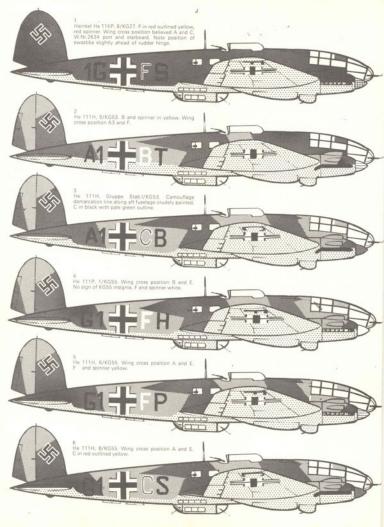
**AIRCAM AVIATION SERIES** 

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## LUFTWAFFE

BOMBER CAMOUFLAGE & MARKINGS 1940 HEINKEL He111-JUNKERS JU88-DORNIER Do17





No. \$10



Heinkel He 111H, Gesh.Stab/KG53 "Legion Condor", Note no aircraft letter on the under surface of the wings.

# **LUFTWAFFE**

### BOMBER CAMOUFLAGE & MARKINGS 1940 HEINKEL He111-JUNKERS JU88-DORNIER Do17

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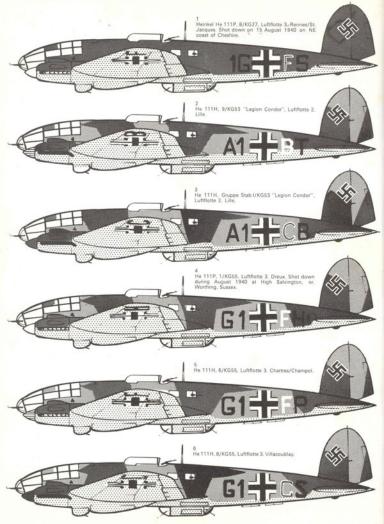
#### ACKNOWLEDGEMENTS

This, the first of two volumes covering the Battle of Britain period illustrates the three main bomber types, the second volume will cover the Junkers Ju 87, the Messerschmitt Bf 110 of the Zerstorer units and all supporting types. Acknowledgement must be made to frequent references to the published work Battle Over Britain by Francis K. Mason and Martin C. Windrow and to the published researches of Herr Karl Reiss Jr.



Heinkel He 111P, Gruppe Stab.I/KG1 "Hindenburg".

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Junkers Ju 88A of Lehrgeschwader 1 in standard splinter camouflage, code is L1+IN, black I outlined white. (R. Ward)

### LUFTWAFFE: Bomber Camouflage & Markings 1940

The midsummer of 1940 found the German Luftwaffe about to launch an all-out air offensive against the British Isles, for which purpose it had at its disposal three substantial Luftflotten (Air Fleets) at airfields along the whole western seaboard of Europe. In the south, units of Luftflotte 3 stood ready at bases in France, while in the north was Luftflotte 5 in Norway and Denmark; centre, Holland, Belgium and Northern France, closest to targets in Southern England, was the base of operations of Luftflotte 2. Luftflotten 2 and 3 had recently participated in the Battle of France during May and June, while Luftflotte 5 had engaged in the occupation of Denmark and Norway during approximately the same period; all units had now been brought up to strength, or re-equipped, since the recent successful campaigns, and most had enjoyed at least a degree of respite from operational flying.

Major equipment of Luftflotten 2 and 3 comprised Heinkel He 111H and P, Dornier Do 17Z and Junkers Ju 88A twin-motor bombers, Junkers Ju 87A and B single-engined dive-bombers, Messerschmitt Bf 109E and Bf 110C single- and twin-engined fighters. With greater distances to cover to reach targets. Luftflotte 5 disposed only the longer-range He 111s and Ju 88s, with Bf 110s for escort purposes; a few Bf 109s were also on hand, but these were purely for defensive purposes. While much has been written in the past of the more glamorous fighters, and of the notorious "Stuka"-the Ju 87, less has been said of the real workhorses, the twin-engined bombers which bore the bulk of the responsibility for offensive action during what was soon to become known as the Battle of Britain.

The He 111 and Do 17 were contemporaries; both had flown late in 1935 in the guise of civil aircraft for fast mail-carrying duties, capable of seating only limited numbers of passengers; both had in fact been designed as bombers. In their intended role the aircraft were to an extent complementary, rather than competitive; the slower, somewhat larger Heinkel could carry a greater weight of bombs a greater distance. It was in fact a heavy-medium, capable of day or night bombing on a sustained scale. The Dornier on the other hand was highly manoeuvrable, and possessed a limited dive-bombing capability. A light-medium, better able than the Heinkel of holding

its own with opposing fighters, it was more of a tactical machine, designed to operate in co-operation with ground forces, attacking targets close behind the front.

The Junkers machine was a later design, intended to a large extent to combine the roles of the other two aircraft, but to offer a better performance than either. In this it succeeded, becoming one of the truly classic aircraft of World War II; faster, and with greater range than the Dornier, it came close to the Heinkel in bomb-carrying capacity, and also in-corporated full provision for dive-bombing. It was also manoeuvrable, a fact attested to by its later use as a coastal and night fighter, and intruder.

Initial armament of all three aircraft was light, comprising only three 7.9 mm. machine guns apiece; this accorded with the German belief that fast, lighty-armed bombers could evade fighter interception. This contrasted with the British theory at the time that tight boxes of relatively heavily-armed bombers, co-ordinating their fire, could fight their way to and from their targets. In the event both were to be proven wrong; there was no substitute for effective fighter escort when determined and well-organized opposition could be expected.

"The German belief in their theory had been reinforced during the Spanish Civil War when early production models of both the He 111 and Do 17 had been committed to combat with elements of the Legion Condor, and later with the Spanish Nationalist Air Force. The ineffective opposition offered by the Republican air arm, and the inability of most of its fighter types to catch the swift German bombers seemed to indicate that the Luftwaffe's views were correct.

At the outset of World War II these theories received something of a joilt; although later models of both Heinkel and Dornier machines had now entered service, their losses to the elderly Polish fighters encountered during September 1939, which put up a much stilfer fight than had been the case in Spain, were somewhat alarming, and efforts were made to increase defensive armament to five or six machine guns. The first Ju 88s were entering service at this time, and early engagements with British fighters over the north of Scotland confirmed the experience of the Kampfgeschwadern over Poland.

One Geschwader of Ju 88s was available to join



He 111 detail shot showing octane marker in this instance a red triangle with white border and 87, the position varied from where illustrated to the extreme right of the photograph. The insignia is of F.A.Gr.122 which was a unit not operational during the Battle of Britain period. (R. Ward)

He 111s in attacks on British naval units off the coast of Norway during the invasion of that country in April and May 1940, but the attack on France and the Low Countries rested entirely on the He 111s and Do 17s. By July 1940 considerable re-equipment of units with Ju 88s had taken place, and all three bomber types carried an augmented armament, usually of five to six 7.9 mm. MG 15 or MG 17 machine guns, together with certain additional armour protection and selfsealing fuel tanks. Reconnaissance units were also to play an important part in the assault on England, checking on the results of attacks, spotting coastal convoys, radar sites, fighter airfields, etc., and these units were also equipped to a large extent with reconnaissance versions of the main bomber types, although a few Staffeln also operated some Bf 110s. The main sub-types in service at this time were as follows:

Dornier Do 17 For bombing, Do 17Z-2; for reconnaissance, Do 17P and a few older Do 17M.

Heinkel He 111. For bombing, He 111P-4 and -6 (Daimler-Benz DB601N engines), and He 111 H-3 (Junkers Jumo 211D-1 engines); for reconnaissance, the same models.

Junkers Ju 88. For bombing, Ju 88A-1 and -5; for reconnaissance, Ju 88A-1 and Ju 88D.

Available by this time to Luftflotten 2 and 3 were some 1,131 bombers (not including specialist aircraft of KG 40 and KGr. 100), of which some 769 were serviceable, together with 67 reconnaissance types, 48 of which were serviceable. In the north, Luftflotte 5 could add to this total 129 bombers and 48 reconnaissance aircraft, with respectively 95 and 33 serviceable. Dispositions of units equipped with He 111s, Do 17s and Ju 88s were as follows:

LUFTFLOTTE 2

I Fliegerkorps

KG 1 two Gruppen of He 111s one Gruppe of Ju 88s

KG 76 two Gruppen of Do 17s one Gruppe of Iu 88s Two reconnaissance Staffeln of Ju 88s, He 111s and Bf 110s.

II Fliegerkorps

three Gruppen of Do 17s KG three Gruppen of Do 17s KG 53 three Gruppen of He 111s

IX Fliegerdivision

KG

KG two Gruppen of He 111s one Gruppe of Ju 88s

KGr. 100 one Gruppe of He 111s for specialised

night pathfinding duties. KGr. 40 one Gruppe of Ju 88s for naval co-

operation duties. KGr. 126 one Gruppe of He 111s for minelaying duties.

One reconnaissance Staffel of Ju 88s and He 111s.

LUFTFLOTTE 3

VIII Fliegerkorps

one Gruppe of Do 17s for reconnaissance

One reconnaissance Staffel of Do 17s. One reconnaissance Staffel of Ju 88s.

V Fliegerkorps KG

51 three Gruppen of Ju 88s KG 54 three Gruppen of Ju 88s

KG 55 three Gruppen of He 111s IV Fliegerkorps

three Gruppen of Ju 88s KG three Gruppen of He 111s

KGr. 806 one Gruppe of Iu 88s for dive-bombing

Two reconnaissance Staffeln with Do 17s, He 111s and Bf 110s.

LUFTFLOTTE 5

KG two Gruppen of He 111s two Gruppen of Ju 88s

Two reconnaissance Staffeln of He 111s and Ju 88s. The main bomber force thus comprised some 16 Gruppen of He 111s and 11 each of Ju 88s and Do 17s.

Prior to the attack on England proper, and while the bulk of the force was resting, re-equipping, etc., a limited offensive was launched during July against shipping in the English Channel. The units at hand for this were of course those of Luftflotte 2, and the Kampfgeschwadern whose responsibility these sorties became were KG 2 and 3. Indeed, Oberst Johannes Fink, kommodore of the former unit, was designated Kanalkampführer to lead, co-ordinate and organise these activities. The first such attack was launched on 10 July, considered by a number of authorities to be the day on which the Battle of Britain truly commenced; 26 Do 17s of KG 2 with a heavy fighter escort, attacked a large convoy in the Thames Estuary. The raid was successfully accomplished, though at least three bombers were shot down by Spitfires and Hurricanes which were rushed to the scene. While the attack was taking place, 63 Ju 88s from Luftflotte 3's French airfields flew in unopposed to bomb Falmouth and Swansea, misleading the defences by approaching from a westerly direction. Shipping attacks continued almost daily, varying in

size considerably, and on several occasions the Dorniers were able to escape all interception. The culmination of these attacks came on 8 August when an all-out attempt was launched by dive-bombers of Luftflotte 3 to destroy a major convoy. Two days later the attack on England began; the first phase of this was to concentrate upon radar stations and on coastal airfields, and the first raid, by 54 Ju 88s of KG 54 and some 20 He 111s of KG 27, escorted by many fighters, winged in during the morning, the 165 aircraft forming the largest force yet despatched over the Channel. The fighters flew ahead of the bombers, leading off the defending interceptors, and allowing the Ju 88s to dive-bomb oil storage tanks at Portland and Weymouth, while the He 111s carried out a level-bombing attack from higher altitude.

Despite the activities of the escorts, which exacted a heavy toll of the British fighters engaged, some managed to get to the bombers and shot down five of the Ju 88s and one He 111; when added to the dozen escorting Messerschmitts lost, the raid had not been a cheap one. Later in the day eight of KG 2's Do 17s were able to carry out an effective attack on a convoy off Harwich without loss, though their escort of

Bf 110s suffered heavily.

Next day the attack really got under way, and taking advantage of a period when the radar in the Dover area was out of action following an attack by Bf 110 fighter-bombers, Ju 88s of II/KG 76 attacked Hawkinge airfield with considerable effect, destroying hangars, workshops and fighters on the ground. A little later almost 100 Ju 88s of KG 51, escorted by half as many again Bf 109s and 110s, approached Portsmouth. The formation divided, the larger proportion of the bombers attacking the dockyard where they caused great damage, while a smaller formation of 15 bombers totally shattered one of the main "Chain Home" radar stations at Ventnor on the Isle of Wight, putting it out of action for several days. This successful raid was also expensive however, as ten Ju 88s were lost to fighters and A.A. defences, while several others were damaged.

The day was only half over when 18 Do 17s of KG 2, accompanied by Bf 110s of Erp. Gr. 210, appeared suddenly over the coastal airfield at Manston, carried out a sharp raid, and escaped without loss,

August 13 was planned for the official launching of "Adlerangriff" (Eagle Attack) which was to be the full major offensive by all three Luftflotten, but it got off to a bad start in the morning when the first raid was recalled; while the escorting fighters received the message, the 74 Do 17s of KG 2 did not, pressing on to Eastchurch airfield where they bombed accurately, damaging buildings and destroying a Spitfire and five Blenheims, on the ground. As they turned for home defending fighters at last appeared and the Dorniers were harried as they sped out to sea, five of the bombers failing to return.

"Adler Tag" got properly underway in the after-noon when 40 Ju 88s of KG 54 and 80 of LG 1, escorted by Bf 110s, approached the south coast. The aircraft of the former unit attempted to carry out a feint attack on Portland, but were met by fighters, losing four Ju 88s with six more damaged. The main force pressed on meantime to Southampton in the face of stiff opposition, inflicting heavy damage on the docks area. A smaller formation broke away to bomb Middle Wallop airfield, but most failed to find it in heavy cloud, and several bombers attacked the airfield at Andover by mistake; LG 1 suffered the loss of three bombers during these attacks.

With the start of the assault on England, night attacks were also begun against targets elsewhere in



flage on the He 111, note that the camouflage on the wing leading edge inboard of the engine nacelles was carried round and under, whereas outboard of the nacelles the demarcation line was central along the leading edge. (R. Ward)

the British Isles beyond the range of fighter escort, which the bombers were thus unable to risk attacking in daylight; during the night of 13/14th, two small formations of He 111s of KGr. 100 set out to bomb aircraft factories. Nine bombers attacked the Spitfire plant at Castle Bromwich with little success, but 15 more, which had ventured across the Irish Sea, carried out a much more successful attack on Short Bros.' factory at Belfast, destroying five of the new four-

engined Stirling bombers.

Believing that the attacks on the south of England must have drawn all the reserves of fighters down to this area, a heavy assault on north-eastern England by Luftflotte 5 was launched on 15th. Expecting little or no fighter opposition, 72 He 111s of KG 26. escorted by Bf 110s, left Norway's Stavanger/Sola airfield during the morning to attack Bomber Command airfields at Dishforth, Linton on Ouse, etc. A few Heinkels turned back en route due to various technical troubles, but 63 arrived off the English coast; a slight navigation error had unfortunately brought them too far south and they made landfall just off Newcastle. As it turned out the fighter defences of northern and central England had by no means been denuded, and these were ready, strong formations of fighters attacking, breaking up, and driving off the Heinkels and their escorts, seven bombers and a like number of Bf 110s being shot down. During the flight back to base, the bombers were again attacked, this time by a patrolling Blenheim fighter, which despatched a further He 111.

A little after the approach of the unfortunate Heinkels, Luftflotte 5's other main bomber unit, KG 30, appeared somewhat further south, approaching the Yorkshire coast. Fifty unescorted Ju 88s from Aalborg, Denmark, managed to get through to their target, unlike the aircraft of KG 26, and attacked Driffield, an airfield of 4 Group, Bomber Command, damaging hangars and destroying about a dozen Whitley bombers. This formation was then also attacked by British fighters of the R.A.F.'s 12 Group, and seven Ju 88s were shot down, a further three later crash-landing in friendly territory due to damage. This mauling convinced Luftflotte 5 of the unwisdom of attacking any targets in the British Isles in daylight without adequate fighter escort, and it played no further major part in the battle. Indeed, a few weeks later KG 26 moved south to join Luftflotte 3 in France, followed by KG 30, and it was from here that they resumed attacks on English

targets.

While all this was going on, the other Luftflotten continued their campaign against Fighter Command's southern airfields. Eighty-eight Do 17s of KG 3 with heavy escort swept in over North Kent, where they split into two formations, one attacking Eastchurch airfield again while the other hit another Short Bros. factory at Rochester, on the Medway, considerably disrupting Stirling production here too. The escorts were effective in preventing interception on a worthwhile scale and only two Dorniers failed to return. Other bombers of KG 1 and 2 in smaller formations attacked Hawkinge airfield and radar stations at Maidstone, Dover, Rye and Foreness without loss. Luftflotte 3 Ju 88s were not so fortunate however; 12 of I Gruppe attacked Middle Wallop airfield and 15 of II Gruppe attacked that at Worthy Down, but in neither case was much damage done. On the other hand the bombers were hard hit by the defences, eight Ju 88s being lost, five of them being from a single Staffel.

Next day, 16 August, 24 Do 17s of II/KG 2 tried to get through to the important sector airfield at Hornchurch, but were turned back short of their target a second formation then appeared and scattered its bombs generally when attacked. Three Dorniers were shot down. The attack on the main fighter bases was now on however, and on 18th raids came in thick and fast. Nine Do 17s of III/KG 76 were to attack Biggin Hill in company with 30 Ju 88s of II/KG 76, but the latter failed to arrive at the rendezvous in time and the Dorniers went in alone, being intercepted at low level and losing one bomber. The Ju 88s followed them a little later, and lost two. Meanwhile other Do 17s attacked Kenley at both low and medium altitude, inflicting much damage and destroying ten Hurricanes on the ground; some aircraft of this formation went on to bomb Croydon, but fighters struck back, shooting down two over the target area, two into the Channel as the bombers made for home, and damaging three more so severely that they had to carry out force-landings in France. In one bomber the pilot was killed and the flight engineer, Obfw. Illg, took over the controls, flying the aircraft back and carrying out a successful wheelsdown landing. For this effort he was awarded the Ritterkreuz, but a week later his aircraft was shot down over London and he became a P.O.W. He 111s of KG 1, 27 and 53 were also over Southern England on 18th, seven of these bombers being shot down by British fighters.

He 111 of KG26 at rest somewhere in England, note position of insignia and octane marker which may be faintly seen aft of insignia. (R. Ward)



The continual assaults on the fighter airfields were steadily taking: their toil, and Fighter Command was beginning seriously to feel the strain, but the cost had so far been of the order of 10%, some 127 medium bombers having been lost between 10 and 23 August; such a rate of attrition cannot be sustained over a long period, and if the Luftwaffe bomber force was not to be decimated, Fighter Command's sword would have to be rapidly blunted. Since the beginning of July a regular toil had also been taken of the reconnaissance aircraft which appeared daily over the Channel and Southern England, and at least 25 of these had fallen to the defenders in this seven week period, 13 of them Do 17s, while four more were the closely-related Do 215s.

After several quieter days, several large raids were made on 24th, He Ills and Ju 88s attacking Horn-church while 46 Do 17s and He Ills struck at North Weald. Five He Ills of KG 53 failed to return, while three Ju 88s of KG 76 were shot down by Boulton Paul Defiant turret fighters, but the raids were not stopped. Later, 50 Ju 88s of LG 1 with an escort of Bf 110s bombed Portsmouth without loss.

Two nights later an event occurred which was to change the course of the battle, and subsequently of the whole war; some He 111s on a night raid became lost and inadvertently jettisoned their bombs on central London. Under the assumption that this was a deliberate attack, the British Prime Minister, Winston Churchill, ordered a reprisal attack on Berlin, which was in its turn to set Adolf Hitler demanding for London to be bombed—a reversal of previous policy, which had expressly forbidden this.

On 26 August, the morning after the bombs landed in the capital, the Luftwaffe was still concentrating on the airfields, quite unaware of any impending change in tancities. Forty He 11ls and 12 Do 17s bombed the south coast area around Dover during the first raid, three Dorniers of KG 3 being shot down by Defiants and Hurricanes. Forty more Dorniers of both KG 2 and 3 then approached Hornchurch and Debden, but were met head-on and turned back with the loss of six aircraft, the attack proving a major failure. The final raid of the day was by 48 He 11ls of KG 55 on Portsmouth, but this was to be the last major daylight appearance of Luftflotte 3 bombers for some three weeks, as they were now turned on targets in the Midlands at night in an effort to cripple British fighter production.

Luftflotte 2 maintained the day offensive, 23 Do 17s of 1/KG 3 and 27 He 111s of KG 53 being directed to Eastchurch and Rochford respectively on 27 August. The Dorniers hit their target hard, but the Heinkels were driven off by fighters, losing four of their number. With the failure of the attack on Rochford, 30 more Do 17s from the other Gruppen of KG 3 were sent out to complete the job, doing so

with the loss of only one aircraft.

With the availability of all Luftflotte 3's bombers, the night offensive was stepped up very considerably, and on the might of 28/29 August between 130 and 130 He 111s and Ju 88 of KG 27, KG 55 and KGr. 806, followed pathfinders of KGr. 100 to Liverpool, delivering the heaviest raid yet launched on a single target in England, bombers of other units raiding other industrial towns at the same time. Against these attacks the defenders were at this time almost help-less, only one bomber being brought down.

The heaviest fighting of the battle so far, occurred



Line up of tied down Ju 88A's on a Channel Coast airfield during the summer of 1940. Unit is unknown, note the camouflage demarcation line on the

angine accele of the centre alreaft. (R. Ward) on 30th, 40 He 111s and 30 Do 17s with escorting fighters flying in over the Kent coast in the morning. They were heavily and consistently attacked all the way to their targets, but despite this, the vigilance of the escorts kept looses low. Later in the day Ju 88s carried out an accurate and almost unopposed attack on Biggin Hill, inflicting much damage, while 30 He 111s of KG 1 attacked north of the Thames. Losses for the day totalled six Heinkels, five from this later unit. After dark 130 Heinkels and Junkers of Lufffolte 3 repeated their attack of two nights earlier on Liverpool.

The continued appearance of substantial numbers of British fighters and the heavy losses being suffered by the bombers from time to time, now had the Luftwaffe high command worried. Almost all Luftflotte 3's fighters had now been moved into the Pas de Calais where they were available to join those of Luftflotte 2 on escorts to its bombers, the Ju 87s which had previously been their main charge having been withdrawn from the battle following disastrous losses, and much heavier escorts now became the order of the day, a whole Geschwader of Bf 109s often being used to cover a single Gruppe of bombers. Despite this, the R.A.F. still managed to get through, and on the last day of the month when 30 Do 17s of KG 3 attacked Hornchurch, five were shot down. A smaller formation of eight Dorniers of II/KG 76, which specialised in low level attacks, got through to Biggin Hill and once more the airfield was bombed. Next day heavily escorted Dorniers bombed this

important target yet again, creating havoc and prac-

tically bringing operations there to a halt. On this same 1 September, 18 He 111s of I/KG 1 bombed

the docks at Tilbury, covered by no less than three

geschwadern of fighters. Fighter Command was now in real trouble, short of pilots and with its control organization gradually crumbling under the continual attacks; on 2 September successful attacks were made on no less than seven airfields, few losses being inflicted on the attackers. Three days later 68 Do 17s and He 111s of KG 2, 3, 26 and 53 bombed oil tanks at Thameshaven, only three Heinkels failing to return. By 6 September bomber losses since 24 August totalled 107, but fighter opposition was definitely diminishing, and the percentage of losses generally was dropping. Now, however, fate took a hand, and Hermann Goering issued an order which was to set to naught all the hard fighting, effort and loss of the Luftwaffe over the past month, and to prove the salvation of Fighter Command. Furious at the continued appearance of the R.A.F., which he thought must by now be down to its final reserves, and pressed by Hitler to retaliate for the raids on Berlin, he now ordered the main effort to be switched to London. The vast, sprawling metropolis was to prove capable of absorbing anything the Luftwaffe could hurl at it, while the end of the assault on the fighter airfields was of decisive importance to the tired defenders, who, relieved of this burden, were able to increase both their strength and effectiveness.

The first attack on the new target came during the afternoon of 7 September, when 348 bombers of KG 1, 2, 3, 26 and 76, escorted by 617 fighters, bombed the docks of East London and set them ablaze; ten bombers were destroyed by the defenders. At night 318 He 111s and Do 178, guided from fair by the glow of the great fires, returned to stoke the configeration.

More raids followed on a smaller scale, rising in numbers again on 11th. In the afternoon of this day several large attacks were sent in, but on one of these the He 111s of KG 26—late of Luftflotte 5—lost their escort when the fighters had to return early due to shortage of fuel; the bombers suffered heavy losses as result, seven being shot down and ten damaged.

The climax came on 15th however; the first raid by 100 Dorniers of KG 3 was picked up early by the radar chain, and was attacked when still well out from its target. Unable to continue and minus six aircraft, the bombers jettisoned their cargoes at random and pushing over into the shallow powered dives in which they could reach up to 370 m.p.h., fled.

The second wave which then approached was even bigger, comprising, over 150 Heinkels and Dorniers of KG 2, 53 and 76. This formation was heavily intercepted all the way in, finally dropping its bombs all over south and east London and withdrawing, but not before 14 Do 17s and 10 He 111s had been shot down. A final raid by 27 He 111s of III/KG 55 on Portland was also met by fighters, and by the end of the day Luffflotte 2 and 3 had lost 34 bombers with so many others badly damaged that in all a quarter of the bomber force was out of action. Such losses could not be sustained—it was a major victory for the R.A.F., which greatly heartened both the service and the population as a whole.

After this date the majority of the He 111 and Do 17 units were transferred to night operations, the day-light attacks being left to the Ju 88s, which were still increasing in numbers. KG 2 now began receiving some of these aircraft, and KG 77, which had been withdrawn before the battle to re-equip, now had its Gruppen ready for action.

Three days after the massive battles on 15th, the new Ju 88s of III/KG 77 made an afternoon attack on London, but were met by over 100 fighters and lost ninė aircraft, including five from 8 Staffel and the Gruppenkommandeur, Major Maxim Kleis. Hoping that all fighter units were now based to the south and east of London, Luffflotte 3 risked 58 He 111s of KG 55 in a daylight attack on the west country on 25 September, Bristol Alicraft's factory at Filton being the target. A few Ju 88s from LG 1 attacked Portland to create a diversion, and the sudden appearance of raiders from this unexpected direction initially threw the defenders off balance. The Hein-kels hit their target hard, destroying eight new aircraft on the ground and causing sufficient damage to the plant and its environs to bring production to a halt. There was no shortage of fighter squadrons in the area however, and the bombers were caught on their way out, five being shot down.

KG 59 repeated the same tactics next day, attacking the main Spitfire production line at Woolaston; again their attack was damaging and production here too was halted. The defending fighters were once more late off, and only one Heinkel of the 59 taking part failed to return on this occasion. A third attempt on 27th, did not come off; 30 He 111s and a number of Bf 110s raided Filton again, but the Heinkels were met on their approach by Hurricanes, and were forced to jettison their bombs and turn away. Over the London area on this date, a raid was laid on by Ju 88s of KG 77's I and II Gruppen, the 55 bombers arriving late at the point where they were to meet their escort, and consequently approached the target alone. Spitfires and Hurricanes pounced on them from all sides and the formation was cut to pieces before German fighters could be called to the rescue, arriving to inflict substantial losses on the British squadrons. Twelve KG 77 aircraft were lost in this raid, and two other Ju 88s of LG 1 were also shot down during the

The last big daylight battle in which the bombers were involved in any numbers was on 30 September when three raids were made. Two hundred aircraft took part in the first, aimed at London, but three Ju 88s were shot down. At midday KG 30 tried to get through to this target, but failed, losing at least two aircraft, while I and II/KG 55 made a final attempt in the west, winging in to bomb Yeovil. They were met and turned back by defending fighters, losing four Heinkels in the process.

As October came in, only fighters and fighterbombers ventured over England in large formations, Ju 88s making the occasional sneak raid by small numbers of aircraft when cloudy conditions prevailed. Larger formations of these bombers occasionally attacked coastal targets, but did not try and penetrate inland, the vast bulk of the bombers now flying only at night. On these latter raids losses were at first far lighter, and it was not until the early months of 1941 that the defences were able to begin taking a substantial toll of the nocturnal predators. On the night of 14 October 69 Dorniers raided Coventry, while about 200 He 111s and Ju 88s bombed London heavily.

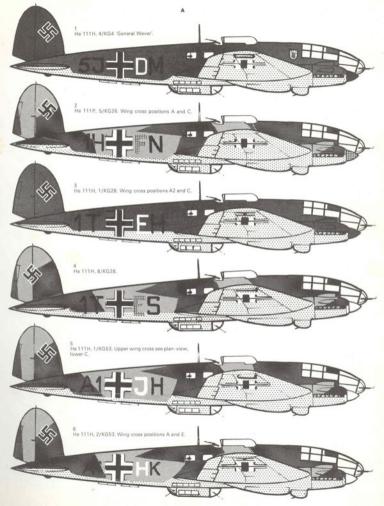
Obviously night bombing could not hope to be anywhere near as accurate as that by day with the aids available in 1940, but nonetheless the Luftwaffe managed to inflict considerable damage with what it had at its disposal. On the night of 13/14 November 77 He 111s of KG 26 raided London while 63 more from KG 55 hit Birmingham. Next night some dozen He 111s of KGr. 100, using the "X-Gerät" radio navigation aid, led 437 bombers to Coventry, marking the target for KG 1, 3, 26, 27, 51, 55, LG 1 and Kü. Fl. Gr. 606, which between them dropped 394 tons of high explosives, 56 tons of incendiaries and 127 parachute mines to devastate the centre of the city and add a new word to the English language-to "Coventrate", meaning to totally destroy a town by air bombardment. On the night of 19 November KGr. 100 led 369 bombers of KG 26, 54, 55 and Kü. Fl. Gr. 606 on a similar heavy raid on Birmingham.

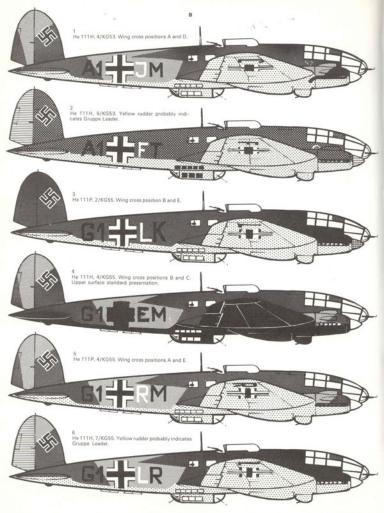
By the end of November 1,150 bombers were available as the "Blitz" really got into its stride, and over the next two months an average of 200 per night over the next two months an average of 200 per night over England, dropping a total of 13,900 tons of bombs. It was, however, at this stage that the last daylight sorties petered out, and the Battle of Britain ended.

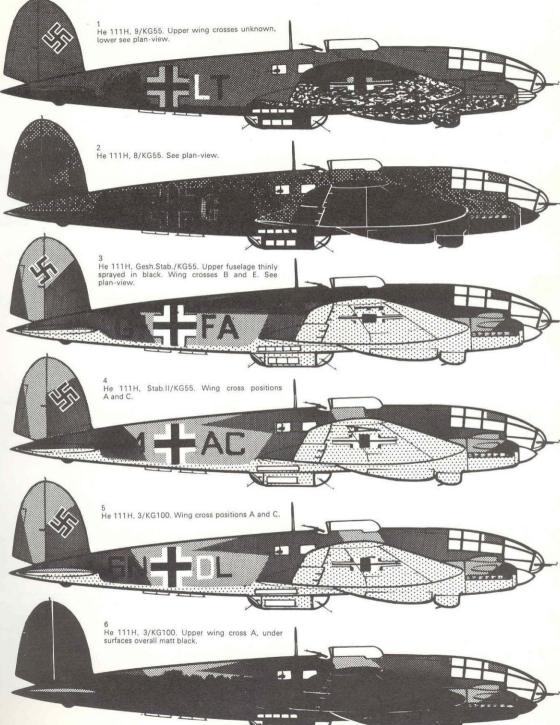
Of the bombers which had taken part, the Dornier Do 17s were the first to go. Already by the end of 1940 they were fast being replaced by Ju 88s, and with the appearance of the improved Do 217E in 1941 their final demise was sealed. Gruppen of KG 2 and 3 operated in 1941 over Yugoslavia and Greece, and during the invasion of Russia, but by early 1942 all had left Luttwaffe front line service, though many soldiered on with units of the Finnish and Croastian

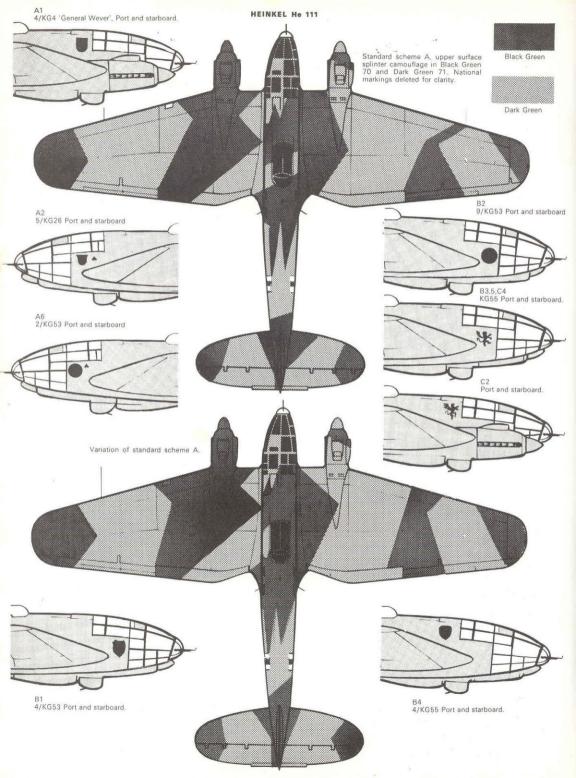
air forces, to which they were then supplied. The Heinkell He III remained for much longer, carrying on as the Luftwaffe's major night bomber for some time; it was developed for use as a torpedo-bomber, and late in 1944 was used to air-launch V-1 flying bombs when the latters' launching sites were captured by the Allied armies. They also served as transports and on various other duties, remaining in service until the last months of the war. The Junkers Ju 88 went from strength to strength, becoming the main bomber of the Luftwaffe both by day and night until 1944, when developments of the basic design such as the Ju 188 and 388, began to supersede it.

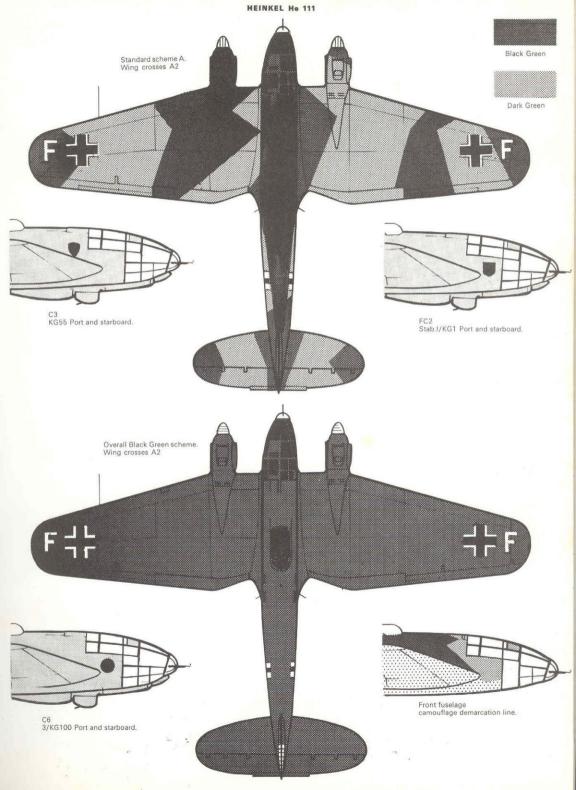


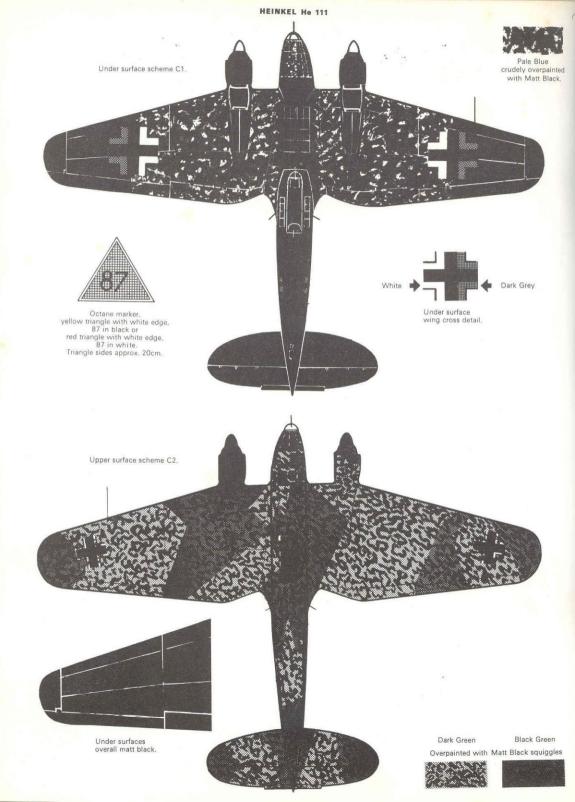


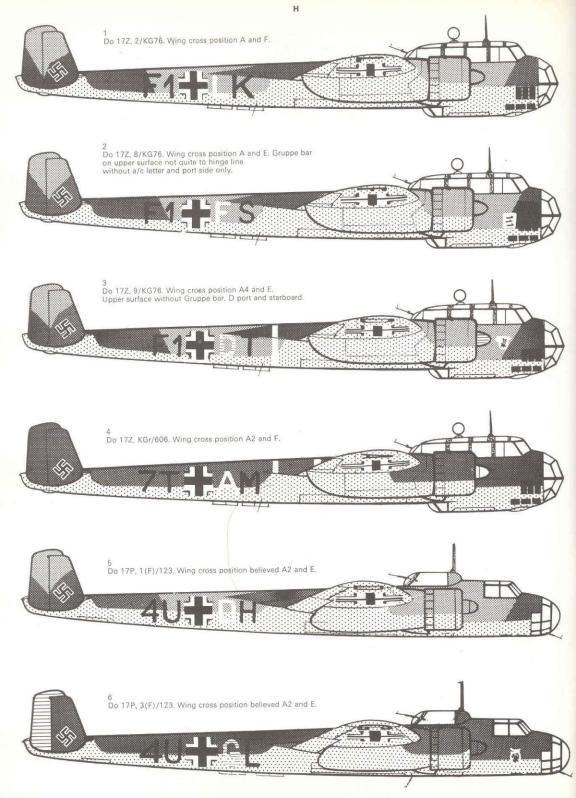


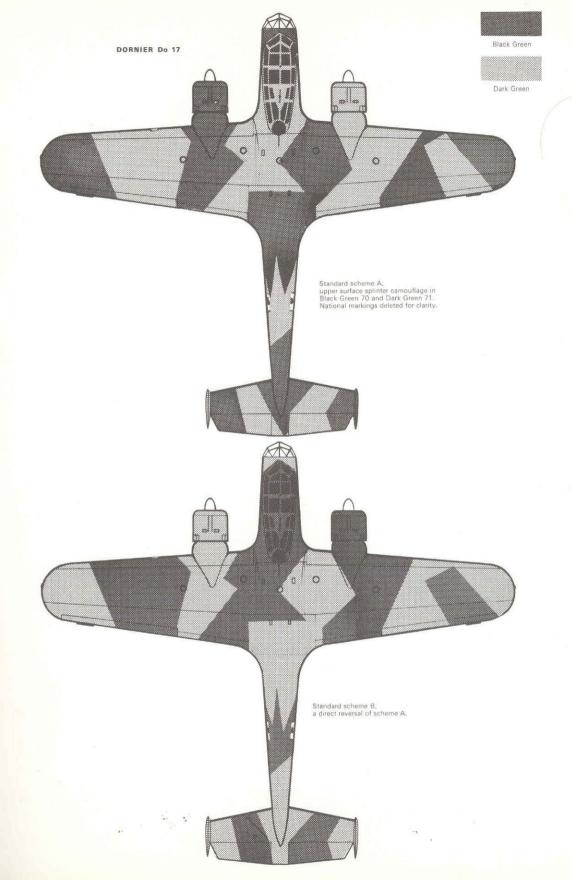


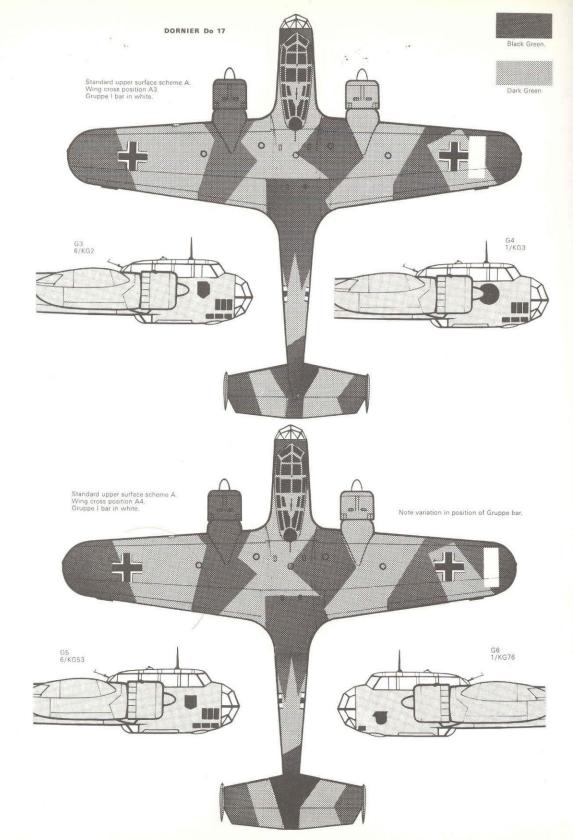


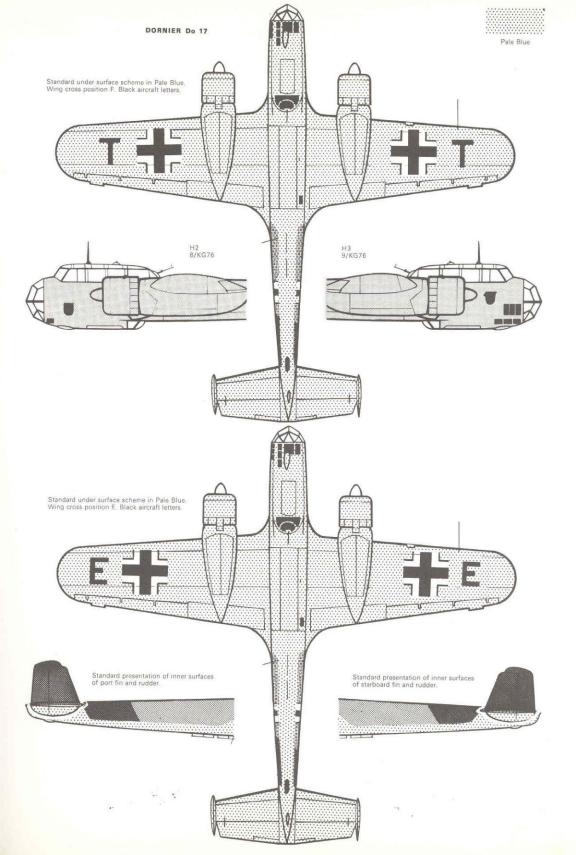


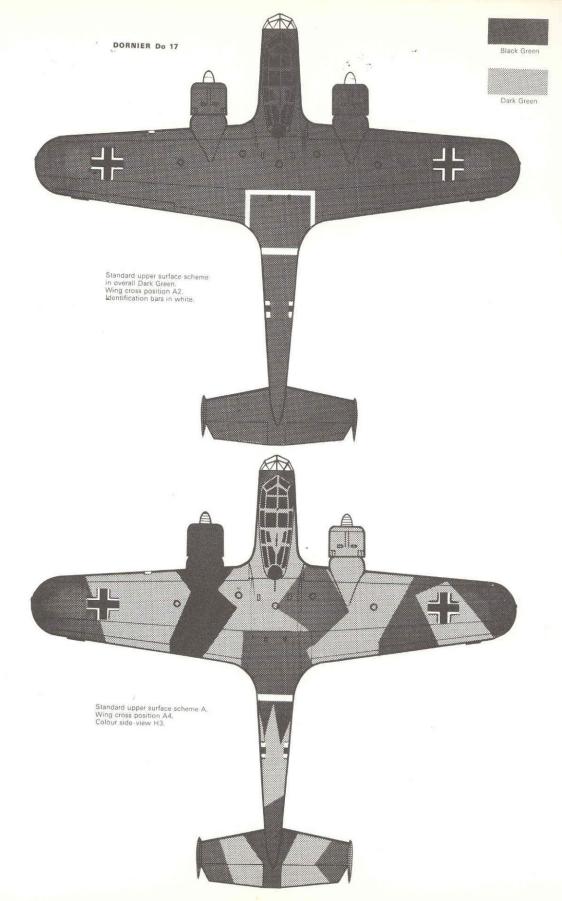


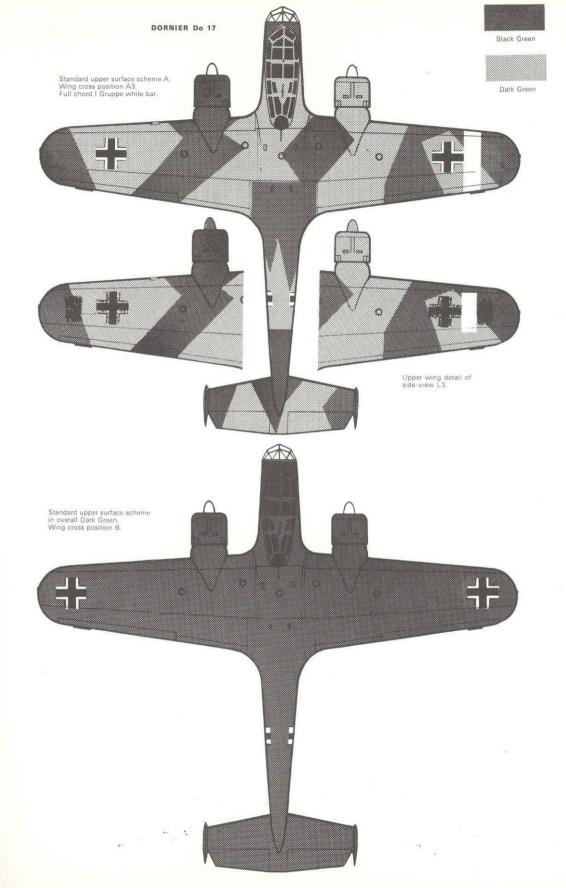


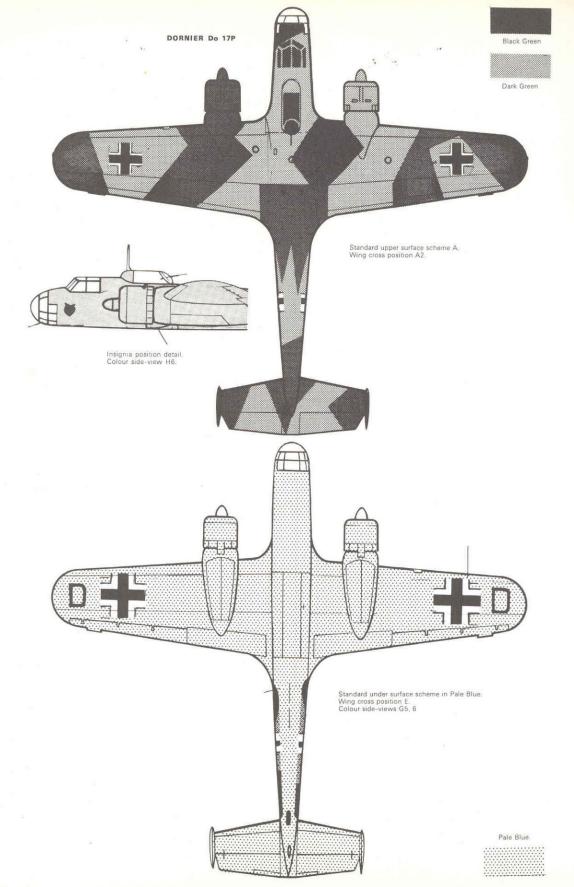


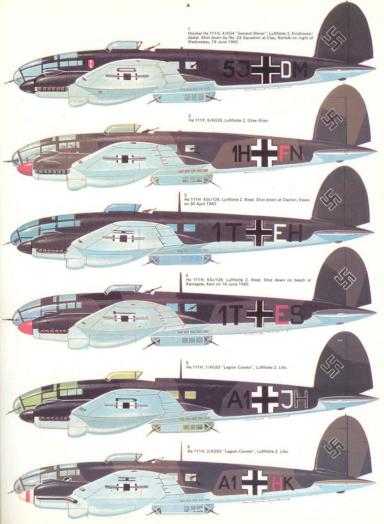


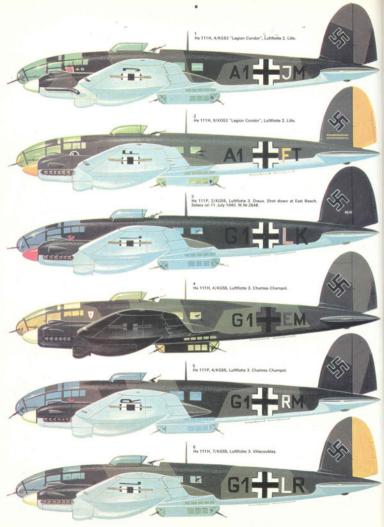




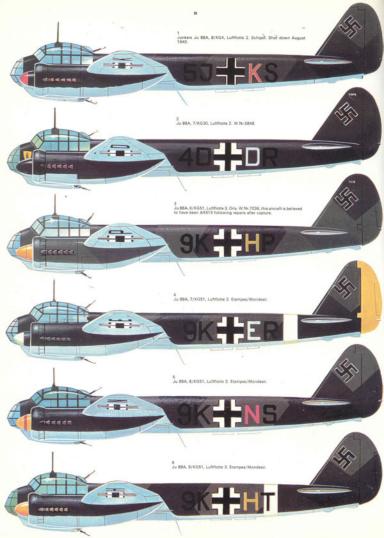




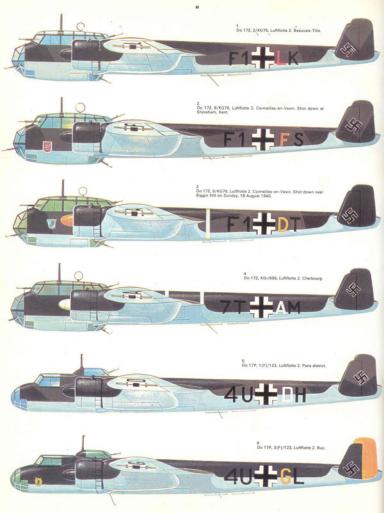














Above: Fine flying shot of He 111 bombers of KG26 over France, standard splinter scheme. Note the insignia of KG26 on nearest aircraft with octane marker, this time in yellow and white. (US National Archives)



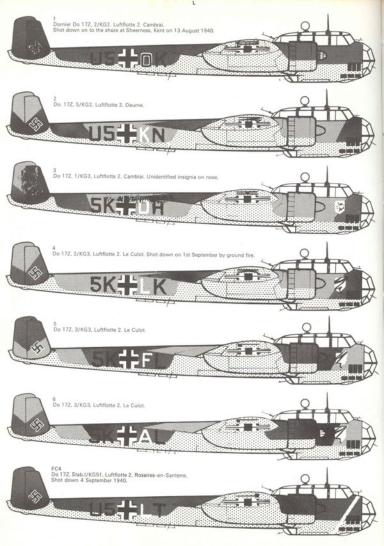
Above: A pair of He 111s of a large formation probably heading out for the English coast. Note the early, central position of the swastika on the aircraft to the left. (R. Ward)

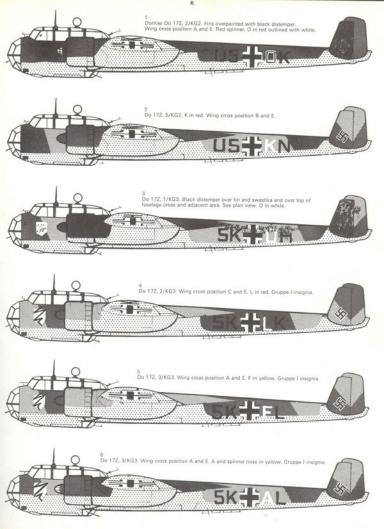


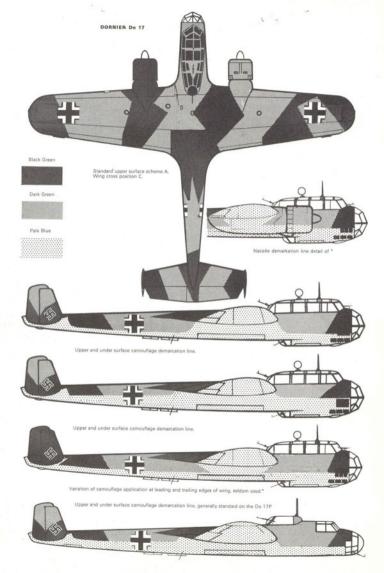
Left: Pilot's view from a He 111 with part of a large formation directly ahead. (R. Ward)

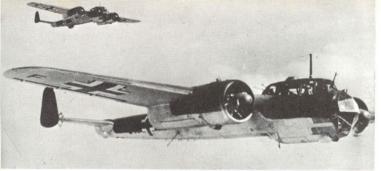
Below: Bird's eye view of the nose of an He 111, note reflection of high flying He 111 in dorsal windscreen. Overall black green scheme: (R. Ward)









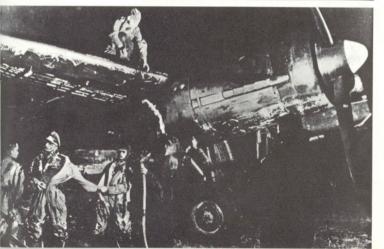


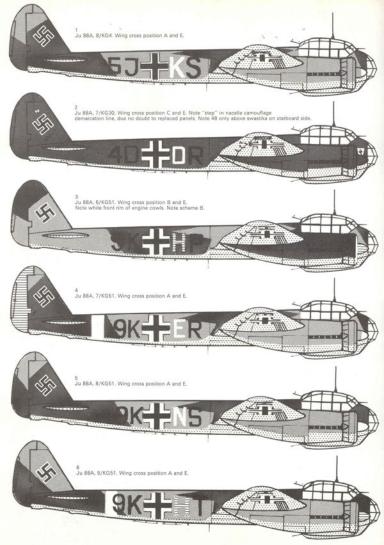
Above: Do 17Z's of the Battle of Britain period in standard splinter scheme, note fuselage and nacelle demarcation lines. (US National Archives)

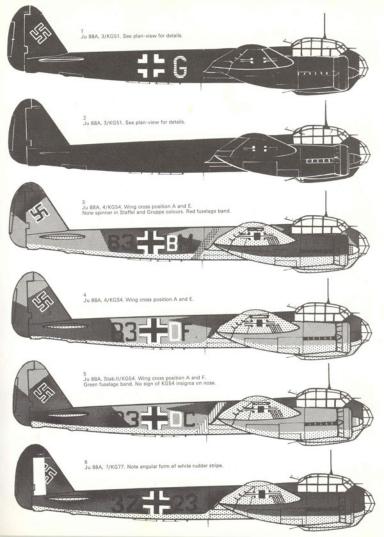
Right: Overall black green Do 17Z, wing cross positions clearly shown.

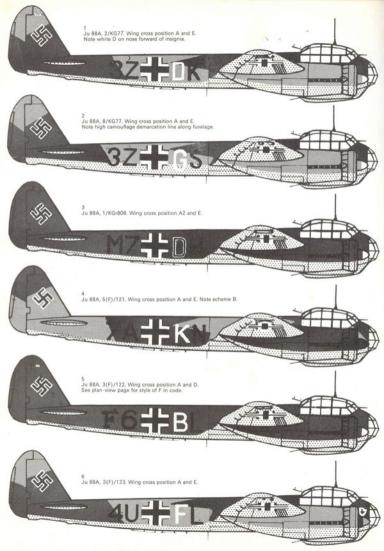
Below: With night operations forced on the Luftwaffe towards the end of the Battle of Britain under surfaces of He Ills and as in the case with this Ju 88 were painted over with matt black distemper. (R. Ward)

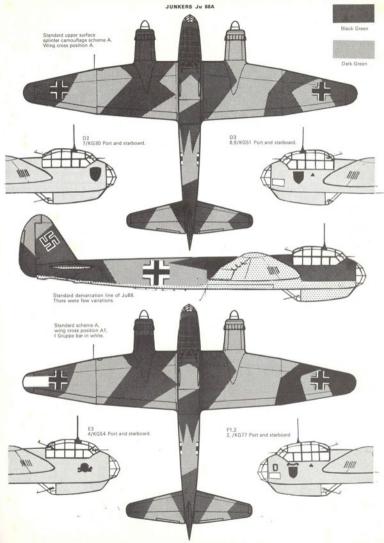


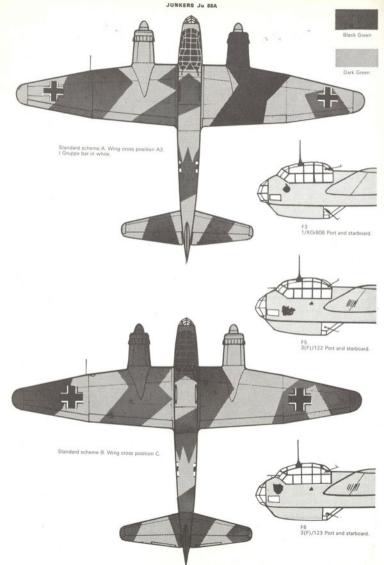


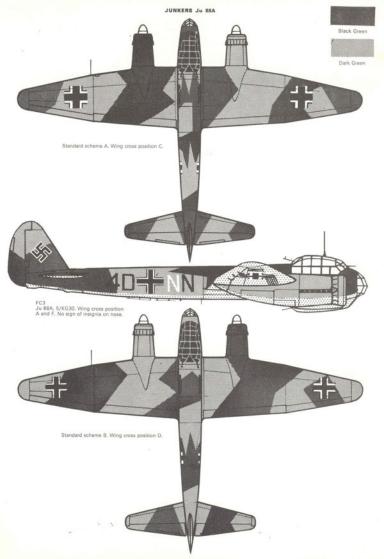


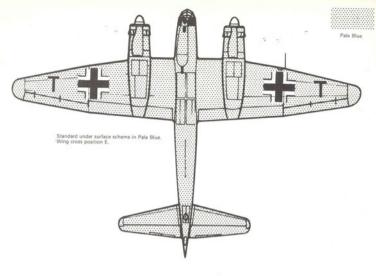




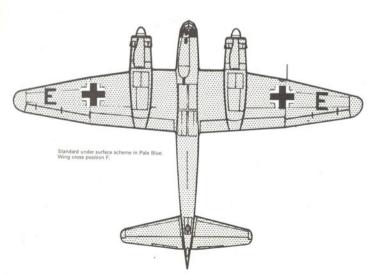


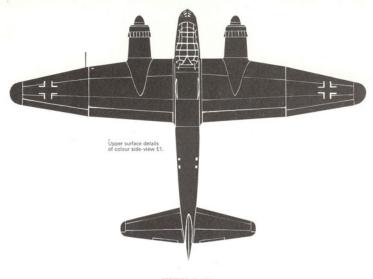




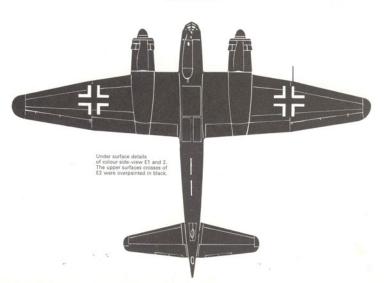


JUNKERS Ju 88A





JUNKERS Ju 88A







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Front cover, top to bottom:

FC1 Heinkel He 111, Stab./KG53 "Legion Condor", Luftflotte 2. Lille. September 1940. FC2 Heinkel He 111P, Stab./KG1 "Hindenburg", Luftflotte 2. Roseires-en-Santerre. Shot down on 4 September 1940.

FC3 Junkers Ju 88A, 5/KG30, Luftflotte 2, Gilze-Rijen.

FC4 Dornier Do 17Z, 9/KG2, Luftflotte 2. Cambrai.