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CAMPAIGN ANALYSIS: NORTH AFRICA 1940 to 1942

Strategy & Tactics

No. 19

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CAMPAIGN ANALYSIS: NORTH AFRICA 1940 to 1942

Part 1: THE ITALIAN ARMY

Albert Nofi, a long time contributor to the pages of S&T, is 26 years old and is currently studying for his doctorate at Columbia University. This article is the first in a series on the operations in North Africa. Thus far Mr. Nofi has complete similar articles on the British/Commonwealth armies, the Naval forces and is currently working on the Germany army article. Still to be complete are articles on the Air Forces and a general "wrap up" article on the conduct of the North African campaign. These articles will appear as frequently as you indicate on your FEEDBACK questionnaires. Maybe one an issue, perhaps one every other issue. Future CAMPAIGN ANALYSIS are planned on the war in Russia, the Invasion of France (both 1940 and 1944) as well as the campaigns in the Pacific . Work has already been completed on a CAMPAIGN ANALYSIS for the Waterloo campaign. Their publication is up to you. So fill out your FEEDBACK questionnaires and let us know.

The role of the Italian Army in the North African Campaign of World War II has never been properly analyzed nor clearly presented. Though occassional attempts have been made to examine some of the causes for the overall failure of Italian arms — The Rommel Papers come to mind — it is substantially correct to say that no serious, systematic attempt to do so has yet been made. It is the purpose of this article to elicit and analyze the factors which contributed to the general lack of success which followed Italian arms in North Africa and throughout World War II.

This analysis will consist of three detailed discussions, each of which as a direct bearing upon some significant factor or group of factors acting to the detriment of the Italian efforts.

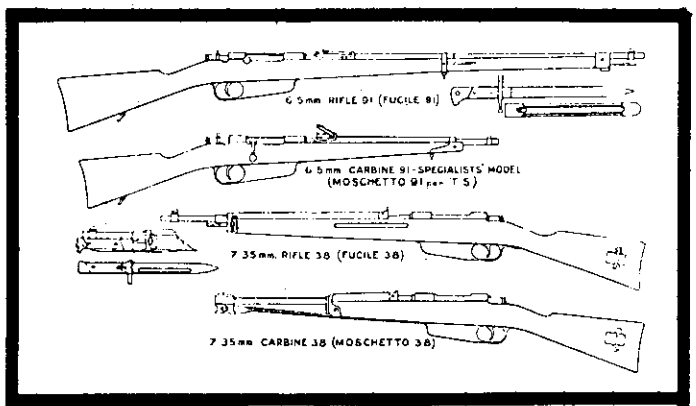
I. Material Factors.

The most frequently discussed aspect of the Italian Army's general failure has been the poor state of its equipment. While it is incorrect to state flatly that every aspect of Italian weapons and equipment was substantially inferior to that of the other major powers, it is not too far off the mark. Some Italian material was fully the equal to, and in some cases superior to, that of the other powers but, by and large, most of it was of questionable value. The problem was not merely one of the quality of equipment but also of the lack of sufficient amounts of what good material as did exist. The Italian High Command deluded itself into thinking that "modernized" obsolete equipment could serve fully as well that which was new.

A quick survey of the several areas of weapons and equipment is essential to an understanding of the problem.

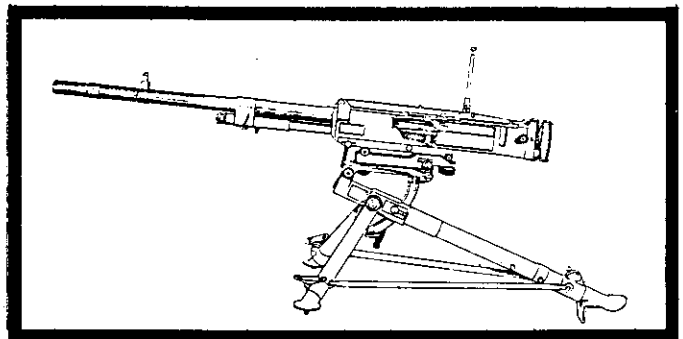
Small Arms. There existed, as regular issue, three types

of pistol, eight types of rifle, and two types of carbine. Only two weapons in each class were semi-automatic and calibers ran in five steps from 6.5mm through 10.35mm. Some of this equipment, such as the Mannlicher-Carcano 6.5mm M1891 rifle and its 1938 modification, was fully the equal of that in the hands of any other army in the world. Some of it, such as the Steyr 8mm M1895 rifle captured from the Austrians in 1918, was of dubious worth.



Most widely used rifles.

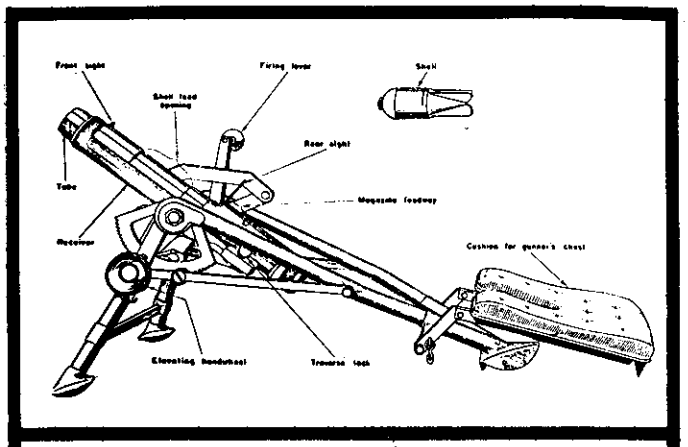
Machineguns. There existed nine separate types of machinegun ranging in four steps from 6.5mm through 20mm and having cyclic rates of fire of from 120 through 500 rounds per minute. Some, like the Breda 6.5mm light machinegun M1930, were efficient, modern pieces, while others, like the Fiat-Revelli 6.5mm medium machinegun 1914, were unquestionably obsolete.



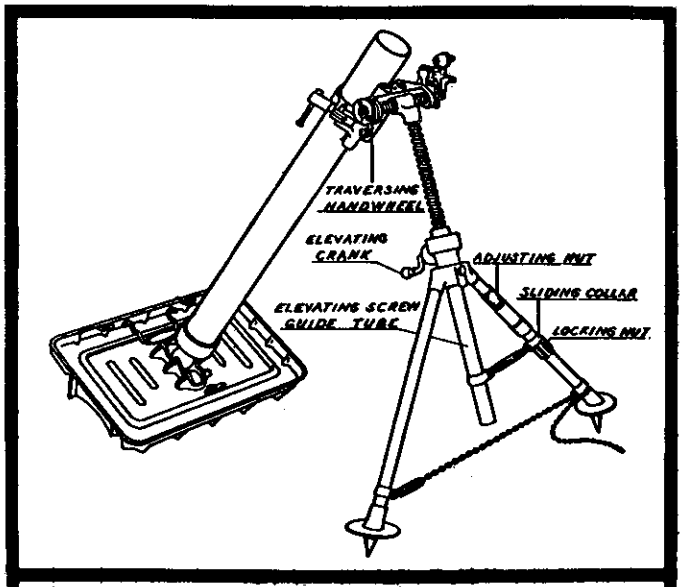
8mm Breda Machinegun (M1935)

Mortars. There existed an 81mm and a 45mm mortar. Both were efficient, modern pieces fully comprable to foreign makes. Both were well supplied to the troops, at least on paper.

Light Tanks. There were six types of light tank in use, two of which were gun equipped. Armor at its thickest was between .31" and 1.45" and speeds ranged from 13 through 26 miles per hour, though endurance tended to be low. The best was probably the Fiat-Ansaldo 3000 B (II) of 5 tons .63" armor, one 37mm gun and one 8mm mg, running at 20 mph up to 90 miles this was not saying much however, since the Fiat-Ansaldo vehicle was developed in



45mm Mortar (M 1935)

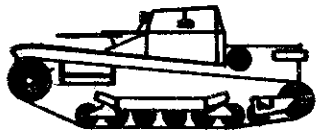


81mm Mortar (M1935)

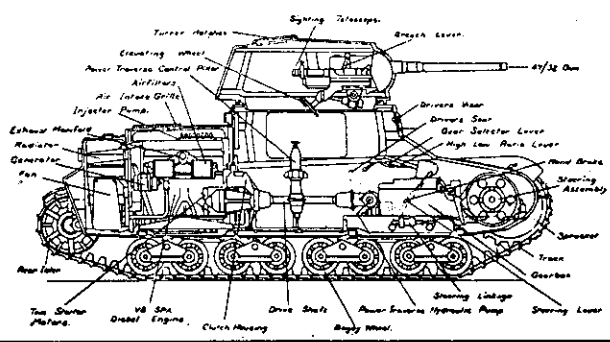
1928, from a 1919 design. The worst was undoubtedly the Carro Veloce 33(L3/35) of 3-3.5 tons, .31" – .63" armor, one 8mm mg, running at 26 mph up to 60 miles, provided you checked the radiator every ten miles or so. This last, needless to say, appeared in Africa in swarms.

Medium Tanks. There were seven types of these, including a captured French Renault vehicle. All were gun armed and had from 1.12" through 1.57" of armor. Speed ranged from 12.5 through 29 mph and weight from 11 through 18 tons. The best was probably the M 13/40 of 13 tons, 1.18" armor, one excellent 47mm gun and three 8mm mg, running at 19 mph up to 125 miles. Though weak in protection and somewhat prone to engine trouble this was basicly a good vehicle which never appeared in Africa in large numbers. The worst was most likely the M 11/39 of 11 tons, 1.12" armor, one fine 37mm gun and two 8mm mg, running at 20 mph up to 125. The thing was virtually uninhabitable and the 37mm gun was sponsoned into the hull and almost impossible to aim properly. Protection was scanty and of questionable value. This vehicle, along with the C.V. 33(L3/35), comprised the bulk of the Italian

armor in Africa during the campaign in question. A very fine vehicle, the 26 ton P-40, carrying the 75mm gun, was under development during this period and came out in 1943, but none saw service in Africa.

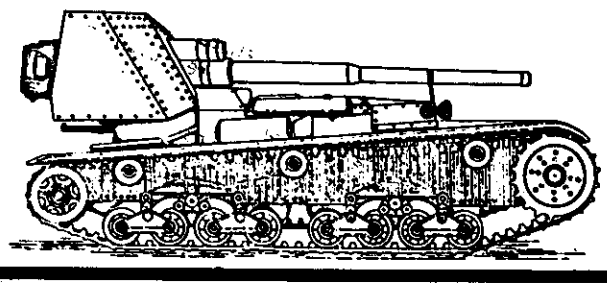


Light Tank M3/33 & M3/35



Medium Tank M13/40 (cross sect.)

In late 1942 the Italians practically dropped tank production entirely in favor of the production of a particularly successful series of self-propelled guns on M class tank chassis.

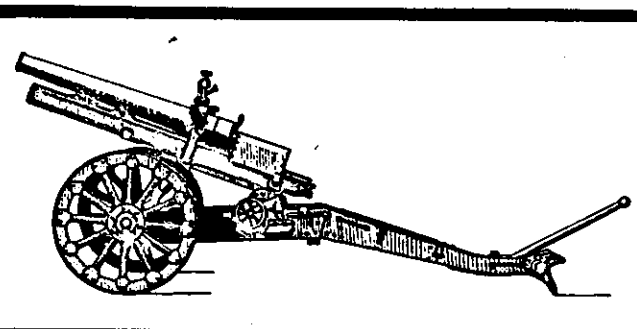


90mm Selfpropelled Anti-Tank Gun. These were excellent weapons but were not produced until 1942.

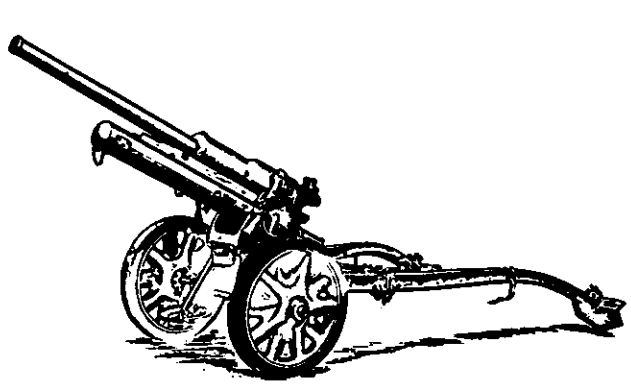
Interestly enough the Germans had, in 1941 and again in 1942, offered to turn over complete plans and machine tools to help the Italians begin production of their Pz Mk III. In its final version this offer envisioned Italian production of the Pz Mk IV and German training for the new Italian armored force. These offers were turned down under pressure from Italian industrial interests, a serious blow to the Italian war effort. Whatever their faults, Italian troops with German training and Pz Mk IV's would certainly have been considerably more formidable enemies than was the case.

Armored Cars. There were three main types of armored car and all three were more or less efficient and comparable to those in foreign service, though somewhat underprotected.

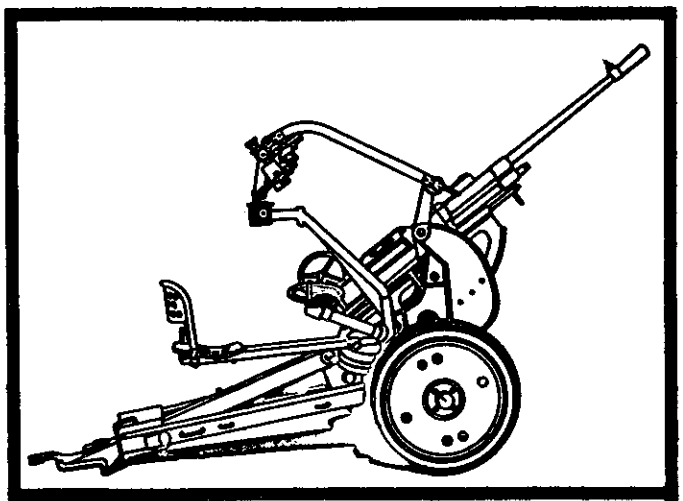
Artillery. In terms of anti-tank, anti-air, field and medium artillery up to 210mm the Italian Army was the proud posseser of no less than fifty-four (54) different weapons totaling sixteen calibers and using more than a score of different types of ammunition. The patterns, as well as some of the pieces, ran from the 1890's through 1940. Add in the fact that some of the equipment had seen service in World War I, on the Austrian side, and the picture which emerges is not a pretty one. The best piece was without question the 149mm M1940, with a muzzle velocity of 2,600f/s and a maximum range approaching 2,400 yards. This piece was produced in both a towed and a self-propelled model but very few seem to have reached Africa and fewer still seem to have seen service there. The Ansaldo 90mm dual purpose A.A./A.T. gun was also an excellent weapon, and approached the famed German 88mm Flak 18 in efficiency. Aside from these most of the equipment was of questionable value. Some self-propelled pieces in various calibers were produced but only a few appear to have been used in Africa.



65mm Infantry Gun



47mm Anti-Tank Gun (M1937)



20mm Anti-Aircraft Gun (M1935)

Uniforms and Rations. The personal equipment of the Italian soldier and his daily rations were significantly inferior to that which his German ally enjoyed and even more so when compared with the British or American soldier. The quality of his field gear was poor and it was badly fitted. Replacement of lost or damaged gear was agonizingly slow. Insofar as the ration went little can be said to its credit. Relatively little of the food came in cans, except tomatoes, and no iron rations, such as C-Ration, was provided. Generally the Italian soldier ate cheese, bread, spaghetti, some vegetables, a little meat, and a little poor wine. The preparation of everything but the meat and cheese required water and, of course, in North Africa, that was a commodity in short supply. Needless to say the average Italian soldier in the field was poorly fed.

The general overall low level of weapons and equipment in the Italian Army stands in marked contrast to the levels to be found in the German, British, and especially the American Armies during this same period. The multiplicity of weapons types is in sharp contrast to the usage in other Armies. In each area this duplication did nothing to contribute to the efficiency of Italian arms and undoubtedly, ". . . contributed to the poor showing of Italian arms in 1940-1943."

II. Historical, Doctrinal, and Organizational Factors.

Our attention must now turn from the concrete and obvious problems of Italian weapons and equipment to the intangible and less obvious, but no less real problems, inherent in the history, doctrine, and organization of the Italian Army.

While the historical background of the Italian Army contains few remarkably outstanding achievements its history is not a particularly poor one when one considers the fact that Italy's existence as a nation is a relatively recent thing. In 1940 the Italian nation had been a unified whole only seventy years.

During World War I the Italian Army had not, it is true, performed in any very outstanding fashion but at its worst it was certainly no worse that the British or French and at its best their equal. Significantly the Italian High Command during World War I did not have the highly efficient control over the press which was the case on the Western Front and correspondents tended to flock to the Italian Front for stories. In this way Caporetto, which was not particularly more disastrous than the Somme and Aisne offensives of 1918, was represented as a staggering defeat. The Italian High Command took a hand in this after the war on the theory that the more disastrous Caporetto was made to appear, the Italian victory at Vittorio Veneto, fought just a year later over substantially the same ground, would be made to look even more remarkable. Racially oriented historians also used Caporetto to help prove their theories of Nordic supremacy and the end result of this was to create an inferiority complex among the higher ranking Italian officers. Vittorio Veneto also had an adverse effect upon the development of the Italian concepts of mobile warfare, as shall be demonstrated below.

This lack of a strong tradition of military victory retarded the development of an espirit de corps in the Army and the flashy Fascist bragging of Mussolini and others was not able to inspire such.

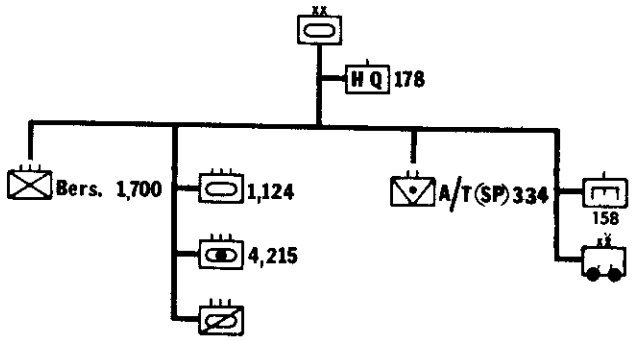
Fascism unquestionably had a serious negative effect upon the strategic thinking of the Italian Army and of the Armed Forces in general. The underlying strategic tenets of the Italian Armed Forces had always been defensive. The temporary discarding of this doctrine during World War I had only tended to reinforce it when at the war's end, the carnage was reviewed. The overall strategic idea was not so much the achieving of military victory, though that was recognized as a desireable thing, as the prevention of the enemy's achieving of such. Consider that the Italian Navy, which played primarily a defensive role in World War II, was not driven out of the Central Mediterranean until the fall of Sicily and the relative worth of this theory becomes apparent. The theory recognized that Italy was too weak to fight a sharp, hammer blow war with one of the greater powers but might just come off well in a drawn out contest designed to prevent the enemy from winning.

Twenty years of Fascism had not seriously altered the influence which this doctrine had on the Italian High Command and training programs, it had, however, succeded in trumpeting the value of the offensive to the point where everyone believed that the offensive was the way. This change did not, however, seriously affect the operational doctrine, training, organization of the Army which were still primarily interested in a World War I style defense. Even after the great Panzer victories of 1939 and 1940 in Poland and France no serious changes were wrought in training or organization though everyone began to pay lip service to the new ideas.

As a case in point let us examine the Italian Armored Division of 1941. This formation was specificly designed as a result of the experience gained in World War I, primarily at Vittorio Veneto, and reaffirmed in Spain during the Civil War. At Vittorio Veneto, in Ethiopia, and in Spain, the

infantry had opened the way and the mobile forces, cavalry and armored cars in 1918 and light tanks in Ethiopia and Spain, had poured through to exploit the success. The Italians, like just about everyone else, conceived of armor as merely cavalry with wheels and the Armored Division was designed with the ordinary purposes of cavalry in mind, namely exploitation, reserve, and scouting. It occupied the same position in 1940 that the Cavalry Division did at Vittorio Veneto. Unlike the Germans, the Italians did not envision the Armored Division as an assault force.

ITALIAN ARMORED DIVISION



NOTE: Designed primarily as a reserve and exploitation force and NOT as an assault force. The motorized division was designed as a running mate to provide infantry support.

STRENGTH

PERSONNEL	abt 6500
Machineguns	696
20mm AA/AT guns	40
37 & 47mm AT guns	198
Guns and Howitzers	64
Armored Vehicles	165
Motor Transport	750

37mm guns and machineguns mounted on tanks included in totals.

Organizationally the Italian Army's field formations left something to be desired. When compared with the British, German and especially the American Armies. The Italian Army and Corps headquarters were relatively poor in Army and Corps support troops and had little or no artillery attached until 1942. In addition there existed about a dozen different types of division, each with its own TO&E, most of which had poorly defined or overlapping functions. The organizational diagrams accompanying this section represent the major formations which served in Africa from 1940 through 1943. A glance at these schematics elicits some interesting insights.

None of the four principle types of division seeing service in Africa, namely the Binary, Autotransportable, Motorized, and Armored Divisions, came anywhere near their foreign equivalents in manpower, generally running between 50% and 60% of the size of their foreign sisters. In addition it should be noted that all of these formations have an essentially bipolar structure, there are two main combatant sub-formations, as opposed to a triangular structure which was generally preferred in the armies of the other powers.

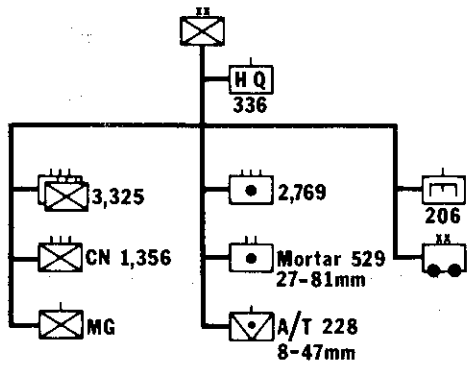
A comparison between the 1941 British Infantry Division and its Italian equivalent, the Motorized Infantry Division, demonstrates some significant differences in organization and equipment, most of which favor the British unit. The most obvious of these differences is the fact that the British formation is better motorized than the Italian one by a factor of 3.0, after adjustments have been made for the relative greater size of the British unit. In every other category of equipment the British unit reveals itself as the better equiped. Not only is its equipment better but it is more plentifully supplied with that equipment. In addition the British formation has a much more flexible structure. The Italians tended to regard their formations as whole units not liable to be divided and this lack of flexibility proved to be a serious handicap to Italian operations in Africa, where small unit actions were often of tremendous importance. It would be redundant to make comparisons between the various other types of formations in each army. The essential point is, of course, that the Italian formations were manifestedly inferior to their British equivalents, an inferiority which would obviously tell in combat.

The widespread use of ad hoc formations, or ragruppamenti, must also be remarked upon for this had a fatal effect on the famous Winter Campaign of 1940-1941. Consider for a moment that of fourteen formations of brigade size and larger available to take part in the campaign, nine, or about two-thirds, were ad hoc formations having but a few weeks existence and the Italian disaster becomes more understandable.

Both of the two types of Infantry ragruppamenti, the Libyan and Blackshirt "Divisions", ran to between 4,000 and 7,000 men, mostly infantry. The Libyan ones were composed of militarized African police units hastily lumped together, while the Blackshirt ones were composed of the Legions of Blackshirt militiamen which were attached to each Infantry Division. Both formations lacked any significant artillery support and had almost no technical troops attached. Neither the Libyans nor the Blackshirts were active soldiers, but they were expected to perform better than the regulars!

In a similar vein the armored ragruppamenti was composed of a number of light and medium tank battalions and was actually merely a swarm of unsupported tanks with an insignificant number of technical and service troops attached.

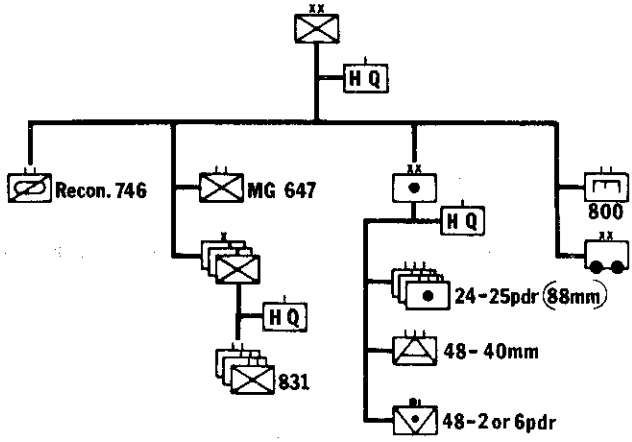
ITALIAN INFANTRY DIVISION



NOTE: The "Binary" infantry division which was the standard formation for the early campaigns of World War II. On occasion the engineers and machinegun detatchment were removed. Often the Blackshirt (CN) formation was weaker or absent entirely.

STRENGTH	
PERSONNEL	12,624
Machineguns	376
Mortars-81mm	36
45mm	126
20mm AA guns	8
47mm AT guns	24
Guns & Howitzers	36
Motor Transport	363
Motorcycles	61
Draft Animals	1937
Light Tanks	5

BRITISH INFANTRY DIVISION



NOTE: Standard for British, Commonwealth and all allies except for French. Fully motorized.

STRENGTH	
PERSONNEL	17,500
Machineguns	867
Mortars (50 & 76mm)	218
Armored Cars	6
88mm Field Artillery	72
40 or 57mm AT guns	48
40mm AA guns	48
Motor Transport	4064

The lack of artillery and technical troops in the raguppamento precluded the possibility that it could participate in sustained, serious combat. Its lack of permanence precluded any degree of cohesiveness under fire and under pressure it tended to disintegrate. Significantly this type of formation was not employed after the disastrous winter of 1940-1941; even the Italian High Command was capable of recognizing some of its fundamental flaws.

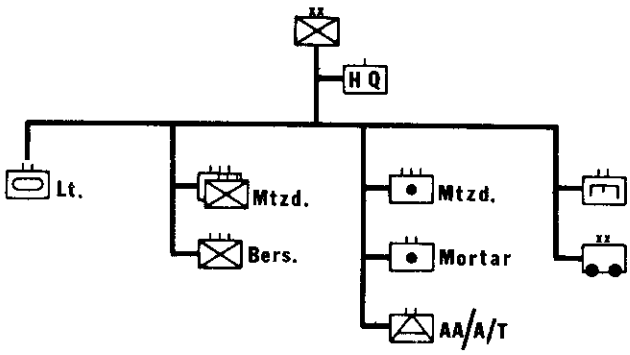
Generally speaking the Italian Army was badly organized and this certainly helped to render it relatively incapable of giving as well as it received in action against the better organized British. It is probable that the inherent flaws in organization played a more serious role in the general failure of the Italian Army than the poor equipment did.

III. Social and Psychological Factors.

Perhaps of greater importance than the material inferiority, the doctrinal confusion, and the organizational flaws were the social and psychological handicaps of the Italian Army. It is all too often overlooked that armies are essentially social organizations, reflecting the societies which raise and maintain them. The equipment of an army consists not merely of its hardware but also of the social consciousness and attitudes of its personnel. It is in precisely these areas which may be found the fundamental reasons for the failure of Italian arms.

The average Italian combatant appears to have been recruited largely from the rural Southern areas of the country. The Northern Italians and the city dwelling Southerners seem to have gone into the more technical branches of the Army, or into the Air Force and Navy, largely because these areas required a relatively high degree of educational experience. The social order of the average

ITALIAN MOTORIZED INFANTRY DIVISION

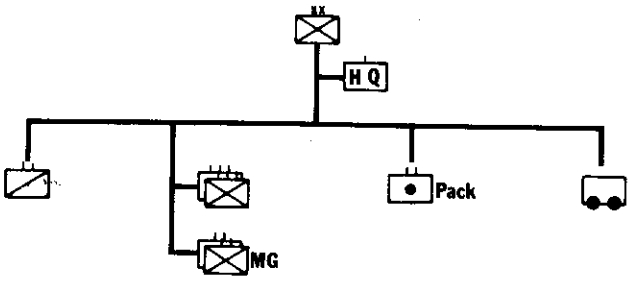


NOTE: Designed as running mate for armored division to provide infantry support. Had enough self-contained motor transport to lift entire unit

STRENGTH

PERSONNEL	9,500
Machineguns	308
Mortars-81mm	57
Motor Transport	850
20mm AA guns	40
47mm AT guns	48
Guns & Howitzers	36

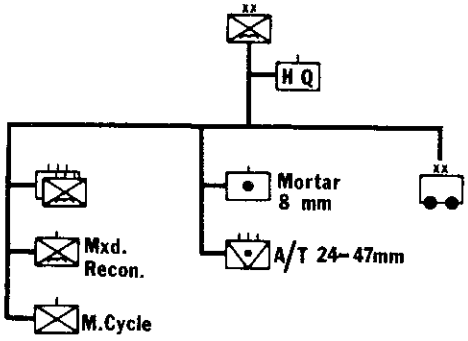
ITALIAN INFANTRY RAGRUPPAMENTO



NOTE: "Ragruppamenti" were Ad Hoc formations rather hastily organized for African service in 1940. They ran to some 4,000-6,000 men and were virtually devoid of support troops, as can be seen.

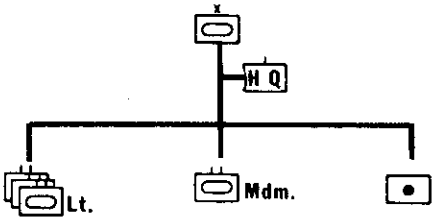
There were two "ragruppamenti" of Libyan militarized police (mostly native troops with Italian officers and NCO's) and four of Blackshirt (Fascist) militia drawn from the binary infantry divisions, in Africa in late 1940.

ITALIAN PARACHUTE INFANTRY DIVISION



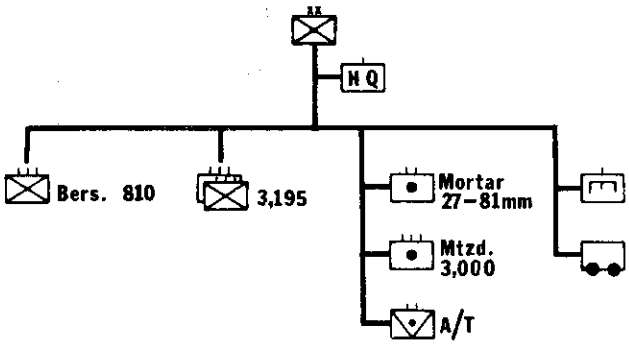
NOTE: Above is the structure "Folgore" and "Nembo" parachute divisions in 1942 and 1943. Strength was about 8-9,000 men. Other data is unavailable or scanty. Good quality infantry although unmotorized.

ITALIAN ARMORED RAGRUPPAMENTO (BRIGADE)



NOTE: Ad Hoc formations created from stray tank battalions in Africa in late 1940. These units lacked all but rudimentary support services and had very little cohesion in combat. The three armored "ragruppamenti" in North Africa in late 1940 and early 1941 disintegrated in combat. Each "ragruppamento" had about 150-200 armored vehicles.

ITALIAN SEMI-MOTORIZED INFANTRY DIVISION



NOTE: Formation is able to lift part of itself in its own vehicles. Artillery motorized but the infantry is largely on foot.

STRENGTH	
PERSONNEL	11,200
Machineguns	abt 300
Mortars-81mm	45
45mm	36
Guns & Howitzers	36
47mm AT guns	24
20mm AA guns	8
Motor Transport	abt 600
Draft Animals	abt 900

small South Italian town may be characterized by several key factors, notably

1. lack of education
2. lack of community concept, and
3. lack of social mobility.

As a result of years of neglect educational opportunity in Southern Italy was poor and the average Southern Italian was at best only semi-literate and totally unprepared for modern warfare. The efficiency of a soldier seems to be directly related to his level of educational experience, and in Southern Italy this tended to be quite low. Indeed prior to World War II the Army had acted as the main educational institution in the country, requiring at least a basic ability to read and write before a man was discharged from training; each batch of annual conscripts was given some exposure to the "3R's", often the first real exposure many of the men had. The pressure of wartime demands on the training camps precluded a continuance of this type of program during the war years.

The general lack of education also tended to support the narrow outlook of the average Southern Italian towards the Italian nation. By and large the average Southerner tended to see no loyalty beyond the extended family and viewed the government as something alien, having but little respect for delegated authority, which is "just about all you really have in modern armies." Lacking a strong concept of community the Italian soldier had relatively little sense of "belonging" to a particular regiment or corps. This of course influenced the cohesiveness that such a formation had under fire. The process of laying down one's life for society requires that one recognize and accept the fact that society is worth at least as much as that life. This was a position the average Southern Italian was not able to take. This does not, however, reflect upon the courage of the individual soldier, as shall be presently seen. His problem was not a lack of courage but rather a lack of motivation.

The rather rigid class structure of Southern Italy was brought into the Army as matter of course. Though promotion was by examination the lack of educational opportunity made it highly unlikely that a peasant could obtain a commission. Generally speaking officers were

TABLE 1-Illiteracy in Selected Nations by Males Only, 1900 to 1930

COUNTRY	'00-'01	'10-'11	'20-'21	'30-'31	BASE
Italy	42.5%	33.1%	24.9%	18.9%	R
France	13.5%	9.7%	6.9%	4.8%	RW
United States	10.1%	8.0%	6.5%	4.8%	RW
England-Wales	2.8%	0.8%	NIL	NIL	RW
Netherlands	1.6%	0.7%	NIL	NIL	RW

NOTE: In all countries but the US males 10 years and over were enumerated. In the US, males 14 and over. BASE for determining literacy is either the ability to read (R) or the ability to read and write (RW). NIL indicates the percentage approaches zero.

TABLE 2-A Comparison of Male Illiteracy by Age Groups between the United States and Italy in Base Year 1931.

GROUP	U.S.	GROUP	ITALY	War Classes
10-14	1.4%	10-14	8.3%	*
15-19	2.4%	15-19	11.3%	*
20-24	3.2%	20-29	11.7%	*
25-34	3.4%	30-39	13.8%	*
35-44	4.9%	40-49	18.7%	
45-54	6.5%	50-64	27.9%	
55-64	7.0%	65-up	41.1%	
65-up	8.9%			

NOTE: Enumeration techniques differed over age 20. War classes indicates those groups constituting the bulk of the armed forces of the respective nations during the period 1940-1945, along with the younger group not enumerable in 1931. Italy tended to have an "older" armed force than the US. Again the determining base for the US is the ability to read AND write while for Italy the ability to read only. No comparison can be made on the basis of what precisely was meant in each country by the ability to "read".

TABLE 3-Illiteracy In Selected Regions of Italy in 1901. (Males Only)

SECTION	REGION	RATE
NORTH (5)	PIEDMONT	18.0%
CENTRAL (5)	TUSCANY	42.0%
SOUTH (4)	APULIA	69.5%
	BASILICATA	75.4%
	CAMPANIA	78.7%
INSULAR (2)	SICILY	70.9%
ALL OF ITALY		42.5%

NOTE: Comparative data for other years or for all regions not available. Italy is divided into four sections and (in 1901) sixteen regions each composed of from two to half a dozen provinces. Figures in brackets indicate number of regions in section.

recruited from among the Upper and Middle Classes, NCO's from among the Middle Class, and enlisted men from among the rural peasantry and urban Lower Classes. Competance was not necessarily as important as social standing, connection, and influence. There was a widespread and abusive RHIP concept which provided every possible comfort for high ranking officers, while almost entirely ignoring the average fighting man. Rations, for example, improved tremendously as one moved upwards in rank, assuming one managed to do so. These conditions were not, of course, conducive to strong ties of respect and loyalty which were so necessary to military efficiency and which were so lacking in the Italian Army.

Taken together these underlying social conditions and their influence upon the Army did not provide a strong base upon which to build an effective and efficient fighting machine. Significantly those services which tended to recruit from Northern Italy, where these social conditions were not evident, tended to perform the most creditably of all, namely the Engineers, Artillery, Air Force, and Navy.

The psychological committment of the individual Italian fighting man to Fascism does not seem to have been overwhelming. In Spain, during the Civil War, Italian troops generally rendered excellent service (in spite of Loyalist propaganda to the contrary) but several interesting incidents should be noted. During the Battle of Guadalajara a relatively large number of Italian troops surrendered to the heavily Italian "Garibaldi" Brigade, composed of Anti-Fascist Italians in the service of the Spanish Republic. While the battle was not the debacle that it was proclaimed to be the significance of these surrenders should not be overlooked. The Fascist State did not manage to motivate the Italian soldier in the same way that the Nazi State motivated the German soldier or the Communist State, the Russian.

To further mitigate against an effective war effort, and influencing all parts of the Armed Forces, was the fact that by and large most Italians were essentially anti-German and pro-British. Aside from Mussolini and some others who were in power most Italians would have prefered to be fighting against the Germans rather than alongside them.

Very likely this strong lack of motivation tended to eliminate the possibility of truly effective operations, when coupled with all the other factors present. Indeed considering the excellent service rendered by Italian Regular and Irregular forces in Italy and Yugoslavia after the Armistice of 8 September 1943 it is very clear that the Italians would have performed with a higher degree of success against the German than they did, in reality, against the British. At least their heart would have been in it.

IV. Conclusions.

What, then, are the underlying causes for the failure of the Italian Army in North Africa and throughout World War II? We must look to a mixture of the various factors which we have gone through above. Other armies have fought well though poorly equipped, others have fought well though poorly organized and possessed of faulty doctrine. Some young nations have managed to pile up enviable military traditions in a short time. Some nations with severe social conditions have managed to win wars at times. The secret lies in the fact that the Italian Army in World War II suffered from all of these problems at the same time.

Let us also not forget that the British must certainly be recognized for their part in making Italy's efforts a failure. Too often military analysts blame defeat on everything but the enemy, a situation which is questionable and suspect to say the least. The British Army was by no means perfect, it was possessed of serious deficiencies in several areas but at least it was better than the Italian and the individual soldier was better motivated and more able to function efficiently than the individual Italian soldier. The British were also fortunate in recognizing and capitalizing upon the Italian flaws while having none of their own siezed upon by the Italians.

Finally, it must be said, lest we tend to blame everything on the weather (like the commentators upon another campaign of the Second World War) that the British managed to out-think and out-fight the Italians time and again.

The ultimate blame for the situations and conditions existing in the Italian Army must rest primarily upon the shoulders of the Italian nation, not even those of Mussolini himself. It was the nation which permitted the Army to enter battle badly armed and equiped; it was the nation which permitted conditions in the South to remain bad for so long; and it was the nation which permitted Mussolini to get away with things for so long. The security of a nation lies in its freedom and its well being, not in pretended glory and talk.

Let us not close without a comment by Rommel, "The ability to wage war is by no means the sole indicator of civilization."

This is the first part of a six part series on the North African Campaign. Next will come the British/Empire forces, The Afrika Korps, The Naval War, The Air Forces and finally, the campaign itself, possibly in game form. On the following pages is the Italian Army Order of Battle and a FOOTNOTE explaining the unit rating.

Order of Battle

Italian Army

North Africa June 1940-Dec. 42

Time Period / Units		16 Pistoia SM	17 Pavia SM	25 Bologna SM	27 Brescia SM	55 Savona SM	60 Sabratha	61 Sirte	62 Marmarica	63 Cirene	64 Catanzaro	101 Trieste
Unit's Full Strength		5	5	5	5	5	3	3	3	3	3	6
Start of War June 1940	A		5	2	5	2	1	3	3	3	2	
Sept. 1940	B		5	5	5	5	3	3	3	3	3	
Feb. 1941			5	5	5	5	0	0	0	0	0	
March 1941	C		5	5	5	5	Re-					
April 1941			3	5	2	5	built					
May 1941	D		3	5	2	5	3					
June 1941			3	3	3	5	3					
Nov. 1941	E		5	5	5	5	3					6
Dec. 1941			2	2	1	0	3					1
Jan. 1942	F		2	2	1		3					2
Feb. 1942			2	2	1		2					2
May 1942	G		3	3	3		3					3
June 1942			1	1	1		1					1
June 1942	H		1	1	1		1					1
July 1942			1	1	1		1					1
August 1942	I		3	3	3		2					3
Sept. 1942		3	2	2	2		1					1
Oct. 1942	J	3	3	3	3		2					3
Dec. 1942		0	0	0	0		0					0

Abbreviations: SM=Semi-Motorized. Letters to the right of the dates indicate the following campaigns. A-The Beginning of the North African War. B=The Italian Offensive and the First British Offensive. C=The First Italo-German Offensive. D=The Siege of Tobruch and Operation Battleaxe. E=The Siege of Tobruch and Operation Crusader. F=The Second Italo-German Drive. G=The Battle of Gazala. H=The Drive to 'Alamayn. I=The Battle of Alam Halfa. J=The Battle of Alamayn and the Final British Drive. CCNN=Camicia Nera (Blackshirt Militia). Rag.=Raggrupamento. Units numbered 60-64, Libyan , CCNN and Rag. were in Cyrenacia in 1940. All others

Time Period \ Units		Trento	Ariete	Littorio	Folgore	23 Marzo	28 Octobre	21 Aprile	3 Gennaio	Libya 1	Libya 2	Rag. 1	Rag. 2	Rag. Babini	Rag. Maletti	Superga 1	Centaro	Giovane Fascisti
		102	132	133	185	1 CCNN	2 CCNN	3 CCNN	4 CCNN								131	CCNN
Unit's Full Strength		6	8	8	6	3	3	3	3	2	2	2	2	2	2	6	8	6
Start of War June 1940	A					3	3	3	2	2	2	2	2	2	2			Only one regiment (one third of division) at El Alamein
Sept. 1940 Feb. 1941	B		2			3 0	3 0	3 0	3 0	2 0	2 0	2 0	2 0	2 0	2 0			
March 1941 April 1941	C	6	5 1															
May 1941 June 1941	D	4 4	1 1													ARRIVED TOO LATE	ARRIVED TOO LATE	
Nov. 1941 Dec. 1941	E	6 2	8 1	5														
Jan. 1942 Feb. 1942	F	2 2	5 1	5 5														
May 1942 June 1942	G	4 1	5 2	5 5														
June 1942 July 1942	H	1 1	2 1	5 1														
August 1942 Sept. 1942	I	4 3	5 2	5 2	4 4													
Oct. 1942 Dec. 1942	J	4 0	8 0	8 0	4 0													

in Tripolitania over against the French frontier. The 55th Infantry arrived in Cyrenacia in mid '41, the 16th Infantry in Tripolitania during 1942. The 102nd (Trento) was only a motorized division on paper. Most of its transport was used for moving supplies while the division functioned as a semi-motorized unit. The downward movement of strength factors represents losses in men and equipment while upward movement represents rebuilding of the units. Some units were destroyed in one campaign and then completely rebuilt. Even during the short periods covered by this chart unit strength could go up and down several times.

FOOTNOTE: BETWEEN REALITY AND SIMULATION

Most of those reading the above article were first introduced to the activities of the Italian army in North Africa through playing Avalon Hill's game AFRIKA KORPS. This type of game is also known by its scientific name "simulation". This word "simulation" tells you more about the nature of the "game" than the word "game" itself does. A simulation attempts to re-create the original, or potential, situation, by what ever means available. In the case of the Avalon Hill game the primary device was an ingenious game formula which allowed the designer to create the illusion of accurate simulation with the minimum of reliance on "hard" historical information. "Hard information" is so called because the data needed is either difficult to obtain or too complex to be reduced to a suitable format for a mass market game-which is what AFRIKA KORPS is.

These footnotes will follow each of Mr. Nofi's articles in order to use his "hard" information as an example of how difficult it is to reconcile this type of information with such a playable game gormat as is found in AFRIKA KORPS. This analysis of the game, and that is what this series of FOOTNOTES will amount to, will begin with the problem of assigning numerical values to the units which participated in the North African campaign.

First let us review the criteria for Avalon Hill's initial choice of numerical factors (hereafter called, as in the game, "combat factors") for their game. The primary objective in designing AFRIKA KORPS was to create a very playable game without losing completely the historical flavor so neccessary in marketing this type of game. In doing this the actual value relationships between the units of the various nationalities (British Empire, German, and Italian) were distorted for the sake of playability. We will now put these relationships back into a somewhat more realistic perspective. Be forewarned, however, that these "new" combat factors cannot be incorporated into the existing game without destroying the game as it now exists. To use these new factors would require redesign of the entire game. This new game would not be AFRIKA KORPS as you now know it. This AFRIKA KORPS II would be more realistic and historically accurate, but it would also be more complicated. This would take away from AFRIKA KORPS its most popular characteristic simplicity and ease of play. The "new" AFRIKA KORPS does not HAVE to develop in this direction. But it is usually true that increased realism brings about increased complexity. Perhaps we can find a way around this shortcoming. This will also be one of our objectives in this series of FOOTNOTES.

First, let us take a look at the units involved in terms of those elements which together constitute "combat value". The units in question and their combat elements are shown below in tabular form.

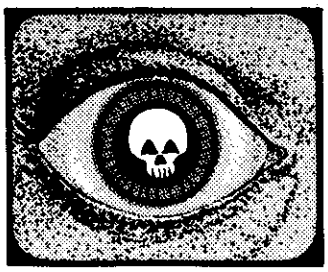
STRENGTH	DIVISION TYPE (by nationality) BRITISH		GERMAN		ITALIAN		
	INF	ARM	INF	ARM	INF	M INF	ARM
MANPOWER	17500	10200	17200	14400	12600	9500	6500
INFANTRY	6300	3300	7200	4500	5600	5700	3500
Guns, 75mm+	72	52	149	150	36	36	64
Guns, 75mm-	96	48	11	69	32	88	198
Machineguns	867	820	643	1031	376	308	696
Mortars	218	364	142	48	162	57	---
Armored Vehicles	6	342	---	163	5	---	165
Trucks	4064	2400	942	2600	363	850	750
COMBAT VALUE	9	14	12	20	5	6	8

INF-Infantry, M INF-Motorized Infantry, ARM-Armored

One might immediately question the validity of the assigned factors. But first keep in mind that these factors must be combined with the geography of the terrain being fought in as well as the method of resolving combat. It is very dangerous to attack factors of any sort using historical "examples". Remember that these factors have been assigned to the "average" unit of the type indicated while that unit was at full strength. Few units remained, or even became, full strength units in the course of the campaign. Various histories will refer to division size units as if they were, most of the time, at full strength. While this was often true there was also another factor to be considered, that of the experience and competence of the men in these units. Mr. Nofi's article dealt in detail with the situation in the Italian army. Later articles will deal with the same problems in the British and German armies. The point here is that there is no way as yet of defining EXACTLY the combat value of a unit. There are too many variables. The best we can do is recognize, from the data available, those factors which contribute most to a units's combat value. In general, the firepower of a unit (expressed in the quality and quantity of weapons and the skill with which they were used) is the best measure to start with. In this respect the Germans and the British far outstrip the Italians. Another critical aspect is tactics — this was the area in which the Germans excelled and in which the British and Italians were most deficient. One can go on and on.

There have been those who have attempted to use a pat formula to compute the value of a unit in combat. But this sort of cut and dried method falls apart when faced with such problems as the efficiency of artillery and armored vehicles. Or when faced with questions concerning mid-campaign re-organizations of units, a tack the British were wont to follow. The Germans did much the same thing, if only because supply difficulty prevented the maintenance of units at their authorized strength. The demands of the terrain (desert) also modified the value of a unit. It wasn't until late in the campaign that the British fully realized the implications of waging war in the desert. So it should also be in a good game. It should expand one's understanding of the subject, not submerge interest in a too pat representation of a past event.

This FOOTNOTE has, we hope, expanded your awareness of the problems encountered in developing a good game. In the next FOOTNOTE we will examine the problems encountered when developing a satisfactory method of resolving combat. This will accompany a piece by Mr. Nofi on the British Empire forces.



'IF LOOKS COULD KILL...'

By Redmond Simonsen

Blitzkrieg is a fairly good game. It is only because it has the potential to be so much better that causes us to slap our collective foreheads over the lack of imagination evident on the part of Avalon Hill when they produced it in the inflexible form that they did. Of course BLITZKRIEG has enough counters to tile your floor with and a mapboard large enough to bowl on but when you get right down to playing it, the game becomes a paper parallel of a Green Bay Packer's intra-team scrimmage: strong but dull.

The reasons for this lack of excitement are legion but chief amongst them are: 1. Too Large a Force on Two Small a Front (shades of 1914). 2. Too Great of a Road Mobility Factor (Surprise?). Couple this feature with number 1 and you have the problem of each player having the ability to shift his entire center of mass in one turn. This leads to the type of "Hammer and Tongs" battles characteristics of the standard AH Blitz game. 3. Virtually Identical Orders-of-Battle (no dynamics). 4. Lack of differentiation in unit-combat-characteristics. Even though there are many different labels stuck on BLITZ units, their combat characteristics are virtually identical. This is mainly a function of the 12 factor stacking rule, the attrition table and mandatory combat rules. 5. Lack of Situational Mutability — in other words you're limited to one type of an army, fighting one type of war, through one route of march to one conclusion or condition of victory.

Perhaps most important of all, in addition to the preceding, is the complexity of the game. It is complexity with utility. All the little non-integrated optionals and inconsistent "Tournament" rules do provide complexity but they are largely patchwork. The complexity doesn't build into the game, it builds onto it.

We have tried (and we hope succeeded) in the BLITZKRIEG MODULE SYSTEM to provide the gamer with a game structure which has variation, interest, escalating complexity and utility. The number of options inherent in the system are only limited by the gamer's personal flexibility and willingness to explore new areas of strategic forces employment.

One of the most important aspects of hypothetical or "non-historical" battle games is "color". In this sense "color" means background setting into which the hypothetical war is placed. In the standard BLITZ game there is virtually no color. The Major Power names "Big Red" and "Great Blue" tend to make one gag rather than envision an important modern nation. The poor Minor Powers are nameless as are all the cities. The only names Avalon Hill chose to mar the board with were inside jokes referring to company personnel (next time you break a river-line, think of a sales representative!) No thought was given towards providing players with a scenario or motivation for the colossal war taking place. In an attempt to rectify this oversight we suggest to you the national names, flags, uniforms and equipment seen in the BMS article. "Azurnerreich" implies a Teutonic land ruled by a monarch or Kaiser. "Krasnynorad" is intended to suggest a Slavic monolithic bureaucracy. Nord and Sud Walkure are Scandanavian nations with constitutional monarchies "Calaedia" is an Anglo-Italian democracy. "New Endor" should be considered a Scotts-Irish confederacy and "San Estados" a Latin theocracy. Of course none of this affects the mechanics of a game but it does induce a certain amount of identification and empathy into the players of a game. One is free, of course, to completely disregard our suggested names and to dream up others which express one's own personal nationalistic flavorings.

A FEW WORDS ABOUT CONSTRUCTION

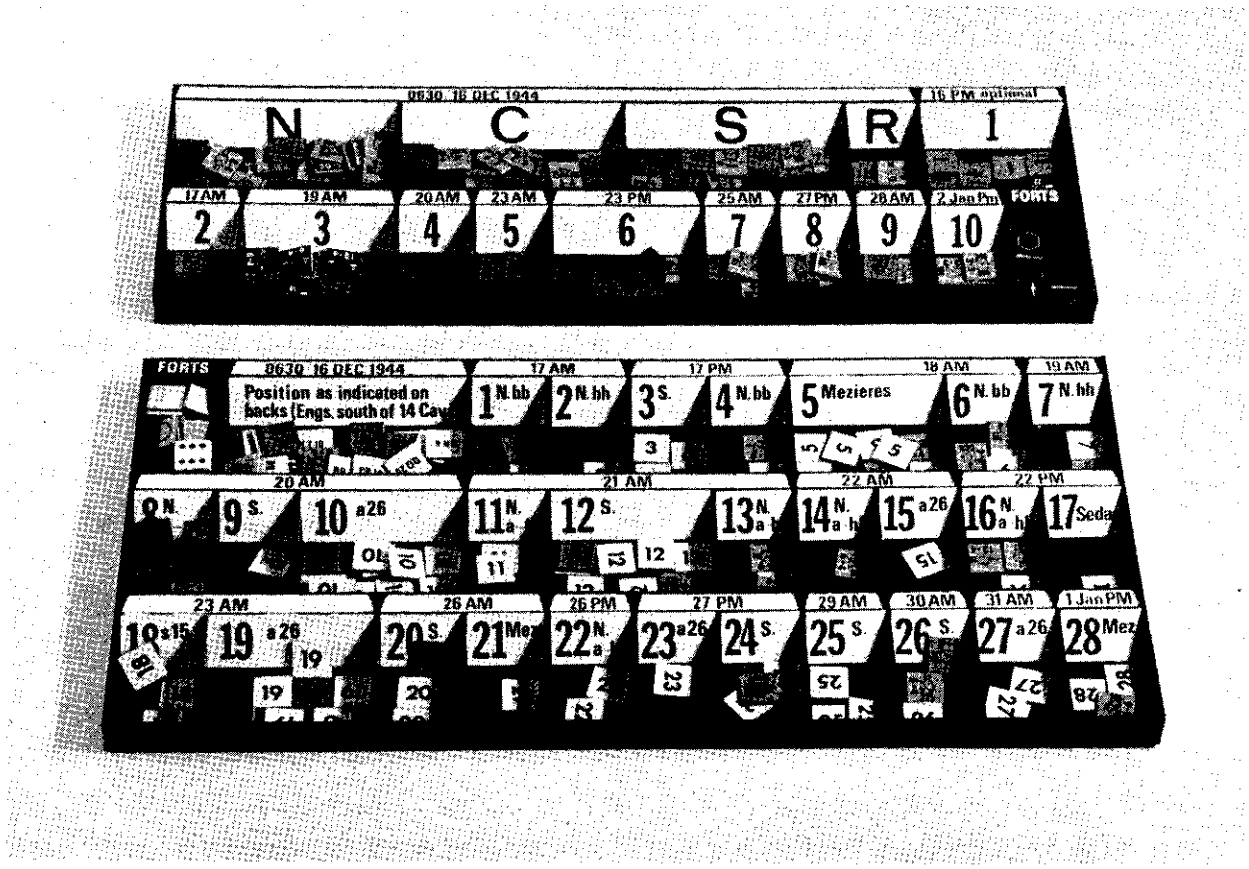
In a game the size of BLITZKRIEG it becomes almost mandatory for the players to build or adapt compartmented trays to hold the counters and to keep them in order. Building custom-made trays is always the most satisfactory solution. Good general dimensions for BLITZ trays would be 5/8" deep by 5 1/4" wide by 13 1/2" long. Never make the individual compartments less than 1" by 1 1/4". Segregate units by class, type and factor for ease of location. Label all compartments, preferably with a photostatic blow-up of the specific counter type. For the number of counters in the S&T version of BLITZ you will need two trays for each side. If they are built to the above specifications they can be placed end to end along the length of the board without taking up a great deal of space. The easiest construction material is smooth finish matte-board (a high-quality easy-to-cut artist's cardboard available in many colors.) If you would like specific working plans for such trays, indicate your desire on the FEEDBACK questionnaire and they shall magically appear in a future issue if enough readers so command.

When mounting the additional counters provided with this issue use BEST-TEST rubber cement. Coat the back of the counter sheets and the mounting board (matte-board is perfect) with glue and allow them to dry. Place two pieces of tracing paper or bond paper over the mounting board so that a thin line of glued-mounting board appears in the center between the two edges of the tracing paper. Place the counter sheet on top of this and gently rub down the center of the sheet to bring the cemented surfaces into contact. Then slowly pull one of the tracing sheets out as you rub down that side of the counter sheet. Do the same on the other half of the sheet. This magical process is called "slip-sheeting". You can form an even better bond by "wet-mounting" with thinned Elmer's Glue-All but this is tricky for the uninitiate and requires a bit of skill to produce unwrinkled counters. If you try it practice first on scrap paper and board or you'll regret it. Counters are best cut out using a sharp x—acto knife and a steel ruler. Minor Country counters should be colored AFTER you mount them and BEFORE you cut them. Suggested colors on the counter sheet refer to MAGIC MARKER colors. After you've mounted and colored your counters and BEFORE you cut them, spray them with a few light coats of "Krylon

Crystal-Clear" to improve service-life. You may also wish to trim a tiny bit off each corner of your counters (particularly the AH ones) in order to render them more manageable and to prevent them from catching on each other when closely stacked. This also helps prevent "dog-earring".

One of the best ways to preserve and protect the CRT's and other tables is to have them laminated in plastic. You can have this done for you by large stationery stores or you can do it yourself with adhesive-backed plastic sheets. Laminating also allows you to make felt-pen notations on the tables to aid your game play. Using felt pens there are many notations you may make on the board itself to aid play ("Illustrator" brand pens are best: alcohol base, non-smearing, brilliant color takes well on mapboard). Port squares should be outlined in red. A black dot on every fifth railroad square will speed play. Minor country borders could stand a little bolder definition. Additional imaginary names can be written in felt-marker or pressure-sensitive dry transfer lettering. Mark backs of units with strength and type and/or nationality. You may wish to color code the edges of units according to type for quicker identification (especially air units). Mounting airbase counters on hexagonal pieces of cardboard will make them easier to spot and to handle. Don't hesitate to make any addition or adjustment which will aid or simplify the mechanics of play since the easier the manipulation of the components becomes, the more actual game playing is possible.

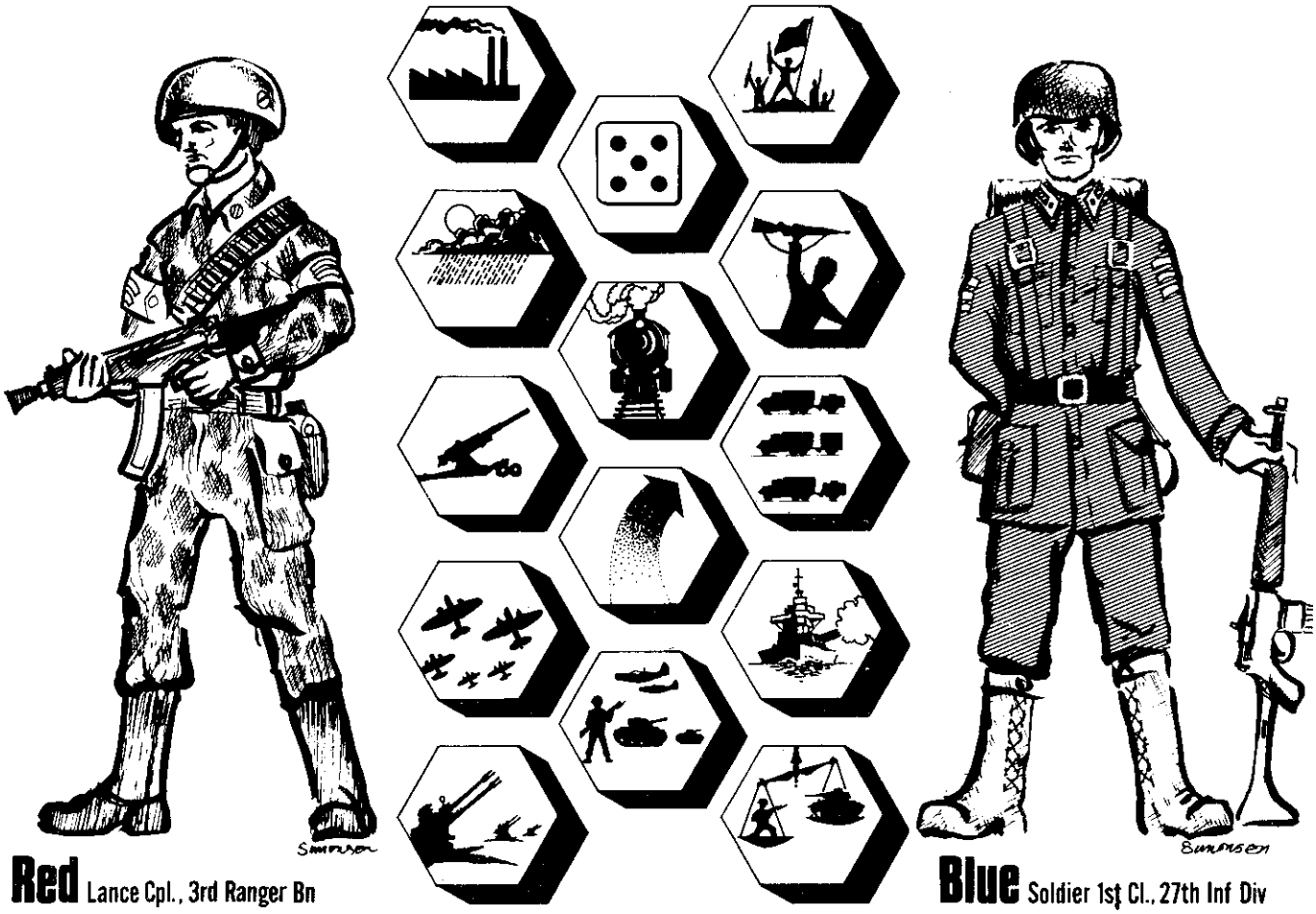
As a result of our extensive redesign of BLITZKRIEG we have taken up the development of a completely new game tentatively titled STRATEGY I. It would incorporate and expand many of the features present in the BLITZ redesign. Also it would be played on a mapboard 44" x 29" (two full size map sheets butted side-to-side). If enough reader-interest is voiced, it will be produced and sold as a TEST-SERIES GAME for about $9.00 or $10.00 per copy. If you would be interested in seeing such a game please indicate your desire on the back of the FEEDBACK questionnaire. You might also wish to suggest features for the game not present in the BLITZ variant. It could conceivably be made into a master wargamer's design kit which would allow you to freely combine and juxta position dozens of different modules to produce a virtually infinite number of battle situations. So give us the word Gentle Readers.



An example of custom made counters and trays built by the author (for S&T Bulge Variant).

THE BLITZKRIEG MODULE SYSTEM

by
James F. Dunnigan &
Redmond Simonsen



Red Lance Cpl., 3rd Ranger Bn

Blue Soldier 1st Cl., 27th Inf Div

This BLITZKRIEG revision was designed by James F. Dunnigan (who has never played the game) and put into an understandable format by Redmond Simonsen (who has played the game frequently). Mr. Dunnigan's ideas and Mr. Simonsen's organizational talents (not to mention his artistic talents) became so intermingled by the time the project was finished that it would probably be best to say that they both did it. Forget about splitting hairs and leave it at that. For more on where all this fusion of talent will lead see the last paragraph in the IF LOOKS COULD KILL DEPARTMENT.

BLITZKRIEG was designed as a result of the success of TACTICS II. Ideally, it was to have been an improvement on the original TACTICS II theme, that is, a hypothetical battle situation which stressed playability and interest while avoiding the difficult to handle details needed to make most historical games realistic. Overall, BLITZKRIEG was a success in this respect. Its excellent sales testify that the game's designers must have done something right. But we feel that they could have done much better. But rather than tear down the original game we feel it would be more constructive (as well as much more interesting) to present an alternative design to the original BLITZKRIEG game. Since any such effort would still have much in common with the original BLITZKRIEG (or TACTICS II, for that matter) we are using the BLITZKRIEG game as a starting point. What we present here are, in some cases, merely additions to the original rules while quite frequently our rules entirely replace those of BLITZKRIEG.

There are 18 modules in the Modular BLITZKRIEG. They cover every aspect of the game and, if all are used, create an entirely new game But you don't have to go that far. You may, just using the original components of BLITZKRIEG, incorporate many, if not most, of our modules in play. But some of our modules require the use of new components and for this reason we have included some new components which, with little effort, can be incorporated into the BLITZKRIEG game. Suppose you don't own a copy of BLITZKRIEG? You're hardly left out of things as the rule modules can, with a little imagination, be applied to almost any type of strategy game. With a little more imagination you can take the modules and apply them to a game you yourself would like to design.

For those who care about it, we assumed that each hexagon on the BLITZKRIEG board equals 32 kilometers (20 miles). Just thought you might like to know.

1

Fluid Impulse

FLUID IMPULSE REFERS ONLY TO THE MOVEMENT AND COMBAT OF CLASS 4 GROUND UNITS

Each move consists of two "IMPULSES" or movement turns. Combat takes place between the two impulses. Procedure: First impulse move all Class 4 ground units, roll combat results, remove losses, retreat any defenders according to CRT. SECOND IMPULSE move all class 4 ground units again, using full BTA. Units may move into enemy ZOC (zone of control) on both First and Second impulse. No combat, however, takes place at the end at the Second Impulse. On both the First and Second impulse units may move THROUGH enemy zones of control at ½ BTA. Overruns may take place in either impulse.

2

Rigid Impulse

Similar to FLUID IMPULSE except that units may not move through enemy ZOC. Units ending their first impulse in enemy ZOC (after combat is rolled) may not move in the second impulse. Units moving in the second impulse may not enter enemy ZOC. Overruns may take place in either impulse.

3

Modified ZOC

ARMOR, INFANTRY, MARINES, AIRBORNE AND RNGR UNITS have a zone of control (ZOC) which extends to all adjacent land squares. This zone of control affects movement of enemy units. Except when using the FLUID IMPULSE MOVEMENT SYSTEM (Module No. 1) units must stop in the first square of enemy ZOC that they enter. Units do not have to have combat with enemy units whose ZOC they are in. If they do choose to attack they may attack only one square of enemy units or as many as they choose. All units in attacked squares must be treated as one defense factor. Units may move from the ZOC of one enemy stack directly to the ZOC of another enemy stack as long as those ZOC's do not overlap.

Class 1, 2, 3, 5 and 6 units do not have ZOC's. They only block the movement of enemy units through the squares they occupy.

(NOTE: SEE AREA INTERDICTION MISSION in AIR TARGETTING CHART, MODULE NO.12). Class 4 Artillery Units have no ZOC. Class 4 units being transported in Class 2 or 3 have no ZOC.

Class 3 units on port squares or assault squares have no ZOC in relation to ground units on land.

Class 4 units which become unsupplied lose their ZOC SEE ISOLATION EFFECT TABLE.

4

Combat Results

(SEE THE COMBAT RESULTS TABLE ENCLOSED AS A SEPARATE SHEET)

The following is an explanation of what the various table results mean:

R - indicates the number of squares the defending units must move back (away) from the attacking units. R 2 means that the defending units must move back 2 squares. The defender MAY elect to lost two factors for each square he is supposed to move back and remain where he is. Or the defender may combine the two, losing some factors and then moving back also. For example; in a R 3 the defender may decide to lose two factors and then move back 2 squares or else lose four factors and move back one square or lose six factors and stay where he his or move back three squares and lose no factors at all. When moving back the retreat must be as straight as possible, directly away from the battle lines in the general direction of the friendly rear area.

AD = Attacker loses the number of his own factors indicated.

AD1 would mean one factor lost, AD3 means the attacking units lose 3 factors.

DD = defender loses factors in the same fashion as AD.

EX = an "exchange" with both attacker and defender losing the number of factors indicated. An EX3 would mean that both sides lose three factors.

Whenever a unit is forced to retreat the attacker may occupy the vacated square. If impulse movement is not used, any defending unit forced to retreat more than one square is immobilized for one turn (flip counter over).

OVERRUN — If a stack of attacking units have 10-1 or better odds on defending units they do not have to attack them to destroy them but may simply move into the enemy square (losing 4 movement factors in the process) and simply remove the enemy unit from play. This is not considered an attack and is done during the movement portion of either impulse.

If players wish to increase their sense of loss or gain accompanying defeat or victory the may wish to use one of the following systems.

1. Cost Effectiveness (COLD-BLOODED). For every factor you lose, pay your opponenet the production cost for that factor in cents. For example: for each armor factor you lose, pay your opponent 2 cents.

2. Humanistic (warm-hearted). Pay your opponent in cents the following prices per factor lost of the following types: AIR UNITS = 1 cent; RANGER = 3 cents; RR, FLAK, AIRBASE = 5 cents; ARMOR, ARTILLERY, AIRBORNE = 10 cents; MARINES, MST, 2 BTA INF = 15 cents; 4 BTA INF GUERILLAS, LST = 20 cents; TF = 40 cents.

Keep a running total of both sides losses. Subtract the smaller figure from the larger and pay the difference to the player with the lower losses. System One is meant to reflect the economic "pain" of losing expensive equipment and highly trained personnel.SystemTwo reflects in a small way, the moral "pain" felt at losing great numbers of men. If you desire more decision points use System No. 3 (MIXED EMOTIONS) which is a combination of both systems. Pay for each factor twice: once at the Cost Effectiveness Rate and once at the Humanistic Rate.

For maximum accuracy each player should physically destroy the money lost for each unit rather than have his opponent profit from the "death" of his forces.

5

Class Stacking

Units are divided into "classes" based upon their fundamental environment, physical characteristics and relative mobility. Units stack by class (i.e. units of one class do not count against the stacking of units of another class when stacked in the same square). For example: 3 infantry units, one flak unit, one airbase, 12 factors of aircraft, one railroad unit carrying eight factors of ground units could all conceivably be stacked on one square. Note that when ground units are "entrained" in a railroad unit they do not count against the stacking of other ground units in the same square. All stacking limitations must be met by the end of the Movement Phase of a player's turn. Refer to the Unit Characteristics Chart. A unit's class also reflects the order in which the units are moved; see Phase Class Sequencing.

6

Phase Class Sequencing

PHASE/CLASS SEQUENCING is simply a method of making movement more logical and orderly. It also implies many rules merely by stating what you must do before you can do something else. You must move in phase, by class; according to sequence Any action which is made possible only by moving out of order is an illegal move. Even if you decide not to use this module, examine it very carefully to understand the rules implicit in the system. For even if you do not use the PCS you MUST obey the rules inherent in it.

For example; SEE PHASE I CLASS 3. Implicit in the order of movement is the rule that units may not go to sea and conduct an invasion in the same turn since Invasions (E) comes before Embarkations (F).

Consistant use of this system will become automatic by about the 6th turn of employment. You will find it ends many of the arguments about what was moved and not moved in a game as complex as BLITZKRIEG. It also speeds up the game considerably once players become accustomed to its use.

7

Railroads

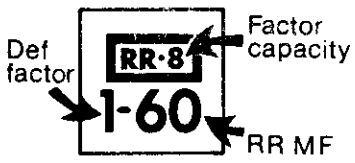
USE OF RR UNITS: The red transportation lines are considered to be RAILROAD MAINLINES not roads. Ground units only increase their movement rate on these lines when traveling in RR units. Each RR unit represents the number of trains necessary to transport 8 factors of Class 4 or 5 units. Units traveling in RR units are placed UNDER the RR counter.

Procedure: Ground unit begins turn on railine or in city square. RR unit is moved to waiting ground unit and picks up (ENTRAINS) unit at a cost of 10 RR movement factors. It may then transport the ground factors along the railine to the limit of its RR movement factor. It may drop off units at a cost of 5 RR M.F. and continue on in the same turn ENTRAINING and DETRAINING units to the limit of its RR M.F. Ground units detrain at a cost (to them) of 2 movement factors, and may not use other forms of transport in the same turn. RR units may not move into enemy ZOC. They may, however, begin their turns in enemy ZOC. RR units themselves do not have any ZOC and neither do any ground units traveling in them. RR units unloaded or loaded have a total defense factor of 1. If attacked and the results call for either a retreat or a loss of factors, the RR unit and any passenger units are destroyed. RR units may be captured by "Overrun Attack".

Railines are subject to being "cut" by either air or artillery bombardment or by ground units. See RR and Railine Intediction on the Air Mission Chart. Ground units may cut railines automatically by simply placing a Class 4 unit on the rail square to be cut and announcing the fact to your opponent. The "cutting unit" may not be in enemy ZOC or engage in any other form of offensive combat in that turn. When the line is cut place a "cut marker" on that square. Place two markers on a Bridge cut (the point at which a railine or city straddles a river) Cuts last for one turn (see PHASE/CLASS SEQUENCING CHART) and may be traversed at a cost of 10 RR M.F. per cut marker.

Railines are also used for Supply (see Supply Module). See Unit Characteristics Chart.

RAIL TRANSPORT



CUT MARKER

8

Initial Orders of Battle

Before each game begins each player chooses an order-of-battle for his side. Both may use the same OB, but to insure an interesting game try to agree on different OB's. If agreement can not be reached between two players here are two ways of deciding which will increase the variation and fairness in OB choice METHOD NO. 1. One player selects any two different OB's and the second player decides who will use which OB of the two selected. METHOD NO. 2. Both players roll die. The player with the lowest die roll uses that number OB and the second player uses any OB with a higher number. For example, BLUE rolls low with a 2 and therefore uses a "Strategic combined Arms Army". Red may choose anything from a Mixed Combined Arms Army to a Horde Army but may not choose a BLITZ ARMY OB or a Strategic Combined Arms Army OB. The side with the lower numbered OB moves first, the higher numbered OB sets up first.

The combined arms army is a balanced force of all arms, ground and air as well as adequate naval support. Obviously, even this "balanced" force can vary in its proportions according to the philosophy of the user. Thus we have mixed, strategic and tactical CAA's (Combined Arms Armies). Most modern nations strive to create CAA's. But if their resources are not up to it they produce Infantry Armies (IA's). This type was in wide use until World War I and is still found in many parts of the world. Even today the Russian army is, in actuality although not in theory, an Improved Infantry army. This was what her army was at the end of WW II. At the beginning it was just an IA. The Horde Army is none other than the "human wave" type force. Color it chinese and run. The Blitz army is what the Germans had at the beginning of WW II. Sort of a "super" tactical CAA.

You will notice that all things considered there are actually FEWER units involved in the game on an active level than in the old Avalon Hill OB. This lower troop level is a more accurate reflection of the size of the armies which could be raised by countries of the order of magnitude represented in the game.

It is recommended that the larger Navy always belong to BLUE.

Production

Each order-of-battle calls for a given number and type of production centers. In each production cycle (which takes place at the end of every second turn starting on turn 2) a player produces new units at the cost per factor in Production Points indicated on the Production Chart. Each Production Center produces independently and may not combine its points with other centers to produce especially "expensive" units. For example a 10 point Production Center could produce, in one cycle, 5 factors of armor or 2 Factors of Artillery and one factor of FTR or any combination of types whose total production cost per factor does not exceed 10. Of course, this means that certain units may not be produced by some types of PC's. Production points may not be accumulated nor may the newly produced units delay their appearance on the board. Newly produced ground units (class 2,4,5) appear in the same square as the PC within stacking limitations. Newly produced sea units appear in the port square of the city in which the PC is located. Sea Units may ONLY BE PRODUCED BY PC's IN PORT CITIES. Newly produced air units (Class 1) appear in the nearest HOME COUNTRY airbase. Newly produced airbases appear in any supplied area, behind friendly lines and out of enemy ZOC. Airbases may not be used in the turn of production. Friendly unit counters lost during the production cycle turn may not be re-used for that cycle.

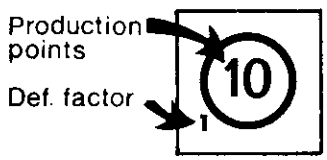
If newly produced ground units would exceed stacking limitations the excess may appear in any Home Country city directly connected to the PC city by a railine.

NO NEWLY PRODUCED UNITS MAY APPEAR IN A SQUARE COMPLETELY SURROUNDED BY ENEMY ZOC. If a production center is completely surrounded by enemy ZOC during the production cycle phase, it may not produce. Production Centers may be captured by an Overrun attack only. Captured PC's may be used as a source of supply only and may not be used to produce new units. They may be recaptured by eliminating all enemy forces holding them. Captured PC's have no defense factor.

NOTE: IN THE CASE OF MAC, RR, TF, MST, LST, and AIRBASE COUNTERS THE ENTIRE UNIT IS CONSIDERED AS ONE FACTOR FOR PRODUCITON PURPOSES.

Players may wish to increase the realism of production center employment by limiting production cycles to one cycle every THREE turns and/or secretly writing production plans two cycles in advance. Write out the first two cycles of the game before the first turn.

PRODUCTION CENTER



"Production" actually represents not only newly produced units but also units which have been refitted, received replacements or called-up from reserve components. P.C.'s should be heavily defended from air attack by flak units and interceptor groups and should generally be located in the heartland of the country with sufficient RR units close at hand to deliver new production to the front. Guard them carefully for once a P.C. is lost it may NEVER BE REPLACED.

Supply

Units are considered "supplied" when they are within five squares of a friendly rail line running back to:

A- A home country city
B- A friendly port (which can also trace a supply line through sea zones of naval parity or friendly superiority back to a home country port).
C- A friendly airbase to which MAC supply airlift missions have been flown that same turn.

Lines of supply must be free of enemy ZOC.

Units may also be supplied by airdrop using MAC units flying from a supplied airfield (see air mission/targetting chart).

Units may not deliberately move into an unsupplied square and must attempt to avoid them when forced to retreat.

A unit is "out of supply" on the turn AFTER its supply line has been cut. For example: if due to enemy action a unit's supply line is cut the isolated unit does not suffer any of the penalties of being "isolated" until its next turn to move comes.

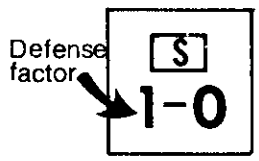
When a unit is "unsupplied" (or "isolated") it may relieve this condition by either moving back into supply or by over running one of the surrounding enemy units and again opening a supply line (this is a normal "overrun" and requires the same 10-1 odds). Supply may also be restored by other, non isolated, friendly units which do this by also obtaining a 10-1 superiority over one of the isolating enemy units. This action allows the "isolated" unit to immediately (in that turn) operate as a supplied unit. During any of the above operations the regular supply conditions must still be achieved after a blockading enemy unit is destroyed. In other words, you don't just overrun ANY of the blockading enemy units but only those whose absence will open an actual supply line.

UNSUPPLIED UNITS HAVE NO ZONE OF CONTROL other than the square they occupy. Their combat factor is cut in half and, in addition, ARMORED units have their movement factor cut in half. Unsupplied air units may only fly ferry missions to a supplied airbase in their first turn of isolation.

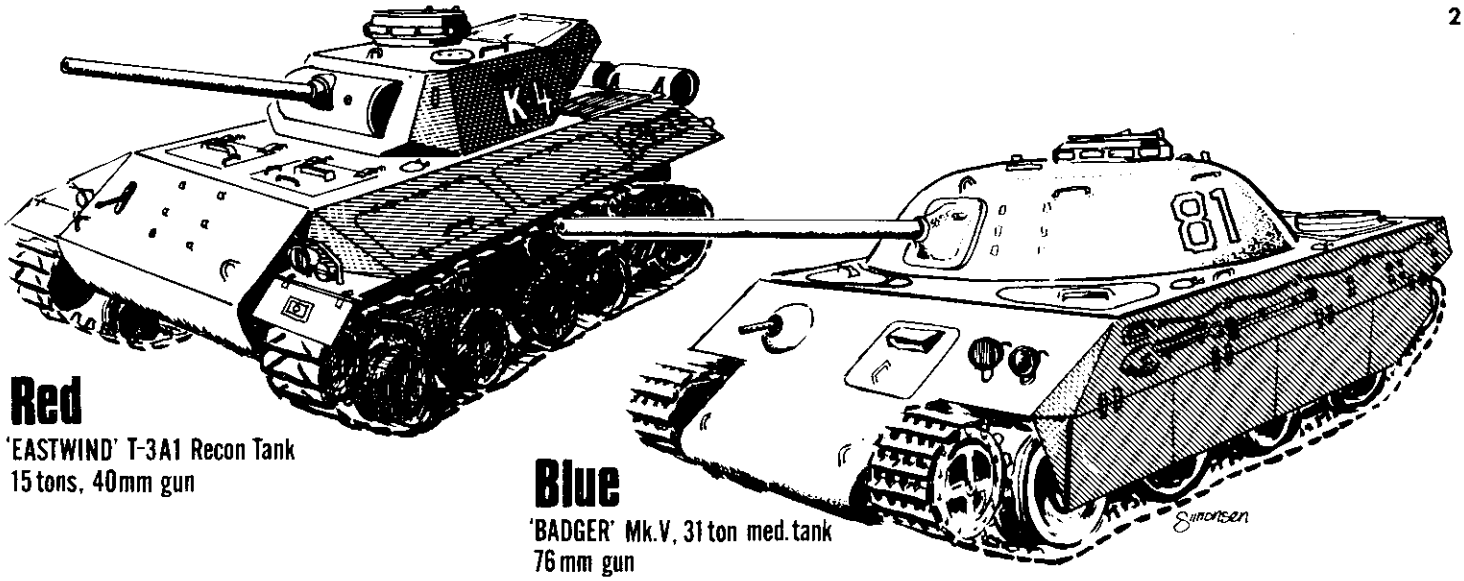
INVASION SUPPLY: A total of 18 factors may be supplied through a given beachead. 36 factors may be supplied through a captured port city. An overall total of 60 factors may be supplied by sea. Invading units are considered to be supplied on the turn of their invasion. They may be supplied if they are within five squares of a beachead. Invasion units may not use enemy rail lines for supply purposes until they capture an enemy city or open a rail line back to a home country city.

NOTE: Minor Country Armies trace their supply routes to a Supply Counter. Once these counters are lost they may not be replaced.

SUPPLY



Railines running through captured hostile cities may not be used for supply or movement purposes unless the cities are garrisoned.



Red
'EASTWIND' T-3A1 Recon Tank
15 tons, 40mm gun

Blue
'BADGER' Mk.V, 31 ton med. tank
76 mm gun

11

Naval Forces

USE OF NAVAL UNITS: Units may be placed at sea in initial set up of game in a Home Country Sea Zone (BLUE Zone A & B; RED ZONE D & E) or in a Home Country Port. Units "at sea" form "Fleets" by stacking together or arraying themselves together on the "AT SEA BOX". These stacks are considered as separate and distinct groups. There is no limit to the number of naval units which may stack in Fleet formation while on the open sea. Units in Port or on Assault Squares (any sea-square adjacent to the coast) stack 3 per square. See Unit Characteristics Chart.

Each Task Force (TF) unit may carry one factor of Rangers and three factors of either TAC or FTR. Aircraft are assigned to ships by flying ferry missions to the TF's from Naval Airbases (bases within one square of the coast) or by flying ferry missions from any base to a port facility or assault square containing the TF's. Rangers embark like any other land unit.

Land units embark into MST's by starting their turn in a port city square. The MST is moved to the matching Port Facility square and the land unit is placed UNDER the MST counter.

Each coastal city squares has a matching adjacent sea square in which sea units may dock. See Port Facility Chart. In a couple of instances, however, only one docking square is physically available for two city squares. In that case double the stacking limitation in those squares (dock 6 units). There are three Inland Ports on the board. Sea units "dock" in the designated city square itself (3 per square). Enemy TF's adjacent to the mouth of the river approach to a Inland Port prevent friendly units from leaving or entering that port. Sea Units in ports which are captured by enemy ground action must sail in the very next turn or be considered eliminated. Enemy ground units stacked on river approaches to Inland Ports also seal-off those ports. TF's may not fight their way out of such sealed-off ports.

INVASIONS: Move MST, LST and any escorting TF's to an assault square adjacent to a CLEAR TERRAIN beach square. The presence of the LST unit permits 6 factors of the possible 8 carried by the MST to assault the beach square. Only one specific beach square may be assaulted from each assault square. On the next and subsequent turns up to 12 factors may be transferred ashore by an LST unit if that previously assaulted beach square has been cleared of enemy units by the "first wave." As long as that beach square remains CONTINUOUSLY free of enemy units, LST's may land units on it. First wave assaults which do not force the defender back, take the losses called for by the GCRT. If the assault force is eliminated as a result, so is the LST unit. In any case, if the beachead is not gained the invasion is aborted and all units involved must return to port. Friendly units already on beach squares may be withdrawn at the rate of 6 factors per turn. See Unit Characteristics Chart, Weather Charts, and MST/LST Actions Chart. TF's may land one factor of Rangers without using LST's. Ranger landings are not considered to be beacheads.

TF units fight Fleet Engagements using the Fleet Engagement Table. See also TF Mission Capability Chart. The following is an explanation of the FET:

AW = Attacker Withdraws: All attack units in that stack withdraw

AD = Attacker Destroyed: One TF unit destroyed, remainder (if any) in that stack withdraws

Ex = Exchange: Each side loses one TF

• = Nothing Happens.

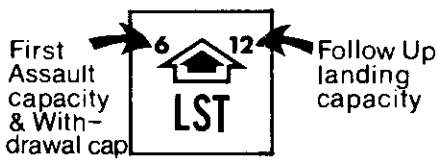
DW = Defender Withdraws: Defending TF's plus any MST/LST under their escort withdraws

DD = Defender Destroyed: One TF unit destroyed. Remainder plus any MST/LST under their escort withdraws.

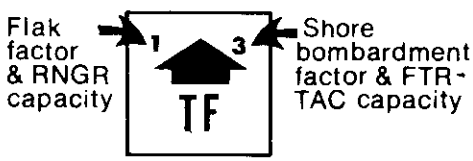
Units withdraw to same zone port or adjacent "at sea" box. If, after withdrawals resulting from combat, one side has gained Naval Superiority in that sea zone, withdraw any MST/LST units of the inferior force IMMEDIATELY. Units forced to withdraw do not count towards Naval Superiority in the sea zone to which they withdraw for that turn-half. They may not withdraw to a zone of enemy superiority or S-3 Weather. If no alternative is available they remain where they are and lose one more unit. Aborted landings must return to port as soon as possible and dock and disembark land units.

MILITARY SEA TRANSPORT

LANDING SHIP/TROOP



TASK FORCE



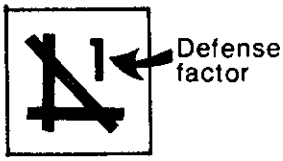
12

Air Forces

AIRBASE COUNTERS: EACH AIRBASE holds 3 air unit counters or 12 factors of air units whichever is greater. Air bases may only be built behind a players lines and not in enemy zones of control.* If an airbase is attacked by ground units, it and all the air units in it are destroyed if forced to retreat.* An Airbase may only be captured by building up an "Overrun" (10-1 odds) situation against it, in which case the planes are destroyed but the field may be utilized by the capturing player next turn.
*Air units based in an airfield are placed UNDER the counter when not flying (with the exception of FTR assigned to INTERCEPT missions which are placed upside down on top of the airbase.
*Land-based MDM and FTR may only fly missions against or to SHIPS AT SEA from "NAVAL AIRBASES". A Naval Airbase is one which is located no more than one sqr. from the coast of the sea zone to which the mission is flown. Naval Airbases affect only one sea zone even if they are built at the juncture of two sea zones.

*AIRBASES may be voluntarily destroyed and the counter reused during the NEXT Production Cycle. If voluntarily destroyed during a production cycle turn they may not be used or "rebuilt" that turn. Combat Missions may not be flown during the turn of voluntary destruction.

AIRBASE



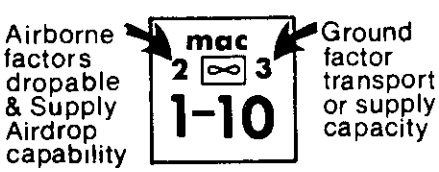
*USE OF AIR UNITS: Most of the rules and mission capabilities of Aircraft are contained in the AIR MISSION TARGETTING CHART.
*Notice that TAC which is based on T.F. units at sea (FLEET TAC) has a much wider mission capability than land based TAC. More information on FLEET AIR missions will be found in the TASK FORCE MISSION CAPABILITY chart.
*Virtually all combat air missions are compatable, that is to say they may be flown against targets in the same square. Airborne units however may not be dropped into a square which is being attacked by bombers (they may however drop into squares in which friendly FTR missions are being flown.)

Air units may always refuse combat (while flying) by aborting their stated mission and returning to base. If, for example, a target were too heavily defended by flak or interceptors the attacking player simply informs the defender of his decision to abort and returns to base without suffering any losses. Similarly if intercepting fighters find that an enemy bomber group is too heavily escorted they may also refuse combat and return to base.

Air units flying from the same base to the same square must fly together.

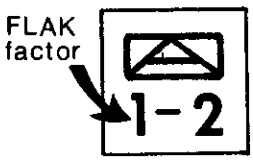
Optional: Interceptors may attack enemy planes at any point along their flight path either on the way to, or returning, from their mission.

MILITARY AIRLIFT CAP.



13

FLAK



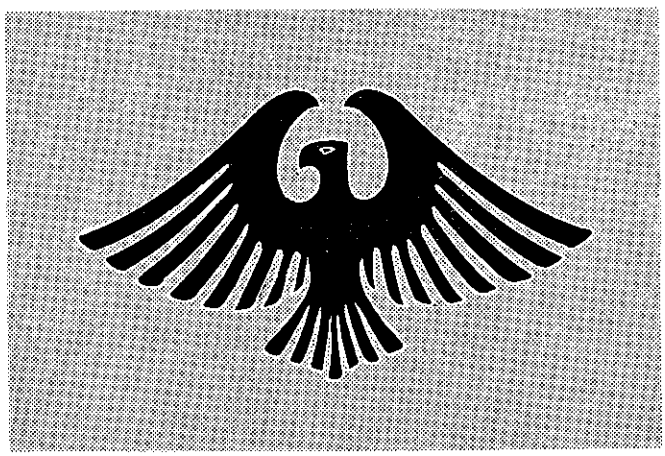
Flak

FLAK units are employed against enemy aircraft. Each FLAK unit has a ZOE (zone of effect) which includes the square it occupies and the six adjacent squares. FLAK units have no ZOC and no defense factor against ground attack. If attacked alone FLAK is destroyed automatically and the attacker may move on as if no unit was present.

Enemy aircraft suffer FLAK effects whenever they Fly through or to a square within a FLAK unit's ZOE. Each FLAK unit may fire only once per turn. FLAK units on different squares may combine their fire against targets flying through or to a common ZOE. FLAK effect upon aircraft is determined by using the FLAK Defense Table (FDT). If upon entering a FLAK unit's ZOE the player running the air mission decides that the concentration is too heavy he may ABORT the air mission without suffering any losses. The player with the FLAK must, however state prior to this decision which (if any) FLAK unit will be used against the air units. Every ABORT caused by FLAK constitutes a use of those FLAK units, and they may not be used again in that turn. When a FLAK unit has been "fired" a player may wish to turn the FLAK counter 90 to record that event. FLAK may not fire into a square containing friendly FTR's flying INTERCEPT MISSIONS. Air units which elect to suffer FLAK fire remove losses before they execute their mission. Air units bombing a square containing 2 or more FLAK FACTORS which are directed against them, add one to their bombing-effect-die-roll number. Air units with different missions occupying the same square at the same time are treated as one group of planes with respect to FLAK effect. A group of aircraft returning from a mission may not escape the effect of any previously unused FLAK unit whose ZOE they fly through. When a player aborts an air mission he must return immediately to the same base or bases from which the mission started. FLAK units may not be used while they are entrained or embarked.

FLAK units may not be attacked from the air although they may suffer ground support air attacks (SEE AIR MISSIONS). FLAK units may suffer Naval or Ground Artillery fire.
*When there are different types of aircraft undergoing FLAK fire in the same square BOMBERS are always the first to suffer any losses.

Azurnerreich (THE BLUE EMPIRE)



14

Weather

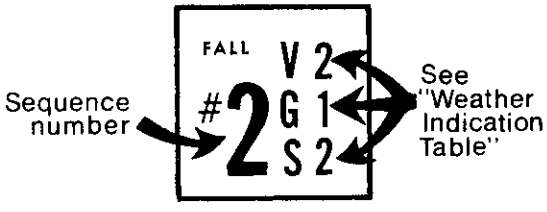
The board is divided into three Weather Zones which correspond to the North to South folds in the board. The weather in each of these zones is determined by the use of Weather Indicators. At the beginning of each complete turn, BLUE rolls the die. The die roll determines which of the numbered Indicators is to be placed in the LEFT-HAND Weather Zone. The next two Zones have their weather indicated by placing the next two Weather Indicators in them in numerical order reading left-to-right. For example: DIE ROLL = 5. No. 5 Weather Indicator is placed in Left Hand Zone; No. 6 in Middle Zone; No. 1 in Right Hand Zone. Each "season" is 9 turns long.

BLITZ BOARD WEATHER ZONES

LEFT	MIDDLE	RIGHT
includes Sea Zones A&B	includes Sea Zone C	includes Sea Zones D&E

SPECIAL NOTE: DURING "WINTER" ALL RIVER SQUARES SOUTH OF THE EAST-TO-WEST FOLD ARE FROZEN AND EQUAL CLEAR TERRAIN SQUARES. LAKE FREDERICK IS ALSO FROZEN.

WEATHER INDICATOR



15

GUERILLA

Guerillas

G
1-4

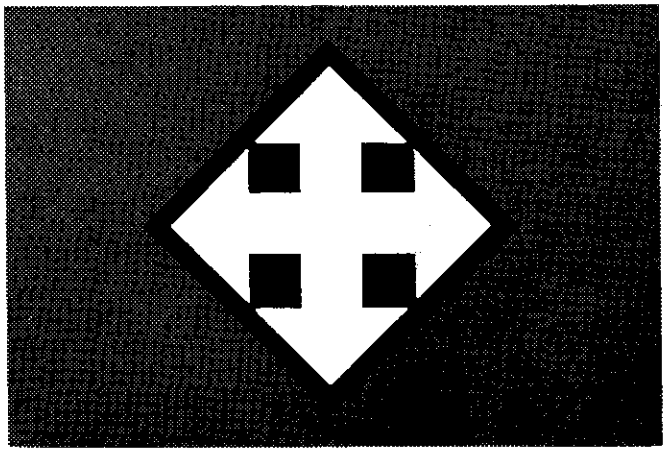
After half of the cities in a minor country have fallen guerilla units may be raised in the countryside. Guerilla units are produced every production cycle turn. One 1-4 Guerilla unit is produced for each fallen minor country city. The units come on the board no further than 3 squares away from the city of production and not in enemy zones of control. Their appearance may be delayed by the player friendly to the conquered country. Guerilla units are moved by the opponent of the "oppressor" nation. Guerilla units need no supplies until they combine to form a unit of 4 combat factors or greater. Guerilla units need not combine into larger units. Once they do, however, their supply line is traced according to normal supply rules with the exception that it may be traced to a friendly city outside their home country. Guerilla units of less than 4 factor size, may refuse combat by retreating one square when attacked (before the die is rolled). Guerilla units operate as infantry and stack 3 units per square maximum. Guerilla units MUST fight if attacked when surrounded by enemy ZOC.

Artillery & Air units add 3 to their die-roll number when bombing guerilla units of less than 4 factor size. Guerillas of less than 4 factor size may move through 1 square of enemy ZOC. Guerillas may not operate offensively outside their home country until the country is liberated. Guerilla units may be absorbed by friendly regular infantry in which case they lose their guerilla characteristics. Guerilla units may not participate in invasions. Guerilla units may take sanctuary outside their home country in any uninvaded minor country or in the "Neutral Country" Squares in the North East corner of the board. When in "sanctuary" they are considered to be supplied. They may not be attacked while in "Neutral Country" and any attack on Guerillas in an uninvaded minor country constitutes an invasion of that minor country.

Guerilla units have normal ZOC. They may cut supply lines. One factor of guerillas may "cut" a railine (place cut marker) by moving to the rail square to be cut and not engaging in any other attacks. The rail square to be cut may not be in enemy ZOC.

Minor countries may be "pacified" (i.e. rendered incapable of further guerilla production) if, at anytime after the first guerillas have been produced and made their appearance, all guerillas, in that country are either destroyed, pushed out or in sanctuary outside that country. Guerilla units coming back from sanctuary allow Guerilla units to be produced again.

Krasnynorad (THE RED STATE)



16

Artillery

ARTILLERY UNITS – Disregard the first combat factor printed on artillery units. The second combat factor is the only one to be used (therefore an 8-4-4 becomes a 4-4). Artillery units have no native defense factor and if attacked while they are stacked alone they are automatically eliminated by any attacking ground unit (other than enemy artillery). Artillery units also have no ZOC.

They do, however, have a zone of Effect (ZOE) which extends to every adjacent square. ARTILLERY UNITS may be employed as indicated in the ARTILLERY MISSION CHART

17

Variable War Scenarios & Victory Conditions

A. Total War (Standard Game) — Blue moves first. Use regular orders-of-battle (OB) for Red and Blue. Use minor country armies if desired. The player who controls the most cities wins. Game may be any agreed upon number of turns in duration but not shorter than 12 turns. Game may also be "open-ended" (i.e. goes on until one player concedes). Game starts 6 turns before Summer (See weather module).

B. National Expansion — Same as above except that the side which controls the most minor countries by turn 12 wins. You are considered to be in control when you occupy the majority of cities in a given country and you have a 2-1 combat factor superiority over enemy regular units and guerillas operations in that country.

C. Neutrality Violation — The neutrality of Calaedia is guaranteed by the 4 other minor countries. North and South Walkure are passive allies of Blue; New Endor and San Estados are passive allies of Red. (Passive allies allow the major power to deplay starting units in their country and to initiate combat operations from within their borders). Minor country armies are deployed by their respective allies but may only be used within their own nation until Calaedian neutrality is violated by one of the major powers. When Calaedian neutrality is violated ALL the minor countries become active enemies of the violating power. Guerilla units are produced in any country under control by the violator. Lines of supply for the "allies" may then be traced to any friendly city. The player who controls the most minor countries by the end of the game wins. Game may be any length but no shorter than 12 turns.

D. Grand Alliance Vs- Quadruple Entente. — Same as total war except that Blue has North and South Walkure as ACTIVE allies (Grand Alliance) and Red has Calaedia, New Endor and San Estados as Active allies (Quadruple Entente). A major power may deploy starting units in any allied country and the allied armies may engage in offensive operations outside their own borders.

E. Brush Fire War (Short Game) — North and South Walkure are ACTIVE allies against the active alliance of the other three minor countries. Use minor country armies only. The Walkurian Alliance moves first. The side which controls the most cities by the end of the game, wins. Start game on the first turn of Summer. Game ends on last turn of Summer. Each country has a replacement rate of 2 ground factors per turn as long as it does not lose control. Replacements appear in any friendly home country city at the end of the turn. Units may not violate the borders of either of the major powers.

F. THIRD POWER — The minor countries are all ACTIVE allies of each other. Blue takes any regular OB except BLITZ ARMY. Minor Country Allies move first (starting from their respective countries). Red is passive ally of Minor Country Alliance. Red sets up units in Red Homeland but may not move them across borders unless Blue violates Red territory or if at the beginning of any turn Red rolls a 6 on the die (The die is rolled every turn to determine whether Red becomes an ACTIVE ALLY of minor countries. When a 6 is rolled, Red units may cross border in the following turn.) Minor Country Units may escape into Red territory and use rail system for supply and movement purposes (utilizing minor country RR units). The side which controls the most minor country cities at the end of the game, wins. NOTE: RED MAY TAKE ANY INFANTRY ARMY OB. USE GUERILLA RULES IN MINOR COUNTRIES. For variation switch Major power roles and make BLUE passive ally of Minor Countries. Minor Country Alliance has a total of 4 Five point Production Centers. Game begins in the 5th turn of Summer and lasts through the first turn of Winter (15 turns).

G. NATIONAL LIBERATION — One side (RED or BLUE) takes a regular OB and occupies the entire board. The other player has Guerilla forces only. Starting with 18 Guerilla factors which are placed no more than 3 squares from a city not in occupiers home country, the Guerilla player must try to gain control of at least 5 cities for a Marginal Victory, 10 cities for a Tactical Victory 20 cities for a Strategic Victory. Up to 18 new guerilla factors may be produced every production cycle as per guerilla rules. Any city not in occupiers home country which is un-garrisoned becomes a guerilla controlled city whether or not there are actually any guerilla units in it. As soon as Guerilla's gain control of 5 cities for one complete turn they may declare the game over or elect to continue and try for a greater victory. At each level of victory they may end game or go on. Oppressor Army only wins when ALL Guerilla units have been eliminated. If at the end of one complete year (36 turns) neither side has achieved a victory condition the war is declared stalemated (which is actually a Moral Victory for the Guerilla's). For variation consider the entire board to be occupied territory and the Oppressor nation to be across the sea. All newly produced Oppressor forces enter through ports in sea zone C or D. Game starts in the 1st FALL turn.

H. CIVIL WAR — The entire board is one country. Distribute one OB throughout the cities and ports on the board, with no more than one unit per square. Air units are distributed one per base. Roll die for each unit. Assuming the counters initially distributed to be BLUE, a roll of 1, 2 or 3 means they remain loyal (BLUE). A 4, 5 or 6 means they turn RED and rebel. The side with the fewest ground units moves first. The side which controls the most cities at the end of 12 turns, wins. Do not use Guerilla Rules. Production Centers become the property of whoever can seize them first. They may be captured and used by the opposing side by driving off any combat units occupying them. Game starts on the first turn of Summer.

18

Minor Country Armies

The abbreviations of the names of the minor countries refer to their physical location on the mapboard. For example, Nord Walkurie comes out NW on the counters referring to North West while Calaedia is abbreviated C (for Central) on the counters.

Also keep in mind that zones of control do not extend over national boundaries which have not been violated yet (the two nations are not yet at war with one another).

When setting up the game, unless otherwise noted, the following procedure is followed for setting up the minor country armies. Each player sets up the armies of minor countries bordering his opponents nation. Both players roll the die to determine who will set up Calaedia's army. Refer to the WAR SCENARIOS for further information on this subject as well as variations on it.

HANNIBAL:
A GAME OF ANCIENT WARFARE

HANNIBAL contains quite a few new ideas. Therefore, a brief description of the rules would be appropriate before Mr. Rusiecki goes into the development of the game. Because of space limitations, only the more important of these rules will be explored.

The movement rules of the game are less complicated than those of the Avalon Hill line. The board is divided into three major areas: the Italian provinces, the area of Europe on the board outside of Italy and finally, North Africa. A piece may move from one of these areas into either of the other two but must remain there for the remainder of his yearly turn. Once in an area, the piece may be moved as far as is desired by a player. The hexagons on the board are not used for movement, only for combat.

Unlike combat in the Avalon Hill games, both players must agree to a battle before it can be fought. The attacking player moves his piece(s) adjacent to those of the defender. By this action, he signifies his willingness to engage his opponent's army in battle. The defender now has the option to move into the attacker's square and engage him. Once the defender declines to engage the adjacent units, the attacker may move into the defender's square to engage. However, the defender may always retreat if he does not wish to fight a battle. Hence, neither player need engage in a battle if he does not wish to do so. Of course, a player's strategic position may make the risks of battle more desireable than retreat.

If both players agree by their actions to fight a battle, they each choose one of the strategies available to them. The Carthaginian is able to use both the infantry and cavalry strategies. The Roman player may use only the infantry strategies, but he is favored by them. Each player must judge how much he is willing to risk with his strategy since it can also backfire and inflict a costly defeat on him. The players now roll the die and receive points from the corresponding results on the strategy tables. The difference between their point totals is the number of units the player with the smaller total must remove from the board.

The less orthodox strategies are not used in the usual combat situations. "Treachery" is used only against enemy units in cities. "Raids" are the only means by which a player can be forced into combat. However, neither side is favored by the results table, and it is not frequently used. Siege, ambushes and traps are some of the other rules included in the strategic game. Their use follows the basic rules of the battle procedure, and hence, they add no complicated rule changes to the game.

The tactical game is different from the strategic version only in the method of resolving engagements. In a tactical battle, both players break each of their units down into their different parts. For example, each Roman infantry unit (or "legion") consists of a Velite line (light infantry), an Hastatii line (the less experienced heavy infantry), a Principes line (the experienced elite of the heavy infantry), and a Triarii line (the old guard infantry) as well as attached heavy cavalry units. Each copy of HANNIBAL contains rectangular breakdown arranged and kept in a specified order, even after the battle begins. Movement is done by ruler since tactical battles are fought like those of JUTLAND. Combat is resolved by means of odds comparison as in the Avalon Hill games. If a piece loses in the die roll, it must retreat one inch and lose one step level. If it has already reached its lowest step, the unit is eliminated.

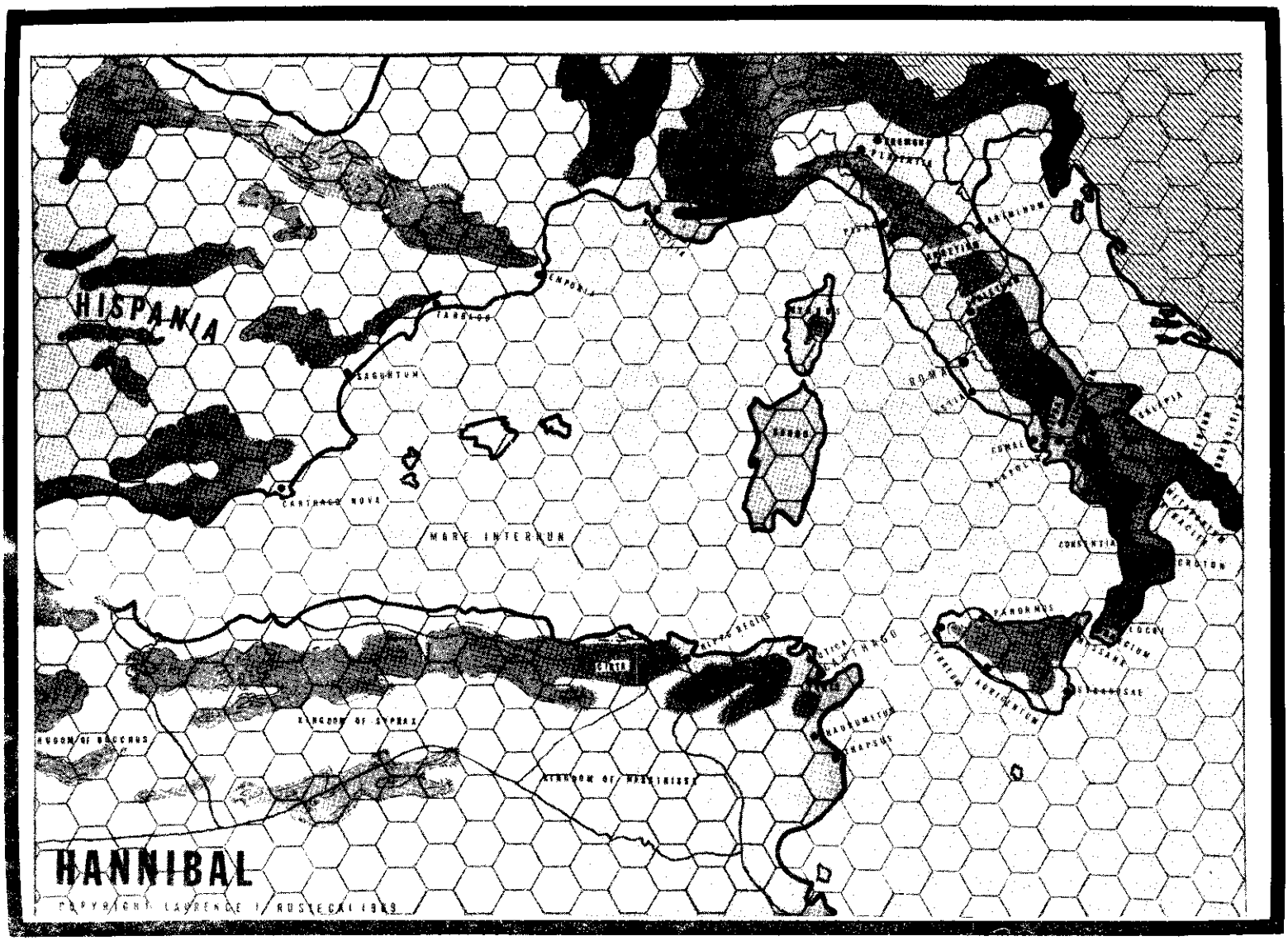
Here you have a brief sketch of HANNIBAL. It should be apparent by now that it takes a different approach to wargaming than do most Avalon Hill games. Now we'll let Mr. Rusiecki himself tell you about the development of the game.

Designing
Hannibal

Larry Ruseicki first came to our attention when he published HANNIBAL and has since become a member of the S&T staff. We feature an article on his game simply because it is the only game available on ancient warfare, and thus in a class by itself Comments?

From the very beginning of its development, I tried to make HANNIBAL a new and different type of wargame. Now finished, I think it has evolved into such a game. However, the unusual nature of HANNIBAL brought up some unique problems in its production.

Gathering information for a mapboard was the first task. Since no statistics on them were available, identifying the major cities and seaports of the ancient western Mediterranean was no easy undertaking. I was able to determine the more important of these places from a close study of the classical atlases and campaign maps which I



managed to obtain. I found the identities of the more obscure cities and ports by scanning the accounts of the campaigns themselves. The information they offered was often scanty, and I usually had to look up the same city or port in three or more different publications.

An even more difficult problem was determining the initial strength of the Carthaginian army since most estimates of it vary greatly. Many authors accept the estimate of Hannibal's forces offered by the Roman historian Livy. He claims that Hannibel had an army of 109,000 men by the spring of 218 B.C. How he managed to march into French Gaul later that year with only 39,000 men seems to have been a mystery to Livy. Some authors try to explain away the missing troops by suggesting a high casualty rate in Hannibal's skirmishes with Spanish Barbarians. I discovered that he left 20,000 men in Spain when he entered Gaul. Dismissing Livy's estimate, I added the garrison forces in Spain to Hannibal's army in Gaul for a total of 59,000 troops. This estimate plus the estimate I arrived at for the Carthaginian forces in Africa gave me the troop strength available to Carthage at the beginning of the war.

The next problem was to write simple, but realistic movement rules. In the first version of HANNIBAL, units were moved from province to province. Later, the province method was dropped in favor of movement by rule. For example, an infantry unit was allowed to move thirty inches in each three month (seasonal) turn. About two months before publication, this method was also discarded, and one inch hexagons were added to the mapboard. Pieces were now moved by hexagon instead of by inches. Just prior to release, seasonal turns were dropped. In the completed version of HANNIBAL, each turn represents a year. The board is now divided into three major areas. Once a unit enters one area from another, it may not leave that area until the following turn. A unit can now move any amount of hexagons within an area. In the older version of the game, a unit could move a total of 100 hexagons in the course of four seasonal turns. In a yearly turn, a unit would never move anywhere near 100 hexagons, and so, keeping track of the number of hexagons moved by a unit became unnecessary. These rule changes were primarily an attempt to simplify movement, but at the same time, realism was

also retained.

Computing the combat results tables was a little easier than formulating the movement rules. The results tables were figured on the basis of each army's efficiency in using certain strategies in battle. For example, the Carthaginians have a better chance of success in an engagement when they use the "envelopment by cavalry" strategy than when they use the "infantry attack against center" strategy. Conversely, the Romans are favored when they use infantry strategies. These results tables proved to be the most durable part of HANNIBAL during its development, and only minor changes were made on them.

The tactical battle rules posed a greater problem. The first question was how casualties came about. I found that the units which retreated in a battle sustained the highest casualties whereas the formations which stood their ground, even though heavily engaged, sustained relatively light losses. For instance, the Gauls were the only part of the Carthaginian army at Cannae which retreated. Consequently, they suffered most of the five thousand casualties which Hannibal lost in the battle. Therefore, in the game, a unit which is forced to retreat also loses a "strength level."

The next problem was to find why whole armies were destroyed in most of the battles of the Second Punic War. I found that in all the engagements where one of the opposing armies was annihilated, the defeated army was surrounded by its opponent. Why couldn't they break out? The answer became apparent when I recalled the strict organization and coordination upon which ancient armies depended. The rear lines of an army could not break out because they were incapable of turning around to attack. Meanwhile, the front lines were being pushed back by the enemy forces engaged with them. Eventually, the front lines had no room to retreat, and the soldiers of the different lines became mixed in the constrictive area they occupied. As a result, each line lost its cohesion, and they were easily crushed by the enemy formations which were still organized. Cannae again provides a good example. The Carthaginian cavalry did little damage when it attacked the rear of the Roman army. However, they did prevent the Romans from retreating. At the same time, the Carthaginian infantry pushed back the Romans' front lines. With no room left to retreat, the Roman front lines became mixed with their rear lines, and they lost their ability to maintain cohesion. With the loss of cohesion, the Roman units also lost their ability to fight effectively.

The less orthodox combat strategies of the strategic game were easier to put into rule form than were the tactical battle rules. Unlike the tactical situations, the causes and effects of "traps," "raids" and "treachery" were immediately apparent. In the real war, traps were successful only against a careless opponent. Accordingly, the "trap" strategy may be used only against an army which carelessly fails to call out the words "avoiding trap." Raids were risky affairs in the original campaigns. In order to simulate the unpredictable nature of a raid, the "raid" combat results table gives both players an equal chance of winning. Neither side is favored by the table. Hannibal was able to gain entry into some Italian cities by means of treachery, but the chances of success in such a venture were not in his favor. Similarly, the player who uses "treachery" in the game has only two chances in six of gaining control of the city he is assaulting.

The small number of naval battles during the course of the Second Punic War made the role of seapower seem deceptively small. If the Roman navy had not been strong, Hannibal would have easily conquered southern Italy simply by blockading the ports of the area and starving them into submission. As in the real war, the role of the Roman navy in HANNIBAL, in most instances, is to protect the Italian coast. The success of the Roman campaigns in Spain and Africa was due to the navy which enable reinforcements to be quickly convoyed from Italy. Protection of troop convoys is also a job undertaken by the Roman naval units in the game.

In this article, I have only skimmed the surface of HANNIBAL's development. Trying to reduce a sixteen year conflict into a simple and realistic wargame was a much more complex task than it may appear here. However, I think you now have a good idea of some of the problems involved in producing a game on ancient warfare.

INTERNATIONAL FEDERATION OF WARGAMING

THE INTERNATIONAL FEDERATION OF WARGAMING is the organization for every serious wargamer regardless of his age or playing ability. The organization is neutral to the extent it does not claim to conquer any territory. IFW offers each member opportunity of participating in club affairs, and originating new ideas, to whatever extent he desires. Among current and planned IFW activities are: Annual Conventions, PBM Diplomacy & Multi-commander games, Tournaments, Stalingrad Society, Napoleonic Boardgames Society, Game and Variant Design, etc.

Members of the organization may keep records of their game wins and losses and thus have their playing ability rated by means of a system similar to that used by the U.S. Chess Federation. YOUR membership in IFW is actively sought. Won't you join us? For full details: William Hoyer, 4654 N. Spaulding, Chicago, Ill. 60625

GAMES

How many shopping days to Christmas? Here we help you get by with a little help from your friend Sid Sackson.

Don't look now, but it's gift giving time again. Those wargaming buddies present no problem, unless, of course, they have them all. For the non-wargamers on your list how about a game that will start those grey cells buzzing, but one that won't scare the hell out of them.

The list is certainly not exhaustive and there are many other games that I could have included; to mention a few – MEM, WHAT'S THAT ON MY HEAD?, QUBIC, ON SETS, VECTOR. Future columns will get around to reviewing these, and lots more.

FEUDAL (3M Bookshelf Games) is the perfect bridge for introducing Chess players to wargaming, or wargamers to Chess. And if you are a fan of both, it should be a natural.

The feudal battle between Ethelred the Great and Aelfric the Barbaric is fought on a plastic terrain arrayed with holes for receiving pegged warriors. (Thus the board can be jolted without causing a disaster.)

In the two-hand game each player operates with thirteen men (although in advanced versions this can be increased to thirty-three). All pieces can be moved on each move. Since the molded plastic pieces have distinctive fronts and backs, if they are turned to face the player at the start of a move and then turned 180 ° when moved it makes it easy, particularly for newcomers to the world of wargaming, to keep track of what has and has not been moved.

At the start of the game a coin is tossed and the loser chooses two quadrants of the board as his kingdom. He should choose those he believes to be better suited for defence since the other player will be the attacker and has the advantage of surprise. Then a screen is placed between the kingdoms and each player sets up his men and also a castle in any position he wishes. With the removal of the screen the battle begins.

Victory comes by occupying the opponent's castle or by slaying his three royal pieces – the king, prince, and duke.

Four or six can play in teams, each team defending a single castle and a single royal family. Or four can play as individuals with their own castles and royal families.

Feudal sells for $7.95.

3–D CHESS (Alabe Crafts) was developed by Lynn R. Johnson, an industrial engineer at Boeing, and is for the died-in-the-wool Chess fan who wants to add depth to his game. The play is on three 8 x 8 plastic boards mounted one above the other, but offset so that the pieces are easily seen and moved.

The rules are regulation with a few adjustments to the added dimension. For example, a pawn may move forward, up, or down.

Chess in three dimensions is not new. I have a series of studies published in Germany around 1919 – and quoting earlier references – which gives rules for games played on 4 x 4 x 4, 5 x 5 x 5, 7 x 7 x 7, and 8 x 8 x 8 fields. (What happened to the 6 x 6 x 6?) But 3-D Chess, to the best of my knowledge, is the first set generally available in the stores. Sorry, but I'm not up on the price.

RISK (Parker Brothers) has been around since 1959 when it was imported from Europe by Parker, so probably most of you have already had the thrill of conquering the world. But for the few who may have missed it, here is a quick rundown on a game with which every wargamer should be familiar and one that is particularly suited for painlessly introducing a novice to wargaming.

Risk is played on an attractive board showing the world divided into 42 arbitrary territories, which are grouped into 6 continents.

To start the game each player counts out a number of armies (from 50 each for 2 players to 20 each for 6 players) and places these, in turn, one at a time in a territory of his choice, except that once a territory has been occupied by a player, others may not place armies in it.

After this initial divying up of the world the game proper starts. At the beginning of his turn a player receives new armies depending upon the number of territories he occupies at that time and also additional bonus armies if he occupies all the territories on one or more continents.

Attacks can only be made against an adjacent territory. The number of armies eliminated in an attack is determined by a simple, but clever, comparison between dice thrown by the attacker and those thrown by the defender. When the defender's last army in a territory is eliminated the attacker moves in and occupies that territory.

For capturing one or more territories during a turn a player is entitled to draw a card from a special deck. These cards are traded in sets of three for additional armies.

The game is won by the player who succeeds in conquering the entire world.

Risk sells for about $6.50, depending upon how deep a discount your dealer gives.

TWIXT (3M Bookshelf Games) was created by Alex Randolph, a writer and game inventor now busy with both pursuits in Japan. This game too has been around long enough, since 1962, for many of you to have become its fans.

Twixt is a departure from wargaming and from Chess, but it is most decidedly a game of pure skill. It is an extension of the game of Bridg–It, one that offers infinitely greater variety and strategic possibilities.

The game is basically for 2 players, although an interesting variation is provided for 2 teams. The board is plastic with holes in a 24 x 24 array.

Each player in turn places a peg on the board. When two of a player's pegs are located a knight's move apart they are connected by a link and this becomes a barrier which cannot be passed by an opponent's link. The object is to complete an uninterrupted chain connecting your two sides of the board and before the opponent succeeds in connecting his two sides.

Twixt sells for $7.95 and comes in the usual convenient and attractive bookshelf format.

SWAHILI (Milton Bradley) is a new variation of the world's oldest known game – Mancala (the Arabic name), or Wari or Awari (the name elsewhere in Africa).

Swahili makes use of the traditional "sowing" move of Mancala, but is played on a new form of board which is particularly adapted to play by 3 or 4 players, in addition to the usual 2.

The board consists of a central pit, 5 rings completely encircling the pit, and 6 additional partial rings. Each player uses 12 upright plastic men which are set up in the 4 rings furthest from the central pit.

In a turn a player lifts all of his men from any ring he chooses and "sows" them by placing one in each adjacent ring towards the central pit. If the last man is placed in a ring with other of his men he may, if he wishes, lift all of his men in this ring and "sow" them. Etc.

Opponent's men can be captured and score 5 points for the capturer. Men manuevered into the central pit score 10 points for the owner. The game is ended when one player has no men remaining and the highest score wins.

Swahili sells for about $3.50.

TRI–NIM (Wff 'N Proof Publishers), by Professors Bruce L. Hicks and Hervey C. Hicks, is the ultimate in Nim games.

A number of chips (starting with 10 for beginners and going up to 36 for mental giants) are distributed in the central 6 spaces of a triangular board. Then the players, either 2 or 3 can play, take turns moving one or more chips from the center towards goal spaces in the three corners of the board.

Moving chips into a goal space avails you nothing unless you are the last one to move chips into that goal, in which case you score all the chips in the goal.

This is once over very lightly on a game that is deceptively simple to learn but very difficult to play as well as it should be played. Strongly recommended for those who have, or would like to develop, the ability to see many moves ahead.

Tri-Nim sells for $3.00

LOGI–QUAD (Metroplan, Inc.) was created by John H. Geiger, a New Jersey expert in city planning and is a little jewel of a game. The rules can be leanred in five minutes; playing time runs about fifteen minutes; but you'll find that it's hard to quit a session before you've put in several hours.

The equipment consists of a plastic grid with holes in a 6 x 6 pattern and a large supply of small balls colored either red or blue.

2 play and, starting with a blank grid, take turns placing balls of their color on the grid. As soon as 4 balls are placed together in a square, a ball can be placed on top of them. As the game progresses play is taking place at many different levels until finally the pyramid is topped with a single ball at the sixth level.

Certain configurations prevent the opponent from playing. Others result in a score for the player placing the ball. The one with the most points when the pyramid is completed is the winner.

Although I haven't received a copy as yet, an enlarged edition with provision for 4 players is also being marketed. Sorry but I can't give you the price of either edition.

DECISIONS, DECISIONS (Cadaco) makes uses of a delightfully novel piece of game equipment. Sixteen holes are arranged in a 4 x 4 array. Four cardboard slides are mounted below the holes so that all except one are blocked. Each slide can be shifted by moving one of the four knobs placed on the sides of the array and each shift causes a new hole to be opened while the old one is closed.

2 to 4 can play.

At the start of the game the fifteen blocked holes are filled with twelve blue and three yellow marbles. Players in turn move a knob, dropping a marble through the opened hole, unless of course it has already been emptied.

Blue marbles when dropped are kept by the players. Yellow marbles must be returned to the board together with a penalty of a blue marble. When all of the blue marbles have been taken the player with the most is the winner.

When played by beginners this is pretty much a matter of luck. When the binary secret of the slides is discovered, and it isn't difficult to find, the game becomes one of skill.

Experienced players will find that in a two-hand game the player who goes first has a decided advantage. To compensate for this an even number of games should be played with first move alternating and a cumulative record kept of the scores.

Decisions, Decisions sells for about $3.50.

The following three games I recommend very highly – but then again I am prejudiced because I invented them. Here are just a few words about each since this column has to come to an end sometime.

ACQUIRE (3M Bookshelf Games – $7.95) is a financial or "money" game which takes about 90% skill and 10% luck in the playing. The game builds to a definite climax and ends in about an hour and a half, and all of the from 2 to 6 players can feel that they have a chance of winning until the final tabulation.

BAZAAR (3M Bookshelf Games – $7.95) is a game based on the manipulation of equations and should appeal to anyone with a mathematical bent. 2 to 6 players.

MONAD (3M Card Games – $3.95) is a card game that is so different that I don't know how to begin to describe it, so I won't. It calls for the same kind of thinking that a strategic board game calls for and should really be played with all the cards face up on the table, although the published rules don't call for this. 2 to 4 players.

Wargamer's Notebook

Back by popular demand is Ed Mohrmann's AFRIKA KORPS IN HO series. It will be continued in this section.

Well, we've built our recconaissance battalion and have a good start on a panzer division. Of course, the heart of the panzer divisions were their tanks and grenadiers, so we must look at the organization of the panzer regiments, the panzer grenadier regiment, and of other units attached to the division.

When they unloaded at Tripoli on 11 March 1941, the 5th Panzer Regiment consisted of 130 tanks. These were organized in two battalions, each of three companies. A fourth company had been left in France and was brought over later. The companies were organized in four platoons, platoon strength being five tanks. Of course, each company had a commander's tank, thus the companies each had a strength of twenty-one tanks, and the battalion a strength of sixty-three. Adding the two battalions' tanks, the signals and artillery observers' tanks and the regimental vehicles, we find that the regiment had a total strength of 152.

At the beginning of the Africa campaign, the majority of these vehicles were PK II's and PK III's, though there were a few PK IV's. Also, a sprinkling of the excellant Czech Skoda tanks which the Germans had designated PK 35 (t) and PK 38 (t) was included.

Now, we all know that one of Rommel's favorite tricks was luring British armor onto the self-propelled guns attached to the tank regiments, there to be pre-digested for the panzers. These assault guns were in battalion strength, the battalion being made up of five batteries, each battery of six guns. This is a radical departure from normal German practice and was probably adopted to fit the tactical use to which these weapons were put in Africa. The unit's equipment consisted largely of the new (at that time) Sturmgeschutz III, a short barreled 75mm gun mounted on the PK III chassis.

One of the biggest contributors to Rommel's defeat was the Desert Air Force. To defend themselves from it, each of the panzer divisions had an attached FLAK battalion. This unit numbered 750 men and had a variety of weapons. First, of course, they had the well known 88mm dual purpose gun. Strength was two four-gun batteries. Light FLAK included five 37mm and sixteen 20mm anti-aircraft, which could also be used as anti-tank guns. Six light machine guns rounded out the battalion. The 88's were towed, all other weapons being halftrack mounted.

Artillery played a large part in the operations of the Afrika Korps. Each of the panzer divisions had a full regiment of guns assigned to it. The three battalions of the artillery regiment had three batteries apiece. First and second batteries were of 105mm guns, the third was a heavy battery of 150mm howitzers. Battery strength was four guns. Personnel strength of the unit varied, since it was found in Africa that not all of a gun's crew was needed, much of the firing being done over open sights. Many of the artillery men actually fought as infantry. A good estimate of the average personnel strength of the artillery battalions would be 500 men-including everyone.

The last of the attached units was the panzer jaeger battalion. This anti-tank outfit comprised three companies of 12 guns each. The companies had 3 sections of four guns. The first and second sections were light 20mm and 37mm FAK while the third section was the heavy 50mm. Initially, all of the panzer jaeger battalion's weapons were towed, but when one of the bright boys in a tank recovery outfit came up with the idea of mounting them on a halftrack, only the 50's remained as a towed weapon.

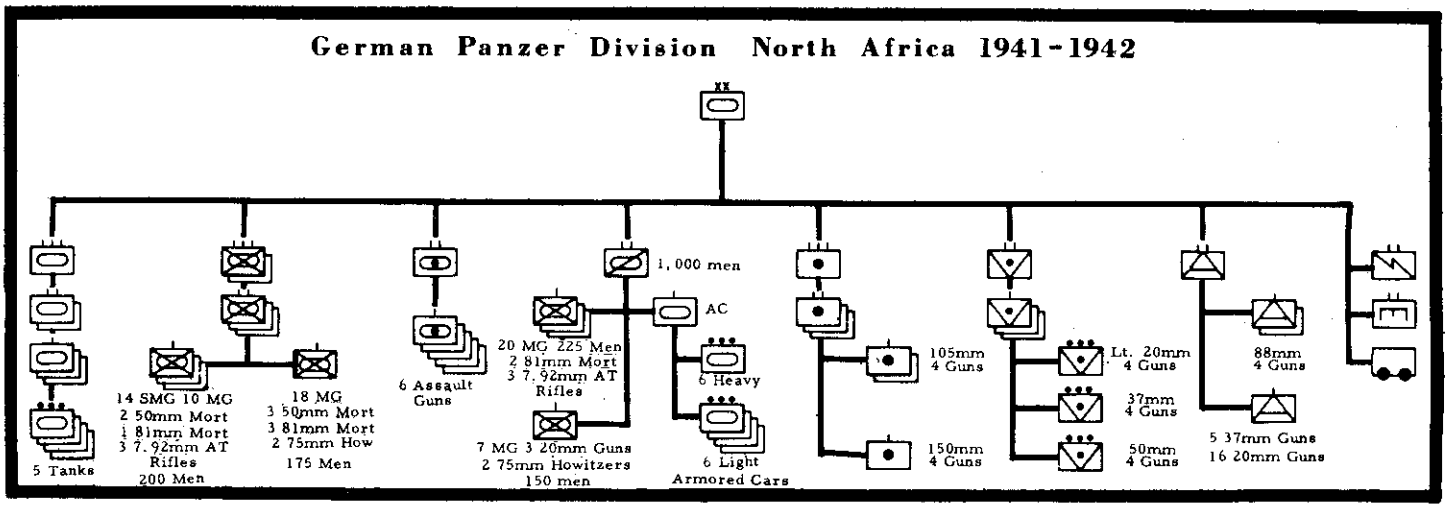
Finally, we come to the last major element of the panzer division. The panzer grenadier regiment had a flexible t.o. of from two to five battalions. However, it was normally organized in three battalions, each composed of three infantry and one heavy weapons (or machinegun) company. There were of course the normal engineers, commo, and supply elements.

The rifle battalion had a nominal strength of 800 men, not counting auxiliaries. Each of the rifle companies had 200 men and a variety of automatic and heavy weapons, including fourteen submachine guns, eight light and two heavy machineguns, two light and one heavy mortar, and an anti-tank section of three 7.92mm rifles.

The heavy weapons company had the bulk of the battalion's mortars and machineguns. Personnel numbered 175 and the weapons included three light and three heavy mortars, twelve light and six heavy machineguns, and usually two 75mm infantry howitzers, same as the recce battalion. It also had the 7.9mm a/t gun.

So, to organize the rest of our DAK panzer division, we need to convert all of this information via our standard ratio and we'll come up with scale companies, etc., and a complete scale division.

Unless you wish to buy Denzil-Skinner cast metal tanks (they are 1/96 scale and don't fit Minitanks' 1/87 scale) for a dollar thirty cents each, you won't be able to represent the PK II. Also, Minitanks doesn't have the PK III armed with the 37mm gun. So, buy the Z-175 and cut the barrel off about half way down, then sand or trim it to the correct circumference. To be entirely correct, the gun mantlet should also be re-worked from the slightly rounded configuration of the G model to the almost semi-circular appearance of pre-G models (notably the C model).



Your table top set up for the scale battalion is as follows: Headquarters tank – 1 Z-174 PK III with 50mm short barreled gun. Number 1 co. – 4 Z-174 PK III with 50mm converted to 37mm. Number 2 co. – 4 Z-174. Number 3 co. – 4 Z-175 PK III "specials" w/50mm long barrled gun. Optionally, you may add the fourth company of four Z-107 PK IV with 75mm long barreled gun.

Two of these battalions will make up a regiment and you will need 2 Z-174 with thinned down guns (to represent dummies) for commander tanks. Finally, 2 each Z-235 and Z-233 motorcyclists for admin sections and the regiment will be complete. If you wish, you can use a couple of Z-126 to represent the regiment's supply vehicles, but its' not really necessary.

For infantry, I'll describe one company, then you can make up as many as you like, a full regiment if you wish. Mount one officer and a radioman on a stand. Mount the remaining 18 figures of the company in three six man stands. One man on each stand is an NCO and one on each stand is a submachinegunner. As for heavy weapons, mount the heavy machine gun on a stand and use three figures for the crew. The two light machineguns are also individually mounted and have a crew of two. Mount a mortar (scratchbuild one if you don't want to buy it. Denzil-Skinner's are 18 cents each) on a stand and use three figures as crew. The last weapon is the 7.9mm PAK. Mount the one in the Airfix AK box and use a three man crew, or mount the panzerfaust (a/t rocket launcher) gunner and two loaders on a stand. Three companies organized in this manner will make up an infantry battalion. Since it is motorized, you'll need one truck per scale company (actual ratio was one truck for twenty men). Use Minitanks' Z-115 in the WWII version, with door "cut-outs."

The weapons company has one 50mm and one 81mm mortar, buy them or build them. Each is mounted on a stand with three man crew. Mount four light and two heavy machineguns on stands, each with crew as above. For the 75mm infantry howitzer, re-work the American 37mm a/t as explained in the first article. It has a crew of four. Finally, mount six infantry on two stands and make one figure on each an NCO and one on each a submachinegunner. Mount the 7.9mm PAK and the weapons company is done.

Unfortunately, all we have to make the assault gun battalion with are Minitanks' Z-176. The odd T.O. of the assault gun battalions precludes using our normal ratio, so we'll use the artillery ratio and use five of the Z-176 to represent the battalion's batteries and one to represent the commander's vehicle and also his staff, etc.

For the artillery, we are in luck. AHM makes one gun that comes with two barrels, and can be used as the 150mm howitzer or the 105mm gun. It is the Z-186 and you'll need nine of them, six as the 105mm and three as the 150mm howitzer. To tow these weapons, use the Z-126 but install a hook on the rear and just under the body. Heat a pin and push it into the plastic, then bend it up and clip off the head. Or just mount the guns on stands with their four man crews and you're finished. The Z-141 artillery crew painted as Germans is passable.

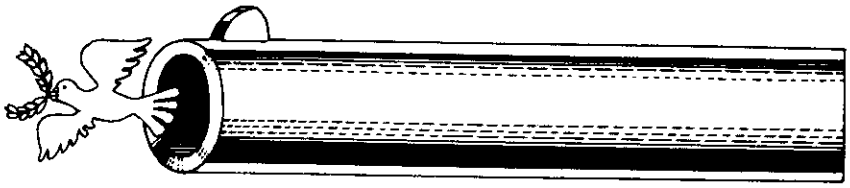
Making the panzer jaeger battalion is difficult, unless you want to use the Z-127 and Z-128, which are actually anti-aircraft guns. Of course, they were the same eventually, but you really should use towed weapons. Z-198 (U.S. 37mm gun) will make a good towed a/t weapon, and you can shave down the barrel a bit or convert the PAK from the Afrika Korps Airfix box to make the 20mm gun. The 50mm will have to be made from scratch, or just possibly converted from an old PK III turret gun mounted on the Z-198 shield and trail assembly.

At any rate, you need one of each type of gun for your PAK companies, three of each type for the full battalion. Each is mounted on its own stand and has a three man crew. Transport is the Z-126.

For the FLAK battalion, you'll need two 88mm guns to represent the two 88mm batteries. These are difficult, but you could use Z-105's tube, shield, and breech assemblys and hoke up some sort of mount. Put each gun on a stand and crew it with four figures. For the light FLAK, use two Z-127 and four Z-128. Put two scratchbuilt machineguns on a Z-126 and the FLAK battalion is finished.

That winds up this session. Next time we'll get into painting, detailing, and authenticating the men and vehicles of the units.

DIPLOMACY



You Lie, Sir!

Ex-Captain Walker (USAF) is now a civilian and it was because of the chaos of his transition that he was unable to be with us this issue. Mr. Walker will be back. Filling in this time is our own managing editor, Ed Birsan, a well-known figure in DIPLOMACY circles. In the following article Mr. Birsan expounds on that aspect of the game which brought him his notoriety.

No weapon is used as frequently as the lie when it comes to the game of Diplomacy. In every game someone lies and quite often all the players lie at different times during the game. The type of lie and the damage which it inflicts can often determine how well you are doing in Diplomacy and what kind of 'professional' reputation you will carry with you to your future games.

The following is a brief break down of the art of lying into five areas followed by a "LIE-ABILITY" chart in which you can find your 'lie-ability' rating.

SMALL LIE

This common creature in the diplomatic circles usually makes its appearance early in the game or in positions when the liar is in no real danger from his victim. It is used to pass on misinformation about the other players motives and possibile moves. It is also used as a screen to disguise your own competence or the lack of it, by projecting all types of irregular moves on the part of distant players. An example of a small lie would be:

TRUTH .... . . GERMANY TO ENGLAND: "I am planning to attack Warsaw with the Austrian's support next turn."

LIE . . . . . GERMANY TO TURKEY: "Austria has given me no hint of his moves I would guard your position in Greece as he usually plays a southern game."

THE SILENT LIE

One of the more frequent members of the middle game, this diplomacy weapon usually makes an appearance when a double cross is about to be played and a third party plays mute while the chopping block is arranged. The uniqueness of the silent lie over all the others is that it is not the misrepresentation of what is going on but merely the refusal to point out certain trends to an unknowing victim. It is also used when players decide to make a move which they know their ally will disapprove of. For instance:

FRANCE: Fleet Mid-Atlantic to the English Channel

Army Burgundy to Picardy, Army Marseilles to Burgundy,

Fleet ~~Spains.c.~~ to Mid Atlantic.

Off hand the moves may be taken as an attempt to root the Germans out of Belguim but it could also be used as a prelude to the invasion of England with:

Fleet Mid-Atlantic to Irish Sea, Fleet English Channel convoy Army Picardy to Wales, Army Burgundy to Picardy. As time progresses the chances of using this type of lie successfully deminishes as players are usually very wary of breaking a long term alliance. It also tips the other player off if after several moves his once talkative ally goes silent and comes up with erratic and ambiguous moves.

THE DEVIOUS LIE

A rare creature among novice players it is generally used by more experienced players who plans/moves well in advance of their execution. It usually takes the form of misdirecting the goals of a fellow player in the hope of luring him into a position in which he has about as much mobility as a toad in a tree: no matter where you turn the only way is down. The advice which is given could be in the field of making moves or in the diplomatic field. It is also usually preceeded or tied to a small lie about the intentions of other players, in an attempt to isolate a player diplomatically.

When used properly it can mean the difference between stabbing someone in the back and being admired for a great diplomatic move or doublecrossing someone and making a bad reputation for yourself in your diplomacy circle.

THE GROSS LIE

Often called the out and out lie it is merely telling a player that you intend to do one thing and then move in the opposite direction with dire consequences to the victim. The gross lie is always present at the diplomacy table and makes surprise appearances usually when things are going well. When used too often it can destroy a player's reputation over night and thus should only be used once or twice during the game.

THE VICIOUS LIE

Of all the lies told this is perhaps the most dangerous as it is usually told in the atmosphere of heated anger. It accomplishes very little for the liar except to let off steam and gain the satisfaction of putting the screws to a personal enemy in the game. It is used when players are principally too weak or too strong to either care or be affected by the military turn of events. It takes the form of turning on satellite countries in the last stage of the game or satellite countries turing on their 'protectors' because they reject

the submissive position they are in. Often this puts that little bit of reality into the game, which is called the 'human element' or 'neurotic factor' which makes the game exciting.

The chart allows you to rate your own liability. Take the type of lie told and the strength that you were at when you lied and find a negative number. Add up numbers for each time that you lied and subtract the number of supply centers that you end up with. A score of −40 or more means give-up (or run for vice president) −20 to −29 means that your image isn't too good, in fact it stinks. −10 to −19 could mean that your tendency to fib is a bit better than your tendency to make a good move. −1 to −9 puts you in the mainstream of the present players in postal Diplomacy. 0 to +9 makes you one of those saintly people we hear about but don't believe exists. A score of +10 to +15 puts you in with a crowd of very bad players as you are too good of a player to play against people who allow you to score points without lieing. A score of +16 to +18 makes you the worst liar of them all: one who lies about himself.

Lie-ability Chart

	TYPE OF LIE				
	SMALL	SILENT	DEVIOUS	GROSS	VICIOUS
S 1	1	X	X	X	18
U 2	2	X	X	X	18
P 3	2	3	2	7	10
P 4	2	4	3	7	10
L 5	2	5	3	6	10
Y 6	2	5	3	6	8
7	3	4	3	5	8
C 8	3	3	3	5	7
E 9	3	4	4	4	7
N 10	3	5	5	5	7
T 11	4	6	6	6	8
E 12	4	7	7	6	8
R 13	X	9	7	6	10
S 14	X	10	7	5	10
15	X	X	7	5	18
16	X	X	X	5	18
17	X	X	X	6	18

X-Wrong classification.

PARLEMENT

Multi-Party coalitional political game (experimental)

One dollar for rules including revisions:

Charles Wells
3021 Washington Blvd.
Cleveland, Ohio
44118

WANT TO PLAY GAMES?

S & T engages in the design and revision of as many as a dozen different games at one time. We need people to help us test games during the testing and development stages. If you'd like to design your own you might learn some interesting "tricks of the trade" from us. If you qualify, you can join the S & T design team. The qualifications are:

1 - You must live in the New York City area and/or be able to attend at least two "work sessions" each month in lower Manhattan on either a Thursday or Friday night.

2 - You must not only be a good player (and we'll give you an opponent who won't be a pushover) but you must also be able to take a freshly designed game and make constructive criticisms of it. You must have an open mind.

The pay is little, aside from all the free games you'll get and the fact that you'll get the games before anyone else does. Still interested? Write to the Editor, S & T, Box 4267, Long Island City, NY, 11104 stating your qualifications. You will be contacted within a few weeks.

WORK?

Would you like to work with Strategy and Tactics? If you are a New York area resident with some skill in drafting or artwork, we could really use you! Depending upon the time you're willing to devote to it you could become involved with many aspects of the magazine — illustration, game-design, layout production, etc. As is the case with all S & T staffers you would not receive any financial rewards for your help, BUT you would get free games, magazines and the opportunity to work in center of the gaming activity. S & T of course would provide all necessary materials and supplies. Literally dozens of projects are waiting to be developed and all that is required is your interest and support to make them a reality. Contact us by letter and we will call or write in reply to set up a meeting and fill you in on details. Of course there is no obligation to serve and all work is strictly voluntary.

WRITE: ART DIRECTOR
STRATEGY & TACTICS
BOX 4267 L.I. CITY N.Y.
11104

PASS IN REVIEW!

BOOKS OF INTEREST TO THE WARGAMER

The Aero series covers 19 volumes each of which is about one specific aircraft. Each of the books provides a short history of the aircraft and many photos of famous men associated with it. These books are very graphic and always provide many pages of photos showing the aircraft in flight or combat. Each book also includes close up shots of the internal mechanisms such as motors, machine guns and cockpit layout. Some of the books have cut away drawings which display the locations of crew members and equipment.

At least 4 pages of color photos are included in each book which show top and side views. Many of the books have examples of squadron insignias in color and some of them have color charts. Some of the books also list kits available and recommend books which provide more data on the subject.

Some books like No. 14 on the Me 262, cover in detail, the design, construction, fuselage, wings, ailerons, tail, landing gear, nose wheel, main gear, power plant, gunsight and armerment. Some of the volumes like No. 15 on the Mustang provide detailed performance data on each model of the P51 and really get down to the nitty gritty. The books vary in their thoroughness and each must be judged individually. While some go into great detail and even provide the muzzle velocities, rates of fire and weights of projectiles fired, others seem to have over looked factors like range, wing area and rates of climb.

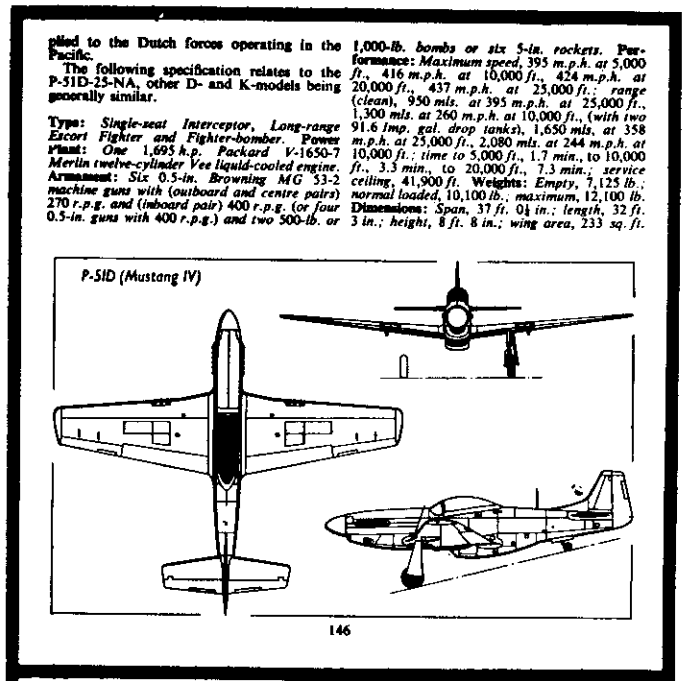
These books sell for $3.00 each and can be acquired thru AERO PUBLISHERS, INC. 329 Aviation Road, Fallbrook, California 92028. The 19 volumes are, No. 1 Me 109, No. 2 KI-84, No. 3 P-40, No. 4 He 162, No. 5 P-12 & F4B, No. 6 P-47, No. 7 Kamikaze, No. 8 Ju 87, No. 9 Dornier 335, No. 10 Spitfire, No. 11 F4U, No. 12 He 100 & He 112, No. 13 He 177, No. 14 Me 262, No. 15 P-51, No. 16 Bf 100, No. 17 Me 163, No. 18 FW 190, No. 19 P38.

The Arco Publishing Co., Inc. of 219 Park Ave. South, New York, N.Y. 10003 puts out a "FAMOUS AIRCRAFT SERIES" of books which look similar to the Aero series. Altho these books sell for $2.95 each, I think anyone seeking hard facts could do much better with PROFILE Publications or the GREEN booklets. These Famous Aircraft series books are quite deceptive and not really all that they appear to be.

To the casual browser in a bookstore somewhere, it would appear that these booklets contain a gold mine of information. The first half of each book is filled with print and pictures of the aircraft. The center fold holds a black and white action painting of the aircaft. Scattered through out the book one finds black and white drawings of the aircraft in battle dress and a picture of several other planes all drawn to scale. This permits you to grasp the relative sizes of the planes of the period.

The last half of each book contains a reproduction of the pilots handbook. At first glance, it looks as though you have all of the facts concerning every facet of the aircrafts performance and possibly a little extra. However, closer inspection will reveal that altho the book is replete with nostalgic memorabilia, it contains little else in the way of hard cold facts or performance data. Typical copy found within these books sounds like something one would expect to hear at a testimonial dinner.

When these books provide performance data, it is presented more as an afterthought than as the main objective of the book. In my opinion, these books rate slightly lower than the AERO series only because the AERO series always provides color photos or color drawings of the aircraft in battle dress which can serve as a guide for painting models. The ARCO books have no color at all.



plied to the Dutch forces operating in the Pacific.

The following specification relates to the P-51D-25-NA, other D- and K-models being generally similar.

Type: *Single-seat Interceptor, Long-range Escort Fighter and Fighter-bomber.* **Power Plant:** *One 1,695 h.p. Packard V-1650-7 Merlin twelve-cylinder Vee liquid-cooled engine.* **Armament:** *Six 0.5-in. Browning MG 53-2 machine guns with (outboard and centre pairs) 270 r.p.g. and (inboard pair) 400 r.p.g. (or four 0.5-in. guns with 400 r.p.g.) and two 500-lb. or 1,000-lb. bombs or six 5-in. rockets.* **Performance:** *Maximum speed, 395 m.p.h. at 5,000 ft., 416 m.p.h. at 10,000 ft., 424 m.p.h. at 20,000 ft., 437 m.p.h. at 25,000 ft.; range (clean), 950 mls. at 395 m.p.h. at 25,000 ft., 1,300 mls. at 260 m.p.h. at 10,000 ft., (with two 91.6 Imp. gal. drop tanks), 1,650 mls. at 358 m.p.h. at 25,000 ft., 2,080 mls. at 244 m.p.h. at 10,000 ft.; time to 5,000 ft., 1.7 min., to 10,000 ft., 3.3 min., to 20,000 ft., 7.3 min.; service ceiling, 41,900 ft.* **Weights:** *Empty, 7,125 lb.; normal loaded, 10,100 lb.; maximum, 12,100 lb.* **Dimensions:** *Span, 37 ft. 0¼ in.; length, 32 ft. 3 in.; height, 8 ft. 8 in.; wing area, 233 sq. ft.*

P-51D (Mustang IV)

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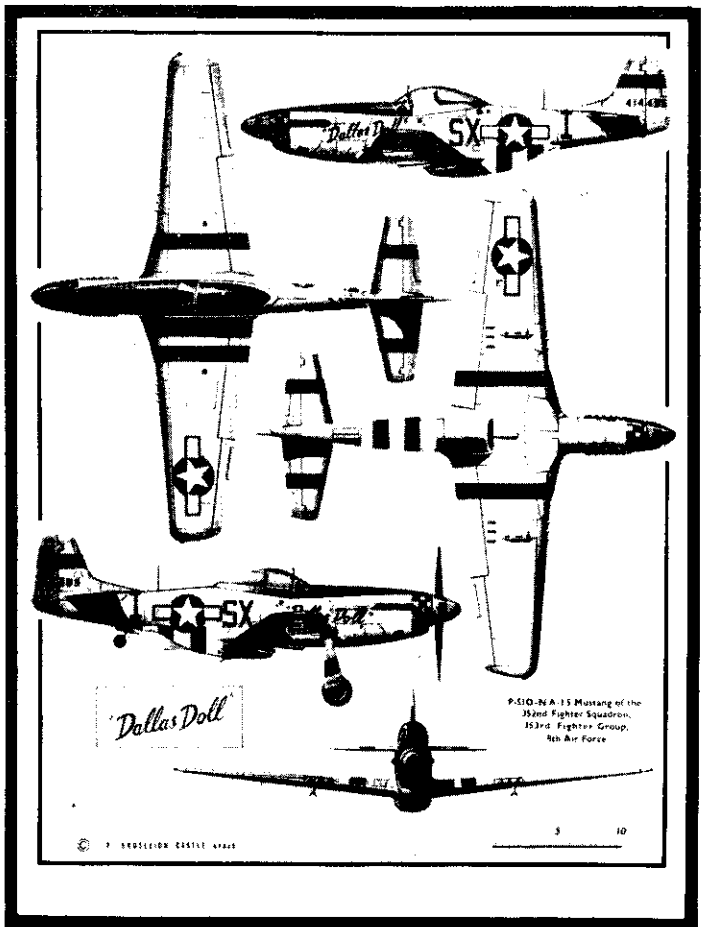
Although only black and white line drawings are included in the Green books they do have the most complete range of technical data as well as sections on all experimental planes . If you want data, this is the best buy.

William Green has published 10 volumes of WAR PLANES OF THE SECOND WORLD WAR. Mr. Green covers every war plane which flew in combat or in prototype form from the beginning of the war to its conclusion. Every nation is covered thoroughly and Mr. Green does an excellent job of bringing out the vital facts. In addition to the specifications and performance characteristics, Mr. Green provides a complete history of each plane. He usually tells how many of each type were produced and occasionally mentions units which used the equipment.

Each discription is accompanied by several excellent black and white photos of the aircraft and a line drawing showing front side and top views. Each book describes about 75 aircraft and sells for about $3.50. As far as I am concerned, there is no better bargain available anywhere. The books are moderately priced and each contains a wealth of information.



The PROFILE PUBLICATIONS series of books on aircraft is probably the best looking of the lot. The above is a black and white photograph (half-size) of the scale drawings from the book on the P 51D MUSTANG. Each of the books has such a color plate, plus numerous photographs and often additional color plates. The data is not as complete or comprehensive as that found in the Green books, but much more "romance" copy is there.

PROFILE PUBLICATIONS offers over 200 pamphlets each of which describes a specific model of aircraft in great detail. Generally speaking, each profile gives at least two pages of color pictures showing the plane painted in the battle dress of several famous units. Colored unit crests frequently accompany the pictures. In addition to covering the performance characteristics thoroughly, the booklets usually provide a list of organizations which used each plane. They usually tell how many planes were made by each factory and even provide tail numbers!

Each booklet covers the subject so thoroughly that it is some times necessary to use several booklets to tell the complete story. For example, the P51 B & C model is described in booklet No. 100 while the P51 D model is covered in booklet No. 8. These booklets sell for about 50 cents each but can be cheaper when bought in larger groups.

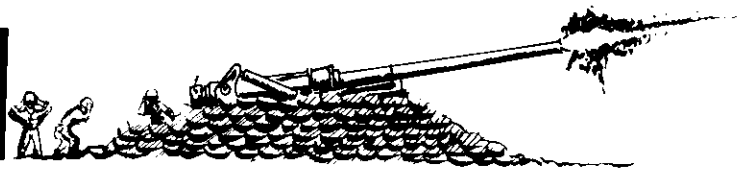
When reading my opinions of these books, you should remember that my tastes are not necessarily your tastes. I value a book for what it can tell me. If the book tells me little, I have no use for it. If the book tells me what I need to know, I consider it to be a good book. Altho I don't usually find fault with the literary style used by an author, I hate like hell to spend my time reading 20 pages which say over and over again "this was a grand old plane and every one loved her dearly." I don't consider information of this type to be useful and am therefor most critical of books which have only this type of crap to offer.

Performance characteristics are the measurement tools used to evaluate an aircraft. No book provides everything you want. Generally speaking, the Green books and the Profiles will give you most of what you need if you have both of them. Occasionally, one of them alone will be sufficient but a double check is much more comforting. What I'd really like to see is a book which gives everything, but no such animal exists. I'd like to see aircraft performance specifications standardized so that it would be easier to compair one model to another. For example, how large is the circle made by a fighter when its in its tightest combat turn at every 5000 foot interval up to its upper limits? How much time is required for the aircraft to fly from take off to its absolute ceiling, broken down in 5000 foot intervals? What is the muzzle velocity and weight of the rounds it fires? What is the maximum effective range of the weapons it carries? Where can you find this data?

When evaluating aircraft for wargameing purposes, it would be much easier if all of this information were available in one common reference source.

Louis Zocchi

Outgoing Mail



OUTGOING MAIL represents a melange of ideas and comments from the staff of S&T directed towards the readers. The following does not represent any one person's opinions or convictions and that's a nice way of getting everyone off the hook.

If this OUTGOING MAIL seems a bit harder to read than the last one it's because the type is smaller. We have more to say but have no more additional space for this section. This is a bit hard to explain once you've noticed that the magazine is more than 25% larger than previous issues. Forty pages. Actually you're getting much more (over 50 pages) if you count all the odds and ends we've included on separate sheets. We've learned our lesson after seeing some of the reader's comments about having to slice up the last issue in order to play CRETE. In the future this will never again be necessary. But that was our first issue for so many things. You can't win 'em all.

Speaking of the size of the magazine, we ourselves became a bit more curious about this subject . So we perused two "competing" publications and came up with the following figures;

PUBLICATION	PAGES	WORDS OF EDITORIAL MATERIAL	PRICE PER COPY	% ADVERTISING & STUFF	
"OLD" S&T	32	about 14,000	$1.50	12%	Includes
"NEW" S&T	40+	about 25,000	$1.50	10%	promotion-
GENERAL	16	about 16,000	$1.00	10%	material &
LIFE	106	about 25,000	$0.50	50%	the like.

The key to increasing the size of a magazine is circulation and advertising. As the first increases so also does the second. But it takes money to increase circulation quickly. Since we are (I hope) basically dealing with a small "special interest" market no one will risk the few hundred thousand bucks it would take to "attempt" to give the circulation a large boost. That leaves just you folks. You, the readers of S&T, are our best salesmen. So take a second look at the "Subscription Sales Kit" included with this issue of S&T and get cracking. As you will notice, you even get a "commission" for obtaining new subs. Meanwhile, we continue to scrounge around on this end. We have no place to go but up.

Speaking of going "up" S&T is also going "monthly", more or less. The S&T SUPPLEMENT (see the ad on page 39) on the months between S&T's regular publication. It will serve a number of functions. First, it will get more material into the hands of gamers. In addition it will allow us to publish more of the articles we receive from (primarily) our readers. In the same vein it will allow us to "try out" new types of articles before deciding to do similar ones in the regular S&T (where they will receive more lavish treatment) . Eventually the SUPPLEMENT will be replaced by a regular edition of S&T. But that's when we really go "monthly". For the present the SUPPLEMENT is the best we can do.

One of the main reasons for publshing the SUPPLEMENT, the considerable number of excellent articles we receive, brings up another point. What our readers are like. We received a 50+% response to our FEEDBACK QUESTIONNAIRE. The results were rather interesting. For one thing, 73% of our readers are age 18 or over. Some 61% have had some college. Thirty percent have had some graduate school while 23% have actually completed graduate or professional school. What this adds up to is a highly literate and active readership. No wonder we receive so much material. In the future we will make it our policy to see that most of it gets published. We have roughly estimated that some 90% of the material we receive is suitable for publication. We will see to it that anything received which falls into this category IS published. If not in S&T or the SUPPLEMENT then SOMEWHERE. More on that elsewhere in the magazine.

The FEED BACK QUESTIONNAIRE proved a huge success. One will be included in the SUPPLEMENT, which is how we will spot good new ideas published there. The FEEDBACK QUESTIONNAIRE can only continue to be a **success if** you continue to use it. Your comments and evaluations were invaluable and their influence is already apparent. So try to get into the habit of sending the questionnaire in. Do it within a few weeks of receiving the magazine. Otherwise we will not be able to include your evaluations in the data processing run (you know, on the IBM machine). Whenever your questionnaire comes in it will be read and passed around, but the only record we keep is the one we get from the computer.

We received various comments on the questionnaires which are best answered here. There were some complaints about the size of the type on the incoming mail. We want to publish as many letters as possible in order to expand communication between readers. Starting next issue we will also put the writer's address with his letter, as many readers have requested, so that a little more communication can be achieved. Speaking of communication. Did you know that it costs the average business almost three dollars to answer a letter? Well, we're not exactly an average business, but it does "cost" us over a dollar for each letter we have to answer. As you know, we'd rather spend the money on producing a bigger and better magazine, as well as designing more games. So don't get uptight if you don't receive a "courtesy" reply to a letter which really didn't need a reply or a form letter to one that did. We don't get the magazine out by writing letters. We only have so many people working on it and time, to put it mildly, is "tight".

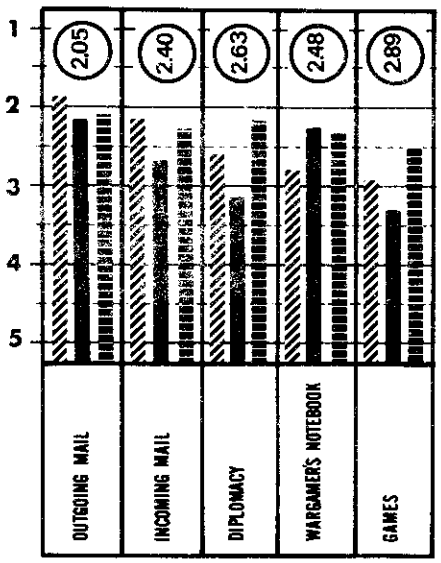
AVALON HILL NEWS: Avalon Hill's next historical game will not, as rumor has it, be LUFTWAFFE, but rather a little number called KRIEGSPIEL. This game will be out in the Spring and will be in the bookcase format (costing eight bucks) and, from what we are told by the designer, will be a "non-historical" wargame based on the same format used in their Football and Baseball Strategy games. It will (probably) have plastic playing pieces and, in general, components a bit superior to those previously found in AH wargames. Avalon Hill is experimenting again. It seems that they had some trouble with ANZIO. We've been in touch with the designers of both 1914 and ANZIO and it seems that ANZIO is doing 40% less business than 1914 did over a similar period. So AH is trying a new design approach. We will carry a review of KRIEGSPIEL as soon as possible. Meanwhile, we have obtained one of the two designs of their planned LUFTWAFFE game and are making it available in the TEST SERIES GAMES.

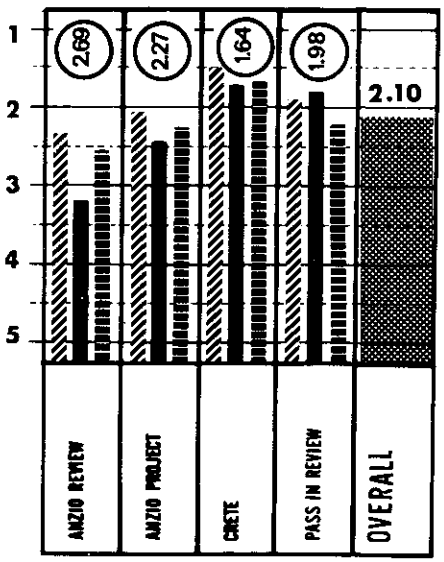
COMING EVENTS: Next issue we will feature a new game entitled BASTOGNE (that's right, the Battle of the Bulge again). It's a completely new game with a 23"x29" full color mapboard included, plus counters and the works. Another game will be featured, one of the "mini games" that did not appear in ANZIO. This one needed a special board as it was a small scale game of the ANZIO beach head. The board will be included, aswell as counters and everything else you'll need. If this game had been included in the original game its sales would probably have been much better. The designer, Dave Williams, will have a few more things to say about the differences between the game he designed and the one AH published. Our lead article will be an indepth study of Luftwaffe ground troops, done in the same style as the Italian Army article in this issue. Plus, of course, our usual features.

In the following issue we will feature something different. A political game in the format of the familiar wargame. It will be called CHICAGO, CHICAGO and will reereate the rather dramatic events at the Democratic National Convention in August, 1968. It was designed by James Dunnigan. We are featuring such an unusual type of game because of one of Mr Dunnigan's previous games, UP AGAINST THE WALL, MOTHERFUCKER! which was published in the Spring of '69 by the Columbia SPECTATOR. It was, of course, based on the Columbia University revolt of '68 and, believe it or not, proved a tremendous success among the local Avalon Hill game players. You may register your opinion of this "experiment" in the space provided in the FEEDBACK QUESTIONNAIRE. Too many "no" votes and we'll do something else. But we think CHICAGO, CHICAGO ought to have a chance. We're providing another game in that issue anyhow. But it's "your" magazine. Give us the word.

FEEDBACK

Issue No. 18





INTEREST
USEFULNESS
PRESENTATION

Average

Incoming Mail

INCOMING MAIL represents the bulk of the mail received which we feel should be passed on to the general readership. If you have something interesting to say and write us a letter about it the letter will most probably end up in this section. These letters are best sent in with your FEEDBACK questionnaire, if not right on it.

Redmond A. Simonsen

Apparently I've created the erroneous impression amongst a few of the readers that I'm some sort of "crypto-facist" or Swastika-bedazzled Germanophile. Due to my graphic use of the twisted cross, people (even some staff members!) have begun to look at me side-ways and wonder where I was in '33. In all seriousness, however, I do wish to clear up any doubts anyone may have concerning my feelings or mistakenly hinted-at sympathies for the Nazis. I like to consider myself as being somewhat rational, ethical and moral in outlook. The Nazi regime was such a monumentally grotesque historical cancer that any condemnation I could personally voice would become a mere footnote to the revulsion that will persist for the rest of Man's existence. Perhaps because of this one can never be totally objective in their reaction to anything that calls up visions of this cancer. I would further suggest that one should never be "objective" about Nazism for to do so would relegate it to the clinical, emotion-less, ammoral area of historical study. One of the objectives of an artist. in fact, is to put content and emotion into his work and to strive to evoke strong emotion. Doing so, one incurs the risk of being identified as the source of the emotion. The Swastika hasbeen called "the most powerful symbol of the 20th century." I believe this to be an accurate statement of fact. I have used it in my work for this very reason-for its singular ability to summon up the images of brutal power gone berserk and of the closest thing to pure evil Mankind has produced to date. But to suggest that by recognizing and utilizing the symbol, I advocate or even remotely sympathize with what it represents, is to completely misconstrue my purpose. The Wehrmacht, however apolitical its generals may have claimed to be was an instrument of Nazism. When we deal with the Wehrmacht in the magazine, we are dealing with an aspect of Nazism. To sugar-coat this relationship and to ignore the leporous hand that held the German sword would be self-delusion. I may be interested in grand strategy, troop movement, weapons and battle history but I don't lose sight of the fact that human flesh is not cardboard counters, a war ravaged world is not a pretty four color mapboard and that the Nazis weren't just a bunch of great tacticians in snappy uniforms.

Consistent with my attitudes as outlined above, I will continue to use the Swastika as a design element when I feel it appropriate to the subject. I sincerely regret any ill feelings such use may provoke but I believe any attempt at deliberate de-emphasis of the Nazi connection with WW II Germany would be an unforgiveable dishonesty and a gross sin of omission.

Arnold J. Hendrick

I too am very sorry that Chris Wagner is no longer with the magazine. His editorship produced a magazine with exceptional balance, and made the short pages stretch out to a magazine you could read, then re-read, and then use as a reference later on. Putting the magazine to such a multiple use is very important. Thus articles must be very carefully chosen for lasting interest. The articles must also be good efforts in the literary field, in order that they can communicate well and pleasurably to the subscribers. This general quality of "workmanship" in the magazine is the reason why I continue to subscribe, NOT because of special deals like a "game every issue" or some other gimick.

I am a modern European history major in college. Thus my interests lie in military history and game design (Avalon Hill type, miniatures, and other games of the intellectual aspects of war and international politics). However, I also play miniature wargames of all periods (although I am most interested in modern wargames--1939 to the present on air, land and sea) and collect the figures and accesories. Beyond that, I am a bug for realistic scenery, good painting jobs, etc., etc. So you see I have important interests in all aspects of the hobby.

The only thing I have small support for in your magazine is the banal quality of some articles. The pros and cons of Anzio was pretty light stuff, for anyone could make those comments, and inevitably everyone who has the game has an opinion. A straight description of the game (as best one can) with the "S&T's Wargamer's Rating" would be far better. The article concerning development of the game and whatnot is far more interesting, altho one feels it was cut down a little.

The "If looks could killdept." was very nice, and just the right ligh touch However, I tend to like the board and counters of Anzio. To me, the colors of the map and the counters should suggest WWII battle colors and terrain colors. The concept is that certain colors, like music or words, can convey an impression to your mind. In this respect 1914 and Anzio communicate much better than any other AH games I know. Further, Red Simonsen had better think twice about continuing his "If looks could kill dept." his cover for Vol. III, No. 2 (the issue I am discussing) is a real bomb. I liked his previous work a great deal, but this one is not so good. Probably because of the lack of detail. All I get is four paratroopers, the island of Crete, and a swastika that is getting pretty darned used up. Once o n the Battle Of Britain cover was fine, but again?????

Since I am interested in wargame design, of course Crete interests me a great deal. In this letter, you will also find a purchase order for a few of the Poultron Press items also. I continue to buy wargames because of new ideas and concepts that are constantly coming out, and the valuable historical information conyained in each game. I liked 1914, Jutland, and Anzio very much because of these factors, especially 1914 with the large number of new concepts in gaming. The S&T rules for armor were also just TERRIFIC (I wish you would continue those rules in reference to infantry and artillery arms). I am always very interested in such material, and I would hope that your magazine would do more in that area.

In regards to your printing techniques, I would suggest that you reduce size of print to the size you use on page 31 to describe the various games put out by Poultron Press (see bottom half of page). You can also print mapboards in reduced scale, because who would be crazy enough to hack up a good issue of S&T just to get the mapboard of Crete? I made my own with magic markers, and I am quite pleased with the results. If you had reduced the size of the mapboards a little, and had made the unit designations on the counters clearer, I would have appreciated it a great deal.

I am quite disappointed about the lowering of printing quality in the magazine. I could care less if the paper is gloss or not, but when page two shows through onto the cover when the magazine is closed, when the titles of articles aren't lined up with the article text, etc., etc., then I get a little unhappy. Also, when I can't read the numbers and letters on unit counters I throw temper tantrums. Be warned!!

In all, this last issue of S&T was pretty good, and the continuation of the magazine was good. I expect better articles, though. I am very excited over the Poultron Press games (see page 31), although the prices are steep. I would gladly pay for just "how to make them" kits. If you sent rules, order of battle, other game playing information, charts and tables, plus a carefully folded and marked mapboard, I would not mind taking it from there at all. Especially if it costs less. The joy of making your own unit and board is really something you ought to consider.

If I ever write some good articles for you, I'll pass them on for you to consider publishing. Until then, keep going and find some really good short article stuff.

Louis Zocchi

On page 30 of Vol. III, #2, David Isby claims that information used for the Battle of Britain factory targets was "obviously erroneous." While I'd like to commend him for his interest in Battle of Britain, I'd like to point out that the situation is not as "obviously erroneous" as Mr. Isby would have you believe.

To begin with, the article mentioned the factories only as a supplementary piece of information. It was not meant to be taken as a penetratingly thorough, indepth study of the British arms industry. Because this was the case, it didn't seem necessary to explain the mechanics of production until I read Mr. Isby's charges. If Mr. Isby can obtain a copy of FACTORIES AND PLANT by William Hornby, London: 1958, published by Her Majesty's Stationery Office, he will see that many of his claims are only half truths.

Isby's first claim is that the Halifax was not produced until later in the year. On page 219 it says "in June 1938, the English Electric company was brought into a scheme of providing additional Halifax bombers which were to begin rolling off the lines some time in 1940." In essence Mr. Isby is correct. There was no production until later in that year. However, there would have been no production at all if the English Electric company hadn't begun tooling up way back in 1938.

Early in 1940, additional manufacturing capacity for the Halifax gained by recruiting a major group of subcontractors and using several London Passenger transport board depots. They were supposed to make 32 bombers a month and averaged about 30. The Preston Halifax factory reached an output of 70 bombers per month. The Halifax was made by Handley Page, Fairey, English Electric, L.A.P. and Rootes.

His second claim is that the English Electric in Preston made Hampdens. Again partially correct, they also make Halifaxes. As a matter of fact, 500 Hampdens were made by Handley Page and 770 by English Electric with another 160 by Canadian Associated Aircraft Ltd.

His third statement that Lancasters didn't come from Manchester until 1941 is similar to his first objection and faulty for the same reason. On page 232 it says: "It was possible to achieve deliveries within two years of the approval of the scheme." For some factories the time was brought down to little over 12 months or even less. Two agency factories for the production of Wellingtons made deliveries in 10 months after approval. However, for new shadow firms, at least 20 months proved necessary from approval of scheme to the first deliveries. I'm sure that Mr. Isby is aware of the fact that it does take time and tools to make an aircraft, and that he was a bit premature when he labeled it "obviously erroneous."

The fact that Manchester was not able to deliver Lincoln bombers before 1945 is partially due to the fact that it was making Lancasters. As a matter of fact, Lancasters were being built by A.V. Roe, Armstrong-Whitworth, Vickers (Chester), Metro-Vickers and Austins. I didn't bother putting down the names of each factory within each city because this would have shown that some cities had several factories instead of just one. That point would gave caused someone else to suggest that each factory within the city be attacked and then I'd have to explain that this was tried and dropped in an effort to simplify the game.

As nearly as I can determine, Mr. Isby has acquired a few facts which, isolated from the intire picture, seem contradictory to the true situation. When all of the facts become known, it seems to me that the only thing "obviously erroneous" is Mr. Isby's letter.

EDITOR'S NOTE: This page of INCOMING MAIL consists primarily of a random sampling of comments readers included on their FEEDBACK questionnaires. Let the chips fall where they may.

Charles Burghardt

This issue was terrific, especially the mini-game. I like Red Simonsen's "If Looks Could Kill Dept." At last there is someone to criticize game packages. There is one thing wrong though, could you try to make your illustrations a little darker and clearer.

Bill Abrams

The quality of S&T seems to improve as it had under Chris Wagner. However, I have found my own interest has shifted principally into miniatures with only an occasional AH game opportunity. The Armchair General seems to be more related to my interest and provides news of the hobby in the United States while Wargamer's Newsletter does the same from England. As much of my gaming is solo, miniatures in tactical combat are better suited and provide another hobby in the painting and research of same. Also, I feel I must reluctantly comment on the Nazi flavor of many of the excellent drawings. Redmond Simonsen is not, I am sure, a fascist or neo-nazi but the effect of some of his S&T covers must be disconcerting to newcomers to the hobby or casual observers. Finally, the issues are too infrequent (same goes for The Armchair General). Monthly issues are definitely better.

Gregory Wilmoth

The OB's and game designs are your selling point. I strongly feel that S&T's subscription loss was due not to missing publishing dates, but rather a decline in the quality of the magazine-more work and less OB's. When they stopped publishing OB's, it became a glorified gab-rag, more boorish than even the club magazines.

Marty Novak

Gentlemen,

I have subscribed to S&T since the very beginning. I have even had a very minor article published in your magazine. I therefore feel very sad to say that this issue is beyond a doubt the worst issue in S&T's short history.

I will be polite and mention the few (very few) good points of the magazine. The introduction of the mini-game is one of the most outstanding ideas in your magazine's history. The book review and game review columns can be tremendous assets if properly developed.

And now for the bad. The physical quality of the magazine is utterly miserable. Articles such as Anzio Review should be left to The General and If Looks Could Kill to the garbage can. Captain Walker's column is running out of ideas because of the limited field he works in. There were no historical articles (save for Crete) and no articles giving into the art of tactics or strategy. (But please no General articles!!!)

I feel the primary purpose of your magazine should be the improvement of wargaming through the use of color, spreads of educational material, and emphasis on the proper use of one's mental abilities in games of skill and thought.

I do not feel that this issue would justify a renewal of my subscription, but I will do so because of the magazine's past quality, and because of my faith in your dedication to the magazine.

Jim Smith

I feel that this issue was an improvement on past issues. It was definitely more interesting and worthwhile. I especially liked the inclusion of the game Crete and the offer of special games that are of limited interest. I feel that in this way a real step forward has been made in the promotion and proliferation of the art of wargaming. All in all I feel that this is without a doubt the most superior wargame magazine I have ever recieved.

Ken Hoffstadter

As I realised that S&T was plagued with all sorts of problems at the time, I was not particularly annoyed with the rather sloppy job done in printing my article "The River Plate Revisted" in Vol. III, No. 1. Still,I would like to mention that I count no less than 16 discrepancies between my carbon copies and the article as printed; these range from simple misprints to the omission of words and phrases. While none of the errors was all that serious, I feel that the article would have been more readable and convincing had it been printed exactly as submitted. Most of all, though, I would have enjoyed seeing my article in print much more if it had been presented under the right name. I don't know whether "Ken Hoffman" is a real person or just me spelled wrong, but any broadsides from Pratt fans over the article may as well be aimed in the right direction.

Mr. Simonsen's artwork for the article was excellent, but the over-all presentation seems to suggest that the illustration was supposed to be the main feature, while the text was merely thrown in as an afterthought.

Mark Hefty

Let me express hearty congratulations and thanks for a superb work in such short time. If the quality doesn't improve, you would still have a fantastic magazine. S&T has never radiated such complete interest and good sense in writing than it has in this, your first, issue.

Complaints or deficiencies? Absolutely none. Your ideas of revision are heartily agreed to by me, especially your idea of the Crete type wargame within the magazine. This is a fantastic idea.

Fred Wadley

I am a game player who enjoys playing a particular game six or seven times and then I am tired of it. I either try to redesign it myself, or put it on the shelf and look for a new game. I would be delighted if your magazine would continue to offer "mini-games," ideas for variations of existing games, military history articles (especially Orders of Battle and organizational tables) and articles by game designers concerning their problems in making the games.

James M. Gibson, Jr.

I think your idea of including a game with every other issue the best since the introduction of S&T. I can't remember an article in S&T that was not interesting although of course many were not useful. I one man's opinion means anything, I think S&T is hands down the best wargaming magazine on the market.

David Dibble

On your new format for game reviews I wish the pros and cons of it were a little longer. Otherwise, I would think it incomplete. I especially liked Redmond Simonsen's "If Looks Could Kill Dept." I like your idea of a "mini-game" and this particularly seems interesting at a glance. However, I don't like the idea of cutting up the magazine to play it.

David Lindsay

Since you asked for comments here are three:

The first comment is on Mr. Simonsen's article. While professing no talent at art, I believe his idea for a different cover is superior to the one Avalon Hill came up with. Far superior in fact. But may I correct Mr. Simonsen on one point: He says that "terrain changes never coincide with hex-sides" and makes a remark to say that they don't. However, while it is true that many hex-sides are split, the point of the matter is that in the event of a split hex-side one uses the most favorable rate of travel. Only when one crosses a hex-side with complete color (of one sort or another) does the change in movement take effect. (I also concur with his judgement about the color of the mapboard. Both a friend and my mother found five colors on the mapboard--not counting the sea--none of them corresponding with Avalon Hill's listed colors.)

Second, while I enjoyed your "Crete Mini-Game" a great deal, I did not enjoy ripping my valuable magazine apart in order to get it, nor cutting pages from it, not being able to permanently affix the Heraklion section of the map to a board because of the article on the back of it. In the future, may I suggest putting these things in the magazine twice, once in the regular section of the magazine (i.e. where it is now) and another in the back, where it can be easily removed without destroying the magazine. It is difficult to read the rules when they are split in two parts by cutting, and very disheartening to see an expensive magazine mangled so.

Third, may I recomend a larger type size for your letters section? The present section is in a size even smaller than Avalon Hill uses in its "Opponents Wanted" section of the General, a phenomena I would have thought impossible if I had not seen it with my own eyes.

Richard L. Bryant

I do not believe that the magazine is as diversified as it pretends to be. Not enough on miniatures is included. It started as essentially a miniature gaming magazine which is why I subscribed. The turnabout has been complete with one article on molding. How about rules, battle reports (both miniature and boardgames), uniform data, and more on Diplomacy. I think S&T would be a great magazine if the new owner can clear up the publication and "issues on time" woes of the past. Unfortunately for me, it is turning away from my main areas of interest.

Donald Cooper

I am much more interested in entirely new games (such as Crete) than a re-hash and criticism of Avalon Hill's latest. Revision of Avalon Hill's games are also worth the space. I would like to see the Best of S&T that was promised before the takeover by Poultron Press. I would rather see S&T go once-a-month or expand or get cheaper (or some other improvement) than receive the 22"X28" boards with upcoming games. (It is a simple matter to photo-copy the mapboards from the magazine without mangling it.) Die-cut counters, however, are difficult to make by hand and would be greatly appreciated.

'CRETE' Postscript

The CRETE game found in our last issue was probably one of the most popular features ever presented in S&T (see Feedback results). Unfortunately, it was, of necessity, produced under considerable pressure. Although the overall design was satisfactory for what we wanted (a short, simple game) there were some mistakes made. All were minor, except for the victory conditions. These we would like to clarify. First of all, the Germans, despite all of their advantages had more to lose than the British. Crete was useless and both sides could ill afford the men lost during the battle. But the German manpower, partically their elite paratroopers, were of considerably more value to the German war effort than the British troops were to the British. Therefore, there are three levels of victory for each side each of which may be modified by the size of the German paratroop losses. A 3-1 loss ratio (three enemy combat factors destroyed for each friendly one lost) obtains a decisive victory. A 2-1 loss ratio gains a tactical victory. A 1-1 ratio obtains a marginal victory (actually a draw). IF the Germans lose at least 6 paratroop units their victory drops one level (or turns a British marginal victory into a British tactical victory and so on) while the loss of at least 9 paratroop units drops the German victory two levels (turning a German marginal victory into a British tactical victory).

This following offer may be a little late, but it may prove useful to some. There are available a limited number of CRETE games. Each includes an 11 x 17 inch main map board plus the smaller map, counter sheet and rules. Cost is one dollar each. Send your orders to S&T.

S J U M S C

THE ST. JOHN'S UNIVERSITY MILITARY STRATEGY CONFEDERATION is one of the largest and most respected wargaming groups in the nation. If you are serious about wargaming, if you want to learn more about it, or if military history is your bag, you can find what you want with the SJUMSC. The confederation newsletter, D-ELIM, is one of the best known and most scholarly of all the club 'zines. The cost of membership is a low $3.00 per year. At that price you can't go wrong. If you are interested and want more information, write to: St. John's University Military Strategy Confederation
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..... $10.00

Strategy & Tactics Supplement

S&T receives much more material than we can possibly publish. Much of it is excellent, but there just isn't enough space. We think we have a solution. We're going to call it the S&T SUPPLEMENT and it will contain 40 pages each issue of material we couldn't get into the regular issues of S&T. It will cost 75 cents a copy (or $4.00 for a one year subscription) and will be published bi-monthly by the POULTRON PRESS. How can we do it so cheaply? After all, it will be offset printed. Quite simple. We use unjustified type and regular letter size paper. We are also betting on over half of the regular S&T subscribers becoming regular subscribers to the SUPPLEMENT. In fact, ONLY regular S&T subscribers may subscribe to the S&T SUPPLEMENT. The first issue is due out in December. It will contain much of the same type of articles as you find in the regular issues of S&T. It is all new material. Give the S&T SUPPLEMENT a try. At the price you can't go wrong.

FOUR DOLLARS FOR A ONE YEAR (SIX ISSUE) SUBSCRIPTION. ONLY AVAILABLE TO S&T SUBSCRIBERS.

TEST SERIES GAMES

Tired of the "one game a year" routine? There's really not much the big companies, like Avalon Hill, can do about it. They must sell too many games to break even. One game a year is all the market will support, or is it? Many good games are designed each year, but only one and not always the best one from a "game" standpoint, is published. Poultron Press has managed to get ahold of numerous games which did not, or are awaiting, regular publication. A limited number have been manufactured and are now available. Oddly enough, and despite the prices, the object of the Poultron Press TEST SERIES GAMES is not to make money by selling games. Selling a few hundred copies of each of these games at five to seven dollars each makes that impossible. The main purpose of the TEST SERIES GAMES is to get into the hands of experienced gamers games which embody new ideas, ideas and concepts which regular publishers are reluctant to experiment with. With each game will come a questionnaire, to elicit your opinion of the game. Sending it in will get you free bonuses. The games are shipped post paid and are complete with full size board, counters and rules. They are ready to play. Allow 2-3 weeks for delivery.

Each game comes complete and ready-to-play with pre-cut colored counters, full size map playing-surface, and comprehensive rules. Playing surface is 23" x 29" non-rigid quality stock, offset printed in black and white.

AVAILABLE JANUARY 1st, 1970

- 1918-Russia was out of the war a year, but the American were on the way. The Germans had one last chance to win the war. Massed against 25 weak British divisions in North France were 74 German divisions, many of them "Stossdivisionen" (Shock Divisions). The "Stosstruppen" were the best assault troops produced during the war, trained in the newly developed "infiltration" tactics and armed with the weapons of World War II. The British stopped them in the original campaign, but it was a close thing. Close enough to make a game exciting to the last move $5.00

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- KOREA-The North Korean Peoples Army (NKPA) was the best equipped and trained army in Asia in 1950. And when it was unleashed against the poorly prepared South Korean Army it was anyone's guess whether or not they would succeed in over running the entire country before UN forces could rally to the aid of South Korea's outnumbered forces. A "short-complex" series of games covering every aspect of the conflict $5.00

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FLYING FORTRESS-Germany's war industries hit their production peak in late 1944. It was Allied bombers which finally shut down the tank and gun plants. But throughout the air campaign over Germany the German LUFTWAFFE had to be faced. A multi-level game covering every aspect of the air war including numerous "what if?" situations for both sides $6.00

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- TANNENBERG - The "sister game" of 1914. Actually designed at the same time and by the same team as 1914. Covers the massive campaign in the east during the Summer of 1914. Complete Russian and Austro-Hungarian OB's. Can be played simultaneously with 1914 or by itself with variable OB's $6.00

- TACTICAL GAME No. 3 (RUSSIA 1944)- A new departure in games. A platoon/company level game whose main objective was to compare different weapons/tactical systems. This version deals with the situation on the Russian front in 1944. Counters include T34c, T34/85, JS II, SU 85, Pz IV, Pz V, Pz VIb, and many other armored fighting vehicles as well as infantry, mortar, artillery and other types of weapons. A radical new approach to historical gaming. The first to be published of a series of similar games $5.00

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2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2
1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2
1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2

Auxillary Counters

RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60	RR·8 1-60
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1 2	1 2	1 2	1 2	1 2	1 4	1 4	1 4	1 4	1 4	1 5	1 5	1 5	1 5
1 5	1 5	1 10	1 10	1 10	1 12	1 12	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10
1-2	1-2	1-2	1-2	2-2	2-2	2-2	2-2	3-2	3-2	3-2	3-2	4-2	4-2	4-2
1 3 TF	1 3 TF	1 3 TF	1 3 TF	1 3 TF	1 2 TF	1 3 TF	1 3 TF	1 3 TF	1 3 TF	6 12 LST	6 12 LST	6 12 LST	6 12 LST	6 12 LST
8 MST	8 MST	8 MST	8 MST	8 MST	8 MST	8 MST	8 MST	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4
G 2-4	G 2-4	G 2-4	G 2-4	G 2-4	G 2-4	G 2-4	G 2-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4
G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 4-4	G 4-4	G 4-4	G 4-4	G 4-4

CUT MARKERS	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10

Horde Infantry

2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2
1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2
1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2

Auxillary Counters

RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60	RR-8 1-60
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	2	2	2	2	2	4	4	4	4	4	5	5	5	5
5	5	10	10	10	12	12	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10	mac 2 3 1-10
1-2	1-2	1-2	1-2	2-2	2-2	2-2	2-2	3-2	3-2	3-2	3-2	4-2	4-2	4-2
1 3 TF	1 3 TF	1 3 TF	1 3 TF	1 3 TF	1 3 TF	1 3 TF	1 3 TF	1 3 TF	1 3 TF	6 12 LST	6 12 LST	6 12 LST	6 12 LST	6 12 LST
8 MST	8 MST	8 MST	8 MST	8 MST	8 MST	8 MST	8 MST	1-4	1-4	1-4	1-4	1-4	1-4	1-4
G 2-4	G 2-4	G 2-4	G 2-4	G 2-4	G 2-4	G 2-4	G 2-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4
G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	G 1-4	1-4	1-4	4-4	4-4	4-4	4-4	4-4

CUT MARKERS

RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10	RR CUT -10

Minor Country Armies

Nord Walküre

Chrome Orange

NW ⊠ 4-4	NW ⊠ 4-4	NW ⊠ 4-4	NW ⊠ 4-4	NW ⊠ 4-4	NW ⊠ 4-4	NW ⊠ 4-4	NW ⊟ 3-6	NW ⊟ 3-6	NW ⊟ 3-6	NW ftr ⊟ 4-12	NW ftr ⊟ 4-12
NW tac ⊟ 4-8	NW S 1-0	NW S 1-0	NW S 1-0	NW RR·8 1-60	NW RR·8 1-60	NW 1	NW 1				
NW ⊠ 2-4	NW ⊠ 2-4	NW ⊠ 2-4	NW ⊠ 2-4	NW ⊠ 2-4	NW ⊠ 2-4	NW ⊠ 2-4	NW ⊠ 1-4	NW ⊠ 1-4	NW ⊠ 1-4	NW ⊠ 1-4	NW ⊠ 1-4
NW ⊟ 2-6	NW ⊟ 2-6	NW ⊟ 2-6	NW ⊟ 1-6	NW ⊟ 1-6	NW ⊟ 1-6	NW tac ⊟ 2-8	NW tac ⊟ 1-8	NW ftr ⊟ 2-12	NW ftr ⊟ 2-12	NW ftr ⊟ 1-12	NW ftr ⊟ 1-12

Sud Walküre

Cadmium Yellow

SW ⊠ 4-4	SW ⊠ 4-4	SW ⊠ 4-4	SW ⊠ 4-4	SW ⊟ 3-6	SW ftr ⊟ 4-12	SW S 1-0	SW S 1-0	SW 1	SW RR·8 1-60	SW RR·8 1-60
SW ⊠ 2-4	SW ⊠ 2-4	SW ⊠ 2-4	SW ⊠ 1-4	SW ⊠ 1-4	SW ⊠ 1-4	SW ⊠ 1-4	SW ⊟ 2-6	SW ⊟ 1-6	SW ftr ⊟ 2-12	SW ftr ⊟ 1-12

San Estados

Pale Olive

SE ⊠ 4-4	SE ⊠ 4-4	SE ⊠ 4-4	SE ⊠ 4-4	SE ⊠ 4-4	SE ⊟ 3-6	SE ⊟ 3-6	SE ftr ⊟ 4-12	SE tac ⊟ 4-8	SE S 1-0	SE S 1-0	SE RR·8 1-60
SE 1	SE 1		SE ⊠ 2-4	SE ⊠ 2-4	SE ⊠ 2-4	SE ⊠ 2-4	SE ⊠ 2-4	SE ⊠ 1-4	SE ⊠ 1-4	SE ⊠ 1-4	SE ⊠ 1-4
SE ⊟ 2-6	SE ⊟ 2-6	SE ⊟ 1-6	SE ⊟ 1-6	SE ftr ⊟ 2-12	SE ftr ⊟ 1-12	SE ftr ⊟ 1-12	SE tac ⊟ 2-8	SE tac ⊟ 1-8	SE tac ⊟ 1-8		

New Endor

Pale Sepia

NE ⊠ 4-4	NE ⊠ 4-4	NE ⊠ 4-4	NE ⊟ 2-6	NE ⊟ 2-6	NE ftr ⊟ 4-12	NE S 1-0	NE RR·8 1-60	NE 1			
NE ⊠ 2-4	NE ⊠ 2-4	NE ⊠ 2-4	NE ⊠ 1-4	NE ⊠ 1-4	NE ⊠ 1-4	NE ⊠ 1-6	NE ⊟ 1-6	NE ftr ⊟ 2-12	NE ftr ⊟ 1-12		

Calaedia

Lt. Grey #2

C ⊠ 2-4	C ⊠ 2-4	C ⊠ 2-4	C ⊠ 2-4	C ⊠ 2-4	C ⊠ 2-4	C ⊟ 2-6	C RR·8 1-60	C S 1-0			
C ⊠ 1-4	C ⊠ 1-4	C ⊠ 1-4	C ⊠ 1-4	C ⊠ 1-4	C ⊠ 1-4	C ⊟ 1-6					

NOTE– Substitute Units have underlined combat factor. In Standard Game, M.C. units may not move until their border is violated.

Production / Initial Orders of Battle

TOTAL FACTORS PER UNIT TYPE

CLASS	COST-in Prodct Points per factor	UNIT TYPE	BLITZ ARMY #1	COMBINED ARMS ARMIES #2 Strategic	#3 Mixed	#4 Tactical	INFANTRY ARMIES #5 Improved	#6 Standard	#7 Horde
1	6	SAC	0	16	16	0	0 •	0 •	0 •
	5	MDM	12	12	6	12	0	0 •	0 •
	3	TAC	8	0	4	8	8	2	0 •
	4	FTR	12	16	4	16	12	2	0 •
	4	MAC	2	4	2	2	0	0	0 •
2	3	Rail Transport	6	6	4	8	4	2	2 •
3	6	TF	0	6	2	2	1 •	0 •	0 •
	6	MST	3	4	3	2	2 •	1 •	1 •
	6	LST	0	1	0	0	0 •	0 •	0 •
4	1/2	Inf. (2 BTA)	0	0	0	0	80	100	120
	1	Inf. (4 BTA)	80	24	32	24	0	0	0
	2	Armor	60	12	18	24	22	10	0
	3	Artillery	16	16	8	0	0	0	0 •
	2	Marines	0	18	6	12	0	0	0
	5	Rangers	0	4	0	0	0	0 •	0 •
	3	Airborne	8	12	4	8	0	0	0 •
5	2	Flak	12	16	12	14	0	0	0
6	2	Airbase	5	8	5	6	3	2	0 •
	# of Production Centers		2	3	3	3	6	5	5
	Production Pts. per center		12	10	10	10	5	4	2

DOT (•) indicates types not producible within given OB

OB COMPARISON

	BLITZ ARMY #1	COMBINED ARMS ARMIES #2 Strategic	#3 Mixed	#4 Tactical	INFANTRY ARMIES #5 Improved	#6 Standard	#7 Horde	TOTAL
CLASS FOUR MOBILITY FACTOR (average)	4.7	4.3	4.5	4.7	2.9	2.6	2.0	
CLASS ONE RANGE FACTOR (average)	10.3	14.4	15.2	11.1	10.4	10.0	00.0	
CLASS FOUR RAW STRENGTH	164	86	68	68	102	110	120	
CLASS ONE RAW STRENGTH excluding MAC	32	44	30	36	20	4	0	
TOTAL	196	130	98	104	122	114	120	

FET Fleet Engagement

Die	1–3	1–2	1–1	2–1	3–1	4–1
1	Ex	DW	DW	DD	DD	DD
2	AW	Ex	Ex	DW	DD	DD
3	AW	•	Ex	Ex	DW	DD
4	AD	AW	•	•	DW	DW
5	AD	AW	AW	AW	Ex	DW
6	AD	AD	AD	AW	Ex	Ex

If possible, Withdrawals take place towards Home country sea zone

TF units fight Fleet Engagements using the Fleet Engagement Table. See also TF Mission Capability Chart. The following is an explanation of the FET:

AW = Attacker Withdraws: All attack units in that stack withdraw

AD = Attacker Destroyed: One TF unit destroyed, remainder (if any) in that stack withdraws

Ex = Exchange: Each side loses one TF

• = Nothing Happens.

DW = Defender Withdraws: Defending TF's plus any MST/LST under their escort withdraws

DD = Defender Destroyed: One TF unit destroyed. Remainder plus any MST/LST under their escort withdraws.

Units withdraw to same zone port or adjacent "at sea" box. If, after withdrawals resulting from combat, one side has gained Naval Superiority in that sea zone, withdraw any MST/LST units of the inferior force IMMEDIATELY. Units forced to withdraw do not count towards Naval Superiority in the sea zone to which they withdraw for that turn-half. They may not withdraw to a zone of enemy superiority or S-3 Weather. If no alternative is available they remain where they are and lose one more unit. Aborted landings must return to port as soon as possible and dock and disembark land units.

GCRT Ground Combat Results

Standard Attack

Die	1–2	1–1	2–1	3–1	4–1	5–1	6–1	10–1
1	R 1	R 2	R 2	R 2	R 3	R 4	R 4	OVERRUN
2	R 1	R 1	R 1	R 2	R 3	R 4	R 4	
3	AD 1	R 1	R 1	R 2	R 3	R 3	R 3	
4	AD 2	AD 2	R 1	R 2	R 2	R 3	R 3	
5	AD 2	AD 2	AD 2	DD 1	DD 2	DD 3	R 3	
6	AD 2	AD 2	AD 3	Ex 3	Ex 3	Ex 2	Ex 1	

BLITZ Attack

Must involve at least 1 Armored Unit.
Armor takes losses first

Die	1–2	1–1	2–1	3–1	4–1	5–1	6–1
1	R 2	R 2	R 2	R 3	R 4	R 5	R 5
2	R 1	R 2	R 2	R 3	R 4	R 5	R 5
3	AD 2	AD 1	R 2	R 3	R 4	R 4	R 5
4	AD 3	AD 1	R 1	R 2	DD 4	R 4	R 5
5	AD 3	AD 2	AD 3	DD 2	DD 5	DD 7	R 5
6	AD 3	AD 2	AD 4	Ex 4	Ex 4	Ex 3	Ex 1

SBT Strategic Bombardment

	Bombardment Factors				
Die	3	6	12	18	24
1	H	D	D	D	D
2	H	H	D	D	D
3	•	H	H	H	D
4	•	•	H	H	H
5	•	•	•	H	H
6	•	•	•	•	H

RIT Rail Interdiction

	Bombardment Factors				
Die	1	2	3	4	5
1	x	x	x	x	x
2	•	x	x	x	x
3	•	•	x	x	x
4	•	•	•	x	x
5	•	•	•	•	x
6	•	•	•	•	•

FCRT Fighter Combat Results

The interceptor is the ATTACKER (a)

	1-4	1-3	1-2	1-1	2-1	3-1	4-1
Die	a/d	a/d	a/d	a/d	a/d	a/d	a/d
1	3/1	1/1	•/1	1/2	1/3	1/3	1/4
2	2/1	1/1	1/1	1/1	1/2	1/3	1/4
3	1/•	1/1	1/1	•/1	•/2	•/3	•/3
4	1/•	1/1	1/1	•/1	•/1	•/2	•/3
5	1/•	1/•	1/1	•/1	•/1	•/2	•/3
6	1/•	1/•	1/•	1/•	1/1	•/1	•/3

FACTORS LOST

FDT Flak-Defense

	Flak Factors									
Die	1	2	3	4	5	6	7	9	12	18
1	•	1	1	2	3	3	4	5	5	6
2	•	1	2	3	4	4	5	5	6	7
3	1	1	2	4	5	5	6	6	6	8
4	1	1	3	4	5	5	6	7	7	8
5	1	2	3	4	5	6	7	7	8	8
6	1	2	3	4	5	6	7	8	8	8

Air Mission Targetting

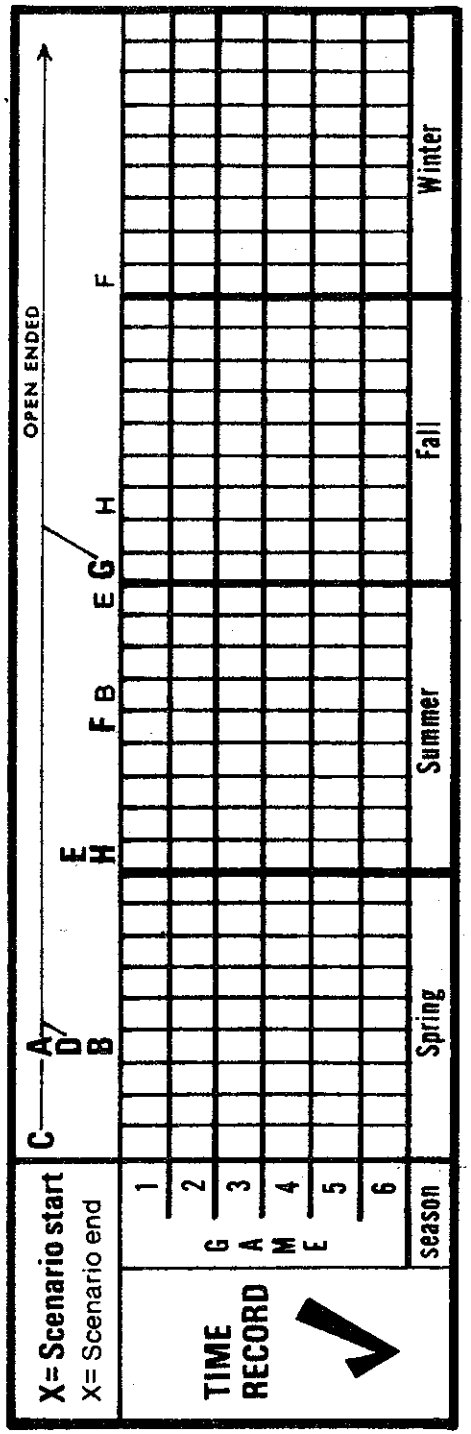
Air units may perform only one mission per complete turn. Missions against a target square containing several targets affect only the target system being attacked. Ground units subjected to ANY bombing may also be subjected to ground attack

MISSION	ACFT	MODE OF EFFECT	RESULTS
1 Strategic Bombing of Class 4 Units	SAC MDM	**Refer to SBT (Strategic Bombing Table)**	Result "D"=All units destroyed. Result "H"=Half of total factors destroyed. When only one factor is targetted, a SBT result of "H" has no effect. When target is in a city square, add 1 to die roll number. (A die roll of 6 in that case would have no effect.
2 Strategic Bombing of Railroad Units	SAC MDM	SBT	Result "D"=All RR units destroyed plus half of any factors being transported Result "H"=RR units immobilized for one turn (flip counters over). Unlike class 4 units, RR units are NOT less vulnerable when in cities.
3 Strategic Bombing of Production Centers	SAC MDM	SBT	Result "D"=No production for that center in the next production cycle. (Flip counter over.) Result "H"=Production rate halved for the next production cycle (turn counter sideways to show this).
4 Strategic Bombing of Supply Centers	SAC MDM	SBT	Result "D"=Center destroyed. Result "H"=No supply for one turn.
5 Strategic Bombing of Ships in Port	SAC MDM Fleet TAC	SBT	Result "D"=One sea unit destroyed for every three bomber factors attacking. Also, no ships may leave or enter that port square for one turn (place any upsidedown counter there to show this). Result "H"=One sea unit destroyed for every six factors of attacking bombers. The attacker chooses the ships lost. Range to target is counted to the CITY SQUARE adjacent to the port square.
6 Strategic Bombing of Port Facility	SAC MDM	SBT	Result "D"=No docking or sailing from that port square for one complete turn as well as no use of port for supply purposes for one turn (use a rail cut counter to show this). Result "H"=NO EFFECT
7 Strategic Bombing of Ships "At Sea"	Fleet TAC MDM	SBT MDM based at Naval Air Base adjacent to same sea zone as ships	Result "D"=One sea unit sunk for every six bomber factors attacking. Result "H"=One sea unit turned back to port for every three factors of attacking bombers. Defender decides which units turn back and which are destroyed. Ground units on MST/LST are lost as well as Rangers or aircraft on sunk TF's. Units turned back do so IMMEDIATLY, to the nearest friendly port.
8 Strategic Bombing of Ships on Assault Squares	Fleet TAC MDM	SBT	Same as SHIPS AT SEA. Land based aircraft count range to assault squares.
9 Strategic Bombing of Airbases	SAC MDM	SBT	Result "D"=Airbase destroyed and all planes on the ground destroyed. Result "H"=One half of all planes on ground destroyed and no takeoffs or landings for one complete turn (flip airbase counter over).

CONTINUED ON REVERSE SIDE

AIR MISSIONS continued

MISSION	ACFT	MODE OF EFFECT	RESULTS
10 Strafe or Bomb Aircraft on the Ground	MDM FTR Fleet TAC	One factor on the ground destroyed for every attacking factor	Defender chooses aircraft lost. Attacking fighters may assume escort role if challenged, in which case they do not take part in strafing mission.
11 Railine Interdiction	SAC MDM Fleet TAC	RIT (Rail Interdiction Table)	Result "X"=Rail line cut. Place "cut counter". RR units traverse cut at cost of 10 movement factors. Result "●"=NO EFFECT Place 2 cut counters for each bridge rail line cut. Remove one a turn for two turns. For 2 it takes 20 movement factors to cross.
12 Railroad Unit Interdiction	FTR	RIT	Result "X"=One RR unit immobilized for one turn for each 2 factors of attacking fighters (flip RR counter over).
13 Area Interdiction of Ground Units	FTR	At least 2 factors of FTR's fly to specific square and remain for one complete turn. FTR's have zone of control into adjacent squares. NOTE THAT THIS IS THE ONLY MISSION WHICH STAYS ALOFT FOR A COMPLETE TURN.	ENEMY ground units move through affected squares at one half their normal movement rate OR at their normal movement rate suffering 1 combat factor loss per square for every 2 factors of interdicting fighters. Enemy units may not retreat through zones of interdiction, if forced to do so they lose one half their combat factors for each interdicted square moved into. 1-1 interception nullifies interdiction for that half of the turn. If intercepted fighter to fighter combat results. If after fighter to fighter combat only 1 factor of interdicting fighters remain they only affect the square they occupy in the ensuing opponents turn. Ground units would still be subject to one factor losses per square per unit.
14 Counter-Interdiction (hunt mission)	FTR	FTR to FTR CRT (The counter Interdictors are the attackers)	COUNTER INTERDICTORS must have at least 1-1 odds. Regardless of fighter to fighter results, interdiction is nullified for that half-turn. Counter-Interdictors are also subject to interception.
15 ESCORT All Missions	FTR	FTR to FTR CRT if intercepted (The interceptors are the attackers)	Escort may fly with any air mission and may rendezvous at any point along the path of the mission within and to the limits of their range.
16 Intercept All Enemy Missions	FTR	FTR to FTR CRT if mission is escorted otherwise 1 factor of bombers or MAC is lost for every FTR factor intercepting.	Interceptors must be assigned to that role at the beginning of the players turn and may not participate in any other mission for that complete turn of assignment. Interceptors have a TOTAL range of 12 squares (radius of action of 6 squares if landing at airbase of takeoff). Interceptors must fight escort at at least 1-1 odds. Interceptor factors above that may strip off and attack bombers or MAC. Interceptors are the ONLY air units which INITIATE their flights during the enemy turn-half. They intercept ONE enemy mission per turn.
17 Ground Support	MDM TAC	Add air combat factors to ground attack factors.	Air support can only suffer losses as a result of interception or enemy flak concentrations They may not absorb losses indicated on ground combat CRT.
18 Combat Airlift	MAC	Emplane Infantry, Ranger, Marine or Airborne units.	MAC unit flys to and deplanes units at friendly airbase, (3 ground factors per MAC unit).
19 Combat Airdrop	MAC	Emplane airborne infantry, fly to drop zone square	Each MAC unit can carry 2 factors of airborne troops for airborne mission. Airborne units must start turn in airbase with MAC unit and may not move after dropping (rotate unit to show this).
20 Supply Airdrop	MAC	Fly from supplied airbase to unsupplied unit	Each MAC unit airdrops enough supplies for 2 factors of ground units. Unit to be supplied may be in enemy zones of control.
21 Supply Airlift	MAC	Fly MAC unit from supplied airbase to airbase in unsupplied area	Up to 3 factors may be supplied by one MAC unit. Units needing supplies trace supply routes to airbase as if it were a home city.
22 Ferry Flights	ALL	Transfer air units from one airbase to another at up to double their range.	Subject to interception as are all other air missions (with the exception of the interception mission itself).



Isolation Effects

GENERAL NOTES ON SUPPLY
- SUPPLY LINES MUST BE ENTIRELY FREE OF ENEMY ZOC
- RR "CUTS" DO NOT AFFECT SUPPLY LINES
- ANY NUMBER OF FACTORS MAY BE SUPPLIED BY A GIVEN HOME COUNTRY CITY

UNIT	MOVEMENT	COMBAT FACTOR
AIR UNITS	May ONLY fly ferry missions OUT of unsupplied airbase in first turn of isolation.	Fighters halved while ferrying out of isolation. NO ATTACKING
AIRBASE	●	NORMAL
RAILROAD	HALVED	NORMAL
SEA UNITS	NORMAL	NORMAL
ARMOR	HALVED	HALVED
INFANTRY MARINES ARTILLERY AIRBORNE FLAK	HALVED NOTE: Airborne units do not suffer isolation in the turn they are dropped.	Units breaking out attack at half factor. If an over run is built up from the outside of an encirclement the units inside may be considered resupplied in that turn.
RANGERS	RANGERS never need supplies and may move into unsupplied areas.	NORMAL

Artillery

	ARTILLERY MISSIONS & MODES	CONDITIONS
ATTACKING	**Offensive Support** Add artillery factors to ground attack if defender is within the Zone of Effect.	Use regular CRT's. Artillery is the last type to suffer losses unless the enemy has defensive artillery within the zone of attacking artillery units.
ATTACKING	**Barrage** Use artillery factors as if they were MDM bombers. Refer to SBT and Air Targetting Chart.	Artillery may not conduct Barrage and Offensive Support with the same units in the same turn. Units suffering barrage may also undergo ground attack in the same turn. All targets within the Zone of Effect may be Barraged by artillery. Artillery in the same square may split and be applied to different targets. All barrages concentrated on one target must be added together as one barrage.
DEFENDING	**Defensive Support** Add artillery to ground defense if attacker is within Zone of Effect (even if attack develops from more than one square).	Use regular CRT. If not forced to retreat, artillery is always last unit to suffer losses. Artillery is only forced to retreat when stacked with other units forced to retreat.

MST/LST Actions Permitted

Sea Zone Status	LAND OR WITHDRAW TROOPS	SAIL FROM SAME ZONE PORT	SAIL INTO PORT FROM ADJCNT ZONE	REMAIN IN ZONE 'AT SEA'- ESCORTED	REMAIN IN ZONE 'AT SEA'- UNESCORTED	SAIL TO ADJACENT ZONE	SAIL INTO SAME ZONE PORT
ENEMY SUPERIORITY	NO				NO	YES	
PARITY	YES						
FRIENDLY SUPERIORITY	YES						

NAVAL SUPERIORITY: EXISTS IN A SEA ZONE WHEN FRIENDLY TF's AT SEA OUTNUMBER ENEMY TF's AT SEA AND IN PORT BY A RATIO OF 3 TO 1 (OR BETTER) WITHIN THAT ZONE.

PARITY: EXISTS WHEN NEITHER NAVY HAS SUPERIORITY.

Coastal City Square	Matching Port Facility Square	Coastal City Square	Matching Port Facility Square
CC-15	CC-14	X-27	X-28
U-11	U-10	BB-31	CC-31
G-4	F-3	AA-42	Z-42
D-7	C-6	JJ-46	JJ-47
D-8	C-7	NN-48	MM-48
M-14	M-15	NN-49	MM-49
P-15	O-15	AAA-54	ZZ-54
P-16	O-15	BBB-55	AAA-55
L-19	L-19 •	JJJ-56	JJJ-56 •
C-20	B-20	RRR-55	SSS-56
D-31	D-31 •	RRR-54	SSS-55
H-32	H-33	RRR-40	SSS-41
I-33	H-33	SSS-40	TTT-41
V-33	W-34	• Island Port	

TASK FORCE Mission Capability

DEFENDING TF's (EXCEPT ESCORTS) MAY REFUSE COMBAT BY VOLUNTARILY WITHDRAWING TO PORT OR ADJACENT ZONES; ATTACKING TF's MAY THEN BE RE-EMPLOYED IN THE SAME ZONE.

MISSION	OBJECTIVE	PLACEMENT	RESOLUTION	NOTES and CONDITIONS
Fleet Engagement	Destroy enemy offensive units.	At Sea Box or assault square	FLEET ENGAGEMENT TABLE (FET)	May only be executed if all friendly shipping in zone is either escorted or in port (if no friendly naval superiority exists.) May conduct air missions in conjunction with surface combat. Units involved in offensive fleet engagement may not conduct fire missions
Raid	Destroy enemy shipping.	At Sea Box or assault square	One enemy MST or LST lost for each attacking TF.	Same as above plus: At least 1-1 fleet engagement must be fought with any escort. Attacking TF's in excess of 1-1 then may raid shipping. PROHIBITED IN ZONES OF ENEMY SUPERIORITY
Fire mission	Bombard enemy units/ installations on coastal squares and enemy ships in port.	Assault square or adjacent to port square	SBT Each TF=3 bomber factors.	Gun Range=1 square. May be employed against any target open to SAC type aircraft. Bombardment results must be rolled separatly from any air attack on same target. Fire mission precludes using same TF in raid or fleet engagement in that turn. PROHIBITED IN ZONES OF ENEMY SUPERIORITY
Escort	Protect friendly ships.	with MST/LST	●	Escort "at sea" must be stacked with shipping. Escorts with invading units may be stacked one square away. Escorts may not engage enemy TF's in fleet combat or raids.
RNGR Assault	Land Ranger Force	Assault Square	GCRT	May conduct Air and Fire missions in conjunction with landing. May not conduct Escort, Raid or Fleet Engagement. LST not needed. Naval Parity not required.
Inshore Air mission	Attack enemy targets within air range of assault squares	Assault square	NORMAL AIRCRAFT RULES	Count range from assault square. Mission may be flown in conjunction with any of above. Inshore fighter intercept may only be flown when TF has been left on assault square during opponents turn.
Sea Zone Air mission	Enemy shipping or targets on coast squares.	At Sea Box or assault square	NORMAL AIRCRAFT RULES	Fleet TAC may be used against ships at sea or in port as if it were MDM bombers. Mission may be flown in conjunction with any of the above. Carrier TF must be in the same Sea Zone as target.

Weather Indication

	1	2	3
VISIBILITY	NORMAL	AIRCRAFT COMBAT FACTOR and SUPPLY AIRDROP: HALVED	NO AIR OPERATIONS
GROUND	NORMAL	−5 RR MF, −1 class 4&5 MF	Class 2,4 and 5: MF HALVED ARMOR Cmbt Fac.: HALVED
SEA	NORMAL	AIR to SHIP and TF Bombdmnt Fac: HALVED DELAY LANDINGS and ASSAULTS	WITHDRAW to PORT or CALMER ZONE; DO NOT LEAVE PORT; NO COMBAT; ABORT LANDINGS

Weather Indicators

SPRING #1 V 1 G 1 S 1	SPRING #2 V 1 G 1 S 1	SPRING #3 V 1 G 1 S 1	SPRING #4 V 1 G 2 S 2	SPRING #5 V 1 G 1 S 2	SPRING #6 V 2 G 3 S 2
SUMMER #1 V 1 G 1 S 1	SUMMER #2 V 1 G 1 S 1	SUMMER #3 V 1 G 2 S 1	SUMMER #4 V 2 G 1 S 1	SUMMER #5 V 1 G 2 S 2	SUMMER #6 V 1 G 1 S 1
FALL #1 V 1 G 1 S 1	FALL #2 V 2 G 1 S 2	FALL #3 V 1 G 2 S 3	FALL #4 V 3 G 3 S 2	FALL #5 V 2 G 2 S 1	FALL #6 V 2 G 1 S 2
WINTER #1 V 1 G 1 S 3	WINTER #2 V 2 G 2 S 1	WINTER #3 V 1 G 2 S 2	WINTER #4 V 3 G 3 S 3	WINTER #5 V 2 G 2 S 2	WINTER #6 V 3 G 3 S 2

Phase-Class Sequencing

PHASE	CLASS	ATTACKER SEQUENCING	DEFENSE NOTES
I MOVEMENT	all	• Break up larger units into smaller ones as desired.	
	1	**A** Land all previous turn area interdiction missions **B** Assign Fighter units to INTERCEPT missions **C** Allocate (fly to target) all area interdiction missions **D** Allocate SAC and MDM bombing missions plus escort **E** Allocate TAC plus escort and independant fighter missions **F** Allocate all MAC missions: Emplane class 4 units, fly and land or conduct paradrops. Fly air supply missions. **G** Allocate and land all FERRY missions (double range)	Check weather. Fire Flak. Fly interceptors. Extract losses.
	2	**A** Move RR units ENTRAINING and DETRAINING ground units as as desired. Detrained units may not re-entrain in the same turn. Rotate detrained units 90 degrees to indicate that they lose 2 BTA when they move **B** Remove all cut-markers placed by same player in the previous turn (except when 2 are at bridge, leave 1). Bridge cuts are removed at rate of 1 per turn.	Check weather Area interdiction effect
	3	**A** Sail TF, MST, LST units from SEA ZONE to adjacent sea zones or from assault squares to same sea zone or adjacent sea zone. **B** Sail MST units to friendly ports, disembark land units, rotate land units 90 degrees in port city to indicate loss of 2 BTA. **C** Sail TF units from ports to same zone "at sea" box. **D** Allocate TF missions (in same sea zone) **E** Allocate MST/LST invasion missions (in same sea zone) **F** Embark land units into MST units in ports. Sail units to zone "at sea" box.	Check weather Note zones of naval superiority
	4&5	**A** Land and move all unopposed invasion forces at a cost of 2 BTA (including Rangers). **B** Move all detrained units at a cost of 2 BTA. **C** Move all debarked units at a cost of 2 BTA. **D** Move all deplaned units at a cost of 1 BTA. **E** Move all remaining supplied ground units. **F** Move all unsupplied ground units. Embark units conducting beach withdrawal into LST's.	Check weather Check area interdection effect
All stacking conditions must be met by the end of this Phase.	all	• Combine smaller units into larger single units. (May not be in enemy zones of control).	
II COMBAT	1	**A** Execute air attack missions against air and land targets-extract losses-place cut markers. **B** Execute air missions against Naval targets-extract losses.	Check weather
	3	**A** Execute fleet engagements-extract losses **B** Execute raid missions-extract losses **C** Execute fire missions-extract land losses **D** Perform mandatory withdrawals	Perform mandatory withdrawals
	4	**A** Fire all artillery barrages-extract losses **B** Conduct beach assaults and Ranger assaults **C** Conduct ground combat (including artillery and ground air support missions) Extract losses, and advance survivors into vacated squares as desired.	perform retreats Defensive Artillery Support
III POST-COMBAT	1	**A** Land all air missions	Check weather
	4	SPECIAL Move second impulse (if impulse system being used)	
IV PRODUCTION every other full turn	6	**A** Produce guerillas **B** Produce and place class 1 through 5 units. **C** Produce new airbases. **D** Destroy unwanted airbases.	

Class Stacking & Unit Characteristics

LEGEND- = PROHIBITED or INAPPLICABLE D = DOUBLED N = NO CHANGE IN FACTOR

CLASS	MAXIMUM UNITS PER SQR. PER CLASS	PROHIBITED SQRS.	UNIT TYPE	TRANSPORTABLE BY-		INVASION CAPABILITY		MVMNT FACTOR COST PER SQR ON MOUNTAINS and FORESTS	EFFECT UPON ATTK FACTOR WHEN ATTACKING FROM-		EFFECT UPON DEFENSE FACTOR WHEN DEFENDING ON			NOTES
				RR & MST	MAC	FIRST ASSAULT	SAME-SQUARE 'FOLLOW-UP'		ASSAULT SQR	FRST/MNTN	sqrs behind RIVER LINE	FOREST	CITY/MNTN	
1 AIR	In Airbase: 3 units or 12 factors-whichever is greater. No limit when flying	ALL except AB when not flying. NONE when flying	SAC											3 FACTORS OF TAC OR FTR MAY BE BASED ON EACH TF UNIT
			MDM											
			TAC											
			FTR											
			MAC											
2 RR	3 IN CITY 1 ON RAILINE	ALL EXCEPT CITY & RAILINE	Rail Transport								N	N	N	
3 NAVAL	3 on port ¾ assault square. No limit 'At Sea'	LAND except Inland Ports	TF											UNITS IN PORT DO NOT CONTRIBUTE TO GROUND DEFENSE OF CITY
			MST											
			LST											
4 GROUND	3	SEA	Inf. (2 BTA)	yes	yes			2		N	D	N	D	AIRBORNE MAY NOT DROP INTO FORESTS or MOVE IN DROP-TURN. MAY DROP INTO ENEMY ZOC & FIGHT (considered as SUPPLIED in turn of drop) • UNITS DEFENDING BEHIND RIVERS OR ON MOUNTAINS DO NOT DOUBLE WHEN ATTACKED EXCLUSIVELY BY RANGERS • ADD 1 TO SBT DIE-ROLL IF CLASS 4 TARGET IS IN CITY, MOUNTAIN or FOREST • ADD 3 TO SBT DIE-ROLL REGARDLESS OF TERRAIN IF SOLE TARGET IS GUERILLA UNIT(S) OF LESS THAN 4 FACTOR SIZE
			Inf. (4 BTA)	yes	yes	yes	yes	2	N					
			Airborne											
			Marines	yes	yes	yes	yes	2	D					
			Rangers	yes	yes	yes	yes	1						
			Armor	yes			yes	3		HALVED				
			Artillery	yes				3		N	N	N	N	
			Guerilla	yes	yes			1		N	D	D	D	
5 AA	1	SEA	Flak	yes				2		N				
6 INSTALL-ATION	1	CITY, SEA and MOUNTAIN	Airbase								N	N		DINGR COUNTER SUPPY UNIT IS CLASS 6
		ALL EXCEPT CITY	Production								N		N	Supply

Production / Initial Orders of Battle

TOTAL FACTORS PER UNIT TYPE

CLASS	COST-in Prodct Points per factor	UNIT TYPE	BLITZ ARMY #1	COMBINED ARMS ARMIES #2 Strategic	#3 Mixed	#4 Tactical	INFANTRY ARMIES #5 Improved	#6 Standard	#7 Horde
1	6	SAC	0	16	16	0	0 •	0 •	0 •
	5	MDM	12	12	6	12	0	0 •	0 •
	3	TAC	8	0	4	8	8	2	0 •
	4	FTR	12	16	4	16	12	2	0 •
	4	MAC	2	4	2	2	0	0	0 •
2	3	Rail Transport	6	6	4	8	4	2	2 •
3	6	TF	0	6	2	2	1 •	0 •	0 •
	6	MST	3	4	3	2	2 •	1 •	1 •
	6	LST	0	1	0	0	0 •	0 •	0 •
4	1/2	Inf. (2 BTA)	0	0	0	0	80	100	120
	1	Inf. (4 BTA)	80	24	32	24	0	0	0
	2	Armor	60	12	18	24	22	10	0
	3	Artillery	16	16	8	0	0	0	0 •
	2	Marines	0	18	6	12	0	0	0
	5	Rangers	0	4	0	0	0	0 •	0 •
	3	Airborne	8	12	4	8	0	0	0 •
5	2	Flak	12	16	12	14	0	0	0
6	2	Airbase	5	8	5	6	3	2	0 •
	# of Production Centers		2	3	3	3	6	5	5
	Production Pts. per center		12	10	10	10	5	4	2

DOT (•) indicates types not producible within given OB

OB COMPARISON

	TOTAL	BLITZ ARMY #1	COMBINED ARMS ARMIES #2 Strategic	#3 Mixed	#4 Tactical	INFANTRY ARMIES #5 Improved	#6 Standard	#7 Horde
CLASS ONE RAW STRENGTH excluding MAC	32	32	44	30	36	20	4	0
CLASS FOUR RAW STRENGTH	164	164	86	68	68	102	110	120
CLASS ONE RANGE FACTOR (average)	10.3	10.3	14.4	15.2	11.1	10.4	10.0	00.0
CLASS FOUR MOBILITY FACTOR (average)		4.7	4.3	4.5	4.7	2.9	2.6	2.0
TOTAL	196	196	130	98	104	122	114	120

FET Fleet Engagement

Die	1–3	1–2	1–1	2–1	3–1	4–1
1	Ex	DW	DW	DD	DD	DD
2	AW	Ex	Ex	DW	DD	DD
3	AW	•	Ex	Ex	DW	DD
4	AD	AW	•	•	DW	DW
5	AD	AW	AW	AW	Ex	DW
6	AD	AD	AD	AW	Ex	Ex

If possible, Withdrawals take place towards Home country sea zone

TF units fight Fleet Engagements using the Fleet Engagement Table. See also TF Mission Capability Chart. The following is an explanation of the FET:

AW = Attacker Withdraws: All attack units in that stack withdraw

AD = Attacker Destroyed: One TF unit destroyed, remainder (if any) in that stack withdraws

Ex = Exchange: Each side loses one TF

• = Nothing Happens.

DW = Defender Withdraws: Defending TF's plus any MST/LST under their escort withdraws

DD = Defender Destroyed: One TF unit destroyed. Remainder plus any MST/LST under their escort withdraws.

Units withdraw to same zone port or adjacent "at sea" box. If, after withdrawals resulting from combat, one side has gained Naval Superiority in that sea zone, withdraw any MST/LST units of the inferior force IMMEDIATELY. Units forced to withdraw do not count towards Naval Superiority in the sea zone to which they withdraw for that turn-half. They may not withdraw to a zone of enemy superiority or S-3 Weather. If no alternative is available they remain where they are and lose one more unit. Aborted landings must return to port as soon as possible and dock and disembark land units.

GCRT Ground Combat Results

Standard Attack

Die	1–2	1–1	2–1	3–1	4–1	5–1	6–1	10–1
1	R 1	R 2	R 2	R 2	R 3	R 4	R 4	OVERRUN
2	R 1	R 1	R 1	R 2	R 3	R 4	R 4	
3	AD 1	R 1	R 1	R 2	R 3	R 3	R 3	
4	AD 2	AD 2	R 1	R 2	R 2	R 3	R 3	
5	AD 2	AD 2	AD 2	DD 1	DD 2	DD 3	R 3	
6	AD 2	AD 2	AD 3	Ex 3	Ex 3	Ex 2	Ex 1	

BLITZ Attack

Must involve at least 1 Armored Unit.
Armor takes losses first

Die	1–2	1–1	2–1	3–1	4–1	5–1	6–1
1	R 2	R 2	R 2	R 3	R 4	R 5	R 5
2	R 1	R 2	R 2	R 3	R 4	R 5	R 5
3	AD 2	AD 1	R 2	R 3	R 4	R 4	R 5
4	AD 3	AD 1	R 1	R 2	DD 4	R 4	R 5
5	AD 3	AD 2	AD 3	DD 2	DD 5	DD 7	R 5
6	AD 3	AD 2	AD 4	Ex 4	Ex 4	Ex 3	Ex 1

SBT Strategic Bombardment

	Bombardment Factors				
Die	3	6	12	18	24
1	H	D	D	D	D
2	H	H	D	D	D
3	•	H	H	H	D
4	•	•	H	H	H
5	•	•	•	H	H
6	•	•	•	•	H

RIT Rail Interdiction

	Bombardment Factors				
Die	1	2	3	4	5
1	x	x	x	x	x
2	•	x	x	x	x
3	•	•	x	x	x
4	•	•	•	x	x
5	•	•	•	•	x
6	•	•	•	•	•

FCRT Fighter Combat Results

The interceptor is the ATTACKER (a)

	1-4	1-3	1-2	1-1	2-1	3-1	4-1
Die	a/d	a/d	a/d	a/d	a/d	a/d	a/d
1	3/1	1/1	•/1	1/2	1/3	1/3	1/4
2	2/1	1/1	1/1	1/1	1/2	1/3	1/4
3	1/•	1/1	1/1	•/1	•/2	•/3	•/3
4	1/•	1/1	1/1	•/1	•/1	•/2	•/3
5	1/•	1/•	1/1	•/1	•/1	•/2	•/3
6	1/•	1/•	1/•	1/•	1/1	•/1	•/3

FACTORS LOST

FDT Flak-Defense

	Flak Factors									
Die	1	2	3	4	5	6	7	9	12	18
1	•	1	1	2	3	3	4	5	5	6
2	•	1	2	3	4	4	5	5	6	7
3	1	1	2	4	5	5	6	6	6	8
4	1	1	3	4	5	5	6	7	7	8
5	1	2	3	4	5	6	7	7	8	8
6	1	2	3	4	5	6	7	8	8	8