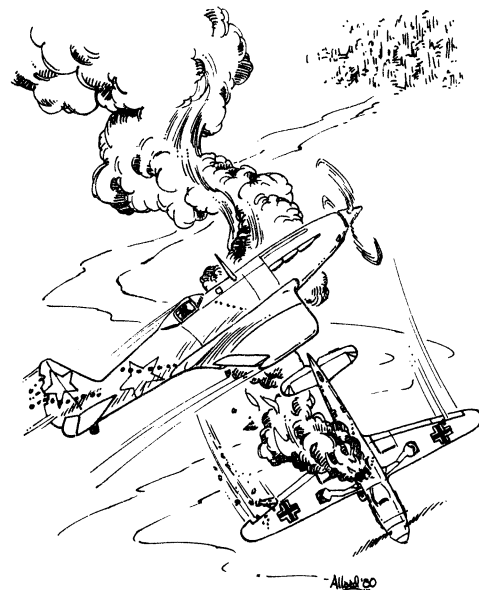


MIGS & MESSERSCHMITTS



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HISTORICAL BACKGROUND:

On 22 June 1941, Adolf Hitler, already master of Central Europe and still at war with the United Kingdom, unleashed his Blitzkrieg on the Soviet Union. Caught by surprise, the half-prepared and disorganized Red Army was driven back in disorder, losing thousands of tanks, guns, and planes and hundreds of thousands of men. The Blitzkrieg seemed unstoppable... and yet... four years later, the remnants of the invincible Wehrmacht were brushed aside as Soviet tanks thrust into Berlin. How had this massive reversal of the fortunes of War come about?

It is simplistic to say that the tide had turned at the Battle of Kursk or earlier at Stalingrad. For before the Battle of Stalingrad there was Hitler's decision to redirect his invasion efforts southward and before that, the terrible first winter that literally froze the German offensive in its tracks. But before all of these events and continuing in parallel with them, it was the resolute defense of the cities of Leningrad and Moscow that brought the Blitzkrieg to a halt, gave the Soviet forces a rallying point and by preventing immediate defeat, opened the path to ultimate victory.

The Siege of Leningrad was a monument to the determination and courage of the people of the city and of the soldiers and airmen who defended it. Pounded by bombs and shells for over two years, they steadfastly prevented the Germans from linking up with their Axis partners in Finland to the north and protected the important Lend-Lease supply lines from Murmansk and Archangel. Often armed with equipment that was obsolete by German standards, their victory was a triumph of will over seemingly impossible material disadvantages.

These material disadvantages were most obvious in the air. Although the VVS-RKKA (War Air Service of the Workers' and Peasants' Red Army) was the largest air force in the world in June 1941, few of its aircraft were comparable in performance to those of the Nazi Luftwaffe. The most common fighter in the VVS-RKKA, the LaGG3, was significantly slower than the contemporary Bf-109F, whether climbing, diving or in level flight and was also inferior in armament, maneuverability and ruggedness. Nearly all of the other fighters in service at the start of the Great Patriotic War were older than the LaGG3 and even more obsolete. But the aerial defenders of Leningrad threw themselves upon the

foe and inflicted heavy losses in spite of these handicaps, losses which the Nazi war machine could not long endure.

AIRCRAFT:

Russian Aircraft

The VVS-RKKA flew a wide variety of aircraft in defense of Leningrad:

The I-153 was one of the last fighter biplanes in active service and represented the culmination of twenty years in fighter development. While not as fast as the monoplanes that replaced it, the I-153 enjoyed extreme maneuverability and a high rate of climb. Its armament of four 7.62mm machine guns was inadequate and its construction was weak by comparison with other Soviet fighters.

Another aircraft nearing the end of its career, the I-16 had once been the mainstay of the VVS-RKKA fighter arm. In the late 30's it had led the way in fighter design—a low-wing monoplane with retractable landing gear and heavy caliber (12.7mm) machine guns. At the start of the war, it was still a potent machine, combining a high rate of climb, outstanding maneuverability and rugged construction, with a very heavy armament (especially in the model 24, which carried two 12.7mm machine guns and two 20mm cannon). Unfortunately, it lacked the speed needed to catch many of the German bombers or to elude their escorts and was soon relegated to ground attack duties.

The LaGG 3 was the most common fighter in the VVS-RKKA at the time of the Nazi Blitzkrieg. While a more modern aircraft than the I-16, it had the misfortune of being inferior to its most common opponent, the Bf-109F, in level, climbing or diving speed and maneuverability. Although it was sturdier and better-armed than the German fighters, with one 20mm cannon, one 12.7mm and two 7.62mm machine guns, this did little to help it evade them and reach the bombers.

The other two modern fighter types in service at the beginning of the war set the style for all subsequent Soviet fighter developments, sacrificing armament, by Western standards, in

favor of high speed and maneuverability, while retaining ruggedness. Of these, the *MiG 1* was the faster aircraft, with a speed of nearly 400 mph, while the *Yak 1* enjoyed a better rate of climb—possibly a greater advantage in an interceptor. The *Yak 1* also had the heavier armament, with a 20mm cannon and two 7.62mm machine guns.

The *MiG 1* was soon replaced by the *MiG 3* which had greater range and a slightly higher speed but was less maneuverable. The armament remained weak—one 12.7mm and two 7.62mm machine guns.

While the *MiG* family dead-ended in the unsuccessful *MiG 5* and *MiG 7*, the *LaGG 3* and *Yak 1* gave rise to a series of successive improvements.

The *Yak 1* was followed by the *Yak 7B*. While not as sturdy as the *LaGG 3* or as fast as the *MiG 3*, the *Yak 7B* retained the armament of the *Yak 1* (one 20mm cannon and two 7.62mm) and remained superior to contemporary German fighters in rate of climb and equal to them in speed.

The *Yak 9*, which followed the *Yak 7B*, showed no tactical improvements, but enjoyed a longer range and became the definitive version in spite of slightly inferior maneuverability.

The *La5* married the wings and rear fuselage of the *LaGG-3* with a more powerful radial engine and a somewhat reduced armament of two 20mm cannon. The result, while faster than its predecessor, was still inferior to the contemporary *Bf-109G* at typical bomber altitudes. At low altitudes, however, the *La5* enjoyed significant advantages in maneuverability over the German fighter.

This low-altitude superiority was even more pronounced in the case of the *La5FN*, introduced in 1943. Improved construction and a more powerful engine made it more nearly equal to the German fighters in a dogfight and better able to elude them as well. Armament remained at two 20mm cannon.

Developed in parallel from the original *Yak 1*, the *Yak 3* was intended to optimise the basic design for low-altitude tactical performance. While less sturdy than the *Yak 7B* and *Yak 9*, the *Yak 3* was the fastest climbing and most maneuverable of the series—and the best armed as well! Two 12.7mm machine guns and a 20mm cannon made it significantly deadlier than its predecessors and finally gave the VVS-RKKA a fighter that was

superior to its German opponents.

In addition to the indigenous Soviet fighters, the VVS-RKKA operated a number of aircraft of British and American manufacture received under Lend Lease. While the number of aircraft thus provided was small compared to total wartime production, it must be remembered that these were largely provided early in the war, when every aircraft counted most heavily and more advanced Soviet aircraft were not yet in production. The two most common fighter types provided under Lend Lease have been included here as representatives of their type.

The Hawker *Hurricane MkIIc* was the follow-on to the mainstay of the Battle of Britain. Decidedly slow and flimsy by Russian standards and suffering from an unimpressive rate of climb, the *Hurricane* was nonetheless highly maneuverable and very heavily armed, with four 20mm cannon.

The Bell *P 39K Aracobra* carried the equally impressive armament of four 7.62mm and two 12.7mm machine guns and a 37mm cannon. This, together with its sturdy construction and modest rate of climb, led to it being most often employed as a ground-attack or "tank-busting" aircraft. However, it was sufficiently fast and maneuverable to occasionally serve in its originally intended role as a bomber destroyer.

German Bombers

For a variety of reasons the *Ju88A* was the most important German Bomber throughout the Siege of Leningrad. Armed with seven 7.9mm machine guns, the *Ju88A* combined solid construction with high speed, making it a difficult aircraft to keep from reaching its target.

The early war companion to the *Ju88A*, the *HeIIIH* was slower and, while better armed (five 7.9mm and two 13mm machine guns, plus a 20mm cannon), it was not as sturdy. Heavy losses in combat eventually caused its transfer to transport duties.

The third member of the triumvirate of early-war German bombers, the *Do17Z* was still slower and easier to shoot down, and armed with only six 7.9mm machine guns. Although few remained in German service during the Siege of Leningrad, the *Do17Z* continued to be operated by the Finnish Airforce throughout the war.

Another bomber used by the Finns was the British Bristol *Blenheim*. Although inadequately armed with two 7.7mm machine guns and lightly built, the *Blenheim* was fast enough to outrun the most obsolete of the Soviet fighters.

The most notorious of German aircraft, the *Ju87B Stuka*, was poorly armed with three 7.9mm machine guns and was easily shot down. Furthermore, it was extremely slow.

As the siege continued, several other bombers were introduced by the Luftwaffe, although none of these rivaled the *Ju88A* in numbers.

In spite of the losses suffered by the *Ju87B*, its ability to deliver heavy bombs with pin-point accuracy led the Germans to field its successor in considerable numbers. Even though the *Ju87D* was faster, sturdier and somewhat better armed (four 7.9mm machine guns rather than three) it continued to be an easy kill for contemporary Soviet fighters.

The *Do217* was the successor to the *Do17Z*. Almost as sturdy as the *Ju88A*, it carried twice the bombload, was significantly faster and had a heavy defensive armament of one 15mm, two 13mm, and four 7.9mm machine guns.

The *Ju88S* was a derivative of the *Ju88A* which sacrificed bombload and defensive armament for speed. While it was extremely fast and could easily outrun most contemporary Soviet fighters, its single defensive machine gun was little protection against any fighter which managed to overtake it.

The *Ju188* was a more successful successor to the *Ju88A*. Carrying half-again the bombload at a somewhat higher speed, the *Ju188* was slightly less sturdy but better armed, with two 7.9mm and one 13mm machine guns and two 20mm cannon.

The *He177 Greif* was intended to be the primary German heavy bomber, but, plagued by official disinterest and excessive intricacy of design, it was years behind schedule. Carrying three times the bombload of the *Ju88A*, it was slightly faster, approximately as sturdy and more formidably armed, with three 13mm machine guns and two 20mm cannon! Fortunately, virtually all *He177* operations were confined to the West.

Even more astonishing was the defensive armament of the *Ju290A*: six 20mm cannon and one 13mm machine gun! While this bomber actually failed to see any active service on either

front, except in pure reconnaissance and transport roles, it has been included in the game as a very low probability encounter to give the player a shot at the Luftwaffe's best.

German Fighters

Just as the *Ju88A* was the predominant German bomber, the Messerschmidt *Bf-109* series single-seat fighters were its primary escorts.

The most numerous German fighter at the beginning of the invasion of Russia was the Messerschmidt *Bf-109F*. Armed with one 15mm and two 7.9mm machine guns, it was faster-climbing and more maneuverable than its principle opponent, the *LaGG3*, although not as sturdy or well-armed.

Next in frequency was the previous model, the *Bf-109E*. More heavily armed (with two 20mm cannon and two 7.9mm machine guns), this veteran of the Battle of Britain was slower than the *F* and more easily shot down.

Much less common than either of the above, the twin-engined *Bf-110F* had shown itself to be an inadequate escort in the Battle of Britain. In spite of its heavy armament (two 20mm cannon and five 7.9mm machine guns) and sturdy construction, its lack of maneuverability and speed had made the *Bf-110* not only inadequate as an escort but almost incapable of protecting itself!

Still rare, but not insignificant, were the Finnish Airforce's American Brewster *B-239 Buffalos*. Given to the Finns during the 1940 Winter War, these planes subsequently shot down a number of American Lend Lease aircraft given to the Soviet Union. Well armed with four .50 caliber (12.7mm) machine guns, the *B-239* was a maneuverable and sturdy, if slow, escort for the Finns British *Blenheim* bombers, but easily avoided by most Soviet fighters.

The *Bf-109F* was gradually superseded by the more advanced *Bf-109G* which became the predominant German fighter on the Eastern Front. Sturdier than the *F*-model, the "Gustav" was slightly less maneuverable and virtually its equal in speed and rate of climb, but carried a heavier armament of two 13mm machine guns and up to three 20mm cannon.

The *Bf-110F* was similarly followed by the more heavily armed *Bf-110G* (with six 7.9mm and two to four 20mm cannon) and eventually by the *Me-210* (armed with two 7.9mm, two 13mm and two

20mm cannon and somewhat faster) but neither of these aircraft made a satisfactory escort as both still lacked the maneuverability needed to dogfight with Soviet fighters.

The *Fw-190* was a much more dangerous newcomer, combining the heavy armament of four 20mm cannon and two 7.9mm machine guns with great sturdiness, moderate maneuverability and sufficient speed to overtake most Soviet fighters. Successive subtypes of this fighter further increased firepower and sturdiness, although they did sacrifice some speed in the process. Fortunately, the majority of *Fw-190*As were assigned to the West in response to the American daylight bomber offensive.

The *Me-262* jet, clearly the ultimate in German fighters, was too late to take part in the siege of Leningrad but (as with the *Ju-290A* bomber) we have included it for the challenge it provides. With a top speed far in excess of the best conventional fighters, a respectable rate of climb and an armament of four 30mm cannon the "Schwalbe" was a fearsome opponent.



MIQs and Messerschmidts was produced by 4D Interactive Systems for Discovery Games. Game Developer: David A. Wesely. Programming: David Wesely and Stephen Goss. Artwork: Raymond Allard. Printing and Typesetting: Galley, Inc. Recording: Tom Jones Studios. **MIQs and Messerschmidts** is based on the miniature wargames rules **Bombers and Battleships** by David A. Wesely and Ross W. Maker.