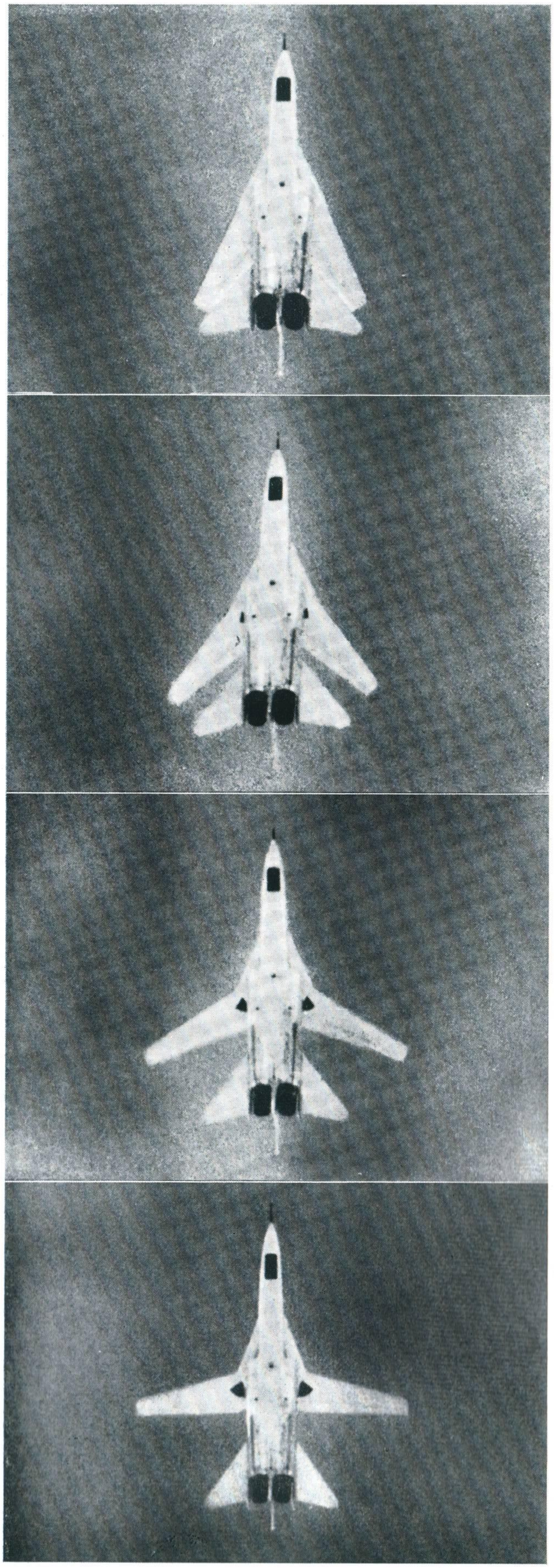
JOINT SERVICES

RECOGNITION *Journal*



Vol. 20 SEPTEMBER 1965 No. 9



FURTHER TO OUR . . .

. . . many recent *Journal* editorials which have been concerned with future trends in aircraft, we refer first to the edition of August 1962 in which we dealt with the increasing numbers and the variety of types of aircraft, under the title "The Crowded Sky". Since then a worldwide increase in the popularity of gliding and a balloon race in Britain itself has added to the crowd, while at the same time sales of conventional aircraft types for executive work and to private owners continue to soar. Piper, typical of the light aircraft manufacturers, produced their 60,000th aircraft early in 1964.

That light and older types of aircraft have current military applications was represented in "Almost Full Circle" (July 1963). Although an eyebrow or two appeared to rise at the sight of these older types at the time, their inclusion was later fully endorsed by all that has happened in Vietnam and elsewhere. Incidentally, there is one other example in this field, the use made by the French Army of a popular run-about type, the Piper Tri-pacer. In the same edition (July 1963) the cover displayed the A-1 Skyraider which, it was suggested, might well have a new lease of life in a COIN role—and indeed this has proved to be so.

"Functional Finishes" (March 1964) and "Camouflage Changes" (May 1964) are now shown to be carried a step further with Beverleys sporting a desert camouflage. As for "What's the Form" (September 1964), the form and the extent of its change in flight on the F-111 is shown here. To the family tree of British aircraft manufacturers set out in "Aircraft Incorporated" (August 1964), the firm of Britten-Norman must now be added.

At the time, January 1963, when the new United States aircraft designations were introduced into the *Journal*, the changes, tiresome at the time, were welcomed as a means to eventual uniformity in the systems used by the four U.S. Services. Having now become used to the system, the first reluctant welcome expressed is now fully endorsed.

By the way, many will recall that it is not long since serious-minded persons were saying "What is the use of aircraft recognition now? Surely everything is going to be out of sight of the ground observer in future?" But clearly, we have now reached a stage in the development of flying where it is simply the case that most flying is done within observable distance of the ground. This not only applies to civil flying but to all the areas where local fighting is going on at the present time. In such areas, there is a very strong danger that the plethora of helicopters, drones, airborne observers, light conventional aircraft, ground attack aircraft and transports are in as much danger from their own friends as they are of the enemy. Nor is the crowding going to grow less in the foreseeable future.

Finally, it might be convenient here to refer to another facet of editorial policy in the serious matter of identification for operational purposes. A mistake is not permitted to go unrecorded and a correction is always published. With forecasts on future aircraft there was one promising type on which time has proved our forecast of service wrong, but policy forbids us to say more!

SEPTEMBER 1965 Vol. 20 No. 9

JOINT SERVICES

RECOGNITION JOURNAL

The *Joint Services Recognition Journal* is a monthly publication produced by the Directorate of Flying Training (R.A.F.), Ministry of Defence, and prepared in collaboration with the Admiralty Board, the Army Department and the Ministry of Aviation (Air Technical Publications). Applications for copies can only be accepted from the Services or other official bodies, and must be submitted through the normal official publications supply channels—**not** to the Editorial Office or direct to the Ministry of Defence.

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** Identification Lessons*

Right: The new light camouflage on U.S. Navy P-3A Orions.

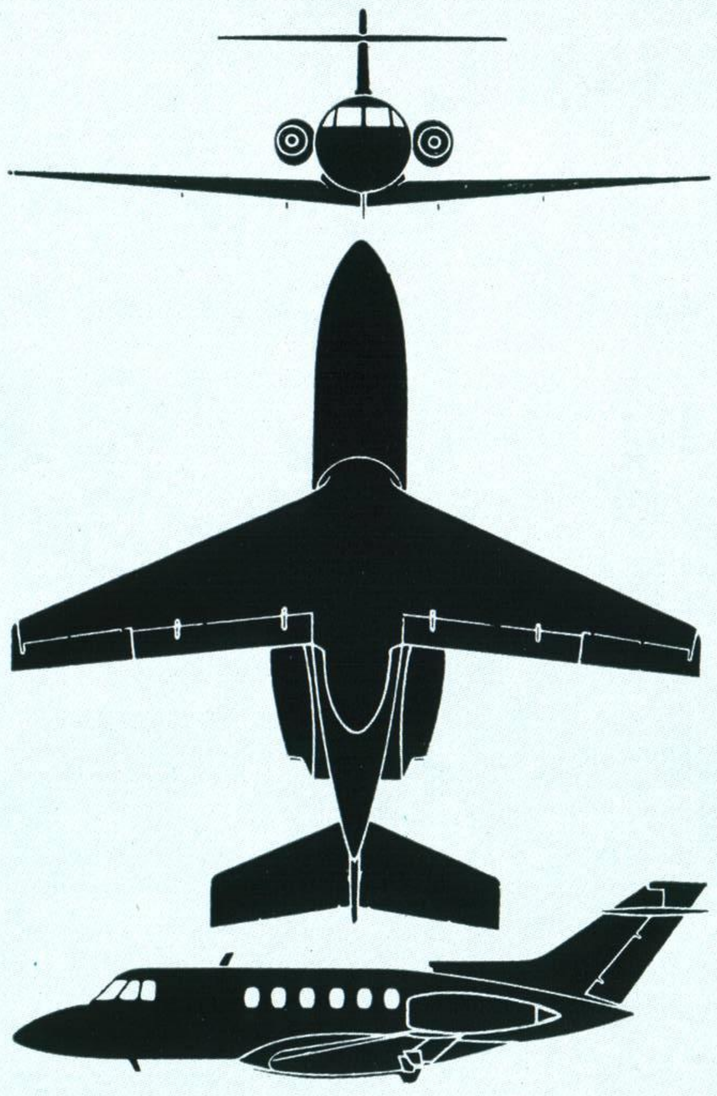


Above: The new desert scheme for R.A.F. Beverleys.



Left: The General Dynamics F-111 (initially known as TFX) showing with intermediate shots, the two extremes in its configuration.





DOMINIE

The Hawker Siddeley 125 is currently in production as a fast (500 m.p.h.) economical jet executive transport or crew trainer. Twenty have been ordered for R.A.F. use as navigation trainers.

Although correctly the name Dominie is restricted to the twenty used by the R.A.F., it is the accepted reporting name for all the HS125 series ; as the key views above and below show, there are only minor differences in fuselage depth and length of nose. The lesson instructions, in this edition on page 247, must be followed.

The HS125 Dominie was originally the DH125 in the famous de Havilland design series of which the DH89 Dragon Rapide was once the Dominie in R.A.F. & R.N. service. Thus the reporting name for the DH89, still flying in various parts of the world under civil ownership, reverts to Dragon Rapide.

Span 47 feet

Solutions on the cover

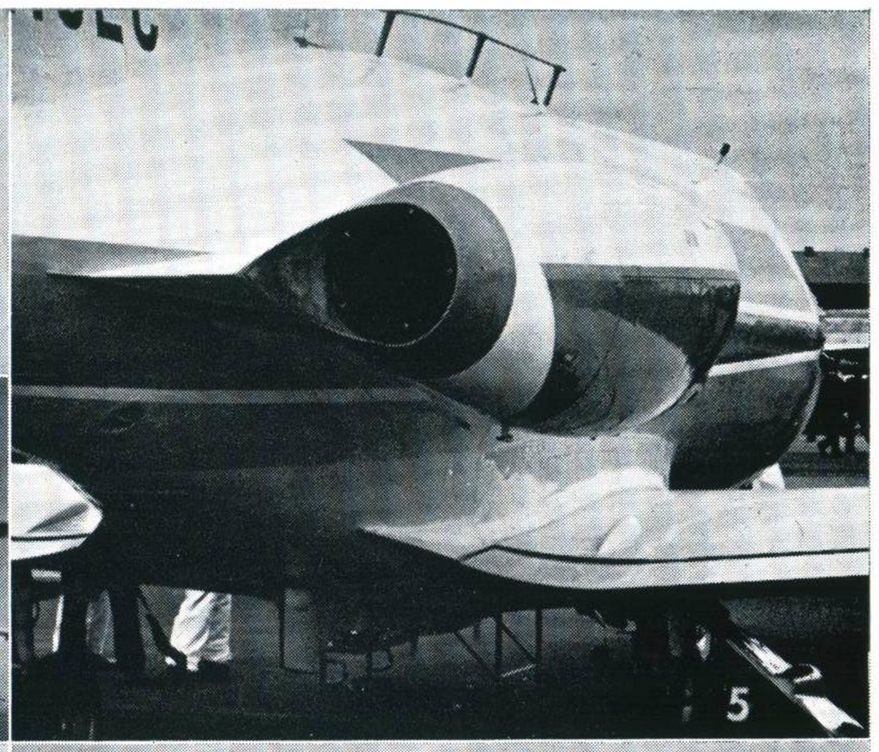




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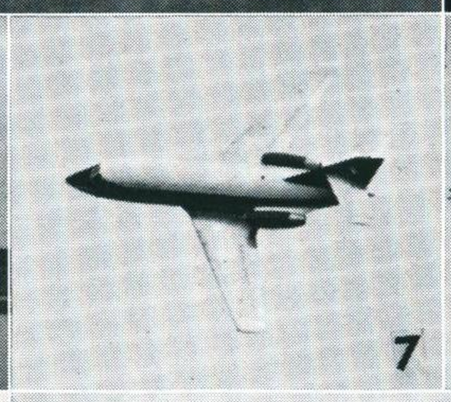
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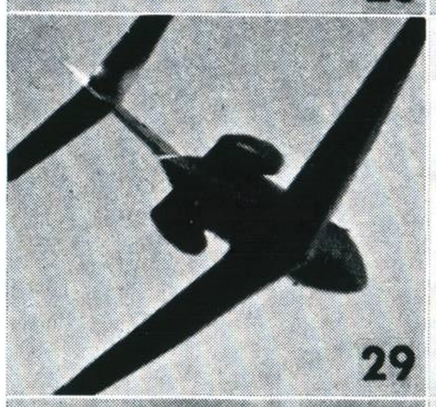

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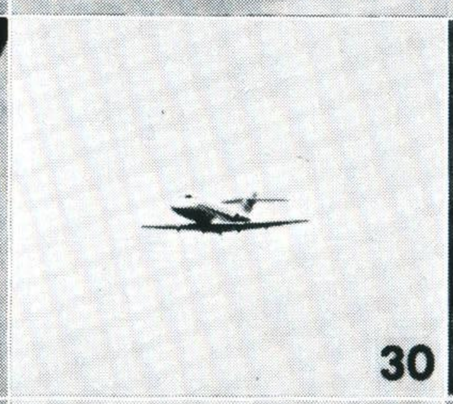

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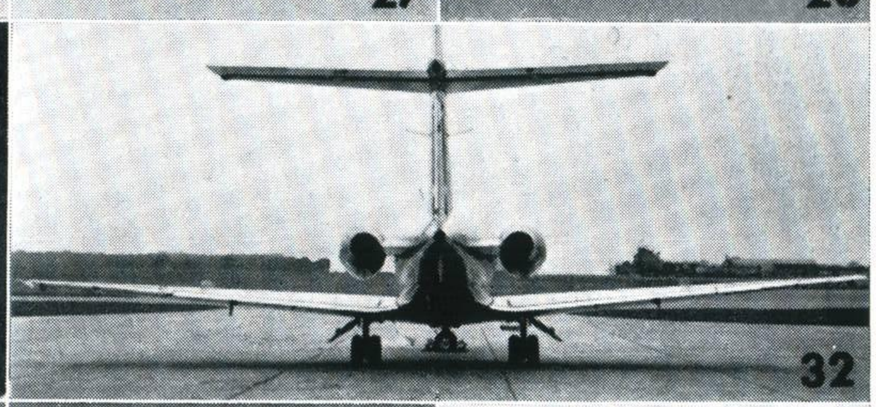

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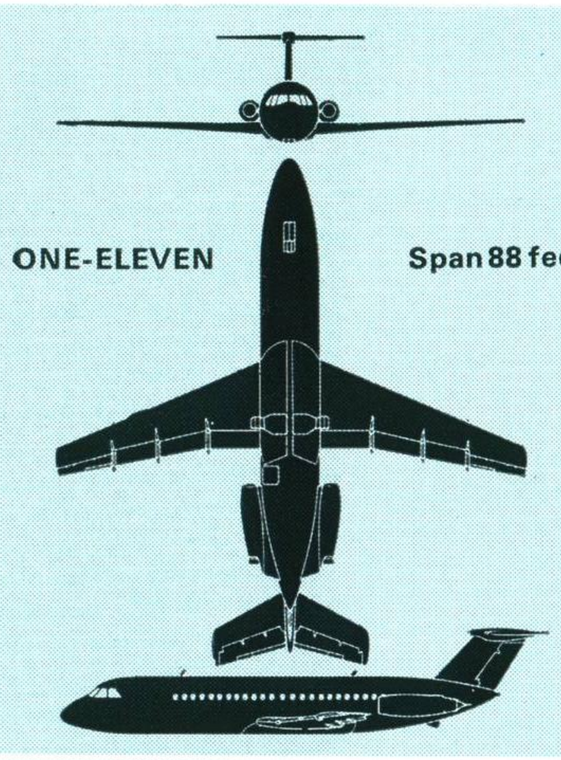

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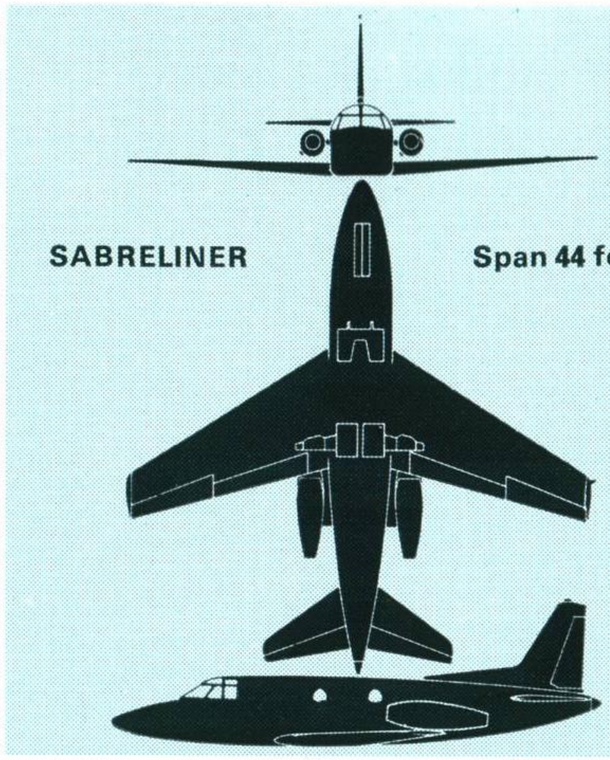


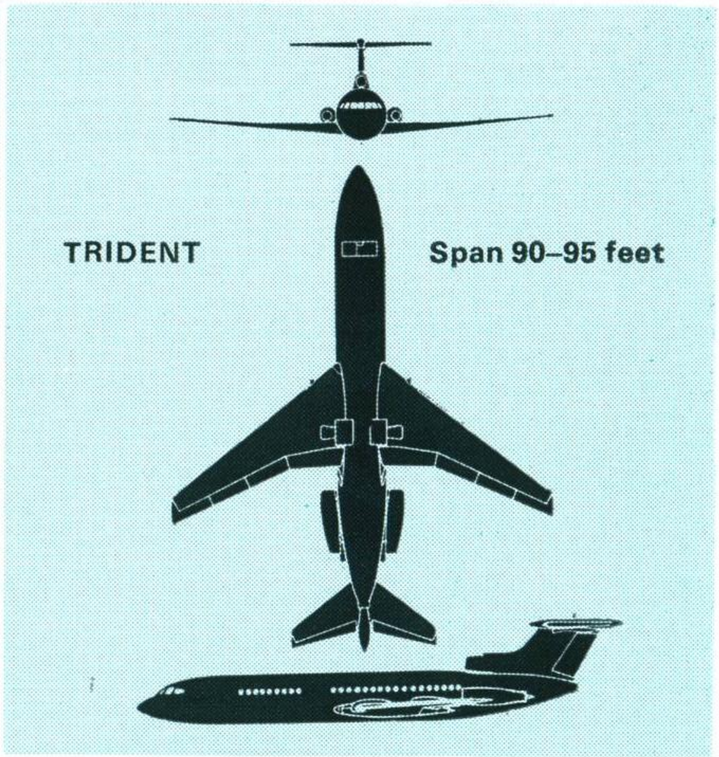

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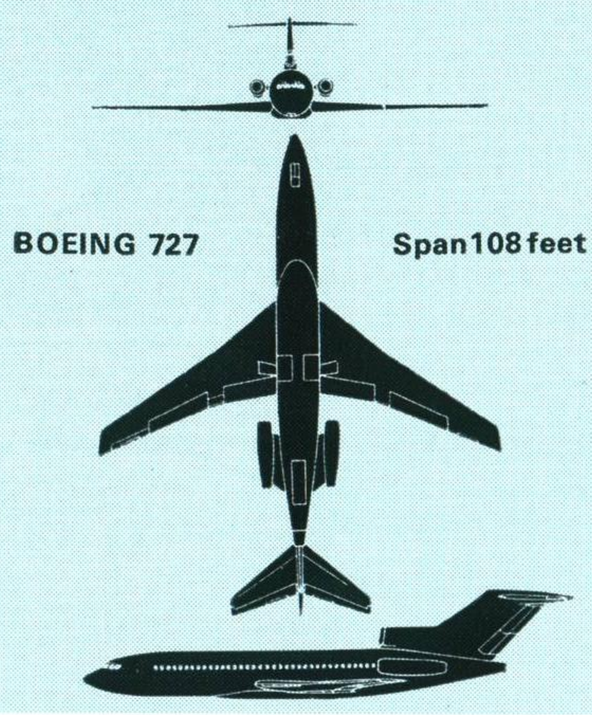

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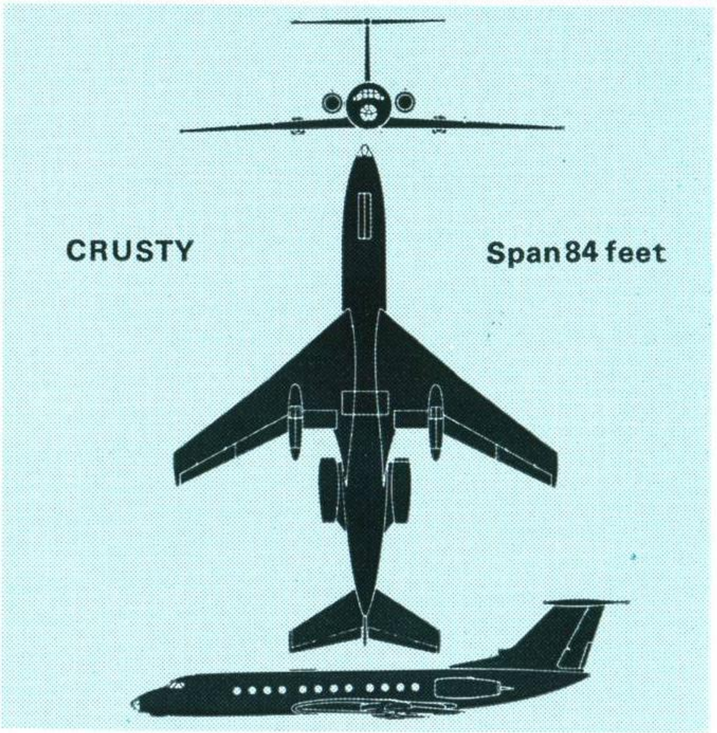


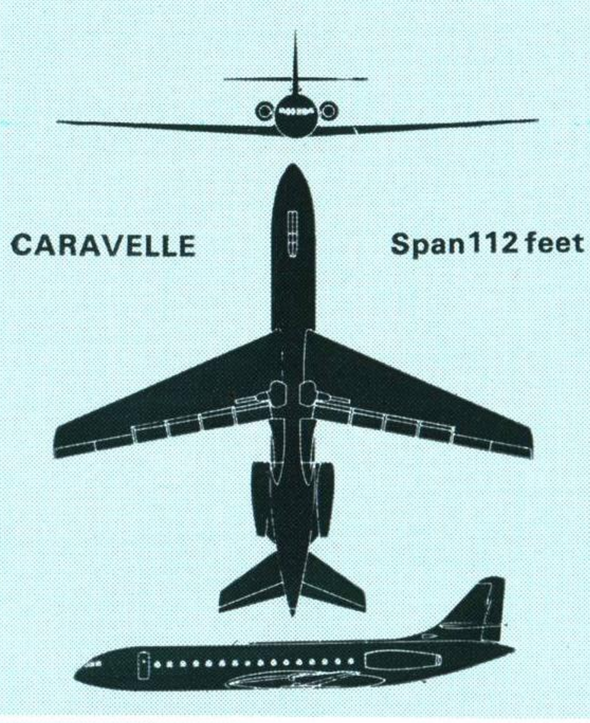


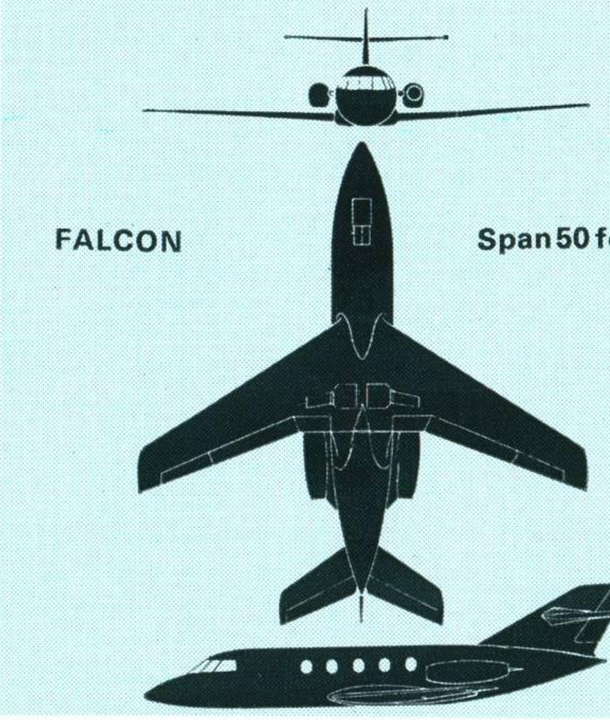


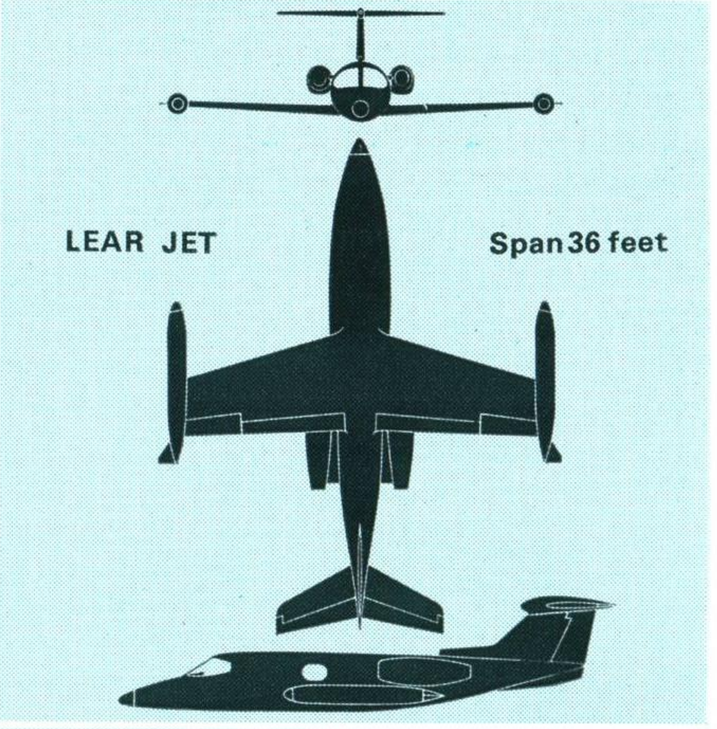
REAR JETS

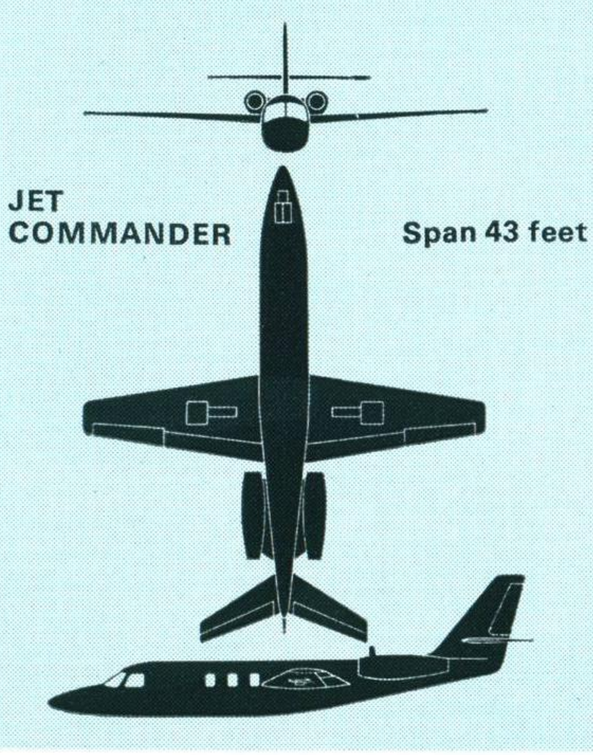
Contemporaries of the Dominie with a somewhat similar configuration are depicted for comparison. The VC-10, Classic and Jetstar are not included as their four-jets distinguish them, however, the three-jet Boeing 727 and Trident are included as their middle-jet, integral with the rear fuselage structure, gives a planform similar to that of a twin-jet. This is one more reason why memorising detail is not an efficient substitute for a planned identification lesson.

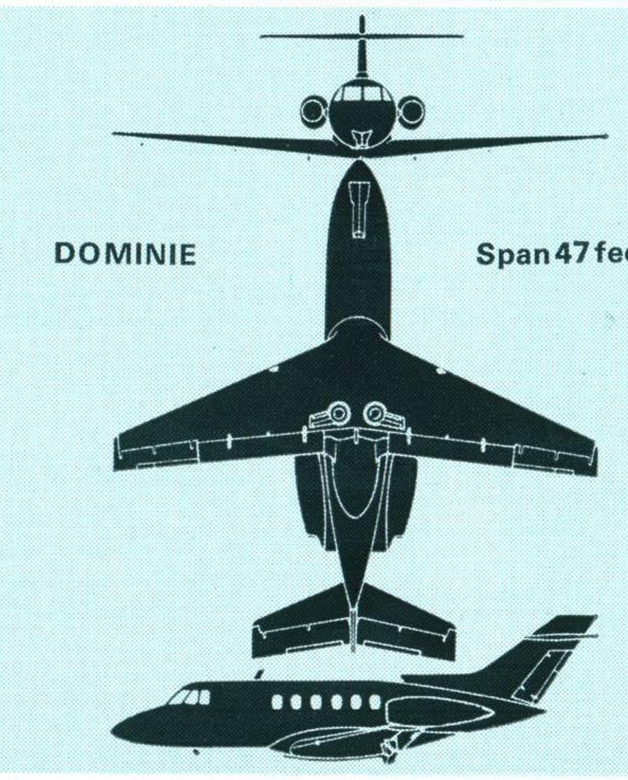


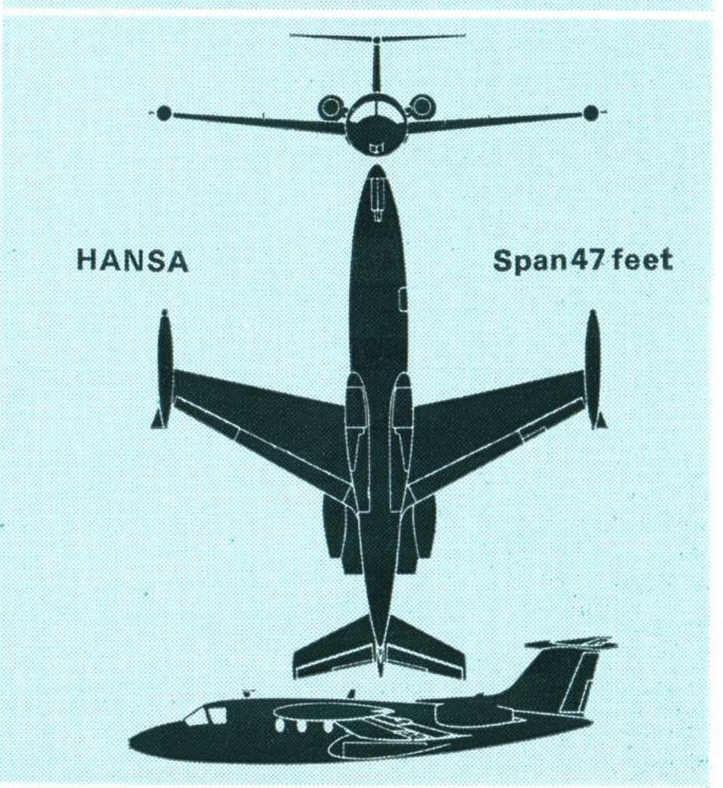














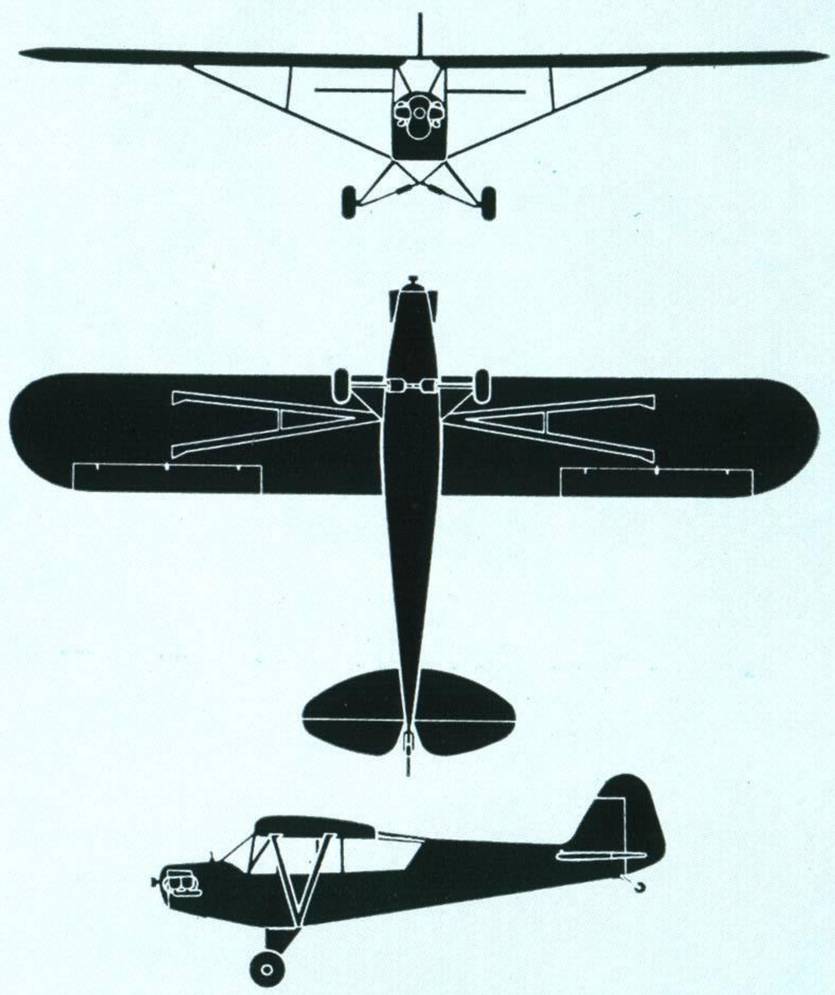
Current production Super Cub

Span 35 feet

PIPER CUB

The Piper Cub, built in its thousands even before the war, was placed in large-scale production for the U.S. Forces during the conflict and was widely used in spotting and liaison roles. Many of the wartime models are still flying world-wide in the hands of private owners and thousands of post-war models have been built for both military and civil use. Although no longer in American or British service use, it is still operated by several Air Forces including the Danish, Indonesian and Turkish.

Inevitably, over the years, there have been changes and these concern the type of engine, cabin and rudder shape. However, the fuselage, wing and tailplane shapes have remained virtually unchanged and these comprise the common characteristics of the Piper Cub which is the reporting name for all versions including the Super Cub still in production. The reason for including the firm's name Piper is to avoid confusion with the Russian Cub.



Pre-war Cub Coupe of a type still flying, shown in wartime R.A.F. service.



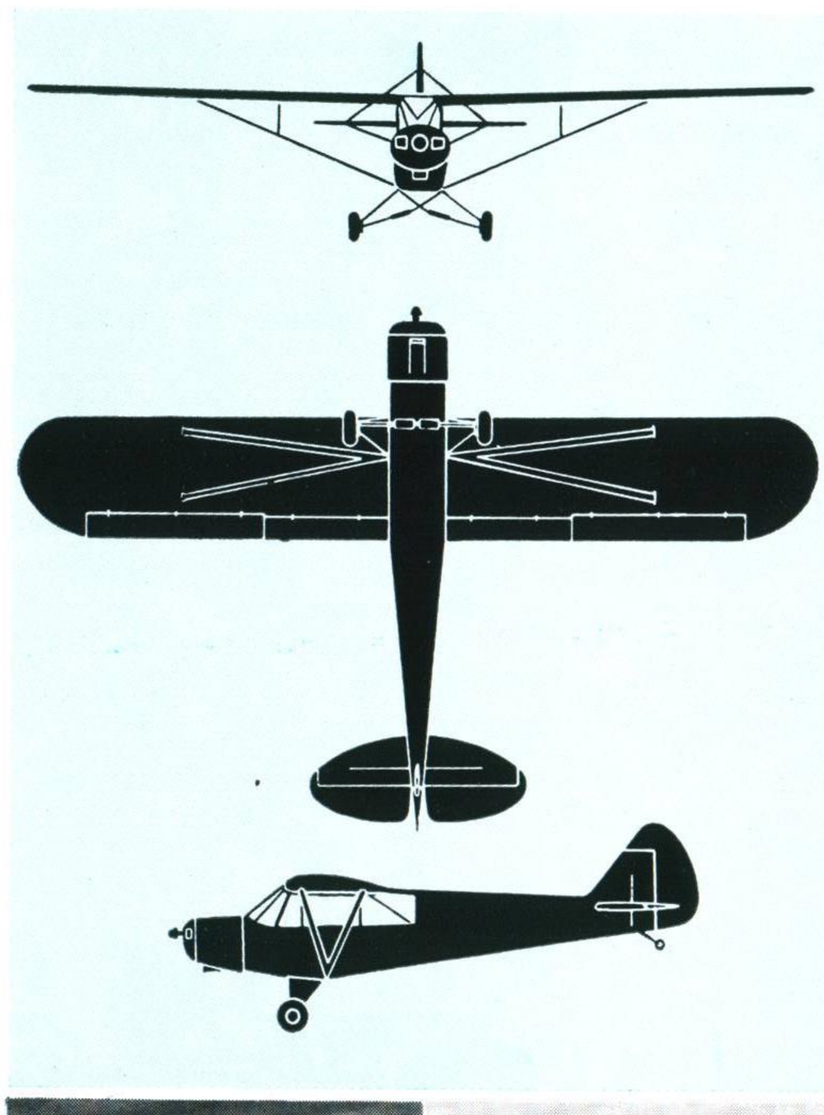
































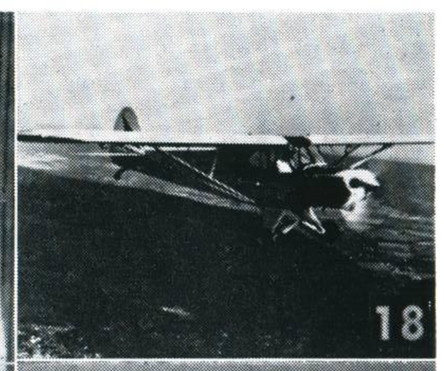


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Piper Super Cub in current military service—Danish.

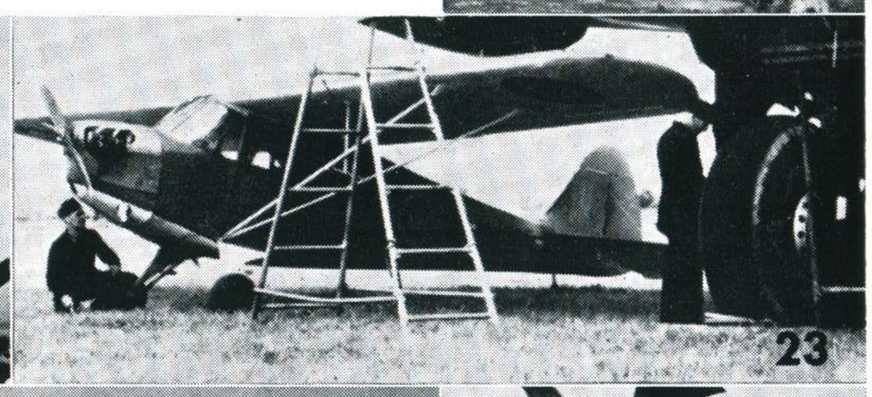

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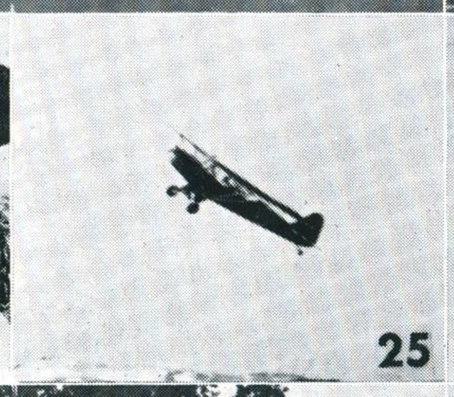

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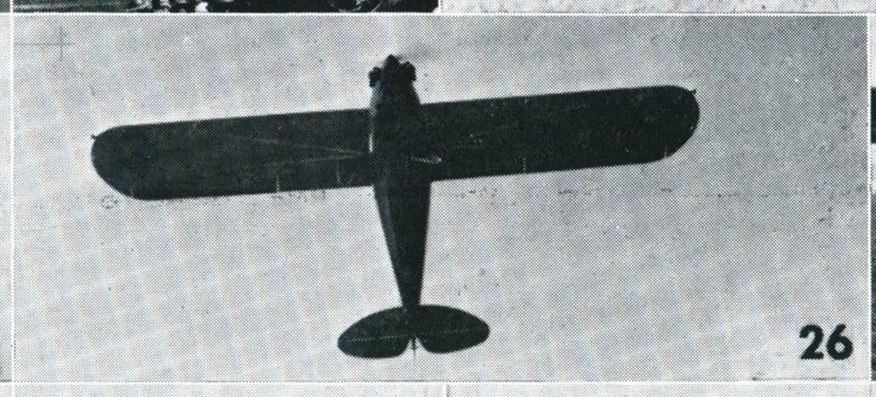

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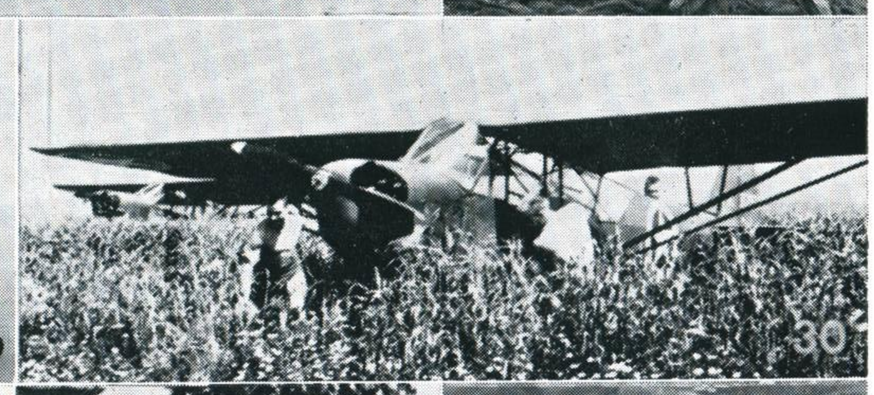

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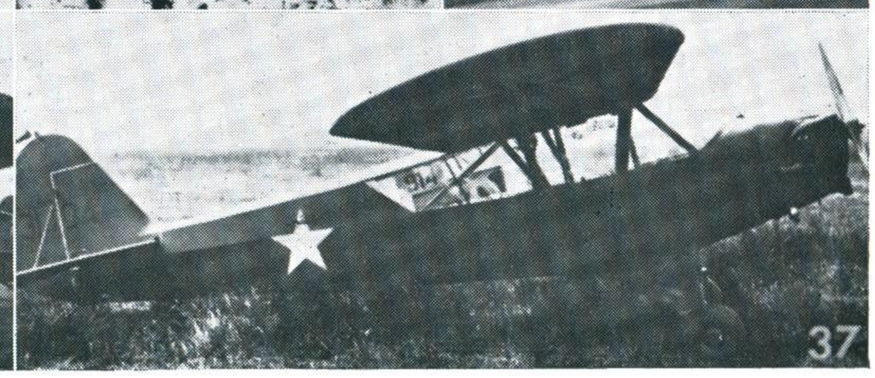
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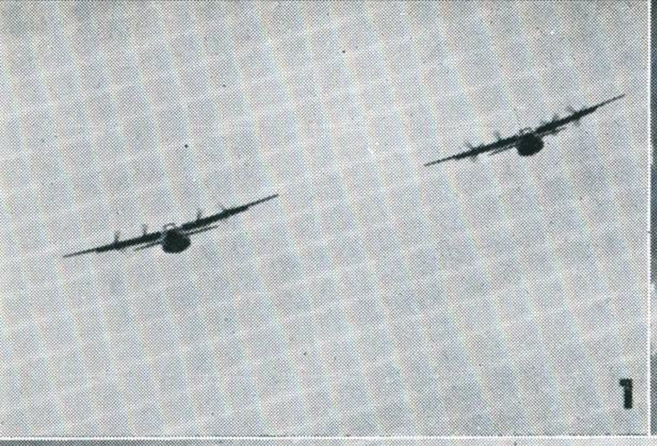

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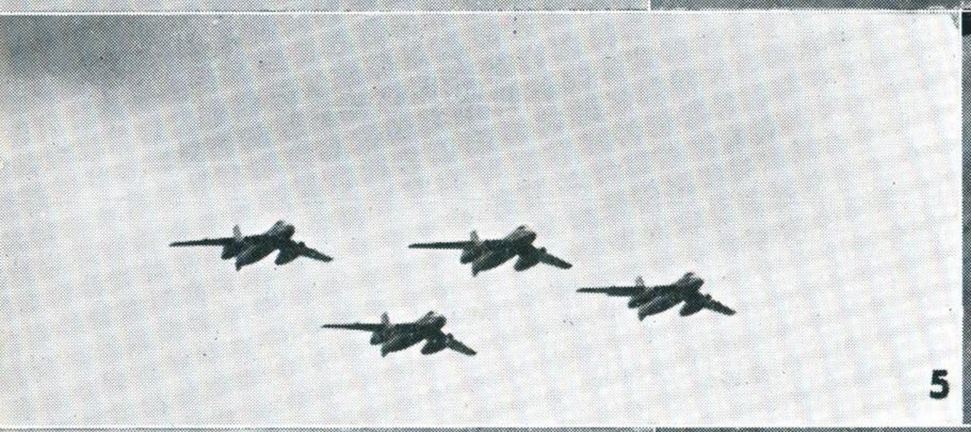

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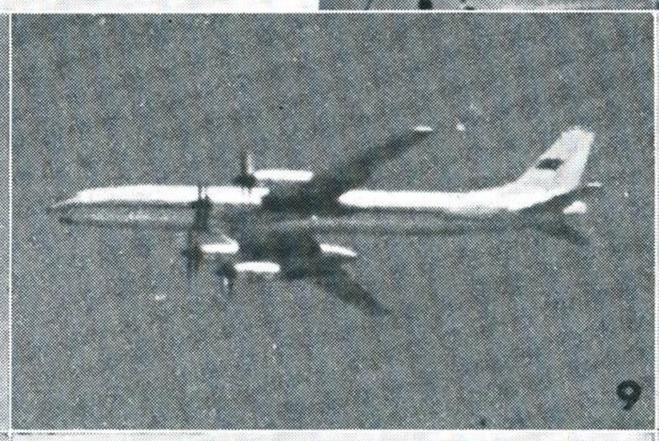

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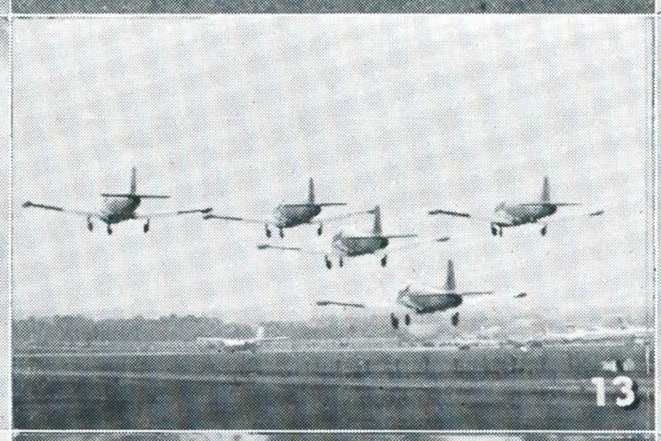

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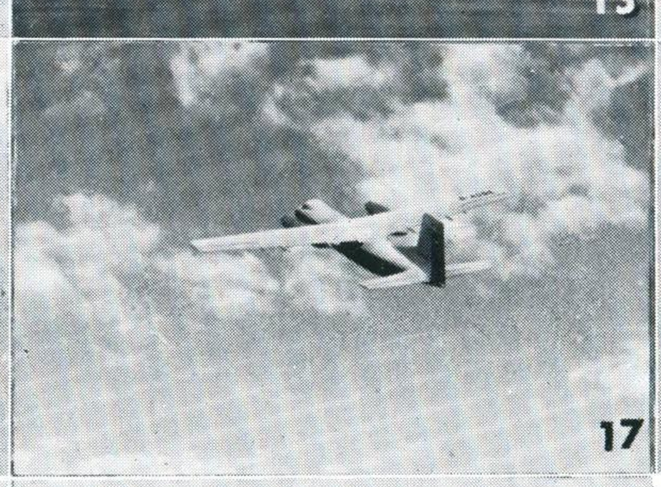

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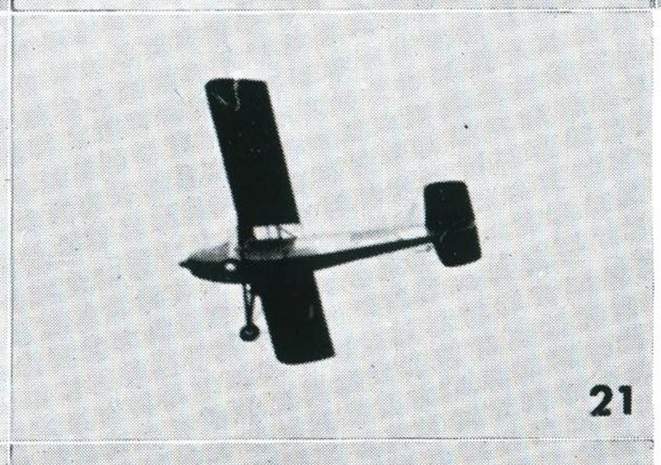

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Testing Time

A test of
your ability to
identify aircraft.

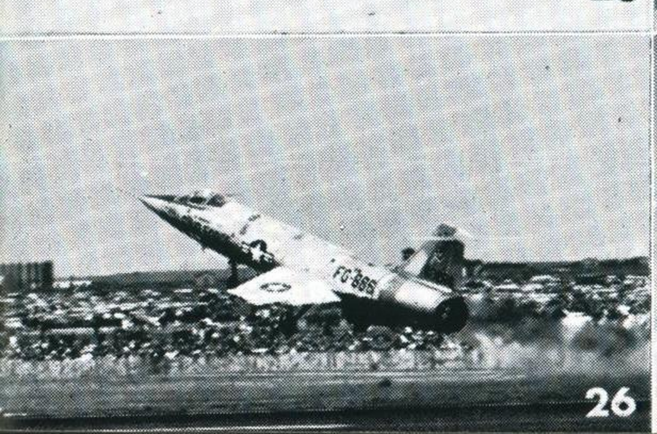
Solutions on
the cover.


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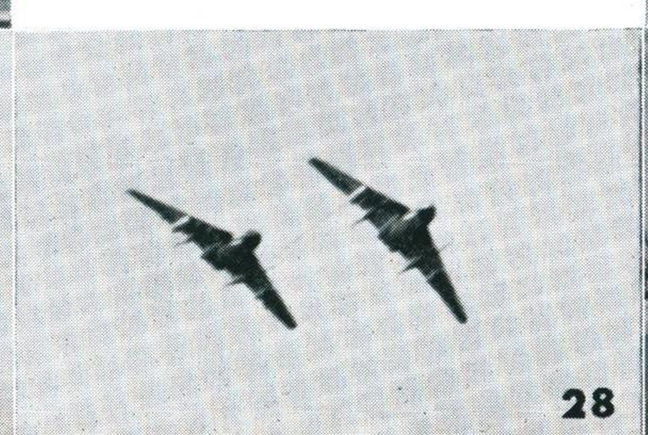

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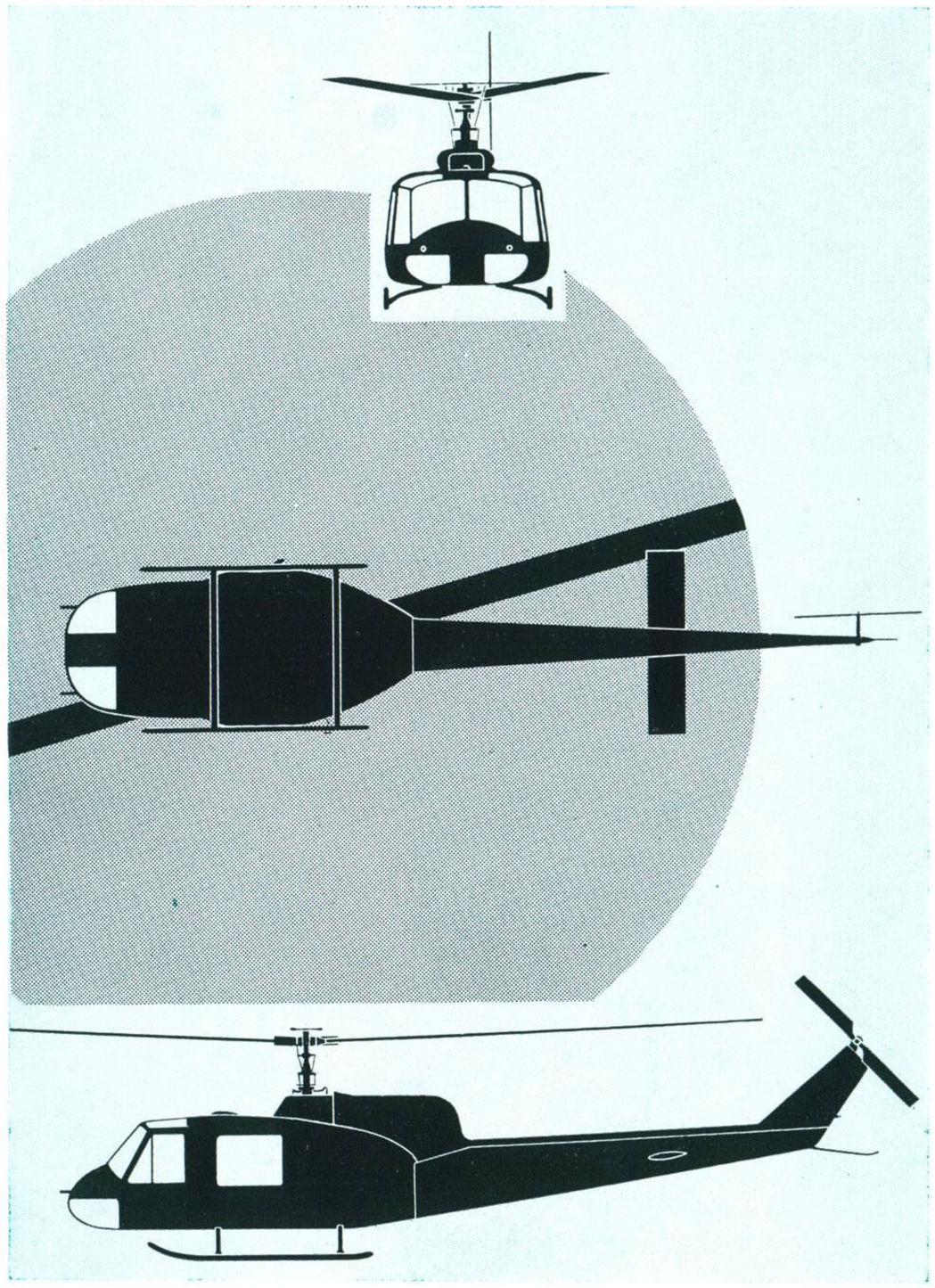

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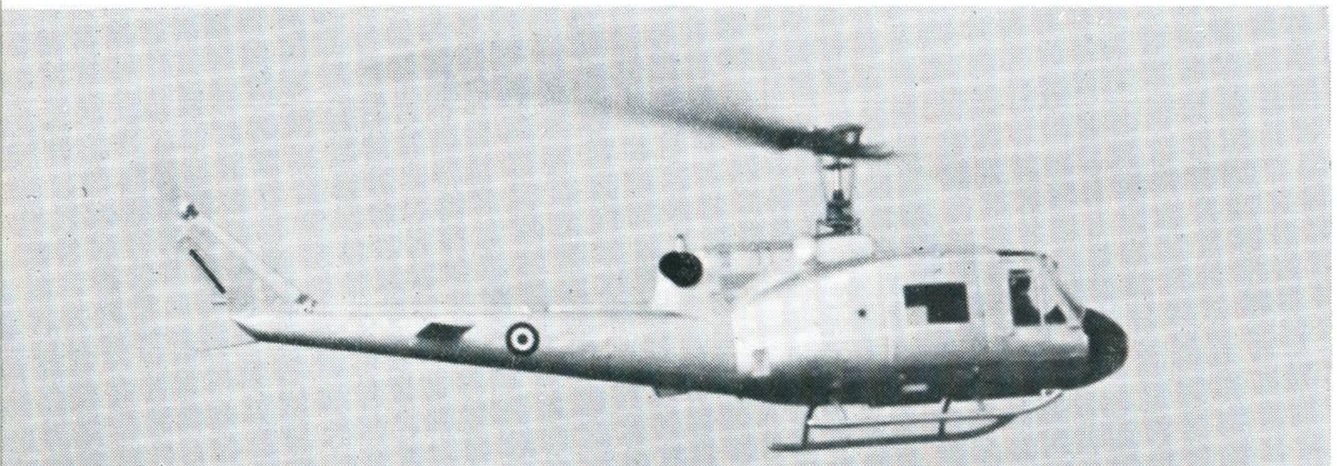
AGUSTA BELL 204—IROQUOIS

This lesson is an adjunct to the Iroquois lesson in the April 1963 edition, for the Agusta Bell 204 is an Italian-built version of the Iroquois.

In general the version of the American Bell UH-2 Iroquois built in Italy by Agusta as the model 204 have British engines giving a slight variation to the outline. Since, however, this is not an invariable rule and the differences are not apparent from certain angles, the reporting name Iroquois (pronounced Ear-o-kwoi) is acceptable for all types to the basic design.

Working to the instructions on page 247, and having noted that all key views on this page are of Agusta Bell 204s, report these thirty targets as Iroquois if Bell UH-2s or Agusta Bell 204s—or otherwise if of a completely different type. Fuselage length 38 feet.









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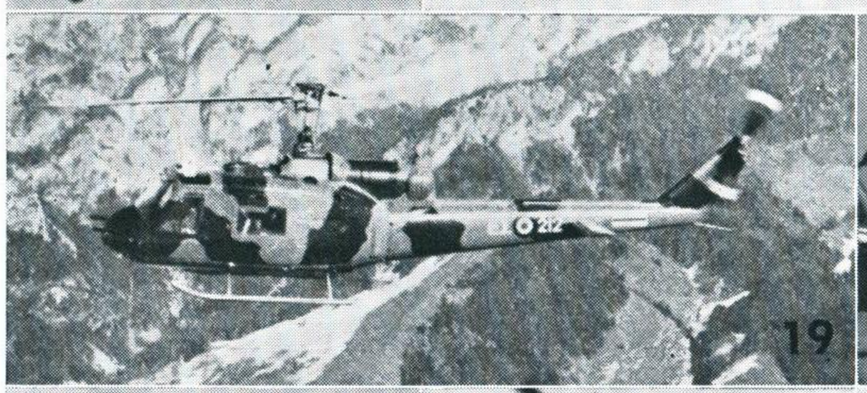
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PARIS FAS

Russian Aviation

Russian participation at the 1965 Paris Salon was the largest ever both by the variety of types and by their bulk. All the Soviet types exhibited are shown with the exception of the Il-62 Classic and Tu-124 Cookpot. The giant Antonov An-22, which dwarfed all other exhibits has been allotted the Tripartite name Cock.

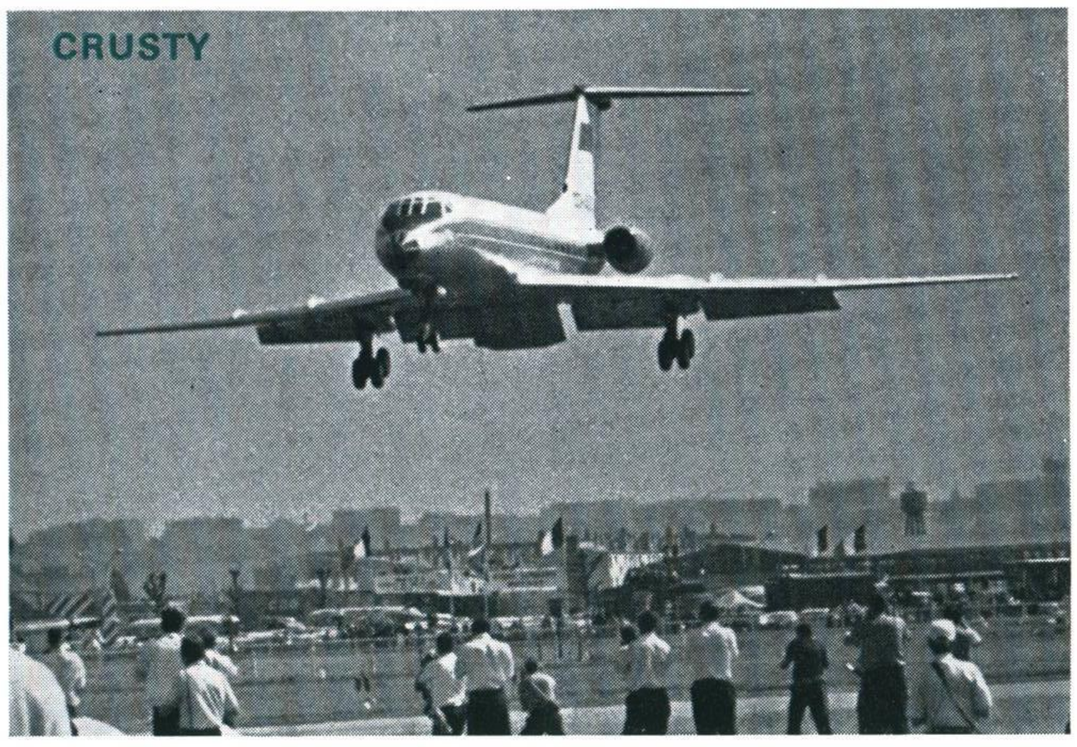














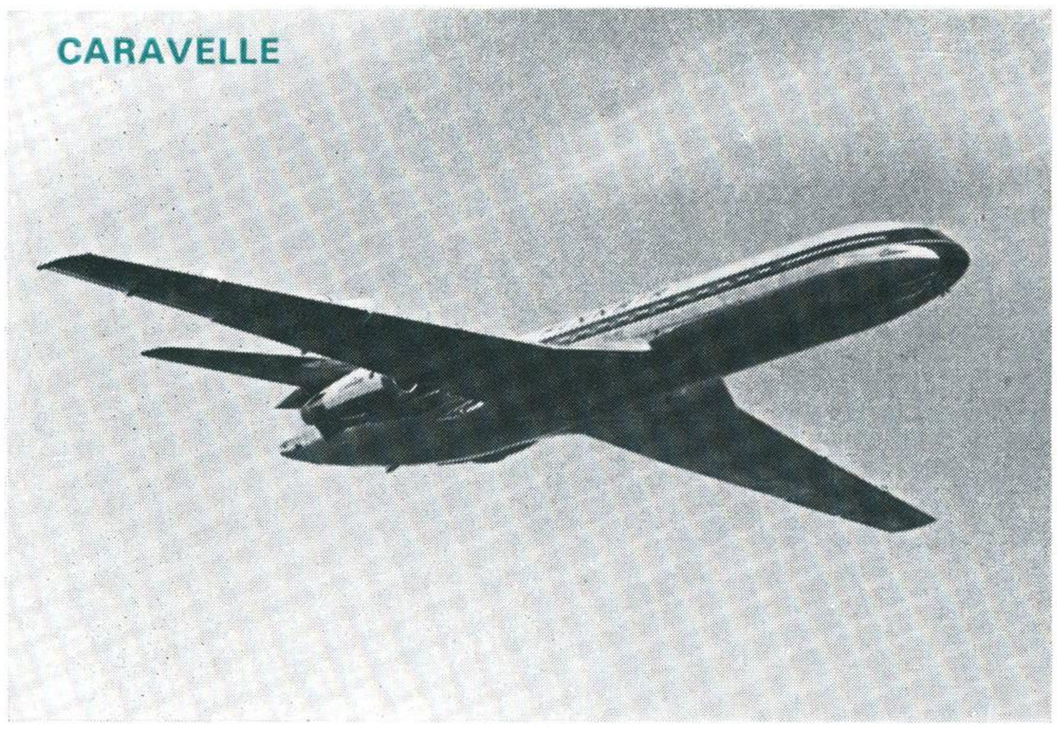
HIONS 1965

French Industry

France had a variety of types on display of which these are representative of the French "V" bomber—the Mirage IV, large and small rear-jet transports, maritime reconnaissance and transport aeroplanes and large helicopters. Other aircraft exhibited included seven versions of the Mirage III, a variety of light helicopters and aeroplanes.



MIRAGE IVA



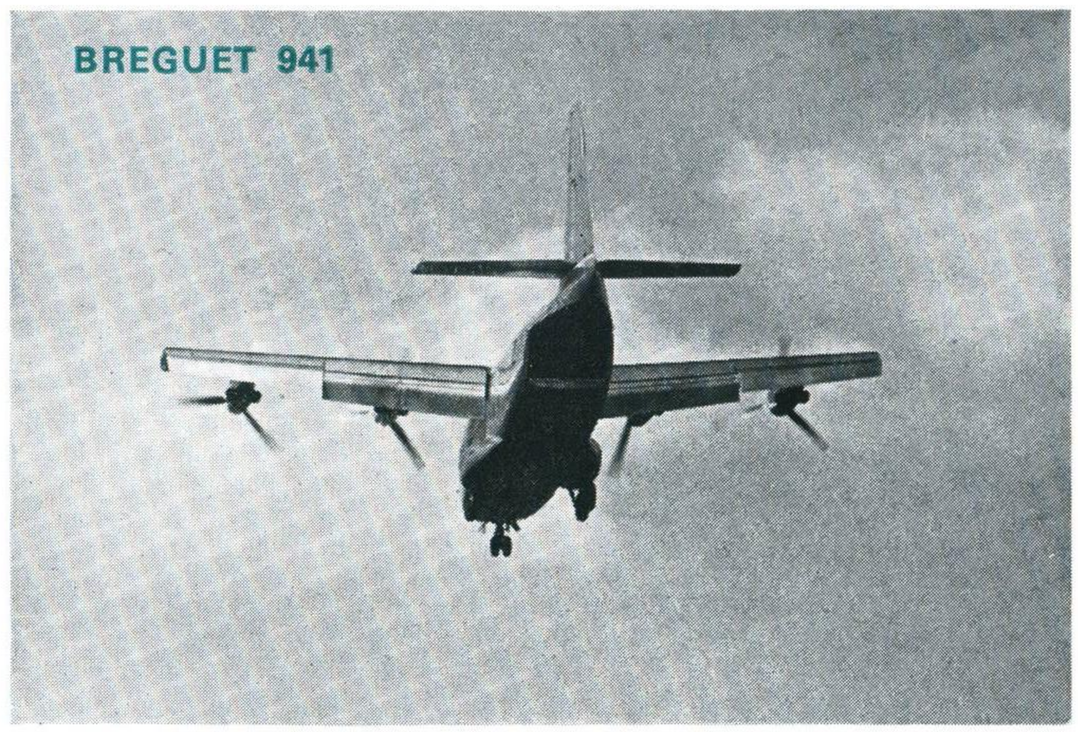
CARAVELLE



FALCON



ATLANTIC



BREGUET 941



SUPER FRELON



SUPER FRELON & SUD SA330

MORE PARI

United States

Apart from exhibits at the Paris Salon by American manufacturers which included Beech, Cessna, Hughes, Lear, Lockheed, Mooney and Piper, American interests were represented by U.S. service aircraft, including Delta Dagger, Freedom Fighter, Hercules, Huskie, Hustler, Phantom, Sabreliner, Starlifter, Thunderchief and Voodoo of the U.S.A.F. ; eight U.S. Navy and five U.S. Army types.

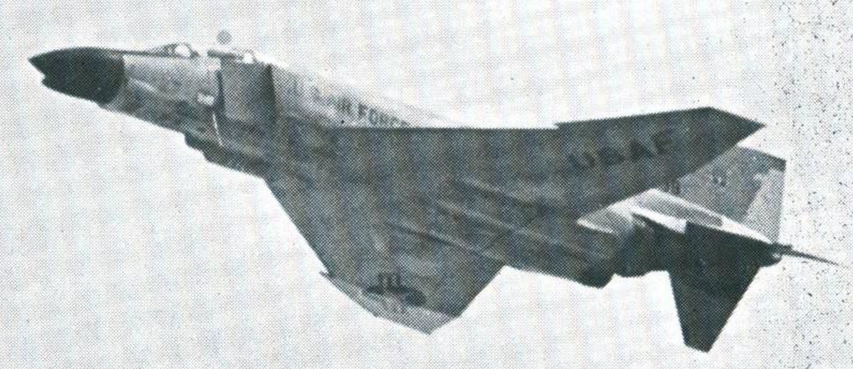
STARLIFTER



FREEDOM FIGHTER



PHANTOM II



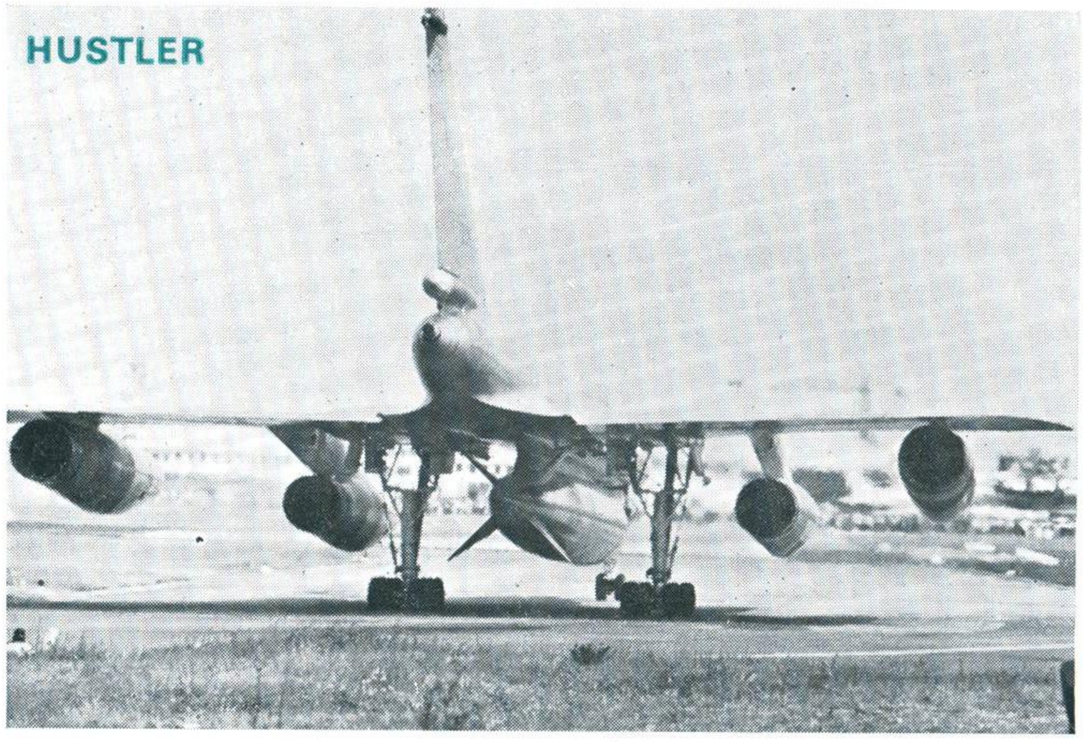
SEMINOLE



MOHAWK



HUSTLER



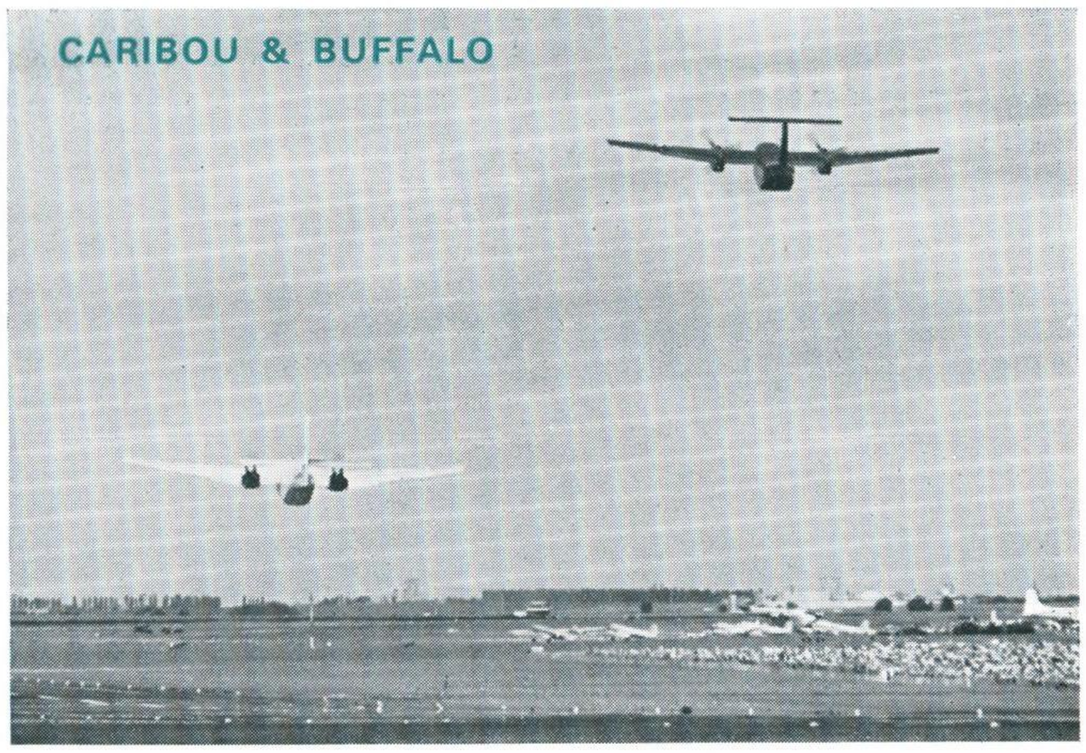
SEA KNIGHT & CHINOOK

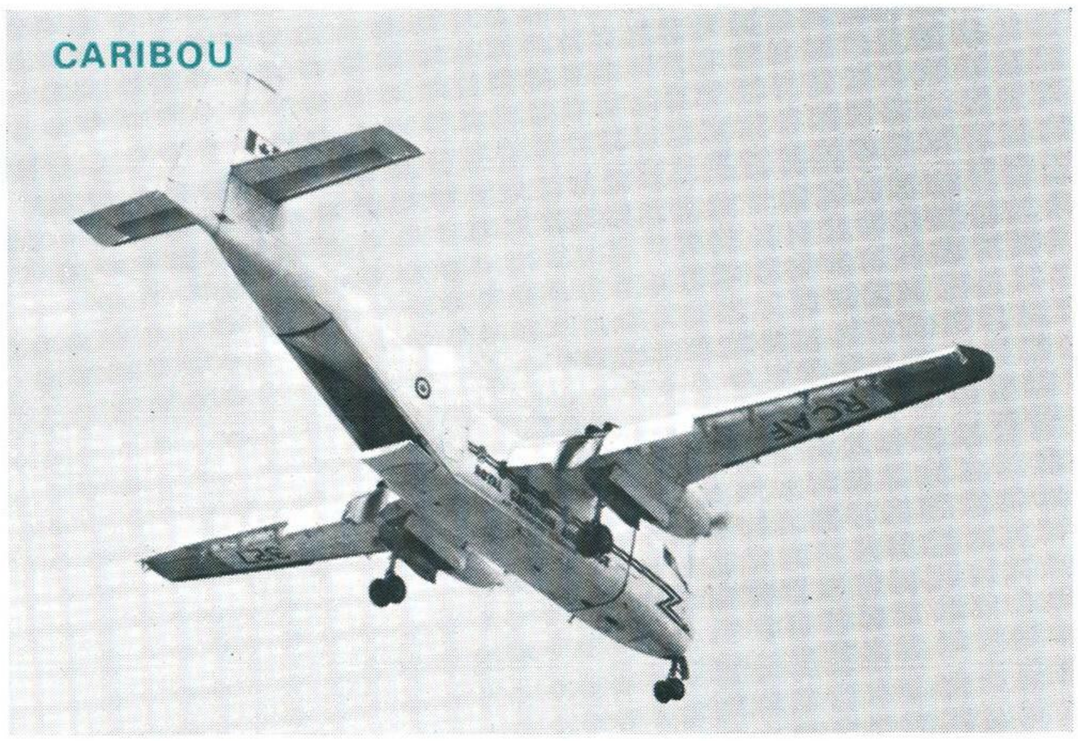


S FASHIONS

Canada

The interests of Canadian aviation were ably represented by service aircraft even if it was not immediately apparent in all cases, for the DHC-5 Buffalo was in U.S. Army markings and the American-designed Starfighter was a Canadian-built CF-104G which the R.C.A.F. call the Super Starfighter.

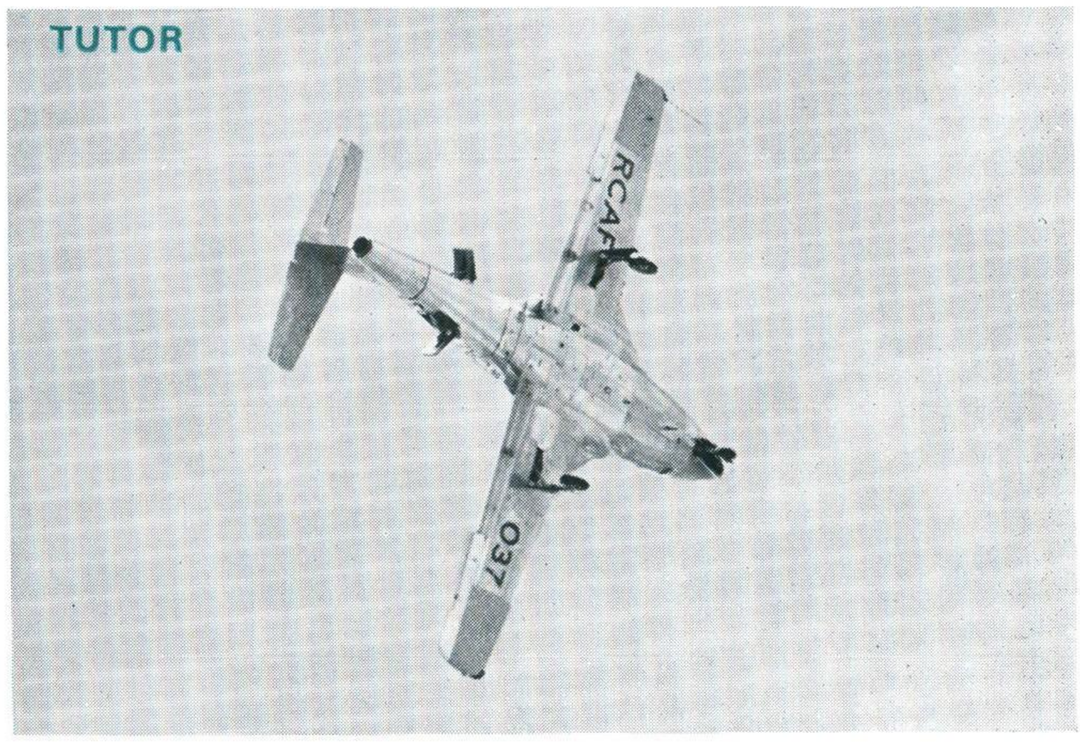

CARIBOU & BUFFALO


CARIBOU



BUFFALO


TUTOR



TUTOR

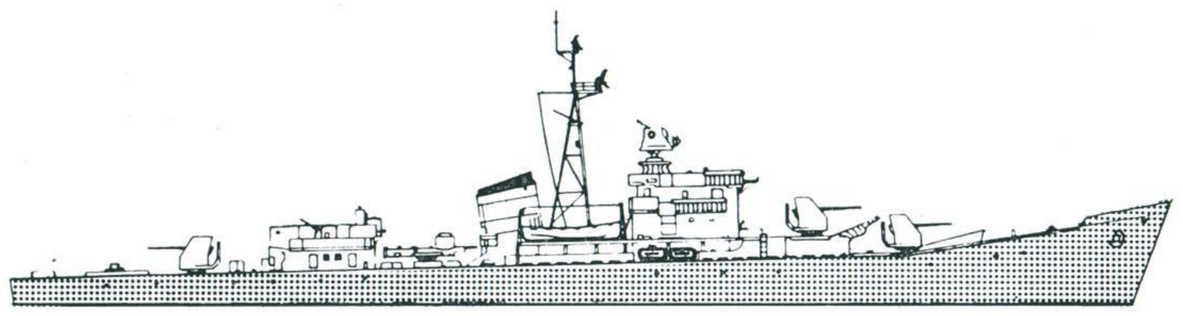


STARFIGHTER


ARGUS

RIGA CLASS (U.S.S.R.) DESTROYER ESCORT

Lesson instructions are on page 247 and readers are recommended to attempt first the initial Riga Class lesson in the May edition.



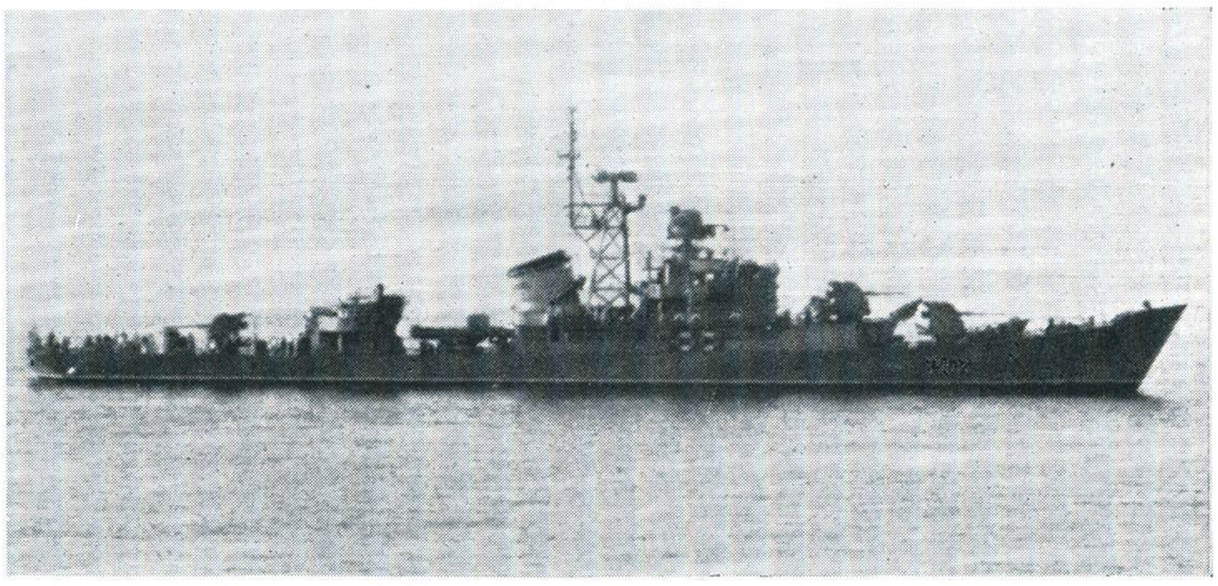
These Destroyer Escorts of which there are some 50 units are improved Kola Class escorts of flush deck design.

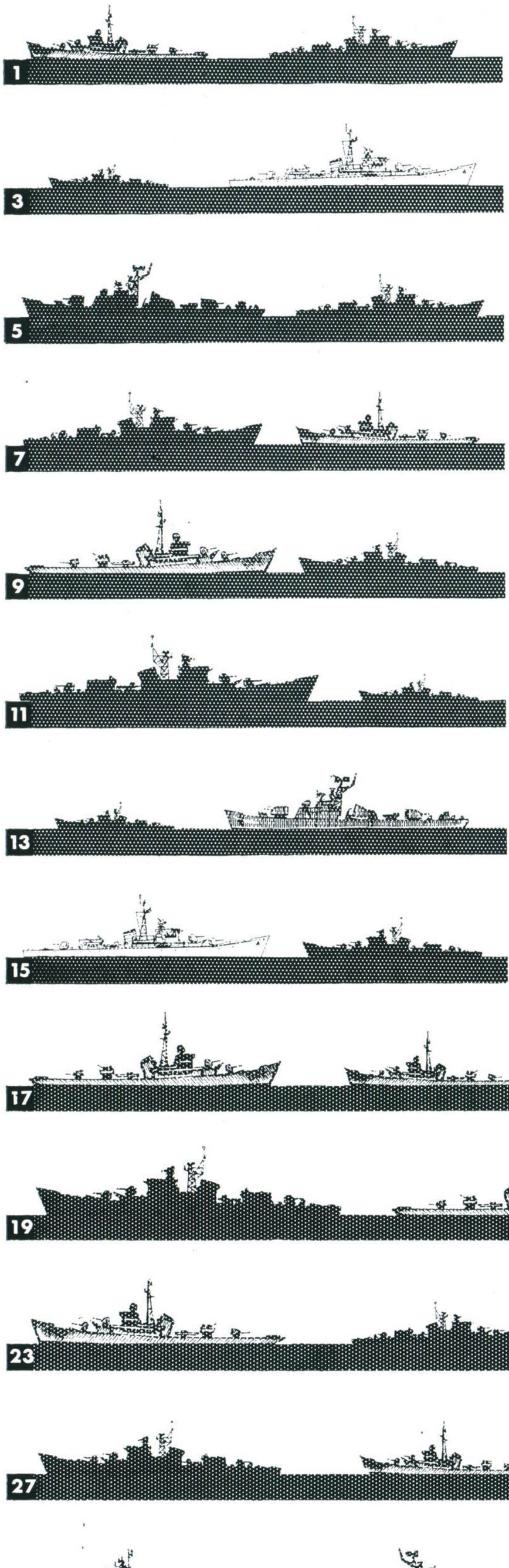
They are not so heavily armed and are lighter than the Kolas and displace 1,280 tons full load. 295 feet long overall they are powered by geared turbines giving a speed of 28 knots.

Armament consists of 3 × 3·9-inch dual purpose guns, two forward and one aft, 2 twin 3·7-mm AA guns and 3 × 21-inch torpedo tubes. They are equipped with 4 depth charge throwers and either a Hedgehog type or two 16-barrel anti-submarine mortars forward. They are also fitted for mine-laying.

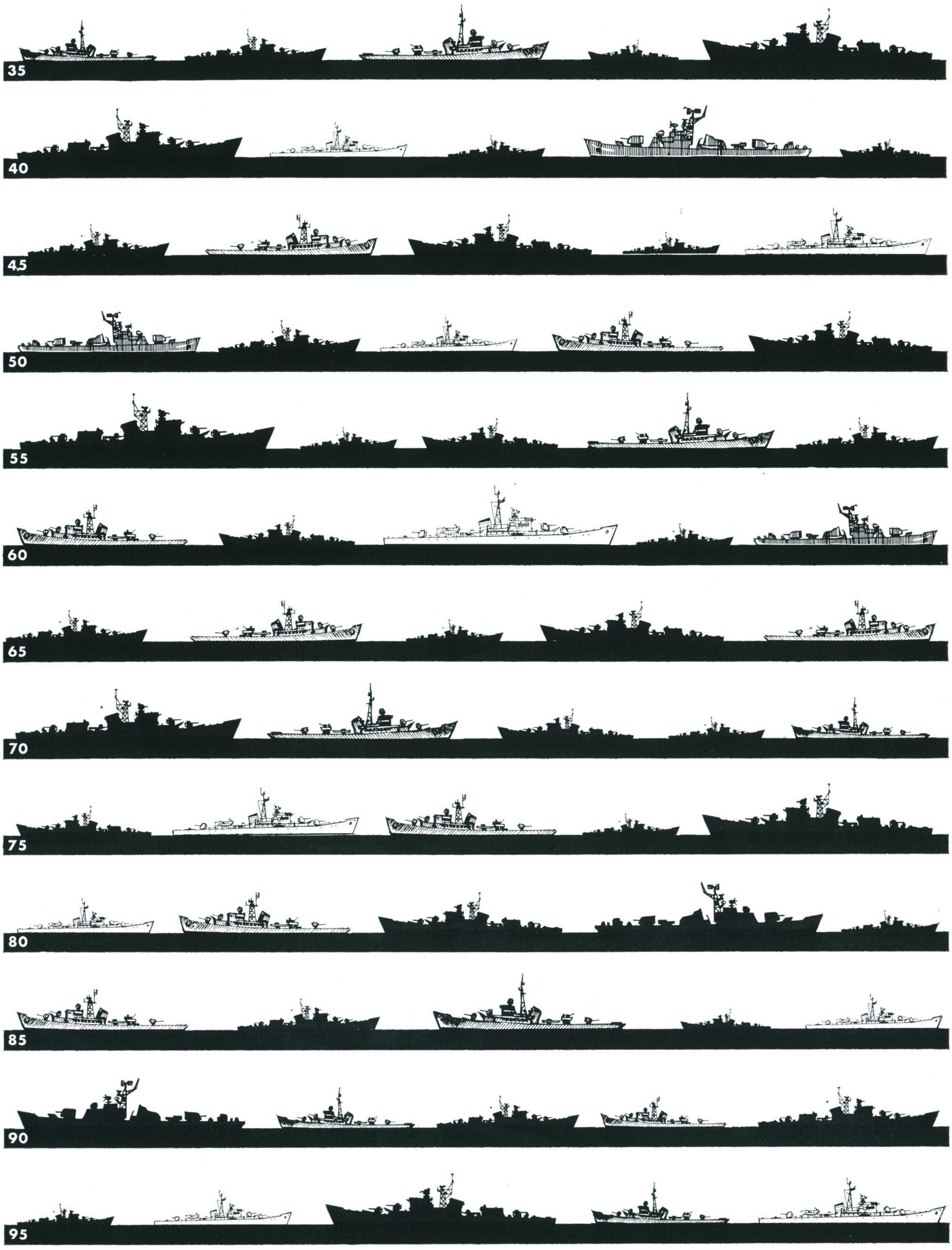
In appearance they are distinctive by reason of the very steep sheer forward; the large bridge and very heavily raked thick funnel with cowl top. Actually there are two types distinguished by the different mast structures, but no distinguishing names are given. The later version has the more comprehensive aerial systems on a stouter mast and most ships are so fitted.

Several ships of this Class have been transferred to other countries in the Communist Bloc and to Finland and Indonesia. Communist China has built four Rigas of the later class.





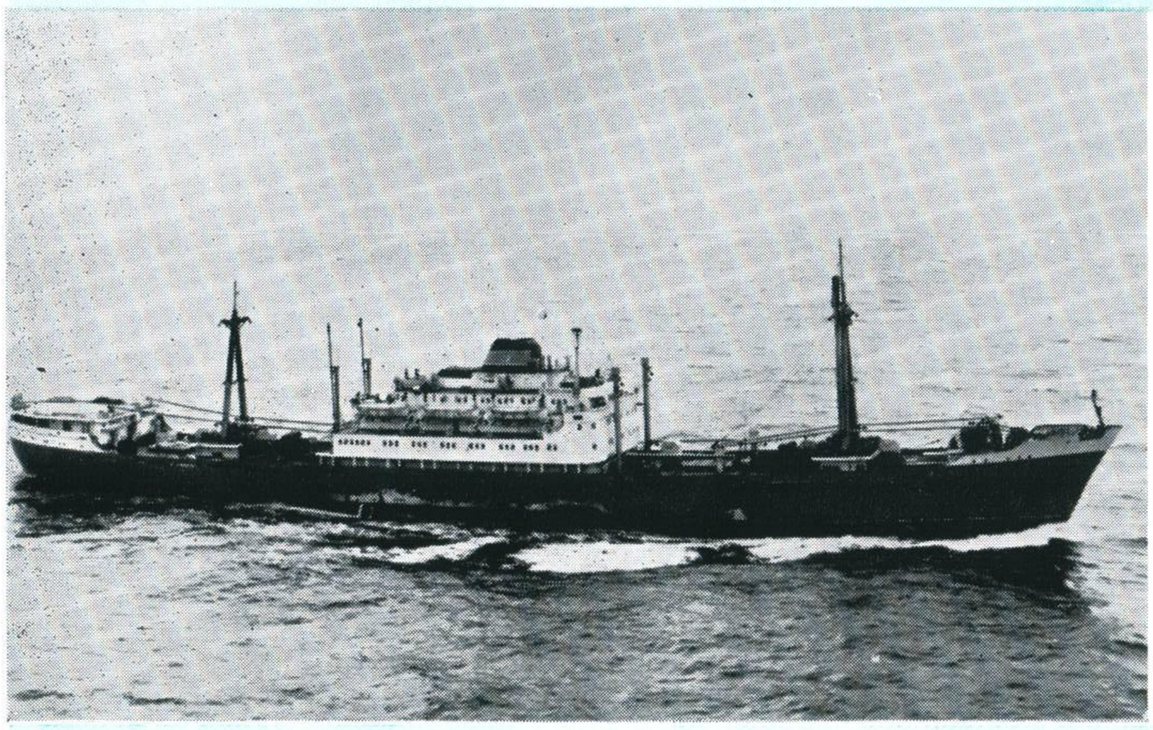
Solutions on the cover



MERCHANTMEN OF THE USSR — No. 13

Chukotka . Metallurg . Solnechnogorsk

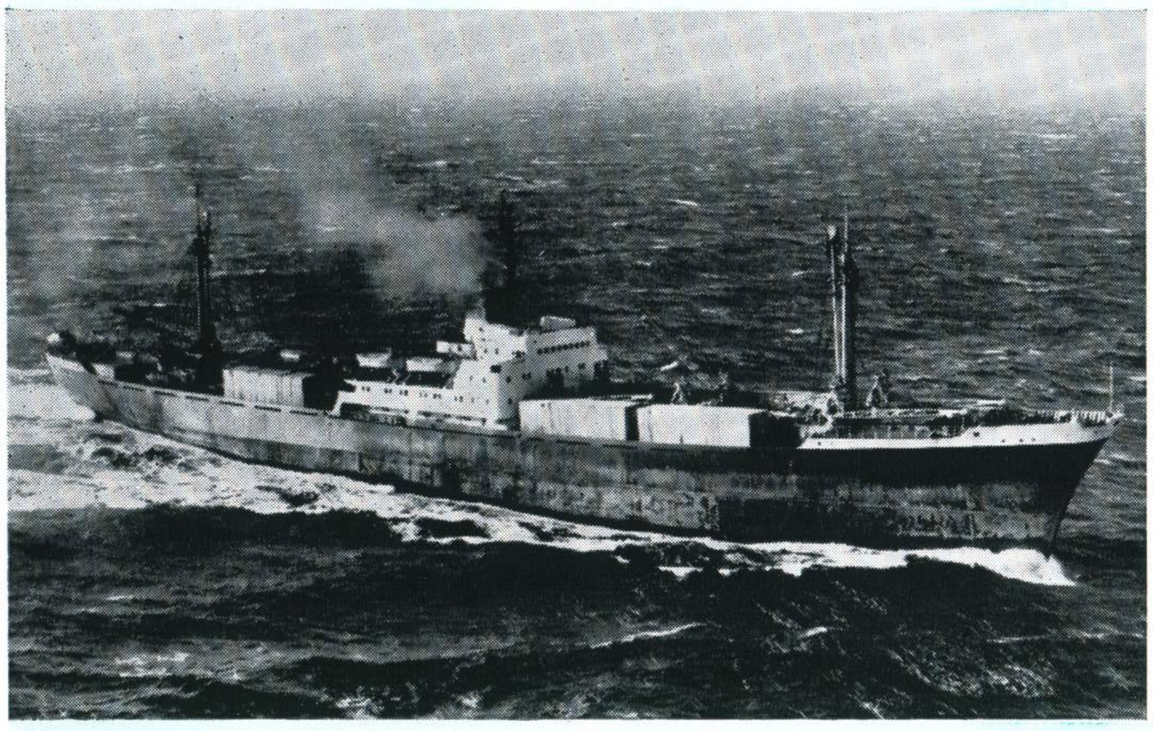
This is a normal lesson for which the instructions on page 247 apply in general, with the proviso that beginners should make out separate answer sheets for each ship and identify one ship at a time from the target views. Solutions on the cover.



Chukotka Class

Fish Factory Ship
Overall length 510 feet
10,600 G.R. tons

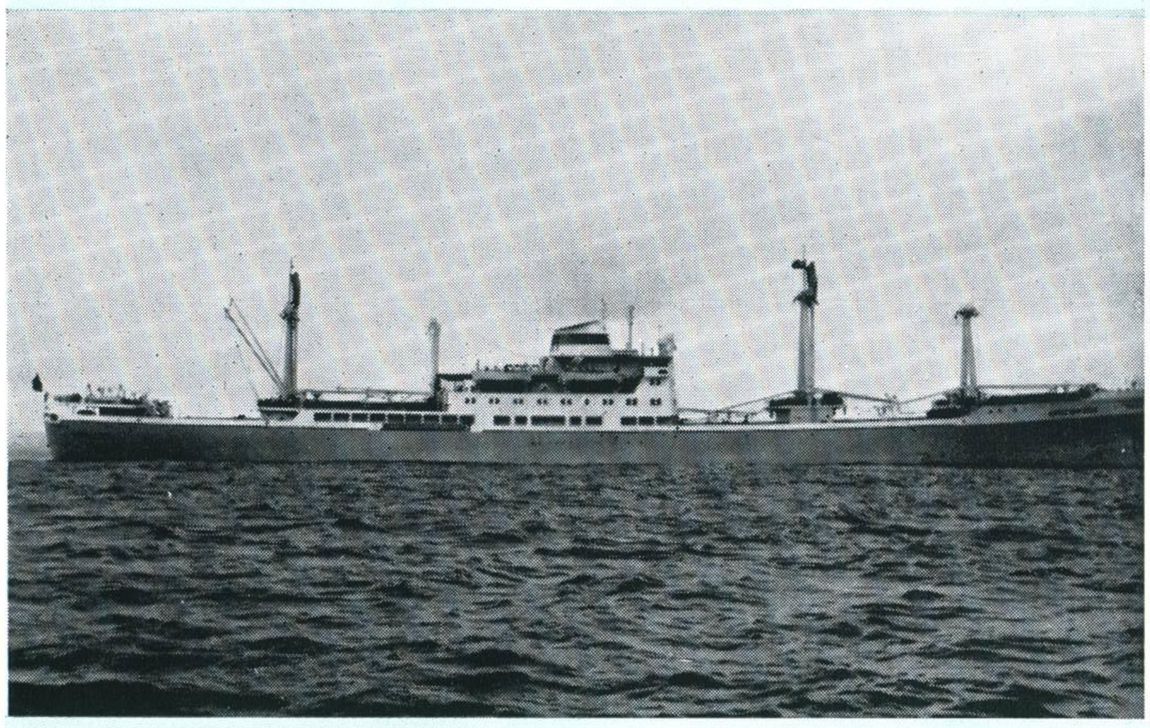




Metallurg Class

Modern Cargo Vessel
Overall length 516 feet
12,000 G.R. tons
Individual ships of the Class vary in detail

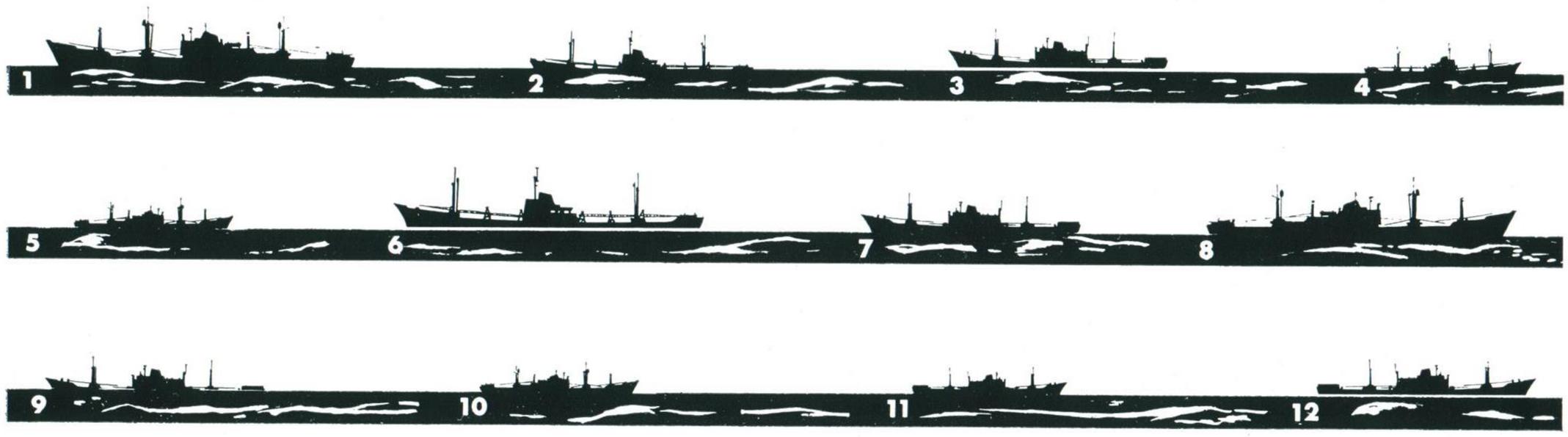


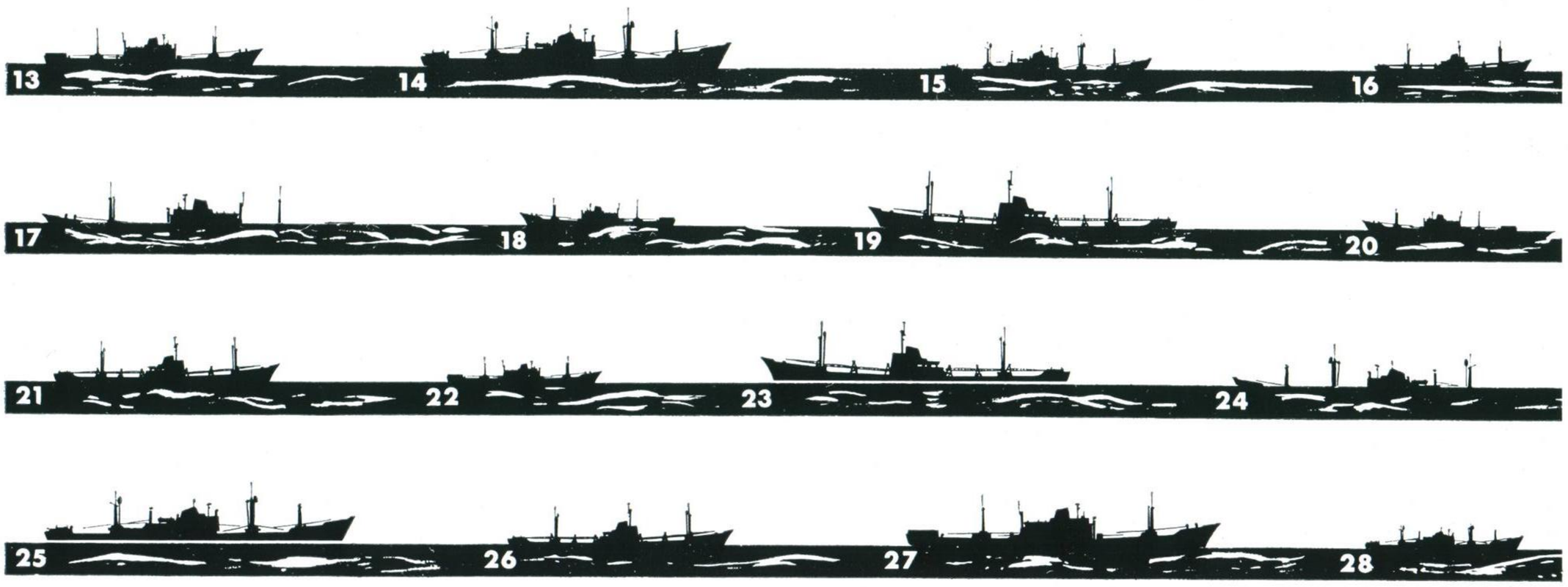


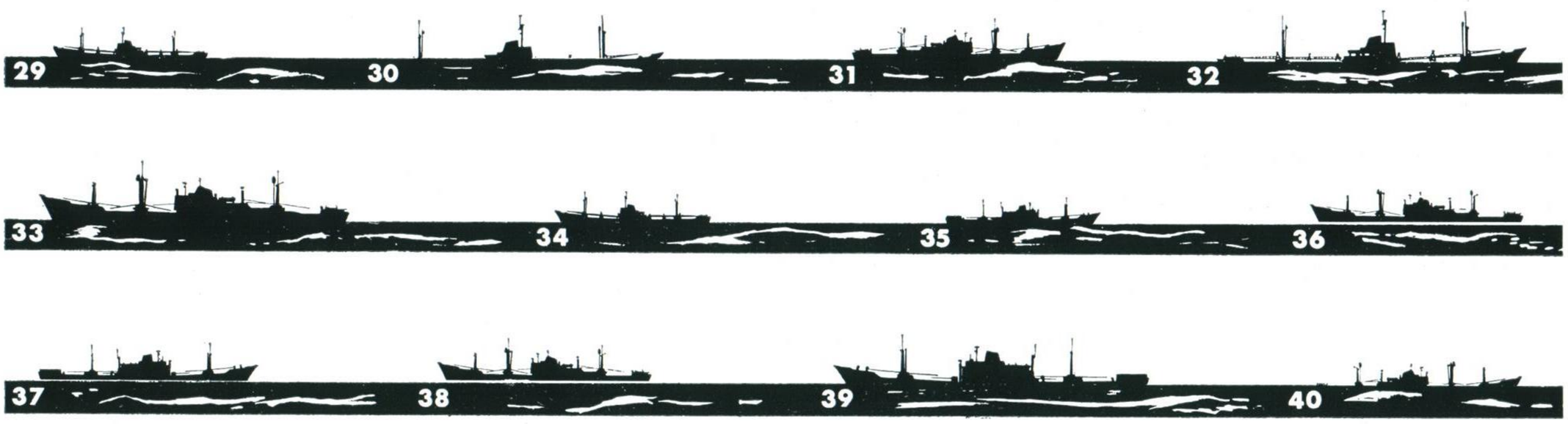
Solnechnogorsk Class

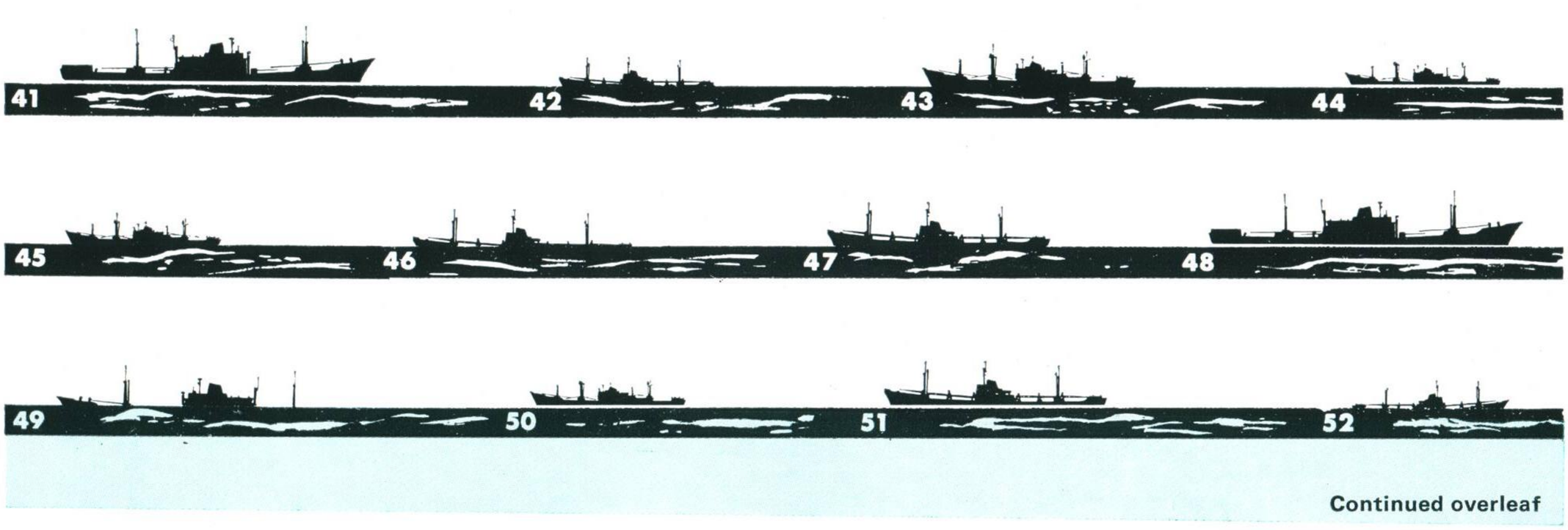
Modern Cargo Vessel
Overall length 505 feet
9,900 G.R. tons





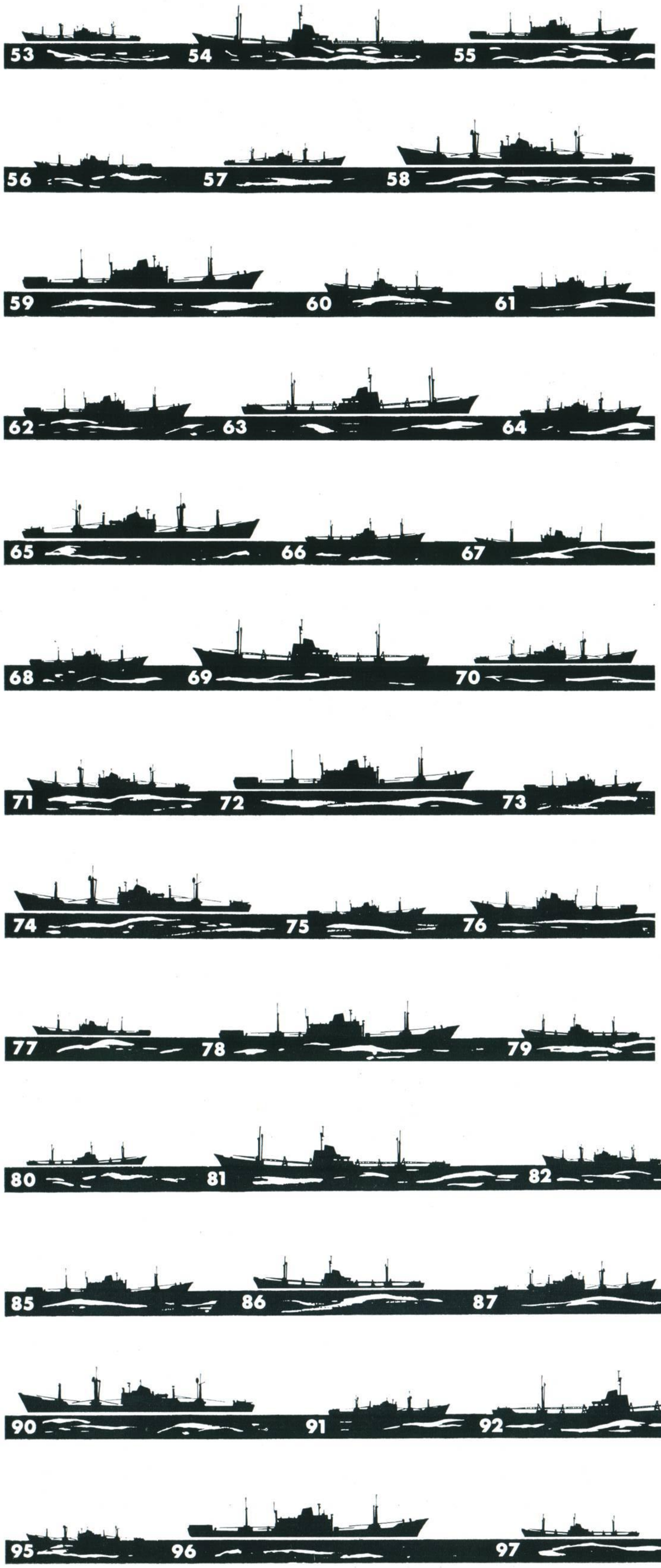


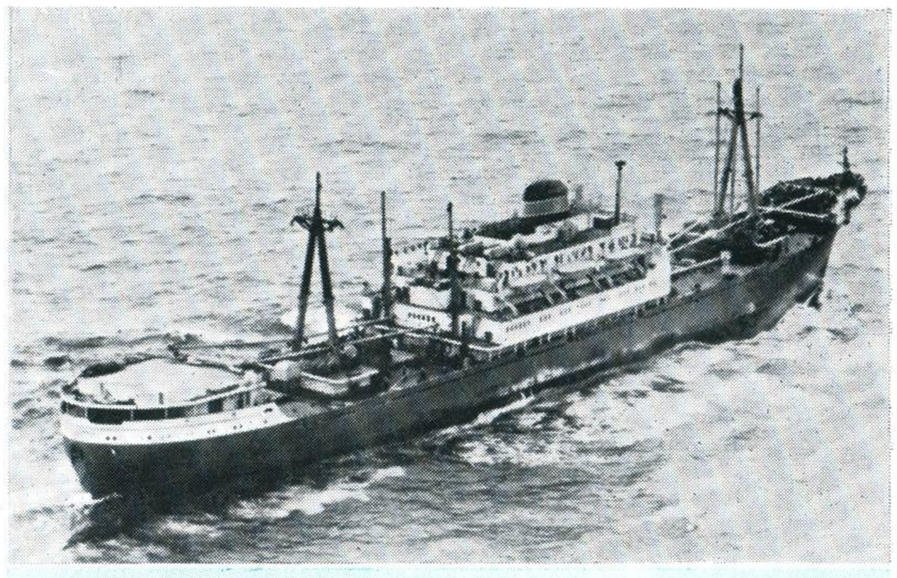




Continued overleaf

Merchantmen of the U S S R — No. 13 — continued

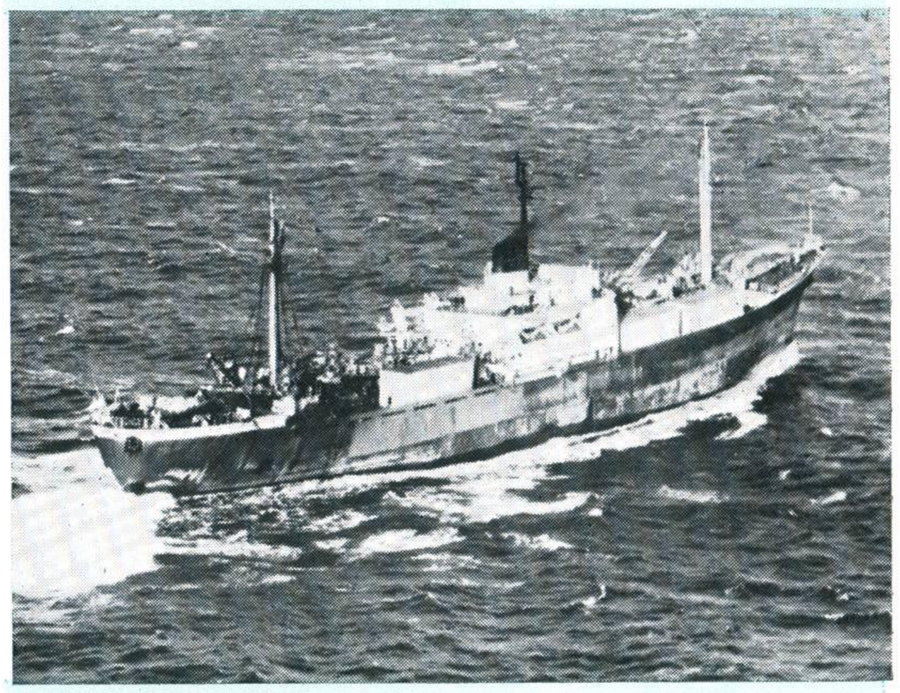




Chukotka Class



Solnechnogorsk Class



Metallurg Class

IN PASSING

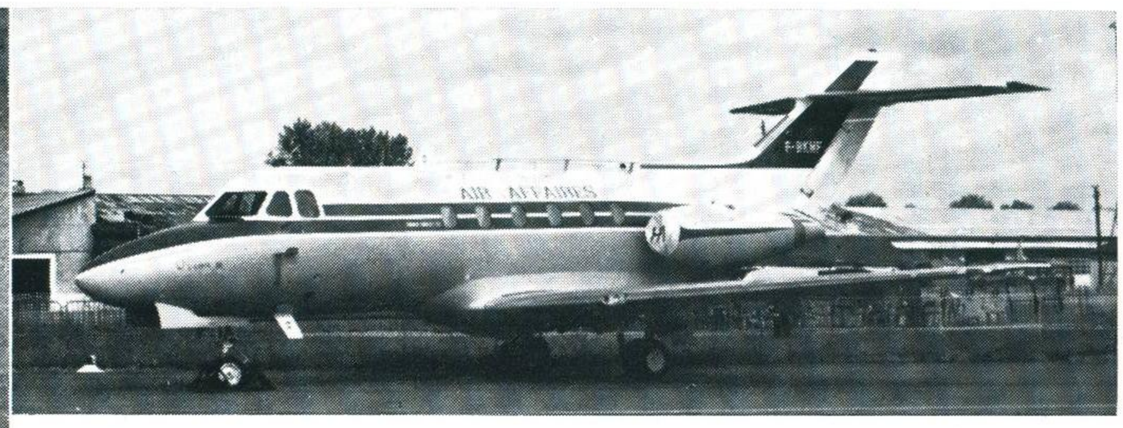
ISLANDER—A NEW NAME





At this difficult time for the British aircraft industry it is refreshing to feature a new manufacturer, the Britten Norman Company of Bembridge Airport, Isle of Wight. Their first aircraft, the BN-2, is designed as a replacement for such rugged and economical aircraft as the Dragon Rapide. Its name, Islander, is both appropriate and exclusive and thereby most suitable as a reporting name.





DOMINIE—OLD AND NEW

As related in the initial lesson of this edition, the D.H.89 Dragon Rapide, which became Dominie in R.A.F. and R.N. service, reverts to its original name for all reporting purposes. Until recently the Dragon Rapide was used by B.E.A. and many are still flying on executive work.



FALCON—A RE-NAMING

At the 1963 Paris Salon the Dassault executive twin-jet, in the same class as the Dominie, bore the name Mystère 20 (over cabin door) but at the 1965 Salon this type has the name Falcon (on the tail fin) which is now acceptable for reporting.



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.**

CENTURION







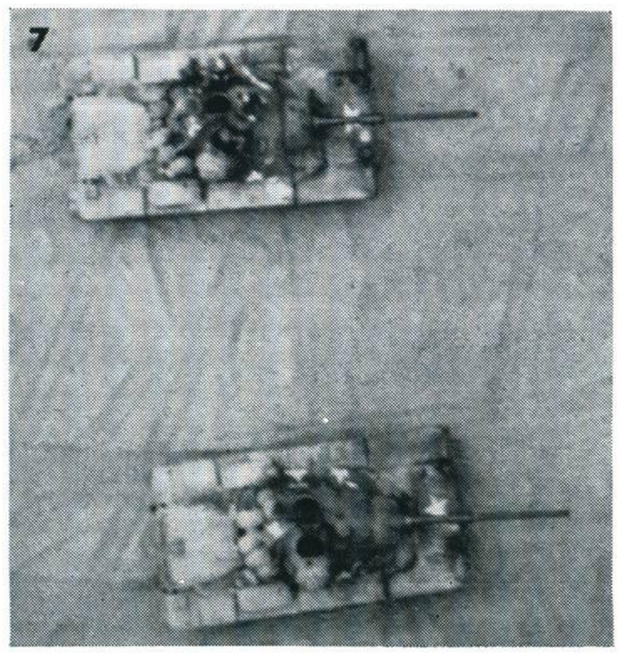






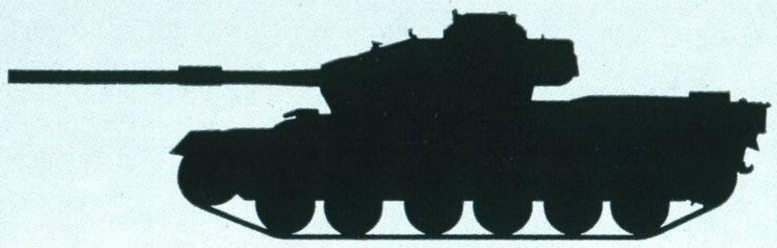












The demand for more powerfully armed tanks has led to a progressive up-gunning of the Centurion tanks used by the British Army and other services. The original version, brought out in 1945, was armed with a 76·2-mm 17-pounder. Later models have been armed with the 83·4-mm 20-pounder. Now, the Centurions are armed with the 105-mm gun and these more heavily armed versions are the subject of this lesson.

The 105-mm gun has been mounted on the Centurions from the Mk. 9 onwards and it has also been used to re-arm the earlier versions, from the Mk. 5 on. The same British-designed gun has also been adopted for the U.S. M60 tank, subject of a lesson in March 1964 edition, and for the Leopard battle tank, being produced for the German Army, as well as the Vickers 37-ton battle tank developed for India.

The up-gunned Centurions have other improvements in addition to their powerful armament but these make little difference to their external appearance. The 105-mm gun can be distinguished from the earlier 20-pounders by its larger diameter barrel and the eccentric location of the fume extractor on the barrel. Otherwise the Centurions retain their characteristic angular turret, and their skirting plates which normally partly cover the road wheels.


9

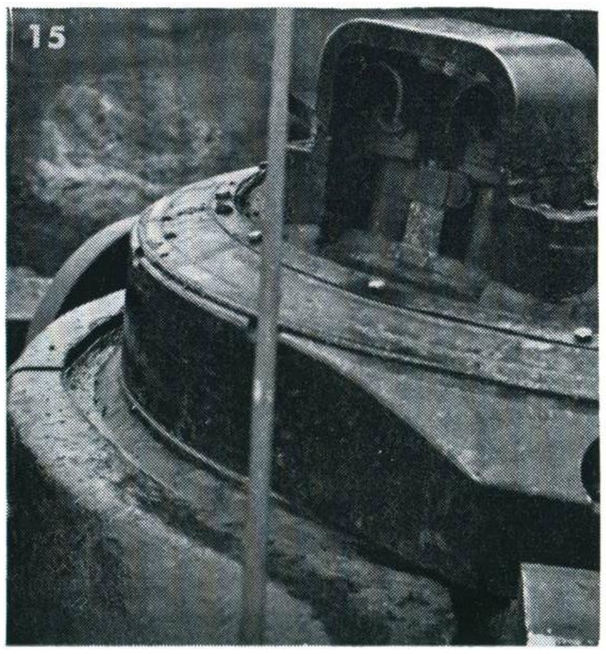

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14


15


16

Continued overleaf

CENTURION continued

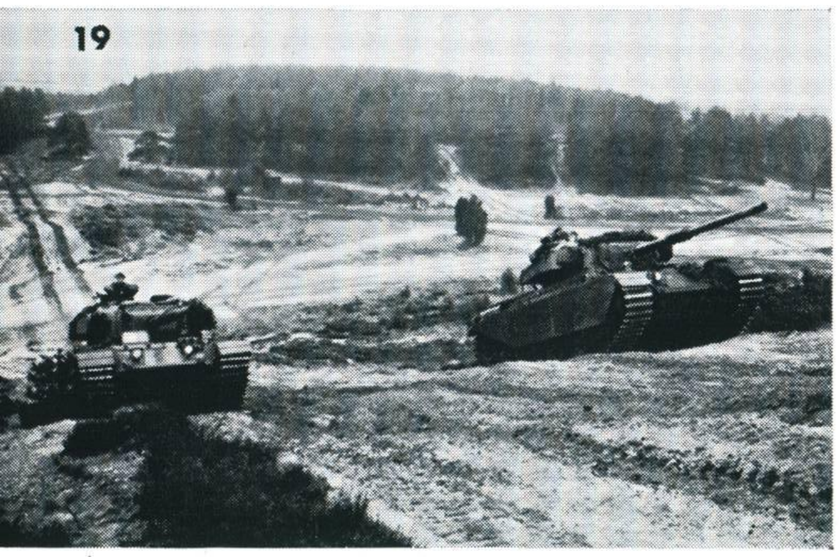


Solutions on the cover



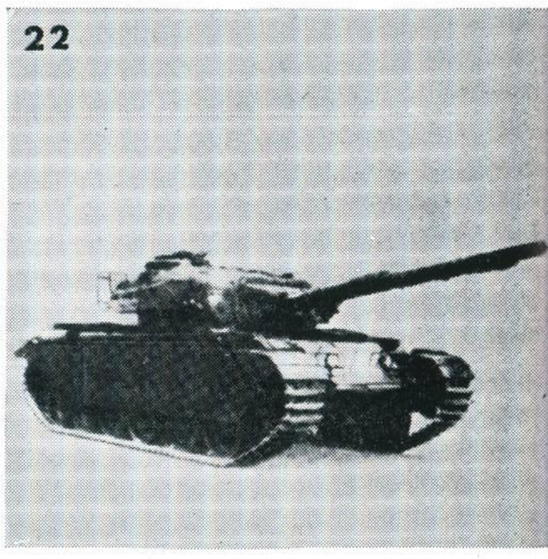




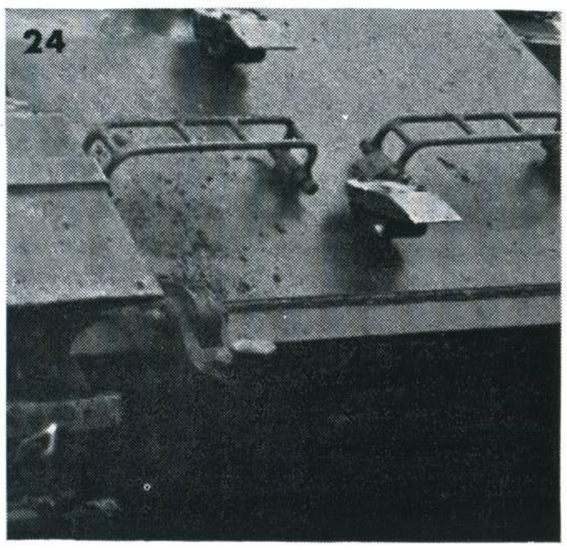




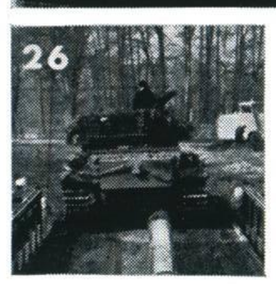




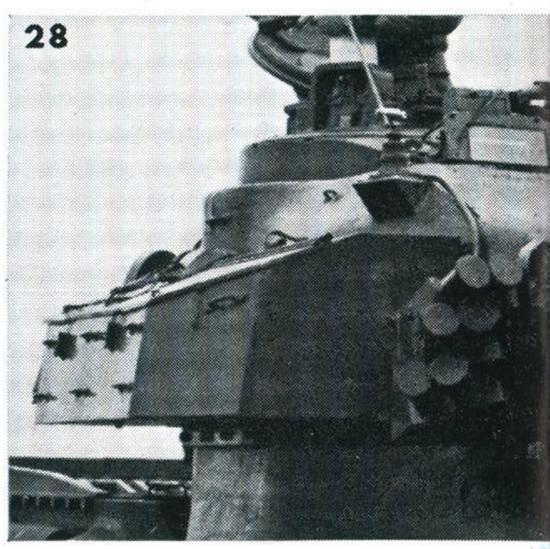




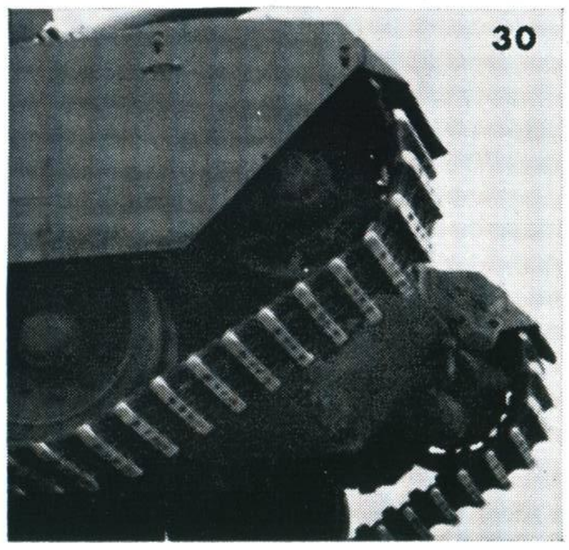


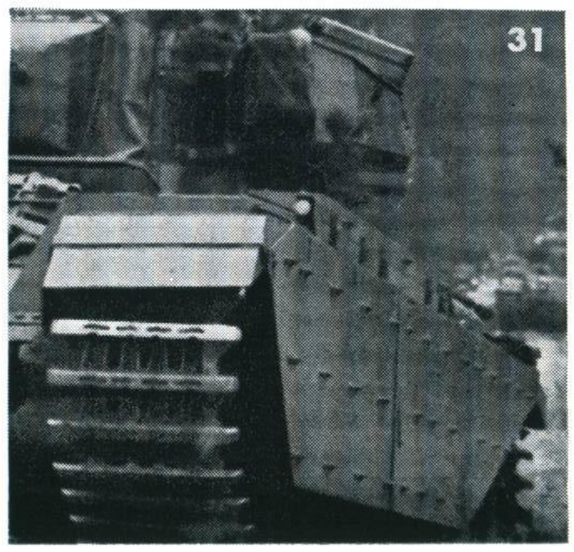














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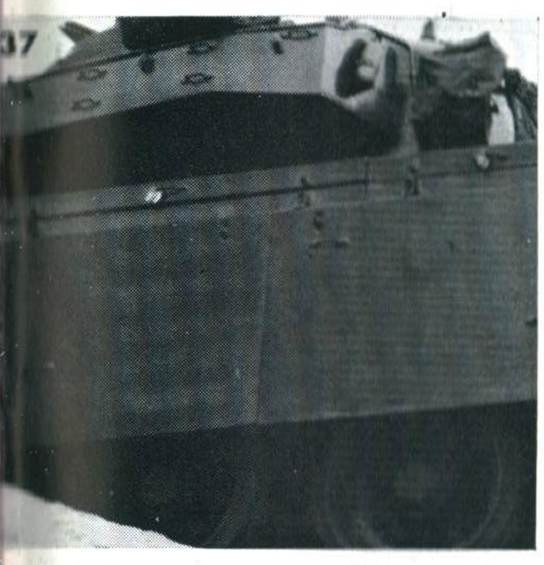


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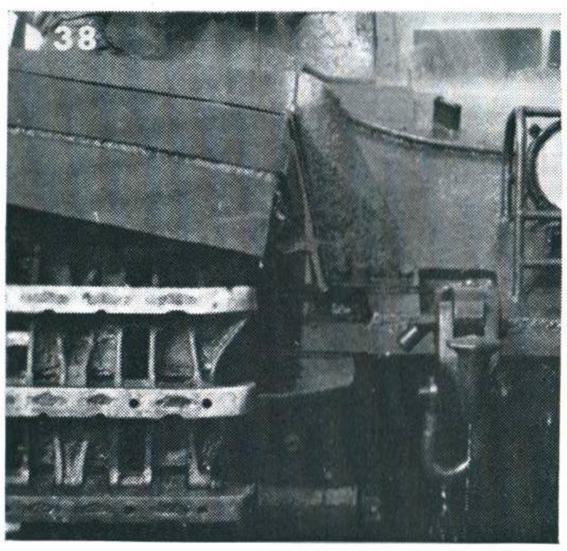
36



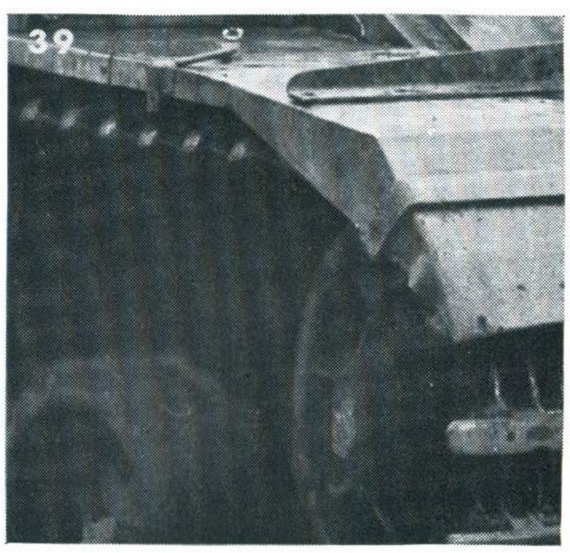
37



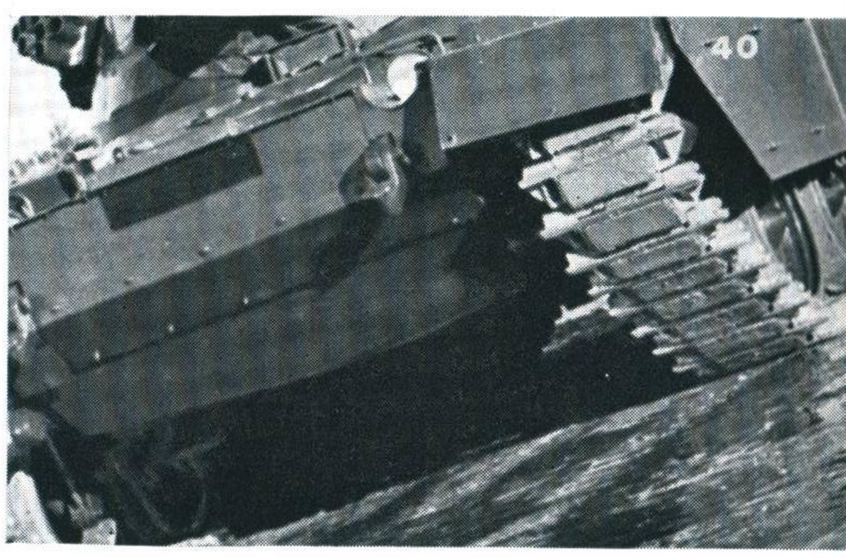
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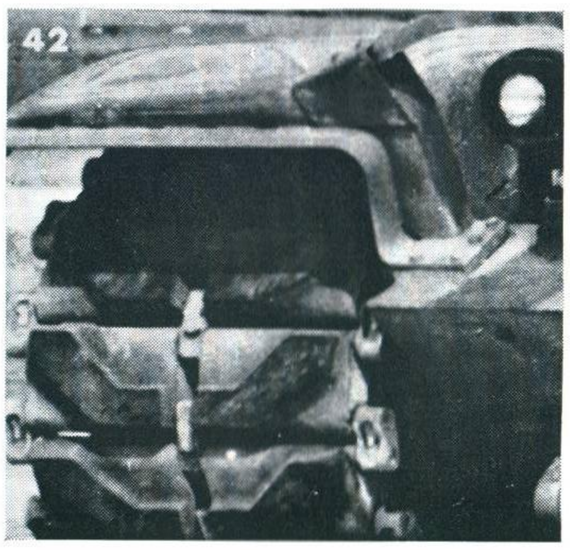
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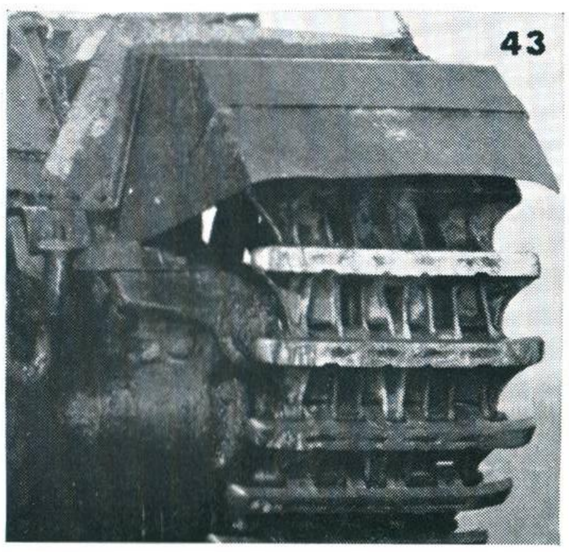
41



42



43



44





Cover Photo: Fiat G91s of the Italian Air Force aerobatic team are shown streaming their national colours of red, white and green and the view above gives a close-up of an individual team aircraft. Fiat G91s delivered from the factory specially equipped for display team use have been designated G91PAN.

SOLUTIONS TO TESTS AND EXERCISES

Page 228

DOMINIE

All targets are of **Dominies** (or **HS125**s reported as **Dominies**) except for No. 7 which is a **Falcon** (ex-**Mystère 20**, see page 247) and No. 27 which is a **Trident.**

Page 232

PIPER CUB

All targets are of **Piper Cubs** (including **Super Cubs**) except No. 8 which is a **Bird Dog** and No. 29 which is an **Auster.**

Page 235

TESTING TIME

1 Hercules
2 Vulcan B.2
3 Beverley C.1
4 Dornier Do27
5 Vautours
6 Lansens
7 Andover (HS748)
8 Comet 4
9 Cleat
10 Brewer
11 Hastings
12 Noratlas
13 Jet Provosts
14 Dominie (HS125)
15 Alouette III
16 Farmers
17 Herald
18 Orion
19 VC10
20 Dornier Do28
21 Brigadyr
22 Fiat G91
23 Bison
24 Pembroke (in air) Twin Pioneer (on ground)
25 Dominie (HS125)
26 F-104 Starfighter
27 Madge
28 Sea Vixen FAW.1s
29 Gnat T.1

Page 236

AGUSTA BELL 204—IROQUOIS

All targets are of **Iroquois** (including **Agusta Bell 204s**) except No. 10 which is a **Hiller E4.**

Page 248

CENTURION

All targets are of **Centurion** tanks except as follows: Nos. 7 & 18 **M60**s, No. 40 **Chieftain** and No. 42 **M60**

A New Name: The Piper PA-31 executive aircraft has been named the Navajo (pronounced Narva-ho). Later models are expected to have longer engine nacelles and revised window arrangement. With separate crew compartment, refreshment bar and lavatory this type may well find favour as a VIP transport.

Page 244

MERCHANTMEN OF THE U S S R—No. 13
CHUKOTKA . METALLURG . SOLNECHNOGORSK

No.	Class
1	Solnechnogorsk Class
2	Metallurg Class
3	Chukotka Class
4	Metallurg Class
5	Solnechnogorsk Class
6	Metallurg Class
7	Chukotka Class
8	Solnechnogorsk Class
9	Chukotka Class
10	Solnechnogorsk Class
11	Chukotka Class
12	Chukotka Class
13	Chukotka Class
14	Solnechnogorsk Class
15	Solnechnogorsk Class
16	Metallurg Class
17	Chukotka Class
18	Chukotka Class
19	Metallurg Class
20	Chukotka Class
21	Metallurg Class
22	Chukotka Class
23	Metallurg Class
24	Chukotka Class
25	Solnechnogorsk Class
26	Metallurg Class
27	Chukotka Class
28	Solnechnogorsk Class
29	Metallurg Class
30	Metallurg Class
31	Solnechnogorsk Class
32	Metallurg Class
33	Solnechnogorsk Class
34	Metallurg Class
35	Chukotka Class
36	Solnechnogorsk Class
37	Chukotka Class
38	Solnechnogorsk Class
39	Chukotka Class
40	Solnechnogorsk Class
41	Chukotka Class
42	Metallurg Class
43	Solnechnogorsk Class
44	Solnechnogorsk Class
45	Solnechnogorsk Class
46	Metallurg Class
47	Metallurg Class
48	Chukotka Class
49	Chukotka Class
50	Solnechnogorsk Class
51	Metallurg Class
52	Metallurg Class
53	Solnechnogorsk Class
54	Metallurg Class
55	Chukotka Class
56	Chukotka Class
57	Solnechnogorsk Class
58	Solnechnogorsk Class
59	Chukotka Class
60	Metallurg Class
61	Chukotka Class
62	Chukotka Class
63	Metallurg Class
64	Solnechnogorsk Class
65	Solnechnogorsk Class
66	Metallurg Class
67	Chukotka Class
68	Chukotka Class
69	Metallurg Class
70	Solnechnogorsk Class
71	Solnechnogorsk Class
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74	Solnechnogorsk Class
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79	Metallurg Class
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89	Chukotka Class
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91	Solnechnogorsk Class
92	Metallurg Class
93	Solnechnogorsk Class
94	Metallurg Class
95	Solnechnogorsk Class
96	Chukotka Class
97	Metallurg Class
98	Solnechnogorsk Class
99	Metallurg Class

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RIGA CLASS DESTROYER ESCORTS

1 Riga I	18 Riga I	35 Riga I	52 Riga I	69 Riga II	86 Riga II
2 Riga II	19 Riga II	36 Riga II	53 Riga II	70 Riga II	87 Riga I
3 Riga II	20 Riga I	37 Riga I	54 Riga II	71 Riga I	88 Riga II
4 Riga I	21 Petya	38 Riga II	55 Riga II	72 Riga II	89 Riga I
5 Petya	22 Riga II	39 Riga II	56 Riga II	73 Riga II	90 Petya
6 Riga II	23 Riga I	40 Riga II	57 Riga II	74 Riga I	91 Riga I
7 Riga II	24 Riga II	41 Riga I	58 Riga I	75 Riga II	92 Riga II
8 Riga I	25 Riga II	42 Riga II	59 Riga II	76 Riga I	93 Riga II
9 Riga I	26 Riga I	43 Petya	60 Riga II	77 Riga II	94 Riga II
10 Riga II	27 Riga II	44 Riga II	61 Riga II	78 Riga II	95 Riga II
11 Riga II	28 Riga I	45 Riga II	62 Riga I	79 Riga II	96 Riga I
12 Riga II	29 Riga I	46 Riga II	63 Riga II	80 Riga I	97 Riga II
13 Riga II	30 Riga I	47 Riga II	64 Petya	81 Riga II	98 Riga I
14 Petya	31 Riga II	48 Riga II	65 Riga II	82 Riga II	99 Riga I
15 Riga I	32 Petya	49 Riga I	66 Riga II	83 Petya	
16 Riga II	33 Riga II	50 Petya	67 Riga II	84 Riga II	
17 Riga I	34 Riga I	51 Riga II	68 Riga II	85 Riga II	



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