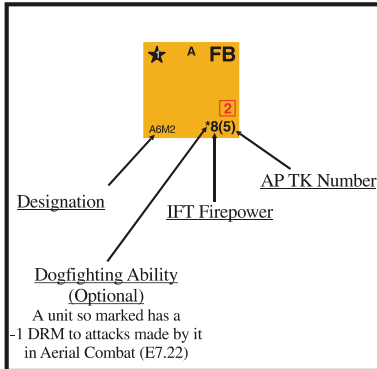


CHAPTER H SUPPLEMENTAL GROUND SUPPORT AIRCRAFT

Aircraft played a vital function during the Second World War. ASL uses generic rules to simulate the use of ground support aircraft. This product is an attempt to broaden the scope of ASL. Very few rules are changed. Indeed, it could be said that the only rule change is one optional rule concerning Air to Air combat. Instead, the idiosyncrasies of some of the major ground support aircraft have been put into counter form. These general rules supplement the ASL Air Support rules (E7.)

1. All aircraft marked DB (dive bomber) are treated as if they were Stukas [EXC: see Aircraft Availability Chart in lieu of E7.1 Stuka availability]
2. All aircraft have an individual AP TK number in parenthesis next to their MG firepower. The generic AP TK numbers are not used.
3. Optional: Aircraft that have an asterisk (*) in front of their IFP involved in Air to Air Combat have a -1 DRM to their attack DR to represent special low altitude ability. This rule should only be used in scenarios taking place before 1943.



U.S. AIRCRAFT NOTES

1. *P-38 Lightning* While succeeding brilliantly in the PTO, the P-38 was not well liked in the ETO and was relegated to ground attack roles. The location of the armament (in the nose and not synchronized with a propeller), durability, and payload capacity made the Lightning a very good ground attack plane. This game piece represents later model Lightnings (the P-38L); if included in scenarios before 1944, bomb load is 150mm, not 200mm.

2. *P-39 Airacobra* For game purposes, this piece represents all USA combat versions of the P-39 except the P-400. About half of all P-39s were sent to the Soviet Union, including many of the P-39s designated as P-400s, which had the 37mm nose cannon replaced with a 20mm cannon. The Soviets actually preferred the 20mm version and replaced many of the 37mm cannons. If designated as having the 20mm cannon, the AP TK number does not have a white dot behind it and is 6 instead of 7.

§ Due to the low rate of fire of the 37mm cannon and its limited ammunition, the AP TK number of 7 can only be applied to one hex during a strafing run/point attack. For all other hexes the AP TK number is 5. This is symbolized by the white dot appearing behind the AP TK number on this aircraft.

3. *P-40B* This game piece also represents the *Tomahawk II*, which made up the bulk of the AVG. No bomb racks were provided until later models.

4. *P-40E* This game piece may also represent other, late model P-40's that are equivalent in ASL terms. May also be used to represent the *Kittyhawk I-III* in British service.

5. *P-47 Thunderbolt* This game piece represents all versions of the P-47 in ASL terms. The P-47 saw service in all theaters of the war, with many different nationalities. The majority of British P-47s went to units in India and Burma.

6. *P-51B Mustang* The plane that allowed the American strategic bombing offense to continue attacking targets deep within the German border was not well suited to the ground attack roll, and was superseded by the P-47 and the P-38. This piece also represents the P-51C.

7. *P-51D Mustang* Mustangs were lend-leased, particularly to the British, but not to the Soviets. In ASL terms the main difference between the B and D models is the addition of two .50 caliber machine guns to the wing roots and provisions for a heavier payload, including rockets.

8. *F4F Wildcat* The Wildcat had just become the standard USN fighter in 1941. In early models, armament was only four .50 caliber machine guns, making its firepower 6(5). In such a configuration it could also be used to

simulate the Brewster Buffalo. Both Buffalos and Wildcats were sold to the British.

9. *F4U Corsair* Designed as a carrier plane, the Corsair was at first regulated to Marine use due to the limited visibility during landing. However, by 1945, the Corsair was a staple of the fast attack carrier groups. Nicknamed "whistling death" by the Japanese because of the unique noise it made during dives. Corsairs were lend-leased to Great Britain.

This piece also represents the *F6F Hellcat*. The Hellcat became the standard USN carrier plane during 1943 to the end of the war. It featured more armor and power than the Wildcat, although not as robust or fast as the Corsair. In ASL terms, however, the two planes are equivalent.

10. *SBD Dauntless* The USA was a pre-war leader in the field of dive bombing. The SBD served as the main Navy dive bomber during the beginning of the war. The SBD was used by the USAAF with the designation A-24. The Dauntless was later superseded by the Helldiver in the USN. In ASL terms, the Helldiver is equivalent, except that the firepower becomes 6(6) to represent the change in armament from two .50cal machine guns to two 20mm cannon.

BRITISH AIRCRAFT NOTES

1. *Hurricane I* This was the main British fighter at the start of the war. While very maneuverable, the Hurricane lacked the speed that was needed to survive in air to air combat

2. *Hurricane IIC* Although eight machine guns sounded impressive, the Hurricane I and the Spitfire I were at a firepower disadvantage when confronted with cannon equipped fighters. The Hurricane IIC had the eight machine guns replaced with four 20mm cannon, giving it great firepower. However, speed and strength were still wanting, and the Hurricane was not normally expected to fight for air superiority against first line fighters.

3. *Hurricane IV* The Hurricane IV represents the Hurricane with a universal wing, made to accept different ground attack packages. In this instance it is modified with two 40mm cannon. Unfortunately, such modifications made the aircraft much more vulnerable to AA fire and enemy fighters, despite added armor. This piece also represents the Hurricane IID. Hurricanes, or Hurribombers as they were also called in this configuration, were used extensively in Burma after Allied air supremacy had been achieved.

§ Due to the low rate of fire of the 40mm cannon and its limited ammunition, the AP TK number of 8 can only be applied to one hex during a strafing run/point attack. For all other hexes the AP TK number is 4. This is symbolized by the white dot appearing behind the AP TK number on this aircraft.

4. *Spitfire I* The Spitfire was the match for the Bf109E that had swept the Spanish, Polish, and French air force from the skies. Like the Hurricane I, however, it was under-armed for modern combat. Seen as an interceptor, the Spitfire I was not called upon to perform in the ground support role, although that would have changed if Sealion had taken place.

5. *Spitfire V* This was an evolutionary, up-gunned version of the Spitfire I with pylons for ordnance.

6. *Spitfire XIV* The later Spitfires had room for a 1000lb payload.

7. *Typhoon (Tempest)* Although originally armed with eight .303cal machine guns, the Typhoon was quickly changed over to four 20mm cannon. The Typhoon proved to be a rugged, durable ground attack aircraft. If carrying the eight machine guns instead of cannon, the firepower should be 6(4). This aircraft also represents the Tempest, which is identical in ASL terms.

8. *Battle* The Battle began the war as the main British ground attack plane. However, due to its slow speed, large silhouette, and poor armament it was quickly swept from the French skies, despite suicidal bravery of its British pilots. After the Battles of France and Britain, the Battle was removed from front line service.

§ Although not a dive bomber, this aircraft is treated as a Stuka for Air to Air combat purposes, E7.221.

SOVIET AIRCRAFT NOTES

1. *I-16* The I-16 was the first mono-wing Soviet fighter. When first delivered, the I-16 was one of the most advanced fighters in the world;

CHAPTER H SUPPLEMENTAL GROUND SUPPORT AIRCRAFT

however, by 1941 it was hopelessly outclassed by the Bf-109. The I-16 also fought at Nomanhan against the Ki-27 of the JAAF. This counter can also be used to represent the MiG-1, one of the most common Soviet fighters during 1941. If so represented, the AP TK number is 5, not 4.

2. *La-5* This counter represents many different Soviet fighters that fought in the mid- to late war period, including the Yak-1, Yak-3, Yak-9 and La-7. All were rather poorly armed for modern combat. Although the Soviets did produce some of the best aircraft cannon of the war, Soviet fighters were generally armed with one or two cannon, and two light machine guns. Soviet planes also suffered from very poor gun sights and quality control on the early production runs.

3. *La-9* The La-9 was one of the best fighters produced by the Soviets during the war, becoming operational in 1945. It was not designed for a ground support role, however, so no provisions were made for ground ordnance. This aircraft may also represent the La-11, which did not become operational during World War Two, but saw action in Korea. The La-11 would have an AP TK number of 7 and not 6.

4. *Yak-9T* The Yak-9 had a number of variants, mostly for the air to ground attack role. The T version mounted an excellent high velocity 37mm cannon in the nose hub.

§ Due to the low rate of fire of the 37mm cannon and its limited ammunition, the AP TK number of 8 can only be applied to one *hex* during a strafing run/point attack. For all other hexes the AP TK number is 4. This is symbolized by the white dot appearing behind the AP TK number on this aircraft.

5. *Il-2* One reason for the austere armament of Soviet fighter planes (besides the fact that the Soviets never fought against a nation with a heavy bomber) was their reliance on the Il-2 Stormovik, a heavy single engine ground attack aircraft. Heavily armored and armed, the Stormovik was to the Soviets as the Stuka was to the Germans.

§ This aircraft receives a +1 DRM when attacking in Air to Air combat, E7.221.

6. *Il-2m* The need for heavier armament was foreseen in 1942 for the Stormovik, as well as provision for some protection from the more nimble German fighters. In the Il-2m version, the 20mm cannon were replaced with higher velocity 23mm cannon, and a second crewman was added firing a rear facing light machine gun. Nearly 37,000 Stormoviks were produced.

§ Although not a dive bomber, this aircraft is treated as a Stuka for Air to Air combat purposes, E7.221.

7. *Pe-3bis* Supplementing the Il-2 was the Pe-2, originally designed as a medium bomber, but converted to a fighter bomber in 1940. Armed with cannon and machine guns, the Pe-2 was a reliable, rugged plane. The counter represents a Pe-3bis, the fighter version of the Pe-2, with more firepower in the nose, and improved engines.

§ Although not a dive bomber, this aircraft is treated as a Stuka for Air to Air combat purposes, E7.221.

FRENCH AIRCRAFT NOTES

1. *M.S. 406* The most common French fighter of the war, the Morane-Saulnier M.S. 406 was a sturdy plane, but was seriously underpowered in relation to the Bf109. Slower even than the Hurricane, the M.S. 406 was not intended as a ground support aircraft. This counter may also be used to represent the Dewoitine D 520, a more modern design but not turned out in great numbers.

2. *Breguet 691* The Bre. 691 proved to be a very good light bomber. With its nose armament able to be angled fifteen degrees downward, the Breguet was designed for the ground attack roll.

JAPANESE AIRCRAFT NOTES

1. *Ki-27* The Ki-27, or Nate as the Allies designated it, was the main JAAF fighter before the advent of the Ki-43. It fought at Nomanhan, and throughout the Chinese theater. Although Nates fought in the invasion of the Philippines, they were withdrawn from service against first line opposition during 1942.

2. *Ki-43* Although well liked by its pilots, the Oscar was poorly armed and poorly armored to face mid- and late war allied fighters.

3. *Ki-61* Very similar in appearance to the Bf-109, the Allies thought it was a licensed copy of the German plane when it was first encountered. Not as maneuverable as traditional Japanese designs, the Tony was a good aircraft that was just a step behind the newer allied planes. The Tony was used extensively in the south Pacific and the Philippines.

4. *Ki-84* One of the best planes of the war, the Frank was not produced in numbers sufficient to make a difference, nor were there many good Japanese pilots left to use it to its best advantage.

5. *A6M2* The famed Zeke that took the Pacific by storm in 1942. While the design was not truly revolutionary, it was totally unexpected by the British and Americans, who thought that the Japanese did not have the capability of designing and building such a dominant aircraft. Its weakness during the early stages of the war were few, mostly having to do with the lack of armor protection. However, the design could not keep up with allied advances and by 1943 was unable to face the newest allied designs.

6. *A6M5b* The M5 Zeros began replacing the earlier models in late 1942. Improvements included better armament, fire extinguishing fuel system, and armor for the pilots. However, the Zero still could not perform with allied planes at high altitude, nor come near to the speed of planes such as the P-51, Hellcat, and Corsair. Nevertheless, the Zero continued to be used by the Japanese until the end of the war.

7. *D3A* The Val was a good design in 1939, but was showing its age by 1941. Still, it continued in service until 1942 as the main IJN dive-bomber, scoring impressive victories. Its main deficiencies were its slow speed and poor bomb load.

8. *D4Y* The Judy was the designed replacement for the Val, but did not become operational in numbers until 1943. A good design, the Judy nevertheless met with disaster during the Marianas operation.

GERMAN AIRCRAFT NOTES

1. *Bf-109E* The Bf109 was one of the most produced fighters during the war. The 109 outfought all French, Polish, and Soviet aircraft at the outbreak of the war. Even against the Spitfire, it had the clear cut veridical advantage, although the Spitfire was the more maneuverable plane, as well as slightly faster.

2. *Bf-109F* An outstanding design, by 1942 the Bf109 began to show its age. The F version also represents later models. The 109 was the main German interceptor of the war, and was by far the most numerous fighter on the Soviet front.

3. *Fw-190A* The best piston engine fighter Germany produced was clearly the 190 and its derivatives. With heavy armament (four 20mm cannon and two machine guns), high speed, and power, the Fw190 was more plane than the Allies could field until 1943. The Fw190 was a very good ground attack aircraft; indeed, the main failing of the Fw190 was its performance loss at high altitudes, although that was rectified in the D series that mounted a liquid cooled inline engine.

4. *Fw-190F* A dedicated ground attack aircraft, the 190F carried a heavier payload and armor than other 190 variants. In 1944 most Stuka equipped squadrons began to be converted to Fw190F's.

5. *Me-262* The first jet fighter to see large scale deployment in battle, the Me262 was forced into the role of fighter bomber by Hitler, who demanded fast bombers to continue nuisance raids against England.

6. *Ju-87B* A very stable dive bomber, the Ju87 was a very good plane—when faced with no modern fighters in opposition. When forced to fly in skies where air superiority or supremacy had not been achieved, the Stuka was “meat on the table.”

7. *Ju-87D* With a powerful new engine, the D model added more armor and an incredibly large bomb load.

8. *Ju-87G* Built as a tank-buster, the Ju87G carried two 37mm flak guns loaded with APCR rounds to be used against the seemingly inexhaustible columns of Soviet tanks. The 87G proved very difficult to fly and only a limited number were produced, although they remained flying after most other Stukas were replaced by the Fw-190.

ITALIAN AIRCRAFT NOTES

1. *M.C. 200* The most common Italian fighter of the war, the M.C. 200 was rather slow and under-armed for combat by 1941. This aircraft can also be used to represent the C. 202 and C. 205, which were much improved versions, although not produced in significant numbers.

Aircraft Data Chart

U.S. Aircraft							
Name	Type	HE Bomb Equivalency	AP TK#	IFT Firepower	IFT DRM	Special	Notes
P-38	FB	200mm	6	8	3	Pre- '44 HE 150mm	1
P-39	FB	100mm	7	8	2	AP TK 7 for one hex only, otherwise 4	2
P-40B	FB	—	5	6	1		3
P-40E	FB	100mm	5	8	2		4
P-47	FB	150mm	5	12	3		5
P-51B	FB	150mm	5	6	2	Also represents P-51C	6
P-51D	FB	150mm	5	8	2		7
F4F Wildcat	FB	80mm	5	8	2	May also represent Brewster Buffalo	8
F4U Corsair	FB	150mm	5	8	3	Also represents F6F Wildcat	9
SBD Dauntless	DB	150mm	5	4	3	Also represents A-24 and SB4U Helldiver	10
British Aircraft							
Hurricane I	FB	—	4	*6	1	Dogfighting ability	1
Hurricane IIC	FB	100mm	6	*12	1	Dogfighting ability	2
Hurricane IV	FB	—	8	4	1	AP TK 8 for one hex only, otherwise 4	3
Spitfire I	FB	—	4	*6	2	Dogfighting ability	4
Spitfire V	FB	100mm	6	*8	2	Dogfighting ability	5
Spitfire XIV	FB	120mm	6	*8	2	Dogfighting ability	6
Typhoon	FB	150mm	6	12	3	Also represents the Tempest	7
Battle	FB	120mm	3	2	1	Treated as a Stuka in Air-to-Air combat	8
Soviet Aircraft							
I-16	FB	80mm	4	4	1	May be used for Mig-1	1
La-5	FB	80mm	6	6	2	Reperents Yak-1, Yak-5, and La-7	2
La-9	FB	—	6	12	3	May also represent La-11	3
Yak-9T	FB	100mm	8	6	2	AP TK 8 for one hex only, otherwise 4	4
Il-2	FB	120mm	6	6	3	+1 DRM when attacking in Air-to-Air Combat	5
Il-2m	FB	150mm	6	7	3	Treated as a Stuka in Air-to-Air combat	6
Pe-3bis	FB	150mm	6	8	3	Treated as a Stuka in Air-to-Air combat	7
French Aircraft							
M.S. 406	FB	—	5	6	1	May represent D 520	1
Breguet 691	FB	150mm	5	6	2		2

Japanese Aircraft

Name	Type	HE Bomb Equivalency	AP TK#	IFT Firepower	IFT DRM	Special	Notes
Ki-27	FB	70mm	4	*4	1	Dogfighting ability	1
Ki-43	FB	120mm	4	*4	1	Dogfighting ability	2
Ki-61	FB	100mm	6	8	2		3
Ki-84	FB	120mm	6	12	2		4
A6M2	FB	80mm	5	*8	1		5
A6M5b	FB	100mm	5	*8	2	Dogfighting ability	6
D3A	DB	100mm	4	4	1		7
D4Y	DB	120mm	4	4	2		8

German Aircraft

Bf-109E	FB	100mm	5	8	2		1
Bf-109F	FB	100mm	5	6	2		2
Fw-190A	FB	120mm	6	12	2		3
Fw-190F	FB	150mm	6	12	3		4
Me-262	FB	120mm	7	12	3		5
Ju-87B	DB	150mm	4	4	1		6
Ju-87D	DB	200mm	4	4	1	May be available in 1944+	7
Ju-87G	DB	—	8	4	1	May be available in 1944+	8

Italian Aircraft

M.C. 200	FB	100mm	5	6	1	Also represents C. 202 and C. 205	1
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Aircraft Availability Charts

United States

Note: All U.S. Aircraft availability DR for the PTO/MTO receive a –1 DRM

1941-42a		1942b		1943A		1943B-1944A		1944b		1945	
DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C
2-3	P-40C	2-4	P-39	2	P-39	2	P-39	2	P-39*	2	P-40E*
4-5	P-39	5-8	P-40E	3-4	P-40E	3-4	P-40E	3	P-40E*	3-5	P-38
6-8	P-40E	9-12	P-38	5-7	P-38	5-6	P-38	4-6	P-38	6-9	P-47
9-10	P-39			8-10	P-47	7-9	P-47	7-10	P-47	10-12	P-51D
11-12	P-40E			11-12	P-39	10-12	P-51B	11-12	P-51D		

U.S. Navy and Marine Corps
FB:
1941-42 Use F4F
1943-45 Use F4U
DB:
1941-43 Use SBD
1944-45 Use Helldiver (US Note)

* In NW Europe replace with P-38

U.S. forces in the PTO receive Dive Bombers on a bomb availability dr1. Dive Bombers may not use Napalm. Dive Bombers may also be used in the ETO with British or U.S. forces by SSR

Great Britain

1939– June, 1940		June, 1940- Dec., 1940		1941		1942		1943		1944*	
DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C
2-6	Hurricane I	2-11	Hurricane I	2-3	Hurricane I	2-4	P-40E	2	Hurricane IV	1	Hurricane IV
7-11	Battle	12	Spitfire I	4-8	Hurricane IIc	5-8	Hurricane IIc	3-6	Hurricane IIc	2-3	Hurricane IIc
12	Spitfire I			9	Spitfire V	9	Spitfire V	7-8	Typhoon	4-8	Typhoon (in PTO replace with P-47)
				10-12	Hurricane IV	10-12	Hurricane IV	9-10	Spitfire V	9-10	Spitfire XVI
								11-12	P-40E	11-12	P-51B

1945*

DR	A/C
≤ 0	Hurricane IV
1	Hurricane IIc
3-8	Typhoon (in PTO replace with P-47)
9-12	Spitfire XVI

* Scenarios set during these two time frames in PTO receive a –3 DRM

Soviet Union

Pre-1941 use I-16		Jan., 1941- July, 1941		Aug., 1941- Jan., 1942		Feb., 1942– Mar., 1943		Apr., 1943- Dec., 1943		1944		1945	
DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C
2-3	La-5	2-3	I-16	2-3	Hurricane IIc	2-3	Pe-3bis	2-3	Pe-3bis	2	Hurricane IIc	2	P-39
4-9	I-16	4-8	La-5	4	P-39	4	Hurricane IIc	4	Hurricane IIc	3	P-39	3	Pe-3bis
10-12	Il-2	9-12	Il-2	5-7	La-5	5	P-39	5	P-39	4	Pe-3bis	4	La-9
				8-11	Il-2	6-7	La-5	6-7	La-5	5-6	La-5	5-6	La-5
				12	Pe-3bis	8-9	Il-2m	8-9	Il-2m	7-10	Il-2m	7-10	Il-2m
						10-12	Il-2	10-12	Il-2	11-12	Yak-9T	11-12	Yak-9T

Japan

Pre-1941 use Ki-27	1941-1942a		1942b use Ki-43	1943		1944		1945		Imperial Japanese Navy FB: Dec., 1941 to Nov., 1942 A6M2 Dec., 1942 to Aug., 1945 A6M5 DB: Dec., 1941 to Nov., 1942 D3A Dec., 1942 to Aug., 1945 D4Y
	DR	A/C		DR	A/C	DR	A/C	DR	A/C	
	2-5	Ki-27		2-9	Ki-43	2-4	Ki-84*	2-6	Ki-84*	
	7-12	Ki-43		10-12	Ki-61-Kai	5-8	Ki-43	7-8	Ki-43	
						9-12	Ki-61-Kai	9-12	Ki-61-Kai	
* In CBI substitute Ki-43										

Japanese forces receive Dive Bombers if the Japanese player rolls < the exponent when determining bomb availability (E7.1), *if* Japanese forces are designated as being supported by Navy forces. Otherwise Dive Bombers are received on a bomb availability dr1.

Germany

1939-40		1941		1942*		1943*		1944*		1945	
DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C	DR	A/C
2-9	Bf-109E	2-9	Bf-109F	2-9	Bf-109F	2	Me-110	2	Me-110	2-3	Me-262
10-12	Me-110	10-12	Me-110	10	Me-110	3-8	Bf-109F	3-6	Bf-109F	4-6	Bf-109F
				11-12	Fw-	9-12	Fw-	7-10	Fw-190F	7-9	Fw-190F
								11-12	Fw-	10-12	Fw-

* During these three time periods there is a –1 DRM in scenarios taking place against the Soviet Union

Dive Bombers

1939-1941 use Ju-87B		1942-1943a use Ju-87D		1943b		1944-1945*	
				DR	A/C	DR	A/C
				2-8	Ju-87D	2-10	Ju-87G
				9-12	Ju-87G	11-12	Ju-87D

* Contrary to E7.1, in 1944-5 a German player may receive a Ju-87 on a bomb availability dr1 in a scenario versus the Soviet Union.

Note All Ju-87s supplied to Italy and Axis Minors were Ju-87D’s.

Note For All Nationalities

All dates in the form of 194Xa refer to the first six months of the year. All dates in the form 194Xb refer to the last six months of the year.