THE ROYAL OBSERVER CORPS

RECOGNITION *Journal*

and R.O.C. GAZETTE

Vol. I OCTOBER 1959 No. 10

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RECOGNITION JOURNAL

AND R.O.C. GAZETTE

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The following address was given by Major-General S. F. Irwin, C.B., C.B.E., Assistant Under-Secretary of State, Home Office, to the Royal Observer Corps Camp at R.A.F. West Malling on 3rd July, 1959.

"A Vital Part of that Deterrent"

Commandant, Royal Observer Corps, Ladies and Gentlemen:

"IN THE LAST TEN YEARS during which I have been concerned with the defences of this country in some particular form, I have had an opportunity of meeting the Royal Observer Corps in its various Headquarters, at the Sector and Group Operations Rooms and in other places where you do your stuff all over the United Kingdom. I have seen you on the job, right from the days when we began after the last war, seen where you would work in the future at Fighter Command and elsewhere, but I have not previously had an opportunity of seeing so many of you all together in one place doing your training, and I have been most gratified today to have been able to avail myself of the opportunity to come down here, see how you train, the conditions under which you live while you are training, and what that training consists of.

I have been greatly impressed, for example, with the smartness of your turn-out for the Guard of Honour which you did me the honour to have on parade when I arrived here this morning. We often hear a lot these days about "spit and polish" and whether it is worthwhile looking smart, being smart, being clean and well turned out. As an old soldier and an Army Officer who was for most of his life chased round the barrack square and afterwards chased other people to see that they did their stuff, I have personally never been in any doubt about the efficiency of any Corps or Regiment which gave attention to being smart on parade and being good on parade. For this particular reason: as you will know—and this is important in the Royal Air Force or the Royal Observer Corps, or in whatever Corps it may be—anything which has been properly cleaned has been looked at very specially, and if there is anything wrong with it, what is wrong with it will be spotted, and that is just one of the reasons why if you see a Corps well turned out, well looked after, and which has done itself up as best it can, you can be quite certain, Ladies and Gentlemen, you may be very certain indeed, that its equipment, upon which the lives of men and women will depend in war, is most likely in the same good order. So let us not imagine that just because we see a Corps properly turned out, looking after itself, having taken some trouble to look well on parade, that it means anything more than that it is a good, efficient Corps and that it is equally capable of doing its operational job well in war.

Now I know, Ladies and Gentlemen, that I come to you today, I suppose, as some kind of a civil servant. From the time I left the Army I have been serving with the Home Office, and in that connection I have come into contact with you in your work. I am not in any way apologetic about having been a soldier because I have been reminded that in the history of the Royal Observer Corps, right at the beginning there was indeed a Major-General—a Major-General Ashmore, I think his name was—who first carried out the experiments which led in the long run to the formation of this Corps, so that even though your strong connection has always been with the R.A.F. and with Fighter Command, I kind of feel that in some small way the Army has had a very small share in your history. You have had now some thirty-odd

years of experience, and we who look at you from the outside and see what you are doing can see the value of that experience in some of the new work which you have been called upon to undertake. In these days there is no Corps, whether it belongs to the Royal Navy, the Army or the Royal Air Force who, in the attempt to sort out the future pattern of our defences, may not have in some way or other to modify their role, give emphasis to some other aspect of that role, and so on. We must not worry about that; we have to keep up with the times, whatever they may be. I hope, however, that you will continue always to preserve your role as a part of the Royal Air Force, and, in particular, your connections with Fighter Command, which have stood you in such good stead in the past.

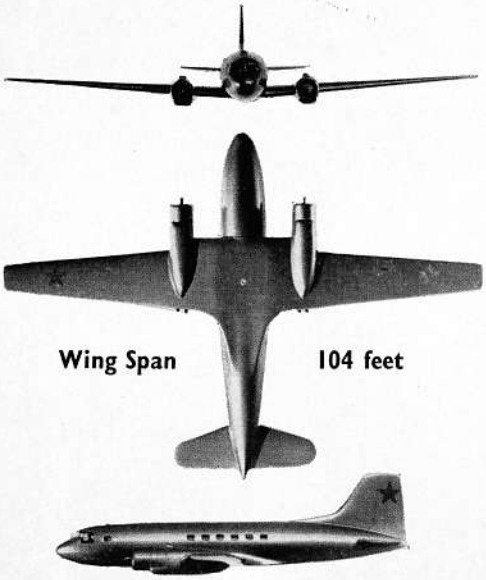
We have noticed, because you have had this very valuable experience, the energy, facility and ability with which you have turned to some of the new tasks which we have asked you to do in other fields and the progress which you have made with them. That progress over the last few years has been quite remarkable and I am able to tell you, from all those scientists who depend on the work which you do, whether they are in the Royal Navy or the Army or the Royal Air Force or in the Home Defence, that they have observed and remarked upon the keenness and ability with which you have made that progress.

Now you have, of course, these new roles to perform, all of very great importance. They are not, let me tell you, just roles which concern the defence only of this country, although they concern that in particular. I want you to realise that this key organisation with the Royal Observer Corps in this country—which to my personal knowledge is far away ahead of any comparable organisation in any other NATO country today, many of which I have visited and seen, and certainly as far ahead of anything on the other side of the Iron Curtain —is, as you know, being brought more and more into co-ordination with the other NATO countries on the Continent. You probably know that in Exercise "Cloud Dragon," in which you played such a large part quite recently, we were for the first time bringing the countries on the Continent all the way round the North Sea from Norway to Denmark, and along the coast of Northern Europe, into this organisation, and the information which you were giving out all over the United Kingdom was, as you know, being passed across to the Continent for them to make the best use of.

Now in the future we shall be continuing that, and we shall ask you to give your help as you have given it in the past, without in any way, I hope, detracting from your primary role of giving your first assistance to the Royal Air Force in any requirements they may have, but who will equally rely upon you for this valuable information about fall-out. I want you to believe, Ladies and Gentlemen, that the voluntary work which you are doing is of such vital interest to this country in its defences that without it, what they call "the deterrent" could hardly exist. You belong as part of the Royal Air Force, whose responsibility it is to handle this deterrent and so convince any enemy of this country that if he undertakes the foolishness of attempting to attack this country, then his country will quite certainly be destroyed. You, with the information that you provide, are a part of that deterrent and if the time ever comes when this country cannot find volunteers among its men and women who are prepared to give up their time for this kind of job, just as you are doing now, this country will have lost the will to defend its freedom; but in my experience of the men and women of this country, of this I am convinced, that they will always be prepared to come forward, give up their time and do their job, as you are doing now, in the hope, and with the assurance, that by doing so they can in the future preserve their freedom.

Commandant, Ladies and Gentlemen, may I congratulate you on what I have seen today and say how very pleased I am to have come down here and met you and seen the excellent work which you are doing. I wish you the very best of good luck in the future. Thank you very much."

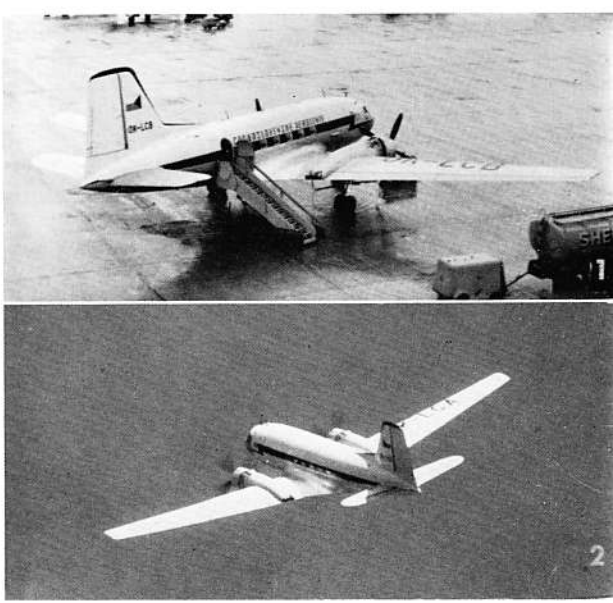
Training for the Fall-out Reporting Role.

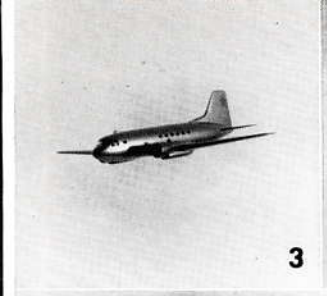


The Ilyushin IL-14 Transport

CRATE

THE IL-14 CRATE, together with its predecessor the IL-12 Coach, have for long been workhorses on the military and civil routes of Russia and her chief satellites. They might be considered the Convair-liners of the Soviet bloc (and indeed are not dissimilar to look at). Although their place is beginning to be taken on the major routes by later and more sophisticated jet and turboprop designs, the Crates are still very active and likely to remain so for some time, for a great quantity of them were built. It will pay to get to know them via this lesson, which is performed in the usual manner with pencil and paper at the ready. Record all your answers *in full*: just "yes" or "no" will not help the name to stick in your mind, and that after all is the object of the exercise.

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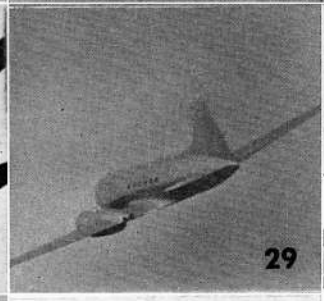
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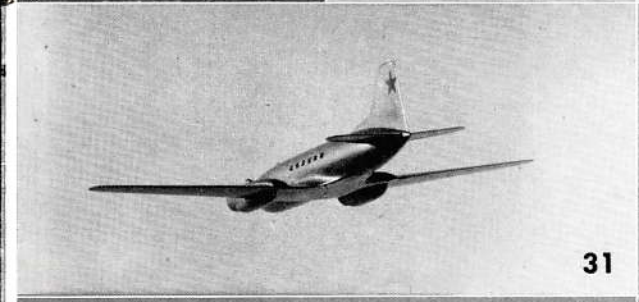
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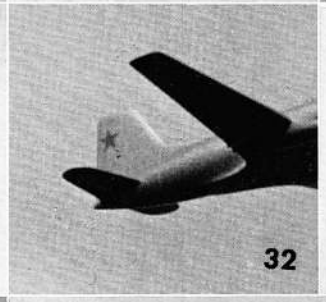
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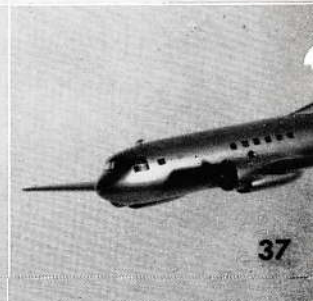
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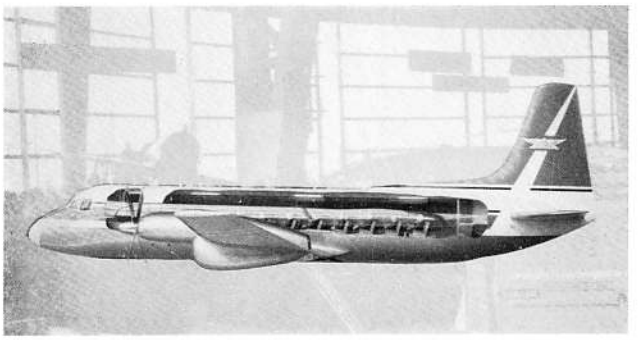
Briefs

A collection of items of news and interest which may help your recognition.

Gnews of Gnats

The Government of India has officially cleared the Folland Gnat Mk. 1 for entry into Indian Air Force squadrons, following three years of intensive joint Folland-I.A.F. flight development. The Gnat Mk. 1 is armed with twin 30 mm. cannon and can carry a comprehensive range of rockets and bombs on underwing pylons. Follands are to supply 25 Gnats, and a further number (about 100, it is believed) will be built under Indian licence by Hindustan Aircraft Ltd.

* * *



Success Story

A private venture in the highly competitive "DC-3 replacement" field has achieved success as it were in one jump, before the prototype has even flown. A British design—the Avro 748, powered by two turboprop engines—it has been ordered by the Indian Defence Ministry and will be manufactured in India. Though actual numbers have not been disclosed the order is a substantial one and has been estimated at something like 100 machines. An order by an independent British operator, B.K.S. Air Transport Ltd., for two machines with an option on a further three, was announced during the S.B.A.C. Exhibition in September. A. V. Roe hope that the first Avro 748 will be flying in time for the 1960 Display. The photograph shows the Avro 748 in model form. It had previously been announced that three Avro 748s, as well as three Handley Page Heralds, are to be acquired for B.E.A. by the Ministry of Supply.

* * *

Change of Name

The sea-going version of the Air-Fouga Magister jet trainer, previously known as the Esquif, has now been given the new name Zephyr.

* * *

First of Six

The first of British European Airways' six Comet 4Bs has made its maiden flight. The 4B is distinguished from the Comet 4 by a longer fuselage, shorter wing span and the absence of external wing fuel tanks. It carries 102 passengers as opposed to 81 in the Comet 4.

* * *

One Over the Eight

Offered for service in 1963 is the Douglas DC-9 four-jet transport, visually speaking a baby brother to the DC-8. Claimed to combine the speed and comfort of the latter with the operating economy of a DC-6B, the swept-wing DC-9 has accommodation for 68 first-class passengers. Dimensions of the DC-9 (with DC-8 figures in brackets) are: span, 94 feet (140 feet); length, 103 feet (150 feet); height to top of fin, 34 feet (42 feet); maximum take-off weight, 120,000 lbs. (265,000 lbs.).

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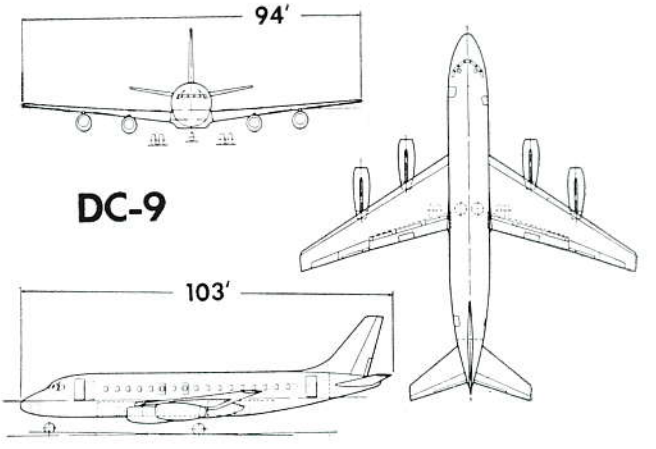

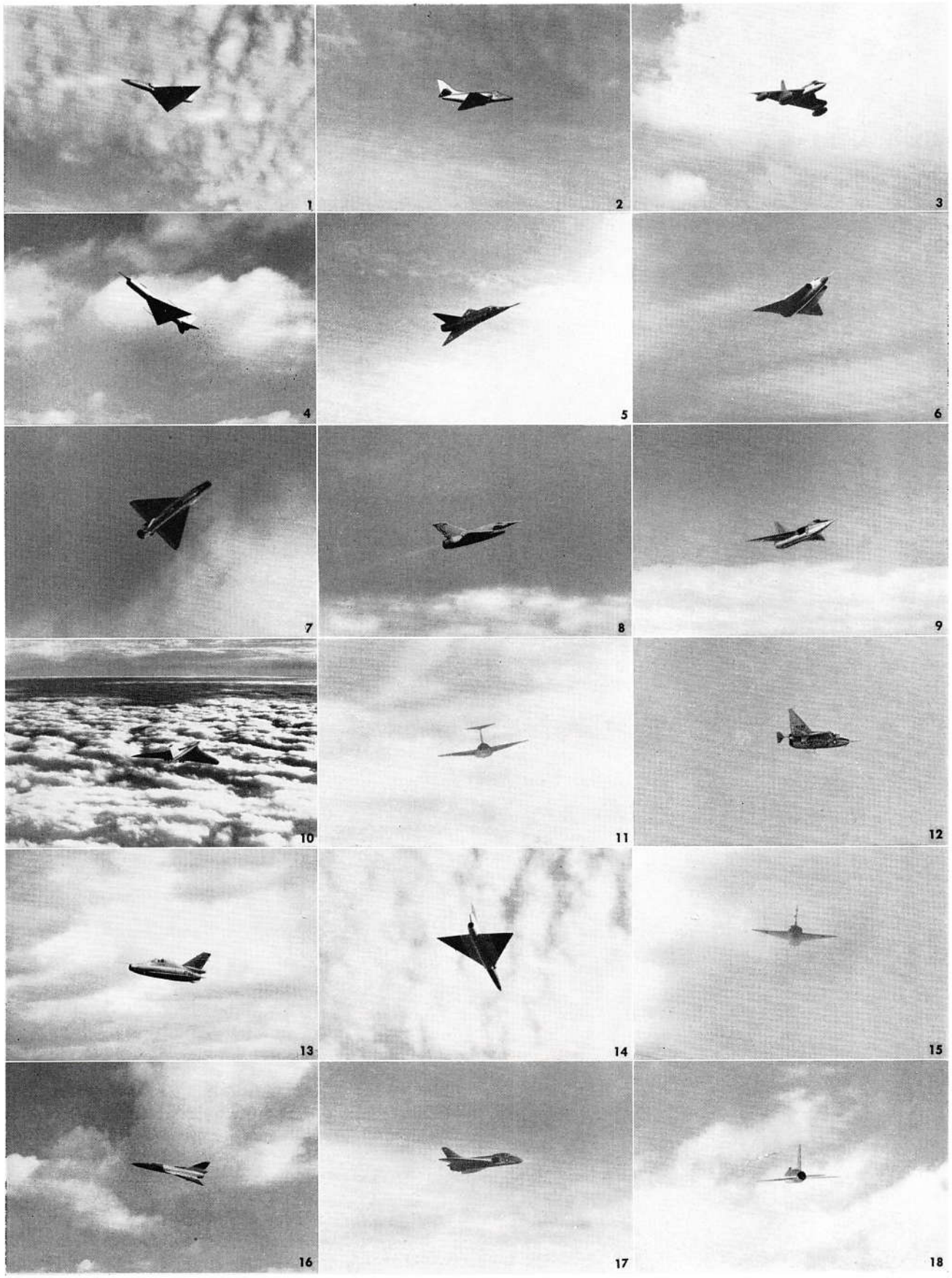

THREE-CORNERED FIGHT

Can you win on points?


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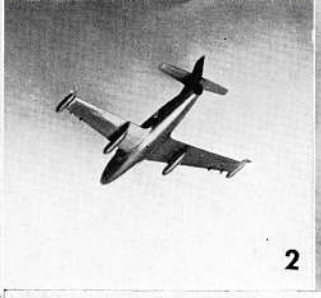
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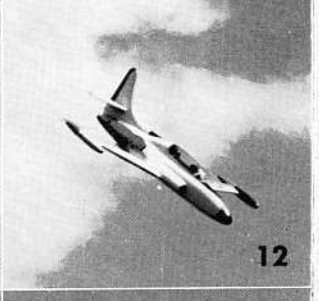
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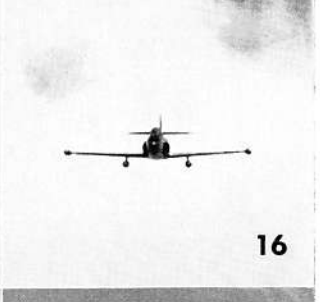
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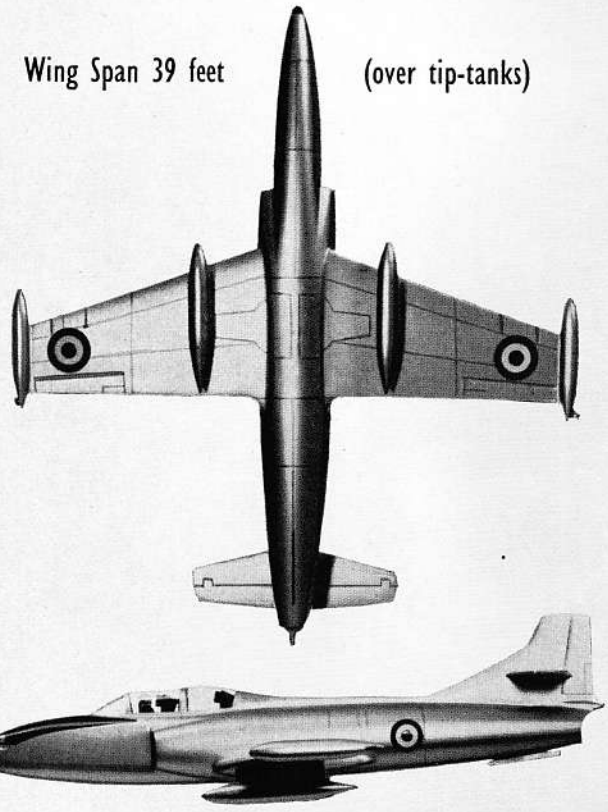
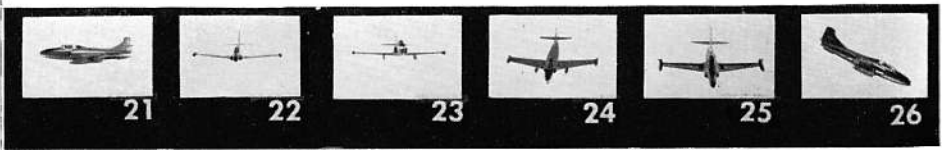
Wing Span 39 feet (over tip-tanks)



FIAT G-82

LIKE THE SEA STAR, the G-82 is also a development of its home country's first post-war jet aircraft and serves with the Italian Air Force chiefly as an advanced trainer, though it is potentially a useful ground attack type as well. The fatter body and squat fin are quite good clues.

If you suffer from identifitis—that is if you frequently will quickly put you right. In fact, a dose of this kind aerophilia is in the rudest of rude health. The opera feel a thing.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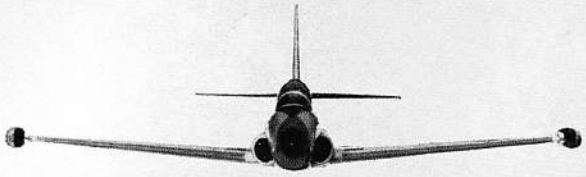
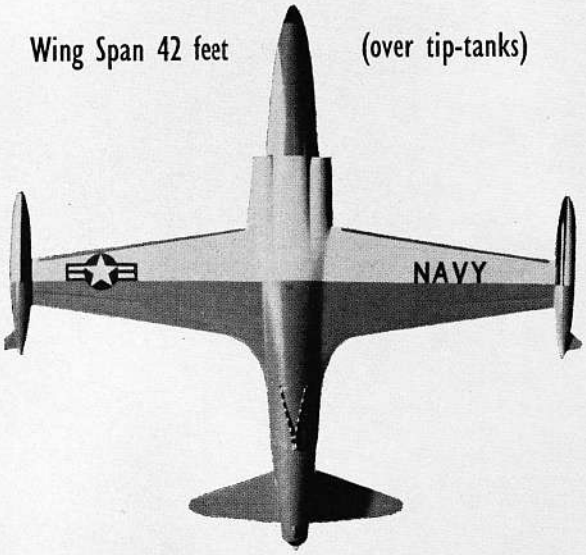
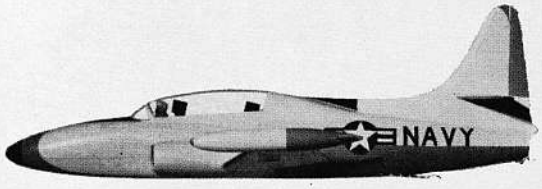
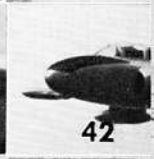


Wing Span 42 feet (over tip-tanks)





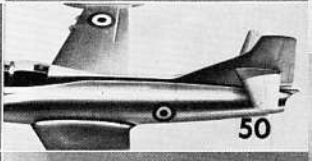


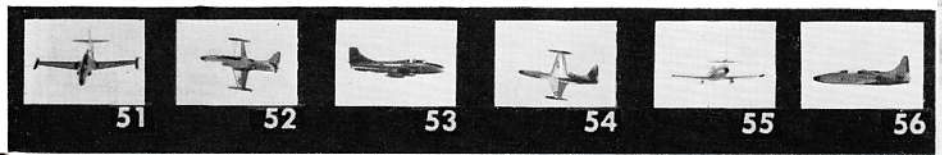
SEA STAR

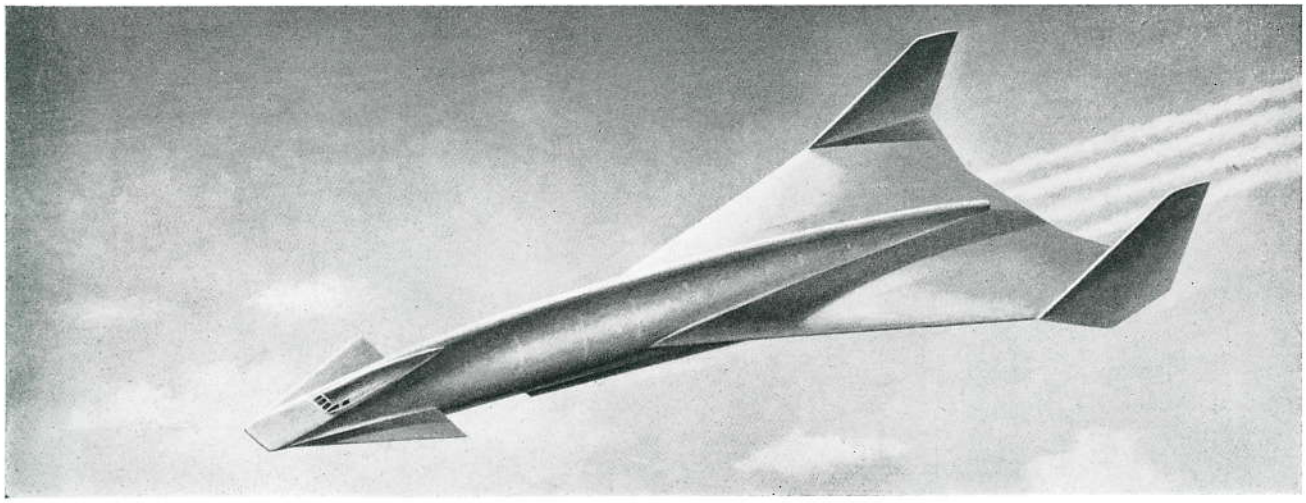
A SHIPBOARD MULTI-PURPOSE TRAINER, the Lockheed T2V-1 Sea Star is a descendant of the original Shooting Star, America's first operational jet aeroplane, and clearly shows its lineage. A large number is in production and service with the U.S. Navy. The humped cockpit and tall tail are often useful pointers.

sea stars or your fiat are killing you—then this medicine of refreshing tonic will do you no harm even if your tion is quite painless, we can assure you—you won't

Answers are on the rear cover.







What's All the Fuss About?

NOBODY in the aircraft industry would quarrel with the idea of bringing air travel within the reach of a wider public—after all, it means a wider market for the industry's wares and more money in its pocket. But *is* the industry really making an effort to bring air fares down? Isn't the man in the street entitled to think that our designers and constructors are more concerned about pushing up the speed of their products than with an attempt to make them more economical? In short, what *is* all this fuss about more speed, about supersonic airliners and such?

Before we begin, we must accept that speed is, without any doubt, a commercial asset. Comfort, courtesy and other considerations all play their part, but in the first analysis what any airline operator sells against rival means of transport is his ability to move his client from point A to point B quicker than they can. And increased speed is likely to continue to sell so long as it is offered at a price which the customer will pay—in terms of safety and comfort, as well as in cash—and so long as customers are forthcoming.

There is a considerable untapped passenger market among people who might be well satisfied with air travel at relatively low speeds (say, up to 400 m.p.h.) if they could get it cheaply enough, but if even present day speeds are beyond them because they cannot afford an airline ticket, how can they be "got at"? The propeller-driven airliner has almost reached its limit in terms of speed—a modern turboprop airliner of today can fly about as fast as a World War 2 fighter—and it may be almost impossible to build "ordinary" aircraft that are materially cheaper to operate than the Britannias, the DC-6s and the Viscounts of today or the Electras and Vanguards of tomorrow.

Therefore we must turn to the jet airliner, and already we have speeds of up to 600 m.p.h. from the Boeing, Douglas and Convair giants and the smaller Comets and Caravelles. Fair enough—but why do we suddenly start talking in terms of 1,200 m.p.h. and upwards instead of making haste slowly and pushing the speed up steadily a bit at a time? The answer is quite straightforward and the reasons for it are twofold. Firstly, it is a simple fact that the shape and structure of current jet airliners will not stand up to speeds much above about 650 m.p.h., so you have to re-design them anyway. But the second and most important reason is this: at subsonic speeds the "lift" of an aircraft is about 18 times the "drag," but once it enters the transonic region (*i.e.*, just below and just beyond the speed of sound) it drops to about eight times, and remains at roughly that proportion as the speed rises. The net result is a sharp drop in both the range an airliner can fly and the load it can carry—a drop, in fact, to a point where it could not even pay its way, far less attract more customers and bring fares down.

How can this problem then be overcome? It is estimated that the payload and range loss incurred in passing Mach 1 could be recovered by about Mach 3·5 (roughly 2,600 m.p.h.) by taking advantage of a type of aero-engine whose efficiency shows a steady increase at higher supersonic speeds. Motorists know that by raising the compression ratio of their engine they can get more power out of the same amount of fuel and the same size of engine, and the same is true of jet engines. Today's jet airliners have a ratio of about 10 to 1, achieved largely by mechanical means, but at higher speeds the air entering the engine is compressed far more by the forward motion of the aircraft. At Mach 2 the ratio achieved by this latter means ("ram-effect" it is called) on its own is 7 to 1 without mechanical assistance, and at Mach 3 is as high as 28 to 1.

The ramjet engine—a jet engine relying entirely on ram-effect to achieve a high compression ratio—thus has much to recommend it. It gets more efficient as it goes faster, and valuable weight can be saved by eliminating the mechanical compressor and its turbine. Airframe heating will bring new problems at about Mach 4·5, it is true, but a Mach 3 or 3·5 airliner can be developed and built by established methods, although much research must still be done first.

So—by increasing the speed you get more work per gallon of fuel and pound of engine weight; because of this you can carry more passengers per aircraft per flight; and because you fly faster your aeroplane can do more work in a given time. All this should lead to lower operating costs, and in turn to cheaper airline tickets. *That's* what all the fuss is about. Time will prove whether it works out that way or not.

● Our thanks are due to Bristol-Siddeley Engines Limited for providing the material for this talking-point. The heading picture is a Convair artist's idea of how you might be crossing the Atlantic in the 1970s.

Rotor diameter 36 feet

Fuselage length 17 feet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SUD-AVIATION
DJINN

THIS kind of Djinn doesn't come out of a bottle, although there is something distinctly bottle-like about its shape. It is being supplied now to French distillery—sorry! artillery observation units and a few have been handed over to the West German Defence Ministry. Even the helicopter-conscious U.S. Army is studying it closely—indeed a compliment. Lesson rules here are the same as always—your answers in full on a piece of paper please, ours are on the rear cover.


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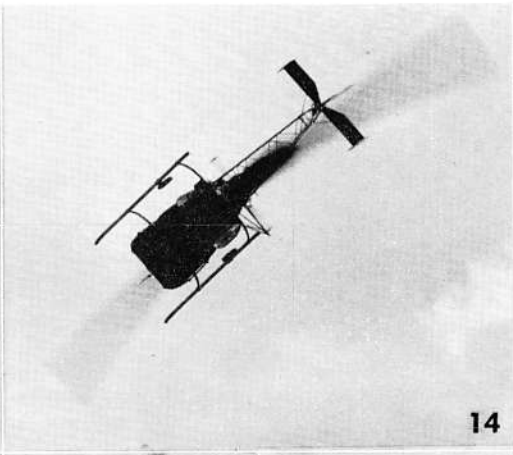
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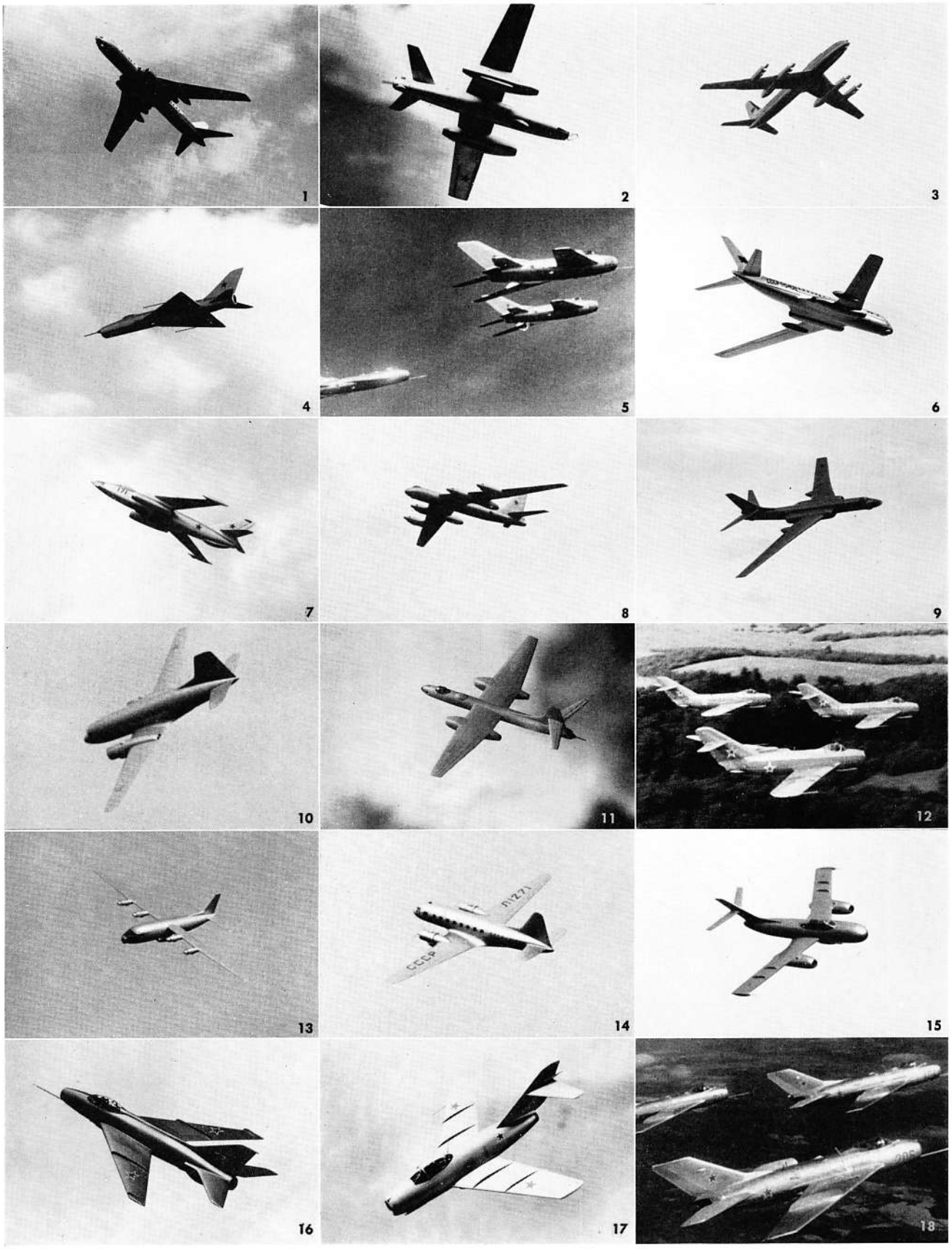

CODED COLLECTION

Can you de-cipher them?

PIONEER

Span 50 feet

Who's Who—4

This pair is one for the ground types, and artillery spotters in particular. Both the Pioneer and the Auster, in its various forms, are in operation in many parts of the world where they are performing extremely valuable service in many rôles. Learn them—or brush up on them—from the lesson below, using the silhouettes at the top as starting points in identifying the targets below. All answers written down in full please: ours are—on the rear cover.

AUSTER 9

Span 36 feet


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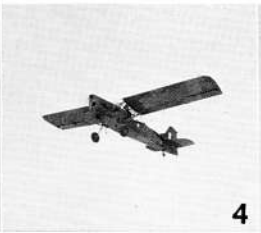
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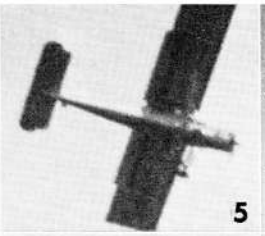
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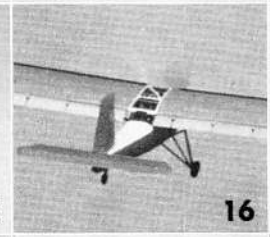
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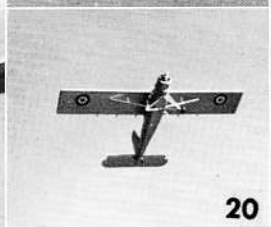
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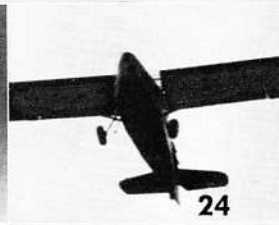
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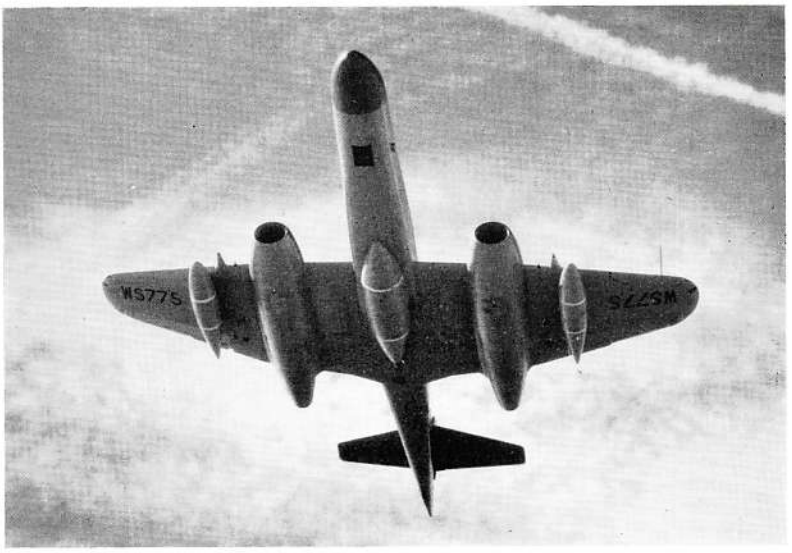
Refresher Course:—

The Armstrong Whitworth

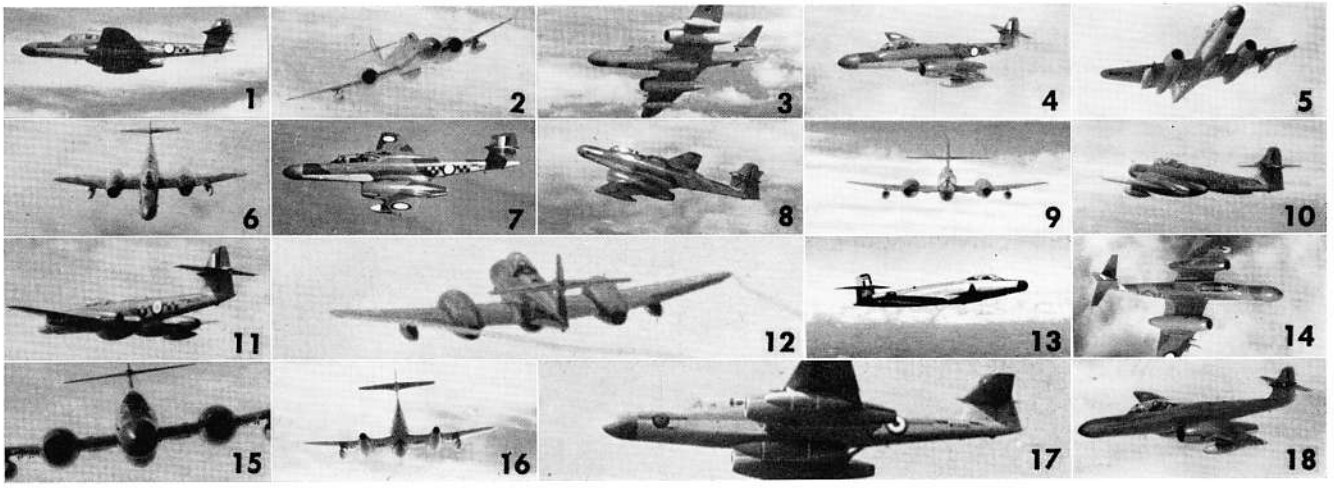
METEOR NF Mk. 14

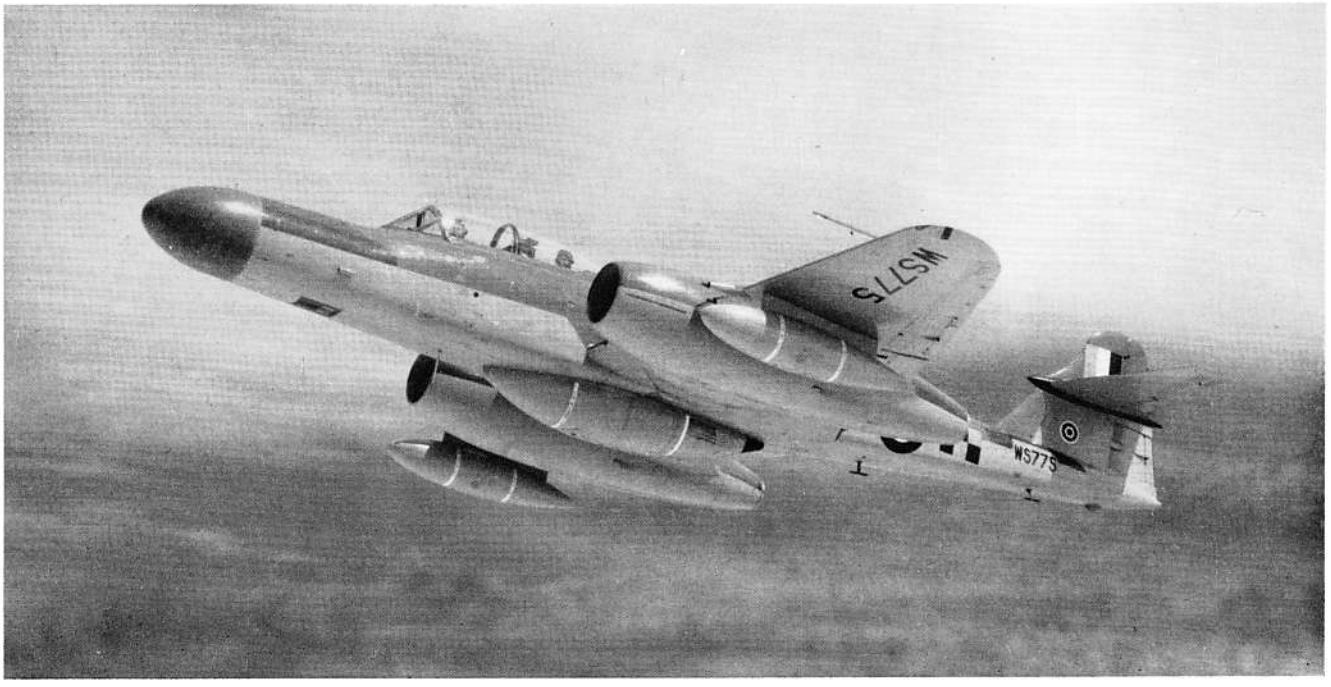
ALMOST the last of a long line of variants of the R.A.F.'s first jet fighter, the Mk. 14 Meteor was one of four all-weather versions developed by Armstrong Whitworth from the original Gloster design. Here is a brushing-up opportunity for anyone who was beginning to forget what it looked like.



Wing Span 43 feet

SPOT THE METEOR 14!



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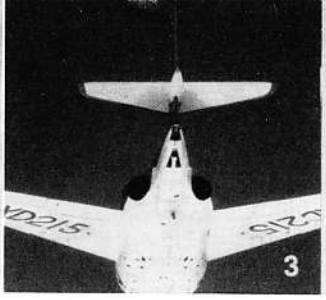

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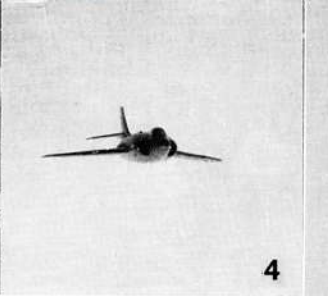
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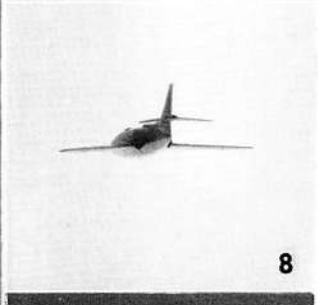
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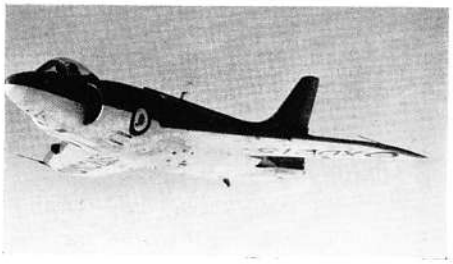

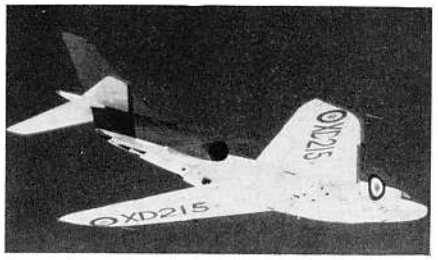


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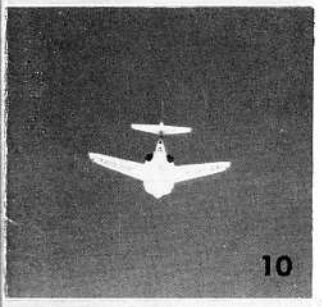
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END-ON : The Supermarine SCIMITAR

This powerful single-seat fighter is now operational with Fleet Air Arm squadrons, and previous lessons in identifying it appeared in the Journals of May 1957 and June 1958. However, just as there are more ways than one of killing a chicken, so are there different ways of identifying an aeroplane. End-on recognition can be one of the trickiest, so the lesson here is designed to give experience of this particular aspect. Procedure is just the same as in other kinds of lesson—paper, pencil, list of numbers, and all your results written in full. Watch for jokers, if any; answers on the rear cover.


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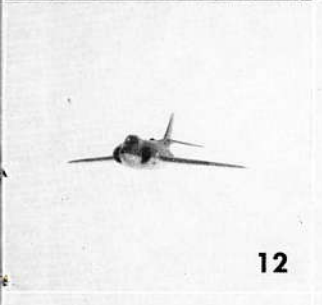
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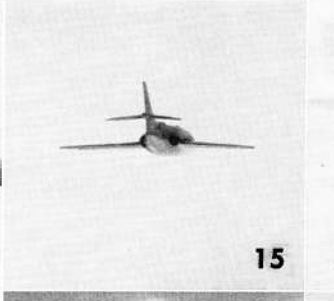
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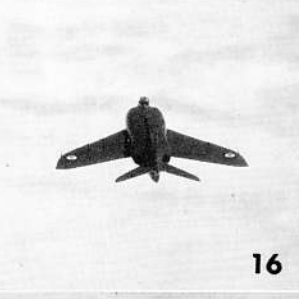
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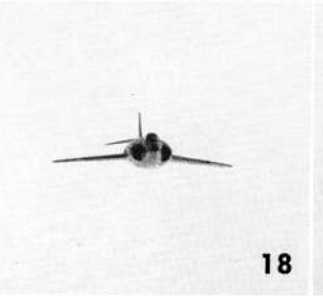
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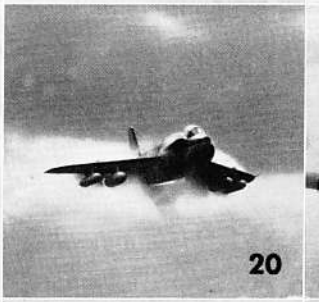
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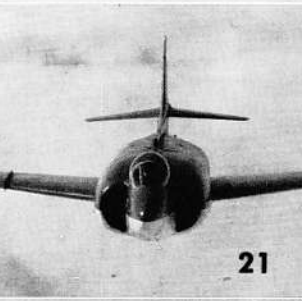
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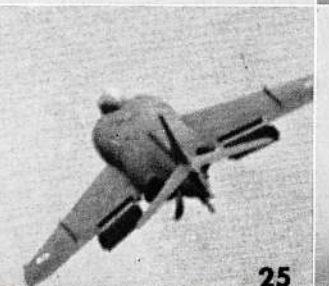
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Cover Photo: World Shrinker. A Boeing 707—City of Canberra—resplendent in the livery of Qantas Airways of Australia, on its first lengthy proving flight from its birth place Seattle, Wash., U.S.A. This aircraft will soon be in service on regular route San Francisco–New York–London, a distance of some 14,000 miles which will be covered in an elapsed time of 38 hours.

SOLUTIONS TO TESTS AND LESSONS IN THIS EDITION

SEA STAR and FIAT G-82

1. Fiat G-82	16. Fiat G-82	31. Fiat G-82	46. Sea Star
2. Fiat G-82	17. Fiat G-82	32. Sea Star	47. Fiat G-82
3. Sea Star	18. Sea Star	33. Fiat G-82	48. Sea Star
4. Fiat G-82	19. Fiat G-82	34. Fiat G-82	49. Sea Star
5. Sea Star	20. Sea Star	35. Sea Star	50. Fiat G-82
6. Fiat G-82	21. Fiat G-82	36. Sea Star	51. Sea Star
7. Fiat G-82	22. Sea Star	37. Sea Star	52. Sea Star
8. Sea Star	23. Fiat G-82	38. Fiat G-82	53. Fiat G-82
9. Sea Star	24. Fiat G-82	39. Fiat G-82	54. Sea Star
10. Fiat G-82	25. Sea Star	40. Sea Star	55. Fiat G-82
11. Sea Star	26. Fiat G-82	41. Sea Star	56. Sea Star
12. Sea Star	27. Fiat G-82	42. Fiat G-82	57. Fiat G-82
13. Fiat G-82	28. Sea Star	43. Sea Star	58. Sea Star
14. Sea Star	29. Fiat G-82	44. Fiat G-82	
15. Sea Star	30. Sea Star	45. Fiat G-82	

DJINN

Targets 11 and 18 are **Alouette II** helicopters, the rest are **Djinns.**

CODED COLLECTION

	Span in feet		Span in feet
1. Cooker	123	10. Crate	104
2. Beagle	68	11. Bosun	70
3. Cleat	177	12. Fresco	36
4. Fishpot	28	13. Cat	125
5. Farmer	32	14. Coach	104
6. Camel	115	15. Flashlight-A	41
7. Blowlamp	57	16. Faceplate	28
8. Bear	170	17. Fagot	33
9. Badger	112	18. Farmer	32

PIONEER AND AUSTER 9

1. Pioneer	13. Pioneer	25. Pioneer
2. Auster 9	14. Auster 9	26. Pioneer
3. Pioneer	15. Pioneer	27. Auster 9
4. Auster 9	16. Pioneer	28. Pioneer
5. Pioneer	17. Auster 9	29. Auster 9
6. Pioneer	18. Auster 9	30. Pioneer
7. Auster 9	19. Pioneer	31. Pioneer
8. Auster 9	20. Pioneer	32. Auster 9
9. Pioneer	21. Auster 9	33. Pioneer
10. Pioneer	22. Pioneer	34. Pioneer
11. Auster 9	23. Pioneer	35. Auster 9
12. Auster 9	24. Auster 9	36. Auster 9

METEOR 14

Target No. 13 is a Canadian **CF-100** fighter, the rest are **Meteor 14s.**

CRATE

All the target views are **Crates** except No. 12, which is a **Coach,** and No. 33, which is a **Convair 340.**

THREE-CORNERED FIGHT

	Span in feet		Span in feet
1. Delta Dart (F-106A)	38	10. Vulcan B Mk. 2	111
2. Skyhawk (A4D-1)	27½	11. Javelin F(AW) Mk. 1	52
3. Hustler (B-58)	57	12. Vertijet (X-13)	21
4. Fishpot	28	13. Gerfaut II	22
5. Mirage IIIA	27	14. Delta Dart (F-106A)	38
6. Draken (J-35A)	31	15. Delta Dagger (F-102A)	38
7. Durandal	21	16. Delta Dart (F-106A)	38
8. Griffon II	27	17. Skyray (F4D-1)	34
9. Fairey F.D.2	27	18. Fishpot	28

SCIMITAR END-ON

All the targets are **Scimitars** except No. 24, which is a **Folland Gnat.**

THOSE WERE THE DAYS!!

20,300 10/59

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