JOINT SERVICES

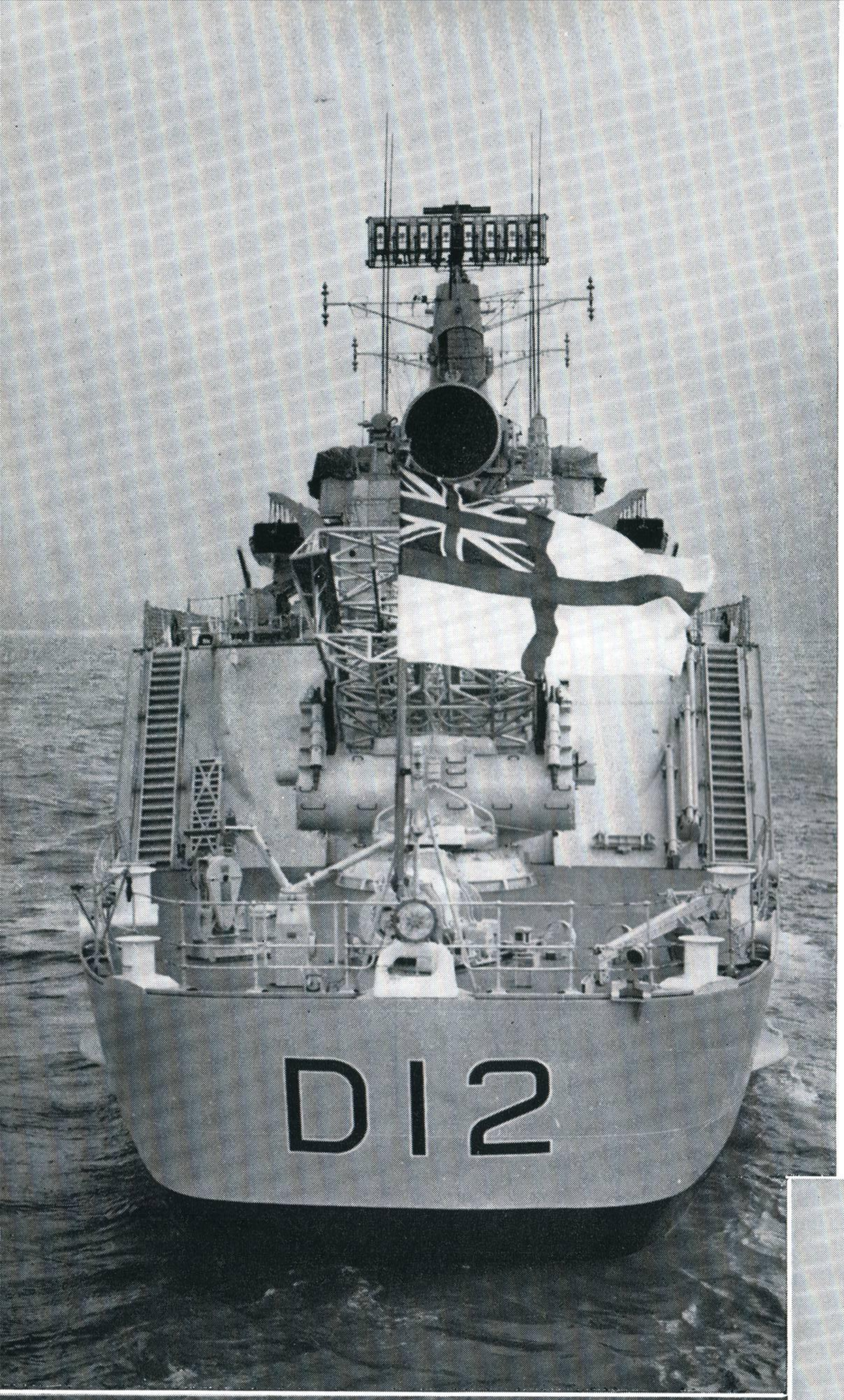
RECOGNITION

Journal



Vol. 21 FEBRUARY 1966 No. 2

The White Ensign *(left)*, conspicuous only from this angle and Pennant Number that in any emergency could be easily obliterated, but the outline is unmistakedly a County Class Destroyer. In the case of the Beverley *(bottom)*, the national markings must of necessity be inconspicuous in order not to compromise its camouflage. The national markings on the sides of the helicopter *(below)* are concealed even at this close-up view, but its shape reveals it as an Alouette III.







FEBRUARY 1966 Vol. 21 No. 2

JOINT SERVICES

RECOGNITION JOURNAL

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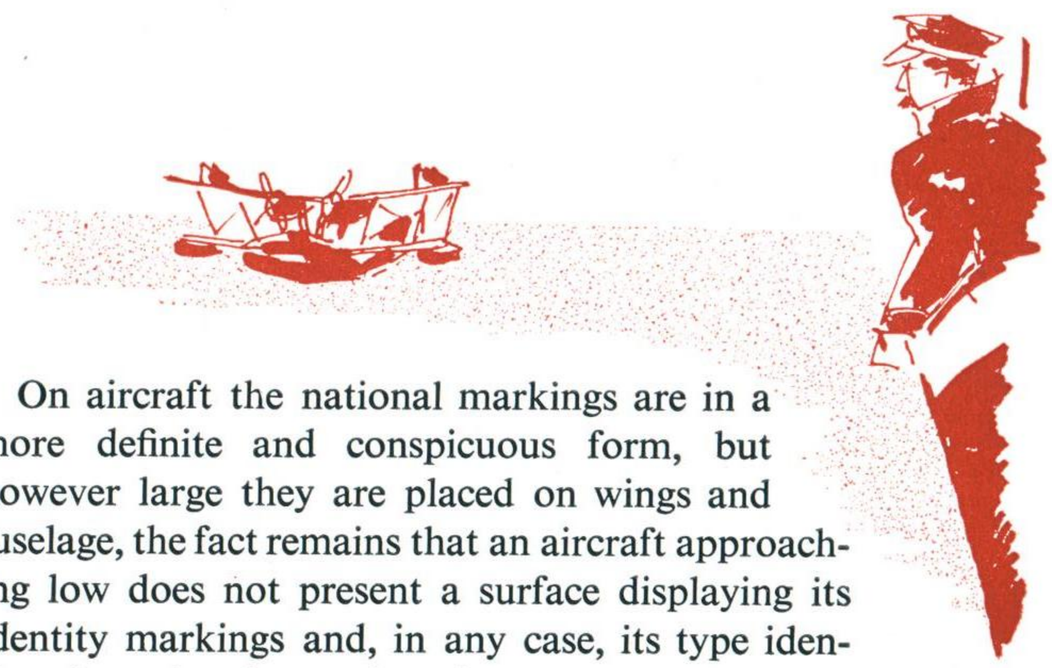
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CONTENTS

Feature	Page
Martin B-57 Canberras *(cover)*	29
National Markings *(editorial)*	30
* C-141 Starlifter	32
Rotary Club	35
* Junak	36
* Freedom Fighter	38
Warship Identification Test No. 8	41
* Blackwood Class Anti-Submarine Frigates	42
In Passing	46
British Service Aircraft Designations	47
United States Service Aircraft Designations	50
Solutions to Tests and Exercises	56

* *Identification Lessons*

. . . NATIONAL MARKINGS



The national insignia displayed by ships and aircraft are, for practical identification purposes, merely symbolic. The display of the White Ensign flown by Her Majesty's ships at their sterns are subject to the vagaries of the wind, and the Red Ensign of British Merchant ships, similarly exposed, are often so well used that they justify their pseudonym—Red Duster. Such indications are symbolic and sufficient for normal peace time conditions, where a pennant number on warships and sometimes a name conspicuously marked on the superstructure, in addition to the bows and stern on merchantmen, gives an indisputable key to identification. But in wartime or time of emergency, security forbids that individual identities be apparent lest enemy, or potential enemy, intelligence compute a disposition or strength of fleets.

Even the flag may mislead for it is a recognised *ruse de guerre* to pretend neutrality in approaching an objective, provided that when fire is opened true colours are revealed. Thus, this leaves the outline as the only true guide to type identity.

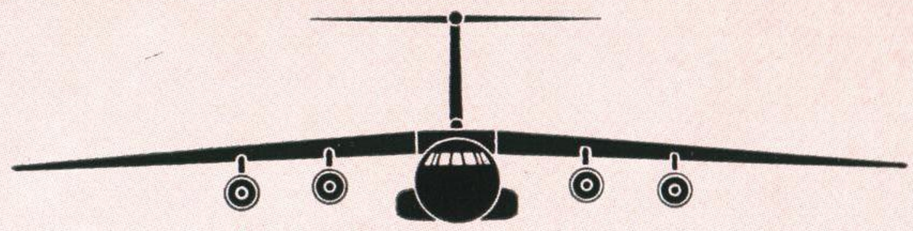
The link between ship and aircraft national markings is that aircraft markings evolved as a means of showing a flag on aircraft, which proved impracticable except in the case of airships. There is an amusing true story of a skipper of a small fishing vessel refusing to take aboard the R.N.A.S. crew of a stranded flying boat in the First World War because he suspected that they were German. When the crew protested that they were British, the skipper asked for sight of their flag!

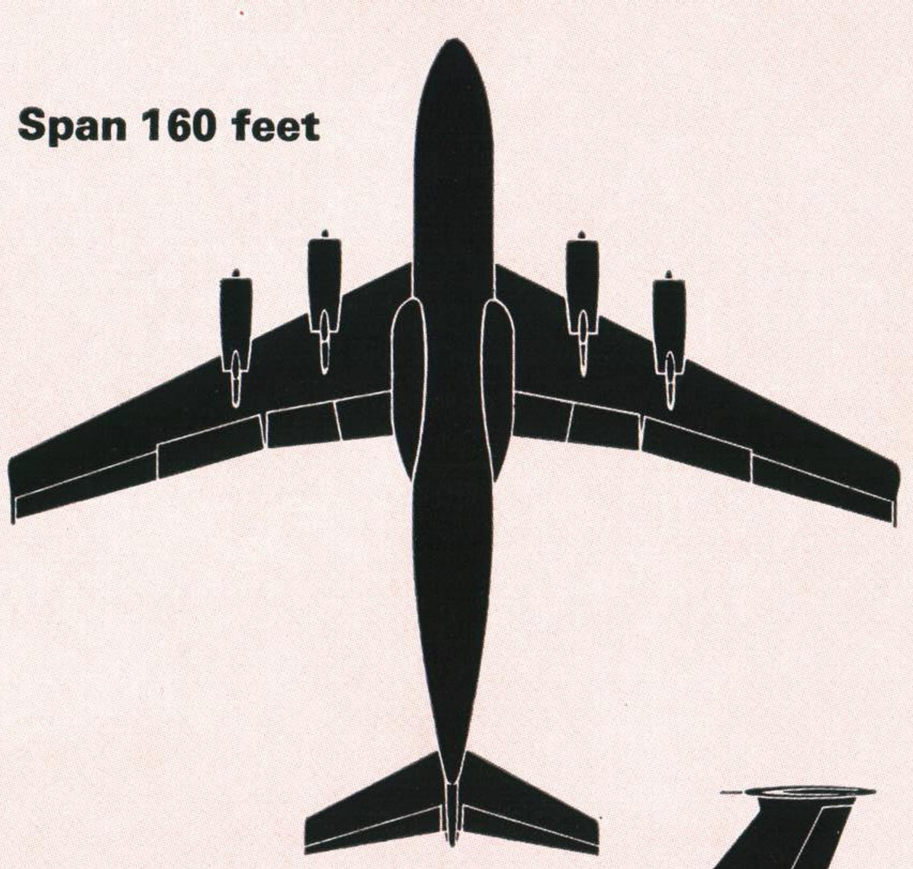
On aircraft the national markings are in a more definite and conspicuous form, but however large they are placed on wings and fuselage, the fact remains that an aircraft approaching low does not present a surface displaying its identity markings and, in any case, its type identity, from its shape, should be apparent a while before its markings could be visible.

The size, shape and positioning of aircraft insignia are, in general, no different than 50 years ago when they were first introduced, and two world wars have shown that more conspicuous special identity markings, such as the D-Day Invasion Striping, are necessary at times to supersede national markings to the extent that camouflage schemes are completely compromised. Furthermore, even then such markings are not adequate to ensure identification from all angles and, in any case, could be easily copied by an enemy as a ruse.

The insignia of the world's aircraft should be known as a matter of general knowledge; most are reproductions of national colours and emblems. There is a perplexing problem when the same type of aircraft is operated by two opposing sides, but this is the exception and dependent on local intelligence. All in all there is no substitute for the recognition of shape to which a name applies and for that name to roll off the tongue spontaneously. This can only be achieved by identification training.







C-141 STARLIFTER

This new Lockheed turbofan-powered cargo/troop carrier recently entered squadron service as the USAF's C-141. It can cruise at well over 500 m.p.h., carry up to 154 troops and has a ferry range of over 7,000 miles.

Designed as a global-range support aircraft to replace the older transport types—which will probably be handed down to the Air National Guard—it is an aircraft that is likely to be seen now, wherever you are stationed. The instructions on page 46 give simple rules for learning to identify this transport.

It should be appreciated that the anhedral wing (i.e. drooping wing) so apparent in a head-on view, may appear to have the opposite effect (i.e. dihedral) from certain angles due to the considerable sweepback of the long-span wings (see target 23).

Solutions on cover






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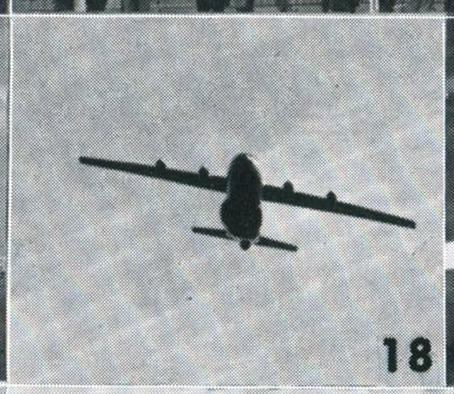

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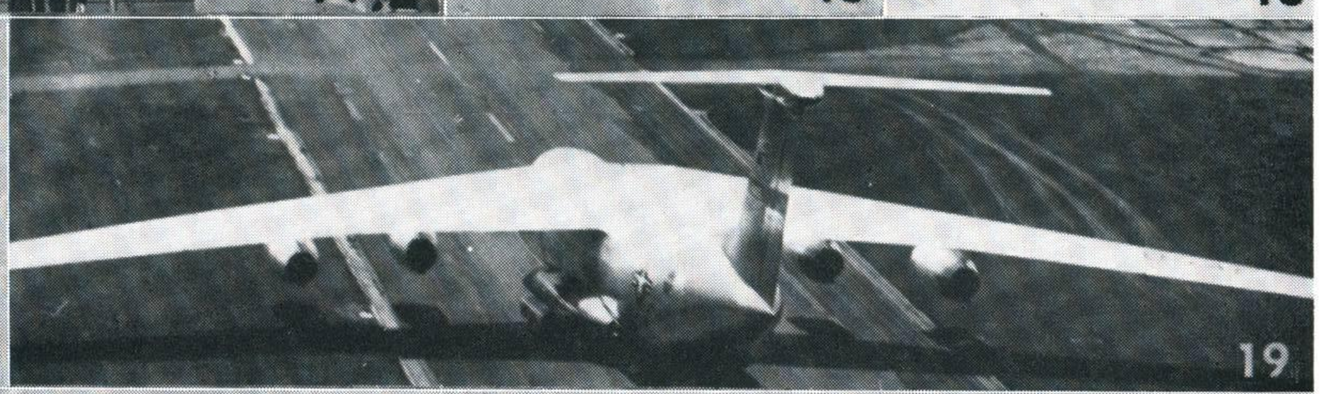
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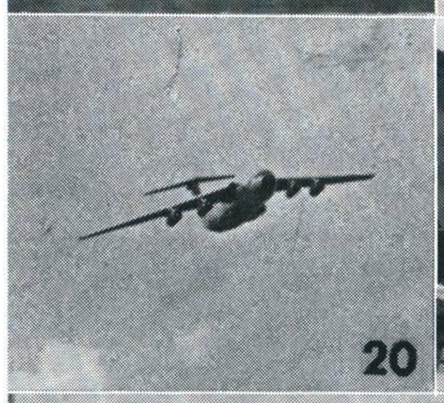

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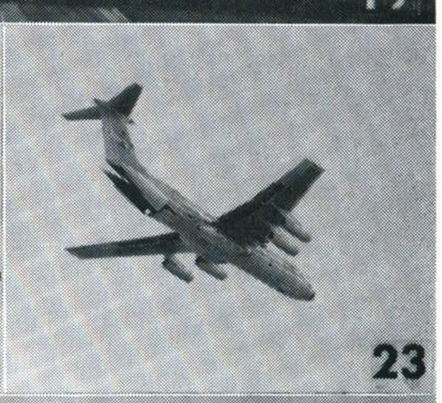

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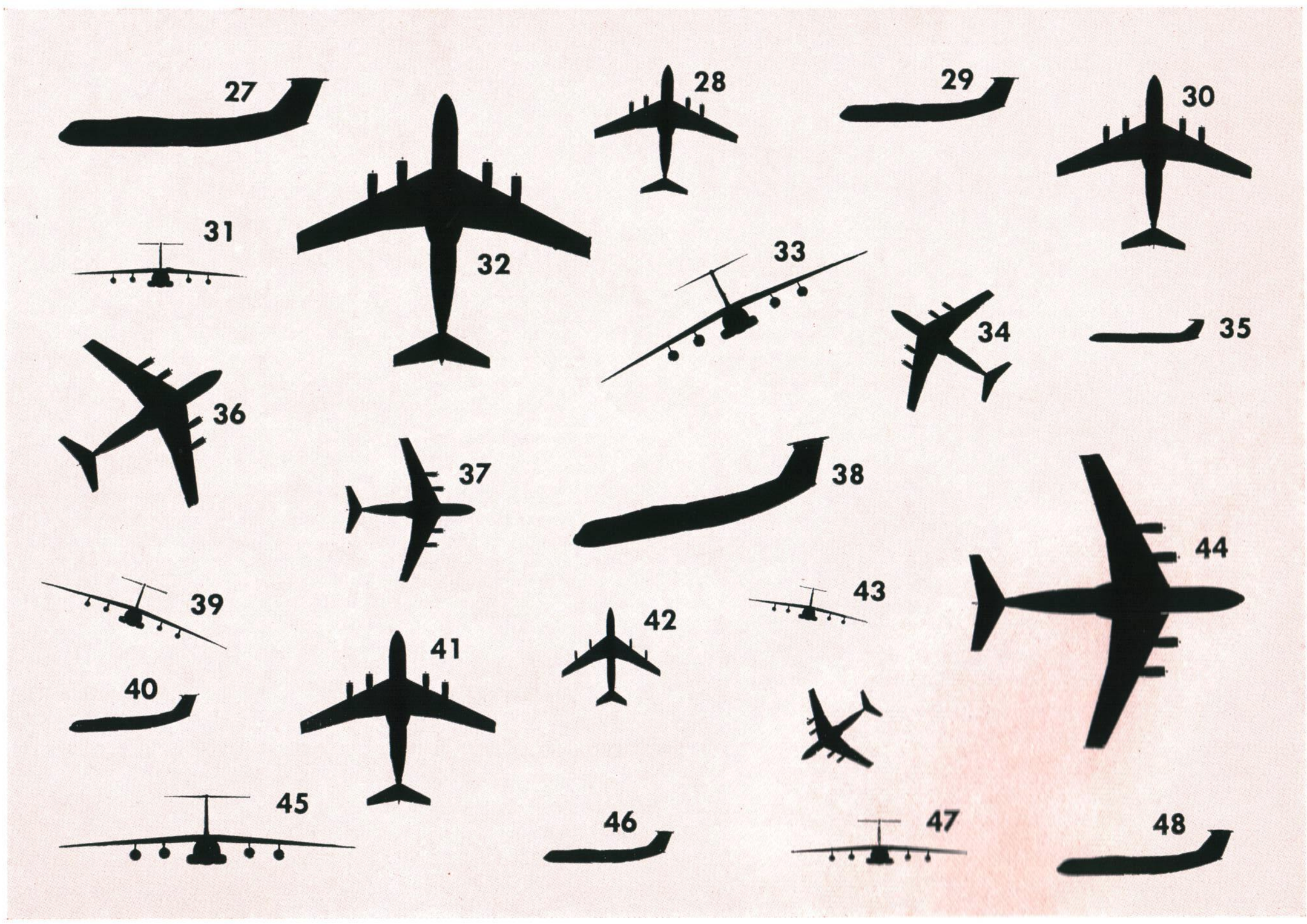

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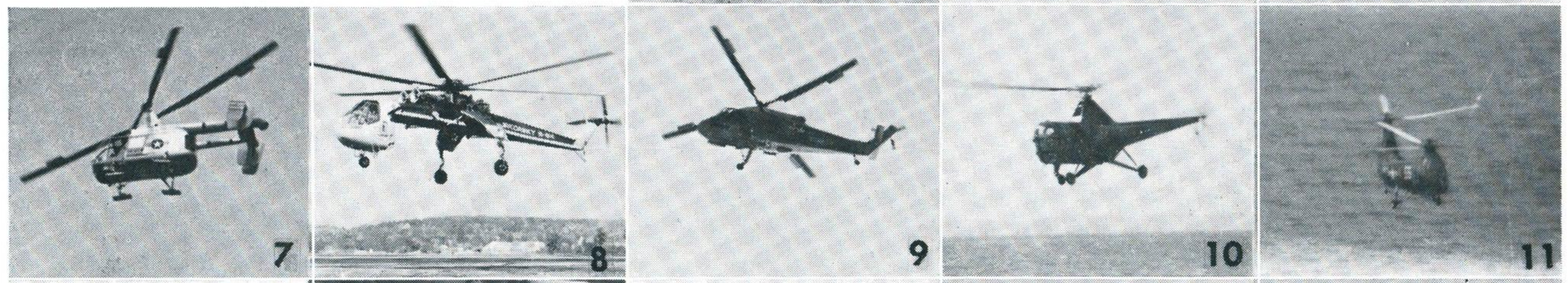

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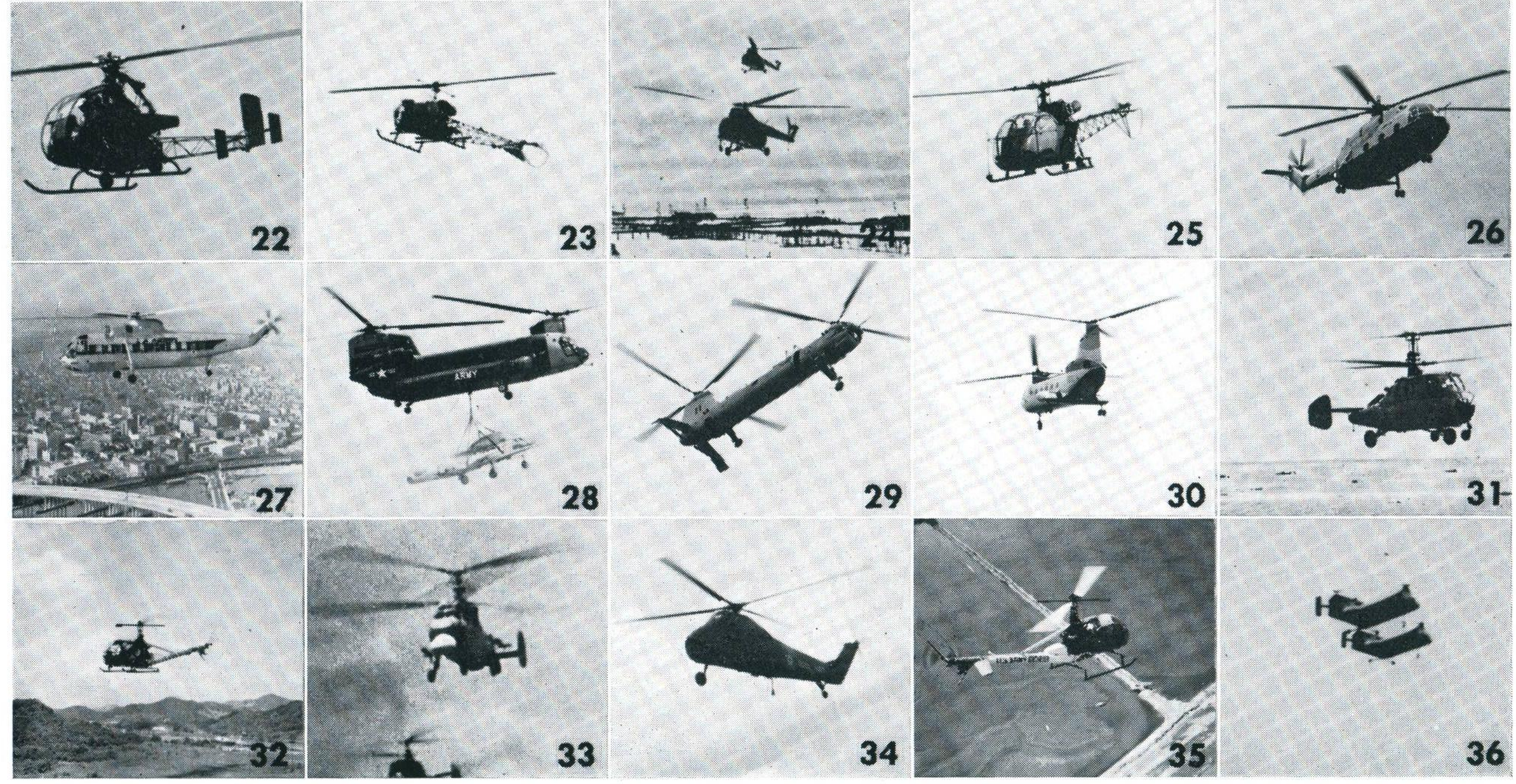
ROTARY CLUB

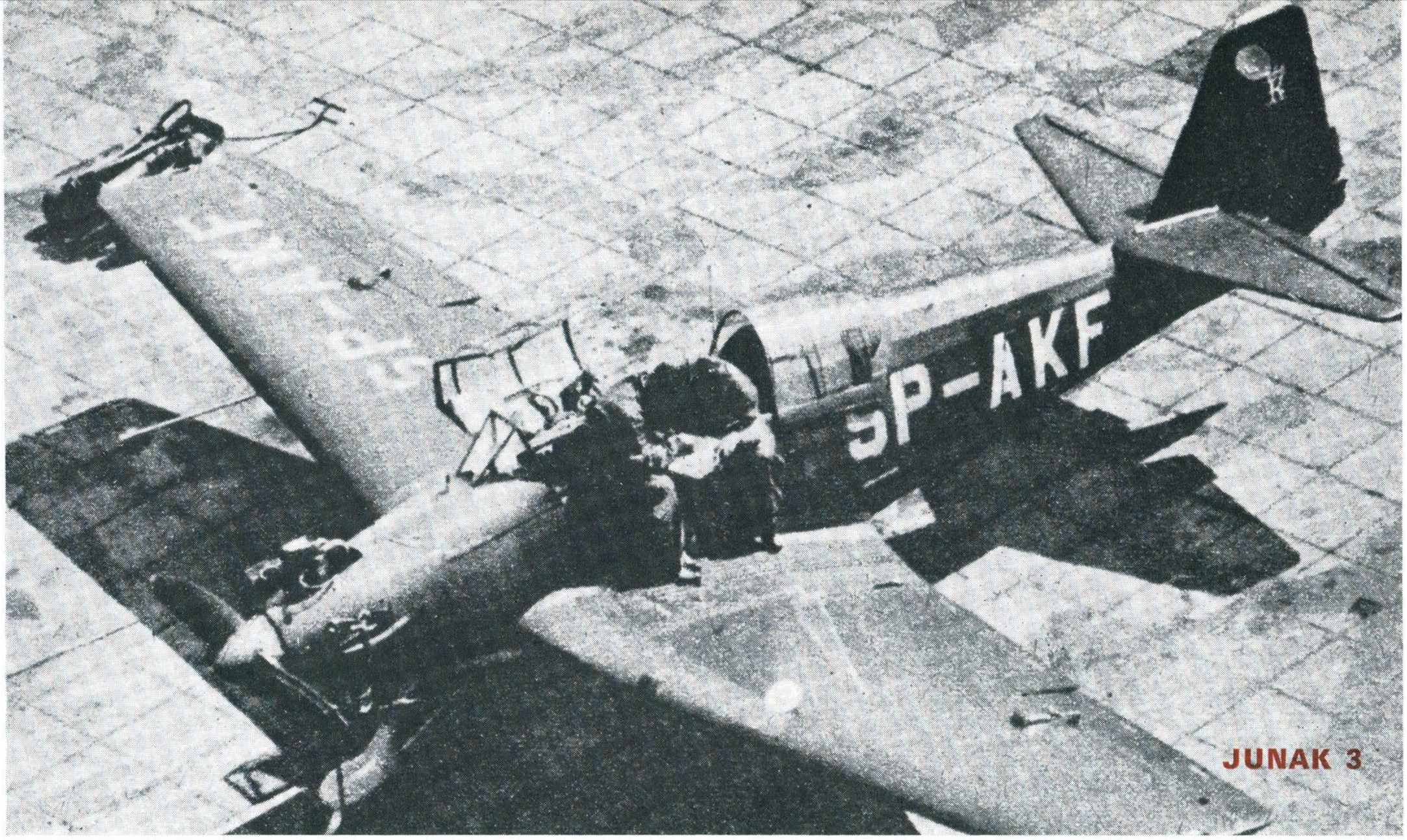
A group of world helicopters for identification and *then* for checking with the solutions on the cover. Those who failed on any type should look up the appropriate lesson ; simply reading the solutions list won't help. A full list of lessons over the past seven years appears in the July 1965 edition.



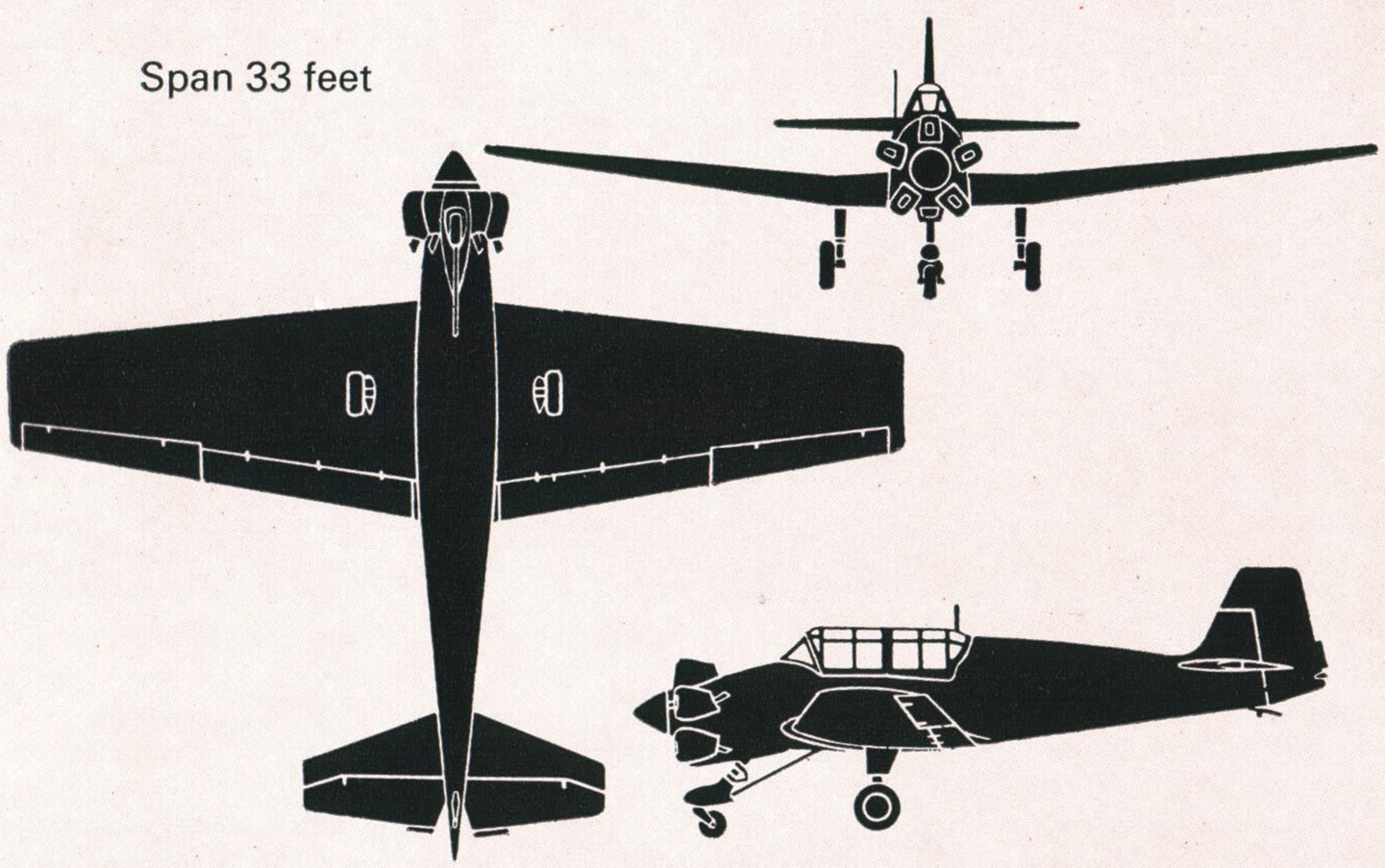








JUNAK 3



JUNAK

First of the postwar Polish designs to be built in quantity and widely used by flying clubs in Poland is the Junak (Cadet) trainer.

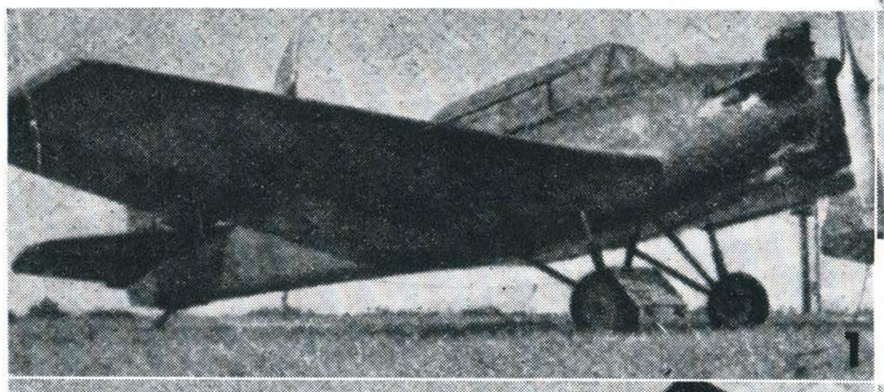
The prototype Junak 1 with a Russian engine was followed by the initial production Polish-engined Junak 2 and the main production Junak 3 differing visually by a nose-wheel type undercarriage.

Work to the instructions on page 46 and report these targets as Junaks, qualifying each as Junak 2 or 3 where possible, or otherwise if "jokers".

JUNAK 3

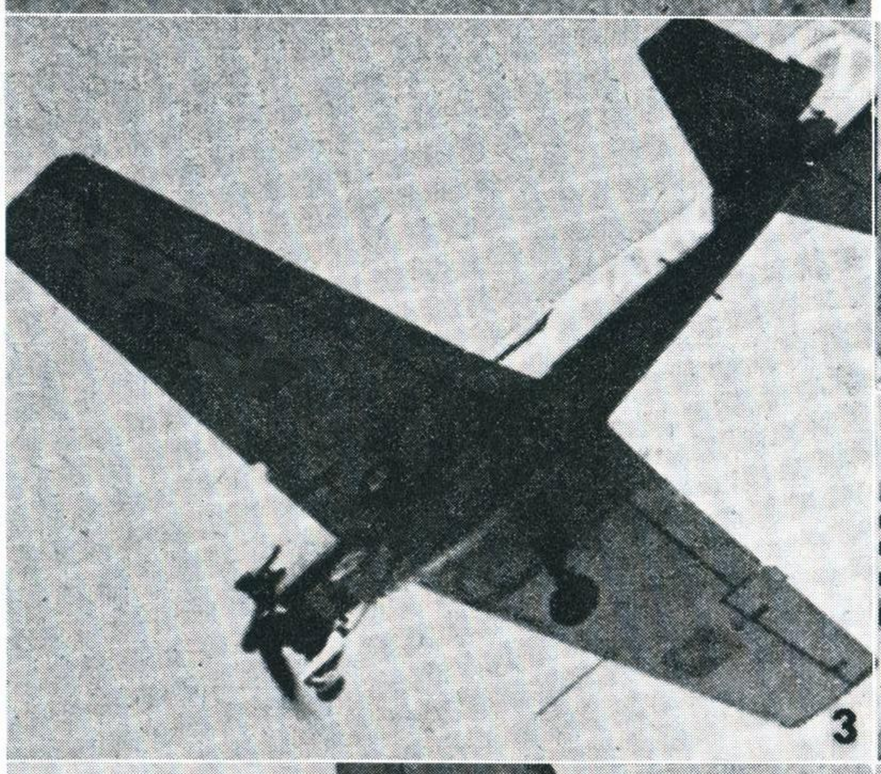


Solutions on the cover





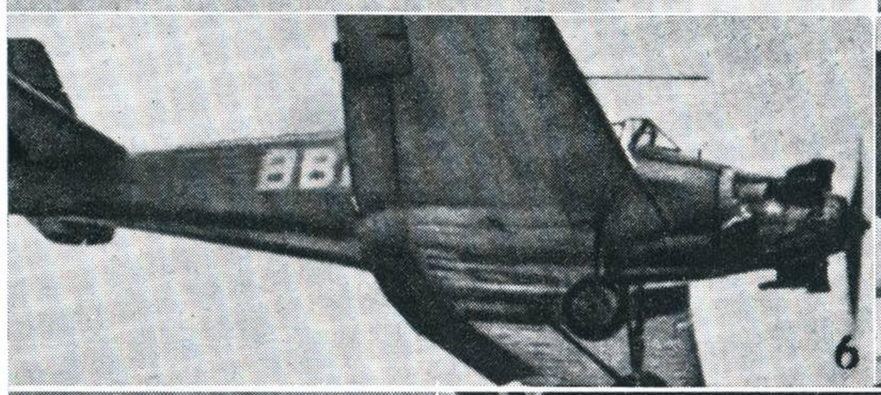
JUNAK 2. Initial production with conventional undercarriage. The Junak 1 of similar configuration with a Russian engine can be ignored for reporting.







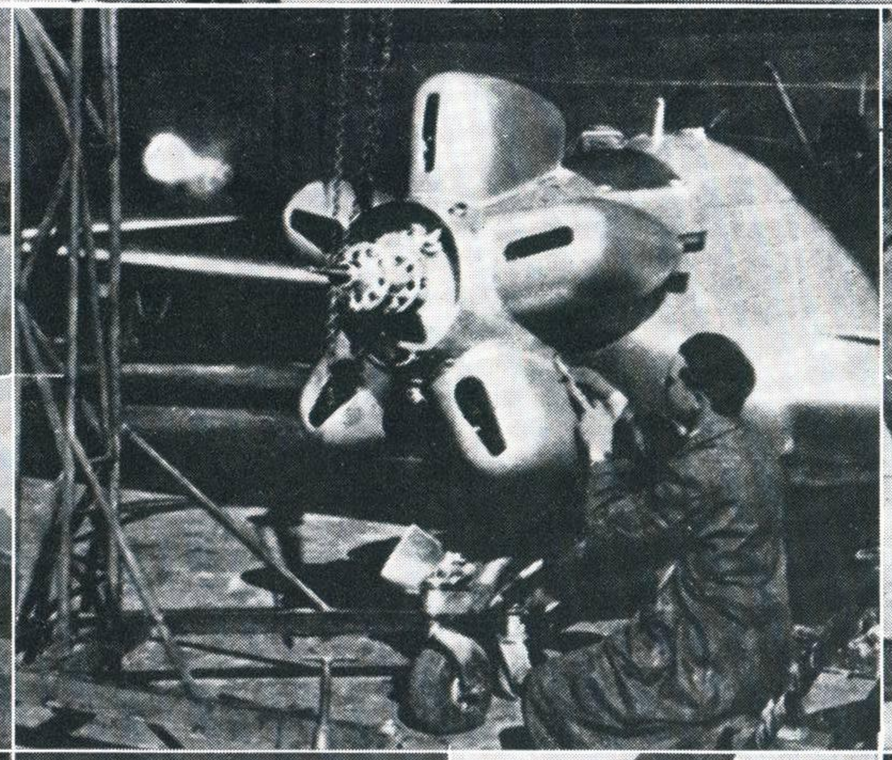


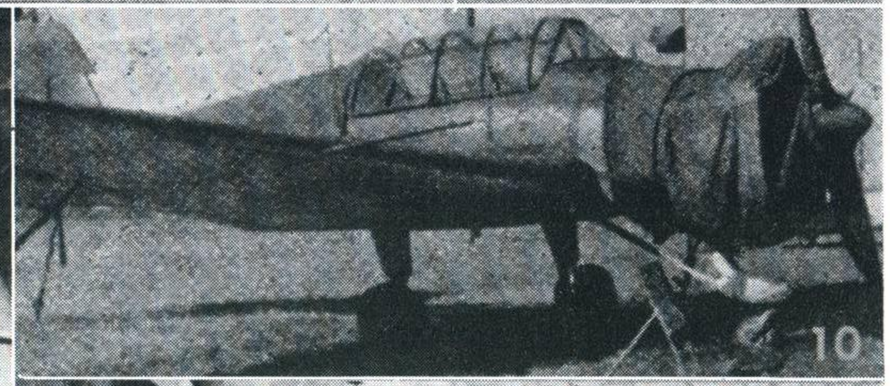




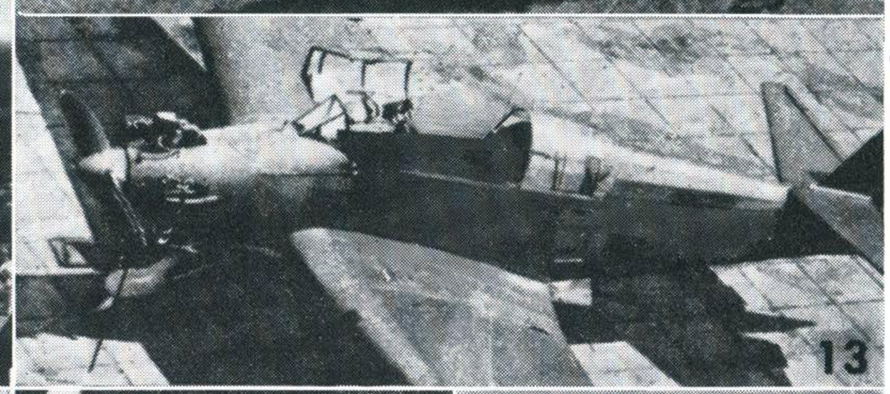


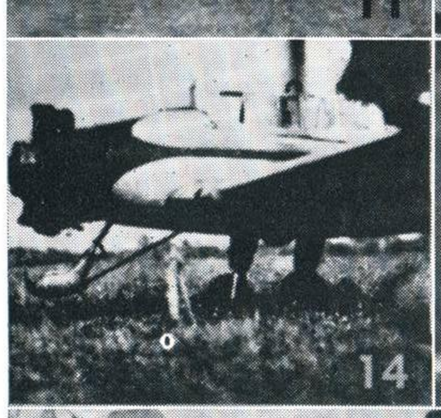


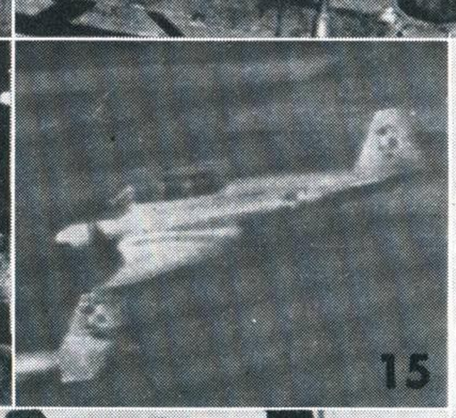




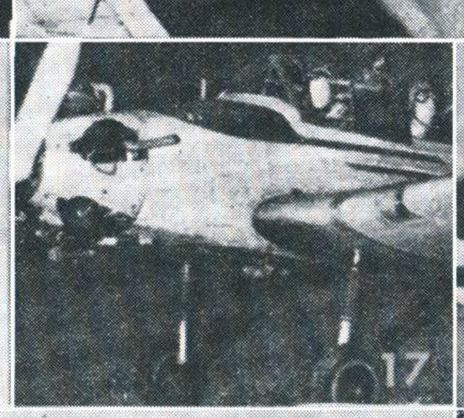






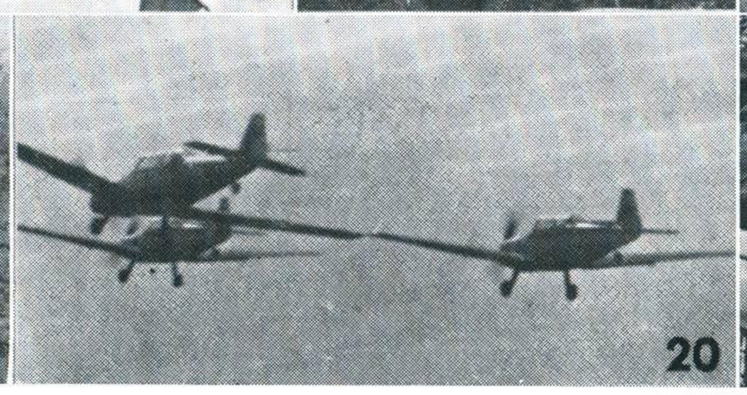




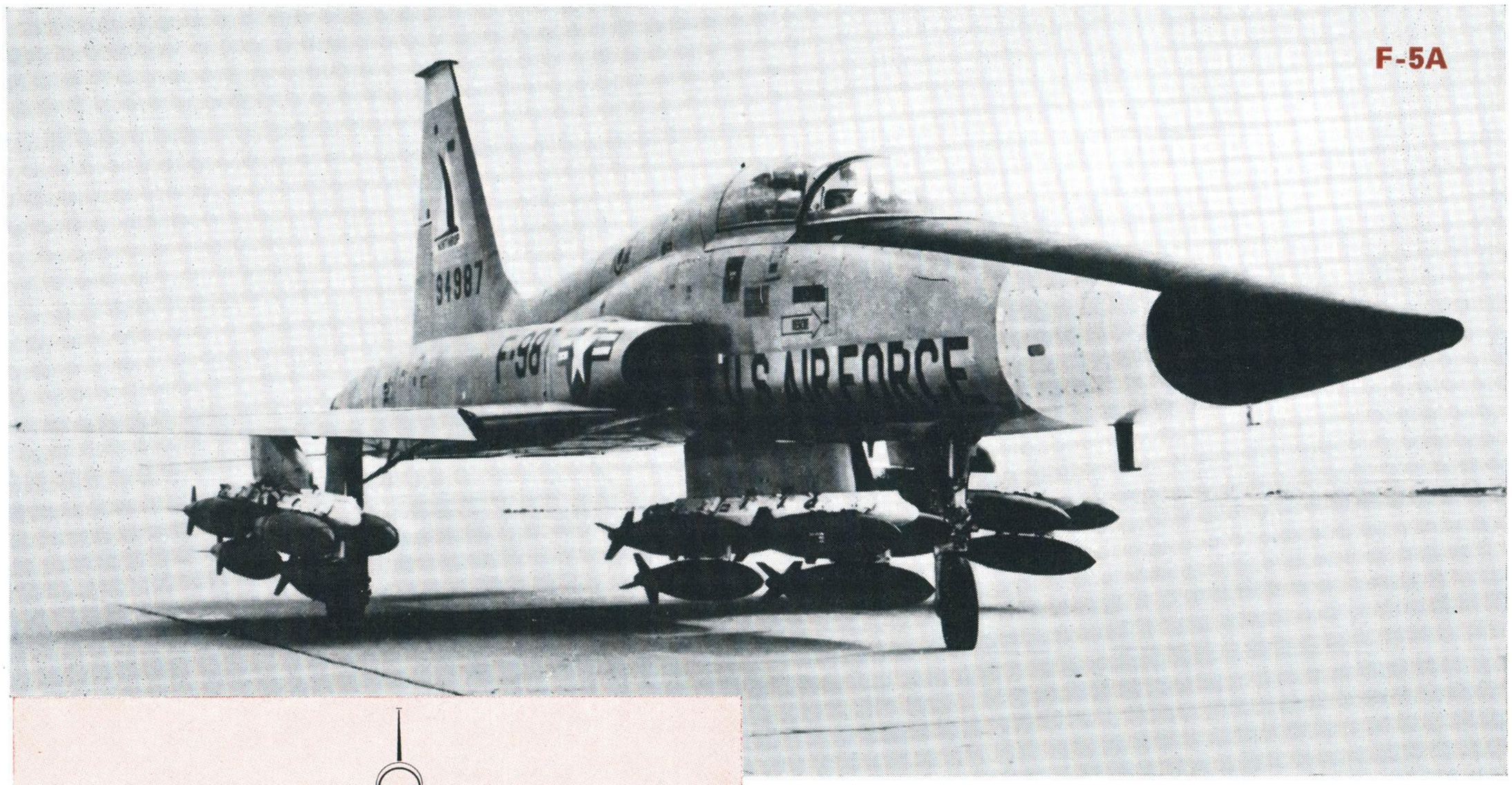


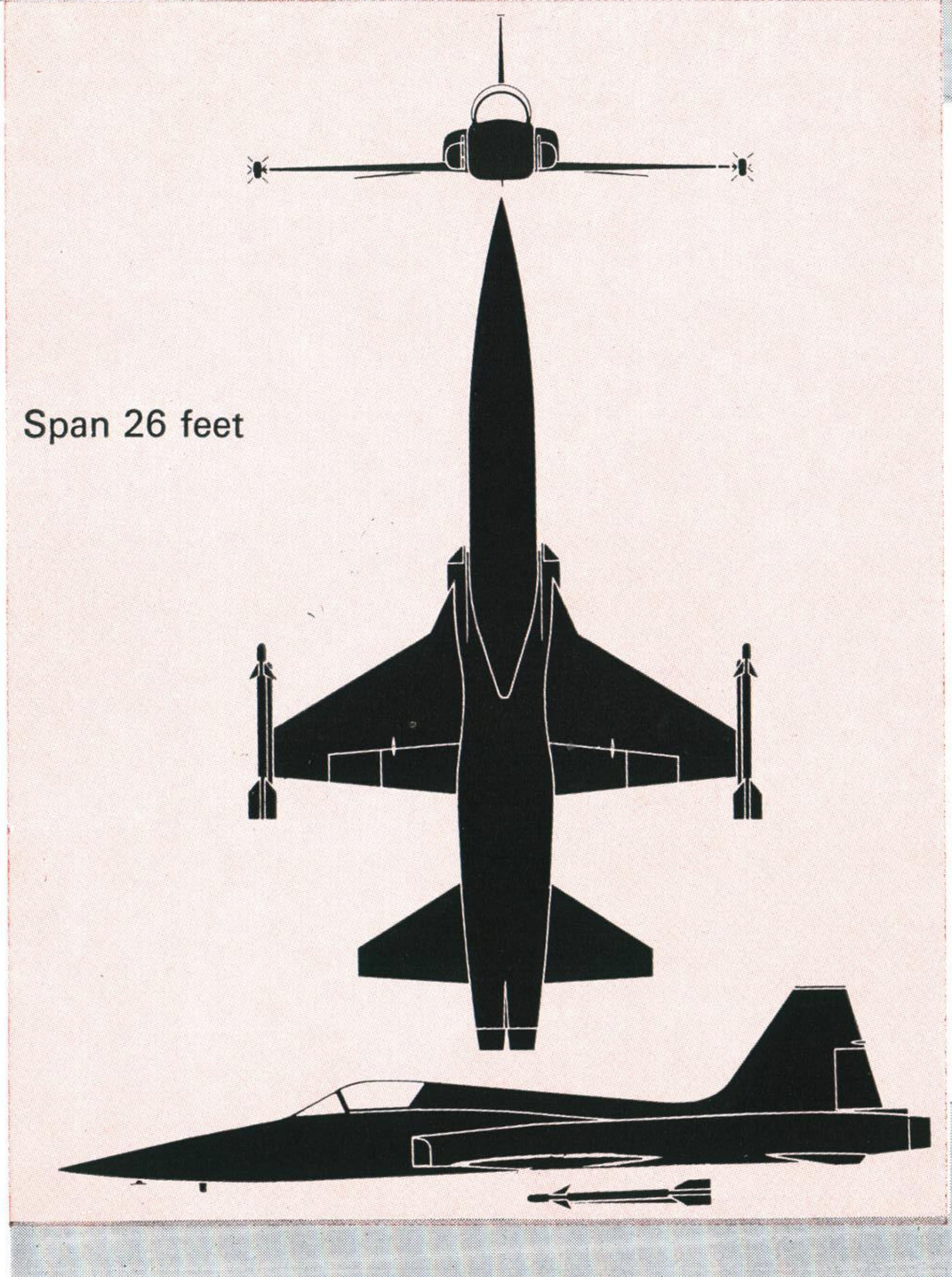










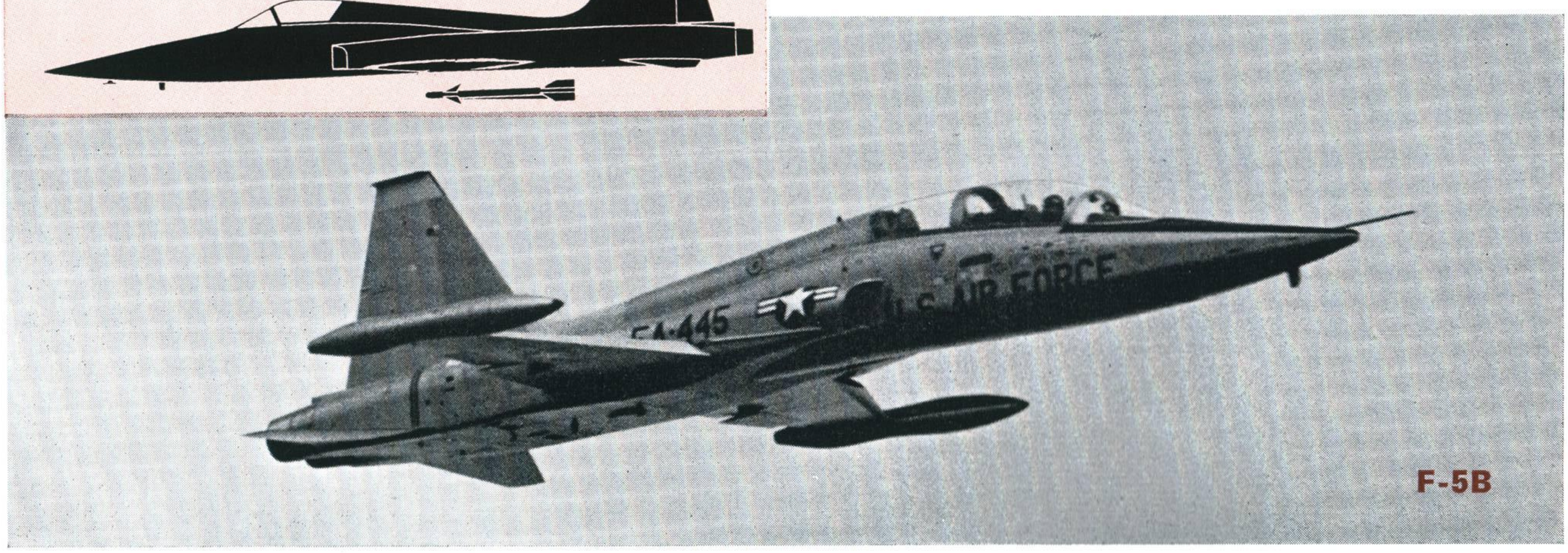


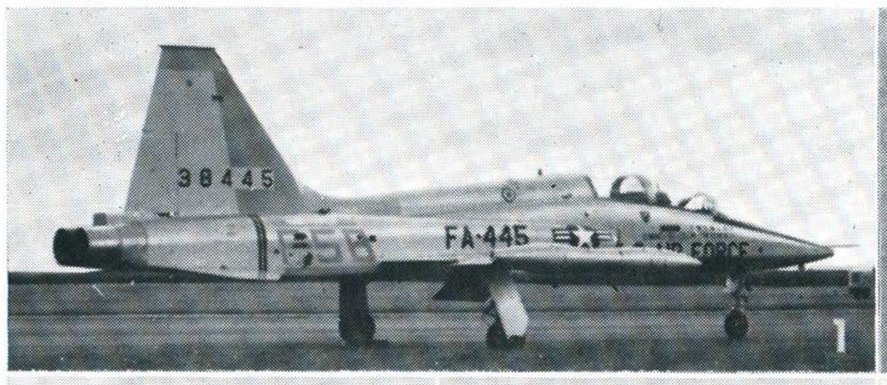
FREEDOM FIGHTER

The Northrop F156F multi-purpose fighter was developed for the U.S. Department of Defense to meet the needs of free world nations under the U.S. Military Assistance Program. Deliveries have been made to several countries in Europe and the Middle East and additionally the R.C.A.F. has decided to adopt this aircraft.

Developed from the Talon (December 1962 edition) by increasing the power and installing weapons systems, it retains the configuration of its predecessor, but, unlike the Talon, it has either tiptanks or wingtip missile launchers and may be seen with a variety of undersurface stores. There are two versions, the single-seat F-5A and tandem-seating F-5B, with variations to canopy and nose shape.

Report to the lesson instructions on page 46 as Freedom Fighter F-5A or F-5B—or otherwise.





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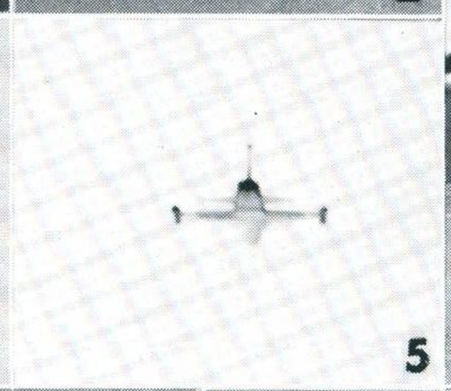

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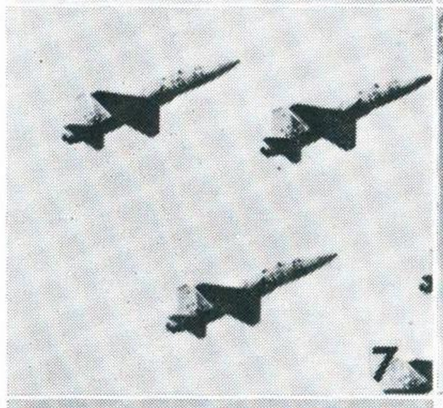


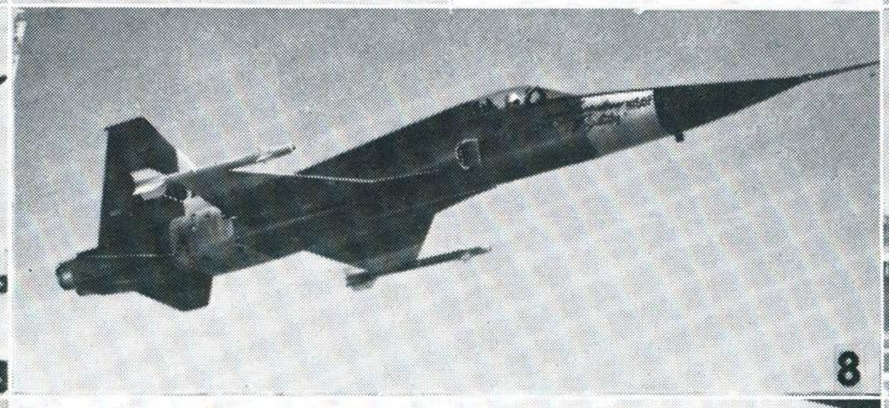
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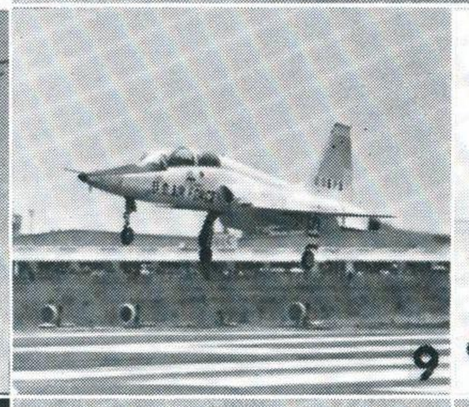

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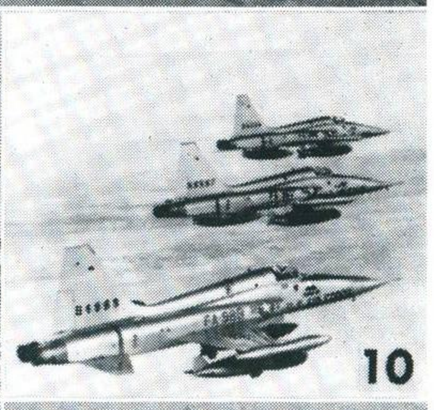

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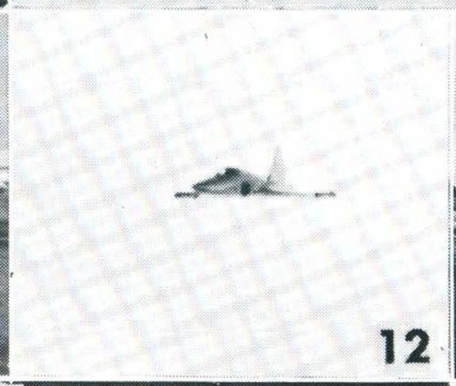

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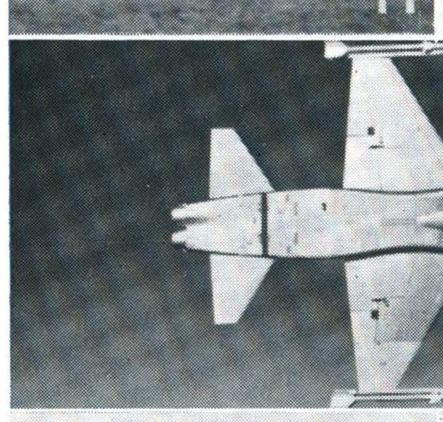

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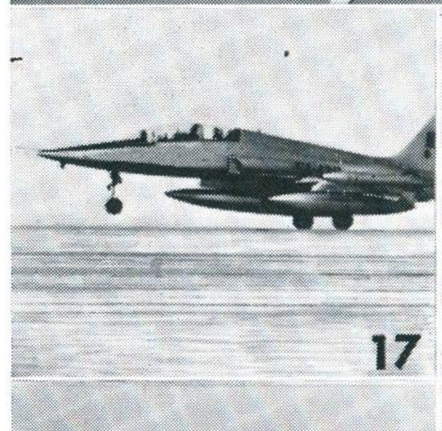

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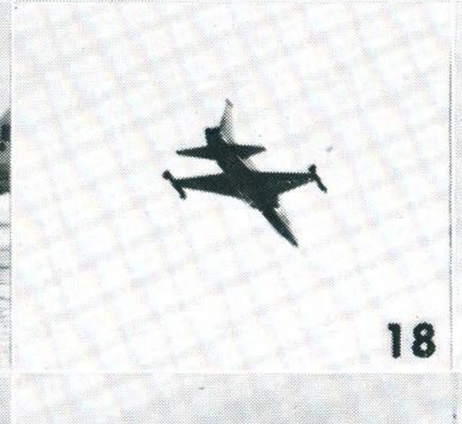

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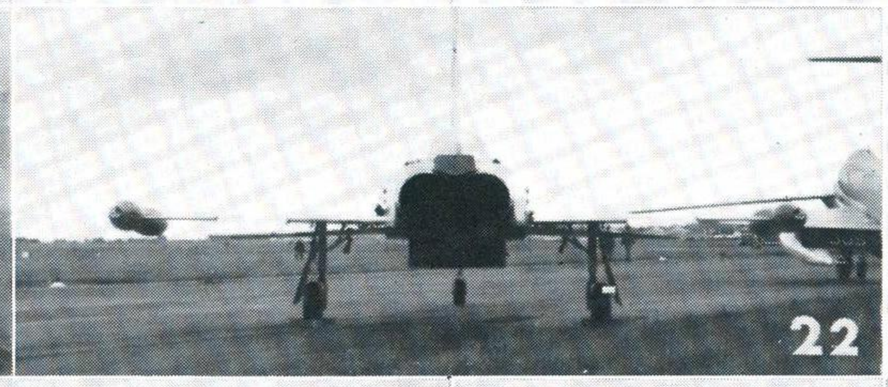

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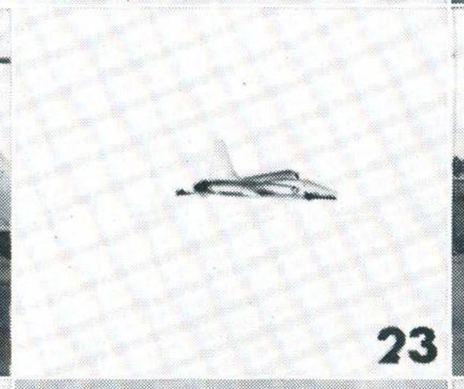

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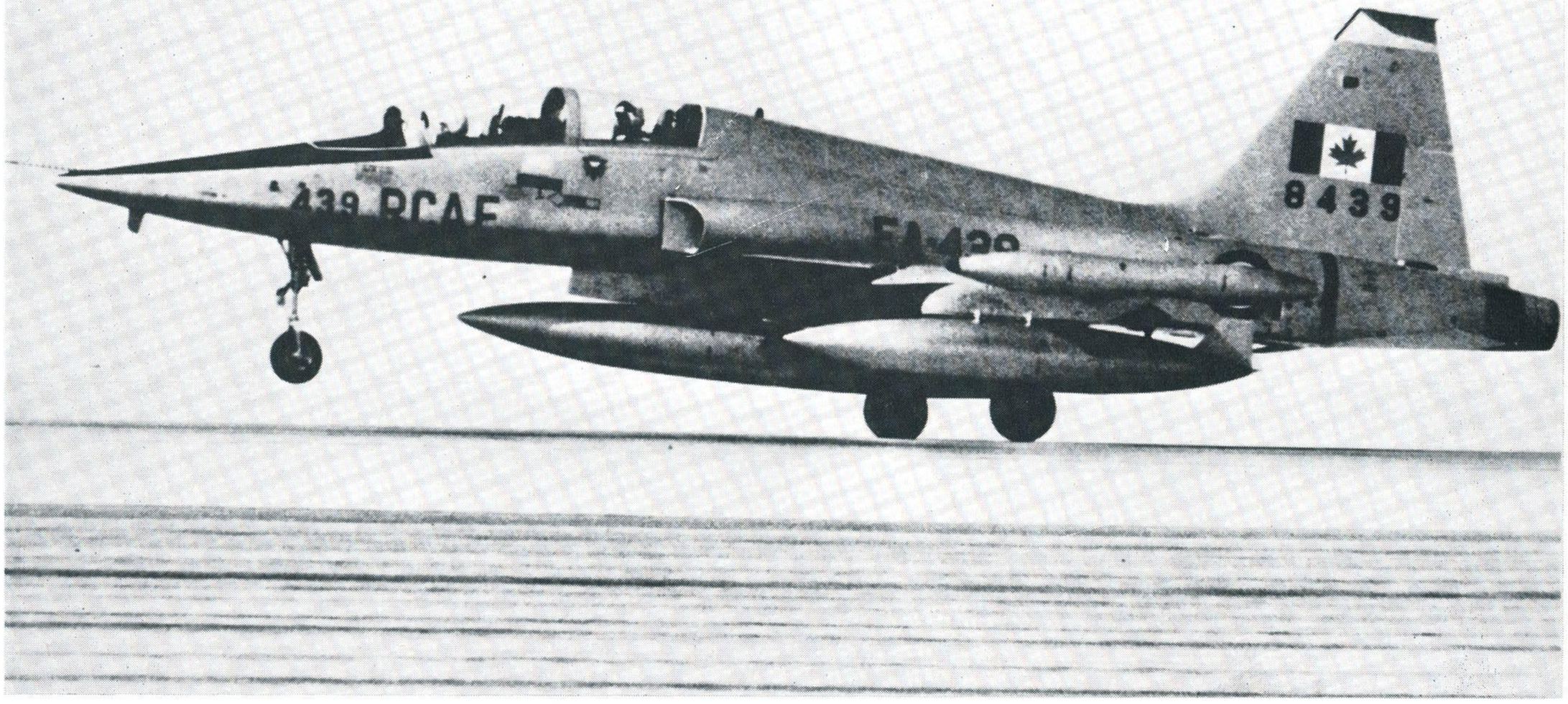

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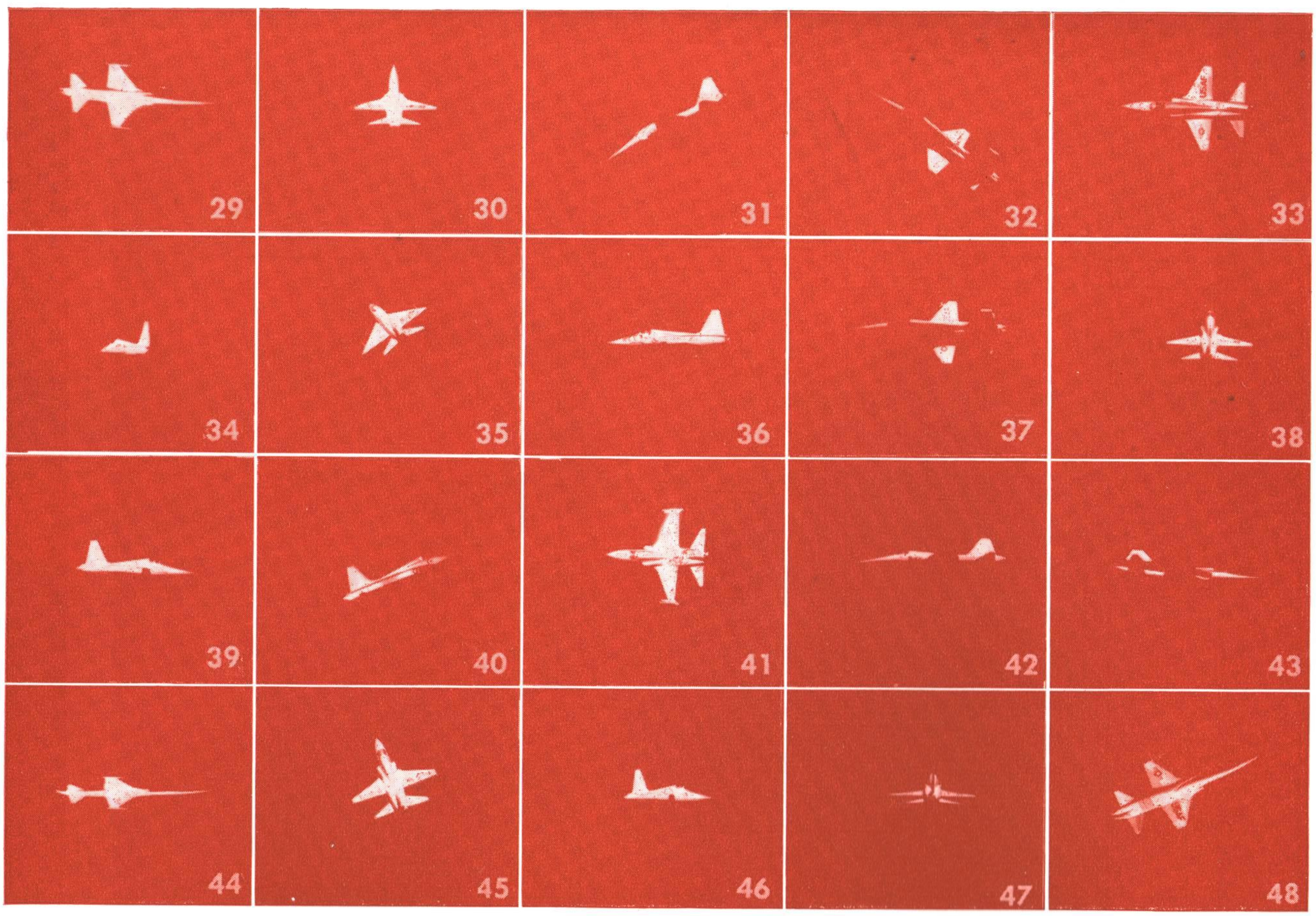

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The U.S.A.F. F-5 designations will apply in Royal Canadian Air Force Service.



WARSHIP IDENTIFICATION Test No 8

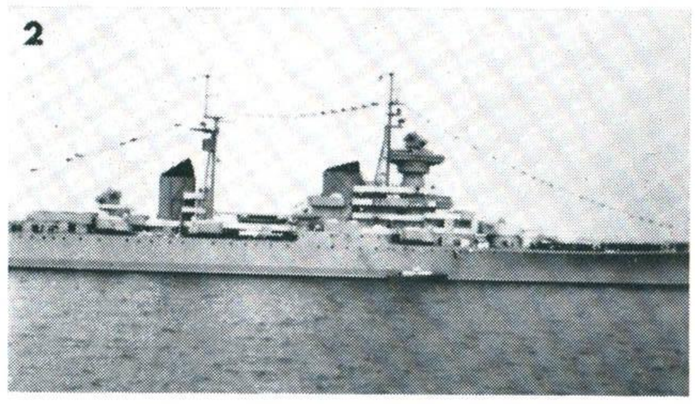
Warships of six nations, British, American, Russian, Canadian, French and Dutch, for your identification and reporting by Class, Type and Nationality.

Solutions with individual names where known on cover.

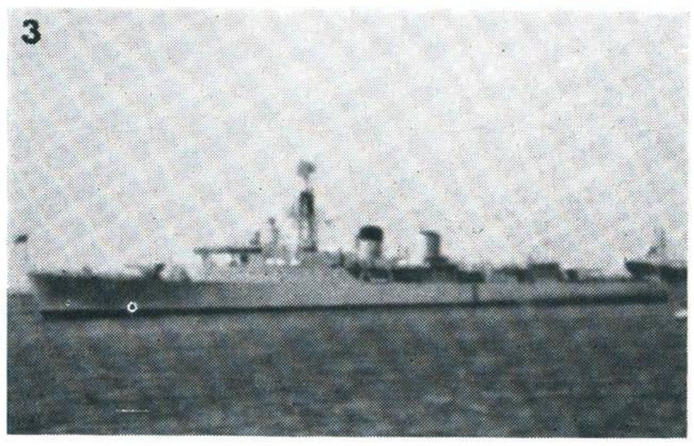
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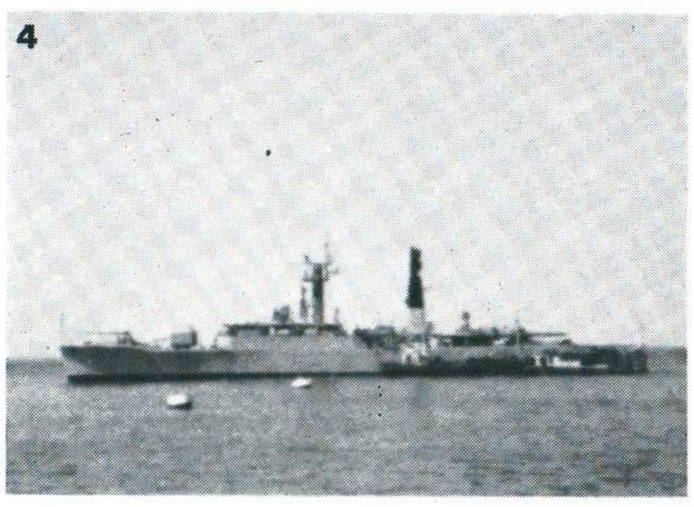
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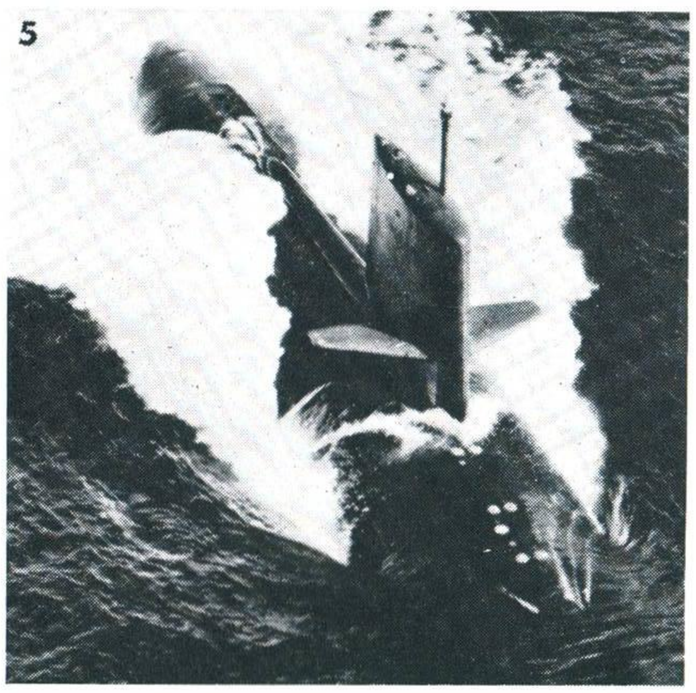
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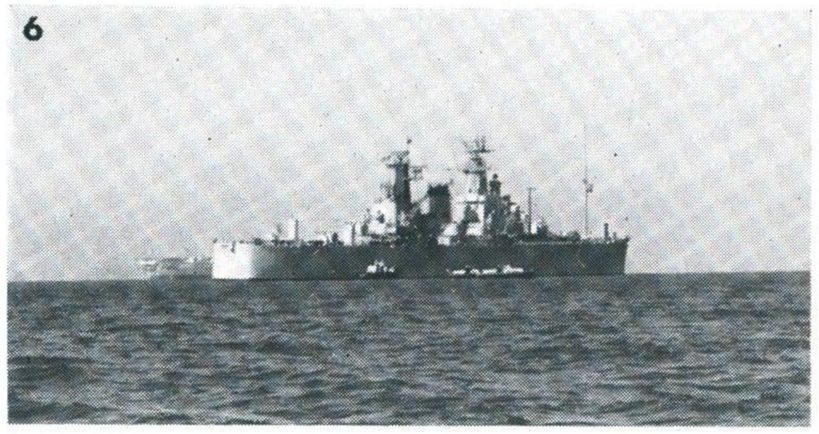
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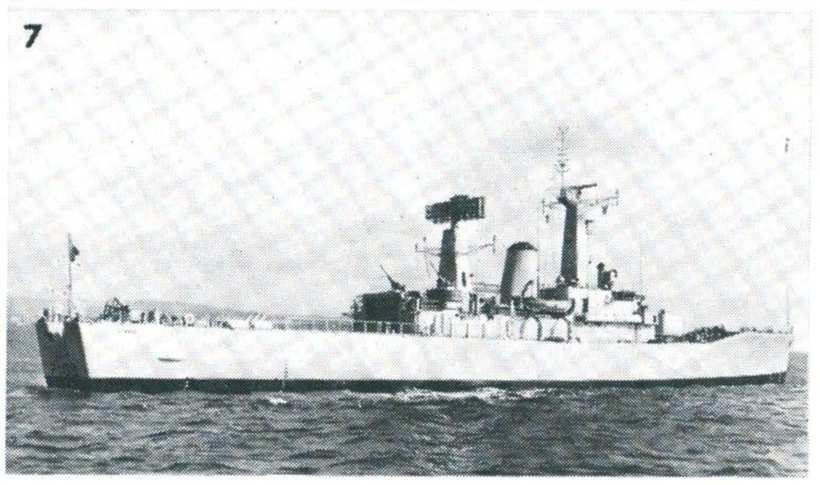
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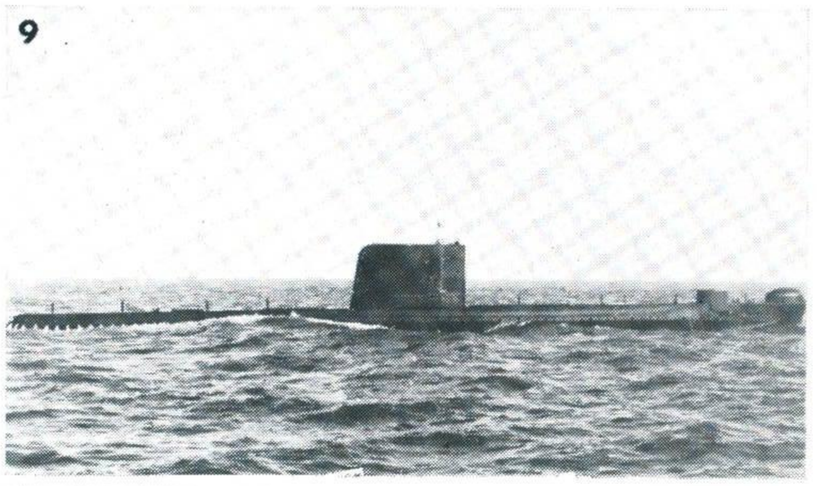
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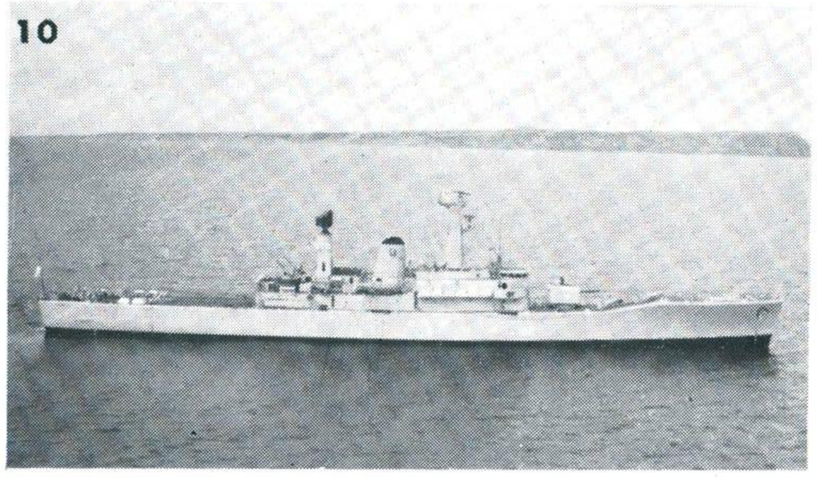
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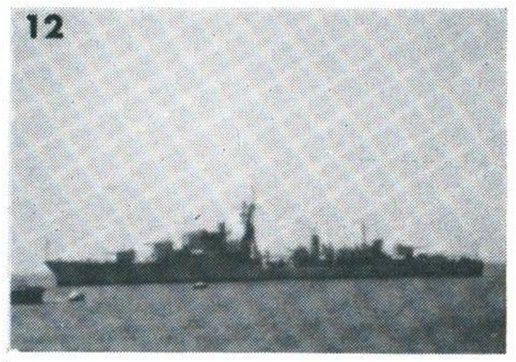
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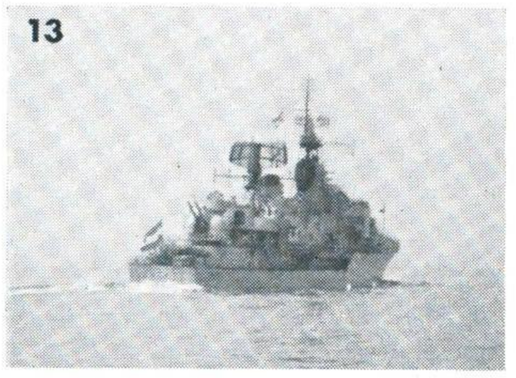
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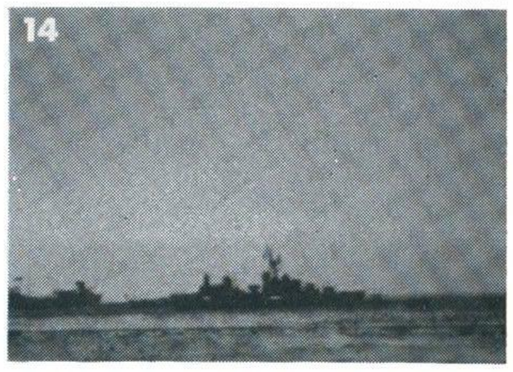
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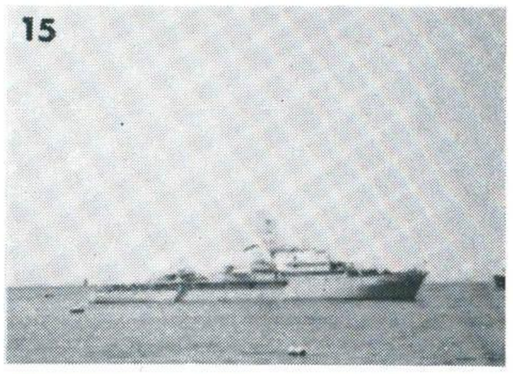
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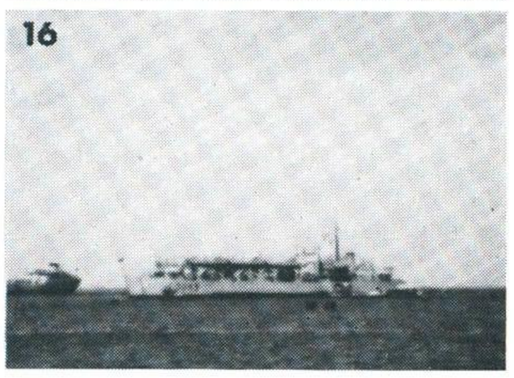
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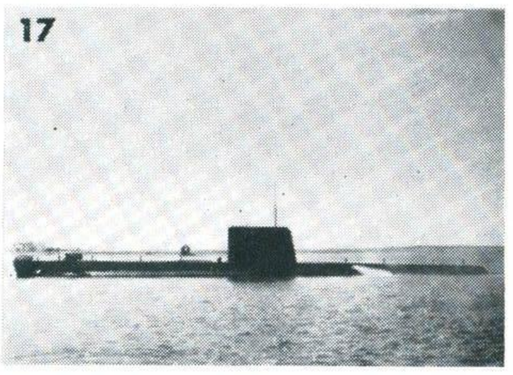
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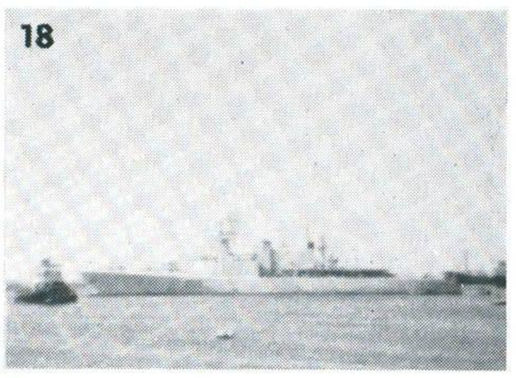
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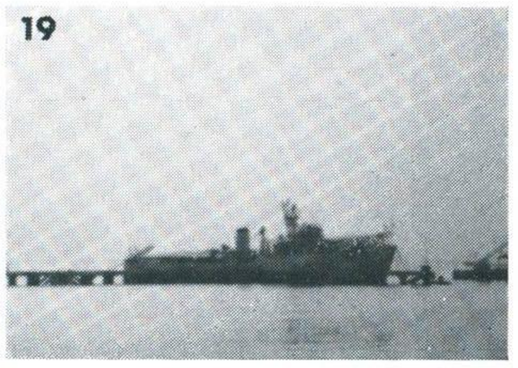
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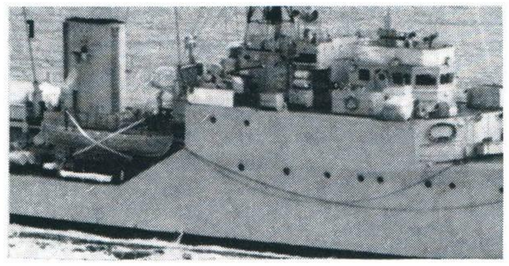
BLACKWOOD CLASS
ANTI-SUBMARINE FRIGATES

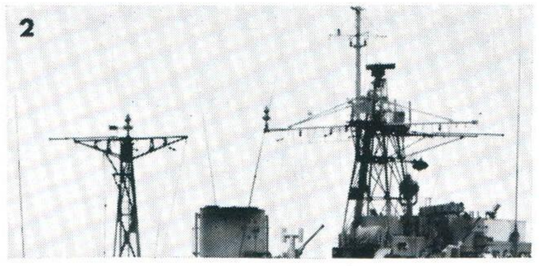
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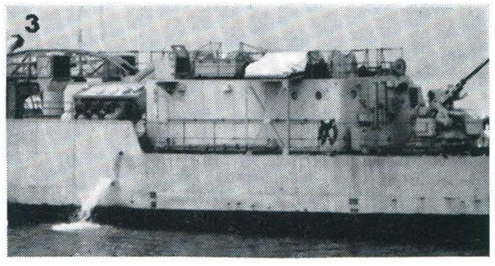


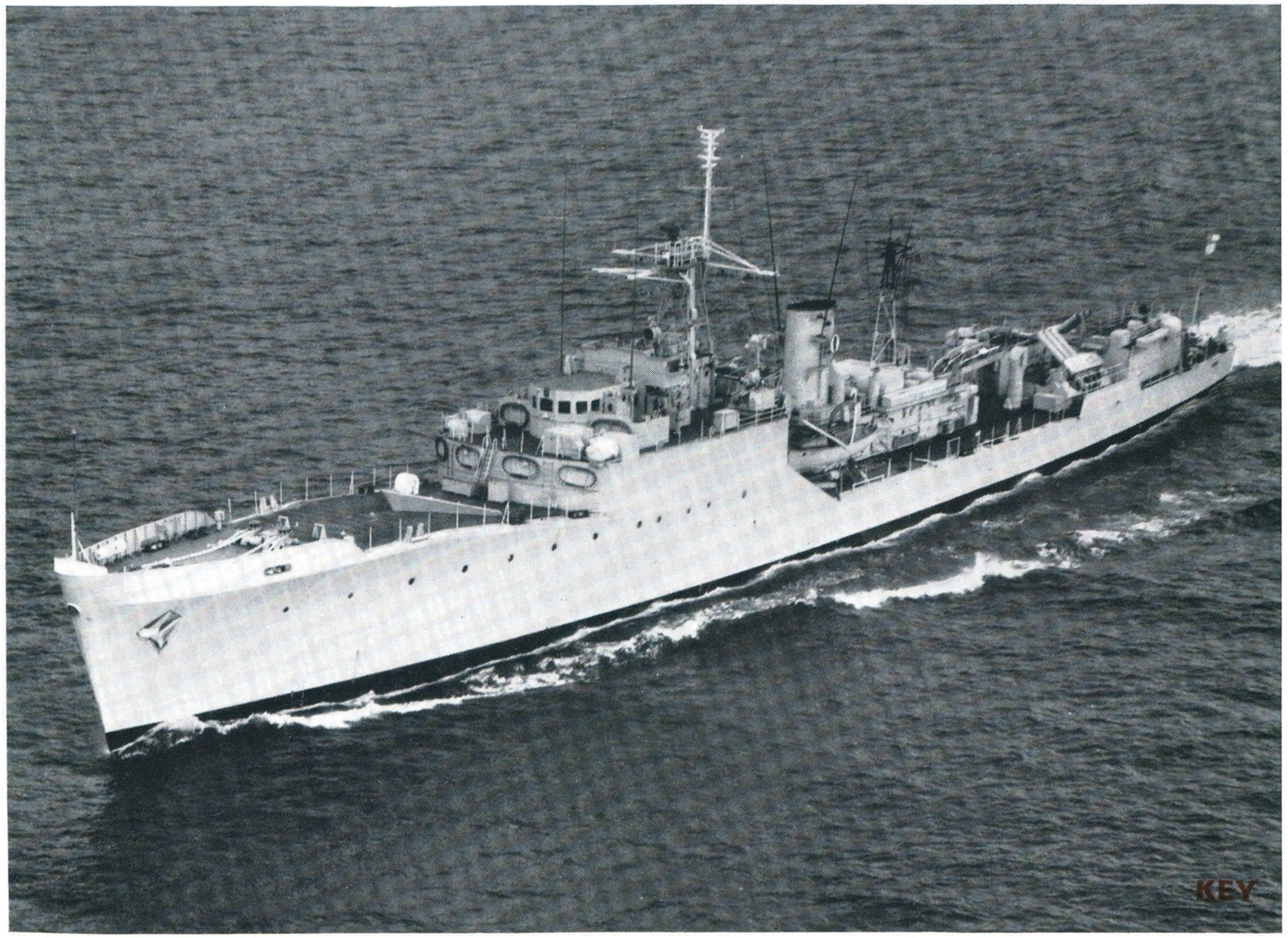
The twelve ships of this class, are lightly armed, utility-type anti-submarine frigates of 1,180 tons displacement and an overall length of 310 feet. Features are their vertical funnels mid-way between the masts and clear of the superstructure, the absence of turrets and a sharp break of the upper deck abaft the bridge.

Main armament consists of Limbos which can fire a pattern of charges over a wide area. *Work to instructions on page 46. Solutions on the cover.*





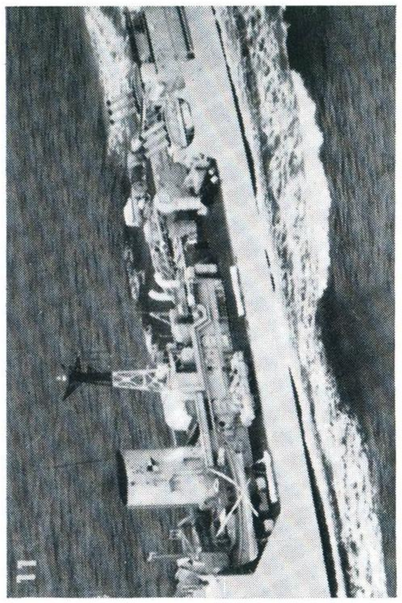


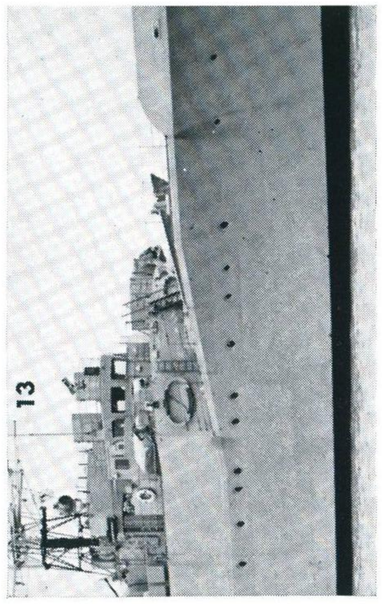


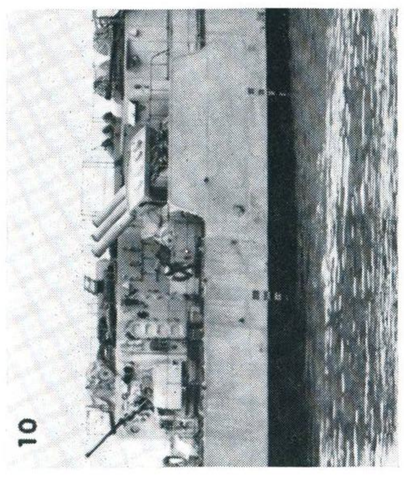


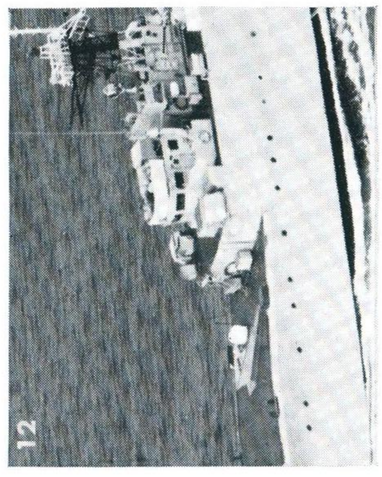


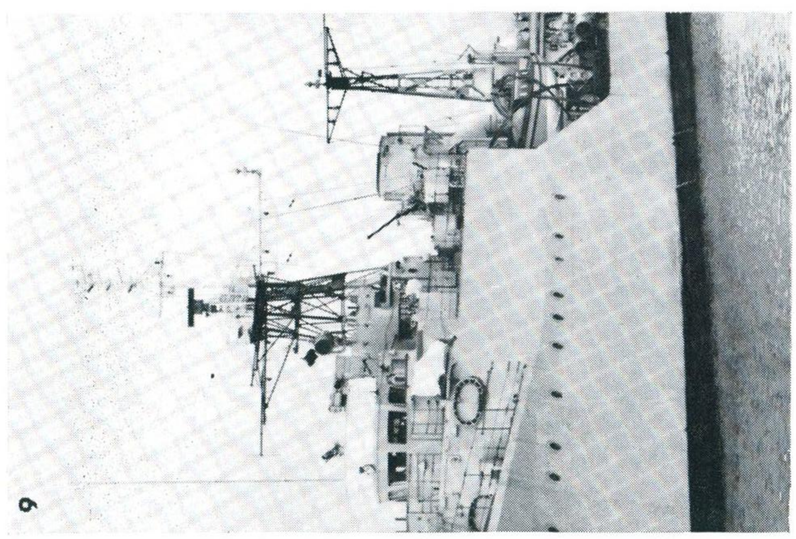




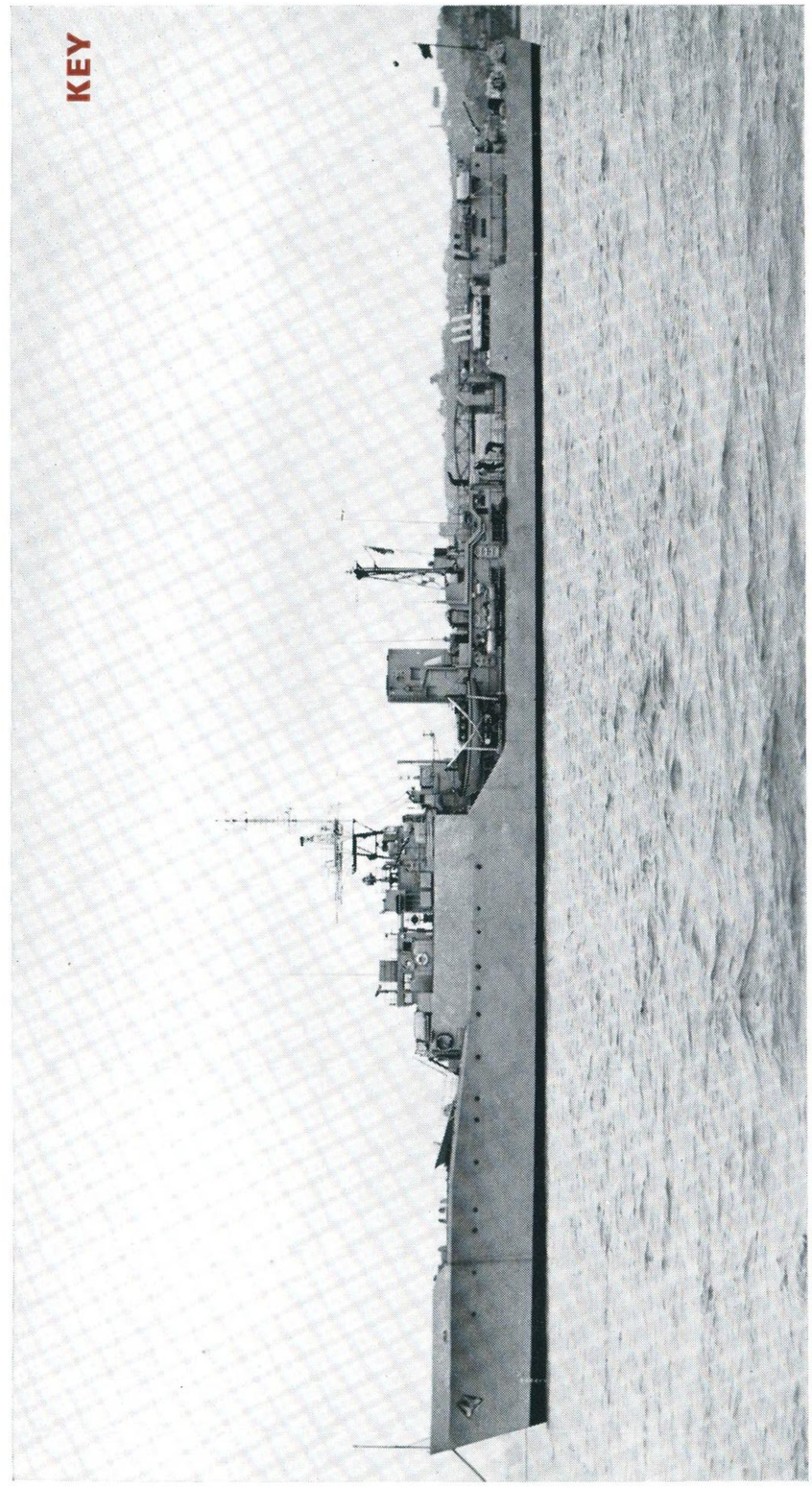


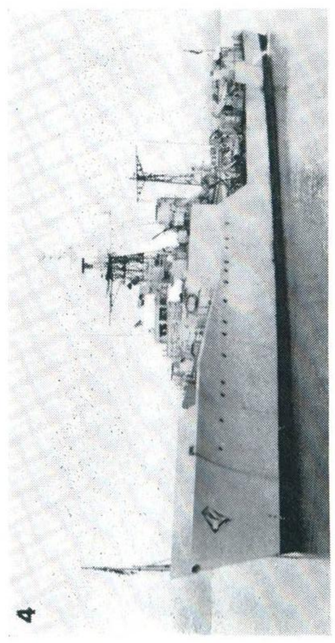


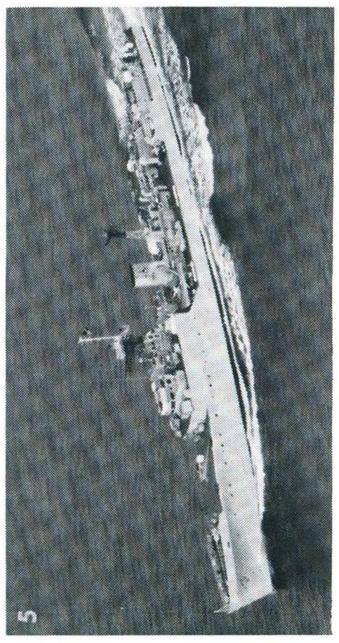


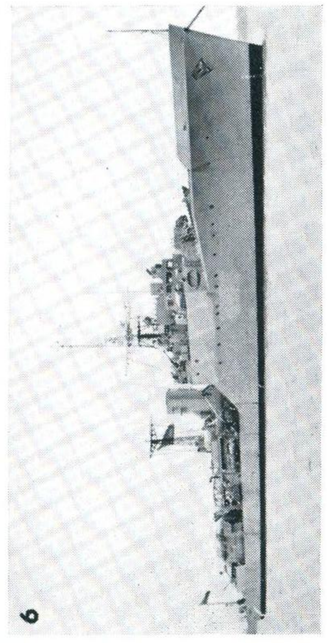


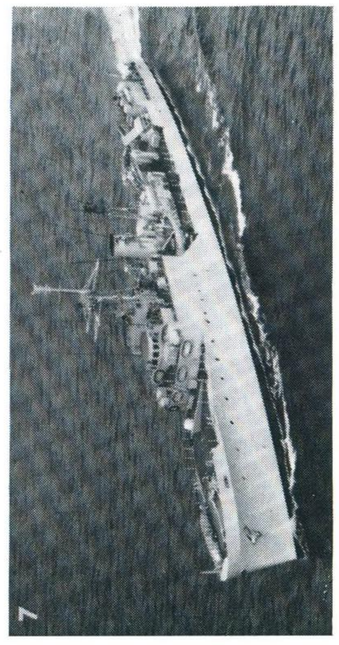
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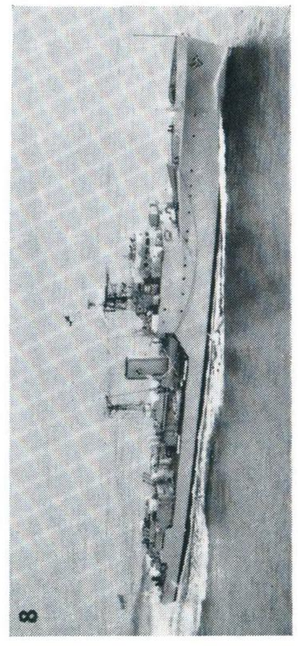










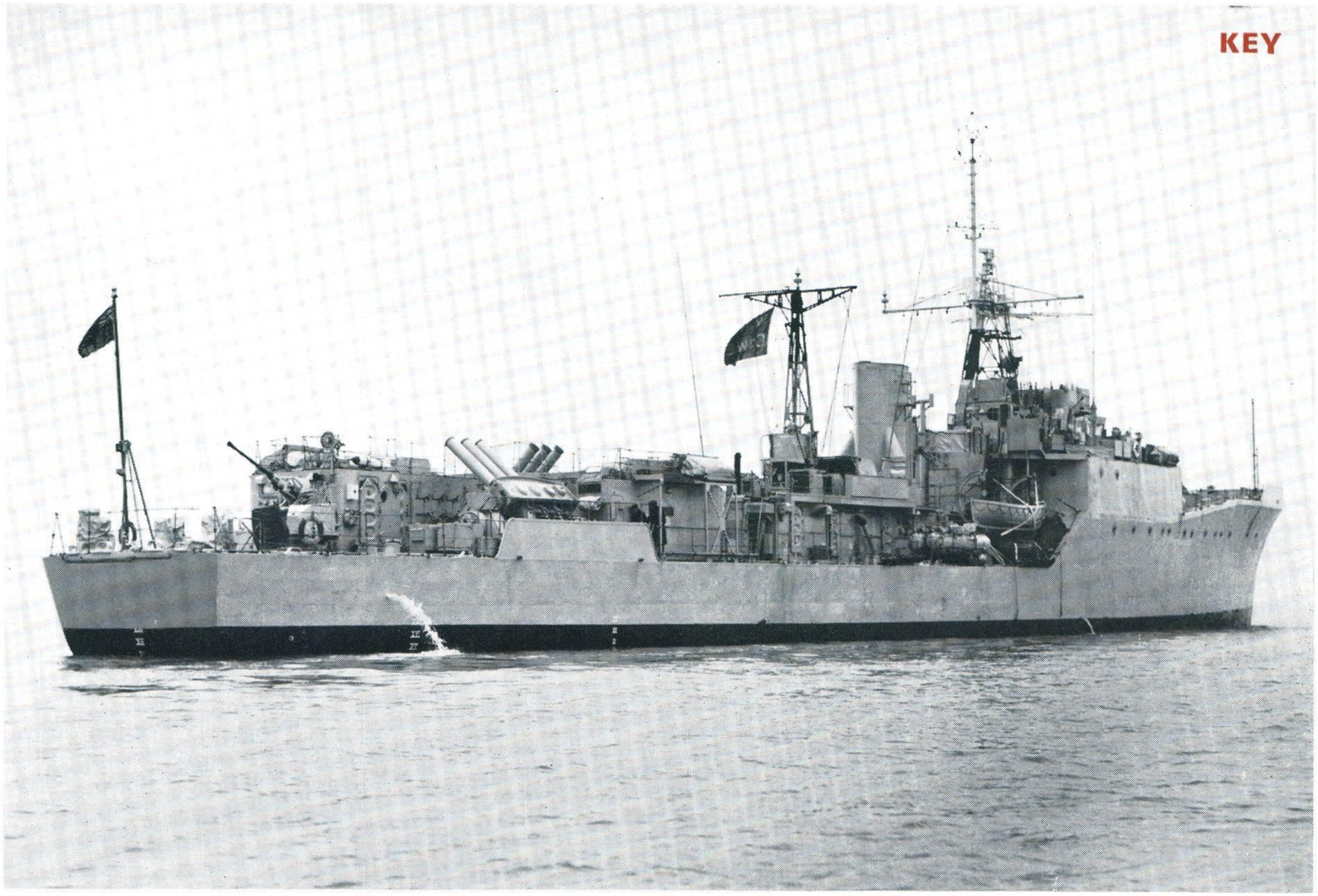





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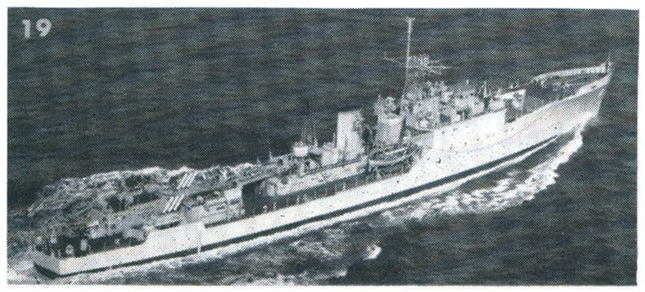

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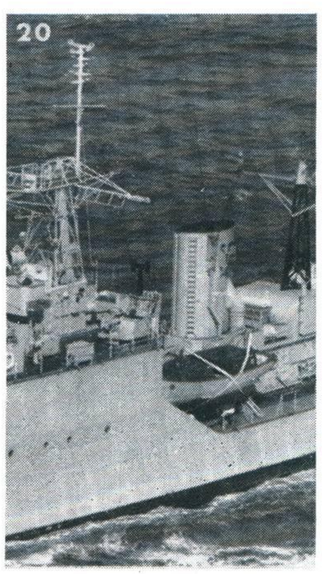

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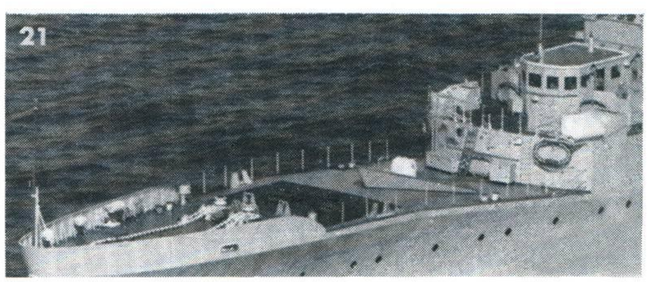

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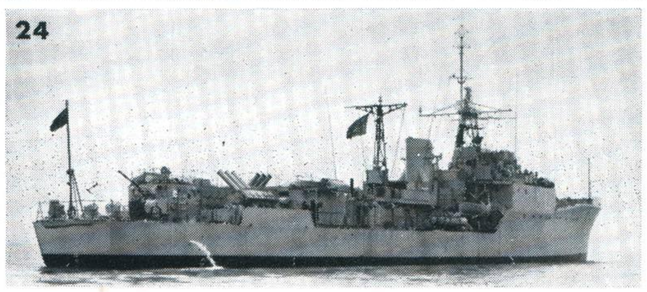

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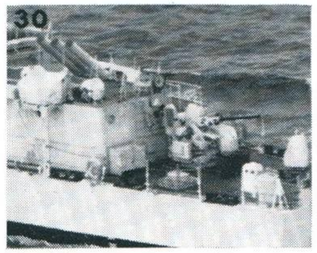

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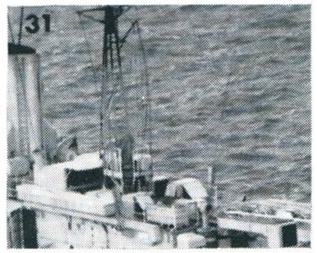




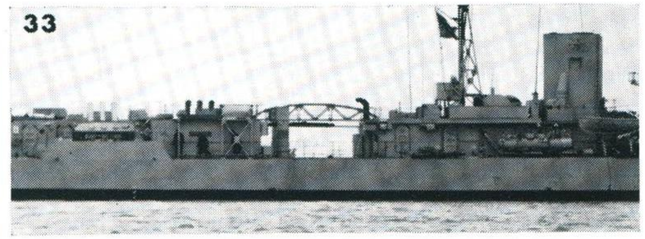










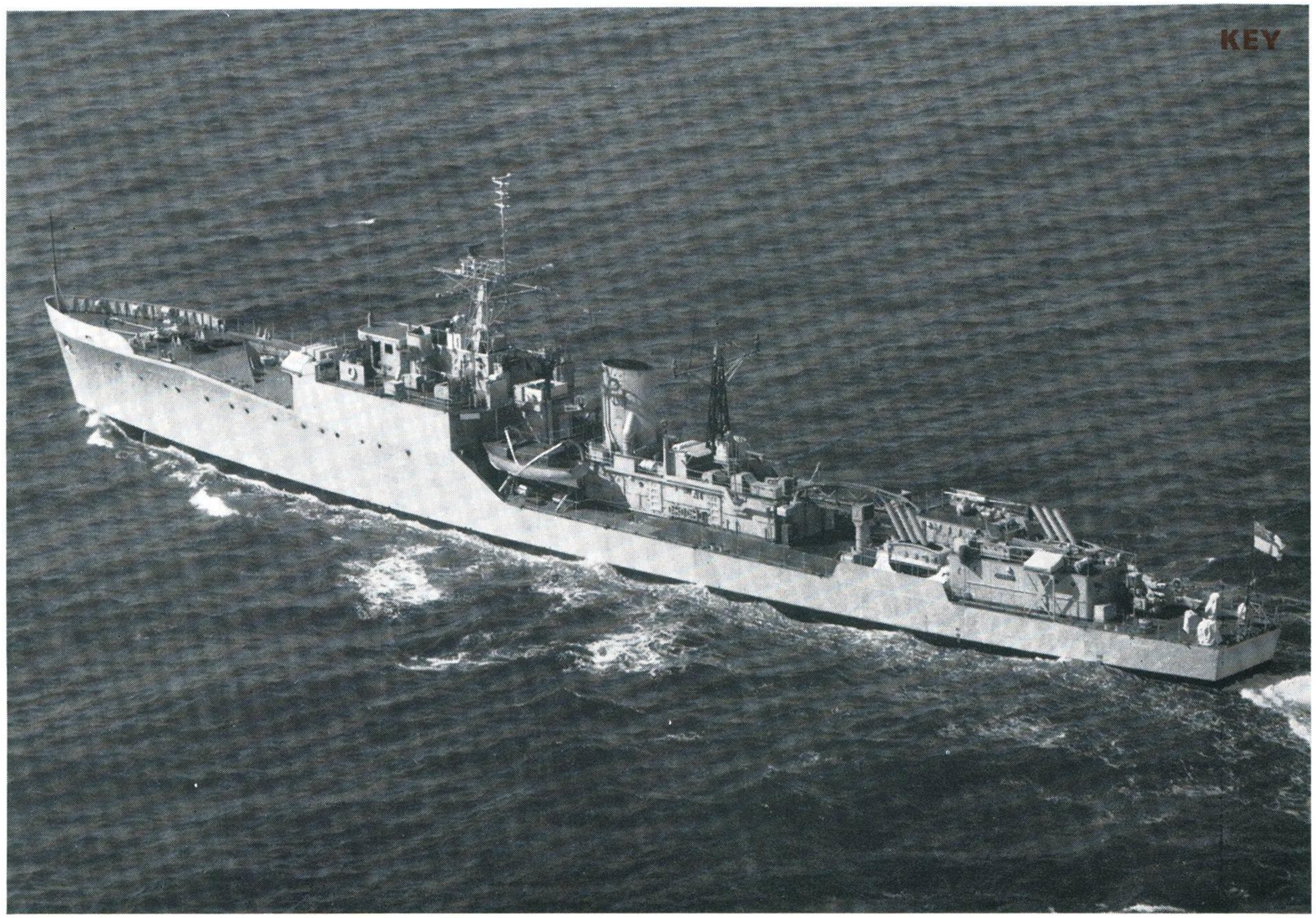












BLACKWOOD CLASS
ANTI-SUBMARINE FRIGATES

IN PASSING

BOOK REVIEWS

Profiles—**Bound Volume of 24 Historic Aircraft by Profile Publications of Leatherhead, Surrey—3 Guineas**

If there is such a thing as nostalgia about wartime days this is the volume which will induce an attack of it. Consisting of 6 months' issues of the two-shilling profiles bound into one, it contains in all 24 historic aircraft drawn in the most meticulous detail and printed in brilliant colour. With each drawing is a set of photographs and a comprehensive background of information. So far as the present writer is concerned probably the aircraft evoking the greatest interest is the FW 190 of the Second World War.

The FW 190 did much raiding on the South Coast and on one occasion put out of action for two weeks the Central School of Aircraft Recognition which, in 1943, was in Eastbourne. It must be said in all fairness however that it was British bullets which did as much damage, if not more, to the School rather than the enemy, although another aircraft managed to hit the hotel used by the pupils and staff, rendering all temporarily "homeless".

There is no doubt that the School itself was a target for one FW 190 of the formation which bombed Eastbourne on that day. The writer and a gunner were on the roof of the School, with a Vickers gas-operated gun, when the local warning sounded. Almost immediately, 15 to 20 FW 190s came over the downs to the west of the town looking rather like a group of beautiful models; each carried one large bomb and one aircraft lined up on the street in which the School stood. Strangely, its approach seemed dreadfully slow. I recall being fascinated by the single bomb, obviously destined for me. Strange as it may seem, the occasion was not one of fear, but of a kind of excited fascination: reaction set in later. The fascination was so deep that although others subsequently said that the racket from the guns and the sound of engines was appalling as the enemy swept over the rooftops, I remembered nothing of the noise at all, only of saying aloud "Why don't you drop the bloody thing?"—hoping he would do so too soon. When he did drop his bomb it passed close over the top of the building between myself and the gunner with a hideous roar, jinked through the roof of the bank on the opposite side of the road and demolished a church nearby. All was then obscured by smoke and dust and showers of bricks whilst the gunner and I solemnly shook hands on our escape, to find that we could not get off the roof.

Eventually descending, every classroom was wrecked. Bullet holes in blackboards, windows smashed, floors, chairs and desks splintered—not as one might imagine from bomb splinters but from bullets from our own guns hosing at the passing enemy. We seemed to have had a doubly lucky escape.

In somewhat different vein the pre-war air exercises of about 1936 are recalled by other aircraft in the book. The Bulldogs, Furies and Virginias of the pre-war R.A.F. for example. I recall a flight of three Virginias of the "Red" or "Enemy" force beating up the Channel at dusk making for London at about 20 knots against 60 knot wind. Though we may smile at them now, these great, gaunt sinister-looking aircraft were very awe inspiring in those days. The Virginia is not, alas, in the present collection of Profiles but her predecessor the Vimy is in the same dark, grim camouflage known as NIVO. Many other aircraft of pre-war and wartime days, allied and enemy are gathered in this excellent little bound volume which retails at three guineas. Though expensive, it is well worth the outlay.

C.E.S.

Lesson Instructions

To obtain the maximum benefit from the training devices published in this *Journal*, the following procedure should be adopted.

1. **Read the text associated with the lesson.**
2. **Prepare a list of target numbers so as to be able to tackle the targets in any order.**
3. **Identify the target pictures by comparing them with the key views: start with the easy ones so as to gain experience: also use targets already identified to solve the more difficult ones.**
4. **When certain of the identity of a target write down its name *IMMEDIATELY* against the appropriate number on your list. THIS IS IMPORTANT.**
5. **Lessons should not be hurried or given a time limit. So far as beginners are concerned, it is more important to identify accurately than quickly.**
6. **Do not attempt conscious memorising of details, shapes, or names.**

Conduite des leçons

1. **Lire le texte correspondant à la leçon.**
2. **Préparer une liste de numéros de cible, de façon à pouvoir prendre les cibles dans n'importe quel ordre.**
3. **Identifier les photos de la cible en les comparant avec les vues-clé: commencer par les plus faciles de manière à gagner de l'expérience: se servir aussi de cibles déjà identifiées pour trouver les plus difficiles.**
4. **Quand vous serez certain de l'identité d'une cible, notez son nom immédiatement en face du numéro correspondant sur votre liste. CECI EST IMPORTANT.**
5. **Les leçons ne devront pas être précipitées ou d'une durée limitée à l'avance. En ce qui concerne les débutants, il est plus important d'identifier avec précision que rapidement.**
6. **Ne pas s'efforcer d'apprendre par cœur les détails, les formes ou les noms.**

Gebrauchsanweisung für die Typenlehre

Um den größten Nutzen aus den Übungsbildern, die in diesem Heft veröffentlicht werden, zu ziehen, sollte wie folgt verfahren werden.

1. **Den zur Lehre gehörigen Text lesen.**
2. **Eine numerierte Typenliste vorbereiten, in der angesprochene Typen in eine gewisse Ordnung gebracht werden können.**
3. **Typen ansprechen durch Vergleich mit den Hauptansichten (von oben, von unten, von vorne, von hinten und von der Seite). Anfangen mit den einfachen Bildern, um Erfahrung zu bekommen. Die angesprochenen Typen zur Ansprache der schwierigeren benutzen.**
4. **Wichtig: Sobald ein bestimmtes Flugzeugbild mit Sicherheit richtig angesprochen ist, sofort die Typenbezeichung in die entsprechende Stelle der Liste eintragen.**
5. **Bei der Übung nicht beeilen oder eine zeitliche Begrenzung festlegen. Für Anfänger ist es wichtiger, richtig anzusprechen als schnell.**
6. **Nicht mit Einzelheiten, Umrissen, Namen aufhalten.**

BRITISH SERVICE AIRCRAFT DESIGNATIONS

The nomenclature of British service aircraft takes into account three factors—the basic type name which for identification training purposes is the reporting name; its function denoted by indicative letters and variations on the original basic type stated by a mark number.

To give an example, the name Canberra was given to our first jet bomber; the original type (Mk. 1) did not go into production, thus the following service bomber version became the Canberra B. Mk. 2 (B for Bomber). Later versions developed for photographic reconnaissance and training became the P.R. Mk. 3 and T. Mk. 4 respectively. An acceptable abbreviated form of this is PR 3 and T 4.

The system becomes rather more complicated with an adaptable aircraft, e.g. the Vampire, developed for Air Force and naval use, had two sets of mark numbers, from Mk. 1 for RAF and from Mk. 20 for Royal Navy development. The allocation of such blocks is to avoid confusion when there is joint production. A typical example is the Chipmunk which originated in Canada where Mks. 1 to 9 were reserved for Canadian production. Hence the U.K. produced trainer became the T. Mk. 10 in R.A.F. service with plans made to reserve Mk. 20 upwards for British civil development. Hunters and Canberras have been widely exported to Commonwealth, allied and foreign governments and a similar block system of allotting mark numbers is used with these aircraft.

It is not expected in identity training that discrimination should be made between marks, but that all marks of a particular type, which involve in many cases slight alterations to its silhouette, should be known by the type name.

Listed here is the allocation of type names, with the prefix and mark numbers, of types currently in service, as a reference to correct designations and as a guide to the scope of aircraft types currently in service.

ROLE PREFIX LETTERS CURRENTLY IN USE

A.E.W.	**Airborne Early Warning**
A.H.	**Army Helicopter**
A.L.	**Army Liaison**
A.O.P.	**Air Observation**
A.S.	**Anti-Submarine**
B.	**Bomber**
B(I)	**Bomber/Interdictor**
B(K)	**Bomber/Tanker**
B(PR)	**Bomber/Photographic Reconnaissance**
C.	**Cargo**
C.C.	**Cargo and Communications**
D.	**Drone or Unmanned Aircraft**
F.	**Fighter**
F.G.A.	**Fighter Ground Attack**
F.A.W.	**Fighter All Weather**
F.R.	**Fighter Reconnaissance**
G.A.	**Ground Attack**
H.A.R.	**Helicopter, Aid and Rescue**
H.A.S.	**Helicopter, Anti-Submarine**
H.C.	**Helicopter, Cargo**
H.R.	**Helicopter, Rescue**
H.T.	**Helicopter, Training**
H.U.	**Helicopter, Utility**
M.R.	**Maritime Reconnaissance**
P.R.	**Photographic Reconnaissance**
S.	**Strike**
S.R.	**Strategic Reconnaissance**
T.	**Trainer**
T.X.	**Training Glider**

Alouette A.H.2	British Army	Version of French Alouette II, hence first British service version and all French and civil versions, are reported as "Alouette Two"
Andover C.1	Royal Air Force	Avro 780 Military Freighter
C.C.2	Royal Air Force	V.I.P. version of civil Hawker Siddeley 748
Anson C.19	Royal Air Force	Standard communications Anson retained in service
C.21	Royal Air Force	T.21 flying classrooms converted for communications work. Earlier marks still in civil use
Argosy C.1	R.A.F. Transport Command	A.W.660 freighter. Also used as civil freighter as Argosy
Auster A.O.P.6	Royal Air Force	Limited use but numbers of this and earlier marks are in civil use
T.7	Royal Air Force	Trainer version, visually similar to A.O.P.6
A.O.P.9	British Army	Standard A.O.P. aircraft with marked visual differences from earlier marks
T.10	Royal Air Force	A.O.P.6 for training
A.O.P.11	Civil	Beagle Auster prototype of Auster development
Bassett C.C.1	Royal Air Force	Anson replacement
Beaver A.L.1	British Army	D.H.C.2 built in Canada. U-6A of U.S. Air Force and U.S. Army and widely used in other countries
Belfast C.1	R.A.F. Transport Command	Short freighter exclusive at present to R.A.F. who have ordered ten
Belvedere H.C.1	Royal Air Force	Westland development of Bristol 192. Only twin-rotor helicopter in British service
Beverley C.1	Royal Air Force	Standard freighter
Britannia C.1	R.A.F. Transport Command	20 Series 253 built for the R.A.F.
C.2	R.A.F. Transport Command	3 Series 252 purchased for R.A.F.
Buccaneer S.1	Royal Navy	Strike aircraft exclusive to Royal Navy
S.2	Royal Navy	Spey-engined version with larger intakes and engine nacelles, see November 1964 *Journal* for comparative visual details
S.50	South African Air Force	S.2 version for export
Canberra B.2	Royal Air Force	Initial production Canberra for R.A.F.
P.R.3	Royal Air Force	Basic B.2 produced for photo-reconnaissance
T.4	Royal Air Force	Trainer version of B.2
B.6	Royal Air Force	Improved B.2 with increased power and fuel capacity
P.R.7	Royal Air Force	Improved P.R.3
B(I)8	Royal Air Force	Convertible night interdictor/high altitude bomber

Canberra (continued]

P.R.9	Royal Air Force	Revised shape with increase in wing span and chord with canopy off-set.
D.10	Ministry of Aviation	Unmanned target version of B.2
T.11	Royal Air Force	B.2 for use on Australian ranges with extended radome nose for A.1 training. Six for R.A.F. and two to Sweden
B(I)12	R.N.Z.A.F.	B(I)8 modified by Boulton Paul
T.13	R.N.Z.A.F.	T.4 modified by Boulton Paul
D.14	Ministry of Aviation	U.K. version of D.10, basic B.2 silhouette
B.15	R.A.F. Middle East Air Force	B.6 for ground attack with provision for rocket firing.
B.16	R.A.F. Middle East Air Force	B.15 with additional electronics
T.17	Ministry of Aviation	B.2 with special modifications
Mks. 18–19	—	Reserved for modification of British-built Canberras
B.20	Royal Australian Air Force	48 Australian-built tactical bombers. Silhouette similar to B.2
T.21	R.A.A.F.	Trainer version of B.20
P.R.57	Indian Air Force	P.R.7 for Indian Air Force
B(I)58	Indian Air Force	B(I)8 for Indian Air Force.
Chipmunk Mks. 1–9	Canadian Civil	Reserved for development of D.H.C.1 in Canada
T.10	British Army and R.A.F.	Elementary trainer
Comet C.2	R.A.F. Transport Command	C Mk. 2 allotted to conform with civil Comet 2
T.2	Royal Air Force	Flying classroom trainer version of C.2
C.4C	R.A.F. Transport Command	C. Mk. 4C allotted to conform with civil Comet 4C

Devon C.1	Royal Air Force	Military communications version of Dove
C.2	Royal Air Force	Devon C.1 with engine change
Dominie T.1	Royal Air Force	Military trainer version of the Hawker Siddeley H.S. 125
Dove C.1	Royal Air Force	Allocation for Dove once used by British Defence Staffs in Washington. Open for possible further deliveries
Dragonfly H.R.5	Royal Navy	Limited use of Sikorsky S.51 helicopters remaining in service

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Eton TX.1	Combined Cadet Force	Primary glider

Gannet A.E.W.3	Royal Navy	Differs usually from all A.S. Gannets by large under-fuselage radome
A.S.4	Royal Navy	Anti-submarine aircraft. Earlier A.S.1s. no longer used
T.5	Royal Navy	Trainer with revised canopy and equipment
A.S.6	Royal Navy	New standard A.S.4
Gnat T.1	Royal Air Force	Standard advanced trainer
Grasshopper TX.1	Combined Cadet Force	Primary glider

Hastings C.1	Royal Air Force	R.A.F. standard transport
C.2	Royal Air Force	A.S. C.1 but with lower tailplane
C.3	R.N.Z.A.F.	Basic C.2
C.4	Royal Air Force	V.I.P. standard C.2
T.5	Royal Air Force	Differ by nose radome for electronic equipment training
Heron C.3	Royal Air Force	Queen's Flight
C.4	Royal Air Force	Queen's Flight with revised accommodation
Hiller H.T.2	Royal Navy	Hiller Type 12.E helicopters (H.T.1) helicopters of the H.T.E.2 type supplied under M.D.A.P. No longer in use
Hunter F.4	Royal Air Force	Reserve only
F.6	Royal Air Force	Standard service single-seat version
T.7	Royal Air Force	Two-seat trainer with silhouette considerably changed. Armed with one 30-mm Aden gun
T.8	Royal Navy	T.7 for naval use with arrester gear. Special sub-designations 8A to 8C concerning instrumentation do not involve external changes
F.G.A.9	Royal Air Force	F.6 with larger capacity for underwing stores
F.R.10	Royal Air Force	Version of F.6
G.A.11	Royal Navy	F.4 modified with arrester hook and provision for rocket attacks
P.R.11	—	Alternative standard for G.A.11
Mk. 12	Ministry of Aviation	Outline changes but concerns, at present, one aircraft only
F.50	Royal Swedish Air Force	120 F.4s exported to Sweden where they have been adopted for carrying Sidewinder air-to-air missiles
F.51	Royal Danish Air Force	2 F.4 export version
F.52	Peruvian Air Force	16 F.4 export version
T.53	Royal Danish Air Force	2 F.4s modified to T.7 configuration
F.G.A.56	Indian Air Force	160 F.6s ordered as ground attack fighter
F.G.A.57	Kuwaiti Air Force	4 F.G.A. 9 ordered
F.G.A.59	Iraqi Air Force	Ordered to F.G.A.9 standard
T.62	Peruvian Air Force	1 F.4 modified to T.7 configuration
T.66	Indian Air Force	22 T.7s modified, with 2 × 30-mm Aden guns
T.66A	Hawker Siddeley	Demonstration aircraft G-APUX
T.66B	Jordanian Air Force	2 trainers to Jordan armed similar to T.66
T.67	Kuwaiti Air Force	Two-seat trainer of F.G.A. 57
T.69	Iraqi Air Force	Two-seat trainer F.G.A.59

Javelin T.3	Royal Air Force	Trainer version with extended canopy
F.A.W.9	Royal Air Force	Standard service version
Jet Provost	R.A.F. Flying	Standard all-through jet
T.3	Training Command	trainer
T.4	R.A.F. Flying Training Command	T.3 with increased power and internal structural changes. Silhouette not changed sufficiently for visual discrimination from T.3
Jindivik 102	Ministry of Aviation	The Australian Mark numbers are used for U.K. procurement of these target aircraft
Kestrel F.G.A.1	Tripartite use	Hawker P. 1127
Kirby Cadet TX.3	R.A.F. and Combined Cadet Force	Slingsby glider
Lightning	R.A.F. Fighter	Initial 20 pre-production
F.1	Command	
F.1A	R.A.F. Fighter Command	Main initial production batch
F.2	R.A.F. Fighter Command	Improved F.1A
F.3	R.A.F. Fighter Command	Improved F.2 with shorter, square-cut fin
T.4	Royal Air Force	Two-seat trainer version with revised fuselage shape
T.5	Royal Air Force	Two-seat trainer version of F.3
F.6	R.A.F. Fighter Command	F.3 with cambered leading edge to wing and 600 gallon ventral pack
F.53	Saudi Arabia	Basic F.3 for export
T.55	Saudi Arabia	Basic T.5 for export
Meteor T.7	R.A.F./R.N.	Limited use trainer version with extended canopy
F.8	Royal Air Force	Limited use
F.A.W.14	Royal Air Force	Long-nosed version still in service—earlier long-nosed N.F.11–N.F.13 no longer serving
D.15	Ministry of Aviation	F.4s converted as pilotless target aircraft
D.16	Ministry of Aviation	F.8s converted to guided weapons target drones
D.17	Ministry of Aviation	N.F.11 as target drone
D.18	Ministry of Aviation	N.F.12 as target drone
D.19	Ministry of Aviation	N.F.13 as target drone
T.T.20	R.N./R.A.F.	Earlier marks converted as target tugs
D.21	Ministry of Aviation	D.16 developed for use in Australia
Pembroke C.1	Royal Air Force	Prince aircraft to military specification
C(PR)1	Royal Air Force	C.1 equipped for photography
C.51	Belgium Air Force	C.1 export version
C.52	Royal Swedish Air Force	C.1 export version
C.53	Finnish Air Force	C.1 export version
C.54	Federal German Republic Forces	C.1 export version
C.55	Sudanese Air Force	C.1 export version
Pioneer C.C.1	Royal Air Force	Overseas use
Prefect TX.1	R.A.F. and Combined Cadet Force.	Slingsby Sailplane
Provost T.1	Royal Air Force	Ex-standard primary trainer retained in limited numbers
T.51	Irish Air Corps.	Export version
T.52	Venezuela	Export version
T.53	Burmese Air Force	Armed export version
Scimitar F.1	Royal Navy	Standard R.N. fleet fighter
Scout A.H.1	British Army	Standard Army helicopter differing from R.N. Wasp in detail, in particular by its skid type undercarriage
Sea Devon C.20	Royal Navy	Naval version of R.A.F. Devon
Sea Hawk F.G.A.6	Royal Navy	Limited use
F.G.A.50	Royal Netherlands Navy	22 F.G.A.6 export version
F.G.A.100	Federal German Navy	34 F.G.A.6s with special provision for extra underwing tanks
F.101	Federal German Navy	34 F.G.A.100s with revised electronic equipment
Sea Heron C.1	Royal Navy	Naval version of Heron
Sea Prince C.1	Royal Navy	Naval version of Prince, similar to Pembroke
T.1	Royal Navy	Flying classroom version of C.1
C.2	Royal Navy	C.1 with modified tailplane
Sea Vampire T.22	Royal Navy	Naval counterpart of Vampire T.11
Sea Venom F.A.W.22	Royal Navy	Limited use
F.A.W.53	Royal Australian Navy	Version with special electronics
Sea Vixen F.A.W.1	Royal Navy	Standard current fleet fighter
F.A.W.2	Royal Navy	F.A.W.1 to new standard
Sedbergh TX.1	Combined Cadet Force	Slingsby T.21b glider
Shackleton M.R.2	R.A.F. Coastal Command	Standard M.R. aircraft
M.R.3	R.A.F. Coastal Command	M.R.2 modified with main visual difference of wingtip tanks
T.4	R.A.F. Coastal Command	M.R.1 aircraft converted for Training
Sheldrake D.1	Royal Navy	Radioplane target drone
Sioux A.H.1	British Army	Bell 47G-3B-1
Skeeter A.O.P.12	British Army and R.A.F.	Standard type

Sycamore H.R.14	Royal Air Force	Standard service version still in use with blisters for casualty evacuation
H.R.50	Royal Australian Navy	Export version
H.R.51	Royal Australian Navy	Basic H.R.14
Twin Pioneer C.C.1	Royal Air Force	Scottish Aviation aircraft
C.C.2	Royal Air Force	C.C.1 to new standard Silhouette unchanged
Valetta T.3	Royal Air Force	Flying classroom
Vampire T.11	Royal Air Force	Limited use
Varsity T.1	Royal Air Force	Crew trainer
VC 10 C.1	R.A.F. Transport Command	Civil name of VC 10 retained
Venom		No longer in use but see Sea Venom
Victor B.1	R.A.F. Bomber Command	"V" Bomber
B.1a	R.A.F. Bomber Command	B.1 with enlarged rear radome. The multi-role designations K, PR—etc. are no longer in use
B.2	R.A.F. Bomber Command	Improved B.2 with main visual difference of enlarged intakes in wing
Vulcan B.1	R.A.F. Bomber Command	"V" Bomber
B.1a	R.A.F. Bomber Command	B.1 with enlarged tail cone
B.(PR)K1	R.A.F. Bomber Command	Multi-role version
B.2	R.A.F. Bomber Command	Developed version armed with Blue Steel
Wasp H.A.S.1	Royal Navy	Naval equivalent to Scout A.H.1
Wessex H.A.S.1	Royal Navy	Naval helicopter, basic Sikorsky S-58
H.C.2	Royal Air Force	Differs visually by single exhaust stub
H.A.S.3	Royal Navy	Re-engined H.A.S.1
H.U.5	Royal Navy	Colloquially called Commando Wessex
Mk.31	Royal Australian Navy	27 to new standard. Visually similar to H.A.S.1
Mk.52	Iraqi Air Force	12 ordered October 1964.
Mk.53	Ghana Air Force	2 ordered
Whirlwind H.A.R.2	Royal Air Force	One remaining in service
H.A.R.3	Royal Navy	Few of the ten acquired still flying
H.A.R.4	Royal Air Force	Bulk being modified to Mk. 10
H.A.R.5	Royal Navy	Re-engined H.A.R.3
H.A.S.7	Royal Navy	H.A.5 for anti-submarine role
H.C.C.8	Royal Air Force	Queen's Flight. Additional cabin windows. Now replaced
H.A.R.9	Royal Air Force	H.A.S.7 aircraft re-engined with Gnomes
H.A.R.10	Royal Air Force	Gnome-engined version with altered nose shape. Equivalent to civil Whirlwind Series 3
H.C.C.12	Royal Air Force	H.A.R.10 for Queen's Flight in replacement for H.C.C.8.
H.A.S.22	Royal Navy	Sikorsky S-55 supplied under M.D.A.P. H.A.R.21s, also supplied, no longer used

United States Service Aircraft Designations

This supersedes the designations given in the May 1965 edition

All aircraft of the United States Services, Air Force, Army, Navy, Marine Corps and Coast Guard, are designated in common numerical series, prefixed by a letter indicative of their role. The Crusader, for example, in the fighter series which went up to 111 and has been re-allotted from No. 1, is the F-8. The first model is automatically the F-8A and subsequent variations or developments became the F-8B, F-8C in alphabetical sequence.

Fifteen letters are in use giving basic missions, these are :

A-	**Attack**
B-	**Bomber**
C-	**Cargo or Transport**
E-	**Special Electronic Installation or Early Warning**
F-	**Fighter**
H-	**Helicopter**
K-	**Tanker**
O-	**Observation**
P-	**Patrol**
S-	**Anti-Submarine**
T-	**Trainer**
U-	**Utility**
V-	**VTOL or STOL**
X-	**Special Research**
Z-	**Airship**

When an aircraft is used other than in its primary role, such as the F-8A Crusader being used for reconnaissance or training, then qualifying prefix letters apply making the designation RF-8A or TF-8A respectively.

Qualifying letters to the basic mission are used as follows :

A	**Attack**
C	**Transport**
D	**Drone or Missile Director**
E	**Special Electronic Equipment**
G	**Permanently Grounded**
H	**Search and Rescue**
J	**Special Test (Temporary)**
K	**Tanker**
L	**Cold Weather Standard of Preparation**
M	**Missile Carrier**
N	**Special Test (Permanent)**
Q	**Remotely Controlled Aircraft**
R	**Reconnaissance (Photographic)**
S	**Anti-Submarine**
T	**Trainer**
U	**Utility**
V	**Administrative Transport (V.I.P.)**
W	**Weather**
X	**Experimental**
Y	**Service Test**
Z	**Obsolete**

The following list gives all United States Service aircraft in use, including aircraft in other services where the aircraft are known by their official American designation :

Popular Name	Designation	Remarks
Aero Commander	**U-4A**	15 Model 560As for U.S.A.F.
	U-4B	2 Model 680 Supers for U.S.A.F.
	U-9B	1 for U.S. Army
	U-9C	4 for U.S. Army
	RU-9D	3 with SLAR for U.S. Army
Aerogyro	**XH-51A**	Lockheed CL-595 for U.S. Navy
	XH-51N	1 XH-51A for N.A.S.A.
Airgeep I	**VZ-8P(A)**	Piasecki Model 59 for U.S. Army. 2-seat.
Airgeep II	**VZ-8P(B)**	Improved 5-seat VZ-8P(B)
Albatross	**HU-16A**	U.S.A.F. model now being converted to HU-16B
	HU-16B	U.S.A.F. standard version.
	HU-16C	U.S. Navy model now being converted to HU-16D
	HU-16D	U.S. Navy standard version
	HU-16E	U.S. Coast Guard
Aztec	**U-11A**	20 Piper PA-23-250 to U.S. Navy
Baron	**T-42A**	Beech B-55 for U.S. Army
Beaver	**U-6A**	DHC-2 for U.S.A.F. and U.S. Army
Bird Dog	**O-1A**	U.S. Army Field Force
	O-1B	60 for U.S. Marine Corps
	O-1C	25 improved O-1B for U.S.M.C.
	TO-1D	Dual control version, U.S. Army
	O-1E	U.S. Army and Marine Corps
Boeing 707	**VC-137B**	Three 707-120 for U.S.A.F.
	VC-137C	One 707-320B for U.S.A.F.
Buckeye	**T-2A**	U.S. Navy trainer
	T-2B	Twin-engined version of T-2A. 36 ordered
Buffalo	**CV-7A**	DHC-5 for U.S. Army
Cargomaster	**C-133A**	34 for U.S.A.F.
	C-133B	Developed version of C-133A
Caribou	**CV-2A**	DHC-4 for U.S. Army
	CV-2B	DHC-4A for U.S. Army
Cessna T-37	**T-37A**	416 for U.S.A.F., now under conversion to T-37B
	T-37B	U.S.A.F. standard version
	T-37C	Military Assistance Programme model
	T-37D	Counter-insurgency version, U.S.A.F.
Cessna T-41A	**T-41A**	Cessna Model 172. 170 ordered
Cessna 310F	**U-3A**	160 for U.S.A.F.
	U-3B	35 all-weather version, U.S.A.F.
Chickasaw (U.K. version known as Whirlwind)	**UH-19B**	Sikorsky S-55 for U.S.A.F.
	HH-19B	Sikorsky S-55 for U.S.A.F.
	UH-19C	Sikorsky S-55 for U.S. Army
	UH-19D	Sikorsky S-55 for U.S. Army
	CH-19E	Sikorsky S-55 for U.S. Marine Corps
	UH-19F	Sikorsky S-55 for U.S. Navy
	HH-19G	Sikorsky S-55 for U.S. Coast Guard
Chinook	**CH-47A**	Boeing-Vertol 114 for U.S. Army
Choctaw	**CH-34A**	Sikorsky S-58 for U.S. Army
	CH-34C	As CH-34A with search equipment
	LH-34D	U.S. Navy Seabat (Winterised)

Popular Name	Designation	Remarks
Choctaw (continued)		
(U.K. version known as Wessex)	**UH-34D**	U.S. Marine Corps Seahorse
	VH-34D	U.S. Marine Corps Seahorse (administrative version)
	UH-34E	U.S. Marine Corps Seahorse (pontoons)
	HH-34F	Sikorsky S-58 for U.S. Coast Guard
	SH-34G	U.S. Navy Seabat also UH-34G
	SH-34J	U.S. Navy Seabat for night operations
	UH-34J	Utility version of SH-34J
Commando	**C-46A**	Few retained by U.S.A.F.
	C-46D	Revised nose and loading arrangements
	TC-46D	Trainer version. Limited U.S.A.F. use
Constellation (Super Constellation in all cases but Constellation acceptable for normal reporting)	**C-121A**	Model L-749 passenger aircraft for U.S.A.F.
	C-121C	Model L-1049 for U.S.A.F.
	TC-121C	U.S.A.F. trainer version of L-1049
	RC-121D	U.S.A.F. version introducing tip-tanks
	VC-121E	*Columbine III* for Presidential use
	C-121G	Air National Guard aeromedical evacuation
	EC-121H	RC-121D with additional electronics. 32 to U.S.A.F.
	C-121J	U.S. Navy transport
	EC-121K **EC-121M** **WC-121N** **EC-121P**	U.S. Navy versions known as Warning Star
Corsair II	**A-7A**	Ling-Temco-Vought light attack development of Crusader
Cougar	**QF-9J** **AF-9J** **TF-9J** **RF-9J**	U.S. Navy fighter relegated and adapted for training roles
Crusader	**F-8A**	Initial U.S. Navy production version now withdrawn from squadron service
	DF-8A **RF-8A** **TF-8A**	Adapted versions of initial production model for U.S. Navy
	F-8B	F-8A with radar changes, U.S. Navy
	F-8C	Increased power, U.S. Navy
	F-8D	All-weather model, U.S. Navy and Marine Corps
	F-8E	F-8D with improved radar
	E-8E (FN)	For French Navy
	DE-8F	Missile director model
	RF-8G	Re-equipped RF-8A. 53 ordered
Dakota (Basic Douglas DC-3 see also Super Dakota, known in U.S. service as Skytrain)	**C-47A**	Douglas DC-3 for U.S.A.F. as Skytrain
	AC-47	Night flak suppression version for Vietnam
	HC-47A	U.S.A.F. rescue version
	RC-47A	U.S.A.F. version, equipped for photography
	VC-47A	V.I.P. version, U.S.A.F.
	VC-47B	V.I.P. for high altitude work. U.S.A.F.
	C-47D	C-47B version modified, U.S.A.F.

Popular Name	Designation	Remarks
Dakota (continued)	**EC-47D**	Test vehicle, U.S.A.F.
	HC-47D	U.S.A.F. Air-sea rescue version
	RC-47D	Camera-equipped version, U.S.A.F.
	TC-47D	U.S.A.F. trainer version
	VC-47D	V.I.P. version, U.S.A.F.
	C-47H	U.S. Navy version of C-47A
	EC-47H	U.S. Navy electronic tests
	LC-47H	Arctic operation for U.S. Navy with ski/wheel gear
	SC-47H	Interim anti-submarine version, U.S. Navy
	TC-47H	U.S. Navy trainer
	VC-47H	U.S. Navy staff transport
	C-47J	U.S. Navy version of C-47H with different engines
	TC-47J	U.S. Navy navigational trainer
	TC-47K	U.S. Navy navigational trainer
Dash	**QH-50C**	Drone torpedo carrier
	QH-50D	Improved QH-50C
DC-6	**C-118B**	U.S. Navy Liftmaster
	VC-118B	C-118B for administrative operations
Delta Dagger	**F-102A**	U.S.A.F. single-seat fighter
	TF-102A	U.S.A.F. two-seat fighter/trainer
Delta Dart	**F-106A**	U.S.A.F. single-seat fighter. 320 built
	F-106B	U.S.A.F. two-seat fighter. 63 built
Demon	**F-3B**	Limited use
Destroyer	**RB-66A**	U.S.A.F. version of U.S. Navy A-3
	B-66B	U.S.A.F. Douglas Model 1327A
	RB-66B	U.S.A.F. reconnaissance version
	RB-66C	U.S.A.F. electronic reconnaissance
	WB-66D	U.S.A.F. weather reconnaissance
	B-66E	U.S.A.F. adapted version
Douglas DC-6	**C-118A**	DC-6A for U.S.A.F.
	C-118B	U.S.A.F. version with interior changes
	VC-118A, **VC-118B**	U.S.A.F. staff transport versions
Expeditor	**C-45G**	U.S.A.F. re-built Beech 18s
	C-45H	U.S.A.F. C-45G with engine change
	RC-45H, **TC-45H**	U.S.A.F. adaptations
	UC-45J	U.S. Navy utility proficiency trainer
	RC-45J	U.S. Navy photo provision trainer
Freedom Fighter	**F-5A**	Northrop N-156F single-seat fighter
	F-5B	Two-seat version of F-5A
	CF-5	Canadair-built model for R.C.A.F.
Fury	**F-1C**, **F-1E**, **AF-1E**	U.S. Navy and Marine Corps versions of the Sabre, mainly in reserve
Globemaster	**C-124A**	Douglas 1129A for U.S.A.F.
	C-124C	Douglas 1317 for U.S.A.F.
Gulfstream	**VC-4A**	Grumman G-159 for U.S. Coast Guard
	TC-4B	U.S. Navy navigational trainer
Hawkeye	**E-2A**	U.S. Navy early warning version
	C-2A	Transport version without radome
Helio Twin	**U-5A**	Helio Model H-500 for U.S.A.F.
Hercules	**C-130A**	Initial production for U.S.A.F.
	DC-130A	Drone control version
	RC-130A	With T.V. view-finder blister, etc.
	C-130B	Developed version for U.S.A.F. and export
	HC-130B	6 for Discover satellite recovery
	C-130D	Winterised version, wheel/ski undercarriage
	C-130E	Long-range version U.S.A.F.
	C-130F	7 for U.S. Navy
	KC-130F	46 for U.S. Marine Corps as tanker/transports
	LC-130F	Four winterised for U.S. Navy, ski/wheel gear
	C-130G	Improved range
	C-130H	U.S.A.F. and R.N.Z.A.F. use
	HC-130G	12 for U.S. Coast Guard use
	HC-130H	Capsule recovery version
Hiller (Raven in U.S. Army, Nomad in R.C.A.F. and Hiller in R.N.)	**OH-23B**	U.S. Army and Military Aid version
	OH-23C	U.S. Army version of Hiller UH-12C
	OH-23D	U.S. Army improved OH-23C
	OH-23F	U.S. Army version of Hiller E4
	TH-23F	Private venture by Hiller
	OH-23G	U.S. Army version of Hiller 12E
	OH-23G-1	Demonstration Hiller L4 model
Hughes 269B	**TH-55A**	U.S. Army helicopter trainer
Hughes 369	**OH-6A**	Name awaited. 714 ordered
Hughes 385	**XV-9A**	Hot-cycle research model
Humming Bird	**XV-4A**	Lockheed 330 VTOL experiment
Huskie	**HH-43A**	U.S.A.F. version
	HH-43B	U.S.A.F. shaft turbine version of HH-43A
	OH-43D	U.S. Marine Corps model
	HH-43F	Developed HH-43B for altitude performance under varying climatic conditions
Hustler	**B-58A**	Standard U.S.A.F. version
	NB-58A	One B-58A flying test-bed
	TB-58A	8 dual-control conversions
Intruder	**A-6A**	U.S. Navy and Marine standard attack version
	EA-6A	U.S. Navy electronic counter-measures version
Invader	**B-26K**	80 ordered for U.S.A.F. COIN role as "Counter Invader"
Iroquois	**UH-1A**	U.S. Army version of Bell 204
	UH-1B	Improved UH-1A for U.S. Army
	UH-1D	U.S. Army version of Bell 205
	UH-1E	U.S. Marine Corps version of UH-1B
	UH-1F	U.S.A.F. version for ICBM sites. 106 ordered
	RH-2	U.S. Army flying laboratory
Jetstar	**C-140A**	5 for U.S.A.F. Communications Service

Popular Name	Designation	Remarks
Jetstar (continued)	**C-140B**	5 for U.S.A.F. mission support
	VC-140B	6 for U.S.A.F. as transports
	C-140C	U.S. Navy transport
Kestrel	**XV-6A**	Hawker Siddeley P.1127 under U.S.A.F. evaluation
King Air	**VC-6A**	1 for special Air Missions Fleet
Liftmaster	See DC-6	
Lockheed A-11	**SR-71**	Experimental strategic reconnaissance aircraft
	YF-12A	Air defence interceptor
Lockheed T-33	**T-33A**	Trainer version of Shooting Star for U.S.A.F.
	DT-33A	U.S.A.F. drone director
	RT-33A	Military Aid version
	WT-33A	U.S.A.F. weather check version
	T-33B	U.S. Navy version
	DT-33B	U.S. Navy drone director version
Lockheed U-2	**U-2A**	U.S.A.F. reconnaissance aircraft
	U-2D	U.S.A.F. 2-seat version of U-2A
Marlin	**P-5B**	Refined version with modified tail
	SP-5B	As P-5B for anti-submarine patrol
Martin B-57 (U.S. built version of Canberra)	**B-57A**	Martin 272 based on Canberra B.2 for U.S.A.F.
	RB-57A, **B-57B**	U.S.A.F. tactical night intruder versions
	RB-57B	B-57B's re-designated
	B-57C	U.S.A.F. transitional trainer
	TB-57C	U.S.A.F. trainer conversion
	RB-57D	U.S.A.F. model with extended wing
	B-57E	Built for U.S.A.F. target towing units
	RB-57E	U.S.A.F. version of B-57E
	TB-57E	U.S.A.F. trainer
	RB-57F	High-altitude, special reconnaissance version with extended wingspan
Mentor	**T-34A**	Beech Model 45 for U.S.A.F.
	T-34B	U.S. Navy version
Mohawk	**OV-1A**	Grumman G-134 for U.S. Army
	OV-1B	U.S. Army version with SLAR
	OV-1C	U.S. Army, alternative equipment
	OV-1E	Projected development
Mojave (Sikorsky S-56)	**CH-37A**	U.S. Army initial version
	CH-37B	CH-37As modified for U.S. Army
	CH-37C	U.S. Marine Corps version
Neptune	**P-2E**, **DP-2E**, **EP-2E**, **SP-2E**	Early models still in U.S. Navy Reserve
	SP-2H	Adaptation of P-2F version for U.S. Navy
Orion	**P-3A**	Lockheed Electra adapted for U.S. Navy
Otter	**U-1A**	DHC-3 for U.S. Army
	U-1B	Modified DHC-3 with skis for Polar regions

Popular Name	Designation	Remarks
Packet (or Boxcar)	**C-119C**	Fairchild "Flying Boxcar" for U.S.A.F.
	C-119F	U.S. Navy version
	C-119G	U.S.A.F. C-119F with aircrew charge
	C-119J	Modified U.S.A.F. version. Used by Italian Air Force
Phantom	**F-4A**	Initial U.S. Navy version
	F-4B	Standard U.S. Navy version
	RF-4B	U.S. Navy adapted version
	F-4C	Standard U.S.A.F. fighter
	RF-4C	Adapted U.S.A.F. version
	F-4D	Late production version, with minor modifications
	F-4G	U.S. Navy version with data link equipment
	F-4J	U.S. Navy version with improved radar
	YF-4K	Evaluation version for Royal Navy with Rolls-Royce Spey engines
	F-4K	Production for Royal Navy
	F-4M	Production for R.A.F.
Provider	**C-123B**	U.S.A.F. standard transport
	C-123H	U.S.A.F. improved transport
	C-123J	U.S.A.F. Arctic missions
Queen Air		See Seminole
Sabre	**F-86D**, **F-86F**, **F-86H**	U.S.A.F. Reserve units and limited use
	F-86K	Military aid countries use only
	F-86L	Modified version for U.S.A.F. Now with Reserve units
Sabreliner	**T-39A**	U.S.A.F. utility trainer
	T-39B	6 to U.S.A.F. as crew trainers
	T-39D	U.S. Navy version
Samaritan (known as Convair Liner in U.S. Navy)	**C-131A**	Convair 240 for U.S.A.F. casualty evacuation
	VC-131A	U.S.A.F. staff transport
	C-131B	Convair 340, U.S.A.F. electronic test beds
	C-131D	Convair 340/440 version for U.S.A.F.
	C-131E	U.S.A.F. electronic countermeasures trainers
	C-131F	U.S. Navy version of Convair 340
	C-131G	U.S. Navy version of Convair 440
	T-29A	Convair 240 U.S.A.F. (4 astrodomes)
	VT-29A	U.S.A.F. transport
	T-29B	Convair 240 U.S.A.F. Also used by U.S. Navy for navigational training (3 astrodomes)
	VT-29B	4 T-29B conversions to staff transports
	T-29C	Convair 240 for U.S.A.F. T-29B with engine change
	VT-29C	U.S.A.F. staff transport
	ET-29C	Special electronics version for U.S.A.F.
	T-29D	Convair 240 U.S.A.F. (No astrodomes)
	VT-29D	Staff transport version of T-29D for U.S.A.F.
Seabat		See Choctaw
Seahorse		See Choctaw
Seageep	**VZ-8P(A)**	Marine version of Airgeep

Popular Name	Designation	Remarks
Sea King	**SH-3A**	Sikorsky S-61 for U.S. Navy
	VH-3A	Special standby helicopters for U.S. Army and Marine Corps
	RH-3A	Minesweeping version of SH-3A
	SH-3D	Improved SH-3A with up-rated engine
Sea Knight (Vertol 107)	**CH-46A**	U.S. Marine Corps helicopter
	UH-46A	U.S. Navy aerial replenishment version
	CH-46D	Naval version with improved power
Seasprite	**UH-2A**	Kaman helicopter for U.S. Navy
	UH-2B	U.S. Navy version less auxiliary tanks
Sea Stallion	**C-53A**	U.S. Marine Corps. 106 ordered
Seastar	**T-1A**	U.S. Navy development of T-33
Seminole	**U-8D**	Beech E-50 Twin Bonanza, U.S. Army
	RU-8D	Version with SLAR for U.S. Army
	U-8E	Beechcraft D-50 for U.S. Army
	U-8F	Beech 65 Queen Air for U.S. Army
	NU-8F	Turbo-powered version of U-8F
Shawnee or Workhorse	**CH-21A**	Piasecki (Vertol) model for U.S.A.F.
	CH-21B	U.S.A.F. improved version
	HH-21B	U.S.A.F. rescue version
	CH-21C	U.S. Army version
Sikorsky S-61	**CH-3B**	U.S.A.F. specific use
	CH-3C	U.S.A.F. general transport
Sioux	**OH-13E**	Bell 47G for U.S. Army
	OH-13G	U.S. Army (improved stability)
	OH-13H	U.S. Army (metal rotor blades)
	OH-13K	U.S. Army turbo-supercharged version
	UH-13H	U.S.A.F. version of OH-13H
	TH-13M	Trainer for U.S. Navy
	TH-13N	TH-13M with engine change
	UH-13P	Naval light utility
	OH-13S	Bell 47G-3B for U.S. Army
Skycrane	**CH-54A**	Sikorsky S-64A for U.S. Army
Skyhawk	**A-4A**	U.S. Navy initial version
	A-4B	U.S. and Argentine Navy with modified rudder and in-flight refuelling
	A-4C	U.S. Navy version with longer radar nose for all-weather attack
	A-4E	U.S. Navy developed version
	TA-4E	Two-seat advanced trainer
Skyknight	**EF-10B**	U.S. Marine Corps electronic counter-measures aircraft
	TF-10B	U.S. Navy/Marine Corps all-weather fighter trainer
Skymaster	**C-54A**	DC-4 for U.S.A.F.
	C-54D	U.S.A.F. engine and fuel modifications. Used by Royal Danish Air Force
	EC-54D	U.S.A.F. M.A.T.S. communications service
	HC-54D	U.S.A.F. rescue service version
	TC-54D	U.S.A.F. trainer
	VC-54D	U.S.A.F. staff transport

Popular Name	Designation	Remarks
Skymaster (continued)	**C-54E**	U.S.A.F. version with increased payload
	C-54G	U.S.A.F. C-54E with engine change
	VC-54G	U.S.A.F. staff transport
	C-54M	U.S.A.F. stripped versions for freight carrying
	VC-54N	Administrative version
	C-54P	Freight transport with modified tanks
	VC-54P	Administrative version of C-54P
	C-54Q	Improved C-54P for freight carrying
	VC-54Q	Administrative version of C-54Q
	C-54R	Personnel transport
	C-54S	Revised electronics
	VC-54S	Administrative version of C-54S
	C-54T	Personnel transport
	EC-54U	U.S. Coast Guard variants of the Skymaster
	RC-54V	
Skyraider	**A-1E**	Operational in COIN roles. Multiplex version
	EA-1E	U.S. Navy and Marine Corps variants for early warning or counter-measures missions
	EA-1F	
	A-1G	Night attack version
	A-1H	Single-seat attack version. Operational in COIN role
	A-1J	Strengthened version of A-1H. Operational in COIN role
Skyray	**F-6A**	U.S. Navy fighter, now relegated to Reserve
Skywarrior	**A-3A**	Attack aircraft, initial version
	EA-3A	Electronic counter-measures variant
	A-3B	Standard heavy attack version
	RA-3B	Photo-reconnaissance version
	TA-3B	Bombing and navigational trainer
	VA-3B	Limited transport
Starfighter	**F-104A**	Lockheed single-seat fighter in export use only
	CF-104A	Canadian-built Starfighter (CF-104)
	QF-104A	U.S.A.F. drone
	NF-104	U.S.A.F. tail rocket experiments
	F-104B	Two-seat fighter for Air National Guard
	F-104C	U.S.A.F. and export fighter-bomber
	F-104D	U.S.A.F. two-seat version of F-104C
	CF-104D	14 F-104D's for R.C.A.F.
	F-104F	Basic F-104D for Western Germany
	F-104G	European production multi-mission single-seat version
	TF-104G	Two-seat trainer for export
	F-104J	For Japan Air Self-Defence Force
	TF-104J	Two-seat version of F-104J
	F-104N	N.A.S.A. instrument proficiency trainer
	F-104S	Proposed improved model
Starlifter	**C-141A**	Lockheed 300 for U.S.A.F.

Popular Name	Designation	Remarks	
Stratofortress	**B-52A**	U.S.A.F. Initial Boeing production	High fin versions
	B-52B	U.S.A.F. (engine change)	
	B-52C	U.S.A.F. (larger underwing tanks)	
	B-52D	U.S.A.F. long range version	
	B-52E	U.S.A.F. improved version	
	B-52F	U.S.A.F. redesigned version	Shortened fin versions
	B-52G	U.S.A.F. Hound Dog missile carrier	
	B-52H	U.S.A.F. improved version	
Stratofreighter (C-97D, J and K versions named Stratocruiser)	**C-97A**	Boeing cargo transport for U.S.A.F.	
	C-97C	U.S.A.F. medical evacuation version	
	C-97D	U.S.A.F modified version	
	HC-97D	U.S.A.F. rescue service	
	VC-97D	U.S.A.F. mobile command posts	
	KC-97F	U.S.A.F. tanker version	
	KC-97G	U.S.A.F. tanker/transport	
	C-97J	U.S.A.F. recent conversion	
	KC-97L	KC-97G modified for Air National Guard	
Stratojet	**B-47B**	First major production version for U.S.A.F.	
	DB-47B	U.S.A.F. drone tests	
	TB-47B	U.S.A.F. crew trainers	
	WB-47B	U.S.A.F. weather reconnaissance version	
	B-47E	U.S.A.F. improved version	
	EB-47E	U.S.A.F. special mission version	
	RB-47E	U.S.A.F. version with cameras and lengthened nose	
	EB-47H	U.S.A.F. crew trainer in electronics	
	RB-47H	U.S.A.F. (additional radomes)	
	RB-47K	U.S.A.F. converted B-47Es	
Stratolifter	**C-135A**	Transport version of Stratotanker for U.S.A.F.	
	RC-135A	M.A.T.S. air charting version	
	C-135B	C-135A with engine change for U.S.A.F.	
	EC-135B	U.S.A.F. flying command posts	
Stratotanker	**KC-135A**	U.S.A.F. tanker. Progenitor of Boeing 707 series	
	C-135F	12 KC-135A for French Air Force	
Super Constellation		See Constellation	
Super Courier	**U-10A**	Helio H-395 for U.S.A.F. COIN role	
	U-10B	Long-range version	
	U-10C	Liaison version	
Super Dakota (Skytrain in U.S. service)	**C-117A**	U.S.A.F. staff transport Dakota	
	VC-117A	U.S.A.F. variants	
	C-117A	U.S.A.F. variants	
	VC-117B	U.S.A.F. variants	
	C-117C	Non-standard VC-47s redesignated	
	C-117D	U.S. Navy, redesigned version	
	LC-117D	U.S. Navy, polar use with wheel/ski gear	
	TC-117D	U.S. Navy navigational trainer	
	VC-117D	U.S. Navy administrative operations	

Popular Name	Designation	Remarks
Super Sabre	**F-100A**	North American single-seat fighter, U.S.A.F.
	F-100C	U.S.A.F. fighter bomber
	DF-100C	U.S.A.F. director version
	F-100D	U.S.A.F. version with enlarged fin etc.
	F-100F	U.S.A.F. combat trainer (two-seat version)
	DF-100F	U.S.A.F. director version
Talon	**T-38A**	Northrop N-156T for U.S.A.F.
Thunderchief	**F-105B**	Republic single-seat fighter bomber for U.S.A.F.
	F-105D	U.S.A.F. all-weather single-seat fighter
	F-105F	U.S.A.F. tactical fighter/trainer (two-seat)
Thunderflash	**RF-84F**	U.S.A.F. and export use
Thunderjet	**F-84G**	U.S.A.F. and export use
Thunderstreak	**F-84F**	U.S.A.F. and export use
Tiger	**F-11A**	Advanced trainer
Tracer	**E-1B**	U.S. Navy early warning aircraft
Tracker	**S-2A**	Grumman G-89 for U.S. Navy and export
	TS-2A	Training version, less ASW systems
	US-2A	Limited utility version
	US-2B	Utility version of S-2A/S-2F
	S-2C	U.S. Navy (increased tail surfaces)
	RS-2C	U.S. Navy version adapted for photography
	US-2C	Target-tug version
	S-2D	U.S. Navy (increased wing span)
	S-2E	U.S. Navy (additional electronics)
	S-2F	U.S. Navy (improved anti-submarine equipment)
Trader	**C-1A**	Transport version of Tracker, U.S. Navy
	EC-1A	U.S. Navy (electronic countermeasures)
Trojan	**T-28A**	U.S.A.F. trainer
	T-28B	U.S. Navy basic trainer
	DT-28B	U.S. Navy target control version
	T-28C	U.S. Navy for carrier use version
	T-28D	Also named Nomad
	T-28E	U.S.A.F. COIN role
	T-28R1	6 modified for Brazilian Navy as Nomaid
	T-28R2	Civil Nomaid model
Trooper		Civil name for Bell 47G with service name Sioux
Valkyrie	**XB-70A**	North American Mach 3 bomber, 2-crew
	XB-70B	North American Mach 3 bomber, 4-crew
Vertol 107 (Sea Knight)	**CH-46C**	U.S. Army helicopter
Vigilante	**A-5A**	Attack bomber for U.S. Navy
	RA-5C	Specially equipped A-5C
Voodoo	**CF-101**	R.C.A.F. version
	F-101A	Initial U.S.A.F. version, now in limited use
	TF-101B	U.S.A.F. (modified nose)
	F-101C	U.S.A.F. (strengthened wing)
	RF-101C	U.S.A.F. (modified nose)
	F-101F	U.S.A.F. Post-production modifications
	TF-101F	U.S.A.F. Post-production modifications



Cover Photo: Martin B-57 (Canberra) bombers of the U.S.A.F. over the Mekong Delta of the Republic of Vietnam.

SOLUTIONS TO TESTS AND EXERCISES

Page 32 **C-141 STARLIFTER**

All targets are of **C-141 Starlifters** except as follows: No. 18 **Cub**, No. 35 **Classic** and No. 42 **Boeing 707.**

Page 35 **ROTARY CLUB**

1 Hare (Mi-1)
2 Iroquois UH-1
3 Harke (Mi-10)
4 Horse (Yak-24)
5 Scout A.H.1
6 Sikorsky S.62
7 Huskie HH-43
8 Skycrane
9 Seasprite UH-2
10 Dragonfly
11 Retriever
12 Hoplite (Mi-2)
13 Brantly B.2
14 Alouette IIIs
15 Sycamores
16 Vertol 44B
17 Wessex (Sikorsky S.58, U.S. Army H-34 Choctaw)
18 Whirlwind H.A.R.10
19 Sea King H-3
20 Ranger (Agusta Bell 47J)
21 Wasp A.S.1
22 Djinn
23 Sioux
24 Hound (Mi-4)
25 Alouette II
26 Super Frelon
27 Sikorsky S.61
28 Chinook CH-47
29 Belvedere H.C.1
30 Vertol 107
31 Hen (Ka-15)
32 Hiller E4 (Raven H-23F)
33 Harp
34 Wessex
35 Hiller E4 (Raven H-23F)
36 Shawnee H-21 (Work-horse acceptable)

Note: Reporting names are given first followed by mark or type numbers in the case of British and American aircraft—Russian designation or alternative and full names, where applicable, are given in brackets.

Page 36 **JUNAK**

1 Junak 2
2 Junak 3
3 Junak 3
4 Junak 2 & 3
5 Junak 3
6 Junak 2
7 Junak 2
8 Junak 2
9 Junak 3
10 Junak 3
11 Junak 2
12 Junak 3
13 Junak 3
14 Junak 3
15 Bies (joker)
16 Junak 3
17 Junak 2
18 Junak 2
19 Junak 3s
20 Zlin Treners (jokers)
21 Junaks

Page 38 **FREEDOM FIGHTER (U.S.A.F. F-5)**

All targets are of basic **Freedom Fighter** type except No. 4 which is a **Macchi MB326** and No. 35 which is a **Fishpot.** The full list, as far as can be discerned, is as follows:

1 Freedom Fighter F-5B
2 Freedom Fighter F-5B
3 Freedom Fighter F-5B
4 Macchi MB326
5 Freedom Fighter F-5
6 Freedom Fighter F-5B
7 Talon T-38As
8 Freedom Fighter F-5A
9 Freedom Fighter F-5B
10 Freedom Fighter F-5As
11 Freedom Fighter F-5B
12 Freedom Fighter F-5A
13 Freedom Fighter F-5B
14 Freedom Fighter F-5
15 Freedom Fighter F-5B
16 Freedom Fighter F-5B
17 Freedom Fighter F-5B
18 Freedom Fighter F-5
19 Freedom Fighter F-5B
20 Freedom Fighter F-5
21 Talon T-38A
22 Freedom Fighter F-5
23 Freedom Fighter F-5A
24 Freedom Fighter F-5B
25 Freedom Fighter F-5B
26 Freedom Fighter F-5B
27 Freedom Fighter F-5
28 Freedom Fighter F-5A
29 Freedom Fighter F-5
30 Freedom Fighter F-5
31 Freedom Fighter F-5
32 Freedom Fighter F-5
33 Freedom Fighter F-5
34 Freedom Fighter F-5
35 Fishpot
36 Freedom Fighter F-5
37 Freedom Fighter F-5
38 Freedom Fighter F-5
39 Freedom Fighter F-5
40 Freedom Fighter F-5
41 Freedom Fighter F-5
42 Freedom Fighter F-5
43 Freedom Fighter F-5
44 Freedom Fighter F-5
45 Freedom Fighter F-5
46 Freedom Fighter F-5
47 Freedom Fighter F-5
48 Freedom Fighter F-5

Although of the same configuration, the T-38 Talons could be discerned by the absence of wing-tip tanks or launchers.

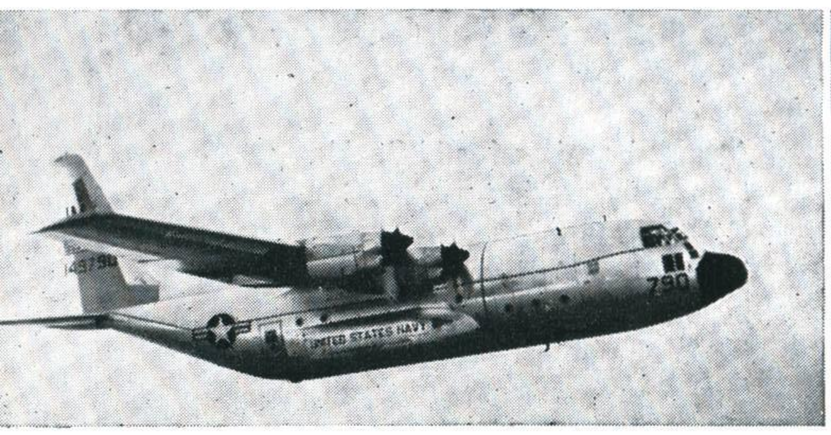
Page 42 **BLACKWOOD CLASS ANTI-SUBMARINE FRIGATES**

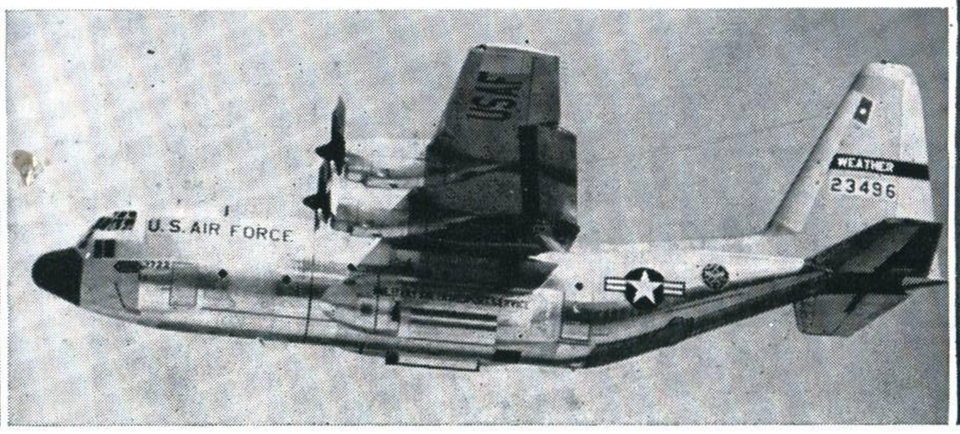
All targets are of **Blackwood Class Anti-Submarine Frigates.**

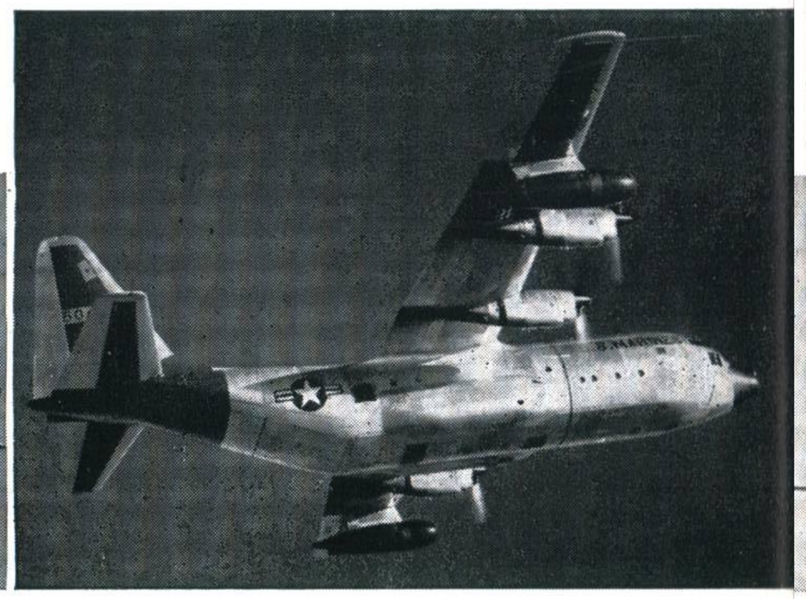
Page 41 **WARSHIP IDENTIFICATION TEST NO. 8**

No.	Class	Name (if known)	Type	Nationality
1	Dokkum	Axel	Coastal Minesweeper	Dutch
2	Sverdlov	—	Cruiser	Russian
3	Tribal	H.M.S. Nubian	General Purpose Frigate	British
4	Salisbury	—	Aircraft Direction Frigate	British
5	Skipjack	U.S.S. Skipjack	Nuclear Powered Attack Submarine	American
6	Northampton	U.S.S. Northampton	Command Ship	American
7	Leander	H.M.S. Leander	General Purpose Frigate	British
8	Petya	—	Escort Patrol Craft	Russian
9	O	H.M.S. Oracle	Attack Submarine	British
10	Leander	H.M.S. Leander	General Purpose Frigate	British
11	Ethan Allen	U.S.S. Ethan Allen	Nuclear Powered Fleet Ballistic Missile Submarine	American
12	Daring	—	Destroyer	British
13	Friesland	—	Anti-Submarine Destroyer	Dutch
14	Allen M. Sumner	U.S.S. John W. Thomason	Destroyer	American
15	Commandant Riviere	—	Dual Purpose Frigate	French
16	LST (C) Type	Messina	Tank Landing Ship	British
17	P	—	Attack Submarine	British
18	St. Laurent	H.M.C.S. St. Laurent	Destroyer Escorts	Canadian
19	Ton	—	Coastal Minesweeper	British

C-130F HERCULES, U.S. Navy ; C-130B HERCULES, U.S. Air Force, converted to flying weather station and KC-130F HERCULES, U.S. Marines.







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