Technical Training Within the German Luftwaffe

by

Werner Kreipe and Rudolf Kaester
CHAPTER I

Secret Flight Training in the Reichswehr as a Basis for the Later Development of the Luftwaffe (1921 - 1932)

Section 1. The Organization of the Training Program

The Versailles Treaty of 1919 expressly forbade the small armed force permitted the German Reich to have anything to do with military aviation. This, of course, put an automatic stop to all plans for a future flying force. There were allied control commissions appointed to make certain that Germany upheld the provisions of the Treaty scrupulously.

As far as Germany was concerned, then, military aviation seemed to be a thing of the past!

Nevertheless, as early as 1921 the first Chief of the Army Command (Chef der Heeresleitung), Generaloberst von Seeckt, began to lay the groundwork for an air training program with undeniably military aspects. Made possible by clever exploitation of certain loopholes in the Versailles Treaty, by the Treaty of Rapallo (16 April 1922), and ultimately by the Paris Aviation Agreement (Pariser Luftfahrt-Akkommen) of May 1926, von Seeckt's work was supported by the successive governments of the Reich during this period.

1 - Unless other sources are specifically credited, it may be assumed that the information contained in this chapter is based chiefly on the study by General der Flieger Felmy, "Die Luftfahrttausbildung in der Reichswehr" (Pilot Training in the Reichswehr (National Armed Forces)), Karlsruhe Document Collection.
The path leading to the establishment of a new military aviation training program was characterized by painstaking effort and ingenious improvisation. The first steps along that path were the following:

a. Recruitment for the Reichswehr of a sufficient number of experienced pilots and observers,

b. Keeping these personnel in practice and giving them further tactical training,

c. Guaranteeing a new generation of pilot personnel, and
d. Creating the technical framework within which all this was to be accomplished.

Crises in both foreign and domestic political developments added to the already tightly restricted freedom of action of the Reichswehr. It was only through the treaties mentioned above that the original strict provisions of the Versailles Treaty were gradually relaxed.

For reasons of military policy, then, all activity connected with military aviation had to be carried out in strictest secrecy. Until after 1935, the year in which Germany regained her military sovereignty, the concepts "secret" (geheim) and "top secret" (geheime Kommandoanche) haunted and frustrated military agencies at all echelons concerned with aviation.

For considerations of self-defense, these difficulties had to be accepted as a necessary evil. Their effect on the training plans of the Reichs Ministry of Defense (Reichswehrministerium) was just as detrimental as it was on the problems of finance and of domestic and parliamentary supervision. This period is known as the "the period of secrecy" or "the period of camouflage" (Tarnzeit).

In view of these highly specialized conditions, all organizational and planning activity carried out by the Troop Office (Truppenamt), under the command of the Chief of the Army Command, was restricted to non-
military activity such as the following:

a. Establishment of civilian pilot training schools,

b. Training of the new generation of pilot personnel,

c. Development and production of the aircraft and aircraft equipment needed, and

d. Training of the Reichswehr as a whole in matters of air raid protection and general air tactics, with special attention to be given to the relatively few officers with flying experience.

When the German armed forces were demobilized in the year 1919, one of the basic principles followed was to take flying officers and General Staff officers into the Reichswehr whenever possible — presumably with the intention of placing them in charge of developing a new air force when time came.

The first organizational plans (1920) for the newly-created Army Command (Heeresleitung) and Navy Command (Marine-Leitung) provided for the appointment of "air specialistse" (Fliegerreferenten) with token staffs. With the final organisation of the Reichs Ministry of Defense in 1921, these "specialist staffs" were expanded to efficiently functioning groups within the framework of the Troop Office (i.e. General Staff) and the Navy Command Office (Admiralty Staff).

In all questions of military aviation, the Reichsheer (National Army) looked to the following agencies for instructions and guidance:

a. Army Organisation Branch (Heeresorganisationabteilung), and

b. Air Defence Group (Gruppe Luftschutz), which was organisationally subordinate to the Army Organisation Branch but worked independently.

The Navy had set up a group of its own corresponding to the Army's Air Defense Group in the Reichs Ministry of Defense. The Navy group was called Navy Command (Air Defense) (Marineleitung - Luftschutz).
Organisationally attached to the Navy Command Office (Marinekommandoamt), the group was directly subordinate to the Navy Command. Apart from the coordination of certain common missions, the group worked quite independently of its superior Navy Command.

Both the Army and Navy groups had the need for camouflage to thank for their titles. The connection between the two was a fairly loose one.  

Since there were neither flying units to be trained nor schools to be administered, both groups led merely token existences – armed with imposing powers of command in an attempt to carry out at least the small-scale programs in pilot training and air tactics. In order to activate these programs in the field, the staff of each of the seven Defense Area Commands (Wehrkreiskommandos) and of the Naval Station Commands (Marinestationskommandos) at Kiel and Wilhelmshaven was assigned a "special duty air specialist (air defense) (Referent zur besonderen Verwendung - Luftschutz) and an aerial photography office (Fliegerbildstelle). The leader of each such detached section had the title of "air specialist" (Fliegerreferent). Beginning in 1929, the staffs of the three cavalry divisions were also expanded to include air specialists and aerial photography offices.

The special duty air specialists represented the only connecting link between the top-level agency and the troop units in which the potential instructors (the World War I fighter pilots and observers) and the potential trainees (the young officers selected for flying assignments) were serving as infantry or artillery officers with their assigned units.

The special duty air specialists were made subordinate to their assigned Defense Area Commands or Naval Station Commands and were integrated into the staffs of these organizations. A great deal depended upon their initiative and

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2 - See Appendices 1 and 2 for detailed pictures of the organizational structure.
their sense of dedication during the period of camouflage! Their most
important mission was to convince the troops and their commanders of the
urgent necessity for establishing the nucleus of a new air force. The
Reichswehr was so fully occupied with its own problems during the early
years of its growth that it had no time for extraneous activity. In the
prevailing opinion, flying was a luxury which a force with an authorized
strength of only 4,000 officers simply could not afford (sheer military
egotism). It took quite a while before this erroneous view gave way in
the face of reasonable argument! The general sphere of activity of a
special duty air specialist has been described above; his specific
responsibilities were the following:

a. Maintenance of up-to-date rosters of Reichswehr officers with
previous flight training and of former flying officers no longer in the
Reichswehr but subject to recall in case of mobilization. Revival of
awareness of the romantic aspects of flying and the traditional pride of
the pilot in his force.

b. Establishment of a cadre of replacement flying personnel, to
consist first of young Reichswehr officers and later on of even younger
officer candidates.

c. Inspection of the civilian pilot schools located in his respective
area, with a view to evaluating the professional and military training being
given.

d. Continued theoretical training of the Reichswehr flying officers
in the fields of ground and air tactics, including the holding of air war
games and practice flights.

e. Supervision of the work of the aerial photography office, pro-
vision of aerial photographs for training purposes, training of observer
personnel in aerial photographic techniques, and training of technical personnel employed in the aerial photography office.

Section 2. The Civilian Pilot Schools. Their Organization and aims.

For political as well as financial and personnel reasons, during the period...
of secrecy the Reichs Army and Navy restricted their planning activity to
the creation of training centers for pilot and observer personnel based on
civil aeronautical needs or on the activities of the sport fliers. In the
very beginning, the Army gave up any idea of trying to train secondary
flight and technical personnel; the Navy, however, as a result of its
utilization of ship-based aircraft, had no choice but to instigate training
courses for technical service personnel from the start. This included signal
and radio personnel, aircraft armors, torpedo personnel, and aircraft
servicing personnel.

On 1 January 1923 Germany regained her air sovereignty, a political
gain which was to have definite effects on the contemplated air training
program.

Despite this gain, the so-called "definitions" (Begriffsbestimmungen)
promulgated by the Allies still represented serious restrictions for
Germany's small and slowly-developing civil aviation industry. These
restrictions were more or less lifted by the Paris Aviation Agreement,
concluded in 1926 after long and difficult negotiations.

The "definitions" dealt primarily with the performance limitations to
be imposed on all aircraft licensed in Germany after 1923. The following
limitations were established for sport machines:

- engine - maximum horsepower 100,
- speed - maximum speed 75 miles per hour,
- climbing performance - maximum acceleration 3280 ft. in
  six minutes.

Only a limited number of aircraft specifically registered as racing
craft were permitted to retain the characteristics normally associated with
fighter aircraft.

The first training centers were established as private flight schools in 1923.
A joint venture by the German government and the Reichs Ministry of
Defense, the plan was given added impetus by the attitude of "passive re-
sistance" demonstrated by Germany in the face of the French occupation of
the Ruhr. The representatives of military aviation in these small schools
were the air specialists of the various Defense Area Commands. The old flight
school aircraft, the Albatross B-2, was retained as a trainer. Nearly all
of the schools were under the supervision of former German air force fliers
or active flying officers from the Reichswehr, who were granted extended
leaves of absence for this purpose. The purpose of this step was to create
a small force of qualified reconnaissance and fighter pilots as soon as
possible, while laying the groundwork for a future replacement force.

At the beginning of 1924, when political tension relaxed somewhat in
Germany, these schools were either disbanded outright or integrated into a
legally recognized civilian framework - the Sport Fliers, Ltd. (Sportflug
G.m.b.H.), Berlin. After this reorganization had been carried out, each
Defense Area Command had one civilian flight training school within its
geographical jurisdiction.

During the period from 1924 until 1933, the organisation of the flight
training centers was as follows:

On 1 January 1924, Sport Fliers, Ltd., with its headquarters in Berlin,
was established with government funds and under the invisible but Neverthe-
less powerful aegis of the Reichs Ministry of Defense. The company maintained
a chain of seven pilot training schools (one in each Defense Area Command),
equipped with sport aircraft which met the criteria imposed by the Allied
"definitions" for trainers. These schools held refresher courses as well as
a complete program for beginners. A great many former air force fliers
took advantage of the refresher course to renew their World War I pilot's
licenses, regardless of whether they were in the Reichswehr.
or in civilian life. The beginner group was recruited from a number of different sources.

The heterogeneous character of most of the trainee classes was not permitted to have a detrimental effect on the order and discipline of the training program. Professional competence and understanding in the guidance and administration of training activity, coupled with the friendly though by no means obvious supervision of the air specialists from the Defense Area Commands, helped to make the program run smoothly and effectively at all the schools.

The headquarters of Sport Fliers, Ltd., in Berlin, was responsible for organizing and supervising the training program at each school. The Reichs Ministry of Defense keeping scrupulously in the background, was the invisible "consumer" and "employer".

The Sport Fliers, Ltd., schools were distributed as follows:

Königsberg, East Prussia  I Defense Area Command
Stettin  II Defense Area Command
Berlin-Staaken and Warnemünde (school of naval aviation)  III Defense Area Command
Leipsig-Schkeudits  IV Defense Area Command
Boeblingen  V Defense Area Command
Hannover and Gosnäück (school for aerobatics)  VI Defense Area Command
Munich-Schleissheim  VII Defense Area Command

In addition, during 1924 and 1925 a number of private pilot training schools came into being:

Fabek + Ga., Hannover (sponsored by the Mark aircraft plant in Breslau)
Dietrich Gohst, Kassel (sponsored by the aircraft plant in Kassel)
private school in Münster
private school in München (under Udsl)
Pilot Training School, Darmstadt (Akaflieg)

Pilot Training School, Hannover (Akaflieg*)

The majority of the last-mentioned undertakings had little more than token value as far as military aviation was concerned; nonetheless they were recognised by the Reichs Ministry of Defense. After all, they contributed to keeping the idea of flight alive and maintained a satisfactory standard in the quality of their training.

The Sport Flies schools were organized in terms of the following functions:

a. Administration of the school and of the training program (under the direction of the ranking flight instructor)

b. Record maintenance (keeping records on trainee achievements, flying hours, etc.)

c. Air traffic control (under the direction of the Air Police (Luftpolizei))

d. Training courses (under the supervision of a flight instructor)

e. General administration (budget and fiscal matters, physical plant, food supplies, etc.)

f. Technical administration (under the direction of the ranking aircraft mechanic foreman).

From the point of view of service supervision, the schools were subordinate to the private agencies which sponsored them (more about these later).

As far as flight traffic control was concerned, each school was under the jurisdiction of the nearest air observation station (Flugwache) of the Air Police.

In questions of national air sovereignty (air traffic routes, aeronautical policy, etc.), the schools fell within the purview of the Aviation Branch (Abteilung Luftfahrt), Reichs Ministry of Traffic (Reichsverkehrsministerium).
The funds needed to finance the schools were provided in the form of subsidies, grants, and tuition payments by the trainees. The trainee groups were recruited from the following sources:

a. Army and Navy officers (known as Altmarkcr since 1927), for whom the government paid a fixed training subsidy.
b. Younger officers (known as Jungmärker since 1927), attached to the Defense Area Commands.

c. Younger members of the pilot groups attached to the technical colleges; for these, as well as for the personnel listed under b, above, tuition assistance payments were made by the government or by private financing agencies.

d. Qualified candidates at the private schools, who paid for their own training.

Pilots' Licenses and Length of Training Period

Until 1935, the Reichs Ministry of Traffic distinguished among the following types of pilots' licenses:

A 1 - Single-seater aircraft; no passengers allowed.
A 2 - Single-seater aircraft, with permission to carry one passenger (maximum speed 93 mph, maximum horsepower 100)
B 1 - Twin-seater aircraft, with permission to carry one passenger (maximum horsepower 250, maximum speed 124 mph)
B 2 - Single-engine multisecater (net weight over 5,625 lbs.)
C 1 - Single-engine multisecater (net weight over 7,675 lbs.)
C 2 - Multiengine multisecater

Aerobatics License - distinction made between licenses issued to pilots wishing to make their living as stunt pilots and pilots interested in aerobatics as a hobby.

The length of the training period needed to qualify for the licenses listed above was as follows:

A 1 - two months A 2 - three months
Aerobatics - one month
B 1 - two months B 2 - three months
C 1 - two months C 2 - five months
Weather conditions, the supply of training aircraft, and the number of trainees sometimes required deviations from the standards set above.

Under these conditions, provided that the ratio of students to aircraft to suitable flying weather was fairly favorable, a gifted student could earn his C 2 - License in about a year and a half. By that time he was a legally licensed aircraft pilot, to be sure, but a pilot with no flying experience whatsoever. For such important subjects as cross-country flying, night flying, and instrument flying clearly could not be covered adequately in the short time allotted.

The steady increase in air traffic and the consolidation of the small airlines to form the Lufthansa on 1 April 1925 clearly revealed the need for a German Commercial Flight School (Deutsche Verkehrsfliegerschule). This school was promptly established in Berlin-Staaken, where it took over the task of training a younger generation of pilots for the Lufthansa (B 2 or C 2 licenses). In addition the School trained flight captains for countless foreign airlines and other customers. It was taken for granted that C 2 - license holders should be given special training in small, seminar-size courses, so that they might be prepared to contribute to the planning going on in the Reichshehr Ministry.

The German Commercial Flight School was admirably organized and had an excellent reputation in aeronautical circles throughout the world. Its Director at that time was Captain Alfred Keller, Retired, a bomber commander of great fame from World War I. As Generaloberst, he held a series of high-level Luftwaffe posts during World War II.

In 1927, partly as a result of the plans under way for training in Russia, the Reichshehr Ministry cooperated in the establishment of a second Commercial Flight School at
Munich-Schleissheim to relieve the overcrowded condition of the School at Staaken. With a few minor exceptions, Staaken was to limit itself to training for the C 2 - license, while all B 2 - license training was to be carried out at the Schleissheim School.

At Schleissheim, the trainees were subjected to a more intensive program of testing to determine more accurately the type of advanced training for which each man was best suited. The number of trainees at Schleissheim was kept high deliberately in order to make sure that the supply of replacement personnel would be adequate to meet the demand (i.e. later military demand).

The majority of Commercial Flight School students completed both the Schleissheim and Staaken centers, earning the right (C 2 - license) to pilot passenger and freight aircraft. A number of them obtained jobs as pilots in other countries. Each year thirty students were retained at Schleissheim for immediate advanced training as fighter or aerial reconnaissance pilots (see the section dealing with training in Russia).

At the same time as the Commercial Flight Schools (landplanes) were founded, corresponding training centers for seaplane pilots were established at Warnemünde, Lüst (on the island of Sylt) and Stettin-Alt Dama (a branch of the Warnemünde school). It was the task of these schools to train a younger generation of seaplane pilots. At that time the German Navy attracted very little public attention, and it took full advantage of this fact to set up small special courses (the so-called Sea-Eagle (Seeadler) courses) to train naval pilots and air observers.

Ostensibly this training was being carried out on behalf of Seewer, Ltd.,
with its seaplane stations at Holtenau and Nordeney. The Seever Company
had been officially hired to tow aerial targets during the practice maneuvers
of the Navy's antiaircraft artillery forces, and for this, of course, a
number of qualified civilian pilots was required. On the basis of these small
deceptions, the Navy was able to operate somewhat more freely than the Army 3.

The year 1926 was an extremely significant one for the development of
aviation. The Paris Aviation Agreement was concluded in the autumn of 1926
after lengthy diplomatic negotiation. With it, the ban on civilian aircraft
construction and the allied "definitions" were more or less abolished. The
ban on the construction of military aircraft remained in effect.

The provisions of the Paris Agreement were quite detrimental as far as
sport flying was concerned, for they specifically forbade state or federal
subventions. As a result the Spär Fliers Schools, which had been financed
almost exclusively by government subsidies, were forced either to disband
entirely or to seek some other means of financial support. As an interim
solution, the Commercial Flight School at Staaken, as an officially recog-
nized training institution, took over the administration of at least a part
of the Sport Fliers schools, until a new organization not financed by govern-
ment monies was founded on 1 April 1927 (Aviation, Inc. (Luftfahrt G.m.b.H.)).
The new company took over the assets of the Sport Fliers, Ltd., including
the school at Staaken. The schools in

3 - See the study by General der Flieger Siburg "Vorbereitende Massnahmen der
Marineleitung auf dem Gebiet des Seeflugwesens in den Jahren 1920 - 1933"
(Preparations Undertaken by the German Navy during the Period 1920-1933
in the Field of Naval Aviation), Karlsruhe Document Collection.
Königberg, Stettin, Schkeuditz, Hannover, and Osnabrück were disbanded; in their place flight practice schools were set up at Würzburg and Böblingen. The training program continued to operate exactly as before; the only change was in its sponsor.

The Paris Agreement permitted the appointment of seventy air force officers to the Reichswehr. Clearly, this was seized upon as justification for the establishment of extremely close contact between Aviation, Inc., and the Reichswehr Ministry. During the years to follow, the original quota of seventy officers was augmented quite considerably.

Section 3. The German Training Station in the Soviet Union.

On the basis of the Treaty of Rapallo in 1922, Generaloberst von Seeckt succeeded in gaining the approval of the appropriate German and Soviet agencies for the establishment of an air testing station at Lipetsk, 310 miles south of Moscow, where was to be an air armament school for all service branches attached to the testing station, and the whole was to be under German administration. The testing station fulfilled its purpose admirably and without any serious friction until 1933, when it was no longer needed.4

The station was established in 1924 and by 1925 it was ready to begin training instructional personnel for its own needs. The first courses

4 See Felmy, op. cit., and also General der Flieger Speidel, Retired, "Reichswehr und Rote Arme" (The Reichswehr and the Red Army), a reprint from the January 1953 number of the Vierteljahrshefte für Zeitgeschichte (Quarterly of Contemporary History), Stuttgart, Karlsruhe Document Collection.
began in 1926, after numerous difficulties created by the rather unique 
political and military aspects of the situation had been overcome.

The school at Lipezk represents the real beginning of Germany's training 
activity in military aviation. It made deep inroads in the civilian training 
schools. Apart from the need for compliance with certain Soviet legal 
requirements, the testing station was directed exclusively by the Troop 
Office (Truppenamt) of the Reichshehr Ministry. At last the Troop Office 
was in a position to organize and direct the training program designed to 
lead to a new German air force.

The additional training potential represented by the Lipezk station 
led to a number of organizational changes on the part of the Troop Office. 
It was obvious that, for reasons of maximum efficiency and economy, only 
the best qualified personnel could be allowed to participate in the six-
month courses which began at Lipezk in April 1926.

In order to assure that this would be the case, the following measures 
were instituted.

a. Observer training, which had been rather neglected so far, was 
concentrated at a special training center in Berlin, where the courses 
were officially designated as "camouflage courses" (Tarnlehrgänge). The 
'camouflage courses' were both theoretical and practical. The practical 
sessions were devoted to tactical training in the use of radio communica-
tion, night observation training, artillery observation training with two-
way radio (including practice in the various fire adjustment methods).

In the Germany of 1927 and 1928
it was impossible to carry on training of this kind in the air. Therefore, a successful substitute had been devised in the form of so-called "mountain observer courses" (Steilbeobachtlerlehrgänge) held in the Riesengebirge or in Upper Bavaria. The "aircraft" radio stations were located in the mountains some 3,280 ft. above sea level, while the artillery targets lay in the valley below, in the line of vision of the aircraft stations up above.

b. The Altmärker and Jungmärker, selected for further training as fighter pilots, were given intensive theoretical training to fit them for the Lippek courses.

c. The Commercial Flight Schools at Staaken and Schleissheim were reorganized to bring them more closely into line with the needs of the Reichswehr. This general trend led, in 1929, to the transfer of the School at Staaken to Braunschweig, where it had more space at its disposal and where it could be more effectively camouflaged. During the same year, the "camouflage courses" were moved to Braunschweig as "Branch N (Night Flight)" (Abteilung N (Nachtflug)) and integrated into the training program of the School as a civilian undertaking.

d. That section of the Troop Office heretofore concerned with aviation was detached from the Office and became an independent inspectorate of the Reichswehr Ministry (Inspectorate No. 1 (Air) (In. 1 (L)) under General-major Ritter von Mittelsberger.5

The testing-training station at Lippek functioned satisfactorily as long as it was needed, i.e., until Hitler came to power.

5 - See Appendix 3.
Section 4. The Training Program.

A. In Germany.

1. Pilot training.

During the period of secrecy, pilot training lay exclusively in the hands of civilian organizations. This was also true of the flying officers belonging to the Reichswehr; they were given leave to attend civilian training and refresher courses.

Training leading to pilots' licenses of the categories A2 through C2 was based on the guidelines and principles established by the Reichs Ministry of Traffic (Civil Code Dealing with the Training of Aircraft Pilots). The newly created Inspectorate No. 1 (Air) was restricted to selecting of the personnel to be trained and to making certain that the schools were adequately administered.

As far as the directors of the schools were concerned, this system was extremely practical since it made no distinction between the training of civilian students and members of the Reichswehr. The only difference was the fact that Reichswehr candidates were subjected to a far stricter physical examination.

Training Courses

In order to maintain and increase the flying ability already possessed by the Reichswehr pilots, in 1927 the so-called "training courses" were initiated in the Aviation, Inc., schools at
Würzburg and Büblingen. Every Reichswehr officer holding a pilot's license was required to complete a minimum of 15 - 20 flying hours per year during the course of a several weeks' assignment to one of these training centers in order to keep his flying ability up to date.

Thanks to the outstanding ability of the two directors, Mr. Riesler and Ritter von Greim, and their highly-qualified staffs, the periods spent at the schools were extremely worthwhile for the Reichswehr officers, both professionally and personally.

The relatively few training hours were broken down to afford practice in the following:

a. practice in flying all the various types of aircraft available in the A2 and B1 classes,

b. aerobatic practice,

c. night flying, and

d. cross-country flying.

These training courses proved highly successful despite the low requirement in terms of number of hours!

The Jungenmärker Group

The Jungenmärker (the camouflage designation for the officer candidates - 30 per year - selected for flight training prior to their induction into the Reichswehr) represented a new group among the Reichswehr pilots from 1927 on. They were assigned to the Commercial Flight Schools for the basic training needed to fit them for advanced courses in Russia. Their training at the Commercial Flight Schools ended with the B2 pilot's license.

The ten best qualified students from each course were then sent on to fighter pilot training at Lipetsk. The remaining twenty were assigned to other groups for further training as military pilots (bomber or aerial reconnaissance pilots).
2. Observer Training.

Prior to 1927, the training of observer personnel in Germany was pretty much hit and miss. The Reichswehr Ministry and its air specialists in the various Defense Area Commands did not have adequate training facilities at their disposal. Everything that was done in the field was so clearly the result of improvisation that it can be classified - at best - as an introduction to observer training.

The air specialists had been allocated an extremely modest budget for this type of training, and the funds involved had to be very carefully utilized if they were to bring any results whatsoever. They were barely sufficient to finance the maintenance of an aerial photography section, the accomplishment of one tactical air defense flight per year per Defense Area Command, and one short-term observer course!

These short-term courses, most of them no more than a week in length were made up of theoretical instruction, lectures, and field trips. There was no flight practice whatsoever.

The instructional staff was made up of qualified older flying officers, General Staff officers, and technical experts. If the situation was particularly favorable, it was sometimes possible to charter a civilian aircraft in which to carry out an instructional flight or two (flying classroom). The annual tactical air defense flight represented the climax of all tactical training (both ground and air). It included flying classroom instruction and inspection trips to various civil aviation installations.
The results of training of this sort were bound to be negligible; nevertheless, by 1927 the following advantages had been won:

- Maintenance of interest in and receptiveness for the advances of aeronautical technology and aerial tactics on the part of the flying personnel of the Reichswehr.

- Effective preparation for the camouflage courses scheduled to begin in Berlin in 1927, which — in turn — were to serve as thorough preparation for the air armament training courses to be held in Lipetsk beginning in 1928.

**Preparations For Training In Russia.**

The initiation of training courses at Lipetsk provided an additional incentive for the Inspectorate No. 1 (Air) to intensify the preliminary training given in Germany. The Reichswehr Ministry was well aware of the fact that the 180 pilot officers on its rolls would be entirely inadequate in the case of a general mobilization as well as for the planned activation of air units commensurate with the expansion of the Army to twenty-one infantry divisions. They were lacking both in training standard and in numbers; most important, there was no younger generation trained to replace them.

After lengthy negotiations between the Reichswehr Ministry and the Reich Ministry of Traffic, the Chief of the Army Command (Chef der Heeresleitung) approved the following program of training (presumably sometime during 1927):

- Thorough theoretical and practical refresher courses for the Reichswehr pilots, to be carried out in Germany and in Russia. These courses were to be limited to approximately thirty students each, 70% of them with flying experience from World War I and 30% of them beginners. This group of trainees was known as the "Altärmer."
b. Pilot training for selected officer candidates (approximately thirty per year) prior to their induction into the Reichswehr. The camouflage designation for this group was "Jungmärker". (The Jungmärker group was also mentioned in 1, above (Pilot Training)).
Beginning with the winter of 1927-28, observer training was to be organized as follows:

a. Six-month course within the framework of the 'camouflage courses' in Berlin, later (i.e. after 1929) under the auspices of Branch H in Braunschweig, designed to prepare students for further training in Lipetsk.

b. Six-month course leading to the A2 or B1 pilot's license (for "Altmark" members only), carried out at the Aviation, Inc. schools at würzburg and Böblingen.

c. Six-month course for observers, qualifying the graduates for observer duty at the Lipetsk training center.

d. Regular (until 1932) courses in such specialized fields as aerial photography, navigation, radio communication, etc. In addition, regular pilot refresher courses were held, requiring 15-20 flight hours from the participants.

The Camouflage Courses In Berlin

The camouflage courses in Berlin represented a kind of advanced military school for observer personnel, a school which gave them the entire theoretical body of experience in their field for future application. The instructional staff had been selected with care and was made up of General Staff officers, experienced pilot officers, qualified engineers, and other technologically trained personnel. Assignment to one of these camouflage courses meant that the officer concerned would spend the majority of his time in theoretical instruction, lectures, and practice sessions devoted to radio communication and aerial photography. Saturdays were counted as practical training days and were taken up with appropriate field trips or with instruction in the "flying classrooms".
Because of weather conditions, the theoretical courses always began in October and came to an end in March. In this way, the entire spring and summer, with their favorable flying weather, could be utilized for practical flight training in Lipetsk.

The program at Lipetsk was subdivided into the following individual subjects:

a. ground and air tactics, as illustrated in aerial maneuvers;

b. Aircraft construction, including engines and aircraft equipment;

c. air armament, bombs, practice in shooting airborne artillery and in dropping explosives;

d. aerial reconnaissance and anti-artillery techniques; adjustment fire techniques - with the help of classroom instruction in radio communication and the "mountain observer courses";

e. direction finding, aerial navigation, and meteorology;

f. aerial photography techniques; and 

g. Russian and English language instruction.

There was no such thing as a final examination. Towards the end of March every year, small groups of eight to ten students made their way to Lipetsk, so that practical flight training could get under way by mid-April.

Seaplane Observer Training.

The training of observer personnel for seaplane duty was begun on 1 October 1928 in the Commercial Flight School at Wannemünde (Group K - named after its leader Lt. (Kapitanleutnant) Kocher, Retired). Running under the designation "Eagle" courses, each course lasted two years and trained a total of approximately twenty-five air observers. This number was considered to be more than adequate in the beginning, since it was sufficient to man the naval reconnaissance squadrons envisioned in the case of total mobilization.
The main training fields covered by Group X were naval air tactics, aerial reconnaissance in joint operations with naval forces, ship identification, over-water navigation and radio navigation, operation of anti-ship artillery, meteorology, and the use of torpedoes and bombs.

The aircraft models commonly used in this type of training were the Heinkel-60 (which could be shot out of a catapult) and the extremely versatile Heinkel-59.

Effective 1 October 1933, Group X (Sea-Eagles) was expanded to form the Naval Observer School (Seebeobachterschule) at Warnemünde; its courses were reduced to one year, since practical training could be carried out with the newly created (1 October 1934) sea reconnaissance squadrons.

After Germany attained military sovereignty in 1935, the Naval Observer School was transferred from Warnemünde to Parow-Stralsund.

See the appropriate Appendix for a summary of the aircraft models most commonly utilized for training purposes during the period from 1923 through 1932.

B. In the Soviet Union (Air Armament Training).

The years 1926 and 1927 were utilized to assemble an instructional staff for Lipezk and to establish the over-all training program for the future air armament courses to be held there. In the spring of 1928, the first systematic training courses (for fighter pilots and air observers) got under way. This period may well be considered to represent the beginning of Germany's air war academies.

6 - See Appendix 4.
Beginning with the spring of 1928, Inspectorate No. 1 (Air) was in a position to gather and evaluate experience on its own and to supervise the training program directly.

As early as 1927 the first steps were taken to activate the necessary instructional personnel. One squadron each of fighter, close-range reconnaissance, long-range reconnaissance, and bomber instructors were recruited from the personnel already in training at Lipezk and organized into instruction squadrons. In 1928 for the first time, each squadron was assigned students from the camouflage course in Berlin, in time for them to take advantage of the spring/summer flying weather. During the years to follow, up to and including 1931, this procedure was repeated with minor modifications, so that a total of twenty-five to thirty students per squadron could be trained each year.

Thanks to the outstanding work of organization on the part of the German agencies involved, the willing cooperation received from technical experts in all fields, and - last but far from least - the fact that sufficient aircraft and equipment were available, the training program at Lipezk functioned smoothly and very effectively. Minor instances of interference and deliberate creation of difficulties on the part of the Russian authorities were not unknown; however, they remained within bearable limits until 1932.

The guidelines developed for the theoretical training were based on the body of experience gathered during World War I (far from up-to-date, of course) and on foreign training manuals. Thus the following missions were almost as urgently necessary as the accomplishment of training itself:

a. development of more specifically applicable training guidelines,
b. collection and evaluation of experience in the field of training,
c. collection and evaluation of experience in the field of operations (up to squadron and group level), and
d. practical testing of aircraft and equipment for possible
utilisation at troop level.
Fighter Pilot Training

Theoretical training was based on the body of experience gathered by fighter pilots during World War I and on foreign training manuals in the field. The instructional staff had been trained in Lipesk during 1926 and 1927 and organized into a fighter training squadron. The cadre of instructors formed what might be termed the "framework" of the fighter pilot course. Each summer sufficient students were accepted (usually between ten and twenty) to bring the squadron up to full strength.

There were plenty of fighter aircraft (Fokker D-XXIII) and trainers (Heinkel HD-17) available for practice flights.

The course covered the following phases of fighter pilot activity:

a. practice flights to acquaint the students with the - for German pilots - completely unfamiliar fighter and trainer aircraft types (unfamiliar chiefly in respect to speed and horsepower),

b. practice flights designed to ensure familiarity with the new aircraft under all possible conditions,

c. practice in formation flying, in groups of two aircraft up to squadron strength,

d. target-location practice and artillery operation, and

e. practice in aerial combat.

The course usually began in May and continued until the end of September.

Observer Training, Close-Range and Long-Range Reconnaissance Aircraft.

Logically, the instructional cadres assigned to training in close-range reconnaissance, artillery observer duty, and long-range reconnaissance were

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7 - Appendix 5 gives a summary of the total number of pilots trained during the period 1925 through 1932.
selected on the same basis as those selected for training in fighter aircraft activity. All three of these branches had at their disposal an experienced pilot officer as chief training official.

Every summer the instructional cadres were brought up to squadron strength by the assignment of observer and pilot personnel who were trained under the supervision of the instructional staff during the day-to-day activity of the squadron. In addition to strictly professional training, the students also participated in courses dealing with the methods and techniques of command (for squadron leaders and squadron operations officers - i.e., those in charge of radio, communication, navigation, armament, aerial photography, etc.). The following aircraft types were available for training purposes: the Albatross L-76 and L-78 and the Heinkel HD-17.

**Training Fields for Close-Range Reconnaissance Pilots.**

a. close-range direction finding, target reconnaissance, and combat reconnaissance.

b. location of artillery targets, accompanied by actual practice in adjustment firing with Russian batteries (live ammunition).

c. practice in the various methods of reporting (radio, air drop, maps and sketches, etc.).

d. interpretation of aerial photographs.

e. practice in air-to-ground firing and in aerial combat techniques.

**Training Fields for Long-Range Reconnaissance Pilots.**

a. long-range direction finding with reference to ground landmarks.

b. long-range railroad and highway reconnaissance.

c. airfield reconnaissance.

d. practice in the use of automatic aerial camera.

e. long-range radio communication.
In general, the long-range training course was closely patterned on the one set up for close-range reconnaissance pilots.\(^8\)

**Bomber Pilot Training.**

Bomber pilot training was also carried out within the framework of day-to-day squadron duty. As was the case with the reconnaissance pilot trainees, the students themselves carried out all the various functions of the squadron.

**Training Fields.**

a. long-range flights to provide practice in navigation by ground orientation as well as by radio,

b. target reconnaissance and practice in approaching the target area,

c. practice bombardment of clearly marked targets (165 to 330 ft. in diameter) from altitudes ranging from 3280 to 9840 ft., using 110-lb. cement bombs (with smoke generator) with telescopic or mechanical bombsights.

d. low-altitude (less than 1650 ft.) bombardment.

e. practice in aerial combat techniques.

The effectiveness of this training was put to the test each fall, when the German pilot trainees participated in the Red Army maneuvers carried out in the Voropesh (Don) area. Traditionally, a full-strength German close-range reconnaissance squadron, a flight of anti-artillery aircraft, and a flight of long-range reconnaissance aircraft were selected to take part in the Soviet maneuvers. German fighter and bomber forces participated only in theory.

The German units were completely on their own (with only an interpreter to help them out) in all dealings with the Soviet command headquarters and

\(^8\) See Appendix 6 for exact statistics on the training of observer personnel.
maneuver leaders. The fact that both sides maintained well-organized radio
and telephone networks guaranteed a smoothly-functioning system of communication.

The performance of the trainee squadron each year came up to both
German and Soviet standards. The maneuvers served as eloquent proof of the
fact that German training goals were being adequately met by each year's
contingent.

9 - In this connection, the reader is referred to Appendix 7.
CHAPTER II

Organization

Chapter II is concerned with a description of the organization of the top-level agencies involved in training. In it, an attempt will be made to deal with all the various problems of command and of training, to define the technical, personnel, and material factors which played important roles, and to evaluate the training program in terms of the quality and quantity of the replacement personnel assigned to the troop units. Chapter II is designed to present a general survey only, more detailed information being relegated to the following chapter on "Training", where it is classified according to specific fields.

Sections 1 through 5 describe the growth and development of the top-level training organizations during the years from 1933 until 1945.

Section 1. The Period of Secrecy.

a. Spring 1933 - The Reichs Air Ministry (Reichsluftfahrtministerium) takes over the pilot training program set up by the Reichswehr.

With the establishment on 5 May 1933 of the Reichs Air Ministry (hampered by the need for a certain amount of camouflage until 1935, which meant that the Commander in Chief, Luftwaffe,

10 - The data contained in this chapter are based primarily on General der Flieger Felmy, Retired,"Luftfahrtausbildung in der Reichswehr, Teil III: 1929 bis zur Auflösung von Lipezk Herbst 1933" (Pilot Training in the Reichswehr, Part III: 1929 through the Disbandment of the Lipezk Station in the Fall of 1933), and "Die Ausbildung 1934-1938 unter dem 'Kommando der Schulen'" (Training during the Period 1934-1938 under the Auspices of the "School Command"), Karlsruhe Document Collection.
and his General Staff could not yet be publicly acknowledged), the German
Reich had taken the first step towards the creation of an independent air
force.

Within the framework of the program of coordination agreed upon by the
Reichswehr Ministry and the Reichs Air Ministry, Captain Goering, Retired,
acting as provisional Reichs Air Minister in the beginning, gradually took
over all those agencies within both Ministries which had to do with aviation.
Captain Goering was successful in overcoming the many political and financial
obstacles standing in their way.

The first organizational steps towards the establishment of a German
air force were undertaken immediately. The Reichs Army (Reichsheer), with
the concurrence of Generaloberst von Blomberg, Reichs Minister of War (Reichs-
kriegsminister), released a number of highly qualified officers to the Luft-
waffe, including Colonel Wever (BStG), an excellent man for the post of
Chief of the General Staff. Colonel Wever was entrusted with the command of
the Air Command Office (Luftkommandos), Reichs Air Ministry, which was,
to all intents and purposes, the predecessor of the Luftwaffe General Staff.

The leaders of the new Wehrmacht branch, including Colonel Wever (who
was most impressed by the preliminary contributions of the Troop Office and
the Inspectorate No. 1 (Air)), were fully aware that a strong Luftwaffe
could be developed only on the basis of a broadly-conceived and smoothly
functioning training program. This conviction, coupled with the realization
that the planned strength in air units would be totally inadequate in the
event of a rapid increase in Reichs Army Strength from seven to twenty-one
division, was instrumental in determining the first training program. For
the Reichs Air Ministry could
not begin to think of setting up new flying units until the framework for an adequate pilot training program had been created.

As far as aerotechnical training (i.e., the training of aircraft maintenance personnel of all categories) was concerned, there simply wasn't any - apart from one or two improvised courses in aircraft armament and aircraft ordnance held by the 2d Transport Battalion (2. Fahrbteilung) at Rendsburg.

The air station at Lipno was being deactivated at this time; its facilities could no longer be counted upon. Thus, after 1933, the smoothly functioning Commercial Flight Schools and the schools sponsored by Aviation, Inc. became the backbone of the pilot training program. Several attempts to reactivate the small training centers formerly maintained by the Sport Fliers, Ltd., although undertaken with the best of intentions, proved unrewarding. The arrangements concluded in 1933 with the Italian air force for the training of a limited number of German bomber and fighter pilots, designed to compensate to some extent for the loss of the facilities at Lipno, also proved to be inadequate.\(^\text{11}\)

Moreover, the results achieved by the Italian venture were quite disappointing and the agreement was cancelled in 1934.\(^\text{12}\)

\(^\text{11}\) The agreement was concluded by General Goering and Italy's Marshal Balbo.
\(^\text{12}\) See Appendix B.
creating the required training organization out of nothing! Out of consideration for the political situation, it was set up as a civilian agency to begin with. Nevertheless, organizational guidelines and supervisory responsibilities were firmly delineated; training goals were clearly defined in terms of kind and scope of training; and the appropriate training centers were established.

The sudden (effective on 1 February 1933) subordination of the existing Reichswehr pilot training program to a civilian Aviation Commission (Luftfahrtkommissariat) - officially redesignated Reichs Air Ministry on 5 May 1933 - invited a great deal of criticism and sheer disbelief that such a system could function.

The new Commission found itself faced with a difficult task from both the military and the political points of view. Slowly the initial difficulties and tensions made way for a spirit of more willing cooperation between the military and the civilian training organization. This cooperation soon began to bear tangible fruit in the form of improved morale and notable progress throughout all echelons of the Luftwaffe, which - as a newly-created armed forces branch - all too often had to be on its guard against the machinations of Party cliques and other special interest groups. It was highly important that the newly-established Reichs Air Ministry succeed in consolidating under one central agency the various military plans and projects affecting training and in gaining complete authority for the pilot training program. To this end, the following measures were deemed necessary:

a. In February 1933, a Pilot School Command W (Kommando der Fliegerschulen W) was hurriedly created within the framework of the Reichs Ministry of Defense, under the supervision of the newly-established Air Command Office. This Pilot School Command was responsible for the activities of the schools at Braunschweig and Schleissheim (for Army pilots) and those at Warnemünde.
and list (for Navy pilots). In all four of these schools, even before
Hitler's ascension to power in 1933, there had been a definite - though
well-camouflaged - emphasis on the military aspects of pilot training. Even
so, despite the establishment of this first command agency of clearly-defined
military character, the majority of pilot training (both land and sea) continued
on a civilian basis, under the auspices of the Commercial Flight School
headquarters in Berlin. The Commercial Flight Schools officially attached
to the Pilot School Command W were later transformed into air ordnance schools
(Fliegerwaffenschulen).

On 15 May 1933, the Air Defense Office, Reichs Ministry of Defense,
together with its subordinate Pilot School Command W, was officially absorbed
by the Reichs Air Ministry.13

This marked the end of pilot training activity as far as the Reichs
Ministry of Defense was concerned.

b. On 1 November 1933, the Reichs Air Ministry created the Inspectorate
for Flight Schools (Inspektion der Fliegerschulen), whose responsibilities -
while still subject to the camouflage demanded by the need to proceed in
secrecy - were definitely military in nature. All the existing agencies which
had to do with pilot and air ordnance training were made subordinate to the
new Inspectorate. For reasons of secrecy, it retained the designation
"German Commercial Flight School" until 1935. The well-known Navy pilot
Friedrich Christiansen was appointed Inspector; his Chief of Staff and con-
current Commander, Air Ordnance Schools (Kommandeur der Fliegerwaffenschulen),
was Colonel (GSC) Felmy.14

The judicious selection of the military and civilian personnel to fill
the slots of the new Inspectorate guaranteed a steady growth in its effectiveness.
13 - See Appendix 9.
14 - Appendices 10 and 11 present a graphic summary of the organization of the inspectorate for Flight Schools, showing the subordination of the training schools, as it remained until the summer of 1934.
without giving rise to adverse comment or criticism. Very gradually, the
military element was pushed to the fore. In the end, carefully selected
General Staff officers, highly-qualified pilot personnel, and experienced
and competent technical personnel were all working together to maintain an
effective training program.

Section 2. Training under the Luftwaffe General Staff, School Command

(Kommando der Schulen), 16 March 1935 - 31 January 1936.

With the achievement of military sovereignty on 16 March 1935, Germany
officially established the Luftwaffe as the third Wehrmacht branch. Its Com-
mander in Chief was General Goering, and it was incorporated into his Reichs
Air Ministry. From then on, his official title was Reichs Air Minister and
Commander in Chief, Luftwaffe (Reichsminister der Luftfahrt and Oberbefehl-
haber der Luftwaffe). This organizational move made things much simpler.
The facade of camouflage was dropped to make way for a clearly delineated
military chain of command. As of 15 August 1935, the Air Command Office was
openly redesignated the Luftwaffe General Staff. Effective 1 April 1935,
at the direction of the Reichs Air Minister and Commander in Chief, Luftwaffe,
the Inspectorate for Flight Schools was transformed into a purely military
School Command. The Command was directly subordinate (via the State Secretary
(Staatssekretär)) to the Commander in Chief, Luftwaffe.

There were no significant changes made in the internal organization of
the Staff or in its personnel.
In order to keep pace with the steady growth of the training program, certain organizational modification were undertaken within the School Command. The training of personnel for land aircraft and for sea aircraft were separated, each program being placed under the direction of a separate subordinate command agency.

The land aircraft pilot schools (Flugzeugführerschulen "Land") were made subordinate to a new command headquarters located in Neuruppin; the sea aircraft pilot schools were made subordinate to the Command Headquarters, Pilot Schools and Replacement Battalions (Sea) (Kommando der Fliegerschulen und Ersatzabteilungen "See") in Kiel 15.

a. Supervision of Training by the Luftwaffe General Staff.

Effective 1 April 1935, the Luftwaffe General Staff assumed responsibility for all training (military, pilot, and aerotechnical) within the Luftwaffe, including training in the schools as well as in the field. Within the General Staff, supervision of the training program was assigned to Branch III (Training) (3. Abteilung - Ausbildung). It was this Branch which was responsible for preparing the top-level directives and guidelines for the training field and for issuing orders for their implementation insofar as such orders had to be originated by top-level headquarters. The following specific phases of training were handled by Branch III:

1) military basic training, except for antiaircraft artillery and signal communications forces,

15 - See Appendix 12.
2) training of officer candidates and officers,
3) pilot training and the training of air ordnance personnel,
4) training of aerotechnical personnel,
5) training within the flying units, and
6) practice flights, war games, flying drills, and maneuvers.

Moreover, Branch III was responsible for making drill grounds, gunnery ranges, and practice airfields available for the training of already existing flying units.

In addition the various Luftwaffe Ordnance Inspectors (Waffeninspektionen) in process of establishment during 1936 were integrated to varying degrees into the training program.

The organizational directive issued by Branch II of the General Staff on 18 January 1936 (File No. 200/36) describes the role of the Inspectors in training activity as follows:

"The Inspectors are directly responsible to the Inspector General Luftwaffe (Generalinspekteur der Luftwaffe) in regard to their persons and their inspection authority. They will carry out their mission through their Inspectors. These, in turn, also have the status of subordinate agencies of the Luftwaffe General Staff and, as such, are responsible to the Chief of the General Staff for gathering and evaluating the experience gained at troop level in the fields of training, organization, ordnance, equipment, etc."

16 - Appendix 13 presents a complete list of Inspectors I through 10, together with a detailed summary of their missions.
b. The Training Program Administered by the School Command.

Effective 1 April 1935, the School Command was responsible for implementing the instructions issued by the Luftwaffe General Staff in connection with pilot training and the training of aerotechnical personnel. Pilot, observer, and aerotechnical personnel training continued to be handled in accordance with the experience gathered by the Inspectorate for Flight Schools - the predecessor of the School Command during the period of secrecy. Actually it was only the name which had been changed. No alterations were made in the established procedures for selecting students and for assigning them to the flying units after training. In accordance with a suggestion put forward by the School Command, the Luftwaffe Personnel Office (Luftwaffenpersonalamt), Reichs Air Ministry, continued in charge of the assignment of personnel.

With the steady broadening of the scope of the training program, the continuing development of the "air offices" (Luftämter) into Air Area Commands (Luftkreiskommandos), and the creation of numerous ordinance inspectorates within the Reichs Air Ministry during the years 1935-1937, the need for further decentralization of the supervisory command function was clear.

On 1 April 1937, the School Command was turned into the Inspectorate for Pilot Schools (Inspektion der Flugzeugführerschulen), Luftwaffe Inspectorate No. 9, thus becoming one of the inspectorates under the command of the Inspector General, Luftwaffe. In contrast to the School Command, the Inspectorate for Pilot Schools no longer had command
authority in the sense of a direct command agency. It was simply responsible for guiding the materiel and personnel aspects of pilot training within the Luftwaffe.

At the same time, Flight School and Replacement Battalion Commands (Kommandos der Fliegerschulen und Ersatzabteilungen) were set up in the Air Areas (Luftkreise).

c. Coordination with Subordinate Command Agencies and Headquarters

After 1 April 1937,

Implementation of the training program in accordance with the training orders and directives issued by the Inspectorates was now in the hands of the appropriate Air Area Commands and their subordinate Flight School and Replacement Battalion Commands. All the training installations were under the jurisdiction of their respective Air Area Commands as far as ground organization services were concerned.

On 1 April 1938 the seven Air Area Commands were consolidated into three Luftwaffe Group Commands (Luftwaffengruppenkommandos) plus a Luftwaffe Command "East Prussia" (Luftwaffenkommando Ostpreussen) and a Luftwaffe Command "Sea" (Luftwaffenkommando See). These were augmented by the newly created Luftwaffe Command "Austria" (Luftwaffenkommando Oesterreich).

With the formation of the Protectorate Bohemia/Moravia, Luftwaffe Group Commands I through III were redesignated First, Second, and Third Air Fleet Commands (Luftflottenkommandos 1 - 3), and a new Fourth Air Fleet Command was set up in Vienna to cover the southeastern theater.
The training responsibility of these higher-level operational command headquarters, as defined in the directives issued by the Commander in Chief, Luftwaffe, through the General Staff, was limited primarily to over-all supervision of training activity within their respective geographical areas of jurisdiction, such supervision to be exercised in conjunction with the Inspectorates. As far as troop administration was concerned, however, the training installations were directly subordinate to the Air Fleet Commands. The agencies having executive authority for the actual implementation of the training program remained the Flight School and Replacement Battalion Commands, which were reorganized into Senior Flight Training Commands (Höhere Fliegerausbildungskommandos) on 1 February 1939.

On 1 April 1938, new local command headquarters, the so-called Air District Commands (Luftgaukommandos), were set up within the Luftwaffe Group Commands. The missions of the newly established agencies were the following:

1) the exercising of command authority within the Air District as a geographical entity;

2) the exercising of command authority over the aerotechnical ground organization;

3) the exercising of command authority over antiaircraft artillery and signal communications forces insofar as these were not directly attached to an air fleet; and

4) the assumption of authority as top-level administrative agency.

Obviously, the first three missions listed above were bound to have an effect on the training program.

On the whole it must be admitted that the frequent organizational changes made in the top-level command structure up to 1939 were not particularly conducive to a smoothly functioning training program.
4. **Development of the Training Program and Establishment of Schools up to 31 January 1939.**

It was Hitler's wish that the Luftwaffe become a strong and independent organization, so strong, in fact, that it would be able to surpass all other air forces in Europe. The Army was to be increased immediately to three times its original strength and - one year later - to double its new strength; the steadily growing Navy also claimed its share of appropriations. And these planned increases continued without interruption until 1938! Both the Army and the Navy demanded the tactical air units traditionally viewed as their due. At the same time, the new Luftwaffe - in addition to antiaircraft artillery and signal communications forces - was primarily in need of strong strategic and operational air units.

These over-all requirements, then, determined the planning for the scope of the activation of air units! The training program needed to meet these requirements was a simple problem in arithmetic to be solved jointly by the planning section of the General Staff and the School Command agencies. Bowing to necessity, the first step was to ensure full exploitation of the training capacity available in the form of schooled flying and aerotechnical personnel in order to staff the units and schools which already existed on paper.

Without tying themselves down to specific numerical goals, the planners decided to follow the principle of development from the bottom to the top and to train personnel by category according to the following basic priority system:

1) airborne and ground technical personnel and air armament personnel of all types;

2) flight instructors;

17 - This wish is repeatedly substantiated in statements made by Hitler after 1935.
18 - See Appendix 14.
3) bomber crews;
4) fighter pilots; and
5) aerial reconnaissance personnel.

This priority listing served as a guide for all the training measures initiated subsequently by the General Staff and its subordinate agencies. The kind and number of schools established were determined in accordance with it.

Establishment of Schools

In line with the program discussed above, preliminary plans for the establishment of an aerotechnical school (Fliegertechnische Schule) were laid as early as February 1933. The school was to be responsible for training all technical flying personnel, regardless of rank.

By 1 October 1933, the first Aerotechnical School was opened at Jüterbog with a training capacity of 1,500 students per year. This was augmented by "field courses" (auswärtige Lehrgänge) held by Germany's aircraft and aircraft engine industries, which raised the total of personnel trained by an additional 1,000 men per year.

On 1 April 1934, the Aerotechnical School (Berlin-Gneisenaustrasse) was set up as an administrative entity to serve the personnel being trained in field courses sponsored by the aircraft industry in the Berlin area. Here, too, training capacity was 1,000 students per year.

On 1 July 1934 the Aerotechnical School (Adlershof) came into being, also with a training capacity of 1,500 personnel per year.

Between 1936 and 1938, training programs for aircraft mechanics were set up at Tutow and Fassberg, and one for general aerotechnical trainees at Stade.

Each of these programs was capable of training an additional 1,000 men per year.
In addition to these formal training programs, beginning in 1935, the already established air units and airfield repair depots also provided a source of technical personnel through their own informal training system. This on-the-job training resulted in at least another 2,500 aerotechnical personnel per year, most of whom required no more than short specialized courses to bring them up to the school standard.

Keeping pace with the growth of the aerotechnical school system, an accelerated construction program for pilot and air armament schools was also under way.

With a dispatch unheard-of in military construction circles, Colonel (GSO) Kesselring, at that time Chief of the Luftwaffe Administration Office (Luftwaffenverwaltungsamt), created a building organization the like of which Germany had never experienced before. By 1939, working day and night, it had built some 150 airfields!

The untiring effort of Kesselring's organization, from the lowliest construction worker to the very top, deserves special commendation for its role in creating the indispensable basis for the training program — namely the training fields! By the beginning of 1939, the following Luftwaffe training schools either had been opened or were in process of construction:

2 aerial reconnaissance schools,

2 fighter pilot schools,

3 bomber schools,

1 special bomber pilot course,

2 air armament schools (naval aircraft),

21 pilot schools of A-B category, including LKs† (38),

9 pilot schools (H-4+)

14 pilot schools of the G category (21)

3 pilot schools (naval aircraft)
2 instrument flight schools (7)

19 - See page
20 - The figures in parenthesis indicate the number of schools in operation as of 1939.

+  - (Translator's Note) The abbreviation LKS is not defined. It might stand for Luftkriegsschule, air warfare school for officer candidates.
++  - (Translator's Note) The abbreviation E is not defined.
In 1933, at the command of the Reichs Air Ministry, the so-called railway routes (Reichsbahn-Strecken) were instituted under the supervision of the School Command. For purposes of camouflage, the program — ostensibly to serve the needs of combined air and rail freight transport — was handled by the Deutsche Lufthansa, Berlin. In reality, the project was designed primarily as a flight training aid, and all the personnel concerned (except those on the payroll of the Lufthansa) were responsible to the School Command.

The railway routes were utilised as follows:

1) to train instrument flight instructors from the B and C schools in actual night and blind flying;

2) to train advanced bomber crews in practice target location flights; and

3) to train pilot students in cross country and over-water flights (routes to Tripoli and Spain).

Training in the "Mother Units" (Mutterverblute) after 1935.

During the early years of Luftwaffe development, the number of units to be supplied with personnel was relatively small; thus, the training program in effect until 1935 was well able to meet the demands made upon it. The only noticeable deficiency was in the field of night and instrument flying. During the period 1935 — 1937, however, the training program proved totally inadequate to fulfill the unexpectedly heavy requirements, necessitated by the military activations of 1 April 1936. There was no alternative but to resort to temporary stop-gap measures.

In order to relieve the schools somewhat, those few air units already activated in 1935 were designated as "mother units" for the units newly activated on 1 April 1936.
This meant that they were to be responsible for training a specific number of pilots (to be recruited from the ranks of particularly well-qualified technical personnel, ground and airborne) for assignment to their "daughter units". This training was to be accomplished by their own personnel and with their own equipment - without outside help - and was to be equivalent to the training leading to a B1 pilot's license at the very least. After completion of their unit courses, the trainees would be sent to the appropriate schools for the further training needed to qualify them for the Luftwaffe License (Luftwaffenflugszeugführerschein) and, in some cases, the Advanced Luftwaffe License (Erweiterter Luftwaffenflugszeugführerschein).

The same general methods were utilized for the training of auxiliary observers, airborne radio operators, airborne mechanics, and aerotechnical personnel in the "mother units".

In this way, the unforeseen potential bottlenecks in the attainment of authorized strength could be successfully avoided for the years to come. Any gaps in the training given by the mother units could be filled in later on by the daughter units themselves.

c. Personnel Requirements and the Measures Taken to Meet Them.

During the early years of Luftwaffe development, the only trained personnel available consisted of 220 active officers with flight training, 180 officer replacement personnel who had been trained for observer duty at Lipetsk, and 180 Jungmarken from the Reichswehr, all of whom had had adequate training in the operation of aircraft\textsuperscript{21}.

Since this was inadequate, there was no alternative but to resort to civilians with pilot training.

\textsuperscript{21} - See Chapter I, page 57, "Training Courses", and Chapter I, Appendix 6.
Until 1935, the existing school system, the various semi-civilian flying organizations, the "air specialists" assigned to the Defense Area Commands with their lists of reserve personnel, and the training center at Lipsek were quite capable of providing the instructional personnel required by the flight training schools being established in Germany. These, together with the flight instructors, pilots, trainees, and trainee applicants covered by the German Commercial Flight School and Aviation, Inc., training system, represented an adequate foundation on which to base a broadly-conceived training program. There were, of course, personnel difficulties to be met in certain areas prior to 1938. The following sections describe the solutions found for them:

1) Aerotechnical Personnel.

The agreements concluded by the Luftwaffe with the Army, the Navy, and the provincial Police Corps (Landespolizeien), whereby the latter consented to release to the Luftwaffe well-qualified candidates for the ranks of non-commissioned officer and enlisted personnel, ran smoothly until 1936-37. During the early developmental years, all the Luftwaffe's aerotechnical personnel and a goodly share of its flying personnel were recruited from these sources! After 1937, the Luftwaffe drew the majority of its technical personnel from the official recruiting organization - the pilot training regiments.

The acquisition of the necessary instructional staff (engineers, master mechanics, foremen, air armament personnel) proved to be a problem in the beginning, but fortunately one which could be solved. The required instructors were recruited from industry, from the Lufthansa, from the Lipsek station, and the ranks of World War I technical personnel. The majority already had well-paying civilian jobs, which created a certain amount of difficulty as far as wages and salaries were concerned. Fortunately, things could be settled on a mutually satisfactory basis.
the Luftwaffe Signal School (Luftmachtichtenschule) at Halle. Most of these personnel had to rely on their own initiative to perfect their training and to gain practical experience, both in the schools and in the units to which they were subsequently assigned. In view of the extremely high quality of the personnel selected and the intense interest which motivated them, there were very few instances of failure!

The airborne mechanics were recruited chiefly from the aerotechnical schools and, from the ranks of the "self-made" mechanics to be found at every pilot school. These personnel, too, were forced to perfect and apply their theoretical training during the course of their assignment to a unit.

5) Observer Personnel (Instructors and Trainees).

Due to the specifically military prerequisites, this category of personnel could hardly be recruited from civilian life. As a result, there was an acute shortage in the beginning. The problem was solved by reactivating qualified pilot personnel from World War I and by commandeering qualified observer students at the air armament schools for further training as instructors.

Until 1935, officer candidates in the observer category were selected from Army and Police Corps volunteers. After 1935, the primary source was the air academies. The air units themselves provided non-commissioned officer personnel for training as auxiliary observers for bomber aircraft.

Both categories were trained at the appropriate air armament schools.

The criteria used in determining the number and kind of personnel to be released to the air units and schools for training as flight crews and as aerotechnical personnel will be discussed fully.
and their effectiveness evaluated later on in the present study.

In summary of paragraphs 1) through 5) above, the following conditions prevailed by the end of 1938:

aa) personnel requirements in all categories were barely being met adequately in terms of training standards;

bb) nevertheless, the units already in existence had been brought up to authorized strength except in the following categories: pilots (10% lag) and airborne radio operators (15% lag). There was no gap in airborne observer strength.22

cc) the operational readiness within the flying units was extremely uneven.

The most significant gaps in training were those felt by the bomber units, primarily as a result of insufficient training in night and instrument flight.

6. The German Association of Sport Fliers (Deutscher Luftsportverband) and the National Socialist Air Corps (Nationalsozialistisches Fliegerkorps) (Luftwaffe reserve forces)23.

With the abolition of all the other flier organizations in existence prior to 1933 (with the exception of the German Commercial Flight Schools), General Goering established the German Association of Sport Fliers as the only paramilitary flight training agency.

The Aeronautical Club of Germany (Aeroclub von Deutschland) was among the organizations disbanded at that time - only to be resurrected within the framework of the new wave of organizational activity.

The Reichs Air Minister delineated the missions of the German Association of Sport Fliers as the following:

a) Propagation of the idea of flying among the population;

22 - See Appendix 15.
23 - The material discussed in this section is based primarily on information.
23 - (cont'd) provided by the former National Socialist Air Corps Group Leader (Gruppenfuehrer) and Chief of Staff Kehrberg (Karlsruhe Document Collection), and on Erich Gritzbach, Hermann Goering, Werk und Mensch (Hermann Goering, The Man and his Work), 1938, page 145 ff.
b) Indoctrination of German youth with the romance of flying;

c) Training of pilots and technical personnel for future integration
into the new Luftwaffe then being planned;

d) Holding of refresher courses to keep the pilots and technical per-
sonnel of the former air force and the aircraft industry in training, and

e) Supervision of all sport flying in Germany.

The newly organised Aeronautical Club, in addition to certain "on paper"
duties, was given the task of representing Germany abroad in all functions
pertaining to sport flying.

The organisation of the German Association of Sport Fliers was set up
as follows:

Directorate (Frassidium),
State Groups (Landesgruppen) (corresponding to the Air Areas),
Sub-Groups (Untergruppen) (of regimental strength),
Local Groups (Ortsgruppen) (of battalion strength), and
Flight Companies (Fliegerstürme) (of company strength).

The Directorate was subdivided into branches according to the special fields
of activity to be dealt with. The State Groups, whose staffs were divided into
the same subgroups as the branches of the Directorate, were subordinate to
the latter. There were sixteen State Groups, which were augmented by two more
after the annexation of Austria.\textsuperscript{24}

By the end of 1934, the organisation had increased its strength to
approximately 30,000 Flight Company members, and the sport flier units of the
Hitler Youth (Hitlerjugend) had reached an equal total membership. This in-
crease justified the appointment of the leaders of the two organisations as
Reichs Sport Flier Leaders (Reichsluftsportführer). The latter were placed
under the command of Goering's old comrade at arms, Captain Bruno Loerser,
Retired.

\textsuperscript{24} - See Appendix 17.
This move was followed by an organizational modification - the separation of the existing flight companies into two distinct categories, the one devoted to engine-driven flight and the other to glider flight. Both groups were charged with the mission of providing young men with the basic training needed to fit them for service in the new Luftwaffe or in the rapidly growing air armament industry.

Together with the official establishment of the Luftwaffe in 1935 came the "militarization" of the Association of Sport Fliers. In other words, from this time on, the Association was openly recognized as the agency for presilitary flight training and as a clearing-house for the youthful personnel reservoir of the future Luftwaffe.

Officially the Association now had the status of a "Luftwaffe reserve", whose commander was for all practical purposes the Reichs Sport Flier Commander, Loerzer. The internal organization of the Association was altered to conform to the organization of the Luftwaffe itself, both geographically and structurally. A number of existing flight training schools (for both engine-driven and glider aircraft) were expanded into flight practice schools (for the refresher training of former wartime pilots) and flight training centers (for the training of new recruits up to the A 1 and A 2 license classes).

The State Groups, reorganized into Air District Reserve Groups (luft- gaureserven), now received their training directives from the Air Area Commanders having jurisdiction over their respective geographical areas. In April 1937, at the express order of the Commander in Chief, Luftwaffe, and by means of a decree issued by the Führer, the Association was officially transformed into the National Socialist Air Corps. This move was dictated in part by the overall organizational expansion then under way and in part by political considerations. Another old comrade of Goering's, Generalleutnant Christiansen,
The United States government, in its role as an international
leader, is committed to maintaining a stable and predictable
governmental system. The United States believes that stability
and predictability are essential for the well-being of its
international partners and for the global community as a
whole. The United States is committed to working with its
goingen partners to ensure that the international system is
debocratic and just. The United States is committed to
promoting peace and security around the world.

The United States government is committed to upholding
international law and norms, and to working with its
goingen partners to ensure that the international system is
debocratic and just. The United States is committed to
promoting peace and security around the world.
was appointed commander of the new entity. No fundamental changes were made in its form of organization or in the missions assigned to it. In the best interests of the over-all goal of developing a well-qualified Luftwaffe reserve, its tradition of coordination with the Hitler Youth movement remained untouched.

The Training Centers

During the period from 1937 to 1945, the National Socialist Air Corps increased the number of training centers under its supervision to the following total:

1 National Flight School (engine-driven aircraft) (Reichsmotorflugschule),
16 National Flight Schools (glider aircraft) (Reichsseglflieger schulen),
1 Glider Testing Station (Segelflugprobestelle) approx. 20 Glider Flight Schools,
approx. 400 glider practice areas,
4 National Aircraft Construction Schools (Reichsmodeledflugschulen),
approx. 1000 Aircraft Construction Workshops (Modellbau-Werkstätten),
4 National Aerotechnical Training Schools (Reichsschulen fuer fliegertechnische Ausbildung),
1 Workshop Foremen Schools (Werkstattleiterschulen),
18 Central Construction Workshops (Zentral-Bauwerkstatten),
approx. 100 Glider Construction Workshops (Segelflug-Bauwerkstatten),
1 Central Supply Depot (Zentral-Wachschmblager), and
approx. 50 Radio Communications Schools (Funkuebungstussen).

In view of the fact that the number of students in training averaged 150,000 per year, this relatively large number of training installations was absolutely necessary.

25 - See Appendix 17a.
The work of the training installations just mentioned was supplemented by the following programs, whose initiation was the result of close coordination with the appropriate government authorities:

a) At the order of the Reichs Minister of Education (Reichserziehungminister), aircraft model building shops were set up in all primary and secondary schools;

b) The Reichs Minister of the Postal System (Reichspostminister) ordered the establishment and equipment of glider model construction shops at all Federal Post (Reichspost) installations; and

c) On the same principle, the Federal railroad repair shops (Reichsbahnwerkstätten) were expanded to handle aircraft model construction.

The training of the Luftwaffe reserve was carried out - as regarded the duration of training periods and the material to be covered - in accordance with the program approved in 1939 by the office of the Chief of Training (Chef Ausbildungswesen)\(^26\).

At the end of the war, the National Socialist Air Corps still had at its disposal the number of schools and training installations detailed above.

According to data prepared by Kehrberg, the personnel still employed in Luftwaffe training installations (full-time and part-time) during 1944 and 1945 numbered from 15,000 to 20,000.

Despite the importance of the National Socialist Air Corps program in preparing students for subsequent military flight training\(^27\), it must be admitted that the personnel and financial outlay involved was not justified by the degree of success attained.

Section 6. The Supply of Training and Practice Aircraft.

Prior to 1935, the aircraft models utilized by the various pilot training schools were extremely heterogenous. There had been no attempt

\(^{26}\) See Appendix 17b.

\(^{27}\) See Chapter IV and V of the present study.
to develop a standard training aircraft for all the schools. They simply
took whatever the aircraft industry offered. And until 1935, this procedure
proved to be entirely adequate.

As the Luftwaffe grew, however, considerations of technological de-
velopment, training effectiveness, and economy all dictated a reduction in
the number of aircraft produced and a standardisation of the available
models. The Technical Office (Technisches Amt), Reichs Air Ministry, was
the agency in charge of the streamlining program.

The following standard models were used for training purposes:

Class A: Heinkel "Kadett", Focke-Wulf "Stieglitz", HeSiA 25, Durker 111;

Class B: Arado 98, Arado 197 (Stoßfeuer), Junkers W-34, Heinkel He-45;

Class C: Junkers Ju-52, Junkers Ju-86, Dornier Do-23, Heinkel He-111
(D and E Series).

A Technical Office report dated 15 December 1938 indicates that the de-
cision had been made to continue production only on those models underlined
above.

The Junkers Ju-52 and W-34 models were subject to sporadic production
difficulties attributable to a lack of adequate industrial capacity. The
immediate result of the shortage, as we have already pointed out, was imperfect
mastery of night and instrument flight techniques on the part of nearly
all the flying units.

In addition to the shortage of certain trainer models, the Class C
schools and the air ordnance schools were rarely kept up to date by prompt
delivery of the newest models in use at the front. This time lag, too, was
traceable to inadequate production on the part of industry. As a result,
however, most of the pilots newly assigned to front units had not had any
flying experience in the models they were expected to operate!
Section 7. The Development of the Training Organizations Serving the Anti-aircraft Artillery and Signal Communications Forces.

a. The Antiaircraft Artillery Forces.

When the Luftwaffe was officially established in 1935, those few medium and heavy antiaircraft artillery units then in process of activation were released from the Army and taken over by the Luftwaffe.

With the exception of naval antiaircraft artillery and antiaircraft artillery used in certain specified types of fortifications, until 1934 this class of weapon had been forbidden by the provisions of the Versailles Treaty. Thus, there was no established large-scale training program to fall back on. As of 1934, the potential training staff for a future antiaircraft artillery force was limited to the members of the Army's seven motorized antiaircraft batteries from the artillery regiments, the antiaircraft artillery unit at the Königsberg fortress, and a mobile battery designed specifically for training. As early as 1930, these Army elements had begun to concern themselves with training in the field of antiaircraft artillery.

Thus the first Luftwaffe antiaircraft artillery batteries, or rather "replacement batteries" (Ergänzungsbatterien) came from the Army.

Effective 1 April 1935, the Reichs Air Minister and Commander in Chief, Luftwaffe, set up the Inspectorate for Antiaircraft Artillery and Air Defense (Inspektion der Flakartillerie und des Luftschutzes), which was to handle all matters pertaining to the training.

— Based on material prepared by Generalleutnant Bruno Maass, Retired (Karlsruhe Document Collection).
anti-aircraft
and equipment of the artillery forces.

The new Inspectorate was under the command of Colonel Huedel, an artillery
expert taken over from the Army.

In 1938, together with the other inspectorates created since 1936, the
Inspectorate for Anti-aircraft Artillery and Air Defense was assigned to the
Inspector General, Luftwaffe, as Luftwaffe Inspectorate No. 4. With the
creation of the office of the Chief of Training on 1 February 1939, the chain
of command of the inspectorates changed once again, and Luftwaffe Inspectorate
No. 4 now came under the technical supervision of the Chief of Training.

In reality, however, the Chief of the Inspectorate remained in complete
charge as far as training was concerned. He was merely required to keep the
Chief of Training informed of the results of his inspection activity in the
various anti-aircraft artillery training centers 29.

Each member of the anti-aircraft artillery forces received his basic
military training during his first assignment to a regular troop unit (i.e. to an anti-aircraft artillery replacement unit).

As far as troop administration and training were concerned, the anti-
aircraft artillery forces were subordinate to a number of different agencies
throughout their history, viz:

a) effective 1 April 1935: to the Air Area Command in whose geographical
area they were assigned;

b) effective 1 October 1935: to the Senior Commander, Anti-aircraft
Artillery of their local Air Area Command (Hoherer Kommandeur der Flak-
artillerie im Luftkreis); and

c) effective 1 July 1938: to the Air District Command in whose
geographical area they were assigned.

Formal training, including that of unit leaders of all ranks as well as of
all ordnance specialists, was carried out at the following antiaircraft artillery training schools:

Antiaircraft Artillery School No. 1 (Rerik, Pomerania), staffed by the Antiaircraft Artillery Training Battalion (Flaklehrabteilung):

Training Fields: heavy antiaircraft artillery and searchlight techniques;

29 - In other words, the supervision exercised was only formal; see also the section dealing with the missions of the Chief of Training.
Antiaircraft Artillery School No. II (Heiligendamm andPerik-Ost):
Training Fields: light and medium antiaircraft artillery;
Antiaircraft Artillery School No. III (Berlin-Heiligensee):
Training Field: the use of radar equipment;
Antiaircraft Artillery School No. IV (Goepppingen):
Training Field:
Advanced Antiaircraft Artillery Ordnance School (Halle):
Training Field: training of bomb disposal personnel,
amorer foremen, and armorer maintenance personnel.

b. The Signal Communications Forces.

Prior to 1935, there was no such thing as an air force signal communications force. The potential field of endeavor for such a force and its tremendous importance for any future air force was not apparent until after World War I. Germany's models in this respect were drawn from the development of such forces in foreign military programs, from the Army's signal communications forces, and from the Luftwaffe's body of experience in the handling of air traffic control. The training organization capable of developing and maintaining an air force signal communications system was gradually established to keep pace with the plans for its organization and the delineation of its missions.

This training organization started from scratch during the years 1934 and 1935. During the period, under the guidance of the Reichs Air Ministry, certain selected agencies (including a number of small Army and Navy signal communications units as well as a small group of specialists attached to the Testing Station at Lipetsk) were

30 - Based on material prepared by General der Luftschutzentruppe Rahmert, Retired, and Generalleutnant Bruno Maass, Retired, Karlsruhe Document Collection.
designated to establish a training program with the assistance of Branch D of the Gunnery School (Artillerieschiessschule) at Justerborg.

The steadily increasing military air traffic over Germany clearly demanded for reasons of safety if for nothing else, the immediate establishment of a well-organized radio communication and radio navigation system to serve the Luftwaffe schools and the newly-activated Luftwaffe units. It was extremely important that a ground communications system be put into operation at the earliest possible moment and that adequate provisions be made to train the personnel immediately required and to assure an adequate supply of trained replacements.

The most important missions to be accomplished by the ground communications system and, consequently, the fields upon which the training organization had to concentrate, were the following:

a) maintenance and operation of a large-scale, exclusively Luftwaffe telephone and telegraph network suitable for the transmittal of operational orders,

b) maintenance of the radio and telephone facilities required by a smoothly-functioning air traffic control system,

c) coordination of the ground communications system with airborne radio navigation equipment to permit radio direction finding (direct and indirect direction finding),

d) coordination of ground radio facilities with ground direction finding to direct aircraft landing approaches during bad weather, and

e) maintenance of an aircraft reporting system for civil air defense purposes.

In the event of war, the above missions would be augmented by the following:

a) provision of the radio facilities required in the course of strategic and tactical air actions, or supplementation of already existing facilities,
b. radio interception of approaching enemy bomber and fighter formations,
c. maintenance of radio warning services for the protection of friendly aircraft, and
d. provision of the radio facilities needed in fighter aircraft control operations.

In accordance with the missions detailed above, the following list of individual areas of training was compiled:

a. training in wire communications
b. training of airborne radio personnel
c. training in ground radio communications
d. training of airbornradio operators and mechanics
e. training in radio reconnaissance operations
f. training in air traffic control operations
g. training in the field of radar
h. training in aircraft reporting
i. training the maintenance of signal communications equipment
j. training of a female corps of auxiliary communications personnel

(Luftnachrichtenhelferinnen).

As of 1939, the following training installations were available for the accomplishment of the above program:

Luftwaffe Signal Communications School (Luftnachrichtenschule) (Halle) 31,
Advanced Signal Communication Technical School (Hoheere Luftnachrichten-
technische Lehrlanstalt) (Halle),
Luftwaffe Signal Communications Testing and School Regiment (Luftnach-
richtenversuchs- und Schulregiment) (Kothen)
Air Traffic Control School (Flugsicherungsschule) (Halle)
Luftwaffe Signal Communications Training Battalion (Luftnachrichten-
Lehrabteilung) (Greifswald), and
the schools maintained by the First, Second, and Third Air Fleets, and
the Air Fleet (Sea).

31 - See Appendix 16.
The over-all supervision of the training program lay in the hands of General Martini, Chief, Luftwaffe Signal Communications Forces, Office of the Reichs Air Minister and Commander in Chief, Luftwaffe (Chef des Namrichten-Luftwaffe).

From 1934 on, the signal communications training program developed as follows:

1934: establishment of a signal communications branch in the Air Command Office; the office of the Chief, Signal Communications Forces, was the top-level agency as far as training was concerned and had the authority to issue instructions to the other Air Offices in training matters.

1935: official militarisation of the signal communications forces and their training installations.

1937: establishment of Branch 7, Luftwaffe General Staff, which – in concurrence with the Chief, Luftwaffe Signal Communications Forces – assumed responsibility for signal communications training activity. At the same time, Luftwaffe Inspectorate No. 7 was set up to deal with signal communications affairs.

During the course of its development, it acquired the following roster of inspectors:

Inspector, Wire Communications
Inspector, Radio Communications
Inspector, Aircraft Reporting Service
Inspector, Air Traffic Control
Inspector, Radio Reconnaissance
Inspector, Luftwaffe Signal Communications Equipment

1938: The Chief, Luftwaffe Signal Communications Forces, was made directly subordinate to the Chief of the Luftwaffe General Staff.

1938: The Chief, Luftwaffe Signal Communications Forces, in his capacity (for all training matters) as Chief, Luftwaffe Inspectorate No. 7
was made directly subordinate to the State Secretary and Inspector General, Luftwaffe.

As of 1 February 1939, Luftwaffe Inspectorate No. 7 was assigned to the office of the Chief of Training for technical supervision.

The Headquarters and Areas Concerned in the Training Program:

1934/35: the signal communications officers and their superior headquarters in the Air Offices

1935/37: the signal communications officers and their superior headquarters in the Air Area Commands

1938/39: the signal communications officers of the Air Fleet and Luftwaffe Commands and the senior headquarters of the Air District Commands

1939: the Senior Commander, Luftwaffe Signal Communications Training Regiments (Höherer Kommandeur der Luftnachrichten-Ausbildungs-Regimenter) and the Senior Commander, Luftwaffe Signal Communications Schools (Höherer Kommandeur der Luftnachrichten-Schulen).

Section 3. The Training Program under the Auspices of the Chief of Training

1. Reorganization of the Luftwaffe General Staff to Provide Control of Training in the Field and at Training Installations.

Effective 1 February 1939, the newly-appointed Chief of the Luftwaffe General Staff, General Jeschonnek, decreed a sweeping reorganization of the Staff. Dictated in part by political developments,

32 - See the study by General der Flieger Deichmann, Retired, "Die Ausbildung in der deutschen Luftwaffe vom Standpunkt der oberen Führung aus gesehen" (Training within the German Luftwaffe, as Examined from the Standpoint of Top-Level Command), the section dealing with the "Office of the Chief of Training" [Karlsruhe Document Collection].
this reorganization was to have a serious impact on the entire structure of the training program. The General Staff was to become an agency devoted exclusively to execution of the command function, responsible for formulating and issuing guidelines and instructions whose implementation was to be the responsibility of other, non-Staff agencies. In line with this move, supervision of the Luftwaffe training schools was to be taken from the General Staff and vested in an entirely new agency, the office of the Chief of Training.

As of 1 February 1939, then, at the suggestion of the Chief of the General Staff, the Commander in Chief, Luftwaffe, ordered the establishment of a training organization within the Reichs Air Ministry.

The only training function remaining with the General Staff was the preparation of the basic guidelines for tactical troop training. This included the issuance of instructions for training at troop level as well as of rough plans for drills and maneuvers (except, of course, when the latter were prepared in detail by the Operations Branch, General Staff). Responsibility for all training matters, insofar as these still remained after the reorganization, was assigned to the - likewise reorganized - Branch 3 (Tactical Branch) of the General Staff.

The Quartermaster General (Generalquartiermeister), however, with his Branch 2 (Organization and Planning) and Branch 6 (Armament), was still intimately concerned with the school training program. It was his office which was responsible for determining the numerical requirements to be made by the General Staff.

33 – See Appendix 18.
of the training program, i.e. how many personnel in which training categories must be available at what time in the future.

In keeping with their double function - supervision of school and troop training - the Inspectorates retained their responsibilities (detailed in Section 1, above) for tactical and technological training the field. As far as this aspect of their work was concerned, they were directly subordinate to the Chief of the General Staff.

After the beginning of the war, effective 2 October 1939, Branch 3 of the General Staff was abolished. Tactical training guidelines, insofar as they transcended the authority of the individual Luftwaffe weapons branches, were prepared and issued by the newly created Group II, Branch 1 (Operations Branch), General Staff. Any training guidelines which affected only one weapons branch were issued by the appropriate Inspectorate. The activity of Group II was presumably restricted to the dissemination of the tactical experience gathered during the employment of the various Luftwaffe branches.

The chief motivation for this organisational change was no doubt the conviction that in the event of war troop training would inevitably be relegated to the background in favor of the exigencies of troop employment. This thinking might have been valid in the case of a short-term war; it was definitely a grave error in the long war which Germany had to fight.

34 - Deichmann, op.cit. These are General Deichmann's exact words.

Effective 1 February 1939, in accordance with the reorganization ordered for the Luftwaffe General Staff, the office of the Chief of Training was set up as an independent agency to ensure the availability of a continuing source of trained personnel for the contemplated expansion of the Luftwaffe. The new agency was assigned responsibility for all phases of training in the various Luftwaffe schools.

The Chief of Training, General der Flieger Kuehl, was directly subordinate to the State Secretary and Inspector General, Luftwaffe, Generaloberst Milch.

In general, the Chief of Training was fully and solely responsible for all aspects of the main training program, in other words for the training of all flying and aerotechnical personnel. Specialized training areas – such as the training of the anti-aircraft artillery, signal communications, and parachute forces – remained under the direction of the appropriate Inspectors. Even here, however, the Chief of Training had the right to inspect training activity at will.

Within the framework of the Luftwaffe High Command (Oberkommando der Luftwaffe), the Chief of Training had the following agencies at his disposal in planning and carrying out his program:

a) his own staff, which comprised four branches;\(^35\)

b) the Luftwaffe Inspectorates (though only to a limited extent in some cases).

\(^35\) - See Appendix 19 for the organizational structure and missions of these four branches.
For reasons dictated by the personnel situation (length of service, time in rank, etc.), coordination between the office of the Chief of Training and the Luftwaffe Inspectorates, including the degree of responsibility to be delegated to the latter, was scheduled as follows:

The ten original Luftwaffe Inspectorates plus Inspectorates 11, 12, 13, and 14, which were established after 1939, were to be responsible to the Chief of the General Staff in all matters pertaining to training within the troop units; they were to be subordinate (with certain qualifications) to the Chief of Training insofar as training at the Luftwaffe schools was concerned. Those Inspectors senior to the Chief of Training were personally subordinate directly to the State Secretary and Inspector General, Luftwaffe. The Inspectorates were under the technical supervision of the Chief of Training.

Despite this technical supervision, direct authority in training matters was relinquished by the Chief of Training for the following specialized programs and assigned to the appropriate Inspectorate:

- Inspectorate No. 4 (antiaircraft artillery training),
- Inspectorate No. 6 (motor vehicle operation and maintenance training),
- Inspectorate No. 7 (signal communications training),
- Inspectorate No. 8 (seaplane flight training),
- Inspectorate No. 11 (paratrooper training),
- Inspectorate No. 13 (civil air defense training), and
- Inspectorate No. 14 (training of medical personnel).

All of these especially designated Inspectorates, though, were required to keep the Chief of Training continuously informed of the results of their inspection activity in the schools under their jurisdiction. Thus, they acted as a link between the Chief of Training and their special training centers.

In the last analysis, then, the Chief of Training was directly responsible only for the training programs in the following fields:
a) general military training of officer candidates for all Luftwaffe branches,
b) pilot training,
c) training of air armament personnel,
d) training of aerotechnical personnel, and
e) navigational training.

Logically, the Inspectorates concerned were expected to cooperate closely
with the Training Branch of the Staff, Office of the Chief of Training, and
were technically subordinate to the Chief of Training. These Inspectorates
were the following:

a) Inspectorate No. 1 (aerial reconnaissance forces),
b) Inspectorate No. 2 (bomber and dive-bomber forces),
c) Inspectorate No. 3 (fighter aircraft forces),
d) Inspectorate No. 9 (pilot training),
e) Inspectorate No. 10 (education and training of officer candidate
personnel for all Luftwaffe branches), and
f) Inspectorate No. 12 (navigation).

In the case of Inspectorates No. 2 and No. 3, it should be pointed out
that the Commander in Chief, Luftwaffe, conferred upon the two Inspectors
the titles General of the Bomber Forces (General der Kampfflieger) and General
of the Fighter Forces (General der Jagdflieger), respectively, by decree dated
15 September 1941. At the same time, the newly appointed Generals were given
increased inspection authority in their respective fields. Moreover, the
service manual for ordnance branch generals (Waffengenerale) required that the
Chief of Training avail himself of their services as advisors in all matters
of fundamental policy.

Now Observations Regarding the Limited Scope of the Program Entrusted to the
Chief of Training
Ordinarily, of course, an organizational structure based primarily on
the need for
taking into consideration the service seniority of certain leading personalities cannot be termed ideal. Still, in this case it had the undeniable advantage of more intense concentration of effort. Despite the wide variety of weapons branches represented, the Chief of Training and his staff—by virtue of their position—were able to exert a certain stabilizing influence and thus forestall any large-scale deviation from a uniform administration of training activity.

An organization structure of such complexity, however, was feasible only under an extremely strong top-level Luftwaffe command set-up. Under any other conditions, its obvious disadvantages would have become immediately apparent.

In view of the many and mostly different weapons systems to be dealt with, it would surely have been more effective to appoint three chiefs of training—one each for flying forces, antiaircraft artillery, and signal communications forces—and to make them all subordinate to the Inspector General, Luftwaffe! In practice, of course, Generals Ruedel and Martini were wholly responsible for their own forces. General Kuehl contributed nothing but his name to the training directives issued for them!

The system outlined above was put into effect in part in 1943, when the office of the Chief of Training was reorganized into the office of the General of Pilot Training (General der Fliegerausbildung), and was to have been effected in its entirety in a reorganization ordered under date of 6 March 1945. This reorganization, of course, was never carried out.

3. Coordination with Subordinate Headquarters and Command Agencies after 1939.
   a. Tactical Training at Troop Levels

Instructions pertaining to the tactical training of the troop units were issued by

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36 - See Section 5 of the present chapter.
37 - See Appendix 20.
the Luftwaffe High Command, Chief of the General Staff, to the Air Fleet Headquarters, as the subordinate agencies having responsibility for troop training. From here they were transmitted through the usual channels - via division or air district headquarters, wing or regiment headquarters, group or battalion headquarters, etc. - down to the smallest unit. The troop commanders were responsible for implementing these orders. The Luftwaffe Inspectorates issued their own special training orders to the troop units through the same channels. The latter were, in effect, detailed supplements to the more general orders issued by the Luftwaffe High Command.

The Luftwaffe Training Division (Luftwaffenlehrdivision) received its training instructions directly from Branch 3 of the General Staff. The Luftwaffe units attached to the Army and Navy received their orders from the Commander, Army Air Units, and Luftwaffe General, Army High Command (Befehlshaber der Heeresfliegerverbaende und General der Luftwaffe beim Oberkommando des Heeres) and the Commander, Navy Air Units, and Luftwaffe General, Navy High Command (Befehlshaber der Marinefliegerverbaende und General der Luftwaffe beim Oberkommando der Kriegsmarine) respectively.

b. Training In the Schools and In the Training Units of the Flying Forces.

Until the outbreak of the war, all training directives issued to the schools by the Chief of Training in the name of the Luftwaffe High Command were routed first to the Air Fleet Commands, which were responsible for supervising training activity. Their primary duty in this regard was the periodic inspection - by the Air Fleet Commander - of the various schools located within this jurisdictional area. The Air Fleets had at their disposal for supervision of the day-to-day administration of the training program and the implementation of applicable instructions the so-called
Senior Commanders, Flight Training (Hoheere Fliegerausbildungskommandeure).

These were newly created agencies with the status of divisional staffs, which served as the direct superior headquarters for the actual executors of training activity - the regiments and the schools. Their authority extended to schools of all types. Due to the rapid expansion of the Luftwaffe, it was not always possible - for one reason or another - to consolidate schools of the same general category under the same command set-up. Instead, the schools were scattered arbitrarily throughout the German Reich - usually as a result of lack of space or organizational difficulty. This enforced decentralization had the following disadvantages:

1) it was extremely difficult to shift students about during the course of their training;
2) the wide-spread geographic distribution of the schools made inspection extremely time-consuming; and
3) the heterogeneity of the various schools under each command agency made effective technical supervision of the training program almost impossible.

**Schools with Their Own Command Headquarters.**

There were a number of schools within the jurisdictional area of each command agency which were not subordinate to the Senior Commander, Flight Training. Instead, they were consolidated with all the other schools of the same type within the Reich under a special central command headquarters. These centralized headquarters were the following:

1) **Air Command** [Kommando der Luftwaffe], which was also Luftwaffe Inspectorate No. 10. It had charge of all the Reich's air academies and was fully responsible for the training of officer candidates up to their commission. Centralization was necessary in this case in order to guarantee uniform training for all and to assure that the selection and evaluation of officer candidates were
2) Headquarters; Aerotechnical Schools (Kommando der Fliegertechnischen Schulen). This headquarters was in charge of all beginning, medium, and advanced aerotechnical schools.

* - Translator’s Note: The German text indicates a footnote here; however, there is none given at the bottom of the page.
and was responsible for maintaining a uniform training program.

3) Headquarters, Armament Schools (Kommando der Waffentechnischen Schulen). Centralization in this case was due to the same need for standardization as in the case of the aerotechnical schools.

4) I. Flight Training Division (I. Fliegerschulungsdivision). The 1st Flight Training Division was established during the latter part of 1940; it was made up of a number of training regiments which were transferred to the German-occupied areas in the West, combined under a division staff located in Paris. The Division had four missions to fulfill:

   a) provision of an eight-week basic military training course for new recruits assigned from the various induction centers,
   b) classification of recruits into categories for further training as flying personnel, aerotechnical personnel, paratroopers, motor vehicle personnel, and general personnel,
   c) function as an occupation force (of secondary importance), and
   d) function as a security and - if necessary - combat force (of secondary importance).

As far as troop administration and daily operations were concerned, the Division was subordinate to the Third Air Fleet; in training matters it was responsible to the office of the Chief of Training (later the General of Pilot Training); and as regarded logistical support, it was assigned to the local Field Air District Command (Feldluftgaukommando).

The Division was stationed at airfields in Holland, Belgium, and France. It comprised eight pilot training regiments, seven battalions, and one non-commissioned officer training command; these were augmented in 1944 by one antiaircraft machinegun regiment.\textsuperscript{38}
38 - See Appendix 22 for a list of duty stations and personnel strength.
Each regiment was divided into two training battalions and one operations battalion; there were two separate battalions devoted exclusively to the training of wartime officer personnel.

The primary mission of the Division was to provide basic military training. The decision as to whether and, if so, to what extent it could be utilized in operations was up to the Commander, Third Air Fleet.

In July 1944, as a result of increased guerrilla activity and the rapid advance of the invasion front, training activity had to be discontinued. During the latter part of August, the Division joined the general retreat towards the East, where its components were either disbanded or reassigned to other units.39

During the summer of 1941, in an attempt to guarantee a specialized training program which could take maximum advantage of the latest experience at the front and to reorganize the various school categories in such a way as to facilitate effective technical supervision, the already existent "branch generals" and their staffs were augmented by the following:

a) **Senior Headquarters, Aerial Reconnaissance Schools and Replacement Units** ([Höhere Kommando der Aufklärungsfliegerschulen und Aufklärungsfliegerversorgungsabteilungen]), stationed in Bregg;

b) **Senior Headquarters, Bomber and Fighter Schools** ([Höhere Kommando der Kampf- und Sturzkampffliegerschulen]), stationed in Prague;

c) **Senior Headquarters, Single-Engine and Twin-Engine Fighter Schools** ([Höhere Kommando der Jagd- und Zerstöererschulen]),
stationed in Strassburg; and

dd) Headquarters, Instrument Flight Schools (Kommando Flug

Dienstlehranstalten), stationed in Berlin.

These organizational changes represented the first step in the direction

of a horizontal, homogeneous command system for the schools to

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39 - Based on a report by the 1st Flight Training Division concerning the

deployment of its various components during the course of the invasion

in 1944 (Karlsruhe Document Collection).
replace the vertical and extremely heterogeneous set-up previously in effect. As a matter of fact, the new organization was a precursor of that inaugurated under the General of Pilot Training in 1943.

c. Training in the Schools and Training Units of the Antiaircraft

Artillery and Signal Communications Forces.

Training activity within the antiaircraft artillery and signal communications forces lay pretty much outside the purview of the Chief of Training. Nominally, of course, he had the right to inspect the artillery and signal schools, but only through the channels represented by the appropriate Inspectorates - which were only technically subordinate to him.

The regular channel for training directives, i.e. through the Senior Commanders, Flight Training, was not applicable in the case of the antiaircraft artillery and signal communications forces. Instead, from the beginning of the war on, the following agencies were responsible for directing training activity within their respective fields, under the over-all supervision of the Inspector General:

aa) antiaircraft artillery forces: the Inspector, Antiaircraft Artillery Forces, and the Senior Commander, Antiaircraft Artillery Schools (Hohe Her Kommandeur der Flakartillerie-schulen)

bb) signal communications forces: the Chief, Luftwaffe Signal Communications Forces, who was also Chief, Luftwaffe Inspectorate No. 7.

For the execution of the orders and directives issued by the High Command, the Air Fleets had at their disposal the air district commands and their subordinate schools and school commands.
40 - The coordination of supervisory and executive activity with the middle and higher-level headquarters was regulated approximately as is indicated in Appendix 20 (Troop Training).
as) anti-aircraft artillery: Commander, Antiaircraft Artillery
Training Regiments (Kommandeur der Flakartillerie-Ausbildungs-
Regimenter),

bb) signal communications: the Signal Officers of the Air Fleets
(Nachrichtenführer der Luftflotten) and the Senior Commander,
Signal Communications Schools (Höherer Kommandeur der Luft-
nachrichtenschulen).

After the outbreak of the war especially, the intervention of the Air
Fleets in training matters proved to be most disruptive to the pilot training
program. The Air Fleets were engaged in aerial warfare on a number of fronts;
understandably, they considered this phase of their activity more important
than training. As a result, they did not hesitate to jeopardize the training
program in a critical situation by requisitioning training aircraft, mainte-
nance, and instructional personnel for operational purposes. A further
disadvantage were the long and cumbersome channels, particularly for the
administration of trainee personnel and for the procurement of equipment. In
an interview with the commander in chief, Luftwaffe, the Chief of Training
succeeded in persuading the former to forbid any further interference in
the training program on the part of the Air Fleet Commanders for the duration
of the war. The same decision was also applied to the other Luftwaffe branches.

d. Training of the Air Landing and Paratrooper Forces.

The newly established air landing and paratrooper forces did not really
appear on the scene until 1938. It was not until 1939 that a training program
for them was firmly organized.

41 - In this connection, the reader is referred to the study by General der
Flieger Deichmann, Retired.
Under the General Staff set-up, Luftwaffe Inspectorate No. 11 was the
top-level headquarters responsible for the training of the paratrooper forces.

In order to carry out this mission, the Inspectorate had set up a
training staff charged with the task of organizing this entirely new body of
material into usable troop-level and school training programs. The Chief of
Training had the right to inspect the activity of Inspectorate No. 11.

Over-all supervision of training was the responsibility of the Head-
quartars, First Air Fleet, in Berlin, while the 7th Air Division (Paratrooper),
in Stendal, was in charge of the immediate implementation of training directives.

The training program was initiated in the Paratrooper School at Stendal. After
the war began, the newly organized XI Air Corps, also played a role in the
training program, insofar as it was in charge of the replacement units.

4. The Increase In the Number of Flying Units and the Expansion of the
Training Program (1 April 1939 - 1941).

Of necessity, there was always a definite relationship between the
number of flying units and the scope of the training program, for the latter –
from the standpoint of its own expansion - had to be one to two years ahead of
the former. Otherwise, the training program would not have been capable of
accomplishing its mission in time to meet future needs.

The discrepancy between number of units and training program was a
problem with which the Luftwaffe had to contend from the very beginning.

According to the above criterion, the number of units in existence at the
beginning of 1939 corresponded to a training program of the approximate scope
of 1937. As early as 1 April 1939, however, the completion of the second
phase of the school construction program
brought the training program into line with the potential political developments (including war) of 1939.

The training program increased nearly 100% in scope from 1937 to 1939; the flying units, on the other hand, as a result of the enforced pause in expansion (from 1 April 1937 until 31 March 1938), increased in number by only 25%. It was not until 1939/40 that they reached a new expansion peak. The expansion of the school program was directed not only by the need to meet the personnel requirements of the newly established units, but also by the desire to be prepared for the increased demands resulting from the losses in a potential war.

The demands made upon the office of the Chief of Training and his staff were naturally very great - in respect to both personnel and material. Both the hard-pressed instructional staff and the training aircraft depot needed to be increased considerably if they were to accomplish their tremendously expanded mission.

The expansion of the training program of the antiaircraft artillery and signal communications forces played a particularly important role.

5. The Coordinating Procedures of the Office of the Chief of Training.

a. Compilation of Training Needs in respect to Flying Units and Determination of the Methods of Implementation.

41 - See Appendix 23.

42 - Further details are contained in Chapter IV.

43 - A summary of the schools of all categories in existence as of 1936, 1937, 1939, 1943, and 1944 can be found in the study by Colonel Koester, Retired, "Die Schulen der Deutschen Luftwaffe 1936 - 1944" (The Schools of the German Luftwaffe, 1936 - 1944), Karlsruhe Document Collection. Colonel Koester's study was prepared in conjunction with the present one. In addition, Appendix 24 contains a list of the schools and training units of the flying forces as of 1 April 1939.
In order to provide a general plan of procedure for the future work of the training staff, it was imperative that the Chief of Training be informed of the kind and degree of expansion planned by the Luftwaffe High Command for the two years after 1 February 1939. As a start, planning could be based on the situation as of that date (i.e. the as yet unmet requirements of the units and of the schools). These requirements amounted to approximately 10% of the over-all unit and school strength. In addition, the tentative program set up by the General Staff to meet both unit and school requirements through 1942 could also be used as a basis.

The computation of training needs could be based on the personnel and equipment authorization figures (readily available) for the individual units and schools. The monthly personnel status reports to the office of the Quartermaster General provided current information as to the percentage of personnel needs not yet filled. Moreover, the office of the Chief of Training, acting on its own, had already established a peacetime average annual attrition figure (personnel becoming unavailable through illness, transfer to other units, death - excluding death by accident, etc.) of 10% for flying personnel and 4% for all other personnel. These figures did not include personnel attrition as a result of accident (to be discussed in detail later on), which was estimated at 1.6 - 1.7% per year. At any rate, based on the factors already mentioned, the office of the Chief of Training could plan its work fairly definitely to meet the needs for trained personnel throughout 1940, assuming, of course, that no unforeseen political developments should occur.

Prior to the beginning of the war, the measures indicated by the factors we have just discussed (assignment of additional trainees to the schools, expansion of the individual training

44 - See Appendix 15.
programs, and the establishment of new schools) did not represent serious problems. Indeed, the most glaring difficulties at that time were the painfully apparent discrepancy between training capacity and training needs and the equally obvious reduction in the quality of the training offered, both due in large part to the urgent need for haste. Unfortunately, this was a period during which training capacity had to be based upon the predetermined number of new units to be activated rather than the other way around, which would have been the case during a normal period of armed forces development.

For political reasons, Germany’s top-level military leaders were exagerratedly anxious to be able to point to a large number of front units, regardless of whether or not they were really capable of being committed at the front. As a result, the discrepancies we have indicated above were simply brushed aside as immaterial. Germany’s top political command had absolutely no understanding for difficulties encountered in the field or for discrepancies between capacities and requirements. Consequently, the office of the Chief of Training, like its predecessor, the School Command, had no choice but to continue to resort to stop-gap measures45.

b. Administration of the Training Program and of Trainee Personnel.

The smooth functioning of the entire training program depended to a very great extent on the administration of the highly varied categories of trainee personnel. The organizational preparations involved, insignificant though they may seem, were of the greatest importance. The basic question was this: Which units had to release which personnel to whom and when?

In the last analysis, the art of coordination consisted in seeing that the individual trainee personnel

45 - eg. the supplementary training of pilots and auxiliary observer personnel within the units themselves. See Chapter II, II, 4, "Ausbildung in den Muttersverbaenden" (Training in the Cadre Units).
arrived at the proper training center (or, after training had been completed, at the proper unit) at the right time and in the right strength. The same thing was true, of course, in connection with the training of aerotechnical personnel.

The following categories of personnel (divided into groups according to the type of training needed) had to be taken care of:

a) five groups of trainees for the pilot's license, category A.
b) four groups of trainees for the pilot's license, category C.
c) four groups of observer and auxiliary observer trainee personnel.
d) four groups made up of bombardier and airborne mechanic trainee personnel.
e) three groups made up of airborne radio trainee personnel.
f) twelve groups of aerotechnical trainee personnel.

Obviously, it was only by drawing on their own reserves that the schools were capable of meeting the demands made upon them.

Prior to 1 February 1939, the Luftwaffe Personnel Office (Luftwaffepersonalamt) alone was responsible for carrying out the necessary personnel transfer actions from one school to another. This, of course, entailed an enormous amount of correspondence between the various school command headquarters and the Personnel Office. As a result, the Personnel Office was not always able to handle the volume of administrative work required and it happened all too frequently that the trainee personnel involved failed to arrive at their destination in time.

In an attempt to ameliorate this situation, the Chief of Training - with the concurrence of the Personnel Office - established a Personnel Group (Personalgruppe) within his own staff to take care of all transfer actions which might become necessary during the course of the students' actual training periods. The Personnel Office resumed its responsibility for the administration of trainee personnel only after they had actually completed their training.
c. Efforts Made to Assure the Availability of the Personnel Needed to Carry Out the Training Program.

The Chief of Training, of course, was well aware of the fact that the supplementary training programs in the units and the overburdening of the schools were bound to lead to difficulty. Thus, in order to increase the capacity of the training program, it was imperative that the National Socialist Air Corps, whose facilities were not being fully exploited, be integrated into it as rapidly as possible. This represented a deliberate deviation from purely military principle in that a Party-sponsored organization was made a part of the training program. 46

In connection with the problem of the availability of personnel for the training program, it may help our understanding of the matter to review briefly the problems and procedures applicable to the recruitment and administration of reserve personnel in general.

The Reichs Ministry of War (Reichskriegsministerium) was responsible for the recruitment and administration of reserve personnel for all the Wehrmacht branches. The Ministry, on the basis of the personnel requirements (classified according to the various personnel categories) submitted by the three Wehrmacht branches, determined what percentage of each year's recruits should be allotted to the Army, Navy, and Luftwaffe.

Each Wehrmacht branch was represented in the top-schelon reserve personnel administration organization by a staff group, whose task it was to distribute the recruits assigned to its particular branch to the training schools determined upon by their respective general staffs. During the first two years of the war, those members of the "flying population" 47 who were found fit for military service were automatically assigned to the Luftwaffe, where all
46 - See Chapter IV, below.

47 - This term was explained in detail in Directive No. 6, Mobilization and Conscription (6. Verordnung ueber die Musterung und Aushebung), dated 17 April 1937 (RSB 1, I, page 469). It was also applied to personnel employed in the aircraft industry.
potential flying personnel were immediately routed through special induction and testing centers.

Despite the fact that there were always more than enough untrained volunteers for the flying units - up to the very end of the war - and even though a large percentage of these volunteers did receive flight training, it was not always possible to employ these reserves effectively as the war progressed. There are countless instances on record of glaring errors in assignment based on high-handed interference on the part of the SS, the Navy, the armored forces, etc. in the reserve personnel administration organization 48.

4. The Procurement of the Necessary Training Aircraft.

Prior to the establishment of the office of the Chief of Training, the distribution of training aircraft was the responsibility of the Technical Office, Reichs Air Ministry. The only exception to this policy was the prerogative (granted in 1938) of Luftwaffe Inspectorate No. 9 (pilot training) of directing the transfer of aircraft from one flight training school to another.

The rest of the schools were not affected by this policy, and - partly as a result of this fact - experienced not a little difficulty in obtaining the training aircraft they needed. This was especially true of the air armament schools. Shortly after the beginning of the war, the Chief of Training, in concurrence with the Technical Office, established an "aircraft" group as a part of his staff. This group was made responsible for the distribution of training aircraft to all the schools and training installations under the jurisdiction of the Chief of Training.

An eminently logical request of the Chief of Training, however, that he be given a number of the most modern front aircraft for the air armament and aerotechnical schools,

48 - See the Reichsmarshall's decree dated 15 July 1943, Appendix 25.
encountered apparently insurmountable difficulties. The distribution of these aircraft was in the hands of the General Staff itself. Despite repeated requests, some of them directed to the Commander in Chief, Luftwaffe, the Chief of Training never succeeded in obtaining the latest aircraft models in use at the front, although training in their operation and maintenance was of the greatest importance. Germany’s top-level command apparently was interested in having large and well-equipped front units (presumably for political reasons) and did not stop to think that its policy was bound to result in inadequate training.

Obviously this policy was a very short-sighted one. Statistical data from that period indicate tremendous losses in front aircraft clearly attributable to errors in their operation - the result of inadequate training of pilots and aerotechnical personnel.

If only a small percentage of these damaged aircraft had been turned over to the schools for salvage, repair, and use as training aircraft, it is quite possible that the proportion of machines lost at the front because of inefficient operation would have decreased markedly in a very short time!

It was not until the war was well under way (1942) that the Chief of Training was able to secure permission to salvage aircraft which came to grief behind the front lines.

These aircraft were rebuilt in repair depots and technical training centers under the jurisdiction of the Chief of Training and were assigned immediately to the pilot training schools. The salvage program brought the schools some 1,000 aircraft. The training program had quite a high quota of aircraft losses for the simple reason that the manufacturers of the front models naturally had not thought to build
2) Pilot Instructors for the Schools.

The training of adequate personnel to fill the rapidly increasing number of positions as flight instructor and assistant flight instructor also entailed certain difficulties. Here, too, the answer was improvisation; the school commanders and training supervisors, with the concurrence of the headquarters concerned, simply requisitioned the best-qualified students for further training as instructors.

3) Pilot Trainees.

The need for pilot trainees was met exclusively by volunteers. Despite the very rigorous physical examination which was required, the supply of successful volunteers from civilian life and the ranks of Army and Police Corps commissioned officers, non-commissioned officers, and enlisted personnel was more than adequate until 1938. Even after 1938, there was no real dearth of volunteers.

Beginning in 1935, the Luftwaffe had air academies (Luftwaffe) of its own to which to send its new generation of officers.


There was a definite shortage of qualified personnel for these two categories, which meant that certain stop-gap measures were necessary. A limited number of radiomen and mechanics could be recruited from civilian jobs and from Lufthansa. These were augmented by a fairly large contingent of radio personnel from the Reichswehr, who had already had basic training at the Army Signal School (Heeresnachrichtenschule) at Jüterbog-Halle and who were then given special training as airborne radio operators (the training, however, was given exclusively on the ground) at
training machines with dual controls. Since the Technical Office proved to be extremely slow in meeting the demands made repeatedly by the Chief of Training in this connection, the latter's successor (General of Pilot Training) was forced to take matters into his own hands.

At his command, the repair depots and technical schools began to convert Me-109's and Me-190's to two-seater, dual-control machines and to install dual controls in Do-17's and Me-110's.

Once Czechoslovakia had been taken over in protectorate status, several attempts were made to utilize Czech aircraft. The results, however, were not satisfactory.

Before the Czech aircraft could be utilized for training purposes, they had to be tested and their flight performance and reliability carefully checked. Because of their radically different handling qualities, their unfamiliar operation, and the difficulties encountered in their maintenance, the Czech aircraft were not very popular in the schools. The expenditure of effort and money on the Czech aircraft was far greater than it was worth.

The situation was approximately the same in the case of the French aircraft captured in 1940.
Section 4. Training under the General of Pilot Training and the Establishment of Pilot Training Divisions (Fliegerschutzdienstmeinen): Organisation of the Training Program 1937 - 1942. 49

1. The reorganization of the office of the Chief of Training into that of the General of Pilot Training under the Luftwaffe High Command.

In an attempt to find a quick solution to the growing problems in the field of training, at the peak of the war (on 1 April 1945) the office of the Chief of Training was reorganized into the office of the General of Pilot Training and made subordinate to the Luftwaffe High Command. In this way, those General Staff offices in charge of planning and personnel requirements were more closely coordinated with the agency responsible for meeting these requirements, the office of the General of Pilot Training.

Generalleutnant Krüger, who had left the General Staff to become General Kruhl's chief of staff, was appointed as the latter's successor.

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49 - The data contained in this section are based largely upon the following:
   a) reports by Lt. Col. a.D. Poetter, former Chief of Staff to the General of Pilot Training
   b) information provided by General der Flieger a.D. Kreipe, former General of Pilot Training.
In addition to handling the work previously assigned to the Chief of Training, the General of Pilot Training was expected to find a way of circumventing the difficulty posed by the simultaneous demands for greater quantity and higher quality in the pilots trained. Accordingly, the training program in future would have to be geared to the following objectives:

a) to increase training capacity, and
b) to make certain that the specific requirements of the current military situation were given due emphasis in the training given.

These two goals were the guiding factors for the activity of the General of Pilot Training.

The reorganization of the training staff took place smoothly as planned. Its subordination to the State Secretary and Inspector General, Luftwaffe, remained unchanged, as did its tradition of close coordination with the General Staff.

The organization of the staff of the General of Pilot Training deviated only slightly from the organization of the Chief of Training's staff. During the summer of 1944, two minor changes were made — because of their increased importance, the Personnel Group and the office of the Quartermaster were made independent branches within the staff. At the same time, Staff II-f was made a part of the Quartermaster branch.

50 — A detailed description of its organizational structure may be found in Appendix 26.
2. The Operational Procedures Followed by the Office of the General of Pilot Training.

The General of Pilot Training was responsible to the Inspector General, Luftwaffe, for the training program carried out at the schools under his jurisdiction (i.e., at the flight training schools). The guiding principle of his work was the necessity for meeting the quantitative and qualitative requirements set by the General Staff while utilizing fully and effectively the support rendered by that body. One of his most important tasks was that of personally representing the interests of his training program in conferences with operational command headquarters, supply agencies, service branch generals, and the agencies in charge of pre-military administration and training.

Chief of Staff.

Apart from his function of inspecting training activity and evaluating the results of his inspection, the most important task entrusted to the Chief of Staff was that of coordinating the activity of his staff with outside agencies. This, of course, included coordination with military areas lying far outside the field of flight training.

Operations Officer.

The primary mission of the Operations Officer consisted in transforming the requirements set up by the General Staff into concrete monthly training goals and trainee recruitment needs, all in terms of the seventy different career groups set up for flying personnel. The General Staff requirements, as formulated and issued by the Quartermaster General, General Staff, had to be translated into immediately applicable instructions for the schools and training installations involved. The criteria used, apart from the basic requirement itself, were the following:
a. normal attrition (personnel loss as a result of accidents, sickness, etc)

b. the training schedules established for the various schools and training installations.

The resultant figures then served as a basis for further computations on the part of the Personnel Group or the office of the Quartermaster. The Personnel Group took the necessary steps to requisition or transfer personnel, and the Quartermaster made certain that the necessary training facilities would be available. The division staffs, as the agencies most directly concerned with training activity, were given appropriate instructions enabling them to carry out their part of the program. The procedure roughly sketched above was generally known as "administering" the training program. The Quartermaster General (Branch 6) of the General Staff was responsible for computing the personnel needs for the front and for issuing appropriate instructions. Close coordination between this agency and the Operations Officer, General of Pilot Training, was consequently of extremely great importance.

Training Branch

The Training Branch was charged with the preparation and dissemination of the basic training guidelines. It was up to this Branch to determine how many trainees in each category had to be ready for permanent assignment when. The training guidelines were developed by individual specialist staffs and were then integrated into the general training orders.

As had been the case under the Chief of Training, training activity under the General of Pilot Training suffered continually from the glaring discrepancy between training requirements and training capacity. It was natural, then, that the Training Branch should devote special attention to this particular problem. The training program itself has been dealt with in great detail.
in Chapter III, including the individual training courses and the length of time devoted to each.

The Training Groups

The various specialist staffs were organized into groups which, among them, covered the entire field of training and were responsible for transforming the material to be covered into immediately applicable training orders, including definite achievement goals and training time schedules, for the use of the individual schools. Deviations from these goals and schedules had to be avoided at all costs in order to ensure smooth administration of the training program. Chapter III contains graphic material pertaining to the subject matter content and duration of the flight training courses.

Personnel Group

The various staff sections of the Personnel Group were responsible for handling the assignment, the employment, and the transfer of officers, officer candidates, instructional personnel, regular student personnel, special student personnel, and foreign student personnel (volunteers or assigned trainees from the nations allied with Germany). Close and constant cooperation with the appropriate agencies of the Luftwaffe Personnel Office and with the personnel staffs of the various Luftwaffe branches was absolutely imperative. As far as its internal procedures were concerned, the Personnel Group operated in approximately the same fashion as its counterpart under the auspices of the Chief of Training. In the summer of 1944 the Personnel Group was redesignated Personnel Branch.

Office of the Quartermaster

In contrast to its counterpart under the Chief of Training (Group III, Supply), the Office of the Quartermaster under the General of Pilot Training was established originally as such. Its mission was the handling of the
instructional material, i.e. administration, procurement, and allocation of weapons, aircraft and aircraft equipment, training fields, hangars, aircraft repair depots, gunnery and bombardment practice ranges, billeting facilities, ammunition, vehicle and aircraft fuels, and other general supply items required by the troops. It was the Quartermaster's responsibility
to make sure that the necessary supplies and facilities were available for each and every phase of the training program.

The Technical Training Branch (Ausbildung Technische Ausbildung)

The former Group IV (Aerotechnical Training) of the Training Branch, staff of the Chief of Training, was expanded into an independent branch with greatly increased responsibilities under the General of Pilot Training. The new branch was placed in full charge of the development and administration of all aerotechnical and air ordnance training. This included pre-induction professional training, apprentice training in the Luftwaffe, and final advanced training in the appropriate aerotechnical and air ordnance schools of the Luftwaffe.

It was the task of the Technical Training Branch to make certain that adequate numbers of well-trained personnel were being made available in all the various technician categories occurring within the flying forces.

A single figure will serve to illustrate the scope of the task assigned to the Technical Training Branch and the efficiency with which it was accomplished – during the course of the war (1939 – 1945), thanks to the superhuman efforts of an extremely capable instructional staff, approximately 200,000 trainees were handled by the technical schools (including those concerned with pre-induction aerotechnical training).

The Technical Training Branch also took steps to reorganize the training program for a woman's auxiliary service in the aerotechnical field, a plan which had been initiated under the Chief of Training and implemented under the General of Pilot Training. There were forty-three specially equipped workshops available for this program.

Organisation Staff

This newly established staff section was responsible for formulating and issuing all orders originating from the Luftwaffe High Command or the office
of the General of Pilot Training which pertained to organizational changes within the headquarters and schools under the latter's jurisdiction.

In addition, the Organization Staff was in charge of unit activations, deactivations, redesignations, and transfers. Despite the fact that the majority of these responsibilities belonged in the quartermaster field, the Organization Staff remained independent until 1944. During the summer of 1944, it was made subordinate to the Office of the Quartermaster.

3. Fundamental Changes in the Administration of the Training Program.

Thanks to the steady improvements being made in it, the pilot training program initiated under the School Command and carried on by the Chief of Training was able to provide the personnel needed to activate new units and to maintain the strength of already existing units until 1942. And by that time, the experience gained during the early war years had already been evaluated and applied in the program. Until 1942, then, there was no reason to make any change in the organization or the administration of the training program.

Beginning with the autumn of 1942, however, Germany's over-all military situation underwent a serious change for the worse. There were crises of mor or less grave significance on every front, and the recently initiated enemy air attacks on Germany's armament industries, coupled with an intensification of aerial warfare at the front, began to make ever greater demands on the units at the front and - consequently - on the flight training program.
On the one hand, partly as a result of material shortages, the strategic and tactical roles of Germany's once powerful bomber forces gradually began to recede in importance in favor of the day and night fighter, the twin-engine fighter, and the ground support forces (the latter particularly on the Eastern front). On the other hand, the military situation made it absolutely imperative that every effort be made to bolster the striking power of the home air defense forces by accelerating the activation of single-engine fighter units. In addition, the bomber forces (still relatively strong) were in urgent need of pilots trained in night and instrument flight.

In keeping with new military development, the Luftwaffe High Command had no alternative but to review and revise its requirements as far as the training program and the trainee quotas were concerned.

The first reaction, logically, was the demand for a long overdue reorganization of the tactical training given to the air crews!

   a. The following training goals were established as the most urgent:

      1) an increase in the number of single-engine fighter and ground-support aircraft pilots trained,

      2) the introduction of night and instrument flight training for all fighter pilots,

      3) intensification of combat-oriented night and instrument flight training for the bomber pilots, including training in the techniques of instrument-guided bomber aerobatics, and

      4) intensification of training in formation flying for the fighter and bomber forces.

In addition, there were other factors (both technical and economic) which made a reorganization of the training program seem highly desirable.
Despite the demands for a training program geared to increased quality of instruction, the following factors made it imperative that the program be subjected to even more stringent limitations:

1) Due to production bottlenecks, there was an acute shortage of the training aircraft required for the B-1 and B-2 courses as well as of training machines of the Ju-88 and Bf-109 types. The General of Pilot Training took independent action to remedy this situation to a certain extent by ordering the conversion of the Bf-109 and the Fw-190 to training aircraft (by the installation of two seats and dual controls). His order also covered the Do-17 and the Me-110.

2) The crises on the Eastern front were resulting in a steadily growing demand for air transport facilities. And in the long run, of course, the additional aircraft and crews could come only from the schools - a serious setback for the training program.

3) The increased need for air transport services at the front was inevitably accompanied by such an increase in aircraft fuel consumption that the gasoline allocations to the schools had to be cut drastically.

4) And in spite of the factors noted above, the demand for trained pilot personnel was increasing by leaps and bounds.

b. The pilot training program was affected the most by the new attitudes, in that its methods were subjected to immediate and far-reaching alteration and expansion. Until 1942, for example, all the students at the A and B schools were given exactly the same training.
as far as the LF-license*; at this point they were classified according to
their abilities and inclinations and the needs of the Luftwaffe and dispersed
to the various command schools to earn their ELF-licenses*51. Beginning
in 1943, however, the distinction between trainees for single-engine aircraft
and trainees for multiple-engine aircraft was made much earlier, as soon as
the students' performance could be accurately evaluated within the framework
of a specialized selective training program. This program utilized aircraft
of the FW-58 and Caudron-445 types.

The former A and B schools were converted to A schools under the new
system, schools in which students were given training culminating in the
LF-license* (single-engine aircraft) in accordance with the traditional
methods of instruction. In addition, candidates were required to put in
forty hours' practice in instrument flight (later augmented by twenty hours
of blind flying practice), which made them relatively independent of weather
conditions. Particular emphasis was placed on formation flying. Two new
flight instrument/schools (utilising single-engine aircraft) were set up in order
to help realise the new goal of increased emphasis on blind flying.

The A schools had the following advantages:

a) students were introduced to the aircraft they would be flying
at the front at an earlier stage of training;

b) training in instrument flight was more thorough;

c) trainees arrived at their specialised branch schools with a
well-grounded knowledge of formation flying; and

d) students were spared the superfluous training in the multiple-
engine aircraft needed to qualify for the B 2 license.

51 - For example, with the 21st Luftwaffe Training Division (L.Tr. 21).
* - LF-license = Luftwaffenflugzeugfuehrerschein (Luftwaffe Pilot's License).
** - ELF-license = Erweiterter Luftwaffenflugzeugfuehrerschein (Advanced Luftwaffe Pilot's License).
Those students selected for further training with multiple-engine aircraft, on the other hand, completed their training at the new A schools with the B 1 license plus a specialized training course for multiple-engine aircraft pilots, without having to go through the entire course leading to a B 2 license. Having completed the A school course, these students were sent on to the new B schools\(^52\).

The new B schools (the new designation for all those schools formerly in the C category) offered training carried out with multiple-engine aircraft and leading to the ELF-license and the instrument flight license. The former A and B schools turned over to the new B schools all those aircraft types (Fw-56, Caudron-445, and Ju-34 h and i) utilized in the training leading to the B 2 license.

The B schools, in their training for the ELF-license, were to utilize the aircraft models listed below (front models fitted with dual controls) to replace the Ju-52 and Ju-86 types, which were to be withdrawn gradually from the training program: Ju-86 A/7 and A/12, He-111 H, Do-17 Z, and Do-217 E 6.

Inasmuch as the production of Ju-86's was unable to meet the requirements, however, the training program retained the Ju-86 for the time being.

The consolidation of ELF-license and instrument flight training in the new B schools did much to encourage the demand for pilot personnel capable of handling a bad-weather landing adequately and played a significant role in eliminating the lack of confidence ordinarily experienced by newly-qualified pilots upon their first contact with the aircraft models in use at the front.

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\(^52\) As of 1935, the old B 2-license (pre-1933) was recognized as a Militärfliegerfuehrerschein (Military Pilot's License); from 1938 on it was known as a Luftwaffenfuehrerschein (Luftwaffe Pilot's License). The former, i.e. pre 1933, C-license was redesignated an Erweiterter Militärfliegerfuehrerschein (Advanced Military Pilot's License) in 1935. From 1938 on, it was known as the Erweiterter Luftwaffenflugzeugfuehrerschein (Advanced Luftwaffe Pilot's License).
The new B schools had the following advantages:

a) Once they had successfully completed the selective course, the B-students remained with the same instructor through the end of their pilot training. They obtained their Advanced Luftwaffe Pilot's License in a shorter time, and they were trained in front-model aircraft before leaving the school.

b) B-school students were given excellent training in instrument and night flying, utilizing the aircraft models in use at the front.

c) Thanks to the preliminary selective training, there were fewer instances of disqualification later on; in the long run, this meant a saving in aviation fuel.

The training of the other crew members also underwent a certain modification and specialization. From 1943 on, the preliminary schooling of the various personnel categories (observers, radio operators, airborne mechanics, aerial gunners) was accomplished in separate, specialized schools. The preliminary training units were attached to these schools. In contrast to former practice, the actual crew training (i.e. working together as a closely coordinated team) did not come until the candidates joined their replacement units for preparation for front duty.

The training of airborne radio operators was altered in that navigation, which had been rather exaggerated formerly, was relegated to the background in favor of radio operation and aerial gunnery. The time spent in the air together with the pilot trainees was lengthened, and the increased practical experience, coupled with greater emphasis on specialized training, soon made itself felt. Beginning in the summer of 1943, the airborne mechanics, too, were given specialized schooling designed to familiarize them
with the aircraft models they would be dealing with at the front later on.

Chapter III contains more detailed information on the new training courses for pilots and observers as well as on the changes made in the schooling of technical ground personnel.

As a result of this reorganization of the training program, which led to substantial savings in gasoline, materiel, and personnel, the General of Pilot Training was soon able to point to increased effectiveness in the utilization of aircraft and personnel.\(^53\)

The accompanying diagram\(^54\) serves to illustrate the variety of specialized courses needed to train the many categories of airborne personnel. As the profusion of arrows indicates, the majority of these personnel were constantly on the move from one school to another!

The diagram also gives some idea of the complexity of the administrative activity involved in these continuous transfers.

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53 - Appendix 27 reveals the enormous increase in training effectiveness in 1943/44 as compared with the results achieved in 1942.

54 - See Appendix 28.

Within the framework of the reorganization deemed necessary in the office of the General of Pilot Training and in keeping with the original plans for a modification in the training program, a fundamental re-arrangement in the subordinate command agencies was unavoidable. Despite the fact that these measures served more to hinder progress in the training program to begin with, they were clearly justified in the interests of ultimate improvement and needed modernization. It can be assumed with a fair degree of certainty that these restrictive measures were also dictated in part by the personnel and material shortages created by the war and by the air situation over the Reich itself.

During 1943, the General of Pilot Training ordered the following re-organizational measures:

a) geographical transfers of:

1) 7 Senior Training Commands (Hoher Ausbildungskommando)
2) 13 A-schools
3) 9 B-schools
4) 7 single-engine and twin-engine/ training wings
5) 6 ground-support training wings
6) 4 bombardment observer schools (or selected elements thereof)
7) 2 Luftwaffe signal communications schools (or selected elements thereof)
8) 1 air armament school
9) 1 aerotechnical school
10) 4 special training courses.

b) deactivation of:

1) 4 Senior Training Commands
2) 3 A-schools
3) 1 B-school
4) 2 night-flying training courses

c) new activation of:
   1) 9 front-duty groups (Einsatzgruppen) of various categories

d) reorganization of:
   1) 4 Senior Training Commands into specialised training commands
       (spezialisierte Ausbildungskommandos)
   2) 4 A-schools into B-schools or instrument flight schools
   3) 2 instrument flight schools (single-engine aircraft) into single-
       engine fighter or ground-support training wings
   4) 2 special training courses.

e) consolidations of:
   1) 10 A-schools into 5 double-curricula A-schools.

5. Subordinate Air Divisions and Senior Training Command.

   During the further course of the standardisation of training sectors and
   the switch-over from horizontal to vertical organisation within these sectors,55,
   both trends which had their beginning under the Chief of Training, all schools
   and training installations were consolidated (beginning in 1943) as specialised
   "pilot training divisions" (Fliegerschuldivisionen). The transformation of
   the former Senior Pilot Training Command into training divisions went hand in
   hand with the basic modification of the training program and incorporated a
   redistribution of training responsibility to a number of divisional sectors
   of activity. As a result, the majority of students were required to switch
   from one divisional area of jurisdiction to another in the midst of their
   training.

55 - See Section 3, the Training Program under the Auspices of the Chief of
   Training, paragraph 3, b.
Most of these organizational modifications, transfers, etc., were put into effect during 1943. Personnel changes, (reassignment at commander level in other key positions), however, were accomplished with dispatch, and the functions of the various staffs and their integration into the existing systems were carried out smoothly.

In other words, this reorganization can be viewed as the first significantly positive step in the direction of new and better training results! As of 1944, the General of Pilot Training had the following training divisions and senior training commands at his disposal for the implementation of the new program:

a) 1st Pilot Training Division, Paris

Composition: 6 pilot training regiments, 7 independent air battalions, 1 training staff (Lehrkommando)

Missions: Administration of all recruits assigned to pilot training,
Provision of basic military training for these recruits,
Selective assignment of personnel to specialized advanced training courses,
Function as occupation force in France (secondary mission).

b) 1st Pilot Training Division, Supreme

Composition: 31 A-schools

Missions: Provision of pilot training leading to the Luftwaffe Pilot's License (single-engine aircraft) as a basis for all advanced training with single-engine aircraft,
Selection of personnel to be assigned to further training with multi-engine aircraft.

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56 - See also Appendix 29.
e) 2nd Pilot Training Division, Norway

Composition: 28 E-schools, 1 front-duty group (aircraft ferrying group),
1 flight instructor's school.

Missions: Provision of advanced training for flight instructors, leading
to the Advanced Luftwaffe Pilot's License and to the
Instrument Flight License, Category II (Blindflugschein
II Kr.)
(front-duty group) Training of students in cross-country
flight by utilizing them as ferry pilots and as air
transport pilots in special missions,
(flight instructor's school) Testing and training of flight
instructors; development and testing of training aids;
testing the fitness of flying personnel released from
military hospitals; training of glider pilot instructors;
testing of training methods in use in glider schools.

d) 3rd Pilot Training Division, France

Composition: 3 ground-support training wings, 1 night ground-support
training wing, 1 close-range reconnaissance training wing,
1 long-range reconnaissance training wing, 4 bomber
observer schools, 1 aerial gunnery school, 1 aerial
photography school

Missions: Training of inexperienced crews in front-model aircraft to
fit them for assignment to the front personnel replacement
groups.
e) **4th Pilot Training Division, Strasbourg**

Composition: 9 single-engine fighter training wings, 1 twin-engine fighter training wing, 2 night fighter training wings, 1 instrument-flight fighter training wing, 1 gunnery school.

Missions: Training of inexperienced crews to fit them for assignment to the front personnel replacement groups or all the front units served by the General of Pilot Training.

f) **Senior Command, Air War Academy and Non-Commissioned Officer Schools (Höheres Kommando der Luftkriegsschulen und Unteroffizier-Schulen), Dresden.**

Composition: 7 air war academies, 4 non-commissioned officer schools, 2 officer candidate battalions.

Missions: Training of commissioned and non-commissioned officer replacement personnel for the Luftwaffe.

g) **Senior Command, Luftwaffe Signal Communications School (Höheres Kommando der Luftschichtenschule), Dülmen.**

Composition: 8 Luftwaffe signal communications schools.

Missions: Provision of theoretical and practical training in all phases of Luftwaffe signal communications activity (see Chapter II, Section 2, paragraph 7, b)

h) **Senior Command, Aerotechnical Schools (Höheres Kommando für Flieger-technischen Schule), Berlin.**

Composition: 8 aerotechnical schools, 1 Luftwaffe supply school, 1 special course for technical officers (Technische Offiziere).

Missions: Training of all aerotechnical personnel (airborne and ground).

Training of Luftwaffe supply personnel.
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Initial and advanced training of the Luftwaffe technical officers.
i) **Ordnance School Command (Kommando der Waffen-technischen Schulen der Luftwaffe), Dresden.**

Composition: 5 Luftwaffe ordnance schools (advanced training courses for Luftwaffe ordnance personnel).

Missions: (approximately the same as for the aerotechnical schools; the main emphasis was placed on the training of civilian administrative personnel in the ordnance field (Waffen-technische Beamte).

j) **Preliminary Aerotechnical School Command (Kommando vor Flieger-technischen VersuchsStellen der Luftwaffe).**

Composition: 22 preliminary aerotechnical schools.

Missions: Provision of preliminary aerotechnical training in all appropriate fields, fitting the trainees for subsequent assignment to the Luftwaffe aerotechnical personnel corps or for further training in the apprentice program.

k) **Senior Commander, Pilot Replacement Units (Hochkommandeur der Flieger-Ersatzeinheiten).**

This agency was made up of the field training regiments and the personnel replacement battalions of the Luftwaffe.

The activation of the Tenth Air Fleet on 1 July 1944 was closely followed (effective 26 July 1944) by a change in the office of the General of Pilot Training himself.

General Kreipe was relieved of his assignment in order to accept a position of higher responsibility elsewhere. His post was taken by Generalleutnant von Massow, former commander of the 4th Pilot Training Division.
Section 5.

1. The Tenth Air Fleet as Top Command Headquarters for all Training and Personnel Replacement Units within the Luftwaffe (1 July 1944 through 5 March 1945).

The establishment of the Tenth Air Fleet was ordered effective on 1 July 1944.
General der Flieger von Seidel was appointed commander in chief of the new Fleet. Its primary mission was to relieve the Air Fleet Reich, which had more work than it could handle in connection with home air defense activity, by taking over the administration and logistical support of the training and personnel replacement units formerly in its charge.

There was a clear delineation of responsibility so far as the General of Pilot Training, the Luftwaffe branch generals, and the Luftwaffe Inspectorates were concerned in that the orders they issued pertaining to training and employment of personnel were binding, and their inspection authority remained undiminished.

Under the Tenth Air Fleet, the command channels for the training agencies were regulated as follows:

a. The XIV Air Corps, the 1st, 2nd, 3rd, and 4th Air Divisions, and the antiaircraft artillery, the pilot, and the Luftwaffe personnel replacement divisions were made directly subordinate to the Air Fleet as far as troop administration was concerned.

b. The following training agencies were made indirectly subordinate, via their local Air District Commands, to the Air Fleet as far as troop administration was concerned:

1) Senior Commander, Air War Academies and Non-Commissioned Officer Schools
2) Senior Commander, Luftwaffe Signal Communications Schools
3) Senior Commander, Aerotechnical Schools
4) Ordnance School Command
5) Senior Commander, Antiaircraft Artillery School (including gunnery training staffs, etc.)
By virtue of the decree issued by the Reichsmarschall of the Pan-German Reich (Reichsmarschall des Grossdeutschen Reichs) and Commander in Chief, Luftwaffe, File No. Az-11 b, 1210+, 10516/44, Classified (through the Quartermaster General, Branch 2, II A), dated 29 May 1944.
6) Senior Commander, Field Anti-aircraft Artillery Schools (Hoherer Kommandeur der Feldflakartillerieschulen)

7) Senior Commander, Luftwaffe Signal Communications Training Regiments (Hoherer Kommandeur der Luftnachrichten-Ausbildungs-Regimenter).

It soon became clear, however, that this new organizational system was still not sufficient, and on 2 October 1944 the Luftwaffe High Command decided to reactivate Branch III (Training Branch) of the Luftwaffe General Staff. To all practical purposes, this step represented a return to the conditions which had existed before the beginning of the war. The newly-reactivated branch was placed under the direct command of the Luftwaffe Operations Staff (Luftwaffenführungsstab), from which it derived its authority over the entire field of training within the Luftwaffe.

2. The Commander, Luftwaffe Reserve Forces (Befehlshaber der Ergänzungsluftwaffe) as Top Authority for the Training Program, From 6 March 1945 until 8 May 1945 (Armistice).

Effective 6 March 1945, the Tenth Air Fleet was deactivated - to be replaced immediately by the newly-established office of the Commander, Luftwaffe Reserve Forces.

The following responsibilities were assigned to the Commander, Luftwaffe Reserve Forces:

a. the Commander, Luftwaffe Reserve Forces, was directly subordinate to the Reichsmarschall; he received his instructions from the Luftwaffe High Command through the Chief of the General Staff.

b. the Commander, Luftwaffe Reserve Forces, was responsible for those missions formerly handled by the Tenth Air Fleet; in addition, the following agencies were placed under his jurisdiction:
58 - In accordance with a decree issued by the Reichsmarschall of the Pan-German Reich and Commander in Chief, Luftwaffe, through the Luftwaffe Organization Staff, Branch II of the General Staff, under date of 6 March 1945.

59 - Ibid.
1) Luftwaffe Defense Office (Luftwaffen-Wehramt)
2) office of the General in Charge of Foreign Personnel (General fuer ausländisches Personal)
3) office of the General in Charge of Luftwaffe Construction Forces, office of the Chief of Luftwaffe Construction (General der Luftwaffen-Bauetruppen beim Chef des Luftwaffen-Bauwesens)
4) office of the Inspector, Luftwaffe Engineer and Land Transport Escort Forces (Inspekteur der Luftwaffen-Pioniere, Landes-schutz- und Transportbegleitung) (Luftwaffe Inspectorate No.17)
5) office of the Inspector, Luftwaffe Women's Auxiliary Corps (Inspekteur fuer das Helferinnen-Korps der Luftwaffe)
6) Luftwaffe Manual and Training Aids Branch (Vorschriften- und Lehrmittelabteilung)
7) office of the Commanding General, Pilot Training (Kommandierender General der Fliegerausbildung)
8) office of the Commanding General, Antiaircraft Artillery Training (Kommandierender General der Flakausbildung)
9) office of the Commanding General, Luftwaffe Signal Communications Training (Kommandierender General der Luftwaffennachrichten-
ausbildung)

The offices of the Commanding Generals, Pilot Training, Antiaircraft Artillery Training, and Signal Communications Training were actually troop command agencies, which were now given full authority over their respective training, personnel replacement, and school divisions as well as over all other units and elements. Previously, these had been subordinate only as regarded matters directly related to training. In addition, these Generals could now be delegated certain Luftwaffe High Command functions in the event that this
should be considered necessary by the Chief of the General Staff or the
Commander, Luftwaffe Reserve Forces. They continued to receive their training
orders and instructions from the Luftwaffe General Staff and from the ordnance
branch generals.

This new organization of the top-level training command, however, did
not prove to be perceptibly more effective than its predecessor. On 8 May,
1945, its responsibilities having been discharged to the best of its ability, the
training organization sank into oblivion.

60 - See Appendix 30, which shows the last organizational structure of the
pilot training program.

61 - According to a decree issued by the Luftwaffe High Command, Luftwaffe
Organization Staff, File No. 2003/45, Classified, dated 3 April 1945,
the activation of the post "Commanding General, Luftwaffe Signal
Communications Training" was never carried out.
CHAPTER III
Training 62

Section 1. Basic Military Training 63

1. The Purpose and Goals of Basic Training

Basic military training had the same significance for the Luftwaffe as it did for the other Wehrmacht branches, since the Luftwaffe was subject to the same basic military and disciplinary principles and regulations as the Army and the Navy.

The internal management of the troops, the maintenance of discipline, the embodiment of ideals and qualities peculiar to the Luftwaffe in contacts with representatives of other Wehrmacht branches, and the ability to defend itself effectively in the exigencies of war—all of these required that Luftwaffe personnel be welded together, ideally and militarily, through a common and effective basic training.

62 - The statements made in this chapter are substantiated by General der Flieger a.d. Werner Kreipe, who, as Chief of the Training Branch, Luftwaffe General Staff, in 1937/38, as Chief of Staff, Office of the Chief of Training, Reichs Air Ministry, in 1941/42, and as General of Pilot Training in 1943/44, had a hand in the development and implementation of almost all the training orders and instructions issued.

63 - Based on studies dealing with basic military training and the training of non-commissioned officer personnel by Generalmajor Tscholtsch, the last Senior Commander, Non-Commissioned Officer Candidate and Non-Commissioned Officer Training Schools (Hocherer Kommandeur der Unteroffizierschulen und Unteroffizierschulen).
The fundamental purpose of basic military training was rooted in this thinking. Likewise, it determined the delineation of individual training goals.

During peacetime, the units, training installations, and other elements of the Luftwaffe had the following infantry-type duties to perform: post guard duty; provision of honor companies for military parades and functions; field maneuvers and gunnery practice, including the previous drill necessitated thereby, in platoon or company strength.

In time of war, within the framework of a somewhat diminished program of formal drill, the last-named duty was augmented by the requirement of participation in smaller-scale war games. There was always the possibility that the flying units, in particular, and the advanced airfields they utilized might become involved in military action - perhaps as a result of invasion by enemy paratroopers, breakthroughs by enemy motorized units, or by virtue of an enemy encirclement action. Under such circumstances, the Luftwaffe ground forces had to be in a position to defend themselves and the installations entrusted to their care. Obviously this duty could not be the responsibility of the flying units, which would be fully engaged in the air.

These infantry-type goals of the basic military training program could be met only by thorough training and drill in hand-to-hand combat, by continuous practice in the form of small-scale field exercises in combat unit or platoon strength, and by effective participation in larger-scale maneuvers.

2. Organization of the Training Program.

a. Prior to the Restoration of Military Sovereignty.

Officially, the Luftwaffe did not exist until 31 March 1935, although even before that time
there existed countless schools sponsored by the German Commercial Flight School and a number of new schools ready for immediate conversion to purely military training. The completely new aerotechnical schools, for example, with their continual over-all strength of 3,000 - 4,000 trainees, were urgent evidence of the need for official military status and for a systematic replacement program with military personnel. The Luftwaffe, however, did not yet have personnel replacement or training programs of its own, and there was no possibility of its establishing such for the time being. Inevitably, then, these institutions had to get along with improvised measures—quite successfully, as a matter of fact.

As a result of internal agreements concluded between the Reichs Ministry of Defense and the Reichs Air Ministry after 1933, the following basic guidelines were set up:

1) the Army and Navy were to release a sufficient number of relatively well-trained enlisted and non-commissioned officer personnel in the lower and middle age groups whose backgrounds and inclinations fitted them for Luftwaffe service, until such time as the Luftwaffe had established its own personnel replacement program and, further, until this program was functioning smoothly,

   enlisted

2) the personnel released in the petty and non-commissioned officer ranks was to include sufficient numbers of instructional, administrative, and general-duty personnel to make sure that the still camouflaged Luftwaffe would be capable of staffing adequately the schools and units it needed until its own training program should be far enough along to take over, and

3) the Army and Navy were to maintain current rosters of particularly well-qualified enlisted and non-commissioned officer personnel available for release for pilot training or for the increasingly important aerotechnical schooling.
Thanks to the somewhat unusual recruitment methods outlined above, the Luftwaffe was able to dispense with a training organization of its own until 1936. Until 1935, it still had access to highly-qualified Army and Navy personnel who had already completed basic military training.

b. After the Official Establishment of the Luftwaffe on 1 April 1935.

At this point, a fundamental decision had to be made - should basic military training be left up to the individual units, or should all new recruits be put through a six months' course with special basic training units before being assigned to the units or the specialized training schools? Quite properly, the second method was selected. The new recruits were assigned to the pilot, antiaircraft artillery, or signal communications training units for a uniform basic training course, modeled upon that of the Army in that it ensured thorough mastery of basic military training.

Practice has shown that a period of six months is not too long, during peacetime at least, if all the training goals are to be adequately met.

From 1935 on, the pilot replacement battalions - which were in effect the Luftwaffe counterpart of the Army's infantry training battalions - represented the basic military training installations of the Luftwaffe. Each battalion was composed of a battalion staff and five training companies, the fifth of which was devoted exclusively to training in the operation and maintenance of motor vehicles.
After 1938, the tremendous increase in the scope of their duties made it necessary to expand the battalions into pilot training regiments. This re-designation did not involve any changes in the fundamentally infantry-type basic training; it was merely an organizational measure.

A pilot training regiment consisted of two different elements - a pilot replacement battalion and a pilot school of the A/B category. The commanders of these two elements were granted the authority of a subordinate battalion commander. Their chain of command led through the regiment commander to the next superior command headquarters.

o. After the Outbreak of War in 1940.

Germany's occupation of France, Belgium, and the Netherlands in 1940 was followed by a large-scale transfer of training units into these areas to take over the duties of occupation forces. By 1941 a total of eight pilot training regiments and several independent training battalions had been transferred to the occupied countries and placed under the central jurisdiction of the "Pilot Training Division, Paris". Their responsibilities as an occupation force were classified as a "secondary mission". When the regiments moved, their A/B schools were summarily detached, and all but a few of them remained behind in the Reich as independent schools.

This solution, dictated by the exigencies of the situation, can
handily be termed an unqualified success. Basic training had already been watered down as a result of the gradual reduction of the training period, necessitated by the demands of the military situation, from six to three months. Now the training units were to be burdened still further with occupation duties - patrol and sentry duties, participation in sorties against enemy guerrilla forces - as well as with the effects of enemy air attacks. As a result, training activity was relegated to the background to a far greater degree than had been planned, and by mid-1944 it had come to an almost complete standstill. This was due in part, of course, to the shortage of infantry weapons and training materials - a shortage which first appeared in 1943 and became steadily more acute as the war progressed. The orders issued by the Third Air Fleet (Paris):

to the effect that the training regiments should not be unduly burdened by occupation-force duties and assignments, could not always be given due consideration in the light of the emergencies of the moment; this, was true to an ever greater degree during the subsequent course of events.

3. The Training Program Itself.

Basic military training in the Luftwaffe was very similar to infantry training in the Army. The Army's tried and tested Service Regulation 130 (Heeresdienstvorschrift 130), which was taken over almost without alteration and published as Luftwaffe Service Regulation (Luftwaffendienstvorschrift) 130/2a, 2b, and 3b, served as fundamental guideline.

The Army Regulation specified a training period of six months. During this time, the recruits were to be trained in the following infantry disciplines to the point of automatic and effective application:
handy be termed an unqualified success. Basic training had already been watered down as a result of the gradual reduction of the training period, necessitated by the demands of the military situation, from six to three months. Now the training units were to be burdened still further with occupation duties - patrol and sentry duties, participation in sorties against enemy guerrilla forces - as well as with the effects of enemy air attacks. As a result, training activity was relegated to the background to a far greater degree than had been planned, and by mid-1944 it had come to an almost complete standstill. This was due in part, of course, to the shortage of infantry weapons and training materials - a shortage which first appeared in 1943 and became steadily more acute as the war progressed. The orders issued by the Third Air Fleet (Paris) to the effect that the training regiments should not be unduly burdened by occupation-force duties and assignments, could not always be given due consideration in the light of the emergencies of the moment; this was true to an ever greater degree during the subsequent course of events.

3. The Training Program Itself.

Basic military training in the Luftwaffe was very similar to infantry training in the Army. The Army's tried and tested Service Regulation 130 (Kreisgeldienstvorschrift 130), which was taken over almost without alteration and published as Luftwaffe Service Regulation (Luftwehrdienstvorschrift) 150/2a, 2b, and 3b, served as fundamental guidelines.

The Army Regulation specified a training period of six months. During this time, the recruits were to be trained in the following infantry disciplines to the point of automatic and effective application:
a. Individual Training (Luftwaffe Service Regulation 130, Volume 2, Part A)
1) training with and without a gun
2) training in the use of the standard machine-gun types 1 and 13
3) training in the use of pistols of the 08 type and machine pistols of the 38 and 40 types
4) training in the use of hand grenades
5) combat training in the use of rifles.

b. Group Training (Luftwaffe Service Regulation 130, Volume 2, Part A)
1) organization, equipment, and missions of the group
2) closed formation actions
3) open formation actions
4) combat methods of the group (the artillery battle, the advance, the breakthrough, the containment action, evasion actions, and anti-aircraft defenses)

c. Gunnery Training (Luftwaffe Gunnery Manual (Die Schiessvorschrift der der Luftwaffe)).

This branch of training included everything from elementary gunnery training to advanced combat practice firing in group formation, as follows:
1) preliminary training, including target practice with blank cartridges
2) target practice with live ammunition at a range of 350 - 1000 ft.
3) advanced practice firing in groups in the field.

In general, both the kind of drill given and the conditions under which it was given were similar to those established by the Army for its motorized and animal-drawn troops.
d. Mastery of the Subject Matter Handled in Training.

Lectures attended by commissioned and non-commissioned officers (company chiefs, company officers, and non-commissioned officers).

e. Barracks Duty.

This duty was quite frankly designed to further the maintenance of cleanliness and order within military billets. Through effective guidance on the part of the barracks leader, group captain, or master sergeant, this particular branch of training was supposed to teach the recruits punctuality, cleanliness, and comradeship.

f. Gymnastics and Sport.

This branch of training, which was to be given as much attention as possible, was taken very seriously in the training regiments.

The majority of young Wehrmacht recruits had already received a pretty good basic training in gymnastics and sport in the various premilitary organizations and sport associations.
Thus, the training regiments merely had to make sure that they were kept in
practice through systematic physical training and sport programs. Depending
upon local conditions and the season, these took the form of early-morning
setting-up exercises, callisthenics, light athletics, swimming, gymnastics, and
athletic games—when possible accompanied by some element of competition.

Through the establishment of "Luftwaffe Sport Clubs" (Luftwaffen-Sportvereine),
a part of this athletic activity was transferred to the "voluntary, off-duty"
sphere—psychologically an extremely sound move! Implementation of the
physical training program was based on Luftwaffe Service Regulation 982, the
highly modern "Training Directive, Physical Education" (Vorschrift fuer Leibes-
uebungen).

g. Advanced Infantry Training (up to Company-Level).

Advanced infantry training was made the responsibility of the units,
schools, and airfield commands (Horskommandaturen).

Carried out in accordance with Luftwaffe Service Regulation 130/2 b, ad-
vanced infantry training covered the following subjects:

1) platoon-level: formations, basic marching and combat formations
   and possible variations thereto; company-level: dito.

2) the infantry platoon and infantry company in combat: marching,
deployment, combat techniques, antiaircraft, antitank, and anti-
tank defenses

3) the practical application of combat techniques in company formation:
   sentry duty, airfield defense, small-scale breakthrough and relief
   operations.
4. Instructional Personnel

The effective accomplishment of the training missions detailed above presupposed the availability of a highly-qualified staff of instructional personnel. And in the early years of accelerated expansion, this requirement went unfulfilled all too frequently (apart from the initial staff recruited from the Army). This statement is not intended to be derogatory; it is simply indicative of the difficulties with which the troops - through no fault of their own - were forced to contend.

The main reason was the lack of a well-trained and experienced corps of non-commissioned officer personnel. No effort was made in the very beginning to establish well-coordinated schools for non-commissioned officer personnel. This oversight was remedied officially in 1941, but by this time it was too late for the measures taken to have any real effect.

Prior to 1941, the regiments and units had no choice but to resort to the establishment of courses of their own to train non-commissioned officer personnel and non-commissioned officer training commands, the latter being strongly supported by the senoir training commands. The methods utilized by this admittedly provisional training program were just barely adequate; the material to be covered was, as usual, somewhat less than adequate in quantity, due to the urgent need for speedy training. Only the most carefully selected applicants were ultimately assigned to the non-commissioned officer candidate training program.

Apart from the program mentioned above, the main responsibility for the education and training of the non-commissioned officer reserve was entrusted to the company chiefs and squadron captains. Inevitably, these had far too little time at their disposal to permit effective accomplishment of the program assigned to them.
The situation faced by the company officers within the training regiments was somewhat more favorable. Most of these officers had been recruited from the Army or the police corps and had a highly adequate standard of infantry training behind them. Others came from the ranks of the first graduating classes of the newly-established air war academies. Section 5, below, presents further details in connection with their training.

5. The Non-Commissioned Officer Schools (Beginning and Advanced).

During 1938, the personnel recruitment and training situation in the ranks of lower-level Luftwaffe personnel was determined by the following factors:

a. the Army and the police corps were no longer releasing non-commissioned officers of officer candidates to the Luftwaffe;

b. within the framework of previously established armament categories, the new activation of units, schools, and regiments of all kinds continued;

c. the need for well-qualified non-commissioned officer personnel continued to grow at a steady pace; and

d. the meeting of this need could be fulfilled only by resorting to the methods described in sub-section 4, above.

If the pace of new activations could have been slowed down, and if a period of relatively calm development had intervened, then the measures which we have described would probably have been adequate. Apart from certain uniform aspects of troop administration, which in any case would have to have been taught by special non-commissioned officer training squads,
the main responsibility for non-commissioned officer training was centered in
the troop itself. The exemplary Reichswehr, for example, managed to exist with-
out non-commissioned officer schools!

Nevertheless, these basic premises were not applicable to the Luftwaffe.

In December 1940, the Chief of Training, Office of the Reichs Air Minister,
and Commander in Chief, Luftwaffe, issued a directive ordering the Luftwaffe
to establish non-commissioned officer basic and advanced training schools
modeled on those of the new Army, which had been in existence for some time.
Non-commissioned officer personnel, destined to act as officers' aides in the
theoretical and practical training of enlisted personnel of all categories (and
from all social classes), simply had to be given adequate military training in
addition to general character training. The non-commissioned officer was
expected to be a leader and an example to others within his own particular field.

The basic and advanced training schools were intended to prepare him for
these tasks.

On 1 February 1941, unfortunately without the benefit of thorough pre-
planning, an operations staff was set up under the supervision of the Chief
of Training; its task was to study the problems inherent in the establishment
of the non-commissioned officer schools.

Preliminary planning envisaged the establishment of the following:

a. three non-commissioned officer basic training schools and one
advanced training school during the period 1941/1942; the basic training
schools, having completed the major part of their task, were to be converted
to advanced training schools during 1943;

b. the Command Headquarters, Non-Commissioned Officer Basic and
Advanced Training Schools, Berlin.
In 1943, this Command Headquarters was consolidated with the Command Headquarters, Air War Academies, to form the Senior Command, Air War Academies and Non-Commissioned Officer Schools.

Organization

As far as the organization and composition of the command staff were concerned, it must be admitted that - in view of its all-encompassing responsibility for training - all potential aspects were represented. For example, the need to train students in troop-level administration and welfare required the availability of experienced Luftwaffe administrative and payroll personnel; the need for training in higher-level professional school subjects presupposed an instructional corps versed in such subjects.

Each school was made up of six companies, each comprising 200 students. And these companies were the real core of the training program. In keeping with the widespread recognition of this fact, the assignment of company administrative officers, non-commissioned training officers, and top-level enlisted personnel was numerically quite generous.

The students at the non-commissioned officer basic training schools were made up of volunteers in the 14 and 15 year-old age groups. There were no specific requirements apart from a good elementary or secondary school education (Volk- bzw. Mittelschulbildung), a good character, and physical suitability for service with the Luftwaffe. The number of volunteers was so great that recruiting officers could afford to be particular, and only young men of above-average capabilities and qualities were selected. Their career was broken down into the following steps:

a. admission to the non-commissioned officer basic training school at the age of 14 or 15;
b. training period of three years' duration;

c. promotion to non-commissioned officer rank in a troop unit by
the age of 19 or 20.

Notes: the stages indicated under a and b, above, carried no military
rank with them.

From the very beginning of these preliminary training schools (common to
all three Wehrmacht branches), the Hitler Youth authorities (Reichsjugend-
fuehrung) protested vehemently against their program. They saw in it an attempt
to usurp their own rights in the field of the training of youth.

The ensuing time-consuming political struggle finally resulted in a
victory for the Hitler Youth leaders! Despite the protests of all three Wehr-
macht branches, the non-commissioned officer basic training schools were
sacrificed to the exigencies of party politics. The Wehrmacht High Command
bowed to the demands of the Hitler Youth authorities and closed the basic train-
ing schools, i.e. all those whose programs could not be sufficiently accelerated
to justify their conversion to non-commissioned officer schools during 1942 and
1943.

The material covered in the basic training schools included the following:

a. civilian school subjects approximately as far up as the last year
of high school (Sekunda-Reife),

b. indoctrination in national political ideals,

c. athletic training, and

d. military basic training up to the point of recruit training.

Due to its premature abolishment, the preliminary training program for
non-commissioned officers had no chance to gather a body of experience for
future reference.

The standard non-commissioned officer training schools, however, were a
part of the existing Wehrmacht organization. No volunteers were accepted as recruits unless they had completed their seventeenth year and pledged themselves to remain in the active service for a minimum period of twelve years.