

SRH-259

OP-20G FILE OF REPORTS

ON

JAPANESE NAVAL AIR ORDER OF BATTLE

(WORLD WAR II)

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REVIEWER'S NOTE:

This Special Research History is comprised of several reports concerning Japanese Naval Air Order of Battle information. Their provenance is unrelated and uncertain, and on some cases, dates are not given.

This file is provided as found in the records of OP-20-G of the United States Navy. The first review for declassification was performed by personnel of the U. S. Navy.

INDEX

	<u>Page</u>
1. The Jap Naval Air Force, a synopsis.	001
2. Jap Army HQ.	006
3. Organization of the Japanese Naval Air Force	010
4. The Organization of the Japanese Naval Air Arm	024
5. Jap Naval Air Arsenals	058
6. Nomenclature of Japanese Navy and Army Airplanes	065
7. Naval Aircraft	086
8. The Japanese Aircraft Industry	093

I

THE JAP NAVAL AIR FORCE
a synopsis

The history of the Japanese Naval Air Force may be taken to date from 1912, when several Nip officers returned from training tours in the United States and France, convinced of the future of air power in naval warfare. Under this impetus, official Japanese interest in naval aviation grew rapidly. The first Jap carrier, HOSHO, was laid down in 1920 and completed in 1922, starting a systematic carrier construction program which quite closely paralleled that of the United States.

The Japanese early adopted the theory that land-based airpower should be an integral part of the naval establishment. In 1926, they began formation of 17 shore-based units. This program was completed in 1931, and after that date, naval land-based air strength continued to expand. Close coordination between land-based and carrier-based naval aircraft played a large part in early successes of the Japanese in the Pacific war.

The Jap Naval Air Force has always been separate from that of the army. It has long been considered the senior service and bears the reputation in Japan of being generally superior in equipment, personnel, training and organization.

From an established strength of 1737 planes, on 7 December 1941, the Naval Air Force has grown to an estimated total of 3500 plus. Monthly production of naval aircraft, approximately 1100, is now more than four times the estimated output of around 250 combat types at the start of the war.

For the past year, the Naval Air Force has been out-fought, out-maneuvered and out-numbered on nearly every occasion of combat. It has suffered heavy losses in planes and airmen and has been forced to commit units not deemed fully ready for combat. Yet Japanese official thinking heavily stresses the necessity of aerial superiority as an absolute prerequisite to naval superiority. All evidence indicates the Japanese are sparing no effort to reform their naval air force for what they believe will be future decisive battles.

The following discussion is designed to give a general picture of organization and functions of the various components of the Naval Air Force as of June, 1944. It does not purport to cover changes which unquestionably have taken place since then.

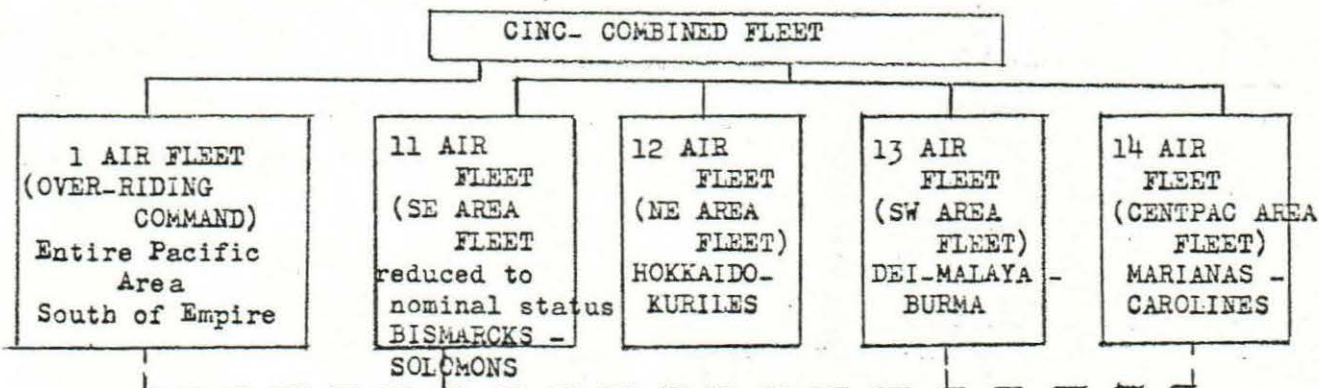
THE AIR FLEETS

The largest single units of the Naval Air Force are the air fleets (KOKUKANTAI), of which there were five in June, 1944. The air fleet, normally commanded by a vice admiral, is an integrated, combatant organization, consisting of one or more air flotillas (KOKUSENTAI), plus supply, overhaul, airfield construction and related units. It bears the operational title of "Base Air Force". In practice, through late 1942 and 1943, each air fleet was attached to an Area Fleet of the Japanese Navy, and the commander of each Area Fleet coincidentally commanded the air fleet assigned to him.

1

The air fleets so organized were the 11th, attached to Southeast Area; the 12th, attached to Northeast Area; the 13th, attached to Southwest Area, and the 14th, attached to Central Pacific Area. Although nominally adjuncts to the area fleets, these air fleets rapidly became by far the most important combatant elements of them.

Fig. 1
GEOGRAPHICAL DISTRIBUTION OF AIRFLEETS
JAPANESE NAVAL AIRFORCE (Prior to June, 1944)



The Japanese began the war with 11th Air Fleet commanding shore-based aircraft. When our occupation of Guadalcanal in August 1942 made the Solomons the principal combat zone, the Japanese formed the Southeast Area Fleet and placed Vice Admiral TSUKAHARA, commander of the 11th Air Fleet, in charge. Previous to this time, 11th Air Fleet had operated throughout the Pacific, but with the Commander-in-Chief of the enemy naval shore-based air strength in the Bismarcks and Solomons its combat activity was limited to that theater.

Vice Admiral TSUKAHARA continued to command the Southeast Area Fleet and the 11th Air Fleet until sometime in October 1942 when he returned to Tokyo as Chief of Naval Aviation. The 11th Air Fleet continued to be the only air fleet (exclusive of carriers) until our occupation of Attu in May 1943 focussed attention on the North Pacific. The enemy then organized the Northeast Area Fleet and the 12th Air Fleet to command shore-based naval air operations in the Kuriles and Empire. Vice Admiral TOTSUKA, a young but experienced aviator, was given this new command.

The 13th Air Fleet was formed in September 1943 to conduct shore-based air operations in the Southwest Pacific. The enemy at that time thought that the Malaya-Sumatra theatre would be more active than it has been to date and may even have had plans for offensive operations. Admiral TAKASU, a man with no aviation experience, was given command of the 13th Air Fleet by virtue of his being commander-in-chief of the Southwest Area Fleet.

The 14th Air Fleet was formed in March 1944, as a result of the enemy losing the Marshalls. Vice Admiral NAGUMO, who commanded the Pearl Harbor attack and other important carrier operations up to and including the Battle of Midway, took command of the 14th Air Fleet, by virtue of being commander-in-chief of the Central Pacific Area Fleet.

On 5 May 1944, a major reorganization took place. It included discarding for all practical purposes the 11th to 14th Air Fleets attached to the area fleets. This

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reorganization probably resulted from the failure of the enemy shore-based aircraft to stop our carrier attacks and also from the appointment of Admiral TOYODA as Commander-in-Chief of the Combined Fleets. As a result, 1st Air Fleet was given tactical command of all shore-based aircraft in the Carolines-Marianas-Philippines and Eastern Dutch East Indies. This comprised practically all the enemy's combat air strength outside the Empire.

The 1st Air Fleet had been formed in July 1943 to train the new air groups being formed as a result of the expansion program. It moved to the Marianas following our September successes and until May trained and operated under the 14th Air Fleet. By the 5 May 1944 reorganization, the enemy for the first time created a tactical air force with a command status co-equal with that of surface and base forces.

The increased importance which the enemy has been attaching to the shore-based air commands is further evidenced by the creation in March, 1944, of two Vice Chiefs of the Naval General Staff instead of one. Vice Admiral TSUKAHARA, who was still Chief of Navy Aviation, was made the new Vice Chief.

Another important change is the elevation of Vice Admiral TSUKAHARA to Commander-in-Chief of the Yokosuka Naval District. This is the top shore-based command in the Japanese Navy. In fact the position of Commander of the Yokosuka Naval District has, on several occasions, such as in the case of Admirals KOGA and TOYODA, been a stepping stone to Commander-in-Chief Combined Fleet. Vice Admiral TOTSUKA has taken TSUKAHARA's place as Chief of Naval Aviation and Vice Chief of the Naval General Staff.

The 11th and 14th Air Fleets have been obliterated to all intents and purposes. The 1st suffered heavily in the Marianas and subsequent actions, and by now may be reduced to its nucleus in the Philippines. The 12th and 13th Air Fleets, never under very heavy pressure, have played no major part in the war, but have been tapped frequently for replacement groups to bolster the sagging defense of hotter combat sectors. They are the only two of the four area air fleets which have not been pulverized in action.

Now that the Japanese periphery has been broken, the principal threat of Allied action is directed against the Empire itself and its narrowing lifeline to the southern regions. The importance of the remaining Area Fleets has diminished greatly, and they find themselves on opposite extremities of a 4,000-mile front which is under attack in the center. As a result, it appears that future organization of Air Fleets will tend to follow the pattern set by the 1st, flexibly operating under the direct control of CinC Combined.

THE AIR FLOTILLAS

Next down the chain of command from the Air Fleets are the Air Flotillas, commanded by rear admirals, and each composed of several Air Groups.(KOKUTAI). The Air Flotillas, which frequently go by their operational title of "Air Attack Forces" have both administrative and tactical functions. Although normally attached to an Air Fleet, Air Flotillas may on occasion exist autonomously for extended periods.

When operating tactically, they frequently assumed command of Air Groups which are administratively attached to other Air Flots.

Eight Air Flots were in operation in June, 1944.

THE AIR GROUPS

The basic unit of the Naval Air Force is the Air Group--a self-contained tactical and administrative organization. It is normally assigned a single type of aircraft for combat purposes, but also often has auxiliary transports and reconnaissance planes.

Combat air groups outside the Empire are designated by numbers indicating the principal type of aircraft assigned, according to the following system:

- 101-200 -- Land-based reconnaissance.
- 201-400 -- Fighters.
- 401-500 -- Seaplane fighters.
- 501-600 -- Single-engine bombers.
- 601-700 -- CarDiv air groups.
- 701-800 -- Land-based attack planes (medium bombers).
- 801-900 -- Flying boats.
- 901-1000 -- Float reconnaissance.
- Over 1000 -- Transports.

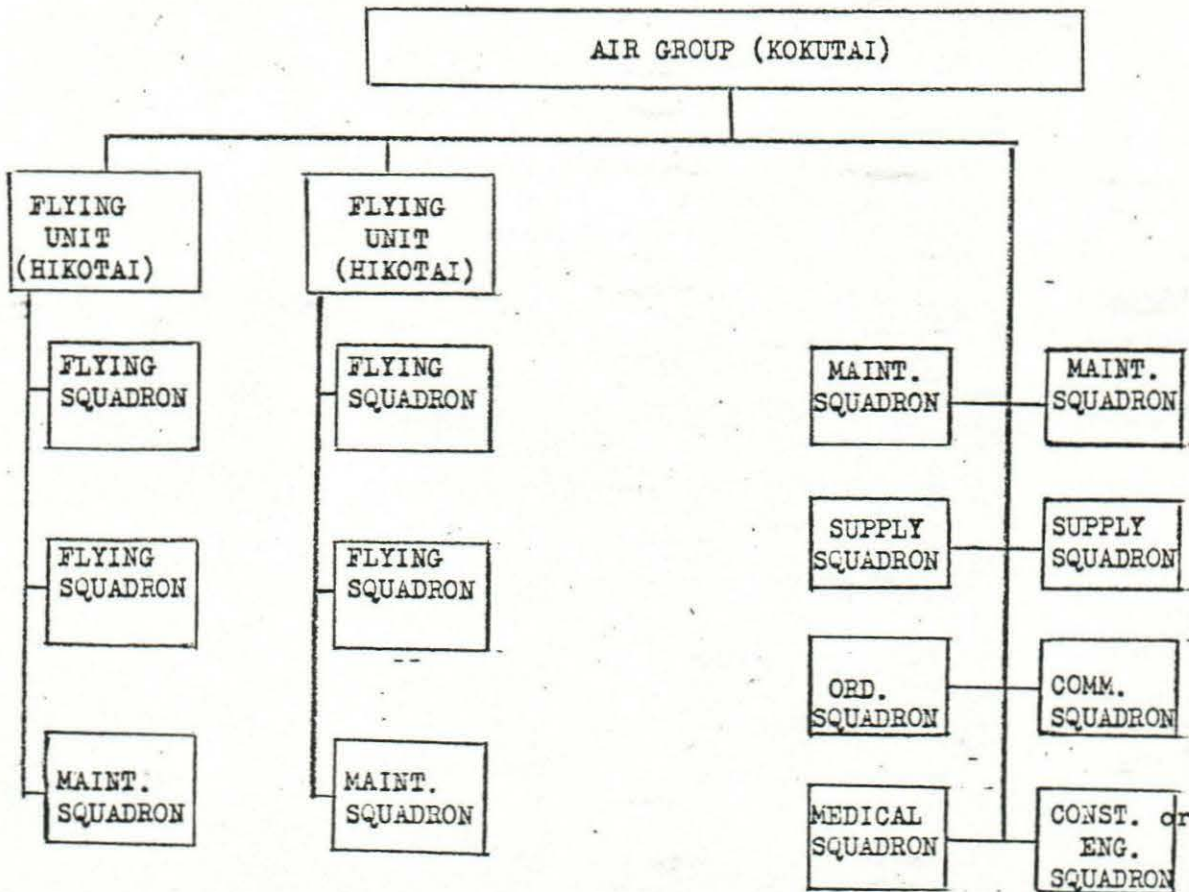
In addition to the combatant, numbered air groups, there are many groups in the Empire, Formosa, China, and Korea which bear the designations of their base or area. These so-called "named air groups" have a variety of functions and the number of aircraft and personnel assigned to them varies greatly. Some of them serve primarily as centers for the forming of groups which are later split off to become numbered combat units. Others are solely training outfits. Still others engage in local defense, or serve the dual functions of local defense and operational training.

The past year has seen a significant revision in the internal organization of numbered air groups. Originally, these groups consisted of ten to twenty squadrons (BUNTAI), of which three or four were flying squadrons of flight personnel, and the remainder were maintenance, administrative, medical and supply. This type of organization proved difficult to transport as a unit. When a rapid move was ordered, it was necessary to detach the flying squadrons, plus a small complement of maintenance men, and shift them by air, leaving the remainder of the group to follow by surface craft. This system created administrative snarls and was, at best, a makeshift.

As a result, the Naval Air Force adopted a new plan of internal Air Group organization, illustrated in the accompanying diagram. This involved formation of streamlined "flying units" (HIKOTAI), each normally composed of two flying squadrons, their aircraft, and one squadron of maintenance workers, plus a few miscellaneous personnel. These units, designated by an independent numbering system, could be moved from place to place by air and transferred from one Air Group to another without disturbing the basic administrative setup of either. It likewise eliminated the necessity of transporting ground personnel on the already overtaxed surface fleet. The gain in mobility, however, no doubt was accompanied by aggravation of maintenance problems.

The current standard plane complement of a HIKOTAI (expressed in terms of initial establishment/immediate reserve) is believed to be 12/4 for flying boats, 18/6 for recce planes and night fighters, and 36/12 for all other types except trainers and transports.

SKELETON DIAGRAM OF
INTERNAL ORGANIZATION OF A NAVAL AIR GROUP
(KOKUTAI)



(OTHER SQUADRONS MAY BE ADDED).

JAP ARMY HQ

The Emperor. -- The Japanese Constitution provides that the Emperor is Commander-in-Chief of the Army and Navy, that he determines their organization, and that he declares war, makes peace and concludes treaties. He is advised by two military councils, namely, the Board of Marshals and Admirals and the Supreme Military Council.

Imperial General Headquarters. -- In wartime or in case of grave emergency an Imperial Headquarters is established under supervision of the Emperor to assist in the exercise of supreme command. It consists of the Chiefs of the Army and Navy General Staffs, the Ministers of War and of Navy and a staff of specially selected officers.

Army Heads (Corresponds to U.S. War Dept.). -- Subordinate to the Emperor and Imperial Headquarters the direction of the Army is in the hands of four principal agencies. These are:

- The General Staff (SAMBO HONBU)
- The Ministry of War
- The Inspectorate General of Military Training
- The Inspectorate General of Aviation

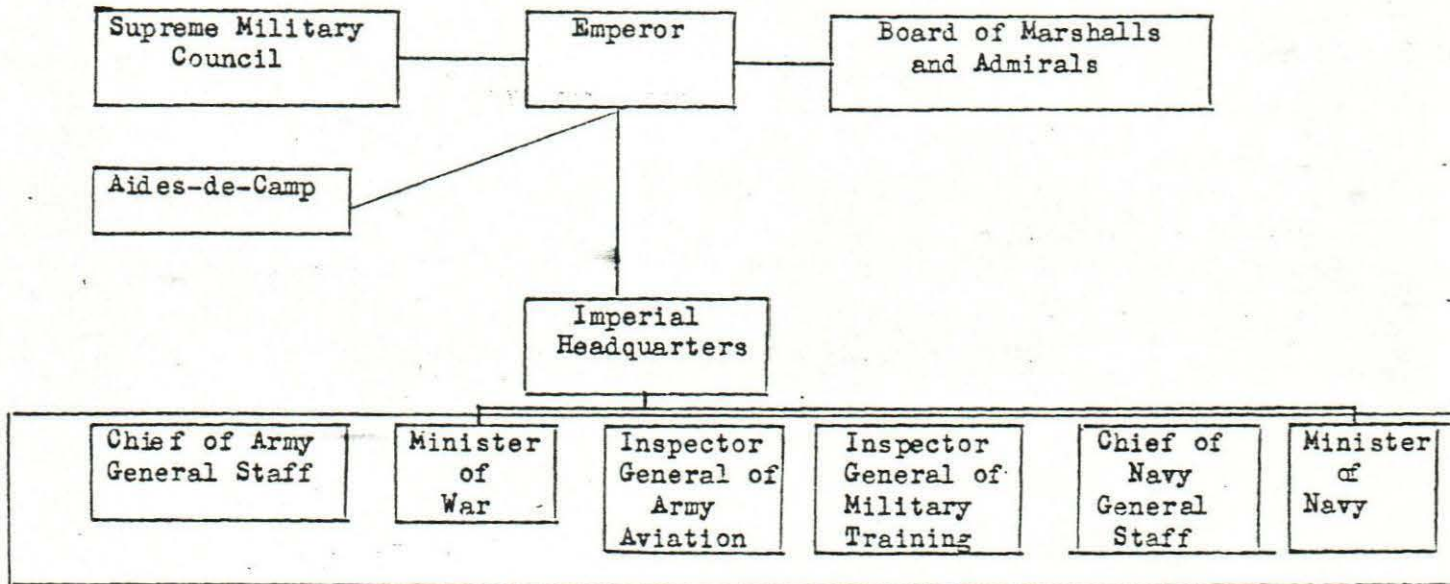
The General Staff. -- The General Staff comprises five bureaus: General Affairs, Operations, Intelligence, Transport and Historical. It is charged with the preparation of war plans, the training and employment of combined arms, the direction of large maneuvers, the movement of troops, the compilation of field service regulations, maps and military histories, and with supervision of the General Staff College, Land Survey Department and probably the Fortress Headquarters. The Chief of the General Staff is appointed by the Emperor. The General Staff is organized as shown in Figure 2. Sources available to the War Department prior to 1941 indicated that the five Bureaus of the General Staff were further subdivided into numbered Sections. However, recent sources, such as the 1942 Army List and recent Transfer Lists do not confirm the numbering of the Sections. The Sections apparently are still in existence, but it is not known how many there are, nor are their functions known.

The Ministry of War. -- The Ministry of War is the administrative, supply, and mobilization agency of the Army. Its chief, the Minister of War, is a member of the Cabinet and provides liaison between the Army and the Diet. He must be a general or lieutenant general on the active list and he is directly responsible to the Emperor. The Ministry of War is subdivided into the Secretariat and eight bureaus.

The Inspectorate General of Military Training. -- The Inspectorate General of Military Training consists of a general affairs bureau, a so-called 2nd Bureau (DAI NI BU), and several inspectorates, and is responsible for technical and tactical training of the separate arms, except the Air Corps, and of services not under the War Ministry.

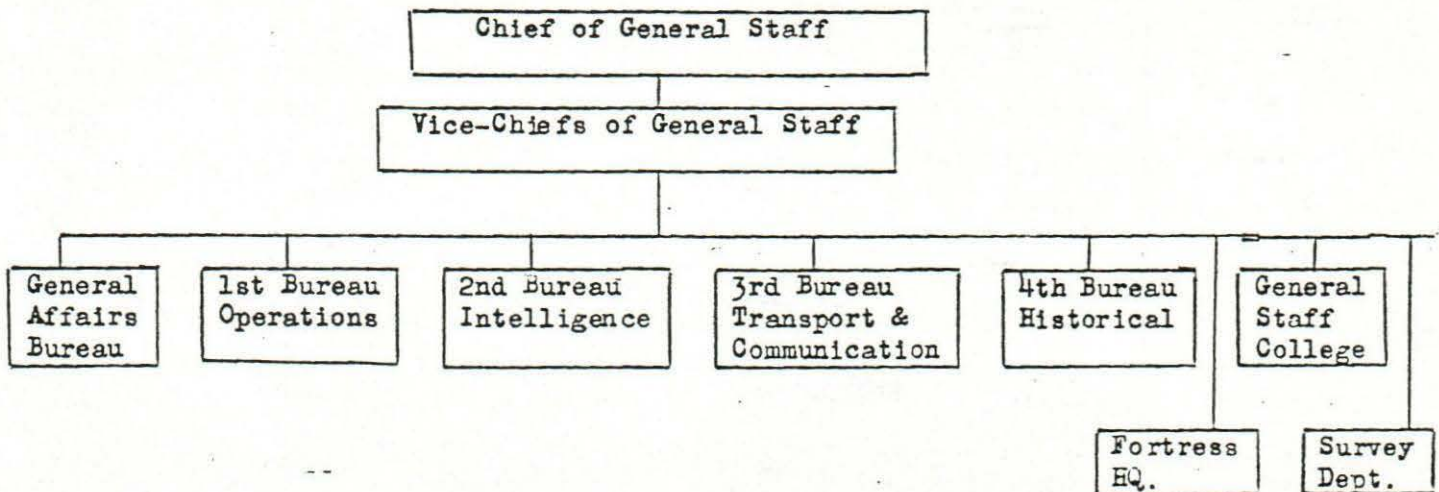
The Inspectorate General of Aviation. -- This agency was created by an ordinance issued 7 December 1938 to supervise Air Corps training. It comprises

a General Affairs Department and a Training Department and is headed by a general or lieutenant general. In aviation training matters only is it directly responsible to the Emperor; in other respects, the Inspector General of Aviation is subordinate to the "Big Three" (Chief of General Staff, War Minister, and Inspector General of Military Training.) The Inspector General of Aviation may be said to rank with but after the "Big Three".



(Figure 1.)
JAPANESE HIGH COMMAND

Note: -- The Supreme Military Council and Board of Marshalls and Admirals act in an advisory capacity.



(Figure 2.)
ORGANIZATION OF JAPANESE ARMY
GENERAL STAFF HEADQUARTERS

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The Air Headquarters and the Army General Staff.

The relationship of the Army General Staff and the Air Headquarters has come to be very close. Nominally the Army Air Force Headquarters (RIKUGUN KOKU HONBU), as the highest tactical command, comes far down the chain of subordination from the Army High Command and under the Inspector-General of Aviation rather than under the Chief of the Army General Staff. But during the TOJO regime, one and the same general, Jun USHIROKU, occupied the posts of Vice-Chief of Staff, Inspector-General of Aviation, and Chief of the Air Headquarters. It is not clear, however, that so close a relationship, bringing tactical command of air operations directly into the office of the Vice-Chief of Staff, is to continue. In the shuffle of commands after TOJO's fall, General USHIROKU was relieved of his aviation posts. For the first time an Air officer, Lt. Gen. Michio SUGAWARA, was placed in command of the Inspectorate-General of Aviation. He was made commander of Air Headquarters simultaneously, thus continuing the now customary combination of the posts. But he had not at any time been a General Staff officer, and his appointment may mean the reversal of the trend away from Air Force autonomy which USHIROKU's position had climaxed.

Nominally, of course, the Inspectorate-General of Aviation is one of the four agencies of the Army High Command, along with the War Ministry, the General Staff, and the Inspectorate-General of Military Education. Like the other three, it is responsible only to the Emperor.

The Supreme War Council and the Army General Staff.

The new KOISO cabinet has introduced a new element into the picture of the Japanese High Command in the formation of a Supreme Council for the Direction of the War. Domei transmitted a rush bulletin 5 August announcing the Supreme Council (SAIKO SENSO SHIKO KAIGI) as follows:

"Having received Imperial Sanction, and in order to formulate a fundamental policy for directing war and in order to adjust the harmonization of the combined strategy of politics and war, a Supreme Council for the Direction of War has been hereby established."

More recently a 14 September broadcast ascribed more specific functions to the Council. It was created, according to the announcement, to "harmonize and adjust state affairs and the High Command." Its function is to "unify the administration and the strategy of carrying out the task of modern warfare, but also extends to deciding the basic policies of administration, foreign affairs, and economy." Broad as such powers seem, the procedure outlines for the Council seems to place it high enough to carry them out. "The procedure of the Council," the announcement went on, "is to hand down to the Cabinet supreme policies decided by the Council which...the Cabinet and the various Ministries will . . . put into force."

The new Council, then, becomes the supreme power in the Empire, relegating the Cabinet to the position of an administrative body. The announcement of 14 September in fact called it "a powerful combined strength of the Army and Navy . . . the fountainhead from which the measures to be enacted by the KOISO-YONAI joint cabinet will originate."

As the only source of information on the new Council is the official announcements of the Japanese, one must turn to inference for further explanation

of its creation and function. Much light can be drawn from the composition of the Council. While no persons were named, the Japanese did announce its membership to include the War and Navy Ministers, the Chief of the Army General Staff, the Chief of the Navy General Staff, and the Board of Fleet Admirals and Field Marshals.

The Council's membership, thus, represents a broadening of the basis from which Army and Navy influence upon Japan's war decisions can be drawn. It is to be observed that the Council's members are the members of the Imperial General Headquarters, plus senior officers of Army and Navy. The Board of Fleet Admirals and Field Marshals already exists as a body, made up of elder statesmen in the two military branches, advisory to the Emperor on matters of military policy. To include them in the new Council is an obvious means of calling upon a wider circle of Army and Navy opinion and healing the rift so evident between Army and Navy in the last months of TOJO's regime. Significantly, too, the Japanese have reverted to the practice of setting up a headless group in supreme place, combining in the new Supreme Council nearly all the reins of command over Cabinet and Armed Forces alike which TOJO had gathered into his own hands. Significantly, too, the same officers who ran Japan's war effort as the Imperial General Headquarters still do so, as the nucleus of the Council.

The evidence is thus that the General Staff of the Army still functions behind the scenes as one of the chief ruling bodies of JAPAN. The new KOISO cabinet has brought it still closer, perhaps, to the Navy, but it has not changed its role and its influence.

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ORGANIZATION OF THE JAPANESE NAVAL AIR FORCE

This information is classified as CONFIDENTIAL and must be treated accordingly.

While the latest changes in the Air Force, as nearly as can be determined, are included in these notes, it should be borne in mind that flexibility has been one of the primary objectives of this organization. Many different combinations of the units listed therein may be encountered in areas of actual combat operations.

IMPORTANT

THESE PAGES ARE NOT TO BE CARRIED IN AIRCRAFT IN COMBAT ZONES.

AIR FORCE, PACIFIC FLEET
AIR COMBAT INFORMATION

D. SHIP-BORNE UNITS:

Ship-borne units are divided into Hakotai, each consisting of 3 Buntai. A carrier carries a number of Hilotai, which are administered on board by ship's "Air Officer".

1. Aircraft designations:

<u>NAME</u>	<u>CODE NAME</u>	<u>DESIGNATION</u>
type 0 Mark I fighter	Zeke	VF
type 0 Mark I seaplane fighter	Rufe	VF/F
type 0 Mark II fighter	Hap	VF
type 99 dive bomber	Val	VB
type 97 torpedo bomber	Kate	VT
type 96 medium bomber	Nell	VB(M)
type 1 medium bomber	Betty	VB(M)
type 99 flying boat (2 engines)	Cherry	VP
type 97 flying boat (4 engines)	Mavis	VP
type 2 flying boat (4 engines)	Emily	VP
type 95 seaplane (biplane)	Dave	VP/F
type 0 observation seaplane (biplane)	Pete	VP/F
type 0 reconnaissance seaplane (mono)	Jake	VP/F
type 100 reconnaissance plane	Dinah	VO

2. Brief glossary of Japanese names for above are:

fighter (VF)	sentoki	fc
seaplane fighter (VF/F)	suijoki sentoki	fsc
bomber (VB)	bakugekiki	fb
torpedo bomber (VT)	kogekiki	fo
land based torpedo bomber (VB(M))	rikujo kogekiki	flo
observation (VP/F)	kansokuki	fr
reconnaissance (VP/F)	teisatsuki teisatsuki	fr fr
flying boat (VP)	hikotei	fd

"J" NAVY AIR ORGANIZATION

15 Airflots:

Airflot 1 - 5 are carrier divisions
Airflot 11-12 are seaplane tender divisions
Airflot 21-26 are in 11th Air Fleet.

Each Airflot contains one or more air groups.

Airgroups:

All have 3 numeral designation at present.
Sometimes operate as units, sometimes as detachments (each Airgroup may function as separate individually named detachment).

Number of planes in air group varies with type---carrier groups depend on plane complements of ships involved.

Land Based Groups:

VO 12 aircraft
VF 45 " and often 6 VO (recce)
VB 18 "
VT To date on carriers only.
VB(M) 27 aircraft
VP 12 "
VP/F 12, 18, or 24 aircraft.

Above generally but not always followed---Jap org is at all times extremely flexible.

Summary of Organization of Naval Air Force:

<u>J</u>	<u>U.S. Equiv.</u>
SHOOTAI	3 plane section
CHUUTAI	9 plane flight
KOOKUUTAI	27-54 plane group or squadron
KOOKUU SENTAI	Airflot consisting of 2 or more KOOKUUTAI
KOOKUU KANTAI	Air Fleet

Base Air Force-----local defense groups.

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ORGANIZATION OF THE JAPANESE NAVAL AIR FORCE

✓ FLEETS (kookuu kantai)

The Japanese Naval Air Force is divided for operational purposes into two Fleets. The Third Fleet is composed of carriers and attached planes and vessels. The Eleventh Air Fleet consists of shore-based aircraft. By no means all of the Japanese Naval Air Force falls within these two commands. Aircraft squadrons, tenders, and other aircraft equipment not assigned to either fleet are attached to Air Stations, various bases, and to surface force or area commanders.

✓ FLOTILLAS (kookuu sentai)

The Naval Air Force has been divided into at least sixteen flotillas, most of which are assigned to the two fleets. The known flotillas are as follows:

1st	CarDiv 1.)
2nd	CarDiv 2.)
3rd	CarDiv 3 (now non-existent).)	- Third fleet
4th	CarDiv 4 (now non-existent).)	
5th	CarDiv 5 (now non-existent).)	
11th	Seaplane tender command recently disbanded.	
12th	Seaplane tender command probably disbanded.	
14th	Training command.	
13th	Training command.	
21st)		
22nd)		
23rd)	- Eleventh Air Fleet.	
24th)		
25th)		
26th)		
50th	Carrier training command.	

✓ GROUPS (kookuutai)

The air group appears to be the basic organizational unit of the Japanese Naval Air Force. Each flotilla contains one or more air groups. In a recent reorganization, a three numeral designation was adopted for all air groups in place of the old system of identification by name or number. A group is often referred to by the name of its commanding officer.

Air groups sometimes operate as a unit and at other times in detachments. The number of planes in an air group varies with the type. Carrier plane groups like ours naturally depend on the plane complement of the ship involved. Land-based air groups fall into several categories:

Observation (land plane)	12 aircraft.
Fighter	45 aircraft and often 6 observation (land plane).
Dive Bomber	18 aircraft
Single Engine Torpedo Bomber	To date used only on carriers
Twin Engine Bomber	27 aircraft.
Flying boat	12 aircraft.
Float Observation (reconnaissance plane)	12, 18, or 24 aircraft

The above pattern is generally but not always followed. There are certain groups which have both Fighters and Dive Bombers, usually 18 planes of each type. There also are groups which have Fighters and Twin Engine Bombers, usually 27 planes of each type. Flying Boat groups are often found to have a Float Fighter unit attached to them. Some Twin Engine Bomber groups have 36 and 45 aircraft. Transport planes have been attached to Fighter, Flying Boat and Twin Engine Bomber groups. The number of planes in a group also depends to a large extent upon losses and replacements.

Planes within a fighter or bomber group are usually organized as follows:

Shootai	3 plane section.
Chuutai	3 section (9 plane) flight.
Kookuutai	Group of 3 - 6 flights (27 - 54 planes).

This organization is particularly true of Twin Engine Bombers where an attack unit is almost always either 3, 9, 18, 27, 36, 45, or 54 planes. Here again it is impossible to lay down any general rule as a section has been known to have anywhere from 2 to 8 aircraft. Observation (land plane), Flying Boat and Float Observation (reconnaissance plane) units usually appear to have two sections per flight and follow a 3, 6, 12, 18, 24 pattern.

THIRD FLEET

This is the carrier organization and consists of the 1st and 2nd Air Flotillas which are not up to strength, particularly since Midway where the old 1st and 2nd Air Flotillas were completely wiped out. Commander-in-Chief of Third Fleet corresponds to our former Commander Carriers and as Commander Striking Force is an important Task Force Commander. The KAGA was the flagship of the Third Fleet until she was sunk at Midway. Since then the SHOKAKU and ZUIKAKU have been used as the flagship. The present organization of the Third Fleet is:

× 1st AIR FLOTILLA - CarDiv One
SHOKAKU (flying crane).

Large carrier of 826 feet and 29,300 tons; completed 1940; carries 72 planes (27 fighters, 18 dive bombers, 27 torpedo bombers); maximum speed of 34 knots. This ship has a small island on the starboard side and forward of amidships. Pictures are available in O. N. I. 41-42.

ZUIKAKU (Lucky Stork)

Large carrier of 826 feet and 29,800 tons; completed in 1941 and sister of the SHOKAKU; carries 72 planes (27 fighters, 18 dive bombers, 27 torpedo bombers); maximum speed of 34 knots. No picture of this ship is available, but like the SHOKAKU, she probably has a small island on the starboard side and forward of amidships, although there have been reports that her island is on the port side.

ZUIHO (Lucky Phoenix)

Smaller carrier converted in 1941 from the submarine tender TAKASAKI, which was completed in 1940; about 600 feet in length and approximately 12,000 tons; carries 36 planes (27 fighters, 9 torpedo bombers). Rated as having a speed of at least 25 knots. No picture is available, but this ship probably resembles the SHOHO.

* 2nd AIR FLOTILLA - CarDiv Two

JUNYO or HAYATAKA (Peregrine Falcon)

New ship completed in January, 1942; converted from the KASHIWARA MARU; 620 feet in length and 23,800 gross tons; designed speed 28 knots; a large ship carrying 51 planes (24 fighters, 18 dive bombers, 9 torpedo bombers) and 3 spares. No picture is available but there is believed to be a small island on the starboard side with a stack directly abaft the island.

HIYO or HITAKA (Flying Falcon)

New ship completed in May, 1942; converted from the IZUMO MARU (a sister ship of the KASHIWARA MARU). Believed to be similar to the JUNYO in design and performance.

* 50th AIR FLOTILLA

HOSHO (Flying Phoenix)

Old ship completed in 1922; first Japanese carrier; 510 feet and 7,470 tons; rated at 24 planes (12 fighters, 12 dive bombers) and a speed of 25 knots; has no island but has 3 stacks on the starboard side which fold out like the stacks on the USS RANGER; she has accompanied support forces in major operations such as Midway and has been used as a plane ferry but probably not as a combat carrier. Recent reports indicate that she is now being used only for training purposes.

RYUHO

New ship. Nothing is yet known about it. Possibly converted from the TAIGEI (AS).

* PLANE FERRIES

OTAKA or TAIYO (Big Falcon) UNYOU (Cloud Falcon)

These two ships are converted passenger ships; the OTAKA (KASUGA MARU) was completed in 1941 and the UNYOU (YAWATA MARU) was probably completed about June 1942. They are rated at about 45 planes and a speed of 23 knots; these ships are probably only plane ferries and not combat carriers. Each ship has been known to carry as many as 60 planes when acting as a ferry. No good pictures are available but they have been seen and photographed. They are reported to have no island and no stacks.

CHUYO (Off-shore Falcon)

Believed to be a converted merchant ship similar to the OTAKA and UNYOU. May have been converted from the NITTA MARU. Placed in operation as a plane ferry about December 1942. Has been known to carry about 60 planes when acting as ferry.

✓ ELEVENTH AIR FLEET

The administrative staff of the Eleventh Air Fleet is stationed at Tenian, but operational headquarters have been at Rabaul since at least August 1942. The Commander-in-Chief of the Eleventh Air Fleet has also been at Rabaul where as Commander Southeastern Area Fleet he has had general command of air and all other operations in the Solomons and Eastern New Guinea.

The Eleventh Air Fleet contains the fighting strength (exclusive of carriers) of the Japanese Naval Air Force. All aircraft assigned to the 21st - 26th Air Flotillas, as well as some additional air groups fall within its jurisdiction. Airplane tenders, merchant ships, plane ferries, destroyers, and other surface craft are assigned to the Eleventh Air Fleet from time to time as necessary for the proper performance of its duties.

Each Air Flotilla (21st - 26th) in the Eleventh Air Fleet contains two or more air groups. The typical organization of an Air Flot is:

Air Group	12 Flying Boats
Air Group	45 Fighters, 6 Observation (land planes)
Air Group	27 Twin Engine Bombers
TOTAL STRENGTH	90 planes

The strength of an Air Flotilla is extremely flexible and varies from time to time depending upon the task to be performed. The normal strength of an Air Flotilla is 75 to 125 planes but has been known to be as low as 20 (after heavy losses) and as high as 190.

The assignment of air groups to Air Flotillas is continuously changing. The following organization of the Air Flotillas is given only ~~as an example~~ of relative strength and must not be considered as a statement of present organization or plane complement;

21st Air Flotilla

151st Air Group - 12 Observation (land planes)
253rd Air Group - 45 Fighters
752nd Air Group - 36 Twin Engine Bombers

22nd Air Flotilla

252nd Air Group - 45 Fighters, transports
701st Air Group - 27 Twin Engine Bombers
802nd Air Group - 12 Flying Boats, 24 Float Fighters

23rd Air Flotilla

202nd Air Group - 45 Fighters, 4 Observation (land planes)
2 Transports
753rd Air Group - 27 Twin Engine Bombers

24th Air Flotilla

- 201st Air Group - 27 Fighters, 27 Twin Engine Bombers
- 703rd Air Group - 27 Fighters, 27 Twin Engine Bombers
- 801st Air Group - 12 Flying Boats

25th Air Flotilla

- 251st Air Group - 45 Fighters, 6 Observation (land planes)
- 702nd Air Group - 36 Twin Engine Bombers.

26th Air Flotilla

- 204th Air Group - 45 Fighters
- 582nd Air Group - 18 Fighters, 18 Dive Bombers
- 705th Air Group - 27 Twin Engine Bombers
- 707th Air Group - 27 Twin Engine Bombers

Many air groups are not assigned to Air Flotillas. This is particularly true of seaplane units which are usually assigned to local base forces or area fleet commands. The following list gives the air groups which are known to exist but which are not included in the above Air Flotilla organization:

- 125th Air Group - 12 Observation (land plane) (?)
- 203rd Air Group - 45 Fighters (?)
- 341st Air Group - 36 Twin Engine Bombers
- 405th Air Group - Fighters, Dive Bombers or both types
- 452nd Air Group - Fighters, Float Observation/Reconnaissance Planes
- 552nd Air Group -
- 572nd Air Group -
- 751st Air Group - 36 Twin Engine Bombers
- 803rd Air Group - 12 Flying Boats (?)
- 805th Air Group - 12 Flying Boats (?)
- 851st Air Group - 12 Flying Boats (
- 852nd Air Group -
- 853rd Air Group - 23 planes
- 858th Air Group - 13 Float Observation/Reconnaissance planes
- 958th Air Group - 30 Twin Engine Bombers
- 987th Air Group -
- 995th Air Group -

The following additional air groups are local patrol and transport units in the various areas indicated. Most units are believed to have only seaplanes assigned to them but some like the 902nd have Flying Boats and possibly other types:

- 902nd Air Group - 6 Flying Boats, 24 Float Observation/Reconnaissance Planes.
Headquarters at Truk.
Detachments at Saipan and Palao.
- 932nd Air Group - 12 Float Observation/Reconnaissance Planes
Surabaya and Makassar.
- 934th Air Group - 18 Float Observation/ Reconnaissance Planes
Ambon and Aroe Islands
- 936th Air Group - 12 Float Observation/Reconnaissance Planes
Camranh Bay and Saigon.
- 938th Air Group - 18 Float Observation/ Reconnaissance Planes
Solomons.
- 952nd Air Group - 24 Float Observation/Reconnaissance Planes
Marshalls and Gilberts.

- 953rd Air Group - 12 Float Observation/Reconnaissance Planes
Kavieng and Rabaul
- 954th Air Group - 10 Float Observation/Reconnaissance Planes
Davao
- 956th Air Group - 24 Float Observation/Reconnaissance Planes
Celebes.

It appears from the above that groups in the 100s are Observation (land plane) units, 200s are Fighters, 500s are Fighter-Dive Bombers, 700s are Twin Engine Bombers, 800s are Flying Boats, 900s are Float Observation/Reconnaissance Planes. There is some doubt as to whether this pattern is always followed. For example, the 953rd Air Group appears to have 30 Twin Engine Bombers rather than Flying Boats, the 201st may have Twin Engine Bombers as well as Fighters and some groups in the 700s are indicated as having Fighters and Twin Engine Bombers. It also is customary for Flying Boats and Float Observation/Reconnaissance Plane units to have some float fighters attached to them. The one fixed rule of Japanese Air Force organization is flexibility.

AIR TENDERS

These ships are assigned from time to time to the Third Fleet, Eleventh Air Fleet, Air Flotillas, and other commands. They have also operated in seaplane tender divisions which are believed to be disbanded for the present. Numerous merchant ships have been reported to have been converted into seaplane tenders. Most of the following are fast ships carrying 13 - 14 planes:

SEAPLANE TENDERS

AKITSUSHIMA	Built 1942; 9,000 tons; speed 20 knots; 14 planes; four 5" AA guns.
SHITOSE	Built 1938; 9,000 tons displacement; length 577 feet; 20 knots; four 5" and four 3" AA guns; 4 catapults; 14 planes
CHIYODA	Built in 1938; 9,000 tons displacement; length 577 feet; 20 knots; four 5" and four 3" AA guns; 4 catapults; 14 planes. Sister ship of CHITOSE.
KAMOJ	Built 1922 as tanker; converted 1933; 17,000 tons displacement; length 498 feet; 15 knots; two 5.5" and two 3" AA guns; 14 planes.
NISSHIN	Sister ship of the CHITOSE and CHIYODA; built 1938; 9,000 tons displacement; length 577 feet; 20 knots; four 5" and four 3" AA guns; 4 catapults; 14 planes.
NOTORO	Built 1920 as tanker; 14,050 tons displacement; length 471 feet; 12 knots; two 4.7" and two 3" AA guns; 1 catapult; 10 planes.

SEAPLANE TENDERS SUNK

MIZUHO

CONVERTED SEAPLANE TENDERS

KAMIKAWA MARU Built 1937; 6,853 gross tons; length 510 feet; 21 knots; four 5" guns; 12 planes.

KIMIKAWA MARU Built 1937; 6,863 gross tons; length 503 feet; maximum speed 21 knots; probably mounts six 5" guns.

KIYOKAWA MARU Built 1937; 6863 gross tons; length 479 feet; speed 22 knots; 13 planes; two 5" AA guns.

KUNIKAWA MARU Built 1937; 6,860 tons; length 503 feet; maximum speed 21 knots; probably mounts six 5" guns; sister of the KIMIKAWA MARU.

SAGARA MARU Built 1939-41; 7,187 tons; length 509 feet; maximum speed 19 knots; capable of mounting six 5" or 6" guns.

SANUKI MARU Built 1939; 7,158 gross tons; length 430 feet; speed 20 knots; 13 planes; six 5" AA guns.

SANYO MARU Built 1930; 8,360 gross tons; speed 13.5 knots; 13 planes.

CONVERTED AIRCRAFT TRANSPORTS

FUJIKAWA MARU Built 1938; 6,938 gross tons; length 437 feet; speed 21 knots; 14 planes; two 5" AA guns.

GOSHU MARU Built 1939; 8,592 gross tons; length 443 feet; speed 18 knots; 13 planes; two 5" AA guns.

KEIYO MARU Built 1935-39; 6,442 tons; length 456 feet; maximum speed 17 knots; capable of mounting six 5" or 6" guns.

RITAN MARU (may be LYONS MARU) Built 1920; 7,013 gross tons; length 445 feet; speed 14.5 knots.

MOGAMICAWA MARU Built 1933-38; 7,493 tons; length 436 feet; maximum speed 16 knots; capable of mounting six 5" or 6" guns.

NAGOYA MARU Built in 1932; 6,072 tons; length 407 feet; maximum speed 13.5 knots.

RIO DE JANEIRO MARU Built 1930; 9,626 tons; length 461 feet; maximum speed 17 knots; believed mounting 6" guns.

CONVERTED AIRCRAFT TRANSPORTS SUNK

KATSURAGI MARU

ESTIMATED TOTAL NAVAL AIR FORCE STRENGTH

An estimate of first line operational plane strength of the Japanese Air Force based on information set forth in this bulletin is given below. Under ship-based are included planes attached to Carriers, Battleships, Cruisers and Tenders. This estimate does not include operational types used exclusively for training or reserve:

	Fighters	Float Fighters	Dive Bombers	Single Engine Torpedo Bombers	Twin Engine Bombers	Flying Boats	Float Observation/ Reconnaissance Planes	Observation (land plane)	TOTAL
Ship based	190	70	90	120			225		695
Land based	410	70	40		300	65	185	25	1095
	600	140	130	120	300	65	410	25	1790

RANKS IN THE JAPANESE NAVAL AIR FORCE

The ranks listed below are given as of the reorganization which took place in December, 1942. It is almost impossible to find English equivalents for these titles, but the meanings of the component words have been quite clearly established as follows:

KAIGUN - Navy	CHO - Leading
HIKO - Air or flying	JOTO - Superior
Heiso - Petty officer	ITTO - First
Hei - Seaman	NITO - Second

<u>Rank</u>	<u>Abbreviation</u>	<u>Approximate English Equivalent</u>
(Kaigun) Taisho (少将-general)		Admiral
" Chusho		Vice Admiral
" Shosho		Rear Admiral
" Taisa (少将/少佐)		Captain
" Chusa		Commander
" Shosa		Lieut. Comdr.
" Taii (I-少将)		Lieutenant
" Chui		Lieut. (jg)
" Shoi		Ensign
(Kaigun Hiko) Heisocho (少将/少佐)		Leading Air Petty Ofcr.
(Kaigun) Jotō Hiko Heiso (少佐)	Johiso	Superior Air Petty Ofcr.
" Itto Hiko Heiso	Ippiso	1st Class Air Petty Ofcr.
" Nito Hiko Heiso	Nihiso	2nd Class Air Petty Ofcr.
" Hiko Heicho	Hicho	Leading Airman

~~SECRET~~

"	Joto Hiko Hei	Johi	Superior Airman
"	Itto Hiko Hei	Ippi	1st Class Airman
"	Nito Hiko Hei	Nihi	2nd Class Airman

AIR FLEET

<u>Fleet</u>	<u>Headquarters</u>	<u>Date of Information</u>
11th fleet	RABAU	September 7th
12th fleet	PARAMUSHIRU	"
13th fleet		"

KOOKUUTAI
(TOKUSETSU)

<u>Number</u>	<u>Assignment</u>	<u>Number</u>	<u>Assignment</u>
151	21 SF	851	23 SF
201	24 SF	902	4 F
202	23 SF	932	GKF
204	26 SF	934	2 KF
251	25 SF	936	1 KF
252	22 SF	938	8 F
253	21 SF	952	4 F
281	27 SF	954	3 KF
331	28 SF	958	8 F
381	23 SF	1001	
452	27 SF		
501	25 SF (26?)		
531	27 SF ? 24?		
551	28 SF		
552	22 SF		
582	26 SF		
702	25 SF		
705	28 SF		
751	21 SF		
752	24 SF		
753	23 SF		
755	22 SF		
761	27 SF		
801	27 SF 24?		
802	22 SF		

KF = S. Exped. Fleet
 GKF = S-W Area Kantai
 F = 艦隊
 Sf = 航空戰隊
 (四格) = 空戰

~~CONFIDENTIAL~~

The Organization of the Japanese Naval Air Arm

Any study of the organization of the Japanese Naval Air Force must of necessity concern itself with two echelons of command, the administrative and the operational. With the former of these we only are concerned insofar as an understanding of its procedures and duties effects our comprehension of the operational echelon.

As is true in any administrative set-up, the administrative side of the Japanese Navy Air Organization deals mainly with the general naval policies, their formulation and procedures of control through shore establishments from their inception with the Emperor and his advisors down a long spidery network of sub-sections, naval districts, sub-bases and outposts. The actual carrying out of the policies in their minute detail is termed operations.

The Emperor is the head of all military organization in Japan. As Commander-in-Chief of the Navy, he has the sole power to declare war, make peace, and conclude treaties. He appoints his highest advisors, the heads of the Naval General Staff, the Navy Department and the Commanders-in-chief of the various fleets and districts. It would be incorrect to state that the Emperor is all-powerful, for the Supreme War Council and more especially the Grand Headquarters are the real planning groups and comprise men of high rank and great prestige who are also experts in strategy.

The true worth of the Emperor lies in his mythical divinity. With his consent any law or decision put forth in his name must be right in the eyes of his subjects. In this cooperation of a 'Can-do-no-wrong' personality with a planned grand strategy is fused the mighty functional and spiritual power which directs the military destiny of the Japanese.

The Supreme War Council: (GUNJI SANGI IN)

The Supreme War Council is charged with coordinating the plans and activities of the Army and Navy. Their powers are very real for prior to his appointment of the

Navy Minister and the Commanders-in-chief of the fleets and districts, the Emperor usually consults this council.

The Grand Headquarters: (DAI HONEI)

This body was established by the Emperor's ordinance in 1937 which stated "The Highest Body of Supreme Command to be called The Grand Headquarters, shall be established under the supervision of the Emperor. The Grand Headquarters shall be set up in time of war or emergency as the occasion demands. The Chiefs of the Army and Navy General Staff assist the Emperor in the exercise of the Supreme Command, by formulating the strategic plans ... and by coordinating the operations of the Army and Navy." Members of this staff include experts in strategy and war, together with specialists in Naval intelligence and communications. They constitute the most potent force in the formulation of high naval strategy.

Besides these two councils there are several other high naval authorities and committees.

The Naval General Staff: (GUNREIBU)

This office takes care of most of the functions carried on by Cominch and the Office of the Chief of Naval Operations in our own Navy Department. It is charged with planning operations, strategy, and with National defense. It also devises war plans, directs the movements of fleets and squadrons, has charge of naval intelligence and naval communications and inspects the naval establishments. Liaison with the Grand Headquarters, the various fleets and with forces in China and occupied regions to the South, is carried on by a group of officers from this staff.

The Navy Ministry: (KAIGUN SHO)

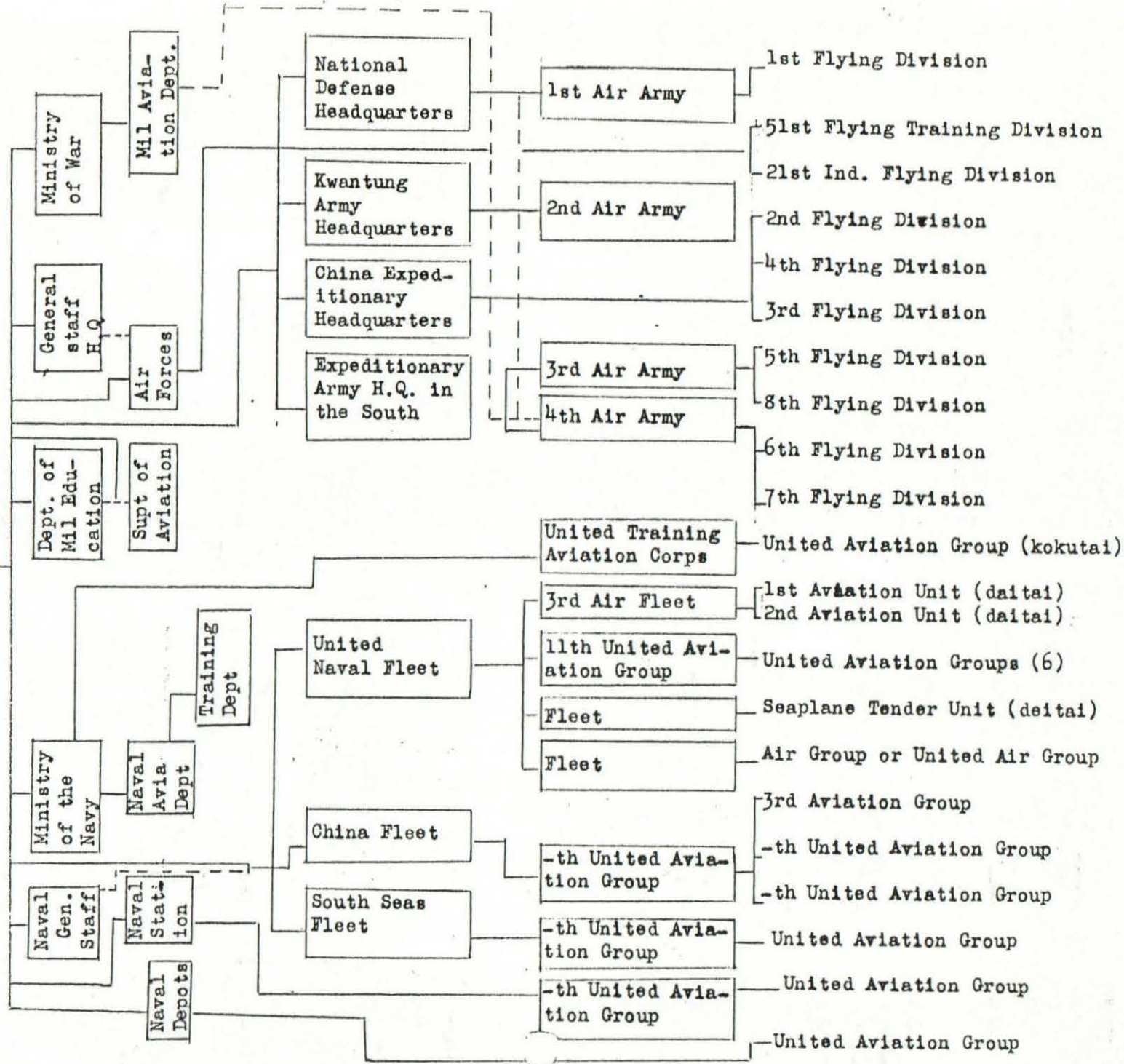
The Minister of the Navy: (KAIGUN DAIJIN)

A member of the cabinet, The Minister of the Navy is selected by the Premier from among the admirals and vice admirals on active duty. His actual appointment comes

Chain of Command of Japanese Army & Naval Air Forces

The Emperor

General Headquarters



026

from the Emperor to whom he is directly responsible. Under the Japanese Constitution, the War and Navy Ministers have broad powers to act in a semi-independent status of the civil branches of the government.

The Minister of the Navy is charged with building and maintaining ships and providing them with men and munitions. He is not in command of Naval operations which are directed by the Chief of the Naval General Staff. He is assisted by two civil officials and by a naval vice minister who is on active duty. The naval vice minister relieves the Navy Minister of much of the burden of administration.

The Board of Admirals: KAIGUN KAIGI

A permanent advisory board of the Navy Department, The Board of Admirals serves to coordinate the activities of the Navy Department and those of the Fleet and shore stations. The Navy Minister presides over this board, whose members are all Flag officers. The board determines the scope of the year's work and then assigns to each sub-division of the Navy its portion of the work, thus maintaining maximum continuity and coordination. It meets once a year with the commanders-in-chief and the directors of the bureaus to nominate officers for promotion.

The Departments: HOMBUS

The departments are not to be confused with the bureaus which are generally headed by navy captains and perform ordinary bureaucratic functions such as the paper work connected with personnel, training, supplies and accounts etc. The departments, headed by vice admirals, retain considerable power in administration and planning and plenary power in research and development. Of these departments there are four: the Naval Aviation Department (KAIGUN KOOKUU HOMBUS), The Naval Technical Department (KAIGUN KASEI HOMBUS), The Naval Civil Engineering Department (KAIGUN SHISETSU HOMBUS), and the Hydrographic Office (SUIRO BU).

The Bureaus (KYOKU)

The Navy Department consists of eight bureaus and a Secretariat. The bureaus are as follows: The Bureau of Military Affairs (GUNMU KYOKU), The Bureau of Military Preparations (HEIBU KYOKU), The Bureau of Personnel (JINJI KYOKU) The Bureau of Training (KYOIKU KYOKU) The Bureau of Material Supply (GUNJU KYOKU) The Bureau of Medicine (IMU KYOKU) The Bureau of Accounts (KEIRI KYOKU) and The Bureau of Law (HOMU KYOKU).

Several colleges owned and directly under the jurisdiction of the Naval Ministry and a Courts Martial completes the hierarchy of Naval Administrative Organization.

The distinction between administrative and tactical or operational organization presents a difficult problem in a study of the Japanese Naval Air Force. Administration as we have briefly described it refers to the semi-permanent chain of command which is concerned primarily with administration. In contrast, as has been stated above, the tactical organization cannot be presented in more than momentary detail because of the fluidity and constant changes involving units and fleets engaged in operations.

For the most part, each naval and naval air commander heads an administrative organization and also a corresponding tactical organization. The ships and units he commands in each instance may be exactly the same, but even so, separate titles will be assigned ^{him according to his functions} ~~to~~ his command ^{On the other hand the ships and units assigned} may in each instance be completely different, but this is not ordinarily the case. Usually his tactical command embraces as its main complement, the units assigned to his administrative control, ^{and will} ~~it~~ also includes units from other administrative organizations. Similarly, some of his own administrative units are 'loaned' to other commanders for tactical purposes. This practice is common for both supreme and the subordinate commanders. A fleet commander will borrow ships from another fleet for operations. Within the structure of the fleet itself, one subordinate commander will borrow aircraft, men, and ships from another subordinate for operations.

The use of the term Force (BUTAI) is characteristic of all tactical titles. The three area fleets all have corresponding tactical designations as area forces, i. e., the Fourth Fleet is also the Inner South Seas Force and the several air flots have tactical titles as Air Attack Forces. In like manner, air fleets have a tactical designation as Base Air Forces.

"The basic operating elements of the Japanese Naval Air Organization (which can in fact not be too readily separated from Naval Organization) are the fleets (air and surface) and the Naval and Guard Districts.

While fleet and district organizations interlock in function and responsibility, there are differences in emphasis of function and area of responsibility. Thus the primary duty of the fleets is the conduct of operations against the Allied forces and their area responsibility lies on the rim of the Empire.

On the other hand, the main duties of the districts are supporting in character and they are located at the hub of the Empire. This difference in area responsibility is fundamental to an understanding of Japanese Naval Organization.

While there is a contrast in primary functions, there is a considerable interlocking of secondary functions. Thus the districts are responsible for defensive operations in the inner areas assigned to them and each district has air elements and surface vessels of some combat stature assigned to it.

Similarly, the fleets operating in the forward areas are responsible for the administration of advanced and supporting bases. As the war is brought closer to the Japanese homeland, the interlocking of the fleets and districts is likely to increase.

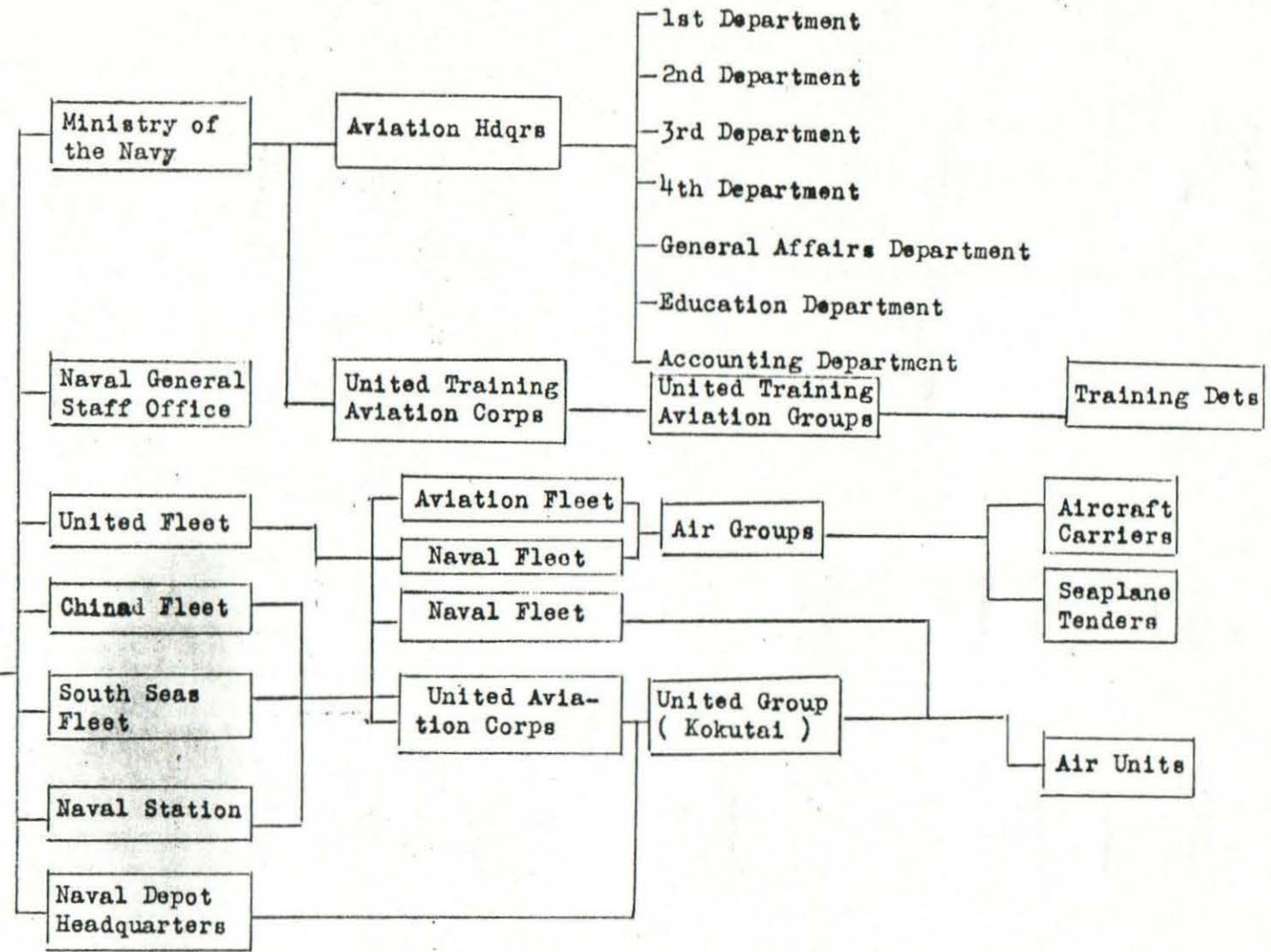
Naval Districts -- (CHINJU FU)

Japan and its adjacent waters are divided into four Naval Districts and seven Guard Districts (KEIBI FU) which are:

Chain of Command of Japanese Naval Air Forces

The Emperor

MINISTRY OF THE NAVY



YOKOSUKA (1st) NAV. DIST.
KURE (2nd) NAV. DIST.
SASEBO (3rd) NAV. DIST.
MAIZURU (4th) NAV. DIST.

OMINATO GUARD DIST.
OSAKA GUARD DIST.
RASHIN GUARD DIST.
CHINKAI GUARD DIST.
RYOJUN GUARD DIST.
TAKAO GUARD DIST.
HAINAN GUARD DIST.

The Naval Districts are all centered on the Mainland of Japan and have the more important functions and facilities. The Guard Districts are largely peripheral to the Naval District."

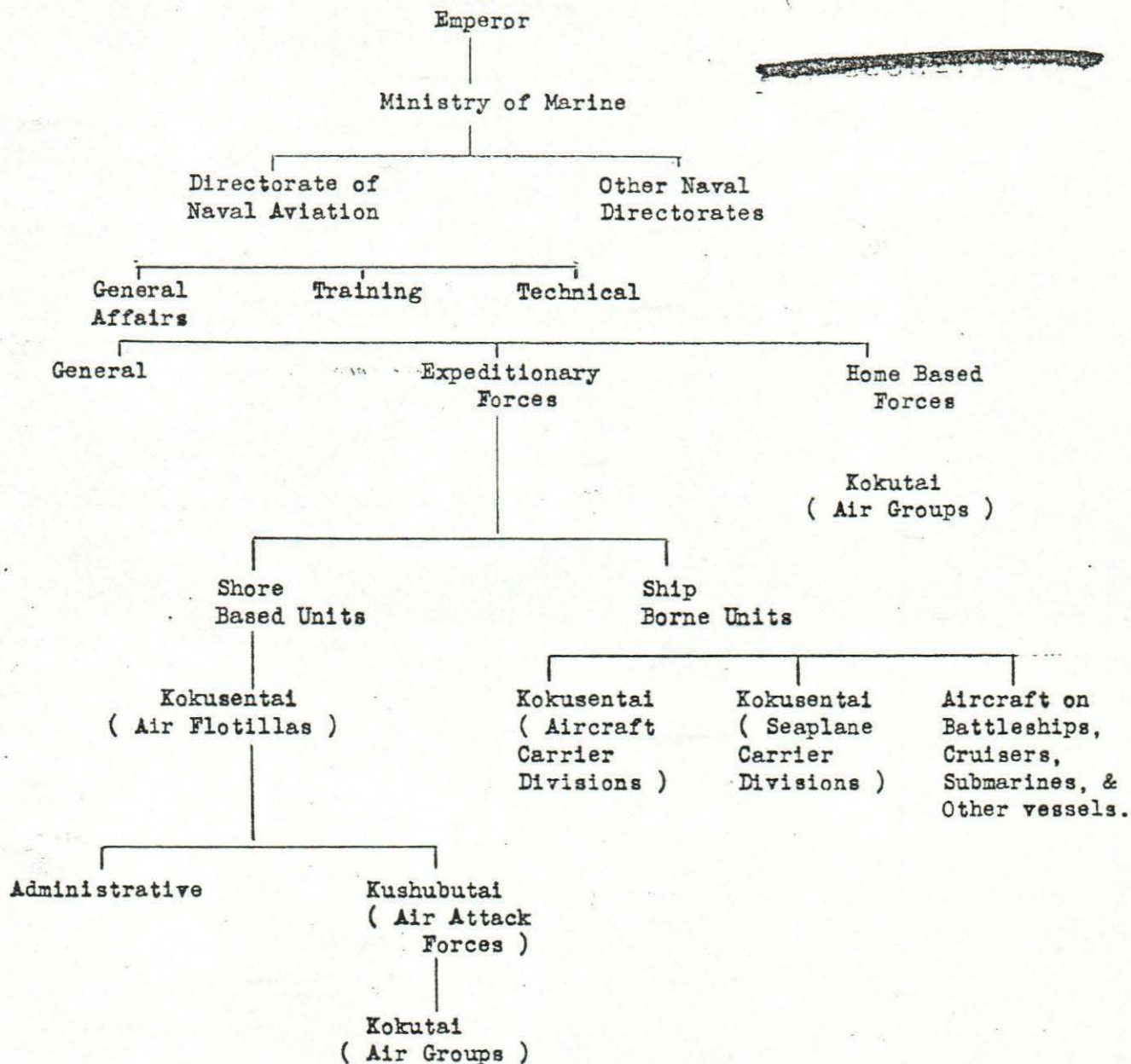
"In both cases the district is named after the Naval base which is its headquarters and focus of activities, except in the case of the Hainan Guard District."

Functions: The Four Naval Districts are the core of the Japanese Naval Establishment. They have the following vital functions:

1. Construction and Maintenance of vessels of the Fleets.
2. Protection of the sea and air frontiers of Japan proper against surface air and sub attacks.
3. Recruiting, training and supply of enlisted Naval personnel.
4. Coordination of all Naval activities and the maintenance of security within the district.
5. Production, inspection and distribution of Naval aircraft supplies and stores."

"The Seven Guard Districts are junior editions of the Naval Districts. Their Navy Yards are incapable of building major fleet units and are not equipped for major naval repairs. They can, however, build special service ships and miscellaneous small craft. There are no important training centers in the Guard Districts, but the Rashin, Chinkai, and Takao Guard Districts are probably responsible for the recruiting of the Koreans and and Formosans now being used by the Japanese Navy."

Command: Each of the Naval districts and Guard districts is under a Commander-in-Chief (SHIREI CHOKKAN) who is under the Chief of the Naval General Staff for war plans and operations and under the Minister of the Navy for administrative matters. The Cinc of



The above is a descriptive tree of the Japanese Naval Air Service based on all relevant intelligence received to date (Nov. 1942) by Headquarters, Allied Air Forces, S.W.P.A. The tree, within limits, is thought to give an accurate picture, but it must be borne in mind that while it is considered accurate it is not necessarily comprehensive. There are believed to be certain intermediate commands (e.g. the Combined Air Groups - RENGU KOKUTAI), the northern, southern and east Indies Air Forces (Kokubutai) whose precise relation to the tree is not altogether clear, and they have, therefore, been omitted.

The Yokosuka Naval District, the most important district organization in the Japanese Navy Establishment, is a full admiral. The commander of the remaining Naval Districts and all the Guard Districts are Vice-Admirals. The Cinc of a Naval or Guard District is also Commandant of the Major Naval Base within his district, and his headquarters are located there. At present the Commandants of the Guard District are on the same echelon of command as the Naval District Commandants."

"Under the Naval District there is a special air force or (KOOKUJ BUTAI) established with two primary functions. The first is that of escorting ships and patrolling the sea areas assigned; the second is that of training pilots and crews for the Naval Air Service."

"This is indicative of the high integration of air and surface units under Naval District Command."

THE TACTICAL ORGANIZATION

Until January 1, 1944, insofar as can be ascertained, the Japanese Navy Air Force was divided for operational purposes into two fleets: the Third Fleet composed of carriers and attached planes and vessels, and the Eleventh Air Fleet consisting of shore-based aircraft. By no means all of the Japanese Navy Air Force fell within these two commands. Aircraft Squadrons, tenders, and other aircraft equipment not assigned to either fleet were attached to air stations, various bases, and to surface force or other commanders.

Both of these fleets and all other naval and naval air fleets fell under the command of the Cinc Combined Fleet with the exception of the China Seas Fleet and its auxiliaries, the First and Second Chinese Expeditionary Fleets. Of all the fleets, the First (now defunct), Second, Third, Sixth and the GEB and units attached to the Combined Fleet and the Combined Fleet train fell under the classification of what might be termed Mobile Mission Fleets or those available for operations in any area while the remainder, including the First Air Fleet, the Fourth Fleet, the Northeast Area Fleet, its

components the Fifth Fleet and the Twelfth Air Fleet, the Southeast Area Fleet including the First-Fourth Southern Expeditionary Fleets and the Thirteenth Air Fleet and the China Seas Fleet came under the classification of localized area fleets or those units of an almost completely defensive nature. The Mobile Fleets constitute the main striking force of the Combined Fleet while the localized fleets are responsible for defensive action in certain specified geographical areas. It is accepted that no strong offensive action could be undertaken by the localized fleets without drawing on units of the Mobile Fleets.

As has been stated above, originally all shore-based naval aircraft were under the Eleventh Air Fleet while the Third Fleet was in command of all carrier-based aircraft. However, this situation is no longer true for there are now three working air fleets and as of March 1, 1944 a revision in the Naval Fleet set-up has placed the main air striking power of the Japanese Navy under the jurisdiction of the First Mobile Fleet composed of the old Second and Third Fleets and some units of the old First Fleet with Admiral Ozawa, Jisaburu^o, formerly Cinc Third taking command of this new striking arm. Moreover, air groups from certain carriers have been transferred to shore bases and assigned the administrative control of the air fleets.

If we examine the Chain of Command of this air force organization more closely the following relationships will evolve. As has been stated above, at the top of the Chain is the Combined Fleet under which are the several area fleets and air fleets assigned to those areas with the exception of the First Air Fleet, which, so far as is now known, has not yet been affiliated with any particular surface fleet, the establishment breaks down as follows:

THE AIR FLEETS

ELEVENTH AIR FLEET

The Eleventh Air Fleet, assigned to the Southeast Area Fleet and tactically termed the First Base Air Force was the original main air wing of the Japanese Naval Air Force.

It was responsible for escorting, patrolling, and other duties, not only in the Bismarks and Solomons, but also in the Mandates less the Marshalls. Cinc Eleventh Air Fleet was also Cinc Southeast Area Fleet (and may still be) with headquarters at Rabaul. From the point of view of ships, planes, and personnel, it was the largest air fleet.

However, from the first of January of this year the importance of this air fleet has dwindled with the decline of Rabaul as a strategic base until now it is of little or no importance as an air arm. In mid March its complement of Flotillas (21, 26, and 25) was reduced from three to one and after our destructive raid on Rabaul and Truk at the end of April, this remaining Flot, 25, was also reduced to impotence and by mid May was disbanded.

TWELFTH AIR FLEET

This command was created in May 1943 and has since been tactically known as the Second Base Air Force. It is commanded by Cinc Northeast Area Fleet to which it is assigned. Until recently when our increased tempo of activity in the New Guinea area and more especially the creation of the Seventeenth Naval District in Alaska made the high command jumpy, the headquarters of this fleet was at Chitose. It was composed of shore-based aircraft responsible for escorting, patrolling, reconnaissance and defensive-offensive operations in the area assigned to the Fifth Fleet. As the seeming Threat to the Kuriles grew greater, Cinc Twelfth Air Fleet made an extensive search of his area with the idea of building more bases for the increase in size of command which seemed inevitable and the command headquarters themselves were subsequently moved into the Kuriles, first at Paramushiro and then to Shimushu. At this time, Air Flots 27 and 51 were assigned. However, with the Allied attack on Saipan and the bombardment of the Bonins, the slow progressing enlargement of the Northern Command was apparently abandoned (at least temporarily) and Air Flot 27 was detached and sent to Yokohama while 51 again moved South to Kisaratsu to protect the Bonins and Southern Japan.

THIRTEENTH AIR FLEET

The Third Base Air Force or the Thirteenth Air Fleet comes under the command of the Southwest Area Fleet whose Cinc is also Cinc Thirteenth Air Fleet. It was established in September 1943 to command Naval aviation in the D.E.I., Malay, and Burma area with headquarters at Soerabaya. The strength of this fleet is kept proportional to the threat from India and Australia.

Present Composition: 28 Air Flot; Air Group 381

FOURTEENTH AIR FLEET

This unit under the command of Cinc Central Pacific Area Fleet whose head is also its own commanding officer recently formed (March 1944) and charged with aircraft defensive in the Carolines and Marianas. As the power of the Eleventh Air Fleet dwindled its former strength and units were absorbed into this new fleet which established headquarters at Saipan. When we hit Kavieng at the end of March, this unit suffered severe losses and again suffered greatly in the Truk raids. By the middle of April, shortage of aviation gas in the Central Pacific was acute, but at the same time, orders went out to hold at any cost a line running approximately from Saipan through Yap and Palao and thence to Hollandia. An Allied breach of this territory was even then regarded as a serious threat to Empire and supply lines to the South. By the end of May however, following a conference of the high command, a reorganization of the air commands was effected and Cinc First Air Fleet assumed administrative and tactical command of all shore-based Naval air in the Marianas, Carolines, Southern Philippines, Halmahera, Celebes and Western New Guinea. With this move the Fourteenth Air Fleet was divested of all but a few transport planes to become the first top air command divorced from its area fleet command.

FIRST AIR FLEET

The First Air Fleet was created in September 1943 (presumably against the day of another Doolittle raid) for the protection of the approaches to Tokyo and as an operational training command. Its headquarters were then at Kasumigaura, the main air training center in Japan. Many of the planes first comprising this unit were drawn from operational aircraft attached to the training air groups at Kasumigaura and other nearby training centers. However, following the Allied attack on Truk at the end of January, this fleet moved its headquarters from the Empire to Tenian and the area of patrol and defense thus became the Mariana-Caroline, and Bonins-Mariana chain. Early in March, units of this fleet were sent into the Philippines area ^{Strength} to that theater. (It may be that the Fourteenth Air Fleet was temporarily created as an immediate reserve force to back this large but weak force in the Carolines and Marianas, during the period of its growth and to be in direct command of its subordinate units in the specific Marianas-Carolines area).

However, early in May a tactical reorganization placed all Naval air forces in the Central Pacific, Philippines, Eastern D.E.I. and New Guinea areas under the command of the Fifth Base Air Forces with permanent headquarters located at Tenian. This unity of command was probably designed to afford greater mobility and coordination of available forces to protect against new potential loss of the Celebes Sea area and certain strategic bases in the island groups with the subsequent blockade of vital oil supplies.

By the end of May, following a large conference of the supreme commands at Manila, a further reorganization was brought about and Cinc First Air Fleet was given complete control of the whole Central Pacific Area, South of the Empire, excluding Malay and Sumatra. Cinc Fourteenth Air Fleet was divorced from all air units except a few transport planes.

This move brought under the command of Cinc First Air Fleet, the largest shore-based Naval air force ever assembled under a unified command. His top subordinates

include Air Flots 22, 23, 26, and 61 with the recently formed Empire Air Flot 62 (however assigned to the Combined Fleet) training intensely with a view to producing readily available and trained replacements for any First Air Fleet losses. In the New Guinea area it was even deemed necessary for the Navy to command certain Army air units and deployment of Army air groups in that area by Naval commanders has already been noted, although by the first of June this command embraced four air attack forces, only one, the 61st, was then believed to be in good form. The Second Air Attack Force, (Air Flot 22) at Truk was almost completely wiped out in our carrier raid there in late May. The Third Air Attack Force (Air Flot 23) has suffered some severe losses in Western New Guinea and is in any case composed of only one fighter, one reconnaissance and parts of two medium bomber groups. These -- at least until our thrust at Biak, were chiefly concentrated in the Halmahera-Western New Guinea areas, with rear bases at Kendari and Davao. The Sixth Air Attack Force (Air Flot 26) has never recovered from disastrous losses at Palao and at least part of his units are now refitting and training in the Central Philippines; token forces probably remain at Peleliu and Davao. The 41st Air Attack Force (Air Flot 61) is fairly near its full complement of about 500 planes - or was until our Saipan strike. Furthermore, it has been tactically divided recently into an Eastern Air Attack Force with headquarters at Tenian/Saipan and a Western Air Attack Force chiefly responsible for Palao and Yap.

THIRD AIR FLEET

At this writing a Third Air Fleet has been noted in traffic by new calls, but its formulation is still too recent to diagnose. It is suggested, however, that such a fleet is being established, incorporating Empire air groups and training groups.

To each air fleet are assigned one or more air flots comprised of air groups which are in turn composed of Shootai, Chuutai, and Daitai. In the air group category there

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are several sub-classifications, namely, the numbered, the combined and the name air groups. A lesser classification in this echelon, which is not in fact an attributive to this chain of command, but unfortunately is frequently confused in such a manner, are the air stations.

AIR FLOTS AND AIR ATTACK FORCES

The air flot (KOKUJ SENTA) or Air Attack Force (KUUSHUUBUTAI) (Tactical title for Air Flot) is comprised usually of two or more air groups of varying types and sizes -- i.e., Air Group 381 is presently composed of 48 VIF or Interceptor Unit 602; 12 VNF or Nightfighter Unit 902; and 48 VF or Fighter Unit 311 --. The mean strength of a group is between 75 and 90 planes, although this number may vary widely, falling as low as 0-20 planes after a bad encounter and reaching as high as 190 planes for a specific operation.

The Air Flot seems to be a convenient unit title for controlling the administrative functions of several air groups while an air attack force seems to serve the same purpose in an operational or tactical status. It is not clear just how long this practice has been in effect, whether from the beginning of active air strength in this war or whether only in recent months. However, observational study here has led to only one dissenting instance in the above belief in the past several months. (During February Air Flot 26 and Air Attack Force 6, became separate commands so that ComAirFlot 26 could become senior tactical officer at Truk during our February raids and at the same time, a sub-command was temporarily established to continue the work of reforming this Flotilla at a Truk base and at Rabaul.. By mid April, however, the two commands were again joined.)

There are, at this writing, eight functional air flots - 22, 23, 26, 27, 28, 51, 61, 62, -- and two training rapidly -- 63, 64 --. Four others - 21, 24, 25, 50 - have only recently been disbanded. It is believed that Air Flot 21 sustained severe losses in

the Bismark-Solomons area in November, which may have crippled it fatally or wiped it out entirely. In any case, the unit was written off in February as inactive or dissolved. One March reference has it inactive but reforming under command of the Fourteenth Air Fleet, but since that unit itself has since become inactive, it is quite logical to suppose likewise that Air Flot 21 is dead, although, of course, whatever units remained from the original Flotilla or have since been reformed, must presumably have been absorbed into another Flotilla.

Air Flot 24, formerly stationed in the Marshalls is believed to have been eradicated in our early February strikes in that area. About the middle of that month its remaining units were placed under the command of ComAirFlot 22, at Tenian, ostensibly for reforming and training. However, on 20 February, the unit was declared officially disbanded and has not since appeared in traffic.

Air Flot 25 met a similar fate at Rabaul and Kavieng in March, April, and May, and although it hung on for some time with very little strength, its final disbandment became effective in mid May.

Originally a Third Fleet operational carrier training command in the Empire, Air Flot 50 was apparently disbanded at the first of this year when an organizational reshuffle seemingly deemed its existence of little value since most of its duties at that time were turned over to the new First Air Fleet command.

A brief review of the others reveals the following:

AIR FLOT 22

Assigned to the First Air Fleet with a tactical title of Second Air Attack Force, this unit has its headquarters at Truk. Originally established in the Marshalls it soon moved to Tenian. In February of this year when Air Flot 21 at Ruotto was reduced to an inoperative status, its units were incorporated under this command which then embraced all land-based air units in the Inner South Seas area, except First Air Fleet units and a detachment of the Yokosuka Air Group, and was again responsible for all

Japanese held islands in the Carolines-Marshalls group and a while later included the whole Mandates. About this time also, the command headquarters were transferred from Tenian to Truk and when the Fourteenth Air Fleet was organized it was temporarily included as part of its composition. (It became part of the First Air Fleet when the Fourteenth Air Fleet was reduced to an inoperative status). In the 29 March raid on Truk, its commanding officer, Rear Admiral Zenishi Hasegawa was killed in action.

Early in May, because the impregnability of Truk seemed a thing of the past, it was momentarily decided to abandon this base to its own devices and relocate its existing forces. Under this decision Air Flot 22 was to move to Palao and Davao (the latter place in an attempt to build up the Philippines defenses). However, at the beginning of June this unit was still located at Truk and hanging doggedly on despite severe losses from constant Allied thrusts.

CURRENT COMPOSITION: (Estimated) 6/26/44

Air Groups: 151, 202, 251, 253, 301, 503, 551, 755

AIR FLOT 23

This command (Air Attack Force 3, the former Eastern Air Attack Force) is believed to have become operative in early December 1943 and was first associated with the Marshalls. Sometime shortly after the first of the year (1944) it came under the administration of the Southwest Area Fleet and tactically under Air Fleet 13 in a command embracing the Eastern Dutch East Indies with headquarters at Kendari.

The unit suffered heavy losses in our February campaigns against Roi and Namur, however, new groups were assigned and it quickly reformed in the Indies area. In April the unit was active in the Philippines-New Guinea area and closely associated with the First Air Fleet. For a time, its headquarters were transferred to Digos Air Base at Davao, but with the increased tempo of Allied activity in the Hollandia-Biak area of New Guinea, it again took up headquarters in that area at Sorong and about the middle of May was assigned directly to the First Air Fleet rapidly becoming one of its top

subordinate commands. At the end of May it was made even more powerful when the high command decided that for the eventual safety of the area; henceforth Army air units would be deployed under its guidance, and about the same time a tentative move to Ambon-Wasile was indicated.

Current Composition: Estimated 6/26/44: Air Groups 153, 732, 753, 851.

AIR FLOT 26

Air Flot 26 (Air Attack Force 6) was originally stationed in the Bismarks, but in early January was transferred to Truk and associated there with a new air Fleet Command. For a while it continued to direct activities in the Southeast combat zone - in the Rabaul-Kavieng area and against Allied advances on New Britain, undergoing great setbacks.

During February, Air Flot 26 and Air Attack Force 6 became separate commands (the first known instance of this type) so that ComAirFlot 26 could become senior tactical officer at Truk during our raids there and at the same time a sub-command was temporarily established to continue the work of reforming the badly shot up groups of this Flotilla.

In March the command was moved to Palao and assigned to the Fourteenth Air Fleet and certain units were ordered stationed at Davao to furnish more complete air coverage for convoys moving between the Southern Philippines and Palao. A short while thereafter, the command was centered at Peleliu. However, by May with increased operations in the Philippines area and the abolition of the Fourteenth Air Fleet, this unit was placed under tactical organization of First Air Fleet, and unit headquarters were permanently set up at Davao #1 air base.

The Allied operations on Biak and in the New Guinea area have at least temporarily disrupted training operations of this unit in the Philippines since some, or all, of its planes have been hurriedly moved into the Halmahera-New Guinea area.

Current Composition: Estimated 6/26/44: Air Groups 201, 501, 751

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AIR FLOT 27

Tactically known as the Seventh Air Attack Force, this unit, until recently, was assigned to the Twelfth Air Fleet with headquarters progressively at Ominato, Chitose, Misawa and Bihoro. It was charged with partial defense of the Northern area. As the Allied activity in the Alaskan-Aleutian area increased and with the establishment of the Seventeenth Naval District at Adak, Alaska, Japanese fears for attacks on the Kuriles and Northern Empire surged, and increased precautions for defense of the area, including the building of more bases and a considerable increase in air strength with a general movement north resulted. However, the Allied invasion of the Marianas and the bombardment of the Bonins somewhat disrupted this plan and Air Flot 27 was detached and sent to Iwojima area to assist and presumably come under command of the First Air Fleet.

Current Composition: Estimated 6/26/44: Air Groups 252, 452, 752, 801

AIR FLOT 28

This unit is assigned to the Thirteenth Air Fleet of the Southwest Area Fleet. Its tactical title is now Eighth Air Attack Force, although prior to the first of January 1944 it was known as the Western Air Attack Force. Its original headquarters were at Sabang, but in February some time it was temporarily advanced to Port Blair thence again to Sabang and from there to Soerabaya. Just why the frequent shifting about is not known, but charged with the defense of the Western Dutch East Indies it was undoubtedly moved from area to area, dependent on the pressure of war operations.

With the recent shift of the Twenty-third Air Flot (formerly guarding the Eastern Dutch East Indies) to the Philippines area, the defense of the whole theater fell to the charge of this command which then set up headquarters at Kota Raja. Naturally the Hollandia and Biak campaigns have mitigated its effectiveness, but the total outcome, even with the assistance from Air Flot 26, has yet to be measured.

Current Composition: Estimated 6/26/44: Air Groups 331, 705

AIR FLOT 51

Air Flot 51, tactically known as the Thirty-first Air Attack Force was established under the Twelfth Air Fleet as an operational training command. After the disbandment of Air Flot 50 in March, it became the sole operational training command and named air groups under its jurisdiction were changed to numbered groups indicating a strong possibility that they would eventually be used in the field.

Here again, as the tempo of activity increased in the Northern command, headquarters of this group moved Northward from Toyohasi and Chitose to Bihoro and thence to Paramushiro.

When the activity in the Marianas drew Air Flot 27 to Iwojima, the Fifty-first Air Flot was likewise diverted from its northward surge and forced to retire to Kisaratsu for the purposes of bolstering Southern Empire air forces and affording some protection for the Bonins.

The withdrawal from the North of this Flot, as well as 27, left the Kuriles virtually unprotected.

Current Composition: Estimated 6/26/44: Air Groups 203, 502, 553, 701

AIR FLOT 61

Comparatively new command under the organization of the First Air Fleet. It is tactically divided into a Forty-first Eastern and a Forty-first Western Air Attack Force, the former with headquarters at Tenian and Saipan and the latter based chiefly on Palao and Yap, which places were left inadequately protected when the withdrawal from this area of Air Flot 26 to the Halmahera region was necessitated by our activities there.

Formerly responsible for the defense of the Marianas and the Nanpoc Shoto Islands with headquarters at Tenian, Chief of Staff First Air Fleet about the middle of March requested permission to place this Flot in Western New Guinea and the North of Australia area. However, our attack on Palao drastically changed this plan and the Flot remained in the Marianas until a possibility of a U.S. attack on the Carolines developed late in

March. Then some of the planes were moved to the Western Carolines and great losses were subsequently sustained at Mereyon and Palao.

Reinforcements poured in from the Empire and the strength of this unit was again built up at Palao, following which the above-mentioned division of Air Attack Forces was effected.

Large losses were sustained by this unit in the Saipan advances and it has been suggested that reinforcements are being negotiated from the Southwest and from the Empire (from Air Flot 62)

Current Composition: Estimated 6/26/44: Air Groups 121, 261, 263, 265, 321, 343, 521, 523, 761

AIR FLOT 62

Air Flot 62, tactically known as 42 Air Attack Force was originally assigned to the First Air Fleet with additional duties as the headquarters command for Eastern Air Attack Force 3. It was formed in Mid-February as a training command and believed at first to be charged with at least a partial defense of the Northern area.

Stationed at several bases in the Empire with primary headquarters at Katori, it was soon apparent that this command would become a replacement command for other units in the field and subsequently at least part of the units under this command's jurisdiction were ordered to the Marianas, following the Allied mid-March Palao attacks*.

When it was decided in April to strengthen the Philippines defenses, remaining groups of this command still training in the Empire were ordered there.

However, very few replacements from Air Flot 62 were ever really sent out for information of mid May indicated a new plan of the Japs to eventually move the unit southward as a whole with a total strength of some 500 planes. At the end of May and up to the time of our Biak and Saipan operations, this unit was still training in the Empire.

Following these operations, activity of replacement by this command to First Air Fleet units in the Central Pacific and Southwest area has been noted.

*Sometime thereafter, probably late April or early May it was assigned to the Combined Fleet

Current Composition: Estimated 6/26/44: Air Groups 141, 221, 322, 341, 345, 361, 522, 524, 541, 762.

AIR FLOT 63

Still in the very early stages of development it should be several months before this Flot is active or any coherent appraisal of its potential abilities made. It is presently tentatively assigned to the First Air Fleet, although it cannot rightly be estimated as part of the First Air Fleet strength. It has a tactical title as 43rd Air Attack Force and is located in the Empire with the pre-Saipan imminence that 10 new groups were to be added and the whole unit transferred to the Philippines for further and complete training.

Current Composition: Information inadequate.

AIR FLOT 64

At this writing, calls have been assigned to such a Flot, but it is not as yet formed. With a tactical title of 44th Air Attack Force, it is presumably to be assigned to the First Air Fleet.

AIR ATTACK FORCE (NOTE)

Examination of the foregoing discussion reveals that the Air Attack Force numeral designator or Air Flot tactical title is in each case 20 digits less than the Flot number to which assigned. No explanation for this procedure is here accessible, but it serves as a handy method of relationship and familiarity of reference.

AIR GROUPS

The air group (KOCKUTAI) appears to be the basic organization unit of the Japanese Naval Air Force and it is from them that the Air Flots obtain their operational component. As far as can be determined here, there are three air group classifications - numbered, named, and combined.

NAMED GROUPS

It is not quite clear why or how the Japs name their air groups. It is believed that these named groups probably take the name of the parent station at which they were first formed, but when these units are sent overseas, they are found as frequently retaining these originally-named designations as they are found converted to another - usually numeral designation. In some cases, units in training are designated by a name and when deemed operational or ready for field duty, are totally redesignated by a three-digit number. However, it is likewise possible that a named air group may send parts or detachments of its unit overseas redesignated by number while retaining a named nucleus of the same group at its parent or some other Empire base. A third possibility is evidenced by such a group as the Yokosuka Air Group which, although it has detachments serving overseas, they continue to be known as detachments of the Yokosuka Air Group and apparently by no other name.

NUMBERED GROUPS

Numbered air groups are believed to have first been organized outside the Empire at numbered Japanese-held bases. They are sometimes known as specially Mobilized air groups (TOKUSETSU KOOKUTAI), suggesting a distinction between these groups and permanent Naval air force groups. Several months ago, it became apparent that the numbering scheme had a system in accordance with the type and duty of plane assigned to a group, i.e.:

Group	101 - 200	- Survey and Patrol
	201 - 300	- Fighter and some Reconnaissance
	301 - 400	- Medium Bombers (?)
	401 - 500	- Mixed Fighter Bomb and Fighter-Pursuits
	501 - 600	- Fighters, Dive Bombers, Fighter-Pursuits
	601 - 700	- ---
	701 - 800	- Medium Bombers
	801 - 900	- Fighter Bombers
	901 - 1000	- Fighters - Pursuits
	1001 -	- Transports?



However, this scheme must have fallen down in some respects for recently the numeral designation of an air group seems to bear little or no relation to its type complement since groups like the 381st may be composed of fighter units, interceptor units, and night fighter units which in themselves have a three-digit numeral designation (Air Group 381 is composed of Fighter Unit 311; Interceptor Unit 602, and Night Fighter Unit 902).

It has been said that recently the Jap Naval Air Force was reorganized and a three numeral designation adopted for all air groups. This office, however, is as yet unable to determine just how far this belief has become actively true, for there still remain a few number of groups which are known alternately by name or number depending upon habit. For example, the Kisaratsu Air Group, assigned the number 707 is seldom, if ever, referred to by that designation but is almost exclusively known by its name. The same is true of a number of others (about 50 now operational). These groups may be merely training groups like those at Sunosaki or Kasumigaura or they may be fully operational like the Bihoro or 701 Air Group. These name-number groups may possibly be of a temporary quality - that is to say, some groups (as discussed above) may be named groups while in training or waiting to replace losses, but become numbered groups in the field, assuming a new numeral designation or adopting the number of the group whose losses they are replacing.

COMBINED GROUPS

Little is known about the third type of air group or combined group. They are usually composed of named groups if they are operational and are presumed to be training groups located in the Empire or China. There are presently 6 of these groups operative, 11th, 12th, 13th, 14th, 15th, and 18th.

Air groups sometimes operate as a unit and at other times in detachments. One detachment of a group may be Kisaratsu near Tokyo, a second at Truk and a third in the Philippines. The Japanese often confuse the issue by referring to a detachment or even an entire group by the name of the commanding officer.

ORGANIZATION OF AN AIR GROUP

The number of planes in an air group varies with the type. Carrier plane groups, like ours, naturally depend on the plane complement of the ship involved. Land based air groups fall into several categories.

VO	12 aircraft
VF	45 aircraft and often 6 VO
VB	18 aircraft
VT	To date used only on carriers
VB(M)	27 aircraft
VP	12 aircraft
VP/F	12, 18, or 24 aircraft

This pattern is generally but not always followed. There are certain groups which have both VF and VB(M), usually 27 planes of each type. There also are groups which have VF and VB, usually 18 planes of each type. VP groups are often found to have a VF/F unit attached to them. VB(M) groups have been found to have 36 and 45 aircraft. VF, VP, and VB(M) groups have been known to have transport planes attached to them. The number of planes in a group also depends to a very large extent upon losses and replacements. The Japanese organization is at all times extremely flexible.

TACTICAL ORGANIZATION OF AN AIR GROUP

It is known that for operational purposes the Japanese employ formations roughly corresponding to the section, squadron, and wing. These are known respectively as Shootai, Chuutai and Daitai. The Daitai which corresponds with the wing, is also referred to as a Sentai. The theoretical establishment is 3 aircraft to a Shootai, 3 Shootai to a Chuutai, and 3 Chuutai to a Daitai. The whole organization is so flexible that their rigid set-up is rarely found under operational conditions.



It would appear that aircraft of more than one group may be comprised in the Daitai. Among the pilots and aircrew the Daitai is known by the name of its commanding officer.

Planes within a fighter or bomber group are usually organized as follows:

SHOOTAI	3 plane section (2)
CHUUTAI	3 section (a plane) flight
KOOKUUTAI	3-6 Chuutai (27-54) planes

This organization is particularly true of VB(M) where an attack unit is almost always either 3 planes (Shootai) 9 planes (Chuutai), 18 planes (2 Chuutai), 21 planes (Kookuutai), 36, 45, or 54 planes (Two Kookuutai). Here again, however, it is impossible to lay down any general rule for a Shootai has been known to have anywhere from 2 to 8 aircraft. VO, VP and VP/F units appear to have usually two Shootai to a Chuutai and follow a 3, 6, 12, 18, 24 pattern.

BASE AIR FORCES (KICHI KOOKUU BUTAI)

The Japs have another air organization which they call a base air force, tactical titles of the air fleets. The KICHI KOOKUU BUTAI is formed for a specific operation or series of operations mainly from units of the KOOKUU KANTAI by the second digit of which it is designated. I.E., 13th Air Fleet = 3 Base Air Force (Exception: 5 Kichi Kookuu Butai is under 1 Kookuu Kantai).

CARRIER DIVISIONS

Another unit of the Naval Air Force organization is the Carrier Division which at the present time is believed to be contained in 9 carriers (and two converted BB's: Ise and Hyuga are now designated as XCV's) concentrated in four divisions (a 5th is now believed to be forming) under the Third Fleet of the First Mobile Fleet.

Prior to the Midway action, Japanese aircraft carriers were grouped into five divisions. With the loss of four of the larger operational carriers there and one in the Coral Sea, a regrouping was necessary. It may be that the recent creation of the Fifth Carrier Division is an attempt to regain the original carrier complement, which the Japs believe necessary to complete fleet strength.

Besides ship complement, a carrier division also has an assigned air group whose numerical title embraces all aircraft assigned to the particular carrier division (i.e., Air Group 601 is the tactical designation for all aircraft of Carrier Division 1). The complement and type of plane assigned naturally varies with the size and assignment of the division.

CAR DIV 1

Air groups of this division were reformed in May and June 1943 and based at Truk in a training and stand-by status from July 15 to November. Immediately following air invasion of Bougainville on November 1, these air groups were dispatched to the Bismarks. They were almost completely wiped out in the early November attacks upon our ships off Bougainville and in the efforts to repel our December 5th and 11th carrier strikes upon Rabaul. A detachment sent to the Marshalls following our attack upon Tarawa also sustained heavy losses. The present air groups were formed in the Empire about January 1st. They are the first carrier groups equipped with the new Comet (SUISEI) dive bomber and the Tenzan torpedo bomber. Beginning the first part of February, these new CarDiv 1 air groups moved from the Empire to Singapore, where they continued their training, until the First Mobile Fleet (of which this division was a part), sortied for the Saipan operation. As of 1 May, CarDiv 1 air groups had 5 months of training without combat, while only a small nucleus of the personnel had combat experience, the others represented the best graduates of naval air schools.

CAR DIV 2

The predecessors of these air groups in June 1943 were scheduled to move to Wotje and Mille to bolster the defense of the Marshalls. When on June 30 we invaded New Georgia, CarDiv 2 air groups moved instead to the Bismarks and Solomons where they remained until 1 September. The groups were almost completely wiped out and the remnants transferred to shore-based groups. During September new CarDiv 2 air groups were formed

in the Empire. In October they moved to Singapore for training. In December CarDiv 2 air groups were moved to Truk to replace the old CarDiv 1 groups wiped out in the Solomons. The enemy very reluctantly advanced CarDiv 2 air groups from Truk to the Bismarks in January in a last effort to maintain mastery of the air over Rabaul. Thus CarDiv 2 air groups were again lost down the Solomons sink hole. New groups formed in the Empire about March 1, thus the nucleus of experienced personnel who have had combat experience must be very small. Like the other carrier divisions prior to the Saipan sortie, air groups of this division were training and forming in the Indies-Philippines area.

CAR DIV 3

Chitose and Chiyoda completed their conversion to carriers in late September and early October, 1943. Until February they were engaged in escort and training. Their combat air groups together with that of the Zuiho were formed as of 1 February 1944. A new carrier division with no combat experience, probably a very small percentage of personnel has been in combat.

CAR DIV 4

This new division made its initial appearance in traffic in February 1944 at which time it was believed that Taiho, Kaiyo, and Jinyo were tentatively assigned. The unit was singularly quiet until May when Ise and Hyuga were assigned and a type of 3rd Fleet operational training command similar to the former air Flot 50 seemed indicated and it was believed for awhile that perhaps a more appropriate classification would be 4⁷ KOCKJUSENTAI. However, a 4th carrier division and a 654 air group which would be the proper designation for the aircraft of CarDiv 4 have recently been active in the Empire. The curious thing about this new division is that although Ise and Hyuga form a part of it there has been no known conversion of these ships to accommodate combatant planes of a type similar to those in other divisions, but recent estimates have assumed a new XCV classification for the two ships.

Car Div 5

Although not much is yet known about this new unit, it is believed to be training in the Empire. It may possibly be composed of the new carriers Unryu, Amagi, and Katsuragi (still under construction) and calls have been assigned for an air group 605, which again would be the correct numeral designation of an air group for this division.

EASTERN OPERATIONS FORCE

Apart from the fleets, both air and surface, operating in the Empire area and the various Naval districts and guard forces, the most important command for the air defense of the Empire is the Eastern Operations Force, a special Naval Air Task Force. The mission of this force is to intercept and attack our carrier task forces, which the enemy considers a real threat to the Empire. The Eastern Operations Force is believed to have been formed in November 1943; at least it was then noted for the first time. A captured document discloses that on December 7, 1943 it had a strength of 180 fighters, 48 dive bombers, 45 carrier torpedo bombers, 18 twin engine light bombers, 126 medium bombers, 20 land reconnaissance planes, 16 flying boats, and 12 float planes for a total of 465 aircraft. There are a number of basic local defense units such as Yokosuka, Kisaratsu, Teteyama, Kure, and Sasebo which are the backbone of the Eastern Operations Force. To these are added any combat units that happen to be in the Empire. The total strength at any one time had depended upon the number of units in the Empire, training and awaiting employment in a combat zone. For example, on December 7, 1943 no carrier air groups were included because none were then in the Empire, but during April 1944, CarDiv 2 and 3 air groups were part of the Eastern Operations Force. By an order of March 22, 1944 it was stated that army air units attached to the combined fleet were also part of the Eastern Operations Force. It is not known what such army air units may be, but they are not believed to be large.

The Eastern Operations Force as of December 7, 1943 was commanded by Vice Admiral Michitaro Totsuka, who also commands the Northeast Area Fleet and the 12th Air Fleet.

There is some doubt whether Admiral Totsuka is still in command of Eastern Operations Force since information of March 1944 indicates that the command descends upon the Senior Air Commander at Yokosuka air station at the time operations are ordered. This apparent change of command may be due to Admiral Totsuka having moved his headquarters to Shimushu in the Northern Kuriles, where he is quite far removed from operations off the East coast of Honshu.

In addition to the above air force to intercept and attack our fleet far out at sea, there are army fighter units which it is believed would intercept our aircraft over important targets. It is not believed that army bombers except such as have been assigned to the Eastern Operations Force would attack our ships. The Navy would also employ all of its available strength for interception over the target.

OPERATIONAL TRAINING UNITS

The Enemy also has in the Empire a large force of operational training units which have combat type aircraft. These units furnish replacements for combat air groups, and upon occasion new combat groups are formed by the activation of an operational training unit in Toto. At the present time, known naval operational training units in the Empire have a total organizational strength of approximately 190 fighters, 60 dive bombers, 63 carrier torpedo bombers and 168 medium bombers for a total of 481 planes. No information is available here on army operational training strength. To what extent these operational training units would participate in the defense of the Empire is a debatable question. It is the feeling of this office that they should be taken into account because even if they do not operate as a body against our forces, they form a reservoir or ready replacement for losses sustained by combat units. It undoubtedly would take longer to prepare these operational training units for combat than to alert first line air groups. In the case of a carrier attack, the training units probably could not be brought to bear against our forces with the possible exception of some fighter interception. In the event of an occupation, it is believed that the operational units would definitely be employed against our forces.

Guard or Defense Forces (Naval)

There are two branches of these forces, known as KEIBI and Bobi TAI's. Both are direct adjuncts of the Navy and established by Imperial Decree. The purposes and functions are similar but Bobi units are strictly for home defense and would not be encountered in forward areas. BOBI TAI would be under command of the C-in-C Naval Station concerned, whereas KEIBI TAI would be Fleet Controlled.

Personnel:

Obtained from volunteers and conscripts regularly assigned after completion of basic training at the several Naval Stations.

Training:

Same or similar to that of the SNLF but conducted separately.

Functions:

Coast Guard Surface Craft (Subchasers, Escort Ships, Minelayers and Sweepers, etc.), coastal Defense (Fixed Gun Emplacements), Lookout stations (including signals, telegraph, radar, etc.), and Armed Guard Units, small craft such as landing barges not included and probably under jurisdiction of Harbor Dept. (not complete but suggestive)

(Note: - AA patrol and defense, search light units, etc., do not form any part of KEIBI TAI, as they come under direct command of Air Fleets.)

KEIBI TAI (in forward areas)

Organization and strength extremely flexible as formed for specific missions depending on extent and nature of areas to be defended or patrolled. For instance, the 81st at Rabaul at its full strength numbered at least 1000, whereas it could be reduced to almost any strength by detaching personnel to other KEIBI TAI in the vicinity.

As a rule, original personnel would be obtained from one district. Maizuru Naval Station for instance in the case of the 81st. Later, as the needs of the 81st in the field might be increased to cover expanding operations, immediate reinforcement

could be had by drafting or transferring personnel from SNLF's in the area. It could happen, therefore, that Yokosuka, Sasebo or Kure men would be found in the same unit. The main difference between SNLF's and KEIBI TAI's was that the former had additional training for landing operations, which the latter would not have received.

Ordnance & Equipment

Could be borrowed or turned over from SNLF as needed, inasmuch as uniform equipment was issued to both organizations.

Command

As far as can be ascertained there are no known instances where the command of a SNLF unit was concurrently the commander of a KEIBI TAI, or vice versa.

KEIBI TAI were directly under command of the Fleet, but naturally the chain of command would go through the base force wherever such were established in the area where a particular KEIBI TAI was stationed. Fleet could avail itself as KEIBI TAI personnel in order to replace casual losses in the complement of its surface units which might have been caused by illness, injury or accident.

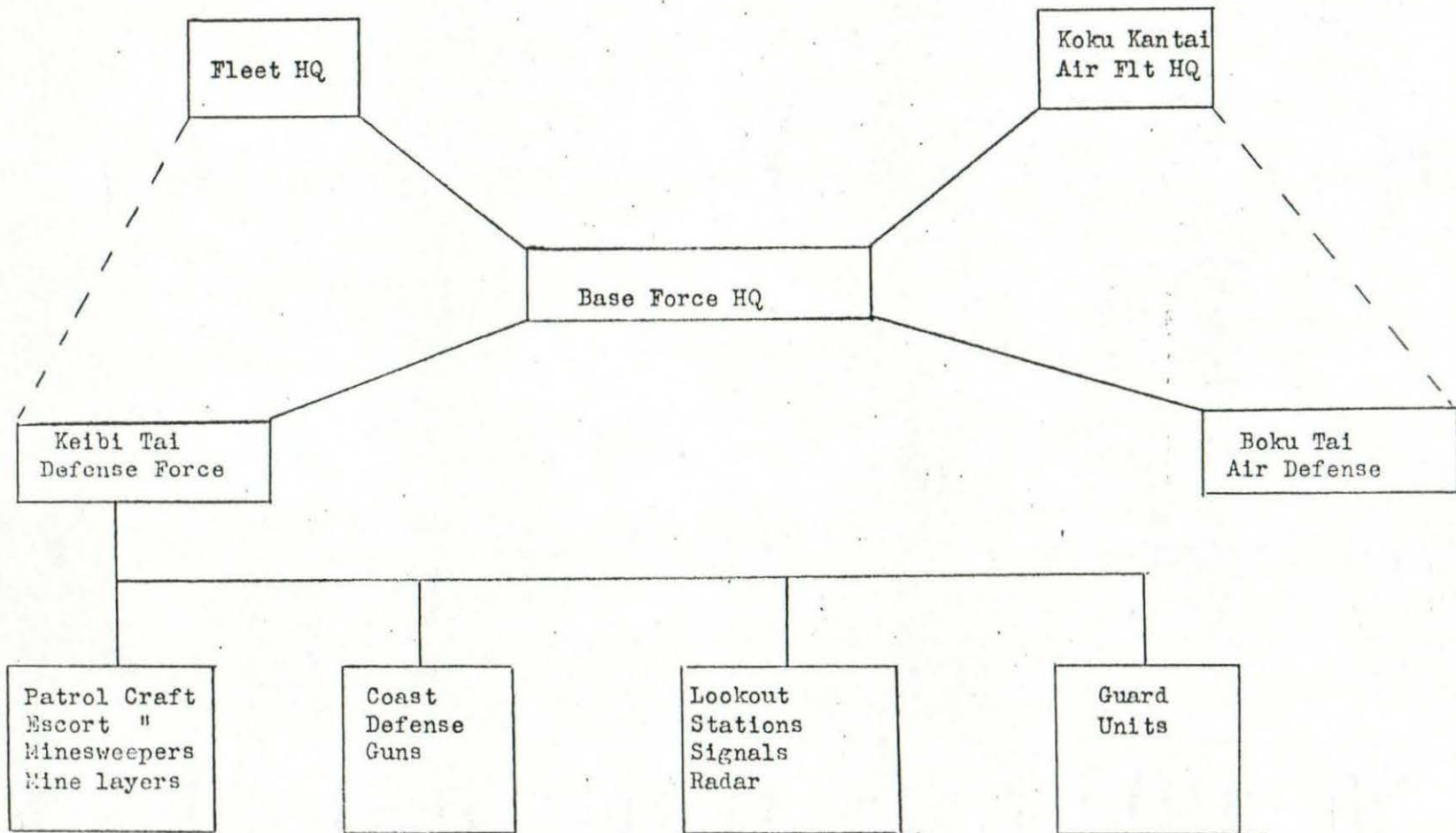
CHART

Numbering of KEIBITAI

It has been suggested that such numbers as 81st through 92nd which have been encountered in SWPA, SPA, and CPA, do not necessarily mean that there are that many KEIBITAI in existence, but that the numbers may skip around (in a general range) with the idea to deceive or create, exteriorly at least, a false estimate of their actual strength.

It is further suggested that KEIBI TAI would never be absorbed into Base Forces, thereby losing their identity.

Taken from a P-of-W account of
Feb. 22, 1944 - IJP.US 61 3/21/44



** This chart would represent an organization of a Keibi Tai such as the 81st Keibi Tai at Rabaul

(Dotted lines indicate direct Fleet control under certain conditions)

JAP NAVAL AIR ARSENALS

The Japanese Navy equips and maintains its air force through a system of Air Arsenals, with branches, workshops, and replacement shops as subsidiaries.

Eight numbered arsenals service the Empire, Formosa and Korea. Jurisdiction in the combat zones, until recently was divided between the Southeast and Southwest area Air Arsenals, each with subsidiaries. However, the encroachment of air forces on the Southeast area has forced abandonment of most of its installations and it is believed that the few remaining have been incorporated into an enlarged Southwest area set-up.

There are also indications that the headquarters of the Southwest area have been moved from Soerabaya to Manila, coincident with a general reorganization sometime after 1 April 1944.

In the discussion which follows, the old organization has been listed, with notations as to changes believed to have been made.

The primary function of the Air Arsenals (Kaigun Kookun Shoo) is to supply and service aircraft, air equipment and ordnance. In its repair capacity, the arsenal handles work which cannot be done by air group personnel. Cases of damage are passed to the shop equipped to handle them, and planes requiring complete overhaul or major repair may frequently be returned from the front to the Empire. Of equal importance is the supply and storage function, which covers planes, spare parts, equipment and ordnance.

The arsenals, especially those within the Empire, have the responsibility of incorporating equipment and design changes ordered after aircraft have left the factory. A few, notably the 21st and 11th, actually manufacture aircraft and engines, but on a relatively limited scale.

The arsenal establishments are normally situated at, or immediately adjacent to, air bases. Administratively, their organization generally parallels the overall Naval establishment, but they appear to operate more or less independently, under authority stemming directly from the Air Arsenal General Affairs Department of

Naval Air Headquarters.

BRANCH ARSENALS: Small units of the above, organized in the same way though on a smaller scale. The arsenals in Japan proper have branch arsenals as do also the Southeast and Southwest Arsenals in the forward theaters.

A REPLACEMENT SHOP is a workshop located in Japan proper that is used largely for supply.

BRANCH WORKSHOPS are repair and overhaul units, equipped with machine shops, and are scattered throughout the Mandated territory, the Philippines, Malaya and the East Indies. They operated administratively under the Southeast and Southwest Area Air Arsenals. Branch Arsenals are also to be found in these areas, and are, presumably larger units than Branch Workshops.

THE NAVAL AIR TECHNICAL ARSENAL, located at Yokosuka differs from the other arsenals in that it is a place where experimentation of all sorts pertaining to aircraft, ordnance and armament is conducted. New and approved types are first tested and tried out here before assignment to the field.

In documents dated prior to 1 May 1944, allusion is frequently made to the 101st, 102nd, 105th, 106th, and 108th Naval Air Arsenals. Since that date these arsenals have been reorganized into Southeast Area Air Arsenals and the Southwest Area Air Arsenal.

1st NAVAL AIR ARSENAL, located at Ami-Mura, Inashiki-Gun, Ibaragi Ken.

Supply responsibility: The headquarters of Combined Air Groups; Air Groups; Air Bases; the headquarters of the Combined Training Command, which are permanently stationed in Miyagi, Fuku-Shima, Ibaragi, Gumma, Tachiga and Saitama Kens.

Subsidiary Units:

1. Kasumigaura Replacement Shop, located at Ami-Mura, Inashiki-Gun, Ibaragi Ken.

2. Koizumi Replacement Shop, located at Okawa-Mura; Ora-Gun; Gumma Ken.

2nd NAVAL AIR ARSENAL, located at Kisarazu-Shi, Chiba Ken.

Supply responsibility: The headquarters of Combined Air Groups; Air Groups; Air Bases, units and schools that are permanently stationed in the Yokosuka Naval District (except for the areas for which the 1st Naval Air Arsenal is responsible, and Iwate Ken); Ship and Air Groups operating in, or about to be assigned to outer combat duty, and the headquarters of the 8th Fleet and Squadrons thereof which are assigned to the Yokosuka Naval District.

Subsidiary Units:

1. Yokosuka Replacement Shop.
2. Kisarazu Replacement Shop.
3. Tateyama Replacement Shop, located at Tateyama-Shi, Chiba Ken.
4. Suzuka Replacement Shop, located at Suzuka-Shi, Mie Ken.
5. Chichijima Replacement Shop, located at Chichijima, Bonins.
6. Hiratsuka Replacement Shop, located at Hiratsuka-Shi, Kanagawa Ken.
7. Osaka Replacement Shop, located at Owado-Cho, Totsuka-Ku, Osaka-Shi.
8. Seya Replacement Shop, located at Seya-Cho, Totsuka-Ku, Yokohama-Shi, Kanagawa-Ken.
9. Toyohashi Replacement Shop, located at Oitsu-Machi, Atsumi-Gun, Aichi-Ken.
10. Oi Replacement Shop, located at Katsumada-Muri, Haibara-Gun, Shizuoka Ken.

11th NAVAL AIR ARSENAL, located at Hiro-Machi, Kure-Shi.

Supply responsibility: The headquarters of Combined Units; Air Groups; Air Base Units, and schools which are permanently stationed in the Kure Naval District, or the Osaka Guard District. Ships and Air Groups operating in or about to be assigned to combat areas which are assigned to the Kure Naval District. The

The headquarters of the Combined Fleet, 1st Fleet, 2nd Fleet, 3rd Fleet and the 13th Air Fleet. The headquarters of Squadrons of these fleets and the headquarters of the Training Fleet which is assigned to the Kure Naval District.

Subsidiary Units:

1. Kure Replacement Shop, located at Kure-Shi, Hiro Shima Ken.
2. Iwakuni Replacement Shop, located at Iwakuni-Shi, Yamaguchi Ken.
3. Komatsujima Replacement Shop, located at Itano-Mochi, Naka-Gun, Tokushima Ken.
4. Tokushima Replacement Shop, located at Matsushige-Mura, Itano-Gun, Tokushima Ken.
5. Akitsuki Replacement Shop, located at Ed Jima-Mura, Aki-Gun, Hiroshima Ken.
6. Kirikushi Replacement Shop, located at Eda Jima-Mura, Aki-Gun, Hiroshima Ken.
7. Takuma Replacement Shop, located at Takuma-Mura, Mitoyo-Gun, Kagawa Ken.
8. Tsuiki Replacement Shop, located at Tsuiki-Mura, Chikajo-Gun, Fukuoka Ken.

OITA BRANCH ARSENAL, located at Oita-Shi, Oita Ken.

Oita Replacement Shop

1. Saeki Replacement Shop, located at Saeki-Machi, Minami Kawabe-Gun, Oita Ken
2. USA Replacement Shop located at Yanaguira-Mura, USA-Gun, Oita Ken

21st NAVAL AIR ARSENAL, located at Omura-Shi, Nagasaki Ken.

Supply responsibility: Air Groups, Air Base Units; Ships and Air Groups operating in or about to be assigned to the outer Combat Areas, which are assigned to the Sasebo Naval District.

Subsidiary Units:

1. Hiu Replacement Shop, located at Hiu-Cho, Sasebo-Shi, Nagasaki Ken.
2. Omura Replacement Shop
Hakata Replacement Shop, located at Shiga-Jima-Mura, Kasuya-Gun, Fukuoka Ken.
3. Shanghai Replacement Shop, Hirohata, Sasebo-Shi, Nagasaki Ken.
4. Sakinabe Replacement Shop, Sakinobe, Sasebo-Shi, Nagasaki Ken.

5. Hirohata Replacement Shop, Hirohata, Sasebo-Shi, Nagasaki Ken.
6. Hirase Replacement Shop, located at Hirase-Machi, Sasebo-Shi, Nagasaki Ken
7. Tsingtao Replacement Shop, located at Tsangkow, Tsingtao, Shantung Province, China.

KANOYA BRANCH ARSENAL, located at Kanoya-Shi, Kagoshima Ken.

1. Izumi Replacement Shop, located at Izumi-Machi, Izumi-Gun, Kagoshima Ken.
2. Kagoshima Replacement Shop.

31st NAVAL AIR ARSENAL, located at Kurita-Machi, Yosa-Gun, Kyoto Fu.

Supply Responsibility; Air Groups, Air Base Units, and Schools which are permanently assigned to the Maizuru Naval District, ships and Air Groups operating in, or about to be assigned to the Outer Combat Areas which are assigned to the Maizuru Naval Base.

Subsidiary Units:

1. Kurita Replacement Shop, located at Kurita.
2. Maizuru Replacement Shop, located at Maizuru.
3. Iwate Replacement Shop, located at Maizuru-Shi, Kyoto-Fu.
4. Kunda Replacement Shop, located at Kunda-Mura, Yosa-Gun, Kyoto-Fu.

41st NAVAL AIR ARSENAL, located at Misawa-Machi, Kamikita-Gun, Aomori Ken.

Subsidiary Units:

1. Ominato Replacement Shop, located at Ominato-Machi, Kamikita-Gun, Aomori Ken.
2. Shimokita Replacement Shop, located at Tanabu-Machi, Shimokita-Gun, Aomori Ke
3. Chitose Replacement Shop, located at Chitose Machi, Chitose-Gun, Hokkaido
4. Bihoro Replacement Shop, located at Bihoro-Machi, Abashiri-Gun, Hokkaido
5. Misawa Replacement Shop, located at Misawa.
6. Paramushiro Replacement Shop, located at Paramushiro-Shima, Hokkaido

BIHORO BRANCH ARSENAL, located at Bihoro.

CHITOSE BRANCH ARSENAL, located at Chitose.

51st NAVAL AIR ARSENAL, located at Chinkai, Shogen-Gun, Keishonando, Chosen.

Supply responsibility; Air Base Units which are permanently assigned to the Chikai and Ryojun Naval Guard Districts.

Subsidiary Units:

1. Chinkai Replacement Shop, located as above.
2. Kuyama Replacement Shop, located at Kenmen, Tokugen-Gun, Kankyonando, Chosen
- Genzan Branch Arsenal, located as above.
- Ryojun Special Branch Arsenal (#3) located at Ryojun.

61st NAVAL AIR ARSENAL, located at Okayama-Machi, Okayama-Gun, Takao Shu, Taiwan.

Supply responsibility: Headquarters of Combined Air Groups and Air Base Units which are permanently assigned to the Takao Guard District, and on Hainan Island. Also headquarters of the Hainan Guard District.

Subsidiary Units:

1. Takao Replacement Shop, located at Takao.
2. Toko Replacement Shop, located at Ozawa Shin, Toko Gai, Toko-Gun, Takao Shu, Taiwan.
3. Hoihow Replacement Shop, located at Hoihow, Hainan Island.
4. Sama Replacement Shop, located at Sama, Hainan Island.
5. Shinchiku Replacement Shop, located at Shinchiku-Shi, Shinchiku-Shu, Taiwan.

SOUTHEAST AREA NAVAL AIR ARSENAL, formerly located at Rabaul (formerly known as the 108th Air Arsenal. Remnants now probably incorporated into Southwest Area.).

1. Truk Branch workshop. *formerly 105*
2. Roi Branch workshop. *formerly 106*

3. Kavieng Branch workshop
4. Buin Branch workshop.
5. Palau Branch workshop.
6. Wotje Branch workshop.
7. Taroa Branch workshop.

SOUTHWEST AREA NAVAL AIR ARSENAL, formerly located at Soerabaya. May now be moved to Manila with Soerabaya as branch.

1. Makassar Branch workshop.
2. Kendari Branch workshop.
3. Koepang Branch workshop.
4. Ambon Branch workshop.
5. Davao Branch workshop.
6. Manila Branch workshop.
7. Penang Branch workshop.
8. Singapore Branch workshop.
9. Carnieobar Branch workshop.
10. Langgoer Branch workshop.
11. Kotaradja Branch workshop.

Planned expansion of arsenals (April, 1944) Phil. Area.

- Legaspi Branch workshop
- Bulan Branch workshop
- Tacloban Branch workshop
- Cebu Branch workshop
- Digos Branch workshop
- Zamboanga Branch workshop
- Jolo Branch workshop
- Davao Branch workshop (#2)
- Manila Branch Arsenal #2

11 November 1943

A-3 8091

INTELLIGENCE INFORMATION MEMORANDUM
No. 35

NOMENCLATURE OF JAPANESE NAVAL AND ARMY AIRPLANES

Code designations of Japanese Airplanes.

Japanese Airplane Nomenclature.

1. General:

Type numbers

2. Navy:

Old Nomenclature

New Nomenclature

Engine Type and Mark

Modle-Type Number System

3. Army:

Type Nomenclature

Ki Number system for airplanes

Ea number system for engines

Appendices A B C

F-2111

NOMENCLATURE OF JAPANESE NAVAL AND ARMY AIRPLANES

Code Designations of Japanese Airplanes

1. For the purpose of identification a system of arbitrarily selected code names for Japanese airplane is now in use. These are of the type ZEKE, HAMP, BETTY, Topsy, etc.
2. These names are chosen by agreement between headquarters of the various theaters after positive identification of the airplane has been made. The basis of the identification is evidence in the form of silhouettes, drawings or information derived from the inspection of crashed airplanes. A new code name is not given unless there is a specific difference in type. Where there are lesser differences which can be observed by our pilots when they see the plane, the difference is denoted by arbitrarily allotting mark numbers. Thus:
 OSCAR is the code name for a fighter with relatively low-powered engine.
 OSCAR Mark 2 is the same fighter with a more powerful engine.
 The term Mark 1 is usually omitted unless it is required to make the context clear.
3. As code names are primarily provided for operational identification, no code names are allotted either to trainers or to non-combatant types other than transports whose use brings them into combat areas.
4. The code names themselves are all short and of a type which cannot be easily corrupted or mistaken in signals, while at the same time carrying an indication of function. Thus, male names refer to fighters; female names to bombers and reconnaissance planes, and female names commencing with the letter "T" refer to transport planes.

Japanese Airplane Nomenclature

5. The basis of the Japanese system of airplane nomenclature is the type or "Shiki" which is usually a year number selected from one or other of the Japanese calendar systems, indicating the year in which the type was commissioned. The calendar systems in use are as follows:

<u>Our Cal.</u>	<u>Erá Cal.</u>	<u>Jap Cal. from 600 BC</u>	<u>Abb. Form</u>
	Coincident with Emp. reign.	supposed date of Empire founding	
1935	10	2595	95
1936	11	2596	96
1937	12	2597	97
1938	13	2598	98
1939	14	2599	99
1940	15	2600	0 or 00 or 100
1941	16	2601	1 or 01 or 101
1942	17	2602	2 or 02
1943	18	2603	3 or 03

6. Type year numbers which have been actually identified on crashed airplanes or are indicated in captured documents, are as follows:

Navy. 96,97,98,99,0,1,2.

Army. 95,97,98,99,100,1,2,3.

Army airplane type year numbers 100, 1,2, are sometimes reported as 00, 01, 02, etc., but these forms are not common in Japanese Army official sources and are definitely discountenanced by Japanese naval rulings, from which it is clear that the officially written forms are:

Reishiki - 0-shiki - Type 0

Ichishiki - 1-shiki - Type 1

Isshiki

Nishiki - 2-shiki - Type 2

Sanshiki - 3-shiki - Type 3

7. There is a general correspondence between the Japanese "Shiki" or type, and the types indicated by our code names. However, at this point, the correspondence ceases, there being no direct relationship between the "marks" of our system and the "model" and "mark" numbers which Japanese use to denote the variations present within the type. The divergencies in the two systems are due to the fact that it is not always clear on what basis the Japanese make their minor distinctions.

Apart from the term "Shiki" the Japanese use two other terms, "gō" and "Kata", and the loose or free translation of these terms can lead to considerable added confusion.

Translations of these characters are, therefore, treated at this Headquarters in a formal manner as follows: -

(式) Shiki is always translated as Type.

(号) Gō is always translated as Mark.

(型) Gata, Kata is always translated as Model.

The difference between the significance of "Go" and "Gata" is not quite clear, but as the use of "Go" is obsolescent as explained below, this is not now of any great importance.

OLD NOMENCLATURE FOR JAPANESE NAVAL AIRPLANES

8. Study of the type, mark, and model numbers on Japanese airplanes is complicated by the knowledge that the Japanese Navy officially changed over from one system of recording airplane models to another, and that their paper work following the change over is not complete, so that the old and new designations may still be met with. Older airplane designations usually had the general form:-

Type - Mark - Function

or Type - Mark - Function - Model

e.g. Rei Shiki 1 go kanjo sentoki 2 gata

Type 0 Mark 1 Carrier-Borne Fighter Model 2

NEW NOMENCLATURE FOR JAPANESE NAVAL AIRPLANES

(. In terms of Japanese Naval Secret Order No. 25 of 7 April 1942 (Nairei Teiyo Vol. 3, 10th printing Jan. 1943, p. 223-226) changes were made in the names of service airplanes, bringing their model designations into the form:-

Type - Function - Model
e.g. Type O Carrier-Borne Fighter Model 21

In the list of airplane types given as Appendix "A", the Japanese names of the new form are reported.

In a few cases the new style name is not yet available, in which case the space is left blank. Although the new system of Naval airplane nomenclature has been in force since April 1942, the Japanese themselves have not yet completely adapted themselves to it, and both forms may still be encountered side by side.

10. The new style model numbers of airplanes are all of two digits of the form 11, 22, 23, 32, etc. The significance of the model numbers is perhaps best brought out by a consideration of a few of the changes which took place when the new nomenclature came into force. These changes are not uniform but definite trends seem evident. A scanning of Appendix "A" will show that a former rather unsystematically combined series of marks and models have been rearranged and the model numbers now progress as follows: -

11, 12, 21, 22, 23, (31), 32 .

The relative value of these model changes in terms of airplane designation is not apparently a fixed quantity, but in general it would appear that change of the left hand digit of this two digit model number denotes a rather large change within the type, while the right hand one denotes a lesser one; this is by no means certain, thus:

Nakajima ZEKE with Model 12 engine is Model 21
" " " " 21 " " " 22.

but

Mitsubishi BETTY with Model 11 engine is Model 11.
" " " " 15 " remains " 11.

TYPE AND MODEL NUMBERS ON ENGINES AND COMPONENTS

11. In the case of components, a typical range of model numbers would be as follows:

<u>Component</u>	<u>Model Number</u>	<u>Description</u>
Tachometer	Model 1	For a single engine (up to 2500 revolutions).
	Model 2	For two engines (up to 2500 revolutions)
	Model 2	For two engines (up to 3000 revolutions)
Air Speed Indicator	Improvement 1	
	Model 1	160 Knots
	Model 2	300 "
	Model 3	300 "
	Model 3	450 "
	Improvement 1	
	Model 5	300 "

The term "model" seems to imply a specific and permanent adjustment of a type of part such as is necessary to enable it to perform a certain range of function or to be used in a specific type of airplane.

12. In the case of Naval airplane engines, each basic type is denoted by a name, e.g. Kasei, Kinsei, Sakae, etc., followed by a two digit model number. Sakae 12, Kinsei 43, etc.

This two digit model numbering system is a development from an earlier system and the features of the present nomenclature can best be demonstrated by an historical example.

In the early Kinsei engine, single digit Model numbers were used to indicate various changes which took place during the development of the engine.

<u>Engine Model</u>	<u>Notes</u>
Kinsei Model 2	650 H.P.
" " 3	730 H.P.
" " 4	900 H. P. (Appeared in 1937)
" " 5	Developed in 1942

At some time prior to the outbreak of the war, the Japanese adopted a standard two digit model number designation for their Naval engines. Thus Kinsei, Model 4 became Kinsei Model 41 (read as model four one not Model forty one).

According to this system the designations "Model 41" refers to the basic "Mark" of Model 4, and in the particular case under consideration, this model happens to have been used on the earliest type 96 2EB NELL. The Kinsei 41 engine was already adapted to several other types of airplanes, and those were allotted numbers as follows:

<u>Engine Model</u>	<u>Used On</u>	<u>Notes</u>
Kinsei Model 41	Type 96 2EB NELL	The Original Engine Model 4
" " 42	" " " "	Modification to take an Air pump
" " 43	" 97 FB MAVIS and several other airplanes	Modification to governor and transmission gear for propeller.
" " 44	Type 99 DB VAL	
" " 45	" 96 2EB NELL	

13. A further complication is evident since it is officially laid down that in general references to engines by Type and Model the left hand digit of the Model number combined with a '0' is to be used as a comprehensive form for the whole range of minor variations within a model designation. Thus in the above illustrative example, all the Models Kinsei 41, 42, 43, 44 etc., (to 49 if developed) are to be referred to collectively as Kinsei 40. Similarly, Kinsei 51, 52, etc., are collectively Kinsei 50. From the Japanese point of view, there seems to be no inconsistency in reading Kinsei 40 as a general class term to embrace 41 to 49 and itself to be equivalent to Kinsei 4.

MODEL TYPE NUMBER SYSTEM

14. The Japanese Navy, in addition to its formal names, uses a system of symbols and numbers to mark the types of its airplanes. This system is denoted by a pair of characters (型式) used together, ie KEISHIKI meaning model-type, or Model and Type. "Model-Type" designations usually take the form of pairs of Roman letters and numbers, sometimes followed by a Roman letter, e.g. G4M1, D3A1, G3M2B, etc.

In the case of the ZEKE assembled by Mitsubishi, the Model-Type designation is given as A6M3. It is known that ZEKE was preceded by a version with fixed wing tips which appears to have been called A6M1. The square wing tip characteristic of HAMP has recently been altered making it outwardly indistinguishable from the ZEKE Mark 2, assembled by Nakajima, but no change has been made in the Model-Type designation, which remains A6M3.

The uses made of the Model-Type designations are not yet clear, but a corresponding Army system of numbers is used in communications and it is possible that the Naval ones may be encountered in similar circumstances.

The first part of the Model-Type combination should be regarded as the type designation, and the second part as the model. Thus G4M1 would be short for Type G4, Model M1.

The initial letter of the Type-Model combination, seemingly has some general reference to the function of the airplane, since, so far as has been ascertained:

- A applies to fighters and fighter seaplanes
- B applies to dive bombers (but also to Type 2 R JUDY)
- E applies to Recce planes
- F applies to observation planes
- G applies to bombers

G3M3 denotes a new form of NELL assembled by Nakajima. Its predecessor was a NELL with a Model-Type designation G3M2B. The significance of the "B" is not yet clear. For Type 1 2EB BETTY the designation is G4M1. Although there is as yet no documentary evidence to show that this has involved any alteration in the Model-Type designation.

JAPANESE ARMY NOMENCLATURE FOR AIRPLANES

15. The Japanese Army designations for airplane types are in general simpler than those of the Navy, and Model numbers are not appended. A typical name takes a form :-

Type - Function
Ichishiki Sentoki
Type 1 Fighter

or

Hyakushiki shireibu teisatsuki
Type 100 Headquarters reconnaissance

A point of note is that whereas the Japanese Navy indicates an airplane of the type year 1940 by O, the Army indicates by the term 100.

KI-NUMBER SYSTEM FOR ARMY AIRPLANES

16. The Japanese Army use a system of numbers for classifying airplane fuselages prefixed by the katakana symbol (キ) KI. "Ki" numbers sometimes appear in such a manner that it is possible to regard them as the Army equivalents of the "Model-Type" designation applied to Navy airplanes, and they are used in communications. "Ki" could be regarded as a contraction of the word "hikoki" meaning "airplane".

In the Army system for example, Type 1 F OSCAR is Ki43, while Type 1 F OSCAR Mark 2 is called Ki432, also and probably more correctly written Ki 43 Model2. Where the Ki number for a Mark 2 airplane is a three number combination, e.g. 432, the 2 may be stamped or printed in different font than the other two numbers. LILY is called Ki 48 and LILY Mark 2 is called Ki 48 (Model 2). Type 97 2EB SALLY is Ki 21. SALLY Mark 2 is definitely reported as Ki 57, but may possibly also be referred to as Ki 212, or 21 Model 2. There does not seem to be any very logical order in the assignment of Ki numbers, except that there is a general upward, but irregular progression.

HA-NUMBER SYSTEM FOR ENGINES

17. In classifying engines the Japanese Army uses a system of numbers prefixed by the katakana symbol (ハ) HA. "Ha" could be regarded as a contraction of the word "hatsudoki" meaning "engine". It is not clear whether all Army engines have a "Ha" number, but it has been noticed that on a Type 3 TONY the engine is referred to as "Ha40" and as "Type 2 1100H.P." The following equations are probable but are based on indirect documentation only and must be treated therefore, with due reserve.

<u>(HA) Number</u>	<u>Engine</u>	<u>Airplane</u>
5		
25	Type 99 950 H.P. Radial	OSCAR Mark 1 LILY Mark 1
26		
40	Type 2 1100 H.P. Inline	TONY
101	Type 100 1450 H.P. Radial	SALLY Mark 2
102	Type 1 1050 H.P. Radial	DINAE
115	Type 2 1150 H.P. Radial	OSCAR Mark 2 LILY Mark 2

CODE NAME	OFFICIAL JAPANESE NAME (after 7 April 1942)	OTHER JAP NAMES	NAVY AIRPLANES		FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
			S.W.P.A. DESIGNATION	MODEL TYPE			
FIGHTERS							
CLAUDE	Type 96 Carrier-Borne Fighter Model 12	Type 96 Mark 2 Carrier-Borne Fighter	Type 96 F CLAUDE			KOTCBUKI 41 Radial	Nakajima
CLAUDE	" Model 14	" Mark 4	"			"	
ZEKE	Type 0 Carrier-Borne Fighter Model 11	Type 0 Mark 1 C-B Fighter Model 1	Type 0 F ZEKE	A6M1	Mitsubishi	SAKAE 12 Radial	Nakajima
ZEKE	" Model 21	" Model 2	"	A6M2	"	"	"
ZEKE	"	"	"	"	Nakajima	"	"
ZEKE Mk2	Type 0 C-B Fighter Model 22	Type 0 Mark 2 C-B Fighter	Type 0 F ZEKE Mk2	A6M3	"	SAKAE 21 Radial	"
HAMP	"	"	Type 0 F HAMP	"	Mitsubishi	"	"
ZEKE Mk2	"	"	Type 0 F ZEKE Mk2	"	"	"	"
"	"	"	"	"	"	ISHIKAWA- JIMA Radial	ISHIKAWAJIMA
? ZEKE or HAMP	Model 32		? ZEKE or HAMP				

Trans. = Transport
C-B = Carrier Borne

Land Recon. = Land Reconnaissance
Obs. = Observation

F-B = Flying Boat
L-T = Land Transport

NAVY AIRPLANES

CODE NAME	OFFICIAL JAPANESE NAME (after 7 April 1942)	OTHER JAP NAMES	S.W.P.A. DESIGNATION	MODEL TYPES	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
SINGLE ENGINE BOMBERS							
KATE	Type 97 C-B Attack Plane Model 11	Type 97 Mark 1 C-B Attack	Type 97 TB KATE		Nakajima	HIKARI 3 Radial	Nakajima
KATE	Type 97 C-B Attack Plane Model 21	Type 97 Mark 2 C-B Attack	Type 97 TB KATE			KINSEI 43 Radial	
KATE	Type 97 C-B Attack Plane Model 12	Type 97 Mark 3 C-B Attack	Type 97 TB KATE			SAKAE 11 Radial	Nakajima
BABS	Type 98 Land Recon. Plane Model 11	Type 98 Land- Reconn.	Type 98 R BABS			ZUISEI 12 Radial	
BABS	" Model 12	"	"		Mitsubishi	SAKAE 12 Radial	Nakajima
VAL	Type 99 C-B Bomber Model 11	Type 99 C-B Bomber	Type 99 DB VAL	D3A1	Aichi	KINSEI 44 Radial	Mitsubishi
VAL	"	"	"	"	"	"	Hiro Arsenal
VAL Mk2	" Model 22	Type 99 Mk 2 C-B Bomber	Type 99 DB VAL Mk2	D3A2	"	KINSEI 54 Radial	Mitsubishi
JUDY	Type 2 C-B Recon. Plane		Type 2R JUDY	D4Y1	"	Inline	Aichi

CODE NAME	OFFICIAL JAPANESE NAME (after 7 April 1942)	OTHER JAP NAMES	NAVY AIRPLANES	MODEL TYPE	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
			S.W.P.A. DESIGNATION				
TWO ENGINE BOMBERS							
NELL	Type 96 Land Attack Plane Model 11	Type 96 Land Attack	Type 96 2EB NELL	G3M1	Mitsubishi	KINSEI 41 42, or 45 Radial	Mitsubishi
NELL	" Model 21	" Model 2	"	G3M2	"	"	
NELL Mk 2	" Model 22	"	Type 96 2EB NELL Mk 2	G3M2B	Nakajima	KINSEI 45 Radial	Mitsubishi
"	" Model 23		"	G3M3	"	KINSEI 52 Radial	"
BETTY	Type 1 L-A Plane Model 11	Type 1 L-A	Type 1 2EB BETTY	G4M1	Mitsubishi	KASEI 11 Radial	Mitsubishi
BETTY	"	"	"	(G4M1)	"	"	Hiro
BETTY	"	"	"	G4M1	"	KASEI 15 Radial	Mitsubishi

NAVY AIRPLANES

CODE NAME	OFFICIAL JAPANESE NAME (after 7 April 1942)	OTHER JAP NAMES	S.W.P.A. DESIGNATION	MODEL TYPE	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
FLOAT PLANES							
ALF	Type 94 Recon-Sea-Plane Model 11	Type 94 Mark 1 Sea-Reconn	Type 94 FP ALF			Type 91 Model 1 600 H.P. Inline	Aichi Mitsubishi and Hiro
ALF Mk 2	" Model 12	Type 94 Mark 2 Sea-Reconn	Type 94 FP ALF Mk2		Kawanishi	ZUISEI 11 Radial	Mitsubishi
ALF	"	"	Type 94 FP ALF			Type 91 Model 2 600 H.P. Inline	Aichi and Hiro
DAVE	Type 95 Sea-Reconn		Type 95 FP DAVE			KOTOBUKI 2 Radial	Nakajima
SLIM	Type 96 small seaplane	Type 96 small model Sea-Reconn	Type 96 FP SLIM			AMAKAZE 12 Radial	
GLEN	Type 0 Small Seaplane Model 11	Type 0 Mark 1 small Model Model 1	Type 0 FP GLEN		?Watanabe	AMAKAZE Radial	
PETE	Type 0 Observation Plane Model 11	Type 0 Mark 1 Observation Model 1	Type 0 FP PETE	F1M2	Sasebo	ZUISEI 13	Mitsubishi
PETE	"	"	"	"	21st Naval Air Arsenal	"	"

NAVY AIRPLANES

CODE NAME	OFFICIAL JAPANESE NAME (after 7 April 1942)	OTHER JAP - NAMES	S.W.P.A. DESIGNATION	MODEL TYPES	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
FLOAT PLANES CONTD							
PETE	Type 0 Observation Model 11	Type 0 Mark 1 Obs. Model 1	Type 0 FP PETE	F1M2	Mitsubishi	ZUISEI 13	Mitsubishi
JAKE	Type 0 Sea-Reconn. Model 11	Type 0 Mark 1 Sea-Reconn Model 1	Type 0 FP JAKE	(E13A1)	Aichi	KINSEI 44	"
JAKE	"	"	"	"	Hiro	"	Hiro
JAKE	"	"	"	E13A1	Watanabe	KINSEI 43	Mitsubishi
RUFE	Type 2 Fighter Seaplane	Mark 1 Fighter seaplane	Type 2 FFP RUFE	A6M2-N	Nakajima	SAKAE 12	Nakajima

NAVY AIRPLANES

CODE NAME	OFFICIAL JAPANESE NAME (after 7 April 1942)	OTHER JAP NAMES	S.W.P.A. DESIGNATIONS	MODEL TYPE	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
FLYING BOATS							
MAVIS	Type 97 Flying Boat Model 11	Type 97 Mark 2 F-B Model 1	Type 97 4EFB MAVIS			KINSEI 43 4 Radial	
MAVIS	Type 97 Flying Boat	Converted from Type 97 FB Model 11	Type 97 Trans. MAVIS			"	
MAVIS	" Model 22	Type 97 Mark 2 F-B Model 2	Type 97 4EFB MAVIS			"	
MAVIS	"	" Model 3	"			KINSEI 46 4 Radial	
CHERRY	Type 99 Flying Boat	Type 99 Medium F-B	Type 99 2 EFB CHERRY			SHINTEN 21 2 Radial	
EMILY	Type 2 F-B Model 11		Type 2 4 EFB EMILY			KASEI 12 4 Radial	

~~SECRET~~NAVY AIRPLANES

CODE NAME	OFFICIAL JAPANESE NAME (after 7 April 1942)	OTHER JAP NAMES	S.W.P.A. DESIGNATION	MODEL TYPE	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
LAND TRANSPORTS							
NELL	Type 96 Land Transport Model 11	Type 96 L-T	Type 96 Transport NELL	(G3M1)		KINSEI 41 42, 2 Radial	
NELL	" Model 21	" Model 2	"	(G3M2)			
NELL	" Model 23		"				
BETTY	(Type 1 L-T Model 11)	12 Ex L-A	Type 1 Transport BETTY	G4M1	Mitsubishi	MK4A (2 Radial)	Mitsubishi
BETTY	Type 1 L-T Model 11	"	"	"	"	KASEI 11 (2 Radial)	"
TESS	Type D2 Transport Model 11		Type DC-2 Transport TESS			KINSEI 43 (2 Radial)	
TESS	Type D2 Cargo	Converted from D2 Transport Model 11	"				

17-00000

ARMY AIRPLANES

CODE NAME	OFFICIAL JAPANESE NAME	S.W.P.A. DESIGNATION	MODEL TYPE KI NUMBER	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
<u>FIGHTERS</u>						
NATE	Type 97 Fighter	Type 97 F NATE		Nakajima		
OSCAR	Type 1 Fighter	Type 1 F OSCAR	43	"	Type 99 950 H. P. Radial	Kawasaki
OSCAR	"	"	43	"	"	Nakajima
OSCAR Mk 2	"	Type 1 F OSCAR Mk 2	43 Model 2	"	Type 2 1150 H. P. Radial	"
JOHN	Type 2 Fighters	Type 2 F	44		1250 H.P. Radial	
JOHN	"	"	44 Model 2	Nakajima	1450 H.P. Radial	Nakajima
TONY	Type 3 Fighter	Type 3 F TONY	61	Kawasaki	Type 2 1100 H.P; Inline	Kawasaki
<u>TWO ENGINE FIGHTERS</u>						
NICK	Type 2 Heavy Fighter	Type 2 2EF NICK	45		1250 H.P. 2 Radials	
<u>SINGLE ENGINE BOMBERS AND RECONN.</u>						
MARY	Type 98 Light Bomber	Type 98 R MARY				
IDA	Type 98 direct Co-Op	Type 98 R IDA	36	†Tachikawa Rikugun	Type 99	Mitsubishi
SONIA	Type 99 Assault	Type 99 R SONIA	51	Kokukosho	900 H.P. Model 2, Radial	

ARMY AIRPLANES

CODE NAME	OFFICIAL JAPANESE NAME	S.W.P.A. DESIGNATION	MODEL TYPE KI NUMBER	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
<u>TWO ENGINE BOMBERS</u>						
SALLY	Type 97 Heavy Bomber Model 1	Type 97 2EB SALLY	21	Mitsubishi	850 H.P. 2 Radials	
SALLY Mk2	" Model 2	Type 97 2EB SALLY Mk2	57	"	Type 100 1450 H.P. Radial	Mitsubishi
LILY	Type 99 Light Bomber	Type 99 2EB LILY	48	Kawasaki	Type 99 950 H.P. Radial	Nakajima
LILY	"	"	48	"	"	Kawasaki
LILY Mk 2	"	Type 99 2EB LILY Mk 2	48 Model 2	"	Type HA 115 Radial	Nakajima
"	"	"	"	"	Type 2 1150 H.P. Radials	Kawasaki
DINAH	Type 100 HQ Recon Model 1	Type 100 2ER DINAH				
DINAH	" Model 2	"	46	Mitsubishi	Type HA 102 Radials	Mitsubishi
DINAH	"	"	46	"	Type 1 1050 H.P. Radials	"

ARMY AIRPLANES

CODE NAME	OFFICIAL JAPANESE NAME	S.W.P.A. DESIGNATION	MODEL TYPE KI NUMBER	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
<u>TWO ENGINE BOMBERS CONTD</u>						
HELEN	Type 100 Heavy Bomber Model 1	Type 100 2EB HELEN	49	Nakajima	Radial	
HELEN	" Model 2	"	49	(?Nakajima)	"	
<u>TRANSPORTS</u>						
THORA	Type 97 Transport	Type 97 Trans THORA		Nakajima	Radial	
TOPSY	Type 100 Transport	Type MC20 Trans TOPSY		Mitsubishi	Radial	
THELMA	Type 0 Transport	Type Lockheed Trans THELMA				
TERESA	Type 1 Transport	Type 1 Transport TERESA				

NAVAL EXPERIMENTAL AIRPLANES

CODE NAME	JAPANESE NAME AFTER ACCEPT. AS OPERATIONAL TYPE	EXPERIMENTAL DESIGNATION	S.W.P.A. DESIGNATION	MODEL TYPE	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
<u>NOW OPERATIONAL</u> * see also main list							
VAL	Type 99 C-B Bomber Model 11	10 Ex C-B Bomber	Type 99 DB VAL	D3A1	Aichi		
ZEKE	Type 0 C-B Fighter Model 11	12 Ex C-B Fighter	Type 0 F ZEKE	A6M1	Mitsubishi		
BETTY	Type 1 L-A Model 11	12 Ex L-A	Type 1 2EB BETTY	G4M1	"		
JUDY	Type 2 C-B Recon.		Type 2R JUDY	D4Y1	Aichi	Inline	Aichi
<u>POSSIBLY OPERATIONAL</u>							
		13 Ex Twin Engine Land Fighter	2Ef			SAKAE 21 and 22 1 of each	Nakajima
		13 Ex C-B Bomber	B			D/B 600G Inline	
		13 Ex L-A	4EB			KASEI 2 4 Radials	Mitsubishi
		13 Ex L-A	"		Nakajima	MAMORU 4 Radials	Nakajima
	Torpedo Bomber	14 Ex C-B Attack	TB		"		
	Type 2 Recon Land Plane		R				

* VAL, BETTY, and ZEKE appear here as well as in the main list to act as illustrative examples. In this list the "experimental" designations are recorded.

NAVAL EXPERIMENTAL AIRPLANES (CONTD)

CODE NAME	JAPANESE NAME AFTER ACCEPT. AS OPERATIONAL TYPE	EXPERIMENTAL DESIGNATION	S.W.P.A. DESIGNATION	MODEL TYPE	FUSELAGE ASSEMBLY	ENGINE MODEL	MANUFACTURE
<u>STILL PROB. EXPERIMENTAL</u>							
		13 Ex. Long Range Fighter 2 seater		F			
		13 Ex. Large Attack		B			
	? Type 3 C-B Fighter	14 Ex. Extreme High Altitude Fighter		F			
		14 Ex. Recon. Sea- plane (2 seater)		FP			
		14 Ex. High Speed Reconn. Seaplane		FP		KASEI 14	
		14 Ex. Med. Flying Boat		FB			
		15 Ex. Fighter Sea- plane		FFP			

Little documentary information is available for Army experimental planes. The following information is based on less reliable sources and is to be assessed accordingly.

Fighter	F	7 82	
Two Engine Bomber	2EB	84	Mitsubishi

NAVY AIRPLANE DESIGNATIONS

FUNCTION	S.W.P.A. DESIGNATION	JAPANESE * DESIGNATION	ROMAJI	CHARACTERS	ROMAJI OF ABBREVIATIONS	CHARACTERS OF ABBREVIATIONS
Fighter	F	C-B Fighter	KANJŌ SENTOKI	艦上戦闘機	KANSEN	艦戦
"	FFP	Fighter Seaplane	SUIJŌ SENTŌKI	水上々々々	SUISEN	水戦
Bomber	B	Land Attack *	RIKJŌ KŌGEKIKI	陸上攻撃機	RIKUKŌ	陸攻
"	B	Med. Attack Plane	CHŪGATA KŌGEKIKI	中型攻撃機	CHŪKŌ	中攻
Torpedo Bomber	TB	C-B Attack *	KANJŌ KŌGEKIKI	艦上攻撃機	KANKŌ	艦攻
Dive Bomber	DB	C-B Bomber *	KANJŌ BAKUGEKIKI	々々爆撃機	KANBAKU	艦爆
Reconn.	R	C-B Recon.	KANJŌ TEISATSUKI	々々偵察機	KANTEI	艦偵
Observation Float Plane	FP	Observation	KANSOKUKI	観測機		
Reconn. Float	FP	Reconn Seaplane	SUIJŌ TEISATSUKI	水上偵察機	SUITEI	水偵
Reconn.	R	Land Recon.	RIKJŌ TEISATSUKI	陸上偵察機	RIKUTEI	陸偵
Flying Boat	FB	Flying Boat	HIKŌTEI	飛行艇		
"	FB	Med. Flying Boat	CHŪGATA HIKŌTEI	中型飛行艇	CHŪTEI	中艇
"	FB	Large Flying-B.	ŌGATA HIKŌTEI	大型飛行艇	DAITEI	大艇

* NOTES: - In the three cases marked above, literal translations do not give a clear concept of the function of the airplanes concerned, therefore, the following equivalents or glosses are used in translation by ATIS, SWPA:

For Land Attack Plane A.T.I.S. uses Land Based Bomber

" C-B Attack " " C-B Attack Bomber

" C-B Bomber " " C-B Dive Bomber

NAVY AIRPLANE DESIGNATIONS (CONTD)

FUNCTION	S.W.P.A. DESIGNATION	JAPANESE DESIGNATION	ROMAJI	CHARACTERS	ROMAJI OF ABBREVIATIONS	CHARACTER OF ABBREVIATION
Transport Flying Boat	Transport	Trans. Flying-B.	YUSŌ HIKŌTEI	輸送飛行艦		
Transport	Transport	Land Trans.	RIKUJŌ YUSŌKI	陸上輸送機		
Experim.		Experimental	SHIKEN	試験		

ARMY AIRPLANE DESIGNATIONS

Fighter	F	Fighter	SENTŌKI	戦闘機	SEN	戦
"	F	Heavy Fighter	JŪSENTŌKI	重戦闘機	JŪSEN	重戦
Bomber	B	Light Bomber	KEIBAKUGEKIKI	軽爆撃機	KEIBAKU	軽爆
"	B	Heavy "	JŪBAKUGEKIKI	重爆撃機	JŪBAKU	重爆
"	B	Assault Plane	SHŪGEKIKI	襲撃機		
Reconn.	R	HQ Reconn.	SHIREIBU TEISATSUKI	司令部偵察機	SHITEI	司偵
"	R	Army Reconn.	GUN TEISATSUKI	軍偵察機	GUNTEI	軍偵
Cooperation	R	Direct Co-op Plane	CHOKKYOKI	直協機		
Transport	Transport	Transport Plane	YUSŌKI	輸送機		
"	"	Land "	RIKUJŌ YUSŌKI	陸上輸送機		
"	"	Cargo Plane				

NAVY AIRCRAFT

<u>"Kana Symbol"</u>	<u>Airframe Designation</u>	<u>Japanese Designation</u>	<u>Common Name</u>
A-1		Type 96 Carrier-Based fighter	CLAUDE
		Type 0 Carrier-Based fighter model 11	ZEKE
A-5	A6M2	Type 0 Carrier-Based fighter model 21	ZEKE (folding wing tips)
	A6M3	Type 0 Carrier-Based fighter model 22	HAMP
		Type 0 Carrier-based Fighter Model 32	----
		Type 0 Seaplane Fighter Model 11	(RUFE)
		Type 2 Seaplane Fighter	RUFE
		Type 94 Reconnaissance Seaplane Model 11	ALF-1
		Type 94 Reconnaissance Seaplane Model 12	ALF-2
		Type 95 Reconnaissance Seaplane	DAVE
		Type 96 Small Model Reconnaissance Seaplane	SLIM
O-2	G5M1 (G5M1?)	Type 98 Land Reconnaissance Plane	BABS-3
O-1		Type 0 Observation Plane Model 11	PETE
O-3	E13A1?	Type 0 Reconnaissance Seaplane Model 11	JAKE
		Type 0 Small Model Seaplane Model 11	GLEN
		*Type 100 HQ Reconnaissance Plane	*DINAH
		Type 2 Carrier-based Reconnaissance Plane	----
		Type 2 Land Reconnaissance Plane	----
		High Speed (or high altitude) Seaplane	----
B-1		Type 96 Carrier-based Bomber	SUSIE
		Type 96 Carrier-based Attack Plane	JEAN
		Type 97 Carrier-based Attack Plane Model 11	KATE-1
		Type 97 Carrier-based Attack Plane Model 61	KATE-2
A-3		Type 97 Carrier-based Attack Plane Model 12	KATE-3
B-3	D3A1	Type 99 Carrier-based Bomber, Model 11	VAL-1
	D3A1	Type 99 Carrier-based Bomber, Model 22	VAL-2
		Type 96 Land Attack Plane Model 11	NELL
A-4		Type 96 Land Attack Plane Model 21	NELL
	G3M3	Type 96 Land Attack Plane Model 23	NELL
A-2	G4M1	Type 1 Land Attack Plane Model 11	BETTY
		Type 97 Flying Boat Model 11	(MAVIS)
B-2		Type 97 Flying Boat Model 22	MAVIS
		Type 97 Flying Boat Model 23	MAVIS
		Type 97 Flying Boat Model 33	MAVIS
O-4		Type 99 Flying Boat	CHERRY
		Type 2 Flying Boat Model 11	EMILY
		Type 2 Flying Boat Model 12	EMILY
		Type 2 Flying Boat Model 22	EMILY

*DINAH is known to be in use in combat areas by the Navy as well as by the army, but it continues to be an Army aircraft, manufactured for the Army.

NAVY FIGHTERS

(A) Type 96 Carrier-Based Fighter (CLAUDE)

This plane, equipped with a Kotobuki, Model 41 engine, was adopted by the Navy in February 1939. In April, 1942, it was indicated that the official designation would be simply Type 96 Carrier-Based Fighter. The other designation, Type 96 No. 4, was apparently the common form before that time and has been occasionally encountered since.

(B) Type O Carrier-Based Fighters (ZEKE, HAMP)

In July 1940, the Navy adopted the Type O Carrier-Based Fighter Model 11 (also known as Type O Mark 1 . . . Model 1). In December 1940, a modification of this plane was adopted, with foldable wing tips, and officially designated Type O . . . Model 21, (also Type O Mark 1 . . . Model 2). This version is the common ZEKE, equipped with a Sakae Model 12, 1050 h.p. engine. The next modification resulted in the square-wing-tipped fighter officially called Type O Carrier-based Fighter Model 22, HAMP (also Type O Mark 2 . . . Model 2). This plane is normally equipped with a Sakae Model 21, 1200 h.p. engine.

Various indications have been received that ZEKE is fitted with a 1200 h.p. engine, and that versions of both ZEKE and HAMP are fitted with 1500 h.p. engines. On the other hand, it is known that the Japanese are using Type O Model 32 and Model 52 Fighters. It seems probable that these may be the designations for the planes equipped with more powerful engines, but it is impossible at this time to determine which designation is used for each of the two planes.

(C) Type O Seaplane Fighter Model 11 (RUFÉ) Type 2 Seaplane Fighter (RUFÉ)

There has been a tendency to agree that the original designation of RUFÉ has been changed by the Japanese from Type O to Type 2 Seaplane Fighter, without making any change in design, engine, or armament. Nevertheless, it is reasonably certain that two distinct aircraft are in use and that the Type O version is the same plane as ZEKE with slight modification to adjust balance, etc., to the addition of the single float. Evidence is by no means conclusive that the Type 2 Seaplane Fighter (now called RUFÉ in some theatres) is this same plane or represents only a slight change. There have been indications that RUFÉ, so called, is now fitted with a Sakae Model 21 engine instead of the Sakae Model 12. The possibility must be considered that such a change in engine installation would cause a change in designation of the aircraft, but the more normal Japanese procedure would result in changing the model number, not the type number, of the aircraft.

(D) Other Fighters

Japanese Navy publications listed the following experimental types of fighter aircraft between 1940 and 1942:

- Type 13 Twin Engine Land Fighter, equipped with Sakae engines, Models 21 and 22 (one each).
- Type 13 Long Range Fighter (twin-seater)
- Type 14 Extreme high altitude Fighter.
- Type 15 Fighter Seaplane.

The first of these was given in a list dated April, 1942; the other three were in the same document, with entries ranging from 1940 to 1942. It is possible that the first two designations refer to the same plane and furthermore to the aircraft listed in Section II as the Type 2 Land-based Reconnaissance Plane, which is known to be in use by the Naval Air Force but has otherwise remained unidentified. Evidence for this supposition lies in a prisoner-of-war's statement that the Navy had adopted a twin-engine fighter. The plane, however, maneuvered poorly and could not make tight turns; so it had been converted to a land-based reconnaissance plane (span about 15 meters, length 10-11 meters) with a crew of three. The prisoner claimed to have seen some of this type at Rabaul in May-June 1943, and described the plane as somewhat like LILY in appearance but with a sharper nose.

No correlative information is at hand on the Type 14 and Type 15 Fighters, although the possibility that the experimental Type 15 Fighter Seaplane has resulted in the Type 2 Seaplane Fighter should not be passed by too hastily.

There is very little recent information to confirm or deny the existence or continued production of the Type 97 2/S F/P Fighter (ADAM). Presumably, one built in 1940 was shot down in the North Pacific in June 1942, and another was sighted in May 1943 in the Solomons. Rather old information indicated that Type 93 Seaplane, called "NAKA" 93, resembled current descriptions of ADAM in physical appearance, speed, and armament.

OBSERVATION AND LIGHT BOMBER TYPES, NAVY OBSERVATION AND RECONNAISSANCE

(A) Type 94 Reconnaissance Seaplane Model 11 (ALF-1) Type 94 Reconnaissance Seaplane Model 12 (ALF-2)

In May 1934, the Navy adopted the Type 94 Reconnaissance Seaplane Model 11 (called Type 94 No. 1 ..., prior to April, 1942). The aircraft was equipped with a liquid-cooled, 600 h.p. engine, designated as Type 91, Model 1 or 2. In November, 1938 a modification of this plane, with an air-cooled ZUISEI radial engine was adopted. It is designated variously as Type 94 Reconnaissance Seaplane Model 11, Type 94 No. 2 Reconnaissance Seaplane, Type 94 (Modified) 3rd type Reconnaissance Plane, and Kawanishi Type 94 Reconnaissance. Kawanishi appears to be the manufacturer of the radial-engine version of this plane; it has recently appeared in forward areas and is known to be carried aboard some naval vessels for catapult launchings.

(B) Type 95 Reconnaissance Seaplane (DAVE)

Although apparently adopted by the Navy in September 1935, this aircraft has been designated as Type 93 Reconnaissance Seaplane as well as by the more common name given above. According to documents, it is ordinarily equipped with a Kotobuki, Model 2 radial engine.

(c) Type 96 Small Model Reconnaissance Seaplane (SLIM)

Adopted by the Navy in July 1936, with an Amakaze Model 12 engine, this apparently twin-float biplane is for use in submarines. It has also been called Type 96 (small) 2nd Type Reconnaissance Seaplane.

(D) Type 97 Observation Seaplane (BOB)

Documentary evidence on this aircraft is slender indeed; photographs do exist, and the plane has apparently been sighted, but only at long intervals.

(E) Type 98 Land-Based Reconnaissance Plane (BABS-3)

Available information indicates that there are at least three military versions of a civil plane, the "Kamikaze" that flew from Tokyo to London in 1937. The first two of these are both Army planes, Type 97 HQ Reconnaissance Plane Marks 1 and 2. The third is a Navy plane, as designated above. There is some evidence that the Navy has had under production two versions of the plane. The first was called Type 98 Land-Based Reconnaissance Plane Model 11, adopted in November 1939, and equipped with a ZUISEI, Model 12 engine. The second was Type 98 Land-based Reconnaissance Plane, Model 12, adopted in July 1941, and equipped with a Sakae Model 12 engine. It is apparently this last modification that is now in use by the Japanese.

(F) Type O Observation Plane Model 11 (PETE)

This aircraft, equipped with a ZUISEI Model 13 engine, was adopted by the Navy in December, 1940. It may also be called Type O Mark 1 Observation Plane Model 1, although the designation given above was considered the official one as at April 1942.

(G) Type O Reconnaissance Seaplane Model 11 (JAKE)

The Navy adopted this plane (with a Kinsei Model 43 engine) in December 1940. It may also be called Type O Mark 1 Reconnaissance Seaplane Model 1. Its airframe designation is apparently "E13A1", but this is not conclusive.

(H) Type O Small Model Seaplane Model 11 (GLEN)

Since this aircraft, for use in submarines, was also adopted by the Navy in December 1940, and is believed to be a twin-float, low-wing monoplane, it may be a smaller version of JAKE. Another designation in use before April 1942 (and perhaps since) is "Type O Mark 1 Small Model Airplane Model 1."

(I) Type 2 Carrier-Borne Reconnaissance Plane

This is a new aircraft only recently encountered, with a 12-cylinder, liquid-cooled, inverted Vee engine. It may be manufactured by AICHI. A prisoner-of-war who claimed to have seen it at Rabaul said it was a very fast plane in use by the Navy and Army. There is no other evidence to indicate it is used by the Army.

(J) Type 2 Land-Based Reconnaissance Plane

An aircraft which is designated thus is believed to be in use by the Navy. Several possibilities of its relationship to experimental type twin-engine fighters are set forth in Section III (D). Some confusion may also obtain between this plane, possibly but not definitely a twin-engine aircraft, and the Type 2 Fighter (NICK).

(K) Other types

A plane designated only as "High Speed (or High Altitude) Reconnaissance Seaplane" may be in operational use by the Navy. Two separate captured documents, one of 1942 and one dated 1940-42 list a "Type 14 Experimental High

Speed Reconnaissance Seaplane." One source indicates it was equipped with a Kasei, Model 14, engine. In the absence of other information, it must be assumed that this experimental seaplane has been adopted by the Navy and is being produced for operational purposes.

The first document also refers to a "Type 12 Experimental Reconnaissance Seaplane"; the second refers to a "Type 14 Experimental Reconnaissance Seaplane." Still another source refers to a "Type 96 Night Reconnaissance Seaplane." These types have not been further identified.

NAVY TORPEDO AND DIVE-BOMBERS

(A) Type 96 Carrier-based Bomber (SUSIE)

This biplane dive-bomber, equipped with a Hikari, Model 1 engine, was adopted by the Navy in November 1936. It is indicated to be still in use, probably for operational training. Some captured silhouettes very similar to that of SUSIE have been marked as "Type 94 Carrier-Based Bomber," but this is believed to be an older designation, possibly of this plane, possibly of its forerunner.

(B) Type 96 Carrier-based Attack Plane (JEAN)

This biplane torpedo plane, also adopted in November 1936, was equipped with a Hikari, Model 2 engine. It was still considered an official Navy combat type in April 1942, but has never appeared in forward areas. It may still be used for training purposes.

(C) Type 97 Carrier-based Attack Plane Model 11 (KATE 1)

Type 97 Carrier-based Attack Plane Model 61 (KATE 2)

Type 97 Carrier-based Attack Plane Model 12 (KATE 3)

The first two models, equipped with Hikari Model 3 and Kinsei Model 43 engines respectively, were both adopted by the Navy in November 1937. Model 12 was adopted in December 1939 and is now the standard carrier torpedo plane. It was originally equipped with a Sakae Model 11 engine. In order, the three models may occasionally still be designated by the older names of Type 97 MK. 1, Type 97 MK. 2, and Type 97 MK. 3 carrier-based Attack Plane.

(D) Type 99 Carrier-based Bomber, Model 11 (VAL)

Type 99 Carrier-based Bomber, Model 22 (VAL-2)

The first VAL was equipped with a Kinsei Model 44 engine, was adopted by the Navy in December 1939. VAL 2 is equipped with a Kinsei Model 50, 51, or 54 engine, according to various reports. Its airframe designation appears to be D3A2.

(E) New Dive-Bombers and Torpedo Planes

The Navy has apparently adopted and started production of a torpedo plane known only as Type 14 Experimental Carrier-based Attack Plane. The Navy has likewise adopted a Type 13 Experimental Carrier-based Bomber, a dive-bomber originally equipped with a Daimler-Benz DB600G engine. (This may possibly, with modifications, be the new large dive-bomber encountered in the South Pacific. That plane has been described as half again as large as the Douglas

Dauntless, with a fuselage resembling the Grumman Hellcat's, and equipped with internal bomb racks.) The present Japanese designation of these two formerly experimental types has not been determined.

NAVY MEDIUM BOMBERS

- (A) Type 96 Land Attack Plane, Model 11 (NELL)
Type 96 Land Attack Plane, Model 21 (NELL)
Type 96 Land Attack Plane, Model 23 (NELL)

Model 11, with 2 Kinsei 41, 42, or 43 engines was adopted in June 1938, and equipped apparently only with 3 x 7.7 mm. machine guns. Another designation, especially prior to April 1942 was: Type 96 Land Attack Plane, Mark 1. At the same time Model 21 was adopted, apparently equipped with one 20 mm. cannon and 4 x 7.7 mm. machine-guns. This plane was also called Type 96 Land Attack Plane Mark 2. Type 96 Land Attack Plane Model 23 is equipped with a more powerful, Kinsei Model 52, engine. Its airframe number is believed to be "G3M3". Prisoners of war have described its armament as 1 x 20 mm. cannon and 3 x 7.7 mm. machine-guns, with no tail gunner. They say that BETTY replaced both the Model 21 and Model 23 versions of NELL in early 1942, but in the last few months the Navy has resumed its use of both models for combat.

- (B) Type 1 Land Attack Plane Model 11 (BETTY)

This aircraft, equipped with two Kasei Model 11 engines was adopted in April 1941. It is also known to be equipped with Kasei Model 15 engines. An unverified report speaks also of a Model 23 in addition to the Model 11 version; such model may exist or may have been confused with NELL (Model 23). There is some evidence that BETTY was once called Type 12 Experimental Land Attack Plane.

FOUR-ENGINE BOMBERS

In April 1942, the Navy was testing an experimental plane, designated as Type 13 Land Attack Plane, equipped with four Kasei Model 2 or four Mamoru engines. In September 1942, it was stated that the Japanese had been attempting to convert NELL to a four-engine bomber. The Japanese press in 1941 stated that an "Army Type 96" four-engine long-range bomber had been developed. One prisoner-of-war reported seeing a number of four-engine bombers near his home in Japan; another stated that Japan now has a bomber similar to the B-17 which he had seen at Yokosuka. Sporadically, during 1942, four-engine land-based planes were sighted by Allied forces in widely-scattered areas, at Lae, Kavieng, Guadalcanal, Paoshan, Loiwing, and in Burma. In April 1943, a large four-engine plane (100' span) was sighted at Kahili. There is clearly insufficient evidence for drawing any conclusions. Three possibilities must be borne in mind: (1) Use of captured U. S. bombers, (2) Production of one or more types of Japanese four-engine bombers, (3) Possession of a four-engine transport type, possibly modeled on the Focke-Wulf "Kurier."

NAVY FLYING BOATS

- (A) Type 97 Flying Boat (MAVIS)

In April 1942, the Navy listed two models as follows: Type 97 Flying

~~SECRET~~

Boat Model 11, adopted in January 1938, with 4 Kinsei 43 engines. (Also called Type 97 Mark 2 Flying Boat Model 1.) Type 97 Flying Boat Model 22, adopted in April 1940, with 4 Kinsei 43 and 46 engines; converted from Model 11. (Also called Type 97 Mark 2 Flying Boat Model 2 and Model 3. Apparently, Model 2 had Kinsei 43 engines; Model 3 had Kinsei 46 engines.)

It is known that at least two models of MAVIS are being used at the present time: Type 97 Model 23 (apparently the same as Type 97 Mark 2 Flying Boat Model 3 above) and Type 97 Model 33. There is no information as yet on the distinction implied by the use of "Model 33": it may indicate a more powerful engine installation and/or fitting of new armament.

(B) Type 99 Flying Boat (CHERRY)

This plane, equipped with two Shinten Model 21 engines, was apparently adopted by the Navy in February 1940.

(c) Type 2 Flying Boat Model 11 (EMILY)
Type 2 Flying Boat Model 12 (EMILY)
Type 2 Flying Boat Model 22 (EMILY)

These three versions of EMILY are now known to be in use. Model 11, when adopted in February 1942, was equipped with four Kasei Model 12 engines.

(D) Other Flying Boats

The flying boats listed above are probably the only ones of which any account need be taken at the present time. Other Japanese designations which have been recovered are:

Type 96 Flying Boat (BELLE), a three-engine biplane of English design, manufactured by Mitsubishi.

Type 98 "3rd Type Special" Biplane Flying Boat (LAURA), manufactured by AICHI, equipped with one Type 90 (500 h.p.) engine.

Type 97 Flying Boat, manufactured by Hiro, equipped with four liquid-cooled engines.

II - AIR FORCES

AREA DISTRIBUTION

THE JAPANESE AIRCRAFT INDUSTRY

This information has been prepared from captured documents and files on crashed enemy aircraft.

Although the Japanese aircraft industry as a whole includes many small factories making components, all available evidence indicates that the assembly of combat aircraft and engines is more than 90% concentrated in the hands of four companies whose factories are in four relatively limited geographical areas, OTA-KOIZUMI, NAGOYA, KOBE-OSAKA and TOKYO.

The important companies making combat aircraft and engines are, in the order of their relative output, Nakajima, Mitsubishi, Kawasaki and Aichi. The major part of Nakajima's air frame assembly is carried on in the twin towns of OTA and KOIZUMI, situated about four miles apart in GUMMA prefecture, about 45 miles north of TOKYO. The KOIZUMI plant produces naval aircraft; the OTA plant makes army planes, NAGOYA is the site of important air frame and engine assembly plants producing for both the army and navy. Kawasaki plants at KOBE-OSAKA make planes and engines for the army. There is little, if any, combat air frame production as well as the output of numerous important components.

The destruction of air frame assembly lines would result in almost immediate reduction of combat strength since Japan is considered to have very little stored reserve of finished aircraft with the possible exception of fighters. The enemy is estimated to have a maximum of three months supply of engines. Destruction of engine manufacturing facilities would, therefore, not result in a reduction of combat strength for several months. But since more precision tools are employed in the manufacture of engines, it is believed that it would take the Japanese longer to restore plants making engines and that the destruction of such factories would have a more lasting effect on enemy combat strength.

The relative output of principal aircraft and engine manufacturers is estimated as follows:

AIR FRAMES

<u>Location</u>	<u>Company</u>	<u>Percentage of Total Output</u>	<u>Principal Types Produced</u>
OTA-KOIZUMI	Nakajima	40%	ZEKE, OSCAR, TOJO, JILL (TENZAN) HELEN, IRVING and probably new MILKYWAY bomber.

AIR FRAMES (Cont'd)

<u>Location</u>	<u>Company</u>	<u>Percentage of Total Output</u>	<u>Principal Types Produced</u>
NAGOYA	(Mitsubishi	22%	BETTY, ZEKE, DINAH, SALLY, SONIA and new fighter RAIDEN (Thunderbolt). Dive bombers VAL and JUDY (Comet). New plant: little information.
	(Aichi	9%	
	(Nakajima	4%	
KOBE	Kawasaki	15%	TONY, NICK, LILY.
	All others	10%	Mostly float planes and flying boats.

ENGINES

<u>Location</u>	<u>Company</u>	<u>Percentage of Total Output</u>
TOKYO	Nakajima (Possibly also Mitsubishi)	42%
NAGOYA	Mitsubishi Aichi	38%
KOBE-ASAHA	Kawasaki	15%
	All others	5%

27 July 1943

The method of giving names to aircraft is decided by special notice.

Minister of Navy SHIGETARŪ SHIMADA

(1st Supplement to Special Notices.)

Method of Giving Names to Aircraft.

1. Names

Type Planes	Fighter	Reconnais- sance	Bomber	Attack	Patrol	Transport	Trainer	Others
Standard Classifi- cation of Names	Weather	Clouds	Constel- lation	Moun- tains	Sea	Sky	Grass Trees	Wind Scenery
Preface	JINRAI	ZUIUN	TEMBA	TENZAN	TŌKAI	SŌKŪ	SHIRAKIKŪ (?)	
	HIDEN	SHIUM	GINKA	ENZAN	NANKAI	HEKIKŪ	MOMIJI (OHKŌ YŌ)	
	SHIDEN	GYOUN	TENKA	RENZAN	SEIKAI	SEIKŪ	SEIRAN	
	JIMPU	SAIUN	HOKUTO	NANZAN	SHIKAI	TENKŪ	ŌKA	
	RAIDEN	KEIUN	SUISEI	TAIZAN	ZAKKAI			
	SEMPŪ	RYŌUN	MOKUSEI	SHINZAN	HOKKAI			

2. Method of Naming.

Name in the following correct procedure:

- (1) Name
However, if it is a training plane, after the name add training plane.
- (2) 2 letters of numerals to show the type of fuselage in motor. (However, concerning the ones in which the actually used (operational planes and engines and fuselage that were adopted as military weapons are reconstructed to training planes; they are type 11.
(Example)
 - (1) Land attack plane adopted in the Imperial Era year 2605.
TENZAN - Type 11.
 - (2) As for the Otsu Fighter adopted in the Imperial Era, year 2615, the one in which the motor was changed.
JINRAI - Type 12.
 - (3) The one in which JINRAI, Type 12 was converted to a trainer:
JINRAI Trainer - Type 11.

(3) Degree of Secrecy

(1) Operational Planes.

(a) Considered secret outside of the section

(b) In public announcement outside the section use the following names:

Navy ship-based planes.

Navy Land-based planes.

Navy Sea planes.

Navy Flying Boat.

(2) Training Planes.

Ordinarily the same name within and outside the section.

The method of giving names to aircraft is decided by special notice.

Minister of Navy SHIGETARU SHIMADA

(1st Supplement to Special Notices.)

Method of Giving Names to Aircraft.

1. Names

Type Planes	Fighter	Reconnais- sance	Bomber	Attack Patrol	Transport	Trainer	Others
Standard Classifi- cation of Names	Weather	Clouds	Constel- lation	Moun- tains	Sea	Sky	Grass Trees Wind Scenery
Preface	JINRAI	ZUIUN	TEMBA	TENZAN	TOKAI	SOBU	SHIRAKIKU (?)
	HIDEN	SHIUM	GINKA	ENZAN	HANKAI	HEKIKU	MOMIJI (OKO YO)
	SHIDEN	GYOUN	TENKA	RENZAN	SEIKAI	SEIKU	SEIRAN
	JIMPU	SAIUN	HOKUTO	HANZAN	SHIKAI	TEIKU	OKA
	RAIDEN	KEIUN	SUISEI	TAIZAN	ZAKKAI		
	SEMPU	HYOUN	MOKUSEI	SHINZAN	HOKKAI		

2. Method of Naming.

Name in the following correct procedure:

- (1) Name
However, if it is a training plane, after the name add training plane.
- (2) 2 letters of numerals to show the type of fuselage in motor. (However, concerning the ones in which the actually used (operational planes and engines and fuselage that were adopted as military weapons are reconstructed to training planes; they are type 11.
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