas. This gives the Axis an average of 2.5 POC on the first turn. By my reckoning, the British can afford to give up only four areas total (not counting the Med or Baltic) throughout the game and still expect to win. Any more erratic rendering of POC will probably doom the British to defeat. My choices on the first turn are threefold: 1.) to defend the three areas, and in the next turn try to enforce a blockade by controlling both the Barents and North Sea in force, thus granting the Axis a sizable first turn lead. 2.) Try to take the Mediterranean, in which case the Germans will be forced to make more daring excursions into the Atlantic to compensate for the point loss, or 3.) take 4 areas and risk being knocked out of one in the first turn.

The first choice is the safest as the Germans would be foolish to risk a major defeat to their fleet when there are plenty POC to pick up at no risk. The drawback is that it gives the Axis an early POC lead without risking a single piece. This in turn allows him to build up his fleet for greater strike potential later in the game, and thus makes it easier for him to gain the extra two or three areas he needs to insure victory. The second choice is very risky as the British can suffer severe damage at the hands of the Italian fleet which is landlocked inside the Mediterranean anyway and can be practically ignored if pursuing a strictly Atlantic strategy. It does have the advantage of practically forcing the Italian fleet to do battle at poor odds where a major British victory may result in 2 POC for the Mediterranean every turn of the game. It also tends to force the issue with the Italian cruisers which will be unable to move through a British controlled Mediterranean on turn 2. The third choice gives the British a POC advantage if opposed on both areas. If I am able to knock out 2 or more ships, I will have severely limited future German possibilities. In many ways the number of ships contending for an area is more important than the relative strength of those ships. Generally speaking, yes, 1-1-7's are much more likely to win a battle than two 4-9-6's as the German battleships can fire on only two targets per round of combat. Thus my strategy early in the game will be to destroy as many of the German ships as I can. Should he counter I will concentrate on his light ships with surface gunfire and his big ships with my air attacks. If he gains an advantage in the first round of combat I'll attempt to disengage. I can't lose any more POC if he holds three areas, and if he chooses not to risk combat I'll have gained maximum POC on the first turn.

GERMAN TURN 1

To a certain extent, this game will be a test of the "Fuzzy Wuzzy Formula" method of calculating the real combat value of units in a game. This method was explained in an earlier GENERAL (Vol. 13, No. 3) with a specific explanation of its application to WAR AT SEA; as the German player I plan to rely on it heavily when deciding whether to come out and fight.

The British are trying to box the German fleet in; when the British try this (especially on the first turn), the paramount German concern must be to maintain the mobility of the German fleet, the British can safely defend two areas, so the Germans must maneuver so as to be able to threaten three.

Assuming reasonably even losses, the British will always be able to maintain superiority in two areas throughout the game, but they will have to stretch to defend three. Consequently, the key-stone of German policy must be to threaten at least three areas each turn. This British setup on the first turn is therefore extremely threatening; they are threatening to box the German fleet in from turn 1, before the Germans have France as an alternate base. As a result the Germans must maneuver to free themselves; breaking this British blockade is the first matter of importance. (This ignores the Mediterranean, where the British dare not venture until they have made careful preparations to overcome the powerful Italians.)

To break the British blockade the Germans must either escape to the South Atlantic - winning the battle there - or win in either the North Sea or Barents. The South Atlantic scheme suffers because it will split the German fleet - the powerful Bismarck and Tirpitz will be blocked in Germany as they enter the game, and the German fleet will be unable to rejoin except in the North Sea under the guns of an alerted and superior British fleet. The Barents, on the other hand, is a fortunate area in which to fight due to the German air coverage there offsetting Allied carrier strikes.

The only other consideration - trying to gain the upperhand in ship kill ratio - is not tempting to the Germans, since their fleet is weak in killing ability before the arrival of the big battleships. They do have to be careful of getting into an even attrition battle, however, in which the British would pull ahead in ship-kill ratio.

Examing the Fuzzy Wuzzy numbers for the British deployment, the British are weakest in the Barents - thanks to the failure of the Queen Elizabeth to make it there - in both battle-winning and killing ability. Attacking there, the Germans should have a 3:2 advantage in both with the added advantage that once the battles against the British the Germans should be able to pick off stragglers and increase the British loss. So we strike in the Barents! For such a crucial battle, the free point in the Baltic will be ignored - the whole fleet will sail, with U-boats in the van. This gives up something in the strategy U-boat war - statistically, probability dictates the U-boats will take casualties with even remaining in the area, but every additional chance for victory is worth taking when the whole fleet is at stake. The U-boats would probably be ineffective in any area, given the British set-up; if they weren't needed to help the fleet, their best bet would be to just wait and build up strength this turn. But they are needed. The Italians have split to hold the Mediterranean and offer the fewest targets to the inevitable British airstrike; the point being to prevent attack of more than two of the more mobile cruisers.

BATTLE STRATEGY - The U-boats will be committed to rid the Barents of the Ark Royal before air strikes are launched. The German air strikes will be used to hit the main British battle line in hopes of disabling a major surface vessel. 3:2 odds is no guarantee of success, after all! We will ignore the Ark Royal during our airstikes and during the first round of surface combat. We want to sink the Ark Royal in the interests of the U-boat war, not spare her with some silly "disabled" that drives her back to port after having done all the damage she can.

BATTLE OF THE BARENTS SEA -

ASW: The British have 9 dice rolls and manage to sink 1 U-boat and disable the other two.

AIROSTRIKES: The Ark Royal contingent hits Gneisenau, Scharnhorst, and Blucher; disabling the former. The German land based air attacks the Hood, Renown, and Repulse; sending the latter back to Britain.

SURFACE COMBAT:

Attacker - Target - Fire - Results

Hood Scharnhorst 5,5,3,1 Disabled
Renown Blucher 5,4,1 Disabled
3 cruisers Hipper 4,4,3
Scharnhorst Hood 6,6,1 4 hits
Speer Hood 2,3
Blucher Renown 6,3 Sunk
Scheer Renown 5,2
Lützow Renown 3
Hipper Sussex 1

The British, finding themselves on the wrong end of a 7:4 firepower ratio disengage in two
separate groups; the Sussex staying with the crippled Hood while the Suffolk and Exeter cover for the Ark Royal. The German pursues both groups, sending the Hipper against the 3 ship carrier force while his slower pocket battleships engage the Hood.

ROUND 2

Attacker - Target - Fire - Results
Hood, Sussex Spee 6,4 Sunk
2 cruisers Hipper 5,4 Disabled
Scheer, Spee Sussex 6,4,1,2 Sunk
Lutzow Hood 6,1 Sunk
Hipper Exeter 2

MEDITERRANEAN -

AIRSTRIKES: British land based air has great success vs. the Italians sinking the Andrea Doria and damaging the Pola.

GERMAN POST BATTLE COMMENTS

Having lost both of my battlecruisers to "disabled" results, it was necessary to concentrate on the British battleships first - with acceptable results. The British attempt to disengage left me with too good an outside chance against the Ark Royal to pass up. Although the odds in this particular pursuit are definitely in the British favor, the fruits of a German upset are just too much to ignore. If I can roll two "4", "5", or "6's" before he can roll one or 6 the Ark Royal is forfeit.

Analyzing the just completed turn through the medium of Fuzzy Wuzzy point losses we find that the Germans lost 13 battle points, 5 killing points; British 34 and 25 respectively; Italians 14 and 12. The Germans have gained outside the Mediterranean but the situation there is still strong enough to deter the British. POC: +1 Axis.

NEUTRAL COMMENTARY -

The British player's grasp of the overall strategic necessities of the game is basically correct. All 3 of the general strategies he has outlined are viable. Unfortunately, his execution of those strategies leaves something to be desired.

I am a proponent of the conservative approach whereby the British secure the North and South Atlantic and the North Sea on the first turn and then move to complete the blockade by adding the Barents Sea on the second turn. This not only limits the German area of operations but also costs him the chance to use his first turn airstrike. I am not sold on this strategy however as it nearly forces the German to conserve strength and only delays the date of the decisive battle when the two antagonists will eventually tangle to determine the outcome of the game. The strategy of luring (or forcing - dependent on your point of view) the German to give battle early is definitely a good one. Equal attrition of forces may well be the best British strategy so my comments will be limited to the implementation of the strategy, rather than the course of action pursued.

Attempting to send the Queen Elizabeth to the Barents wasn't an unfortunate choice. Whenever the British player stretches his forces to cover 4 areas he is giving the German a better than even shot somewhere. He can't afford to lose a single ship prior to combat. This is especially true on turn 1. At least after turn 2, ships which fail the two area voyage to the Barents can base in Russia from where they are guaranteed passage into the Barents on following turns. The failure of the Queen Elizabeth to arrive made the Barents an overwhelmingly easy choice for the German player. If you are trying to force the German into giving battle by covering all accessible areas you want those areas to be as equally divided in strength as possible, given allowances for those areas you must hold and those you mind losing least. The British player did not take into consideration that the Barents was a more tempting target due to the quality (speed) of the ships which defend it, the availability of German aircover, and its importance in the blockade of Germany. The Queen Elizabeth should have been dispatched to the North Atlantic and all 8 cruisers sent to the Barents where they were guaranteed to arrive. This would have made the Barents the most powerful battle winning force on the board. With 18 firepower factors spread over 11 vessels (not counting the Ark Royal) it is unlikely the German would have entered the Barents. If the German is to risk ships in a near even fight he needs to get POC for his trouble and a venture into the Barents against this force might well leave him with both ship losses and a POC deficit.

This leaves the German player with roughly 3 even choices when you consider the probability dictates that one of the 2-2-5's shouldn't make the Atlantic. The South Atlantic is made the weakest area for a reason. Disabled ships will be forced to a neutral port and subject to possible entrapment on turn 2. In any case, barring successful refueling at sea, the German fleet will be divided on turn 2. In any case, you can take solace in the fact that
he is losing at least one POC by not leaving anyone behind to garrison the Baltic. The battles offered are all probable German wins — yet they are against slow, heavy British ships with plenty of killing power. It is unlikely that a German first turn force engaging any of these groups will escape unscathed as nearly happened here. The 4-4's can not only mete out punishment but take it as well and are apt to be saved, albeit damaged, by "disabled" results. These forces are much better suited for the battle of attrition the British seek to wage than the sleek forces sent to the Barents. To steal an overworked phrase, the Germans are likely to win the battle but lose the war. But under any circumstances, if a ship is to be taken out of the battle before it arrives — make the German take the chances, not the British. Remember, he's the one being blockaded.

My disposition has two seeming drawbacks — a weaker ASW defense and increased chance of carrier loss to surface action. Both alleged drawbacks are deceptive. All areas still have an ASW strength of 7 which is enough to inflict casualties. It is worth an occasional POC to keep the U-boat fleet down in numbers. Once built up sufficiently, they can wreak havoc with any blockade. Better to deal with them now piecemeal than be confronted later with a full strength undersea arm. Tempt him to commit them prematurely. The carriers can all be hit on the first round of surface combat due to a lack of screening ships, but the matchups are not so one-sided that the British couldn't win a battle or inflict more losses on the German fleet if fire is diverted from the British battleline to sink the carriers. British Fire should be aimed at the fastest German ship to enable carriers a chance to escape in later rounds.

Given the British player's unfortunate set-up, the German response is entirely correct. To do other than attack the Barents would be an unforgivable omission. The decision to strip the Baltic of a garrison is probably correct in view of the probable need of another first ship to pursue the Ark Royal. However, the German player is subject to criticism for his wasteful disposition of the U-Boats. Probability dictates that they will be of no use against 9 ASW factors. The battle is neither so close or crucial as to justify this premature thinning of the ranks. The U-Boats should not have been committed, but rather built up for their inevitable strategic use against the blockade. Some argument could be made that the German should have switched some of his fire onto the Ark Royal after observing the relative ineffectiveness of the British fire, but that is largely a matter of conjecture.

The British decision to disengage with only 2 cruisers in support of the Ark Royal is not as dumb as it looks on first inspection and can't really be criticized in light of what transpired. It is in a sense an "upping of the stakes." Having lost the first round of the engagement, the British player is daring the German to pursue into an uneven battle hoping to finally sink a German vessel. The rewards of success are so high that the Hhipper correctly follows. A justifiable gamble for the German and an acceptable one for the British only because it did not backfire. Leaving the Sussex behind increases the Hood's chances of survival by dispersing German fire. Together, they manage to take down the Graf Spee before both are sunk. Both players are guilty of faulty gunnery direction here in my estimation. The German would have looked mighty foolish had his 2 shots on the Hood yielded a "disabled" rather than another hit. All 6 shots should have been placed on the Sussex, insuring a maximum salvo on the crippled Hood in the third round. The British player, for his part, would have increased the Hood's chances of survival had he split his fire on two ships rather than concentrating on the Graf Spee. The increased chance of sinking the Spee with a second shot is miniscule (5%) and does not offset the advantage lost had he rolled a combination of two "5's" and/or "6's" (an 11% probability).

In summation, both players have made two errors of judgement in the opening round with the British strategic placement far outweighing German mistakes. Yet, the results of the first turn are indecisive. An effective airstrike on Italy has resulted in overall losses which are a veritable toss-up and considering the British goal of attrition — almost cause for celebration despite the superior quality of the British losses. It is still either player's game, but Turn 1 belongs to the German even though no knock-out punches were thrown.

BRITISH TURN 2 —
Unfortunately, I got only one kill in the Barents which was not enough for the sacrifice of 3 ships, although the Italian airstrike has evened the losses somewhat. I would rather have had the kills against the Germans however. I still am tempted to hurt him in the Barents by sending up a large force but have chosen to wait until turn 3 when I can base in Russia and will have the services of the Russian fleet. I dislike giving him 3 free areas, but I think it
best to wait a turn before attempting to retake the Barents. I'll have most of my reinforcements in by turn 3 and will be ready to retake either the Med or the Barents.

GERMAN TURN 2 -

The British are contesting only two areas that the German fleet can get to, and in both the British would have superiority in both battle-winning and ship-killing ability. The Germans can not afford to sortie into such strength and will be content with the open areas for this turn. Even the South Atlantic is defended enough to make most air-surface sorties and U-boat attacks unattractive; the U-boats will build strength and the Italian fleet will split to minimize the effects of the British air strike.

The British attack against the old Italian battleships portends British incursion into the Mediterranean in the near future. POC: +2 Axis; Total: +3 Axis.

AIRSTRIKES: The British land based air attacks the Fiume, Giulio Cesare and Cato Dullio with no effect.

NEUTRAL COMMENTARY - There is little to criticize. The German would be a fool to venture against this stacked defense and the British player is quite correct in waiting until turn 3 before entering the Barents. However, the arrival of his third turn reinforcements is more than offset by the German's gain of the Tirpitz and another U-boat. The important gains are the availability of the Russian port and the possibility of a sortie by the Russian Baltic fleet. The loss of 3 fast ships in the Barents last turn will hurt. When the inevitable swing north must take place.

I can't believe that the British player is seriously considering contesting control of the Mediterranean after his first turn. The only time to even contemplate that is during the 4th turn after 3 very successful air attacks. Without punches thrown, this turn is a draw.

BRITISH TURN 3 -

I've split my blockade force into 3 areas, one being the Barents rather than the Med to take advantage of the Okt. Revolutia. I can get a maximum of +4 POC if he doesn't enter the Baltic so I'm sure he'll send at least two ships there. This still gives me the Barents and +1 POC for the turn. The German can't get much stronger while I can. He may wait a turn for full U-boat potential but I doubt it as not utilizing the German fleet at full strength is wasteful. He may well decide to wait a turn until the Baltic is cleared. I've tried to distribute my strength so that if he does attack, the Barents will be his first choice and if successful he'll gain the minimum point advantage.

GERMAN TURN 3 -

My strength ratio is at its most favorable point and as the British are trying to contest the Barents this could well be the turn of decision. The British get as much to the Barents as probability would allow one to expect. The loss of the Barham leaves him with 19 attack factors out of a probability of 18.5.

The British strength is evenly divided between the three areas I can reach with the German fleet. With no long-term advantage to be gained in the North Atlantic, that area is not attractive, so the German choice lies between the Barents and the North Sea. The British are weaker in the Barents, and their faster ships are at stake to boot; that is the place to attack. The German ships have lost a 2:1 advantage in battle-winning ability and about 3:2 advantage in ship-killing. The U-boats would almost certainly be wasted in the Barents - too many ASW points - and there's a better use for them anyway. This looks like a good turn to go after the South Atlantic. If the U-boats and the Italian cruisers; the odds are better than 3:2 against an Italian win, but victory will pay big dividends. In addition, a U-boat should survive to deprive the British of Control of the South Atlantic and enable the Italians to escape later - possibly to the North Atlantic.

Once more with a crucial battle at stake I'll have to give up the Baltic. I want to minimize the effect of the British air attack in the Med by giving him only one weak ship to attack. Admittedly, this leaves the unfortunate possibility that he can return all the Italians to port and rob me of my POC for the Med but the odds of this happening are about 170:1. The presence of the Italian fleet is worth the risk; I am now actively pursuing a strategy of maintaining a favorable ship-kill ratio.

BATTLE IN THE SOUTH ATLANTIC

ASW: The British have a 9 ASW rolls but succeed in eliminating only 1 U-boat. The three remaining subs fire twice on the Ramilies and once on the Courageous with no effect.

AIRSTRIKES: Planes from the Courageous & Eagle attack 3 Italian cruisers, sinking the Zara.

SURFACE COMBAT:

Attacker - Target - Fire - Result

Ramilies - Pola - 6,6,5,2 Sunk
Norfolk - Gorizia - 4
Dorsetshire - Fiume - 2
Fiume - Dorsetshire 6 - Sunk
Pola, Gorizia - Norfolk 5

The Italians disengage and are not pursued by their slower adversaries.

SECOND BATTLE OF THE BARENTS

AIRSTRIKES: Planes from the Formidable and Victorious have remarkable success attacking the 4 largest German vessels and administer 2 hits on the Bismarck, 4 on the Tirpitz and 2 on the Scharnhorst. The Norwegian based Luftwaffe does almost as well attacking the Duke of York, King George, and Prince of Wales scoring 2 and 5 hits respectively on the latter vessels.

SURFACE COMBAT:

Attacker - Target - Fire - Result

King George - Blucher - 5,5,4,4 Disabled
Repulse - Prinz Eugen - 6,4,2 Sunk
Essex, Suffolk - Hipper - 5,1,1 Disabled
Prince of Wales
Duke of York, Gneisenau - 5,5,4,4,3 Disabled
Cumberland
Devonshire - Scharnhorst 1
Gneisenau, King George 2
Scharnhorst
Tirpitz - Repulse, 1,4,4,6 Sunk
Lutzow - 5,6
Bismarck - Duke of York, 2,4,5,6 Sunk
Scharnhorst 3
Prinz Eugen - Suffolk 5
Blucher - Cumberland 3
Hipper - Devonshire 4

The British carriers and cruisers disengage and leave the crippled Prince of Wales to her fate. The Germans, all fast ships disabled, can only pursue the Prince of Wales. The badly damaged Scharnhorst does not pursue. The Prince of Wales goes down before the massed fire of 12 German volleys but scores an additional 5 hits on the Tirpitz for a total of 9.

MEDITERRANEAN AIRSTRIKES: British land based air attacks the three Italian battleships at sea and scores two hits on the Littorio.

GERMAN POST BATTLE COMMENTS -

The exchange of airstrikes weakens my ability to win the battle - my odds drop to just over 10:1 - but, strangely enough, my ship killing ability is increased relative to the British. After the British 1st round it is clear that the carriers will get away. To attack the extra carrier I have to attack every British ship of the line - and Prince of Wales might escape, disabled. I would rather guarantee the battle and concentrate on crippling British surface strength.

He has disengaged as I expected. I don't want to risk the Scharnhorst in pursuit, but he had to get very lucky to sink the Tirpitz (a 2.5% chance), so she'll pursue and perhaps draw away. The German might well sink a pocket battleship. POC: O; Total: +3 Axis.

NEUTRAL COMMENTARY -

Despite the stand-off in POC, this turn has been a disaster for the British. Six of their fastest vessels were lost including 3 prize battleships. The Axis losses (2 Italian, 1 German cruiser) are insignificant in comparison. Although the British have maintained their carrier (and thus ASW) strength, they are fast losing the ability to stand up to the German in a surface battle. The 13 hits of this turn could have halved the German strength style for awhile but will not prevent the Germans from fielding an almost perfect fleet on turn 5 - in plenty of time to contest the passage of 2 of the vital Murmansk convoys.

The British have only themselves to blame for their present situation. Their misfortune as their disposition invited disaster even had the Barham arrived on station in the Barents. A much safer move would have been to abandon the North Atlantic and reinforce the Barents with all the cruisers and three 4-4-4's. Those 4's which failed to make station this turn could have been harbored in Russia and been guaranteed in the Barents for all future turns, releasing some of the faster ships for duty elsewhere. The Ark Royal should reinforce the North Sea with the Resolution and Royal Oak dispatched to the South Atlantic. This gives the British a decisive edge in all 3 areas and complete the German blockade. Even if the Germans sortie to France they are still blockaded and the British need fear only subs in the North Atlantic on turn 4. Discouraging an encounter on Turn 3 makes sense as the Germans are practically at the zenith of their strength while the British can still look forward to substantial fleet gains and Allied support. To finish the above placement I would withdraw the Oktiabrsky Revolutia from the Baltic. The German has no easy targets - why give him one.

This move gives the German 3 more POC for a POC lead of 6. But this is the last turn that he will be given an area free. He will have to fight for the rest at even or worse odds. If the convoys get through they should provide a narrow victory. If the German enters into a major battle and loses, the victory could be more pronounced. Continually giving the German his choice of available battle sites in hopes of extracting even
attrition seems to be a losing proposition - especially after losing parity on the initial attempt.

Given the British disposition, the German reaction is only half correct. Another favorable battle in the Barents against the fastest enemy ships is too much to pass up and I agree that the German fleet shouldn't be split to deal with the Russian incursion. However, handing the Allies 2 POC when an easy solution is available is unacceptable. The German U-boats can guarantee that the Allies do not control the Baltic and will suffer only .16 probability of a single boat loss (as opposed to 1.5 in the South Atlantic), while guaranteeing 3 shots at the Okt. Revolutia. This move not only saves 2 POC but serves to conserve U-boat strength for more important battles against the British blockade.

Putting the U-boats into the Baltic forces withdrawal of the Italian from the South Atlantic, but this move was ill advised anyway. As the German player himself confirms, chances of an Italian victory in the South Atlantic are slim and regardless of the enormous fruits of victory this is not the time to gamble. The Germans hold a small but marked edge at this point in the game. Gambling on long shots is not the way for a leader to maintain his lead. By sacrificing the Italian cruisers so early in the game, the German is losing the real benefit of these ships - their threat value as a force in being ready to pop into the South Atlantic and siege 3 POC at any time. The cruisers tie down more British resources by simply existing than they can ever hope to destroy in battle. Taking the chance of removing this threat so early in the game in a battle so one-sided is a poor move, especially in light of the need for the German subs in the Baltic, and the German player's professed strategy of maintaining a favorable ship kill ratio.

The move of the Italian cruisers looks even more foolish in light of the half-hearted Axis efforts to press the attack despite very poor British ASW attacks. Had the Ramilles been disabled, the chances of Italian success would have been better on round two than they were at the outset of the battle. It is difficult then to explain the Italian fire on the Norfolk as other than belated recognition of a strategic mistake.

As to the battle in the Barents only 1 error stands out clearly. The German, having seen the British first round fire, recognized that the British carriers were going to escape again. I think he was correct in choosing to ignore a shot at one of them in the interest of concentrating fire on the British surface fleet. That way he practically guaranteed his own fleet from further damage. Carriers, without proper screening, aren't worth a great deal in WAR AT SEA. The British, on the other hand, were foolish to take their last gasp shot with the Prince of Wales on the Tirpitz. The chance of sinking an undamaged pocket battleship is exactly 4 times that of the Tirpitz once the needed hit is rolled. They also would have increased their own minuscule chances of survival by firing on one of the undamaged pocket battleships. As events transpired, this decision saved the German a ship.

Both players used some faulty judgement, but the German got in a knockdown punch. Turn 3 goes decisively to the German.

**BRITISH TURN 4**

My losses in the Barents would be acceptable if I had caused more than minimal damage to the Germans. I'll go into the Mediterranean this turn for two reasons. The heavy damage sustained by his major capital ships enables me to get away with a smaller blockade force. Furthermore, if I can control the Med this turn it will guarantee the British a decisive victory. Turn 3 would愚蠢 that the needed hit is rolled. They also would have increased their own minuscule chances of survival by firing on one of the undamaged pocket battleships. As events transpired, this decision saved the German a ship.

Unfortunately, I was unable to get enough ships into the Med; the Royal Sovereign, Revenge, and Anson all turning back to England. And for the second time Queen Elizabeth failed to make station in the Barents. The inability to gain any American or Russian support this turn didn't help matters. Yet, this is as weak as he's liable to get for awhile so now seems to be the time to take my last gamble at evening the odds.

**GERMAN TURN 4**

The Allies, seeing the direction of the war, seem to be abandoning the British cause. At this point the Fuzzy Wuzzy strength ratios are 1:1 in both battle ability and killing power, just against the Germans! With the Italians, the strength ratio is just about equal. He better stay out of the Med!

Well, the British are certainly gambling. Clearly, he has his eye on France - his force in the North Sea is strong enough to deter me, especially with its enormous ship-killing strength - he'd outnumber me 3-2 in ship-killing even while I outnumber him (barely) in battle winning ability.

My problem is repairs. Tirpitz can't put to sea for two turns, and it simply isn't wise to risk Scharnhorst when she probably would be sunk by any hit. Committing the Scharnhorst would give me a 2:1 ratio in battle points in the Barents
but in ship killing ability the British would be almost equal. I'm doing too well to let the ship-kill ratio slip away from me by even attrition. It is fortunate that he moved the convoy back to the US.

So it looks like the Germans will have to plan on moving into the Atlantic this turn, which means that steps will have to be taken to prevent being blockaded in whatever port I return to. I'll have to return to France and use the U-boats to free the South Atlantic, or I'll have to return to Germany and send the U-boats to the Barents. Since my large German ships will have to repair in Germany anyway, I'd have to split my fleet with the big ships blockaded in Germany. On the other hand, freeing the Barents will give me fewer POC. Furthermore, the Barents might be able to fight off the U-boat attack, with luck, while the U-boats should strengthen the Italian cruisers enough to control the South Atlantic. There are three areas I can free - South Atlantic, North Sea, or Barents. The U-boats will probably succeed in any of these areas, but the British are strongest in the Barents and the North Sea is always a more desirable target. I could try for the South Atlantic but with the Italian cruisers so weak I could easily fail to pick up the POC anyway; and I want the Italians to seal the doom of the Mediterranean fleet anyway. Relying on the South Atlantic would mean that my sortie ships in France would have to return to France to be free - and then the German fleet would be split, since the big ships must repair in Germany. It is far better to free the North Sea: then with my fast sortie ships in France I can threaten FOUR areas next turn, with a nearly intact fleet.

THE GENERAL

Attacking his fast ships is beginning to pay dividends. The failure of most of the British fleet to make it to the Mediterranean, gives me a chance to nail him to the wall. All Italian ships will sail for this fight: damaged, cruisers, whatever. For my sortie I want only fast ships; otherwise, somebody might get turned back to Germany and tempt him into bombing, possibly delaying my repairs. They'll return to France. With Tirpitz eating up enormous amounts of repair, only two ships can repair in Germany this turn so we'll deprive him of any third target and move into the Baltic in force. The German side is getting the best of all worlds: repairs, unified fleet, able to threaten four areas, killing more British ships, and lots of POC.

ASW: The British have 8 ASW rolls in the North Sea and manage to sink two subs. The 3 survivors attack the Glorious and manage to damage her with 1 hit.

AIRSTRIKES: Planes from the Graf Zeppelin put an early end to the battle in the North Atlantic, disabling the Dorsetshire. In the Mediterranean, plans prove less decisive. A combination of carrier and land-based air attack all 7 Italian vessels and manage only to disable the Fiume. German land based air does the same to the Norfolk after attacking the lone 3 British surface vessels.

SURFACE COMBAT

<table>
<thead>
<tr>
<th>Attacker</th>
<th>Target</th>
<th>Fire</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veneto</td>
<td>Diulo</td>
<td>Courageous</td>
<td>6,6,5,4,1,4,1,2 Sunk</td>
</tr>
<tr>
<td>Littorio</td>
<td>Malaya</td>
<td></td>
<td>4 hits</td>
</tr>
<tr>
<td>Cavour</td>
<td>Cesare</td>
<td>Ark Royal</td>
<td>6,6,5,1,6,5,2,2 Sunk</td>
</tr>
<tr>
<td>Gorizia</td>
<td>Kent</td>
<td></td>
<td>1 hit</td>
</tr>
<tr>
<td>Malaya</td>
<td>Veneto</td>
<td></td>
<td>4 hits</td>
</tr>
<tr>
<td>Kent</td>
<td>Gorizia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The second round of combat comes swiftly to a close as the crippled Malaya and Kent are sunk by the massed fire of 4 Italian battleships.

GERMAN POST BATTLE COMMENTS

In the Med I wanted to get his aircraft carriers for sure before they could run; there was no way I could lose the battle after the air strikes, and the slow ships could be exterminated at will.

In the North Sea I wanted to cut down his area of parity, his ASW capability, so I went after the carrier, with some results. In the North Atlantic my primary concern was to avoid losses or even damage, since the battle was in the bag and the cruiser is not that important; thus I used the airstrike instead of waiting to blow him apart; he got away but I didn't have to risk taking fire.

POC: Axis +4; Total Axis +7

NEUTRAL COMMENTARY

The results of the turn pretty much speak for themselves; four more British ships have been lost with no loss to the Axis. At this rate, it's just a matter of time before Axis ships put to sea hunting for targets! The British have lost 13 ships to 2 for the Germans and is 7 POC behind. When the Americans and Russians fail to answer the bell turn 5 the British player gives up the ghost and concedes. With the combination of ship losses and POC gain this turn the German has rendered the knockout punch.

The German coup de grace is first rate. More POC could conceivably have been gained by moving into the S. Atlantic with U-boats and Italian cruisers, but the actual Axis move is better in the long run.
I have seen many games of *WAR AT SEA* and although a few are won outright in the early going it is relatively rare to see one conceded before the 9th turn. That is not to say that the British play was all that atrocious, rather that a combination of mistakes and dice rolls did him in. I have seen him play far stronger games of *WAS* on other occasions, however, including several in which he bested me.

Although the course of events preceding Turn 4 lead him into a defensive posture I cannot agree with the strategy pursued on this final turn. The very thing which gave the German his initial edge; i.e. inability of a slow ship to arrive at a posted station, cost the British again. Apparently one lesson was not enough. If you can't afford the losses you were made to determine just how parity with an opponent, it follows logically that you can hardly stand to risk 5 when you're decidedly weaker than him. The attempt to move into the Med cost the British a full third of their forces had a field day.

It cannot be said that the story of *WAR AT SEA* is relatively uninteresting. I have a combination of mistakes and dice rolls did him in. I have seen him play far stronger games of *WAS* on other occasions, however, including several in which he bested me.

The THIRD REICH combat results table bears some interesting analysis. The 2-1 is probably the most important attack in the game. While not a guaranteed victory, it is so close to one of the most dramatic attacks that 2-5's for granted along their paths of conquest. The numerous counterattacks make analysis a bit more complicated than on conventional CRT's. We will be primarily concerned with the probability of victory and the expected attacker roll followed by the first attacker roll produces the following results:

\[
P(\text{full exchange}) = \frac{1}{6} \\
P(\text{CA exchange}) = \frac{1}{3} \times \frac{1}{3} = \frac{1}{9} \\
P(\text{E-A}) = \frac{1}{6} \\
P(\text{Full}) = \frac{1}{3} + \frac{1}{9} = \frac{4}{9} \\
P(\text{no result}) = \frac{1}{3} + \frac{1}{16} + \frac{1}{13} = \frac{19}{56} \\
\]

First, let us examine the probability of each possible result. The initial iteration (the first attacker roll followed by the first defender roll) produces the following results:

\[
P(\text{full exchange}) = \frac{1}{6} \times \frac{1}{12.5} = \frac{1}{75} \\
P(\text{CA exchange}) = \frac{1}{12.5} \times \frac{1}{6} = \frac{1}{75} \\
P(\text{E-A}) = \frac{1}{6} \times \frac{1}{12.5} = \frac{1}{75} \\
P(\text{Full}) = \frac{1}{3} + \frac{1}{9} = \frac{4}{9} \\
P(\text{no result}) = \frac{1}{3} + \frac{1}{16} + \frac{1}{13} = \frac{19}{56} \\
\]

Thus, the actual probability of losing a 2-1 becomes 2-1. A 1/3 and not 1/3 as one might initially expect. Hence we see the 2-1 is so often taken for granted.

The next step is to determine the expected losses. Actually, this is quite easy to do once the probabilities have been calculated. Merely figure out how many BRP's you would lose on each type of result.

\[
a = \text{losses on a full exchange} \\
b = \text{losses on a CA exchange} \\
c = \text{losses on an E-A} \\
\]

\[
\text{Expected Losses} = .1875(a+b) + .03125(c) \\
\]

An interesting feature is that the full exchange result will usually contribute more to the expected losses than the A-Elim.

The 3-1 is a guaranteed attack with about 35% less expected losses than the 2-1. The probabilities of each result and the expected losses can be calculated in a similar manner to the 2-1. These results are:

\[
P(\text{full exchange}) = \frac{1}{6} \times \frac{1}{12.5} = \frac{1}{75} \\
P(\text{CA exchange}) = \frac{1}{12.5} \times \frac{1}{6} = \frac{1}{75} \\
P(\text{E-A}) = \frac{1}{6} \times \frac{1}{12.5} = \frac{1}{75} \\
P(\text{Full}) = \frac{1}{3} + \frac{1}{9} = \frac{4}{9} \\
P(\text{no result}) = \frac{1}{3} + \frac{1}{16} + \frac{1}{13} = \frac{19}{56} \\
\]

\[
\text{Expected Losses} = .1875(a+b) + .03125(c) \\
\]

While the 3-1 is clearly superior to the 2-1, the offensive player in *THIRD REICH* can rarely afford the luxury of 3-1's on his major attacks. Limited resources, too few hexes from which to attack and enemy defensive air will usually limit the major attacks to 2-1 or even 1-1.

The 1-1 attack is a bit more difficult to analyze because the CA odds may vary depending on the factors involved. Usually the CA will be at 1-2 or less since the defender is nearly always at least doubled on defense. This almost invariably produces a victory for the attacker. The rough spot on the 1-1 is that there is at least a 1/6 chance of an A-Elim. Full exchanges, a 1/3 chance, tend to be very costly. Be careful to include an extra piece in your 1-1's so that you will have a piece left over to advance into the hex. This leaves about a 5/6 chance of winning the terrain. Not a bad chance but expect a lot more losses on 2-1's and 3-1's.

Let's use the Polish defense problem presented in contest #69 (Vol. 12, No. 4) as an example for our calculations. Against this defense an initial 2-1 attack may be made against Warsaw. The attacking force will consist of two 3-3 infantry units plus 18 air factors. The two Polish air units are counterattacked. For optimum results a 5-1 against an adjacent 1-3 is set up. This attack will only have to be made if both 3-3's are lost in a full exchange. An armor unit could then exploit this in an unoccupied Warsaw.

\[
P(\text{victory}) = \frac{1 - P(\text{A-Elim})}{1 - P(\text{A-Elim})} = .96875 \\
\text{Expected Losses} = 1.875(24+6) + .03125(60) + .1875(1/3) = 7.59 \\
\]

These results are slightly less favorable than the solution featured in the magazine because of the increased accuracy of the calculations due to the iterations.

Let's also examine a slightly different defense. Move the 1-3 from Brest-Litovsk to the hex northeast of Warsaw. The optimum method of attacking this defense is 2-1 the 2-3 and to attack Warsaw with a 3-1 exploitation attack. Note that the 3-1 attack will not be made if the 2-1 fails. The best tactical disposition is a 4-6 + 4 air factors against the 2-3 and (3) 4-6s and 12 air factors against Warsaw at 3-1.

\[
P(\text{victory}) = .96875 (or 31/32) \\
\text{Expected Losses} = 1.875(2(2)+6) + .03125(20) + .1875(1/3) = 7.54 \\
\]

The results are consistent with the contest solution. However, there is more to these calculations than one might have thought. While the back door approach is 0.05 BRP cheaper for the Germans it does have two advantages. First, it forces commitment of the German armor to the east if Poland is to be conquered on turn 1. Second, the probability of no German losses in taking Poland is reduced. The moral is that there are frequently other considerations besides expected BRP losses.

I hope that I have given some insight into analyzing the *THIRD REICH* combat results table. While one does not normally stop a game to make precise calculations, players can develop a feel for the risk and expected losses inherent in a certain line of play. The 2-1 is the attack to use to get the job done. 3-1's are nice when you can afford them. 1-1's are not bad but save them for really important situations when you cannot get a 2-1.
BUT WHAT IF... By Richard Hamblen

RUSSIAN CAMPAIGN VARIANTS
I. ARTILLERY CORPS: add the following units to the game:

RUSSIAN: available '43
GERMAN: available '45

These units are not reinforcements—they can be taken as replacements, starting with their dates of availability. When taken as replacements each unit counts as an armored guards unit.

When defending these units use their combat factor normally (the number in parentheses).

When ATTACKING, in addition to attacking with their combat factors these units ALSO increase the odds of the attack. Each attacking artillery unit raises the odds one level—i.e. a 5-1 becomes a 6-1. More than one artillery unit can attack the same target, raising the odds one level for each artillery unit; however, if the German artillery unit and Stuka attack the same target(s), the combat odds are increased only 3 levels—the effect of the artillery unit is lost.

Artillery units move and attack like infantry units of their respective armies, attacking units in their ZOC on both impulses.

SPECIAL: The Russian player can make an automatic victory attack if the attack includes an artillery unit.

II. SEA TRANSPORT
There is no limit to the number of invasions each side can make in the Black Sea during the game.

Once any sea movement fails (i.e., the transported unit is "sunk" without landing), that side may not use ANY sea movement on that sea for the remainder of the game.

III. ALTERNATIVE STRATEGIC SCENARIOS
Any or all of the following variations can be instituted in a game of RUSSIAN CAMPAIGN. Set up the game and proceed normally until the game turn indicated in each variation—at that point the indicated player may choose whether to trigger that variation.

THE MEDITERRANEAN DISTRACTION
Hitler decides not to invade the Balkans. The Greek and Crete campaigns do not happen; Italy remains tied up in Albania, Balkan politics are less favorable to the Germans, and the British, undistracted by the Greek campaign, are able to concentrate on Rommel.

After the Russian setup but before the German setup the German player decides whether to employ this section. If he does:

1. The game starts with the March/April 1941 turn. The German player sets up and then rolls for weather normally, but if "snow" is rolled Axis units are NOT halved because of supply—the "first winter" mentioned in the supply rules is always the winter starting in late 1941 (early 1942. (If the players agree beforehand, they may use the historical weather—Mud.)

2. Rumania and Hungary are neutral and cannot be entered by Axis or Russian units. Neither side can trace supply through either country.

3. The German Fleigerkorps is not wrecked at Crete and the Germans do not discontinue their parachute training. The following units are introduced into the game:

   exchange for any 3-4 in play May 1943
   available at start

   a. German paratroop units may drop during the first impulse of any clear weather turn; they may drop into any non-woods, non-mountain hex within 8 hexes of a German Army Group HQ. On the turn they drop they must stay within their respective countries, at least one hex away from any border. The Axis player may move them normally, subject to the above limitations.

   As long as Rumania remains neutral, the Axis player may not use Sea Movement in the Black Sea, and the Russian player does not have to roll for his sea movement—Russian Sea Movement automatically succeeds. Also, as long as Rumania is neutral the Axis player does not get any replacements for the Rumanian oil well.

   Rumania and Hungary enter the war immediately as soon as the Axis player controls all three Black Sea ports. At that point all the above restrictions disappear, and units may enter/leave Hungary and Rumania normally.

   3. Remove all Italian units from the game.

   4. All German units must set up in Poland and can attack only the appropriate military districts on the first impulse. The German 11th, 30th and 54th infantry corps (formerly in "Rumania") are not restricted and may attack any Russian units they can get to on the first impulse.

   5. The German Fleigerkorps is not wrecked at Crete and the Germans do not discontinue their parachute training. The following units are introduced into the game:

   exchange for any 3-4 in play May 1943
   available at start

   a. German paratroop units may drop during the first impulse of any clear weather turn; they may drop into any non-woods, non-mountain hex within 8 hexes of a German Army Group HQ. On the turn they drop they must stay within their respective countries, at least one hex away from any border. The Axis player may move them normally, subject to the above limitations.

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   Rumania and Hungary enter the war immediately as soon as the Axis player controls all three Black Sea ports. At that point all the above restrictions disappear, and units may enter/leave Hungary and Rumania normally.
THE GENERAL

b. German paratroop units may land in enemy ZOC.

c. German paratroop units may land on top of enemy units! In this case they attack only the stack they land on top of—while in the same hex with Russian units their ZOC does not extend into adjacent hexes and they do not have to attack adjacent Russian units. However, if they do land on top of Russian units, all those Russian units must be eliminated or retreated out of that hex—if in the same hex with Russian units at the beginning of a second impulse, a paratroop unit is immediately destroyed.

d. German paratroop units have to trace supply like other Axis units.

e. Paratroop units can never be replaced.

f. At the start, the German parachute unit may set up in Poland or off the board.

g. The Russian player doubles all Archangel replacement rolls.

7. For purposes of determining victory, both players control Budapest as long as Romania is neutral.

THE RUSSIAN REACTION

Stalin decides whether to bring the Siberian Army west to defend against the Germans. Reinforcements arrive earlier, but with Siberia stripped of troops the Japanese are tempted to attack.

1. At the start of his March/April 1941 turn the Russian player must decide whether to bring the Siberian Army in early or not. He cannot later change his mind. If there is no March/April 1941 turn—and, if the German player did not activate “THE MEDITERRANEAN DISTRACTION” above—then the Russian player cannot activate this section.

2. All Russian reinforcements listed as arriving on the East edge during 1941 arrive one full turn earlier than scheduled.

3. If the Russian player activates this section then the German player can activate “THE JAPANESE GAMBIT,” below.

THE ITALIAN SELLOUT

Hitler decides not to send the Afrika Korps to bolster Mussolini’s feeble war effort. Italy withdraws from the war and the British commit their forces to “roundup”—the 1942 invasion of Europe.

1. Immediately before the German May 1941 impulse the German player decides to abandon the African project and commit Rommel to the Eastern Front.

2. The following unit appears as a reinforcement in July 1941:

GERMAN:

3. Two German panzer corps must move off the west edge of the board in May 1942 or the German player loses the game. These are in addition to the SS panzer corps (or substitutes) that must leave the game later.

4. All Italian units are removed from the game.

5. The Russian player gets to roll a die for extra replacements each time he gets replacements. These units are kept in a separate pile; they are not surrendered but may not be taken as replacements again. If the Russian player is not able to divert one of his arriving replacements he loses the game.

6. As soon as he has sent 40 factors to Siberia the Russian player need not send any more. He can send more if he wishes; however, he may never send more than one replacement unit per turn (and only replacement units may be sent).

7. As soon as the Russian player has sent 60 factors to Siberia, on his next turn he may start bringing the Siberian units back. These units are brought back one unit per turn and appear as replacements. He may continue to bring them back until all have returned; he need never send units to Siberia again even if he dips below the 40 factors.

8. A British supply line is established through the Caspian. The Russians get an extra replacement die roll every turn they control Astrakhan, starting in May 1943.

TUNISIA OR NOT TUNISIA

Hitler decides to abandon the Mediterranean when the Allies land in Africa. German forces are evacuated or not committed; but the Allies are not tied up in the Mediterranean and are free to execute “Bolero,” the 1943 invasion of Europe.

1. This section can be activated only if the Germans activated “THE ITALIAN SELLOUT” above. The German player decides whether to implement this section before his November 1942 impulse.

2. All Italian units are removed from the game.

3. The Herman Goering panzer corps appears as a reinforcement in January 1943.

4. The two SS panzer corps must be removed in May of 1943 (instead of 1944).

5. The German player gets an extra armored replacement in 1943.

PUTTING THE BULGE ON THE RUSSIANS

Hitler decides to employ his scraped-up reserves against Russia instead of against the Allies in the Ardennes.

1. The German player chooses whether to implement this before his September 1944 turn.

2. All panzer corps withdrawn earlier in the game appear as reinforcements on the October 1944 impulse. If not already in play, the Herman Goering corps also appears.

3. On his November 1944 turn the German player gets to take replacements.

4. The German player must win, or he loses. A draw counts as a Russian win.
I started wargaming back in 1960, when "war" was just another word, when GETTYSBURG and TACTICS II were still just games. After sixteen years and a couple hundred opponents, it sometimes appears that, while wargamers are decent enough people, like any other group sharing a common interest, I wouldn't want to have a sister in law who's a wargamer.

That highly tempered competitive edge shows itself across the table altogether too often, not so much a burning desire to win as it is a determination not to lose. The figures suggest that most wargames are played solitaire because of the difficulty finding opponents. I submit that the difficulty finding opponents is very much a matter of not wanting to find them, of being unable to stomach some of the behaviors we've all seen.

While conscious cheating is extremely rare, so are manners and courtesy equally scarce. Too often a wargame becomes more a matter of intimidation and attempting to establish a sort of moral superiority over your opponent than a test of opposing strategy and tactics. Moral and psychological factors are crucial in the real thing, and crucial in a good simulation, but they don't make for a very fun game. A certain amount of decorum is required in all relationships—even an orgy has a few conventions—so, for the sake of conversation, I'd like to suggest a few common sense notions to bridge the behavioral gap between simulations for blood and games for fun, just enough to blunt the disagreeable edge on our competitive spirits.

SOLITAIRE GAMES: Who cares? Go ahead and roll until you get that D-ELIM. The main problem with solitaire games is that they're so far removed from what most people are used to that there's almost no transfer of whatever the beginner learned from other games—well, here's a gameboard, on a table, and there's a die which I suppose I'll throw or roll, and that's about it. Make sure the rules are reasonably clear to the beginner, and don't trouble him too thoroughly or too quickly. Also, be certain to explain and demonstrate the technique of "soaking off". This second nature gaming tactic looks very suspicious and very illegal to the uninstructed.

Dice throwing can approach the status of an art. Out of the hundred or so rolls in a game, three or four well-chosen creative tosses can prove decisive. When playing for blood or in a tournament, it would be considerate for opponents to shake the dice in a cup. This is somewhat a bother, but the question of artful tosses does not arise.

The expenditure of movement points during complicated or critical maneuvers should be counted out loud, factor by factor, so that there's no doubt there is such a thing. Do you realize you just contributed to our "chest thumping"? Of course we are biased. We wouldn't be worth much if we didn't think our stuff was the best, but we try to be objective and not stand in the way of others doing their own thing. I don't think the hobby will self-destruct. I do believe it is undergoing some very fundamental changes. I believe we will see continued polarization of consumer support and that those enthusiasts who emphasize playing games over replaying simulations will find a stronger than ever hobby under the AH banner. This is why we emphasize customer service so much. We don't sell you a game and then forget about you. We provide free opponents wanted ads on our hex sheets, hexes of the area, ratings, and a comprehensive study of the games themselves in THE GENERAL. None of these features make money. All serve the wargamer. That's our opinion—what's yours?

THE GENERAL: A.H. PHILANTHROPY... Cont'd from Pg. 32

The wargame industry is dedicated to a very large extent on mail order sales to a small, prolific body of hard core enthusiasts. Without retail distribution to attract fringe buyers, these companies must depend solely and repeatedly on their small customer base. They have no choice—publish or perish. Older games do not generate enough revenue to keep them going; after they've reached the saturation point with the hard core they cease to function as sources of revenue and often are discontinued or phased out early in their potential life span. This is all over simplified of course but should suffice for readers to draw their own conclusions.

I can sympathize with Dave Isby when it comes to answering off the cuff questions on games he designed. My gaming days as a professional wargamemaster is limited almost solely to playtesting and evaluation of new games. By the time I've finished my development chores on a game I have probably played it 50 to 100 times for my own enjoyment before I want to play it again right away (WAS is an exception). In other words, I can't say with any degree of certainty that I could answer every question that arises on games I've worked on either. Continued playtests and a few passing years tend to cloud one's recollections of another game's rules. It is little short of unrealistic to expect a designer to address a problem he hasn't thought about in years, just because you played the game last night. If you disagree, try working out a calculus problem for old time's sake—after all—you learned it back in the twelfth grade didn't you? Fair is fair.

"Whose publication is not unreasonably biased towards itself?" Do you realize you just contributed to our "chest thumping"? Of course we are biased. We wouldn't be worth much if we didn't think our stuff was the best, but we try to be objective and not stand in the way of others doing their own thing. I don't think the hobby will self-destruct. I do believe it is undergoing some very fundamental changes. I believe we will see continued polarization of consumer support and that those enthusiasts who emphasize playing games over replaying simulations will find a stronger than ever hobby under the AH banner. This is why we emphasize customer service so much. We don't sell you a game and then forget about you. We provide free opponents wanted ads on our hex sheets, hexes of the area, ratings, and a comprehensive study of the games themselves in THE GENERAL. None of these features make money. All serve the wargamer. That's our opinion—what's yours?

REDUCED HEX SHEET PADS

Now available from the Mail Order Department is a pad of 30 hex sheets with normal half inch hexes printed on one side and 1/4" hexes printed on the back. The pads are useful for designing your own games, making hex overlays for actual maps, outlining movement moves and/or concepts. The pads are available from the parts department for $1.00 plus postage.
The following rules should work equally well in both PANZERBLITZ and PANZER LEADER. Treat them as Optional rules and use them when you like.

1. BARRAGE FIRE: Most 'H' and 'M' weapons may use barrage fire. This attack occurs in the direct fire phase, and in all ways counts as a direct fire attack, except as modified herein. This attack can also occur in the opportunity fire phase, 'H' and 'M' units may also employ barrage fire in the direct fire mode. Flak units may not use barrage fire (see list of these units with the special CRT).

(a) A player may use barrage fire against any hex, including vacant hexes, as long as the attack units satisfy all LOS/LOF limitations. Place a barrage marker in any hex so attacked.

(b) Units in a hex attacked by barrage fire are affected individually. Total the attacking factors, taking into account all TEC and WEC effects for each defending unit individually, and compute the odds as usual. Note that all attacking factors count against each defender individually.

(c) Resolve all barrage attacks on the barrage CRT. In addition to any effects from that CRT, all units in a hex containing a barrage marker lose 2/3 of their movement points, except for units with movement of 1. Any unit friendly or enemy, passing through a barrage hex, loses 1 movement point. The barrage marker remains in the hex until the end of the enemy turn.

(d) Soft (non-armored) units in a barrage hex may not attack in any way. They may defend normally, but may not use opportunity fire.

(e) In addition to WEC and TEC effects, units using barrage fire get the following bonuses:

<table>
<thead>
<tr>
<th>WEAPON</th>
<th>Multiply Attack Factor By:</th>
</tr>
</thead>
<tbody>
<tr>
<td>'M' under 100mm</td>
<td>5</td>
</tr>
<tr>
<td>'M' over 100mm</td>
<td>2</td>
</tr>
<tr>
<td>'H'</td>
<td>3</td>
</tr>
<tr>
<td>'H'</td>
<td>1</td>
</tr>
</tbody>
</table>

Thus a German 81mm mortar using barrage fire would attack with 15 attack factors, before WEC and TEC effects.

2. SWEEPING FIRE: Units with 'I' class weapons may use sweeping fire. This may occur in the direct fire phase, and in all ways counts as a direct fire attack, except as modified herein. This attack may also occur in the opportunity fire phase. Flak units listed on the special CRT may also employ sweeping fire.

(a) A sweeping fire attack may be directed against any hex (except towns) which contains soft (non-armored) targets, as long as the attacking units satisfy all LOS/LOF rules.

(b) Soft units in the hex receive the attack in any manner, singly or in combination, just as in a regular direct fire attack. All WEC and TEC effects apply, and each defending unit may defend only once. Armored units are unaffected by sweeping fire.

(c) Resolve these attacks on the Sweeping Fire CRT.

(d) In addition to WEC and TEC effects, units get the following bonuses:

<table>
<thead>
<tr>
<th>UNITS</th>
<th>Multiply Attack Factor By:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian Infantry</td>
<td>2</td>
</tr>
<tr>
<td>German Infantry</td>
<td>4</td>
</tr>
<tr>
<td>Other Infantry</td>
<td>3</td>
</tr>
<tr>
<td>All other types</td>
<td>5</td>
</tr>
</tbody>
</table>

Thus a German submachine gun unit could use sweeping fire to attack with 24 factors.

(e) Infantry units may use sweeping fire up to their maximum firing ranges, but the bonus only applies to short ranges. Submachinegun infantry units get the bonus only at 1 hex range, while all other infantry units get the bonus at either 1 or 2 hex range. All other 'T' class units, and the flak units, may use sweeping fire and get the bonus up to their maximum range.

3. INFANTRY QUICK MARCH: All infantry units may use quick march. Units employing this rule get a movement bonus.

(a) Units may use this in two ways:

(1) by ending the move with a CAT attack, or
(2) strictly as a movement bonus.

(b) Units using quick march as a movement bonus only may double their movement rate on any given turn. On the following turn, the unit must return to its normal rate. For scenarios lasting more than ten turns (one hour), units can quick march only five times every twenty turns (two hours). Optionally, the unit may elect to triple its movement rate, but in this case it would end its turn dispersed. In addition, any unit using triple movement may not move at all for two turns following the movement; it may attack, though.

(c) Units using quick march to make a CAT attack may double their movement rate. In the following turn, the unit must occupy the defender's hex if possible. If not, the unit may not move at all. Either way, the unit may not move in the second turn after the CAT. It may attack, though.

(d) Note that except in the case of dispersal, rules (b) and (c) above do not in any way restrict the unit's ability to attack, only to move.

(e) Any unit using quick march has its defensive factor halved (round down) for opportunity fire.

(f) Units using quick march to CAT may not use the road movement rate.

(g) Units may not quick march through heavy forest hex sides, or through slope, gully, river, or swamp hexes.

(h) Units which participate in CAT along with units using quick march are in no way restricted by these rules, as long as they did not use quick march. Only units using quick march are affected.

SWEEPING FIRE AND BARRAGE SPECIAL CRT

<table>
<thead>
<tr>
<th>ODDS</th>
<th>Die</th>
<th>1-1</th>
<th>1-2</th>
<th>1-3</th>
<th>1-4</th>
<th>2-1</th>
<th>3-1</th>
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NOTES: Units may never suffer elimination when attacked using this CRT, since only regular dispersals occur. Also, these types of attacks never have any effect (as far as CRT results are concerned) against units in forts, fortes, fortifications, foxholes, etc.

d = dispersal

Certain 'H' class units, in particular flak units, may use sweeping fire, but may not use barrage. They are:

- Germans: 20mm, 20(4)mm, 37mm, Sdkfz 234/1, Wirbelwind, 32mm, Sdkfz 233.
- Russian: none.
- U.S.: 40mm, Recon HQ, Churchill Flamethrower, Buffalo.

British: Bofors, 20mm.
If the wargame companies are the problem why am I writing to you, the official voice of AH? First, AH has been the only company to at least show some concern over the proliferation of new titles. Second, AH is the only company whose publication is not unreasonably biased towards itself in its editorial policies.

The purpose in writing this letter is to express my feelings and to hopefully elicit some response from AH, one of the "Big 3" of wargaming. If any of my thoughts raise some questions or thoughts in your own mind I hope you present them to the rest of the GENERAL subscribers. I will be the first to admit I could be way off base in my thinking. Perhaps this sudden growth will help the hobby to grow. There must now be one title in every given time period and game scale (including game mechanics) to appeal to all segments of the hobby and interest in war games. But, I experienced the collapse of another hobby-industry, slot-car racing. As you know, this hobby reached a peak and virtually disappeared in five years. At its peak, the number of new products and new companies was uncountable. The current situation in war gaming is not dissimilar, I have put thought on the industry's problem, I have put thought on the collapse of another hobby. I have put thought on the idea that I am self-destructive. I have gotten too much out of war games to sit back and hold my tongue while things go from bad to worse.

I would like to see the AH Philosophy column address the war game problem from Oleson's column and bring it up where the situation perfectly in a recent letter. "Deplor- able flood of games is not new, and I am not about to repeat it, because I don't long for the "good old days" of D-DAY and STALINGRAD. Like most "good old days" of any sort, memory has painted them better than they were. Games are now better, and getting better still. What I do mis is a certain enjoyment which I am experiencing less and less. No one who goes to a banquet, offering a large variety of succulent food and fine wines, only to cram down as much sheer quaility and quaff as much sheer volume as possible before passing out, could be considered a gourmet, but rather a glutton. Delicacies must be slowly savored and appreciated, wine carefully sipped. Few war gamers do this anymore, so eager are we to experience the latest thing to come out, no matter what something fresher still. There is a pleasure to be had from knowing a game intimately, and playing it well. I think every war gamer owes himself this pleasure: the art of war gaming well. To achieve it, you select one really good war game that also appeals to quality opponents, and play it not all the time, to the exclusion of others, but frequently enough to become really good at it."

As to the general ineffectiveness of game reviewers I must concur wholeheartedly. There is no such thing as an objective game review— even the best critic is influenced subconsciously by his own preferences in game design style. The only truly objective review is a numerical analysis melted down into a lump average from the responses of hundreds of players. Objective yes, accurate... well, that's another story. If 96 people love a game and one hates it then you have a real good rating. But what if your tastes are not the same? You've just spent $10 to find out you're aberrant. Subjective reviews are filled to the void between the shades. Consulting with people to identify with the tastes of the critic. Unfortunately, component reviewers with the inclination and the time available are few and far between. Richard Berg is the only exceptional critic that comes to mind in the entire hobby, and his tastes differ considerably from my own. We don't publish reviews in the GENERAL for obvious reasons. Anything favorable would be automatically considered prejudiced. You can't win in a situation like that, so we give as much information as we can in the ads, let you rate the games in the RBG and let the articles fill in the information gaps as best they can. Someday a hobby magazine will come to pass that does nothing but subjective reviews by qualified critics. It will be an instant success and wargaming's future will look a lot brighter.

I would agree with the premise that 6 months is not sufficient time to review a new wargame. Yet I remind the reader that Avalon Hill has never done a game in less than a year. Any in-house game design 6 months is at least a full time as the full time project of an AH designer. We have managed to increase our output only by publishing outside designs which were not over a year in design, but in many cases published by other concerns. In cases such as W2000, RC, and W45 we have been able to utilize public reaction to these first edition games to further improve them when they go through the 6 month AH development process. We don't succumb to the pressures of deadlines all that easily. If a game isn't ready we don't publish it. A case in point is FOUR ROADS TO MOSCOW which has been in the grist mill for a year and a half. It is a fine simulation. We are simply unhappy with the way it plays, we have cancelled plans for its production for the time being, and returned it to the designer. So I would maintain that the best thing we can do is suffer from a short design time... if anything, we've increased the design hours spent on the product.

As for being involved in a "race to beat the other guy", the problem is if others are better than AH, we readily concede that we can't keep pace with the speed others produce wargames. It is hard for us to see another company we can and hope that AH quality makes up for the fact we weren't first. Almost every game we've done in the last 2 years has been done previously by other companies—even though they may have been started at or about the same time. We have been guile in the past of rushing games to meet a seasonal retail sales deadline (THIRD REICH comes readily to mind), but never to beat a competitor to the punch. Our philosophy has generally been to do our own thing and let the chips fall where they may. We concede that we can't be first, but try to stay (granted, by our own criteria) to be best. I have yet to hear a bad word about the quality of our summer trilogy (STARDHIPS, CAESAR, WAR AT SEA) and I would bitterly refuse claims to the contrary. But remember... I'm biased. I'm a firm believer that AH Hill games are better than ever before and I imagine designers of other companies feel the same way about their product. The truth lies in what the man after you has tried, the games. Regardless of one's viewpoint regarding the number of games available these days it is important to understand why the phenomenon exists. Wargames, as we all know, are a very specialized product. Far too much to substrat, as other game companies do, on normal retail distribution. It has taken us 16 years to build our retail distribution which is universally recognized as the best in our small industry. Yet, by standards of a Pagoda, our profits (although Bradley our efforts are miniscule. Similarly, other wargame producers' retail efforts are dwarfed by our own. Therefore you have a

--- Cont'd. on Pg. 30, Col. 3
Dear Sirs:

I noticed your title survey in the latest issue of the GENERAL and I could not resist the opportunity to share my thoughts on some recent events, particularly new games and some comments concerning existing games. I have been playing your games since the beginning of my interest in wargaming has grown over the years. I intend in becoming more actively involved in wargaming this year, with the purchase of books such as those in the series of studies in civil and geological engineering early next year. As a result of the distraction from my studies I have been unable to finish many of some of your releases over the past five years as he has decided to play Panzer Leader, Alexander, or versions of CHALLENGERS.

However, being that I am a devotee of the classical and campaign games, I have played your recent releases RUSSIAN CAMPAIGN, THIRD REICH, and 1776 several times for sheer enjoyment. I believe all of my AVG games (I also own STAR FORCE which I am eager about) that I have been playing RUSSIAN CAMPAIGN. The more realistic reinforcement counters for the Soviet Army and the extension of playing time to the end of the war has made these improvements in THE GENERAL and the better player to win most of the time never attain a higher score than the total of the game. I bring only two points to the general population, the economic considerations are of primary importance from the beginning through at least 1941.

In the multiplayer game requires the care and feeding of a partner (called diplomacy) in order to keep track of the military and economic strategy. It seems to me that in the campaign generally, the economic considerations are of primary importance from the beginning through at least 1941.

However, with "a bit of luck" there may be only five players available so that he can get back in short order. The U.S. forces - of course - under your command.

William R. Nightdale
Lynwood, Wash.

Dear Sir:

In the Nov-Dec. Vol. 75, Vol. 4, No. 4 issue of the GENERAL, I see you are offering the 2nd edition of rules for your game 1776: $20.00 plus 50¢ handling. I feel I am being screwed over by having to pay for the cost of the game because of the fault by not in the rules when I purchased the game. The instructions would deal with very much the same thing as the 2nd edition of the GENERAL, and help take care of those who take care of you by subscribing.

I would pay $15.00 for a 2nd edition rules for every game that we have, and $5.00 for this one. If you would deal with me $15.00. No thanks. I don't need that kind of loyalty.

Ed. Lesinger
Laurel, Md. 20701

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Dear Sirs:

I try not to bore you with details, but it is necessary to give you some background on my

in serious competition, which means high or unlimited stakes, a very high level of ability is required. The skills involved are a small part productive. However, if the horizons are to be broadened and a game is to appeal to a larger group of players, then this answers the first of the two questions. If the second question is to find the proper blend of luck and skill that will allow the better player to win most of the time, yet give the game more than the person the possibility of coming out on top.

In my opinion, chess is a very dull game unless played by an opponent of high skill. Chess is also reasonably good. It might have a wider appeal if there was a luck element involved. In the realm of card games, the same can be said of bridge. I feel that there is a need for a blend of luck and skill, and that this is the point that German opponents made a well-reasoned move because he was behind at that stage of the match and the attempt appeared to be his only chance to reverse the course of events, then I'll still curse my fate, but I hope I would have the courtesy to try my best as a very skillful player.

I think that THIRD REICH has built into the game a very good combination of luck and a variety of skills. I am interested in the BRP or economic strategy as it relates to the military or victory strategy. It seems to me that in the campaign generally, the economic considerations are of primary importance from the beginning through at least 1941.

The multiplayer game requires the care and feeding of a partner (called diplomacy) in order to keep track of the military and economic strategy. It seems to me that in the campaign generally, the economic considerations are of primary importance from the beginning through at least 1941.

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Dear Sirs:

I am happy to say that we have two years, apparent, that the "Realism" buffs have finally succeeded in conquering the "Playability" buffs in wargame circles. This happens because any changes have been made in the Avalon Hill Game Co. and THE GENERAL have fallen into their hands, Kudos on your win!

However, methods that you should reconsider your position as virtual "Dictators" of the hobby. The increase emphasized on realism to the detriment of playability but the Silent Majority, Sure we still have STALINGRAD, WATERLOO, et al. But it is we, and our "realistic" objects, which are the things that we should be looking at once in a while. The current ed of THIRD REICH type games is fine, but most of us either work or have to pay for school, and cannot devote 48 straight hours to a game of THIRD REICH. (Hey, you can do that! "Sure I can, but it is my two-week vacation that I get only three-fourths of subsection twenty-three. Don't you read the rule?" Looking for a way to capture Moscow, but how about the real world!"

A "Benevolent Dictatorship" would be more to our liking. Us "Playables" can become dictators in our own right when we are established. The Avalon Hill Game Co. and THE GENERAL have fallen into their hands, Kudos on your win!

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The Question Box

TOPIC

Q. May forward observers for off-board artillery adjust indirect fire when in full cover (such as under a hedgehog counter)?
A. Yes.

Q. Can anti-tank guns "in portee" in light trucks fire from weapon pits?
A. Yes — as if they were in weapon pits within the portee.

Q. May personnel units in full cover, and thus their identity hidden by the limited intelligence rule, be targeted for direct or indirect fire? And if more than one personnel unit is under full cover, how can a target unit be chosen not knowing what any of the units are?
A. No. If the unit fires, or moves into or out of full cover, it may be fired upon.

Q. Can weapon crews be chosen as targets for direct (or indirect) fire while they are operating their weapons?
A. Yes.

For weapon pits, may six personnel units occupy a weapon pit in addition to a weapon and a crew?
A. Yes. This was a bit obscure in the rules, but a weapon pit acts as a hedgehog with the added proviso for the protection of weapon units and vehicles.

May an AFV in a hex fire at targets outside of the hex? May it be fired upon by units outside the hex?
A. The AFV may fire out of the hex, but it cannot be fired upon by outside units.

Q. Are non-personnel units "in portee" in a melee hex?
A. No, only personnel units.

Q. If the defender in a melee situation is under full cover, what is the effect of an attacker's final fire in melee?
A. There would be no final fire because the defender is under full cover. They would merely cover normally, however.

Q. If the line-of-fire runs exactly along the hedgehose between two wreck hexes, what is added to the HP of the target?
A. No.

Q. May attack targets be restricted in the same manner as other types of indirect fire?
A. Yes.

Q. May vehicles units move into/from enemy-occupied hexes?
A. No. Friendly units may not fire into hexes containing friendly personnel units. May non-personnel units move into hexes containing friendly personnel units?

Q. Scenario two states that personnel units may not fire into hexes containing other friendly personnel units. May non-personnel units move into hexes containing friendly personnel units and/or weapon units?
A. No. Friendly units may not fire into hexes containing friendly personnel, vehicle, or weapon units. May, however, fire into hexes containing un-maned weapon units and abandoned, bailed-out, or KILLED AFVs.

Q. When hitting HE rounds at a weapon unit, does the defender receive casualties if all of the weapon unit's hits are "misses"? Is the weapon unit the only target in one target or two separate targets? And yet, although not specifically stated, a wounded weapon unit's crew are treated as one target. The HE "misses" would be evaluated as frag against the crew in good cover.

Q. If a crew assigned to a weapon unit is in the same hex but not operating that unit (and therefore on top of it), and both are in the same cover state, what happens to the crew if the weapon is KILLED by a direct hit?
A. Nothing, except collateral damage if hit by indirect fire.

What is the defensive condition of a portal ATG in a weapon pit?
A. Same as a non-ported ATG in a weapon pit.

Q. Personnel units operating a heavy weapon unit are considered to be in good cover. What about when they are in a weapon pit?
A. Still only good cover.

If a crew assigned to a weapon unit is in the same hex but not operating that unit (and therefore on top of it), and both are in the same cover state, what happens to the crew if the weapon is KILLED by a direct hit?
A. Nothing, except collateral damage if hit by indirect fire.

If an AFV remains in the same hex and continues to operate a unit for several turns, may its MGS as "final fire" on subsequent turns?
A. No. Final fire is only used during the initial turn of overrun.

Q. If an AFV is being close assaulted by enemy personnel units, may another friendly AFV enter the same hex and overrun the close-assaulting infantry?
A. Yes. The only effect, however, would be to lower the infantry units' morale by an additional four points.

Q. May a PkFk weapon move one hex, pivot, and still be able to fire indirectly?
A. Yes. It can only move one hex, but it can still expand two movement points.

AVAIL HILL RBG RATING CHART

The games are ranked by their cumulative scores which is an average of the 9 categories for each game. While it may be fairly argued that each category should not weigh equally against the others, we use it only as a generalization of overall rank. By breaking down a game's rating into individual categories the gamer is able to discern for himself where the game is strong or weak in the game. Many players steep in the game will value the game more if a player he values the most. Readers are reminded that the Game Length category is measured in multiples of ten minutes and that a rating of 18 would equal 3 hours.

The General

Q. When firing at heavy weapon units with weapons of 40mm or smaller, does the Burst On Target rule apply to weapons that are hit but not KILLED?
A. Yes.

Q. If a tank crew built-out, is the tank considered K-KILLED for victory point purposes?
A. In general yes. But, if you're playing with the Experimental Capture Rules, the AFV is not considered K-KILLED and may therefore be captured.

Q. Is the Firefights, are points given for AFV crew casualties?
A. No. Automatically. Use AFV Crew Counters for killed or captured AFV crew and decide their fate as normal personnel units.

Q. Using the AFV Crew Counter rule, are crews automatically acquired for fire when they ball-out?
A. No. Not automatically, it is direct fire, they must be acquired normally, if its indirect fire, they would be acquired by simply switching targets in the same hex.

Q. Can AFVs automatically ball-out of undamaged AFVs?
A. No. What on earth??

Q. Using the 'Best Aspect' rule, assume an AFV moves perpendicular to the firing unit and then pivots in the last hex of movement to face the firing unit. If the firing unit fires at the AFV, the FLANK aspect and gets a STARK hit, which way would the target vehicle be positioned from the firing unit, layer, or "on" firing at the flank?
A. The AFV target would be positioned such that the flank of the firing unit is facing the target AFV, and the firing unit, or "on" firing at the flank.

If an AFV remains in the same hex and continues to overun a unit for several turns, may its MGS as "final fire" on subsequent turns?
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A. Nothing, except collateral damage if hit by indirect fire.

The back sports an enlarged, silk screened version of the Avalon Hill logo. The bold and sensitive feature decorative red collars to present a very pleasing overall appearance.

The shirts sell for $5.50 each plus the usual postage charges based on the dollar amount of your total order. Be sure to specify size. Maryland residents add 4% State Sales Tax.

WARGAMING T-SHIRTS

The shirts are now available and although these black and white photos do not portray the vivid colors and sharpness of the artwork you can take our word that these shirts sport an exact full color likeness of wargaming's most widely recognized box cover.
Infiltrator's Report

Wargame conventions are rapidly becoming a year around phenomenon. Winter events are planned in a variety of locations, not the least of which is WINTER WAR IV sponsored by the University of Illinois Conflict Simulations Society at the Foreign Language Building, 700 S. Mathews Ave., Urbana, IL 61801 January 14-16. Among the planned events are competitions in DIPLOMACY, W&SM, PANZERBLITZ & LEADER. Further information is available from Alan Conrad, 911 S. Locust #101, Champaign, IL 61820.

There's liable to be less snow but just as much excitement at GROUND ZERO in Jacksonville, FL. Sponsored by the Crawford Dragoons (Northwest Florida Wargaming Association) GROUND ZERO promises the usual array of competitive events including KINGMAKER, TOBRUK, W&SM and a RICHTHOFEN'S WARM DEMO DERBY. Scheduled for February 19th and 20th at the Holiday Inn on the Arlington Expressway, GROUND ZERO promises to be a class event. For a free brochure write Roy Beach, 5333 Santa Monica Blvd N., Jacksonville, FL 32207.

WARCON III is scheduled for Jan 28-30 in the Memorial Student Center at Texas A&M University in College Station, TX. Sponsored by the Texas A&M Society, this promises to be an expanded and improved version of last year's event with tournaments in KINGMAKER, and PANZER LEADER among the planned competitions. Interested parties should contact Keith Gross at P.O. Box 8198, College Station, TX 77844.

The Armchair Strategists Club of California State University announces that ORCICON I will be held on Jan. 7, 8, and 9 at the University Activities Center in Fullerton, CA. Among the planned events are an AH Classics Tournament, Richthofen's War Demo Derby, Panzer Leader Macro Game, W&SM, KINGMAKER, and D-PLOMACY tournaments. Cost is $3 per person at the door.

U.S. servicemen in West Germany will get their crack at the convention scene Feb. 12-14 at the U.S. Army Rec Center in Landstuhl. Those in the area are urged to contact SFC David Rolfe, Box 14, 2nd General Hospital, APO NY 09180.

Vol. 13, No. 3 proved to be the most popular issue ever with an overall rating of 2.53 which edged the 2.57 of Vol. 12. No. 1 and in so doing showed the readership preference for a wide variety of subject coverage. The ratings of individual articles by our 1200 maximum point scoring system looked like this:

Initial Impressions of Russian Campaign.............. 404
Panzertactics, 1941.............. 181
Midway Series Replay.............. 143
Furor Tactonius.............. 131
Basic Probability for War at Sea.............. 92
Another Man's View of Russian Campaign.............. 86
Design Analysis—Kingmaker.............. 35
A Question of Balance.............. 27
Just One More Hex.............. 20
More French Alternatives.............. 19
Avalon Hill Philosophy.............. 12

Since nobody has sent in a completely accurate solution to Contest 73 yet (yes, all you clever people who imitate the stories in print but you left something out), we're accepting submissions right up to the time this issue of the GENERAL is mailed out. Consequently we don't have a list of winners at this writing, but we will tip you off to the complete solution.

A number of solutions were wrong because of rules misinterpretations. Before I give the right solution, I'd like to point out that: in the second impulse units move as indicated on the movement allowance chart, they cannot move if they start the second impulse in enemy ZOC, and they cannot attack at all if they were in a first impulse AV; only one unit can invade in the Bleriot D-day move. These ports must be controlled for the invasion to be guaranteed of success; units must stop in the first hex after crossing the Kzech Straits and cannot cross into an enemy ZOC and the Russian units near Rostov are doubled behind the river. If you're wondering why your submission wasn't right, the above might explain it.

Maybe we should have reminded you that the Russians get to go first, too—the 5th Guards Armed Army. As a final hint to all you people who almost got the solution, the 5th Guards Army is the real key to the puzzle—that unit must be used! If you'd like to go back and solve the puzzle for your own satisfaction, all the answers and complete solution is spelled out in the following paragraphs.

First, the 48th and 67th panzer corps and the 3rd Rumanian go to G021, attacking the Russian 3rd armor with a Stuka to get an Automatic Victory. Then the 5th infantry corps goes to K022, controlling Saviestopol. Then move any of the nearby 4-4s to Rostov—and at that moment all three ports are in Axis control. The 1st SS invades at K18, Aving the Stavka unit, and the 2nd SS, 1st cavalry, and 14th panzer corps move into KK10, which is now a Russian ZOC. The 52nd panzer grenadiers go to Q016, and the 11th infantry corps move to L022.

The Axis can get a 4-1 surrounded against Stalin and the 18th Army, but a “Contact” result would save Stalin and allow the Russians to counterattack and break the encirclement, giving Stalin a retreat route when he counterattacks on his turn. So the Axis must make sure Stalin is eliminated when he counterattacks—they must force him to attack at worse than 1-6 odds, so he can only automatically escape with 10 of 12. Probably the key is to avoid all other battles. The Axis need 30 points adjacent to Stalin (and the 19th) and placed so that no other Russian units can come within 3 points of either 12 or 10 of 12. So on the second impulse the 2nd SS and 14th panzer go to MM18, where they will be doubled to 32 points when Stalin counterattacks. These are the units that must be protected from other Russian attacks. The 1st cavalrygoes to LL18 to foil out the Axis 4-1 attack and to block the coastal approach. The 1st SS goes to MM15 to block the overland approach and to surround Stalin.

Now comes the part everyone forgot—you have to block against a Russian invasion to reinforce Stalin's attack! The 52nd panzer grenadier goes to QQ17, and the 11th infantry goes to KK19. The Russians can invade at LL19 or NN18, but the invading unit must attack the appropriate flank unit only. Stalin and the 19th Army must attack at 1-7 and are automatically eliminated.