

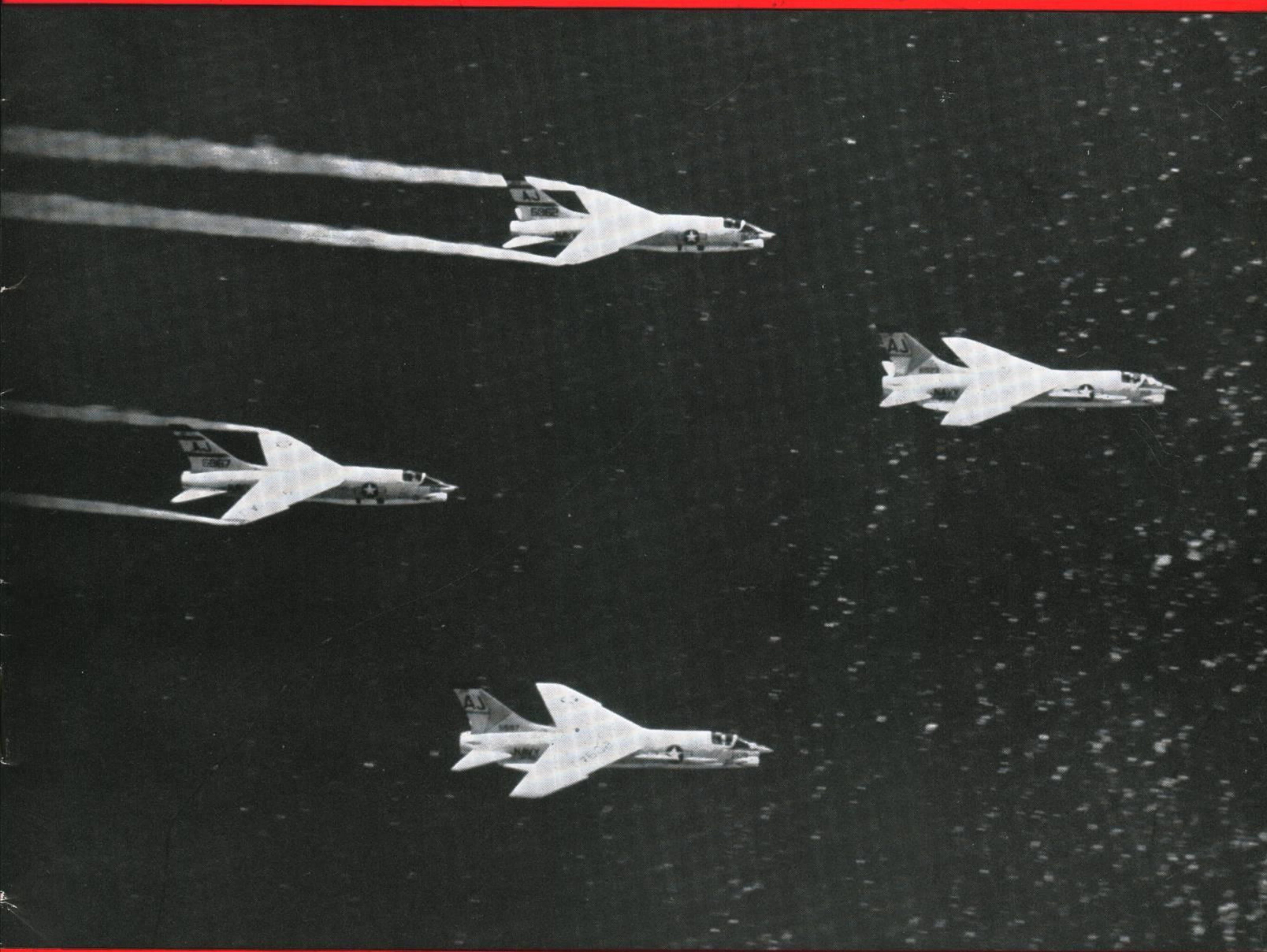
THE ROYAL



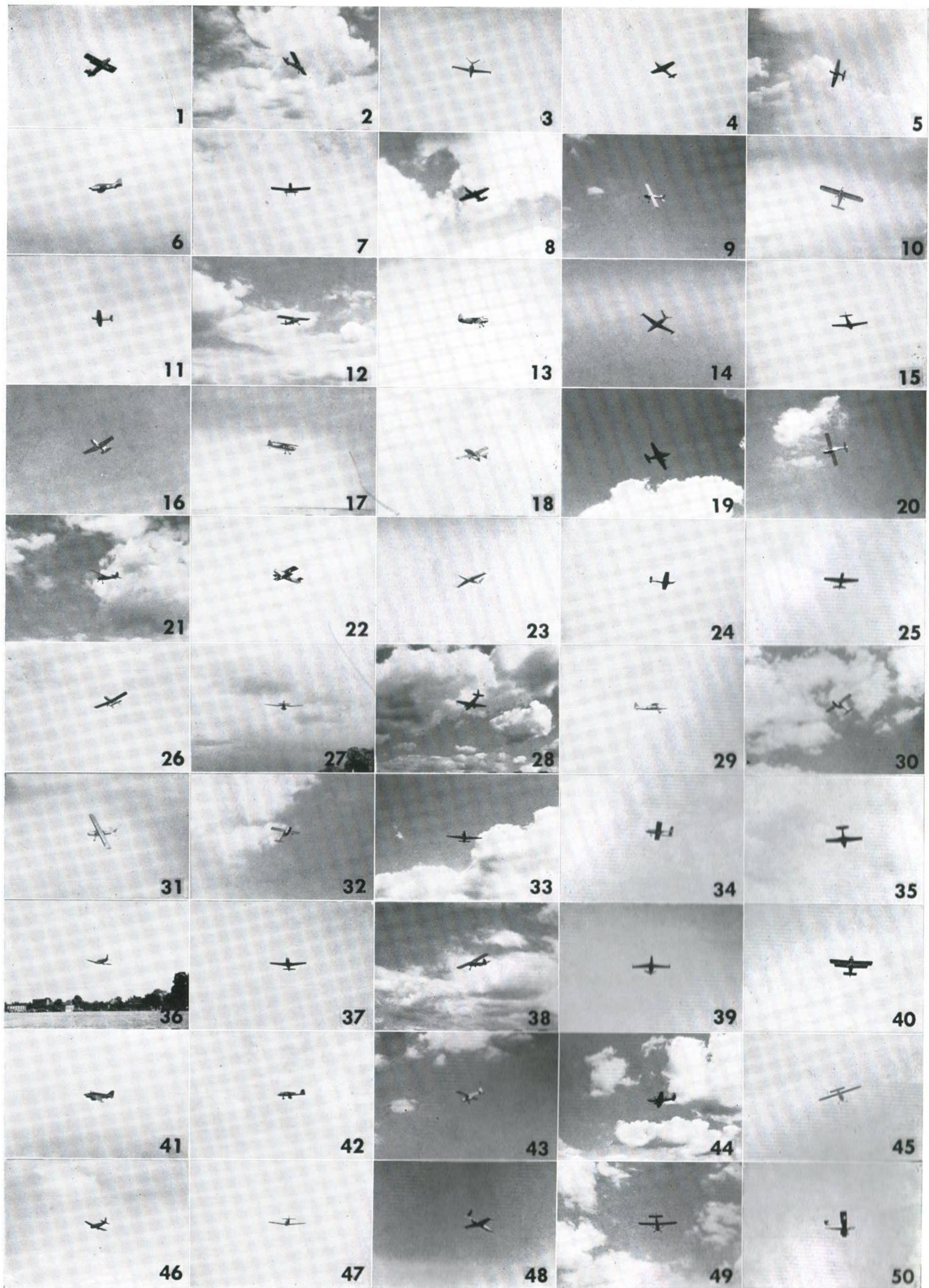
OBSERVER CORPS

# RECOGNITION

*Journal*  
and R.O.C. GAZETTE



Vol. 2 JUNE 1960 No. 6



## A Master Test

These are aircraft likely to be encountered at low altitude.



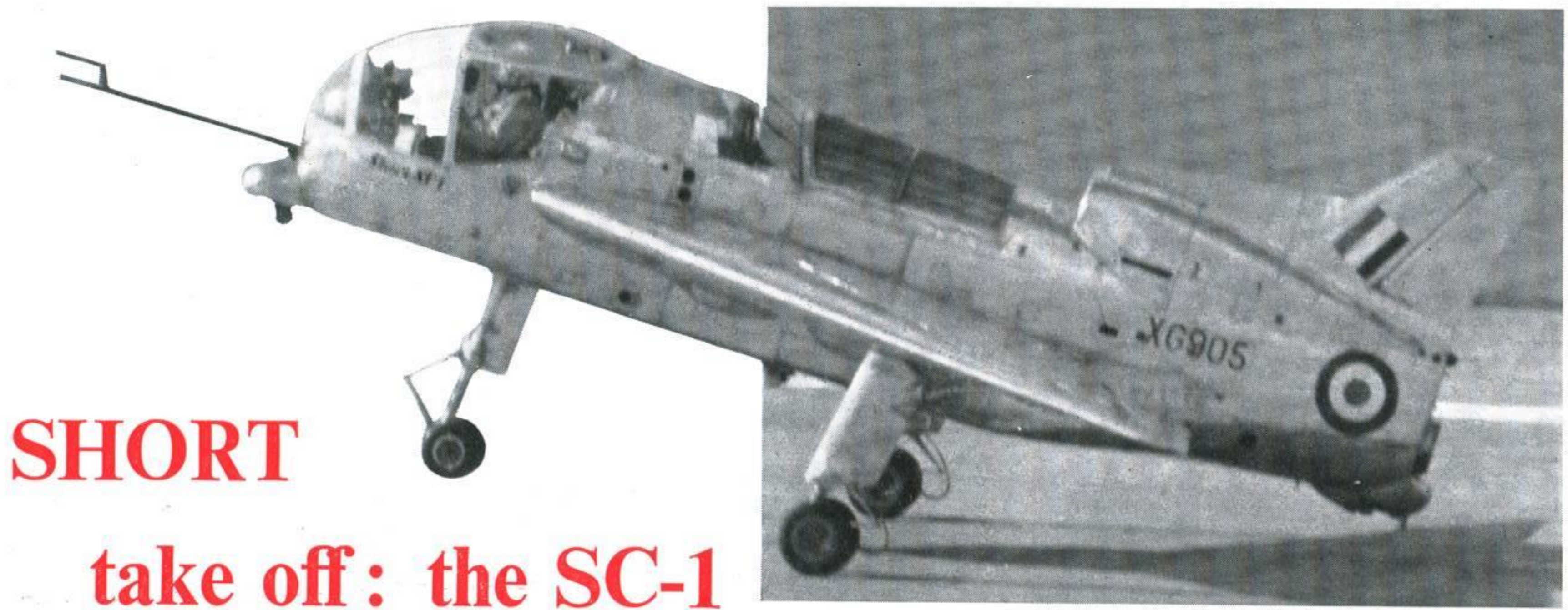
THE ROYAL OBSERVER CORPS  
 RECOGNITION JOURNAL  
 AND R.O.C. GAZETTE

The Royal Observer Corps Recognition Journal and Gazette is a monthly publication produced in the Department of the Assistant Chief of the Air Staff (Training), Air Ministry, and prepared in collaboration with the Ministry of Aviation (Air Technical Publications). Applications for copies must be submitted through the normal official publications supply channels—not to the Editorial Office or direct to the Air Ministry.

This publication is produced solely for official use and can not be sold to members of the public. Contributions and correspondence should be addressed in the first instance through the usual Corps channels to Headquarters, Royal Observer Corps, Bentley Priory, Stanmore, Middlesex.

Feature	Page
Crusaders over the Mediterranean (cover) ... ..	81
A Master Test (spotting test) ... ..	82
Short Take Off: the SC-1 (editorial) ... ..	83
*Lightning/Faceplate ... ..	84
*Who's Who? (Swift/Scimitar) ... ..	86
In Passing ... ..	87
Hunter T Mk. 7 (centrespread) ... ..	88
*Étendard IV-M ... ..	90
*Anti Sub Club (Neptune/Electra) ... ..	92
*"All Delta's Look Alike To Me!" (Javelin/Fishbed A)	94
Solutions to Tests and Exercises ... ..	96

\*Identification Lessons



**SHORT**  
**take off: the SC-1**

THE SHORT SC-1 made VTOL history recently at the Royal Aircraft Establishment, Bedford, when it became the first of its type to achieve a successful transition from hovering to the forward flight, and then to reverse the process.

A small delta-wing aircraft—it has a span of only 23 feet 6 inches—the SC-1 is powered by five Rolls-Royce RB.108 jet engines, four of which are mounted in a central engine bay for vertical lift, whilst the fifth exhausts horizontally at the tail giving thrust for forward flight. Stability is ensured by automatically regulated jets of air from nozzles positioned at the nose, tail and wing-tips. The air is bled from the engine compressors and the nozzles are fitted with shutters which automatically close or open to control the volume and power of the air jets. The pilot can, when necessary, take over from the autostabiliser system.

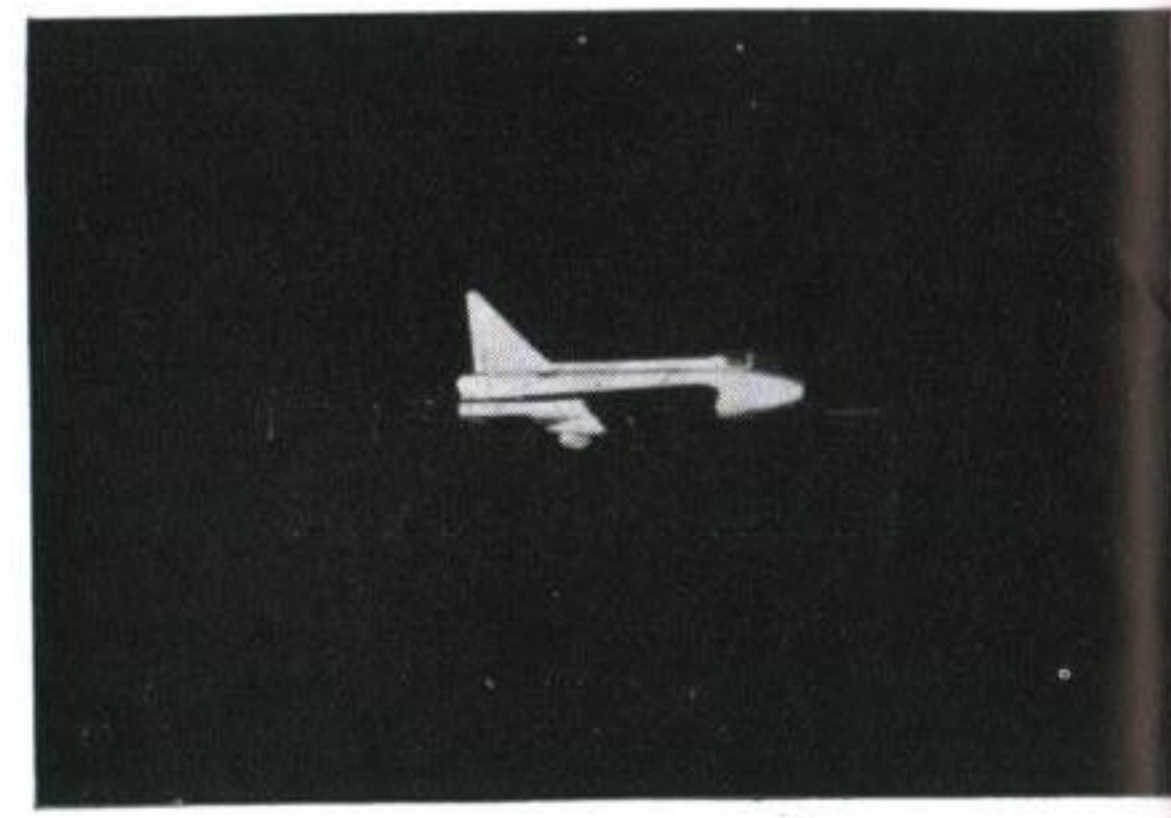
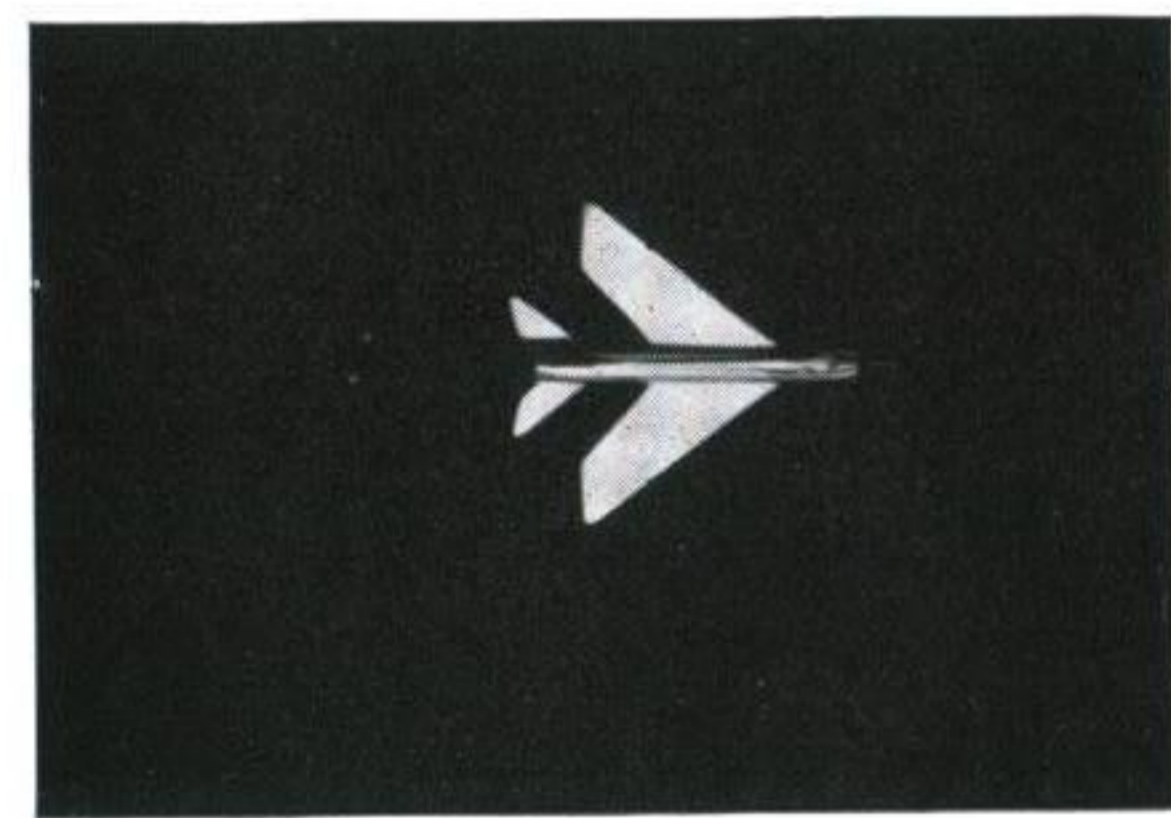
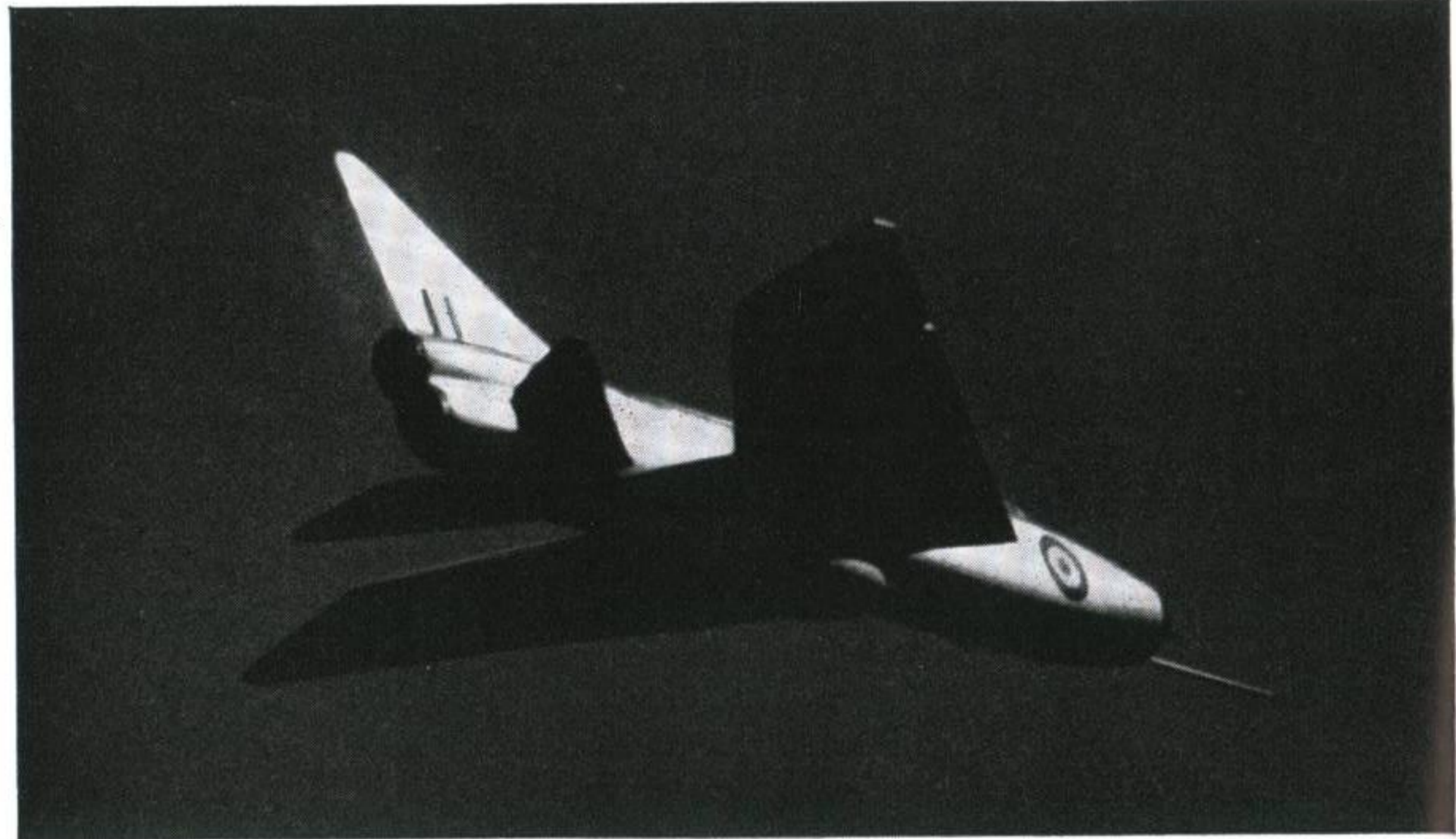
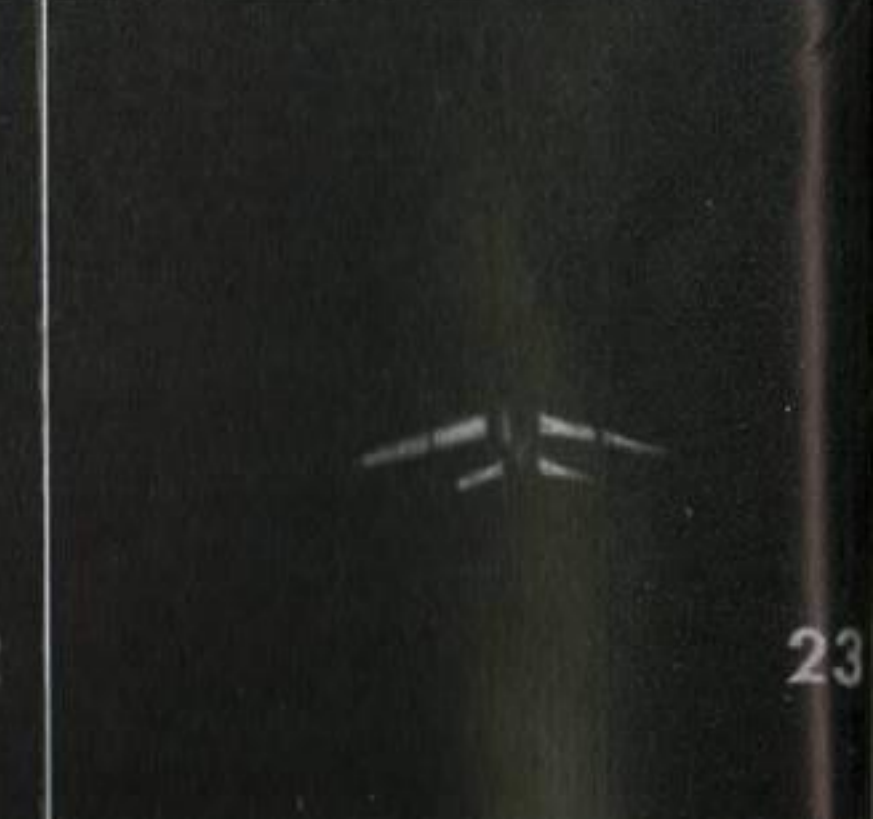
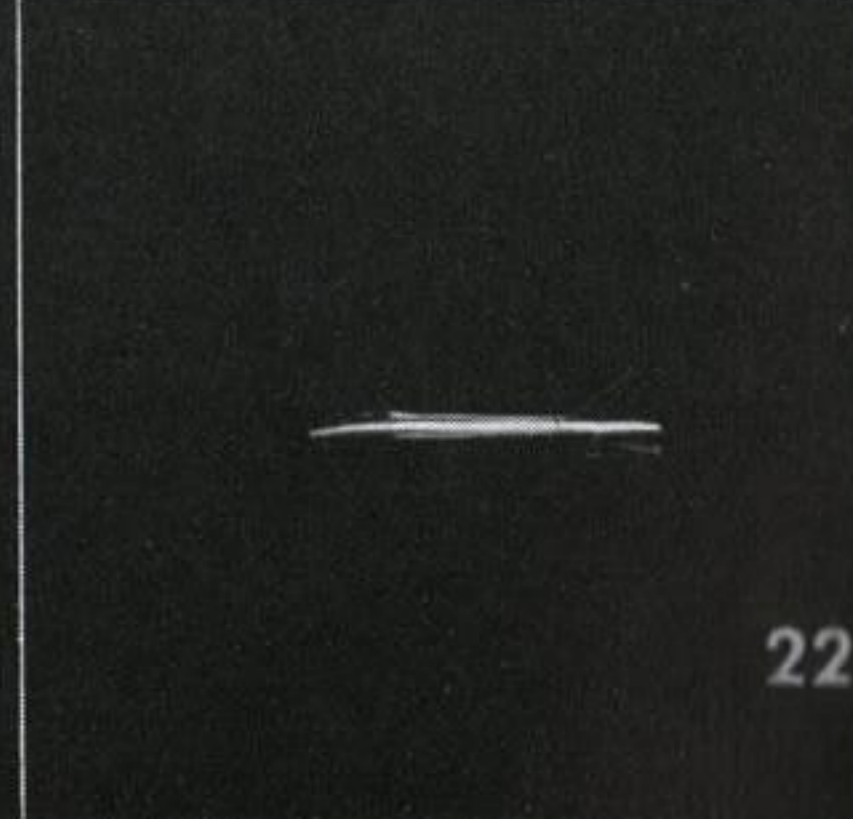
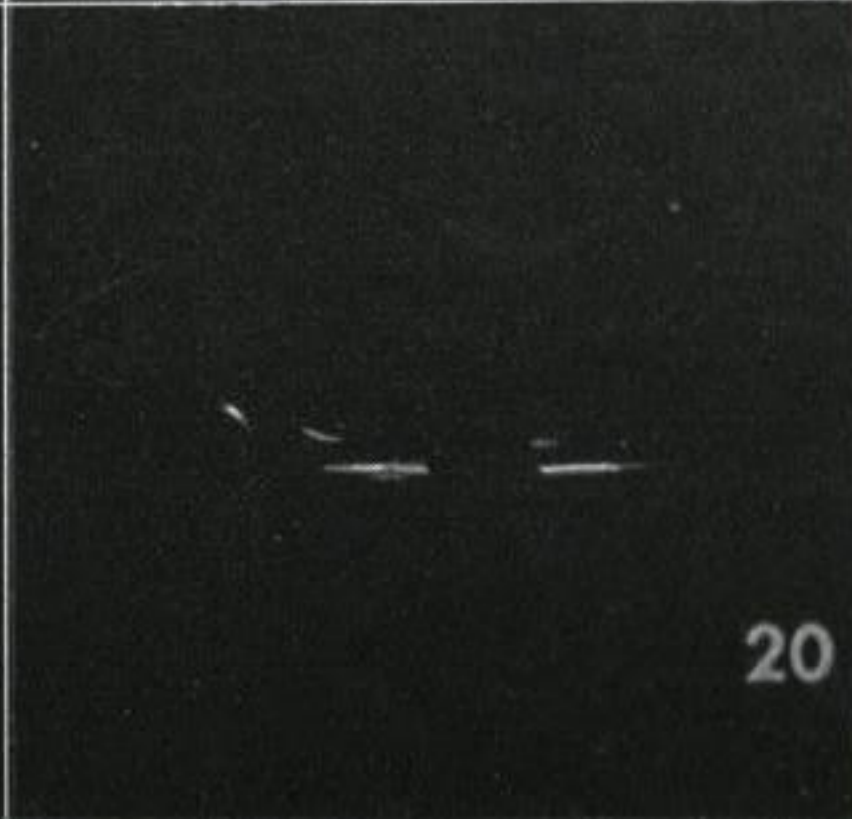
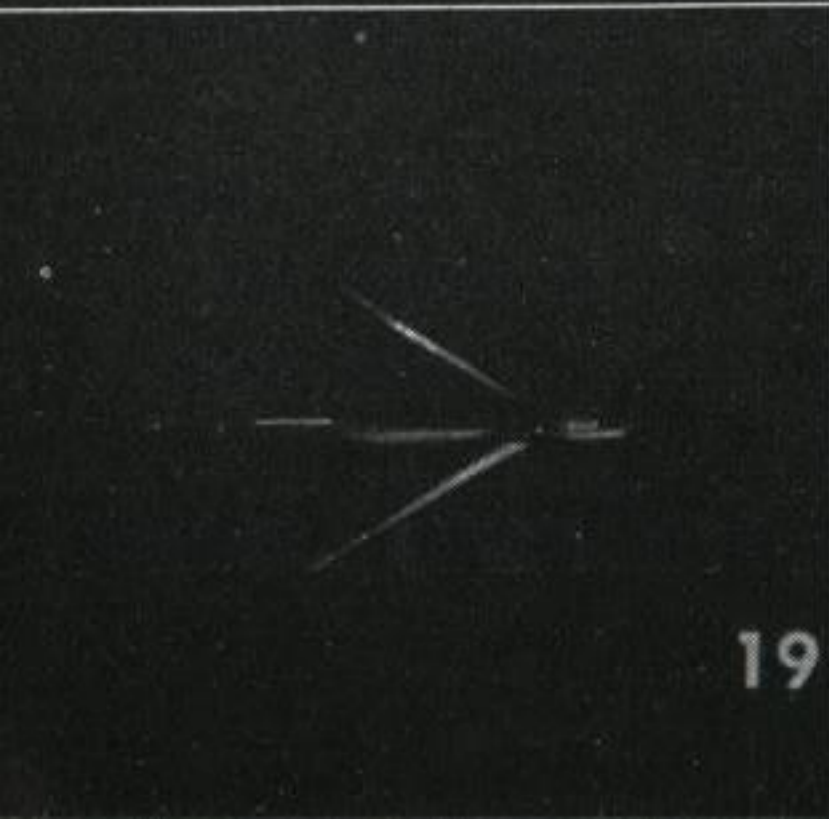
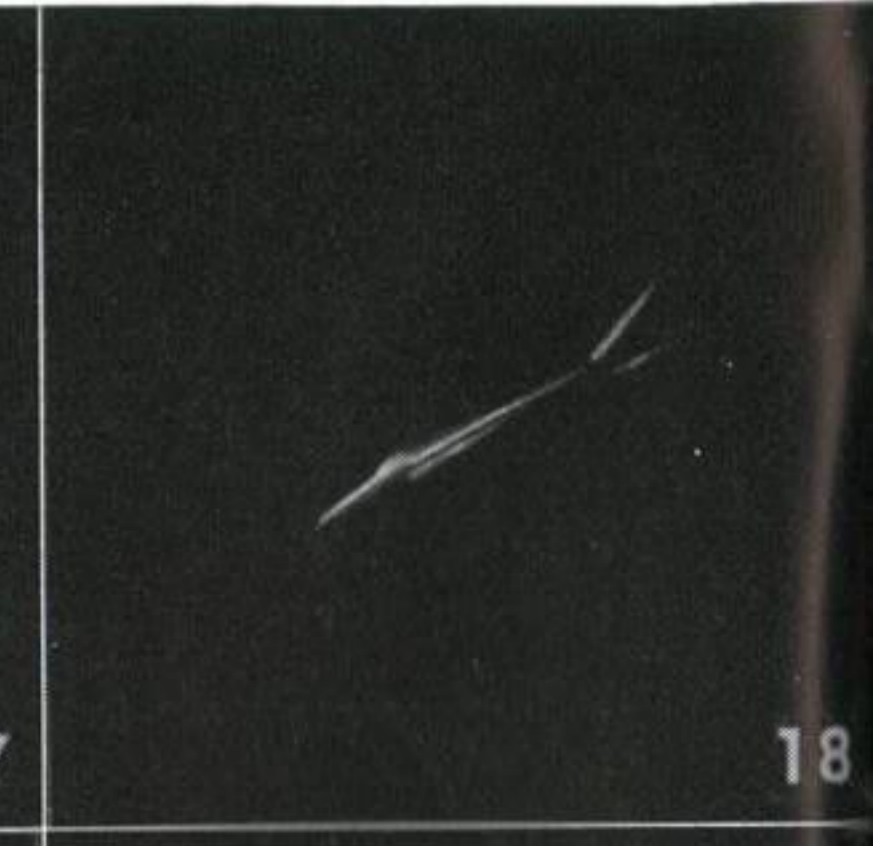
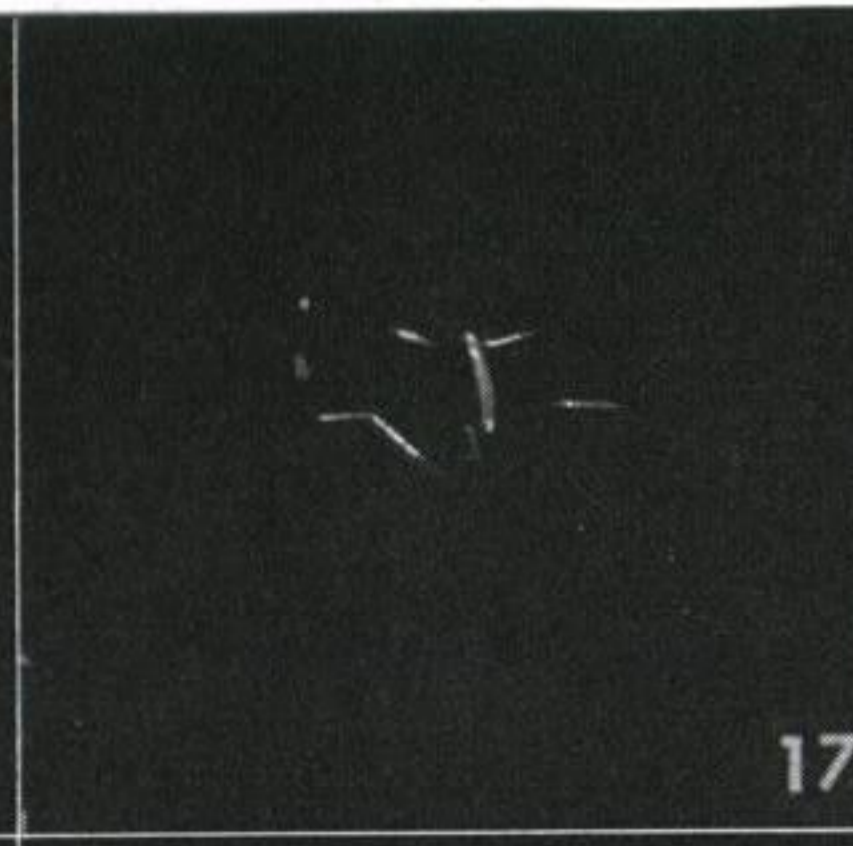
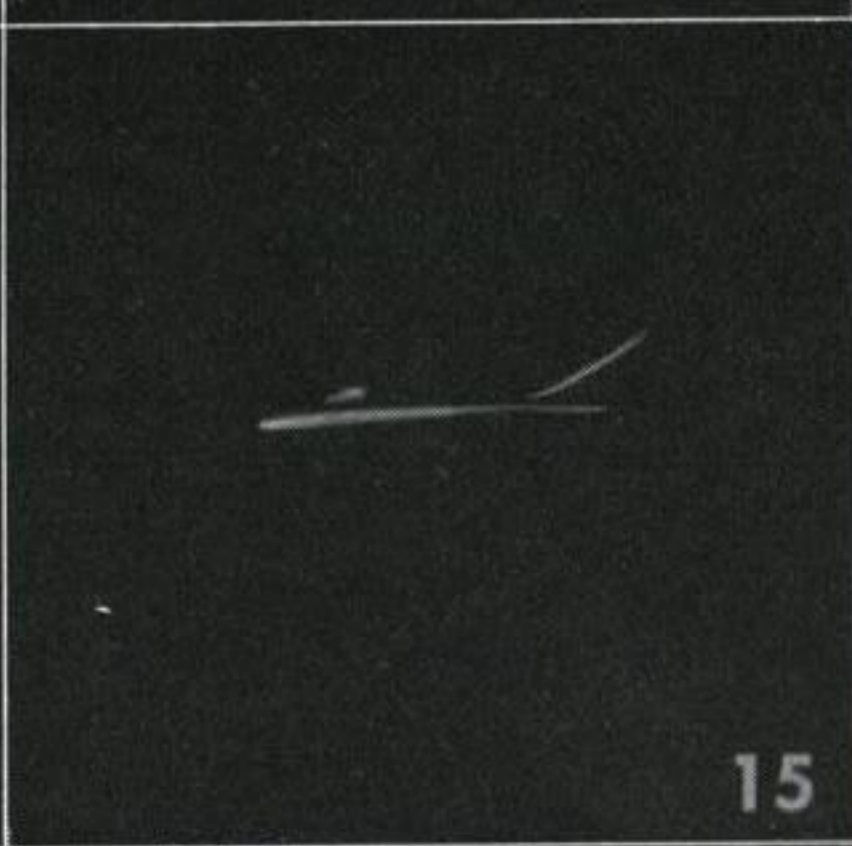
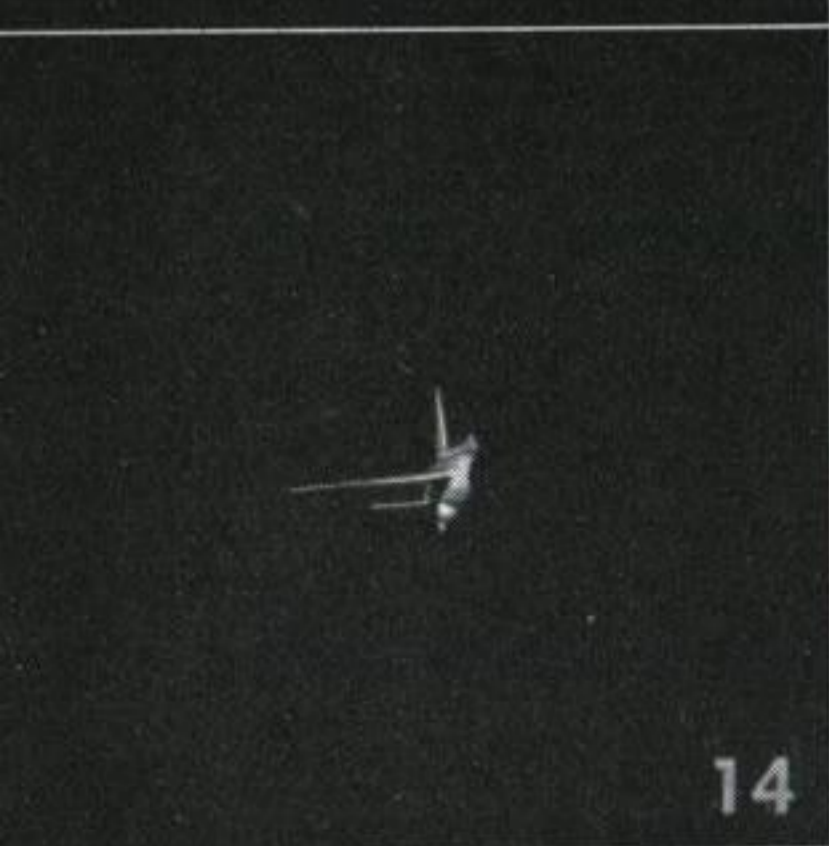
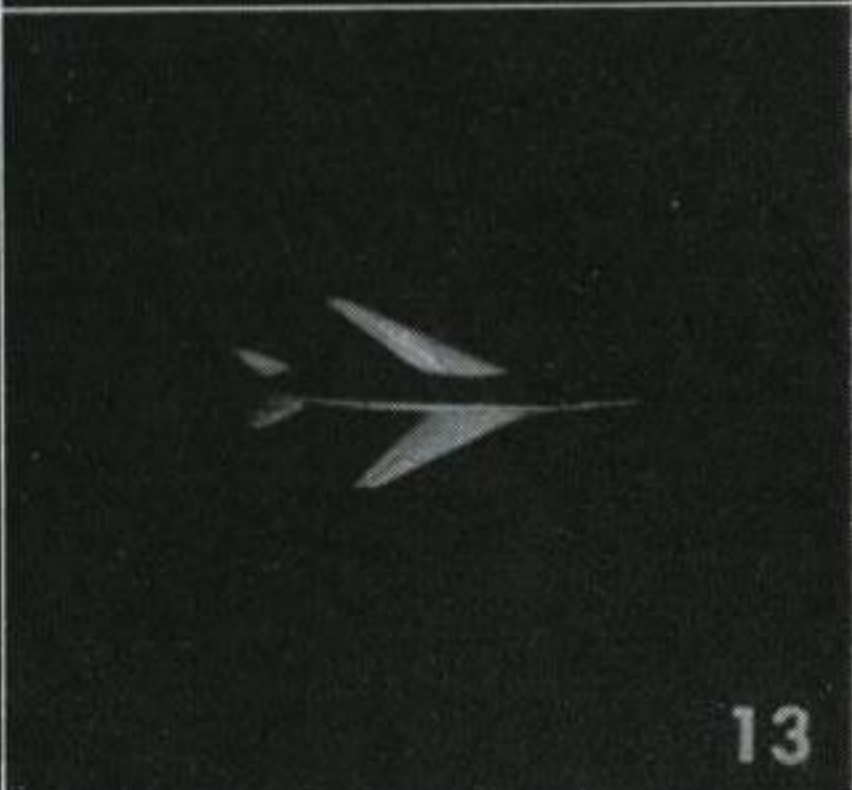
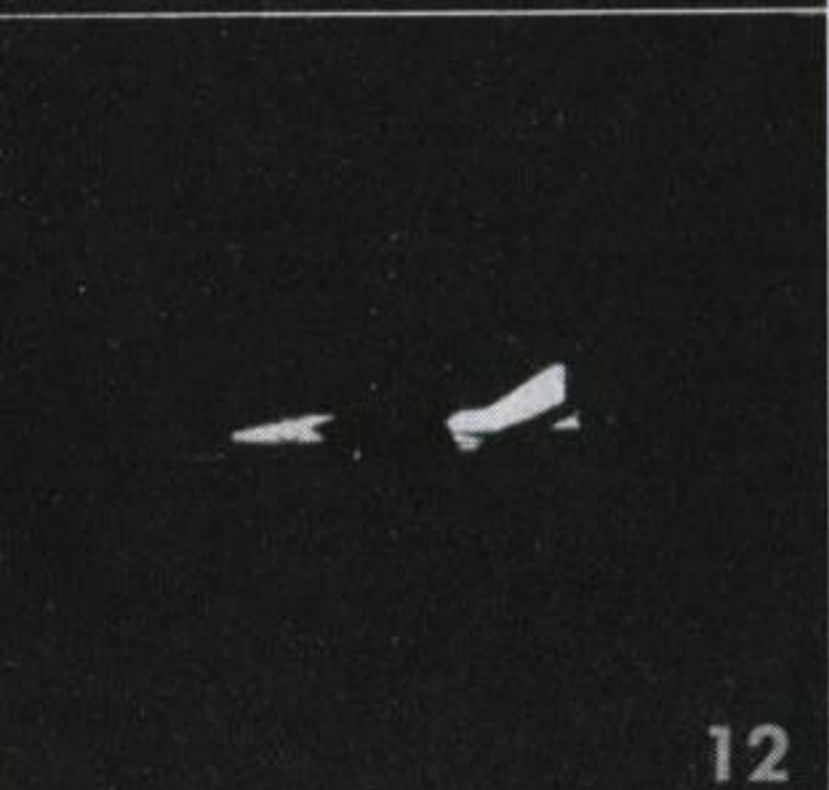
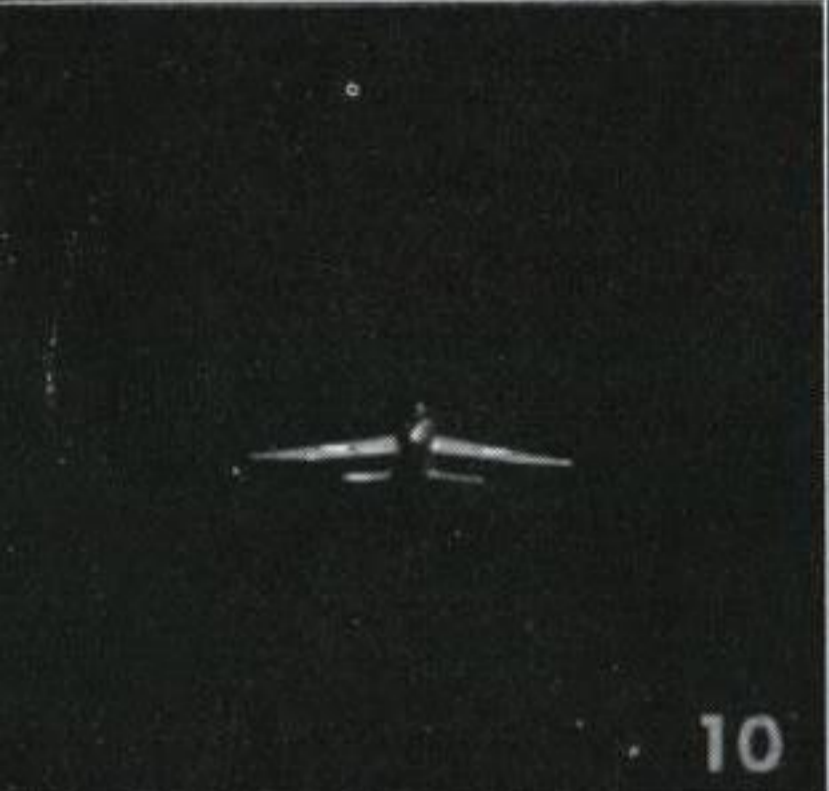
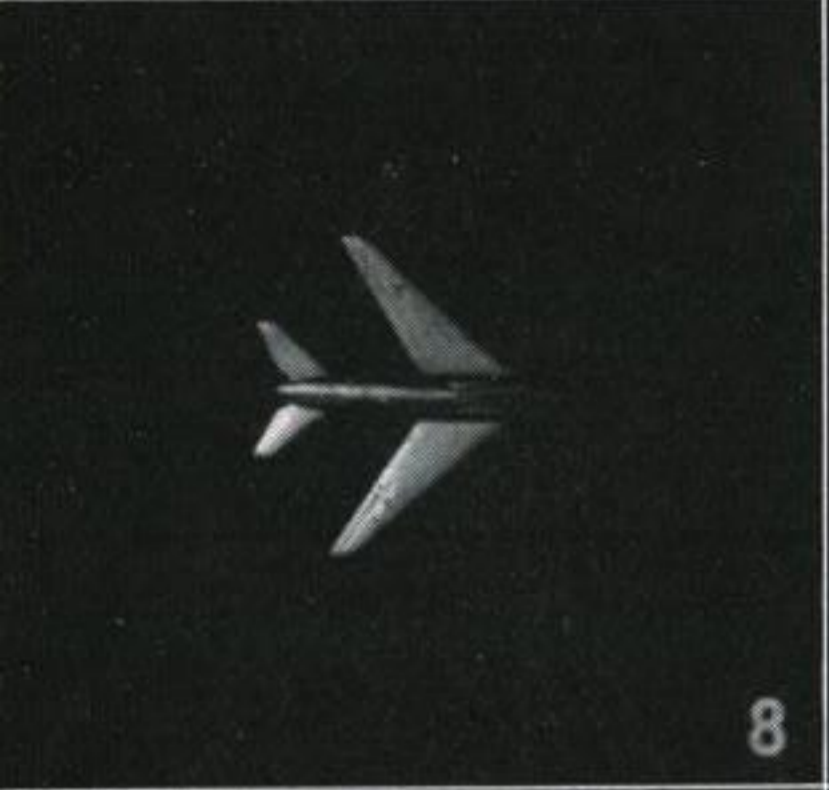
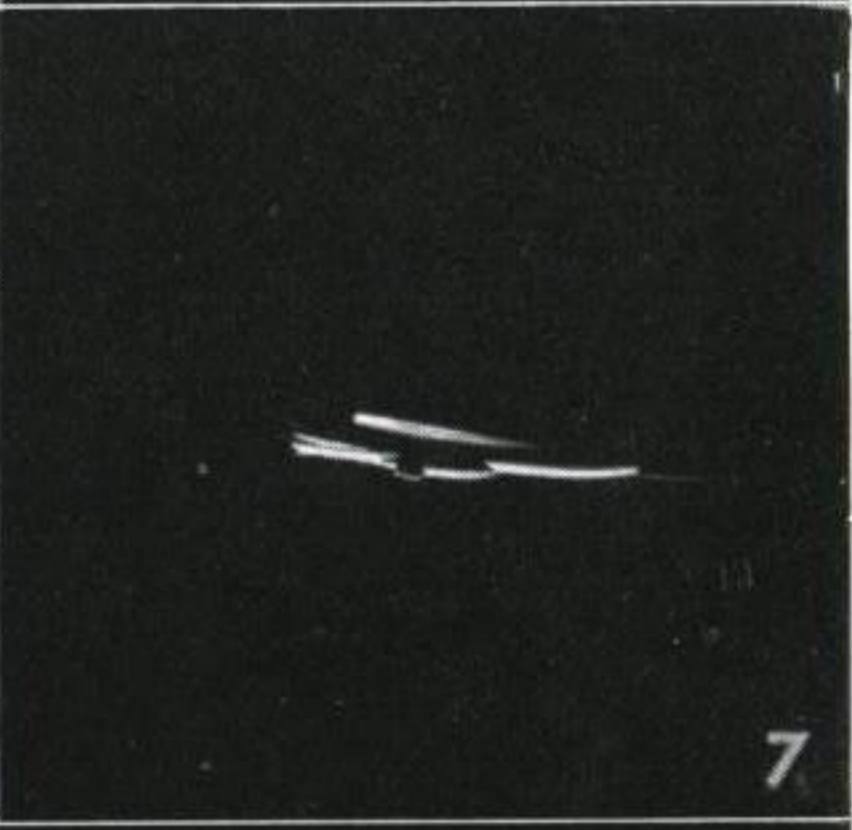
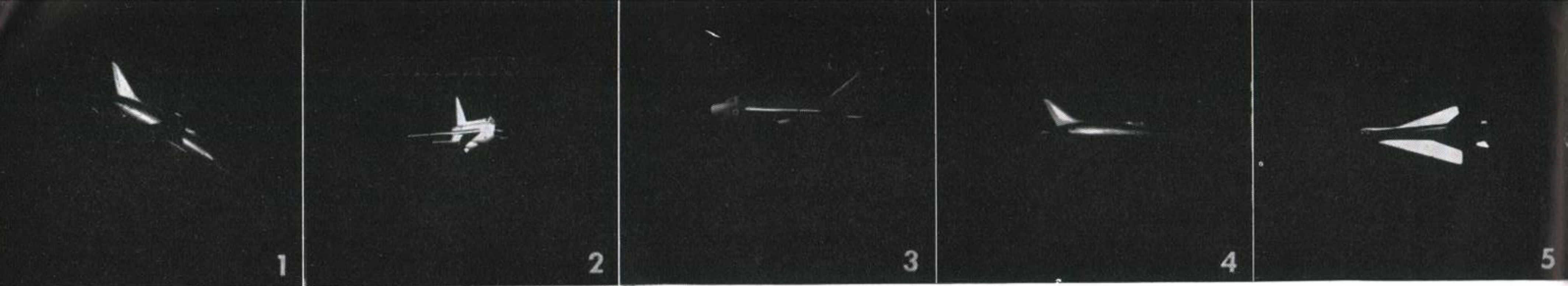
The SC-1 made its first flight as a conventional aircraft three years ago, using normal take-off technique. A series of hovering trials in a special test gantry followed, and in October 1958, it made its first free vertical take-off. Since then a large number of conventional flights and vertical take-offs and landing have taken place.

Before the Bedford trials began the aircraft's vital speed band between 40 m.p.h., using the lift engines, and the minimum normal flight speed, remained unexplored. Within this gap lay the phase of complete transition from jet-borne to wing-borne flight. The Bedford programme was to narrow the gap, approaching it from both the high and low speed

ends in turn, and finally to accelerate through it after a vertical take-off and to decelerate back again before landing. The change of air loads and air-flow pattern as forward speed built up or decreased gave rise to two main problems. One was to ensure that the lift engines would light-up and give full power as required when preparing for vertical landing at the end of a normal flight. The second was the "handleability" and control of the aircraft across this band of airspeed. These problems were solved by step-by-step flight development. The initial approach took the form of a series of flights at about 6,000 feet, progressively decelerating to speeds slightly below the stall. For these flights the aircraft used normal take-off from a runway. Then came a series of vertical take-offs followed by flights at low level above the runway and at gradually increasing speeds. Finally, there remained only a gap of some 40 m.p.h.

The gap was closed at Bedford in April when the SC-1 circled the airfield after a conventional take-off, made a long approach to the main runway, gradually decelerated until it hovered motionless a few feet above the concrete, completed the sequence by accelerating away again into normal wing-borne flight, gradually gained height, circled once more, and finally landed conventionally.

In conclusion, Shorts state that the SC-1's success places within reach a jet-lift supersonic civil airliner of narrow delta configuration. It will be interesting to watch developments.



## Lightning F. Mk. I

Span 35 feet

*This lesson highlights the importance of being able readily to identify aircraft flying at the high altitudes at which modern bombers and interceptors are to be found. The key-pictures above are of the English Electric Lightning. This interceptor is capable of Mach 2—and over; armament consists of two 30-mm. Aden cannons and two Firestreak missiles mounted on the fuselage.*



24



25



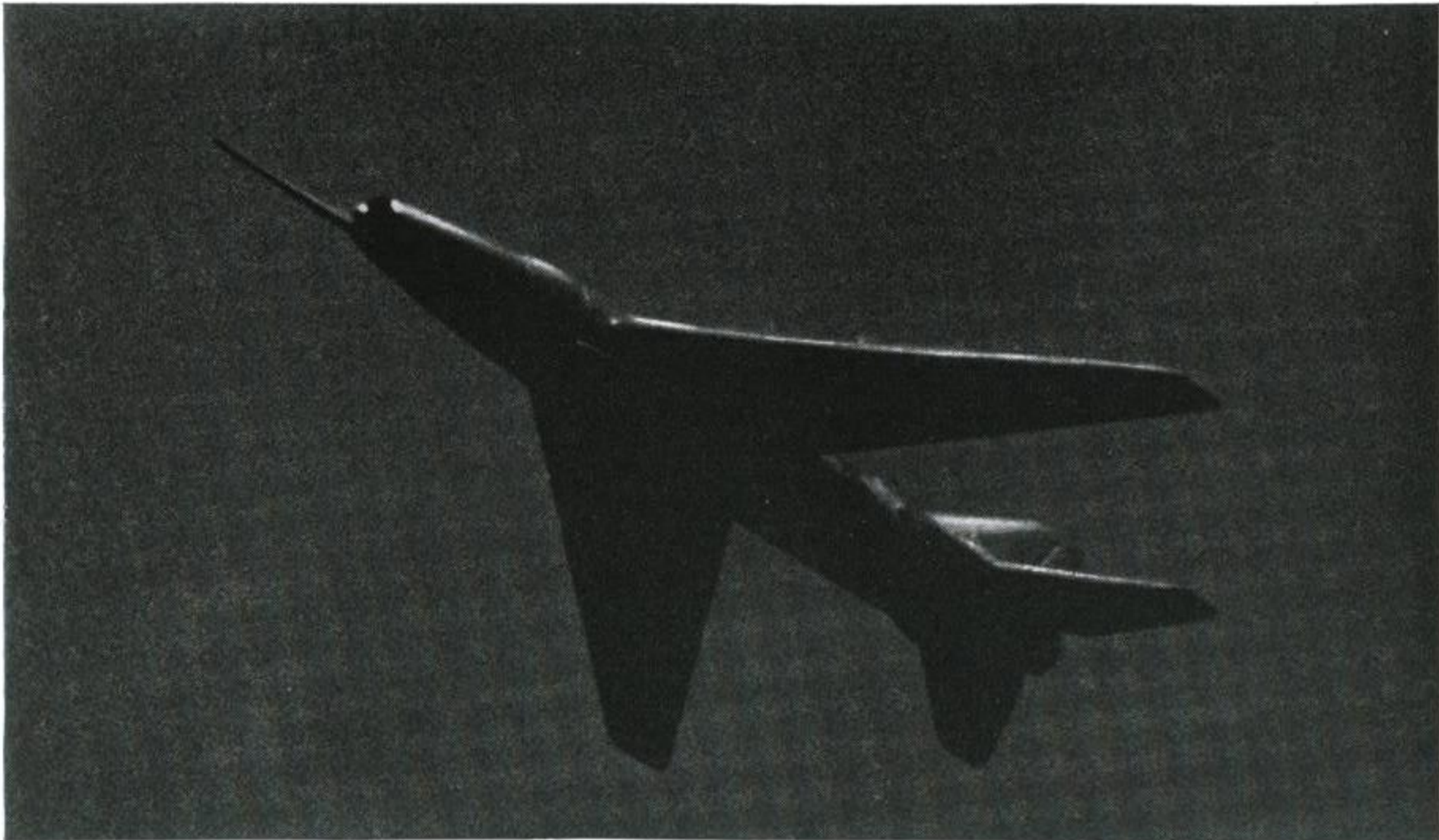
26



27



28



29



30



31



32



33



34

## Faceplate (MiG-21)

Span 27 feet

*These key-pictures illustrate the Soviet's Faceplate, reported to be in limited service use, and believed to fly in the Mach 1.5-2.0 range. This lesson, by the way, is by no means an easy one. Even so, you can get a 100 per cent correct result and gain much experience of these aircraft by the following lesson instructions: make free use of the key-pictures, take the easy ones first, work carefully and write your solutions down.*



35



36



37



38



39



40



41



42



43



44



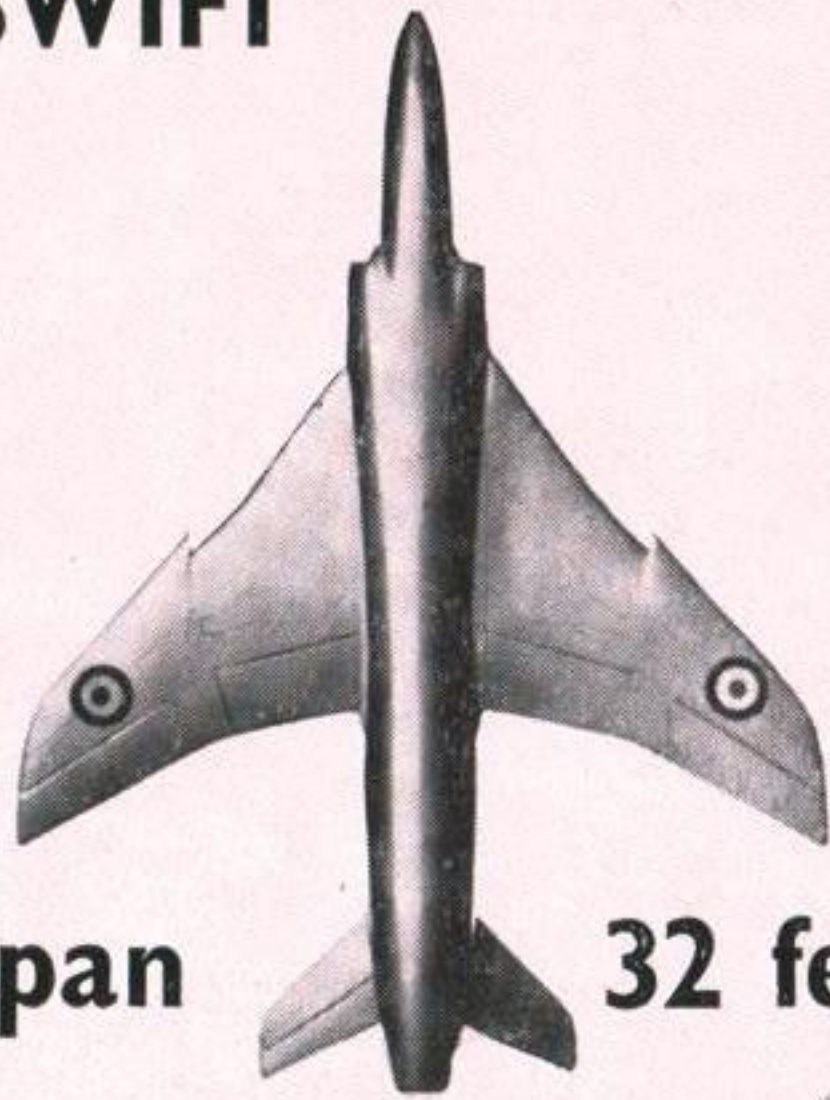
45



46



# SWIFT



Span 32 feet



## Who's Who?

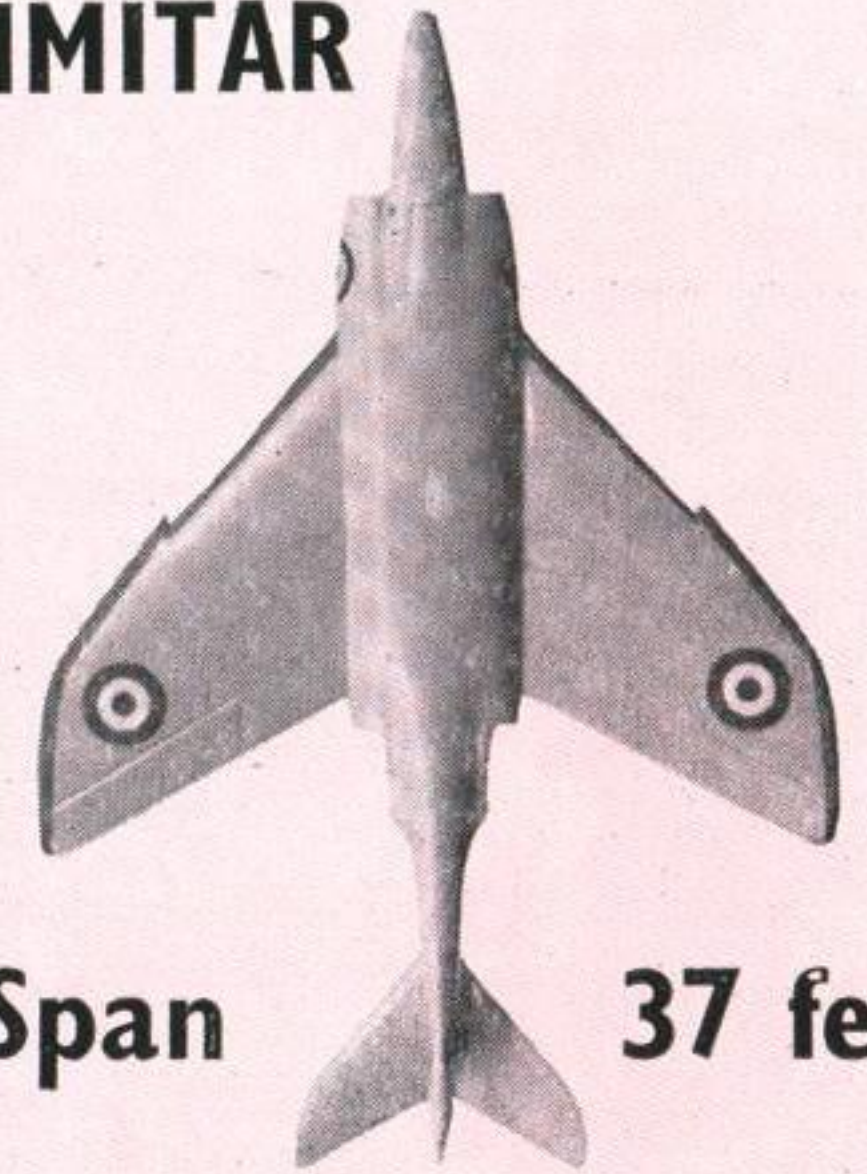
### A Refresher Course

Although at first glance these two single-seat fighters may appear alike in some aspects there are very different characters as you will find as you go through the targets. That on the left is of the Mark 5 Swift, Mark 7s are also flying (see target No. 35)—note the longer nose and canopy. Before starting the exercise on the smaller single-engined Swift and its later twin-engined brother, list target numbers 1 to 35 on a piece of paper.

Solutions on the cover.



# SCIMITAR



Span 37 feet



1



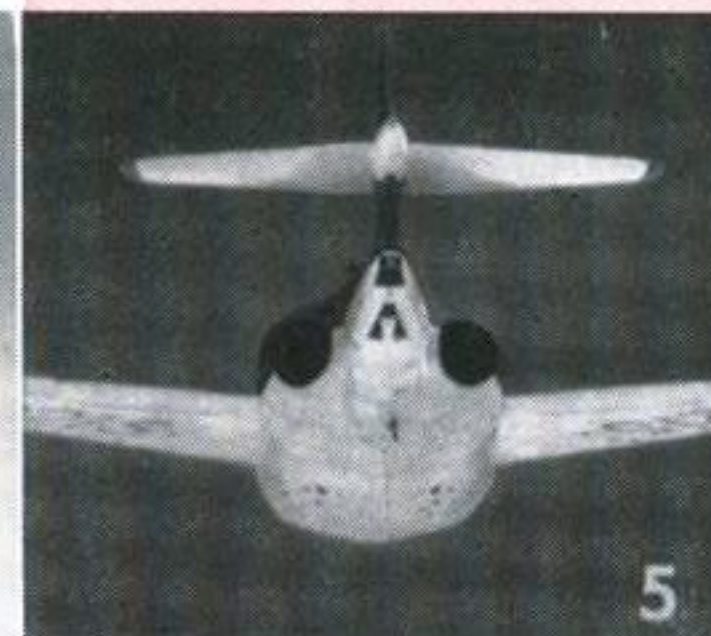
2



3



4



5



6



7



8



9



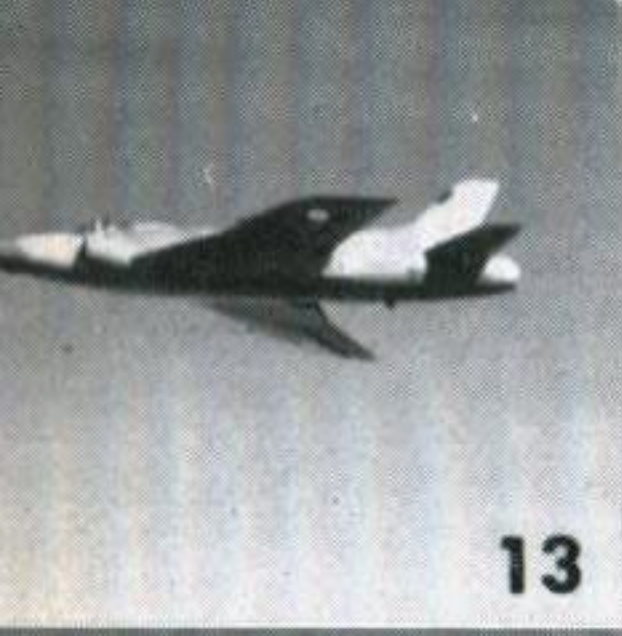
10



11



12



13



14



15



16



17



18



19



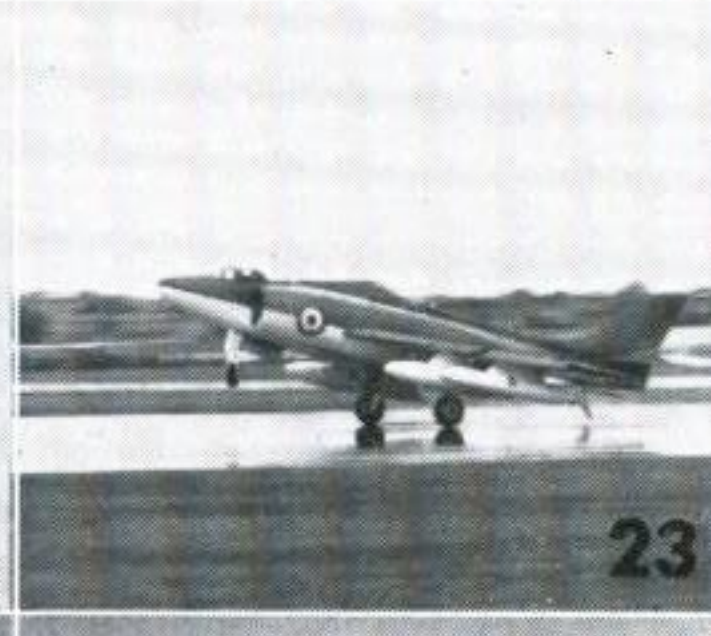
20



21



22



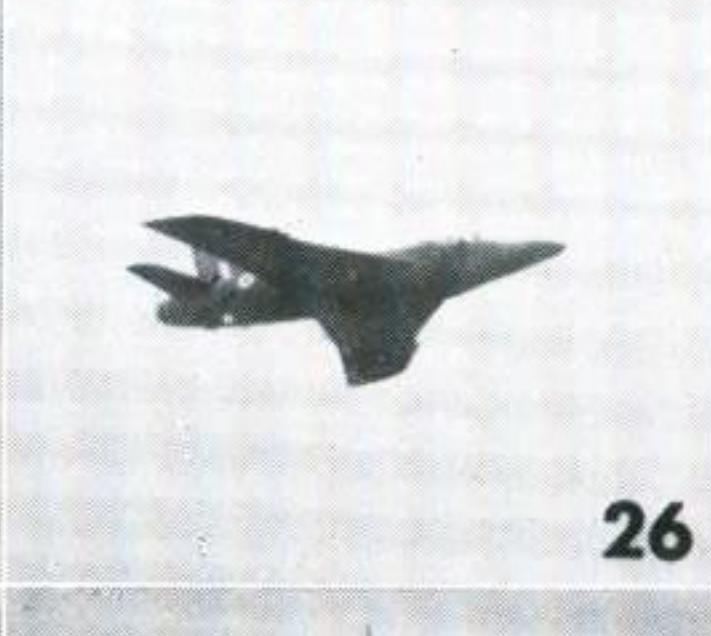
23



24



25



26



27



28



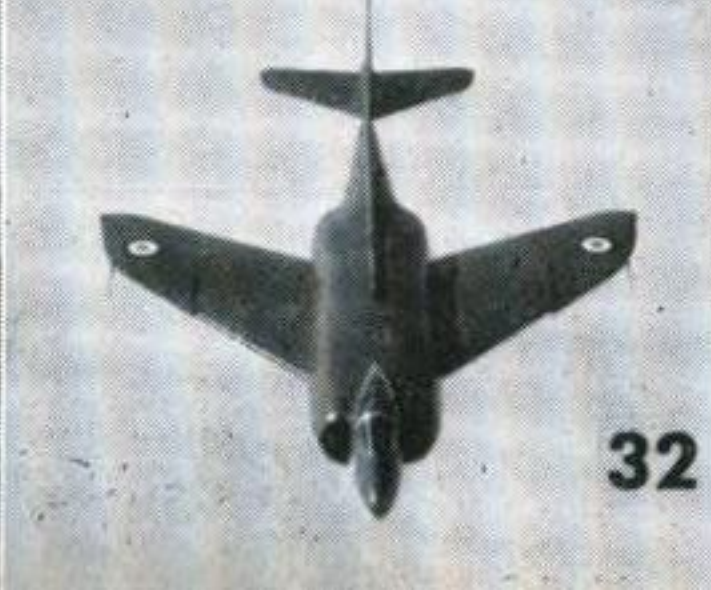
29



30



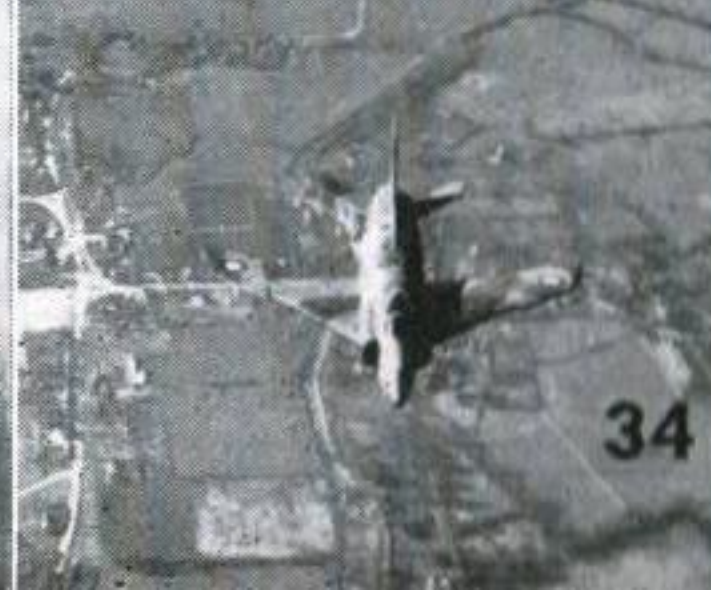
31



32



33



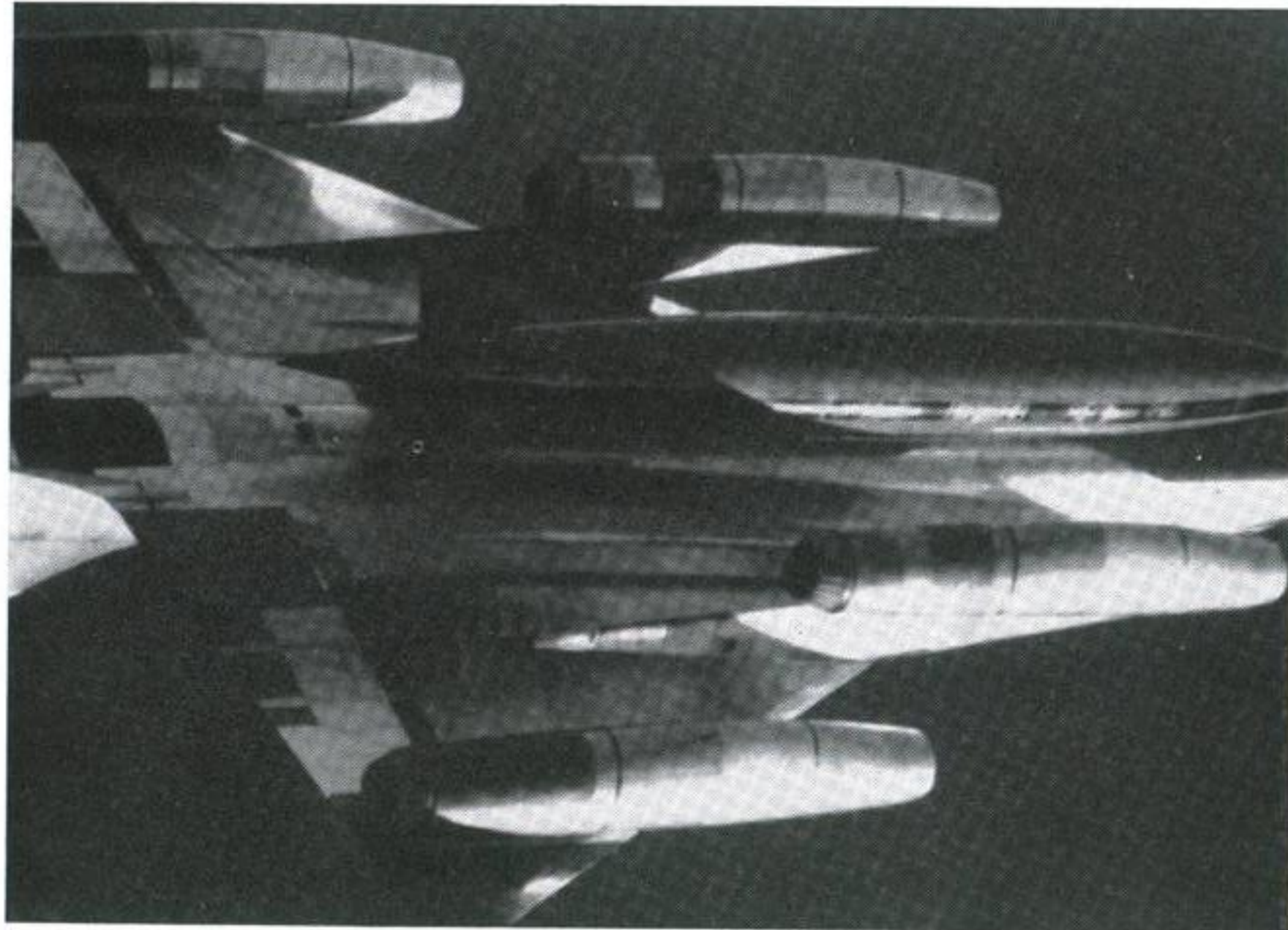
34



35

# In Passing . . .

## True or False?



This odd-view should not be at all difficult to *identify*; after all there aren't many aircraft about that look like this, and, here's a clue, none that lives so well up to its name. The answer is on the cover.

## Farnborough

Aerophiles, and indeed many others, will wish to know that this year's S.B.A.C. Flying Display and Exhibition at the Royal Establishment, Farnborough, is to be held from September 5th-11th, the public being admitted on the 9th, 10th and 11th. The Society says that this year the stand space will be greater than ever before.

## Aeronautics Amalgamated Unlimited

"Do you know what the initials S.B.A.C. stand for?" Roger Bacon, in "Flight" recently asked—and replied "Society of Both Aircraft Constructors."

## Dog House

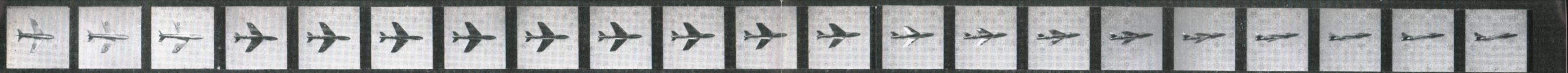
The solution to target No. 15 in the "Boat Race" lesson in the February 1960 Journal should have read "Madge" and not "Marlin." This was an error in typing when preparing for Press—*honest!*



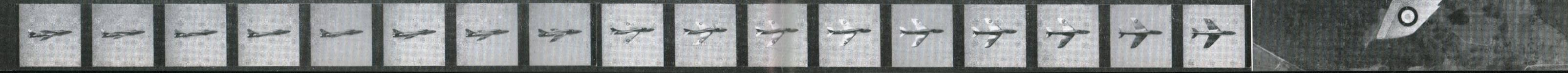
"Got her up to Mach 3 coming back. . . . Didn't want to miss 'Wagon Train'."



**Ship of State.** The Air France Caravelle which brought President and Madame de Gaulle to England for the State visit in April is seen here on the apron at Gatwick Airport. The Presidential Caravelle was escorted from over Abbeville to England by six Hunter 6 fighters of 65 Squadron Royal Air Force who formed on either side of the Caravelle in two vic formations 1,000 feet above and 200 yards out and abreast of the Caravelle.



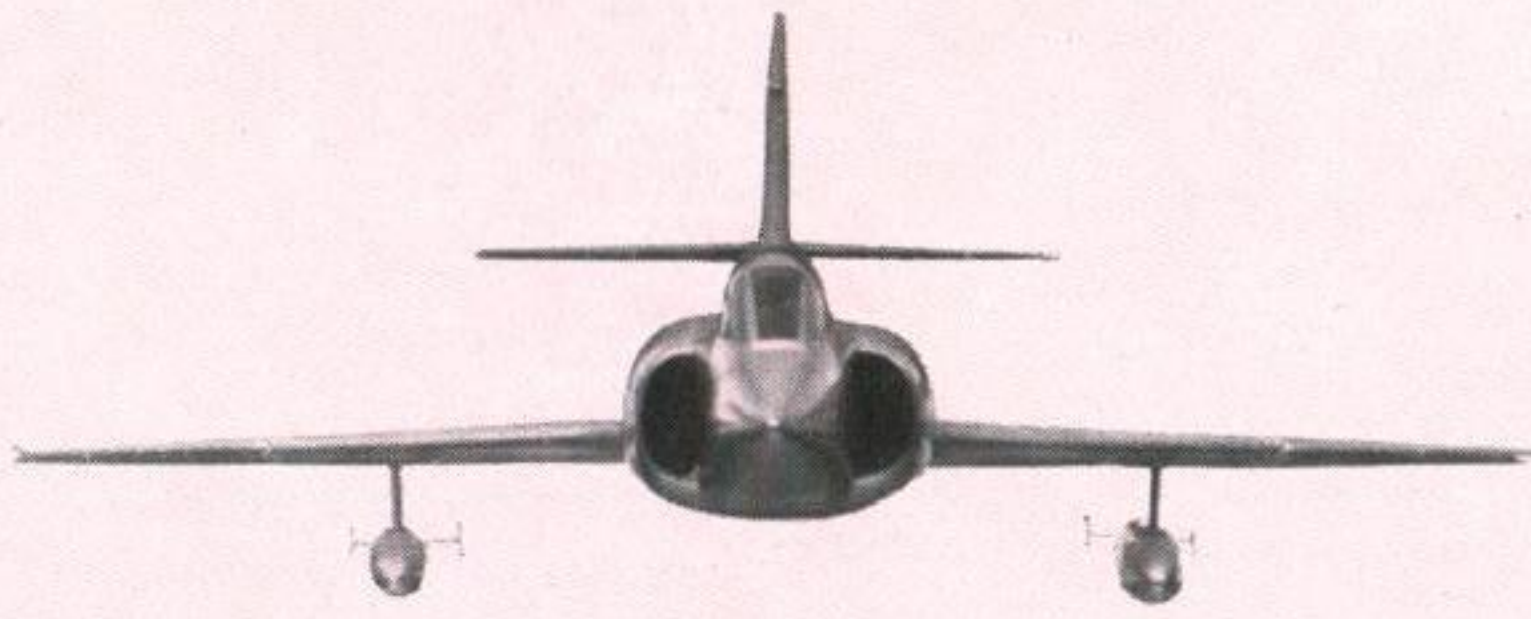
*Hunter 7*



# Étendard IV-M

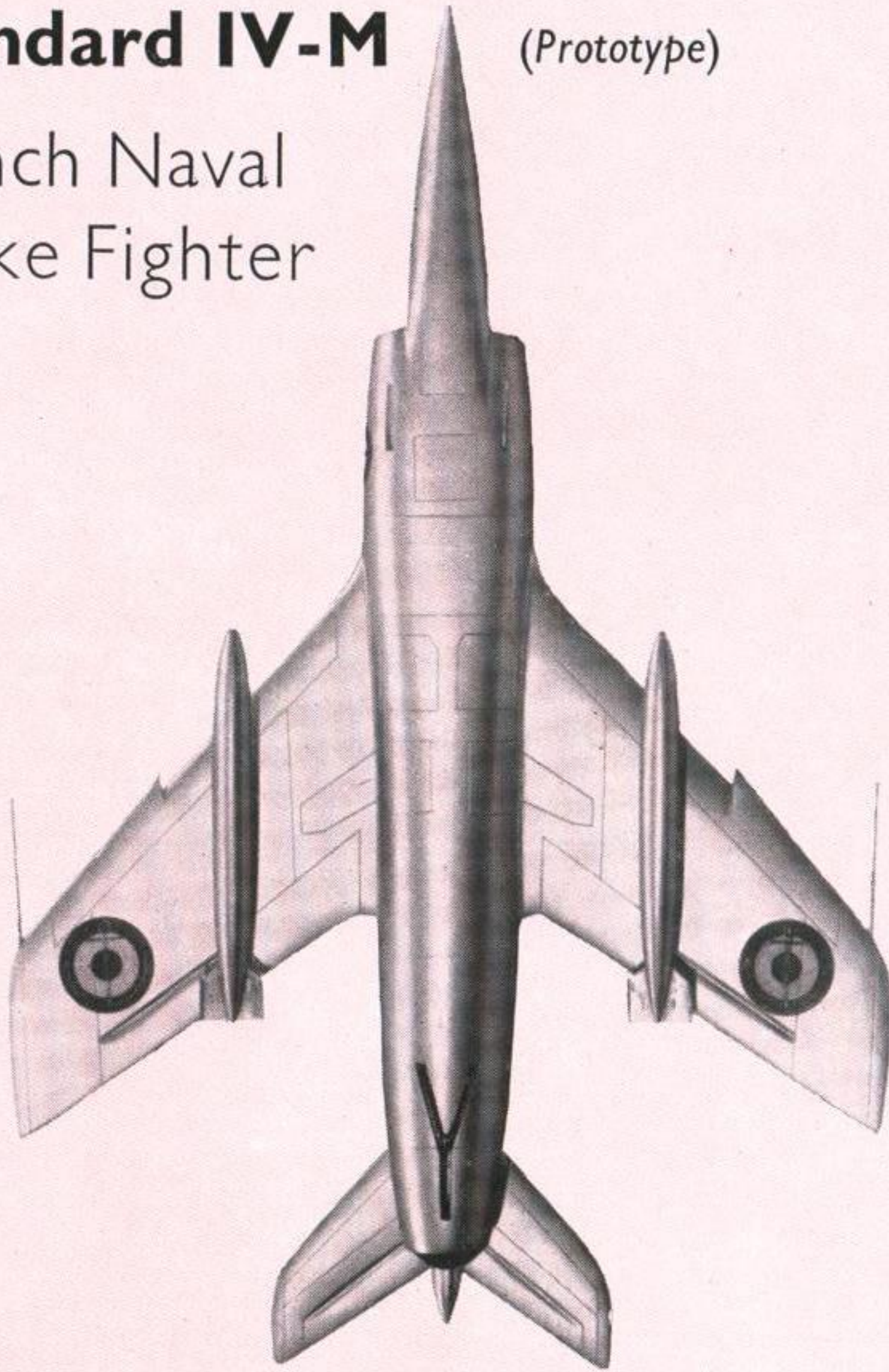
This is the French Navy's low- and medium-altitude strike fighter, developed for service with the new aircraft carriers Clemenceau and Foch. Armed with two 30-mm. DEFA cannons, underwing stores can include rockets, bombs, missiles, or external fuel tanks. The Étendard IV-M was developed from the smaller Étendard IV, the land-based version, for which no production is envisaged.

Our three-view is of the prototype Étendard IV-M; the key-picture illustrates the pre-production model the obvious difference between them is the distinctive radome on the nose of the latter. Targets cover both types, although we include the odd view of the prototype Étendard IV (target number 15, for instance, carries no deck landing gear). As large orders for this aircraft are expected from the French Navy we suggest you follow the usual lesson instructions and write down the number of Étendard IV-M's you can identify.

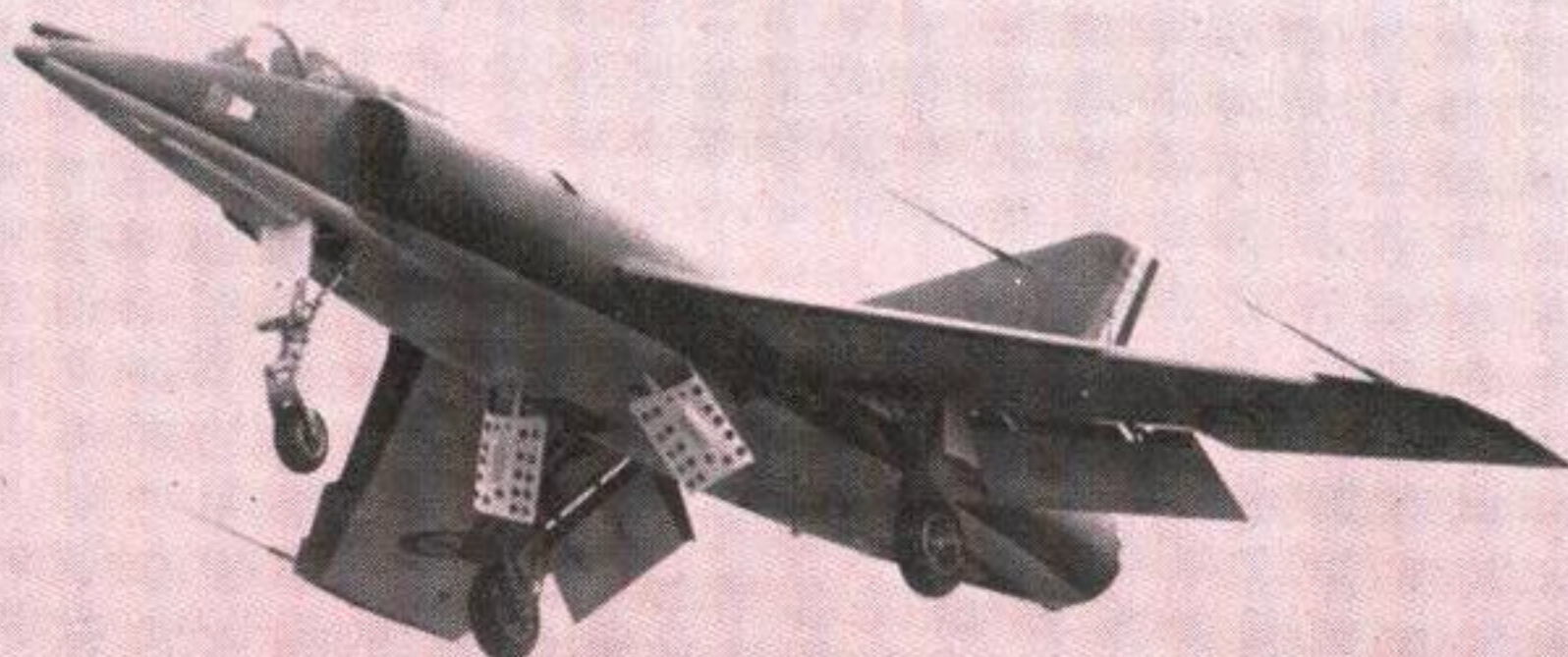


**Étendard IV-M** (Prototype)

French Naval  
Strike Fighter



**Span 32 feet**



**Étendard IV-M** (Pre-production version)





3



4



5



6



10



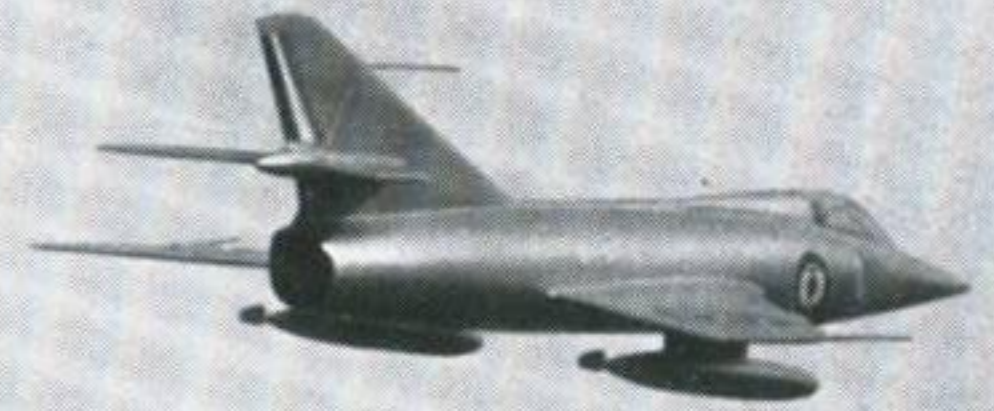
7



8



9



11



12



13



14



15



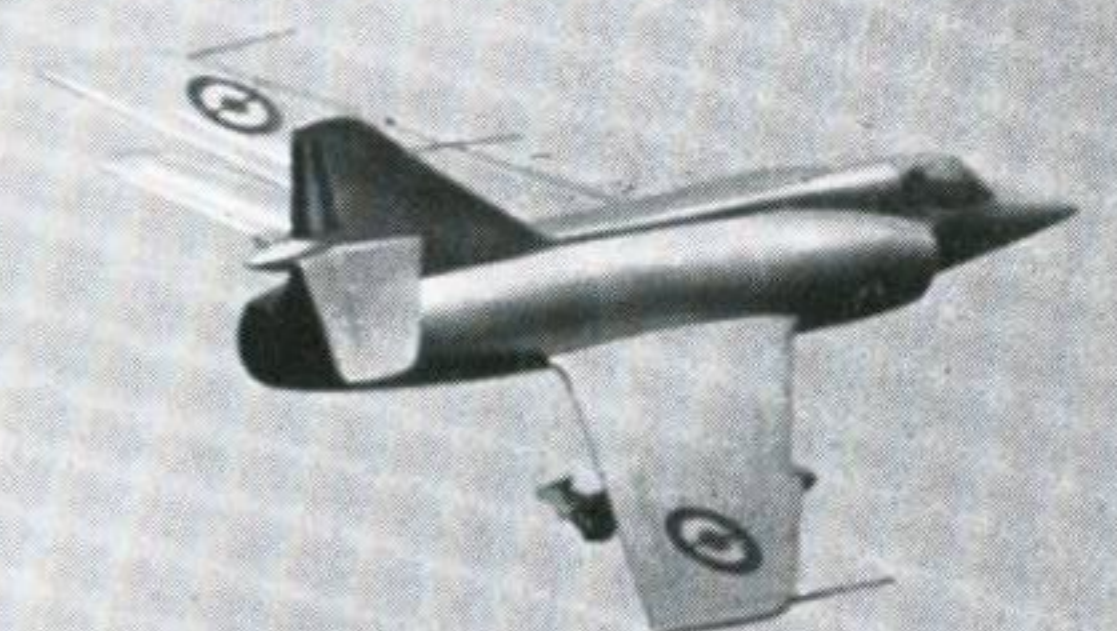
16



17



18



19



20



21



22



23



24



25



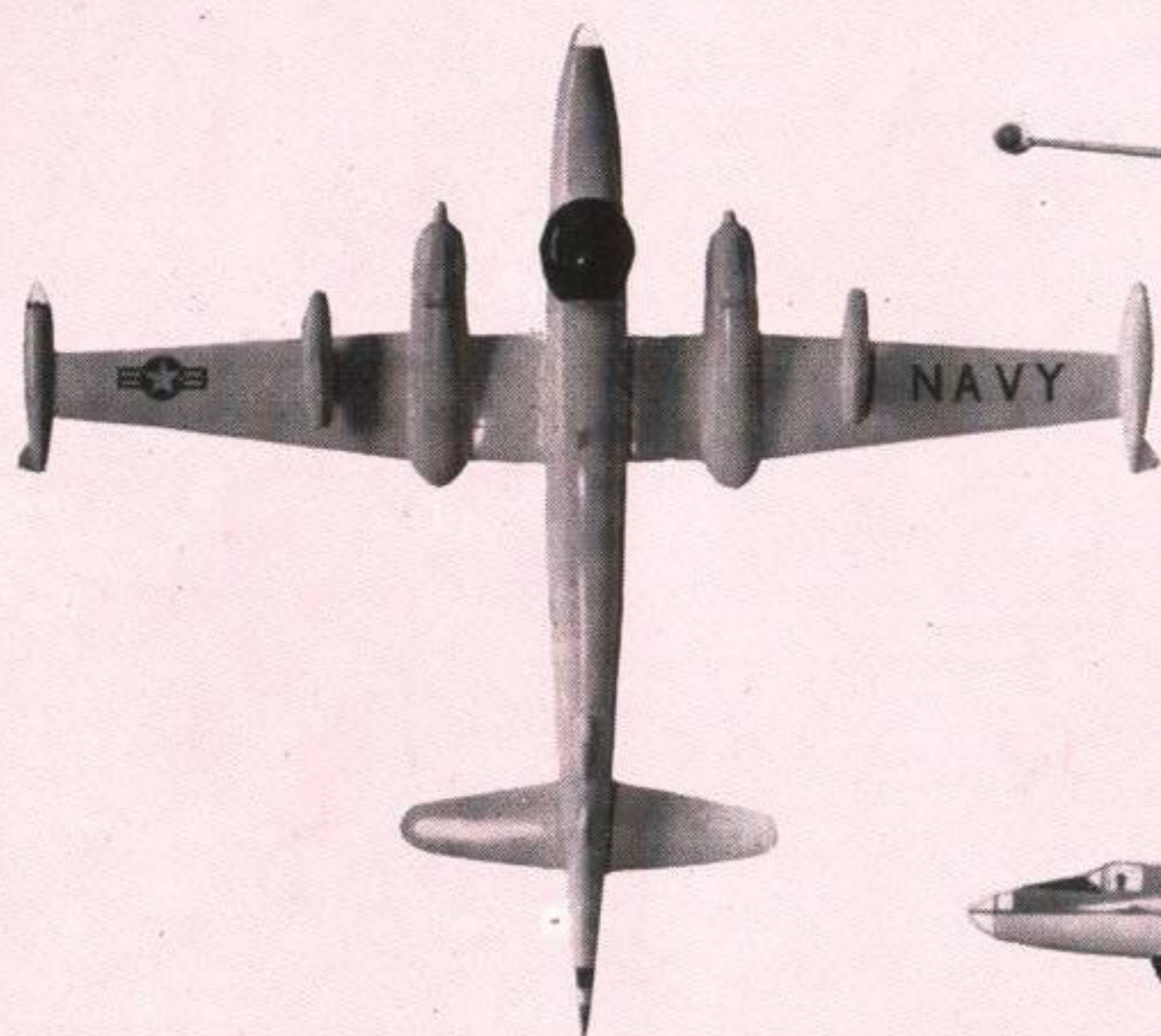
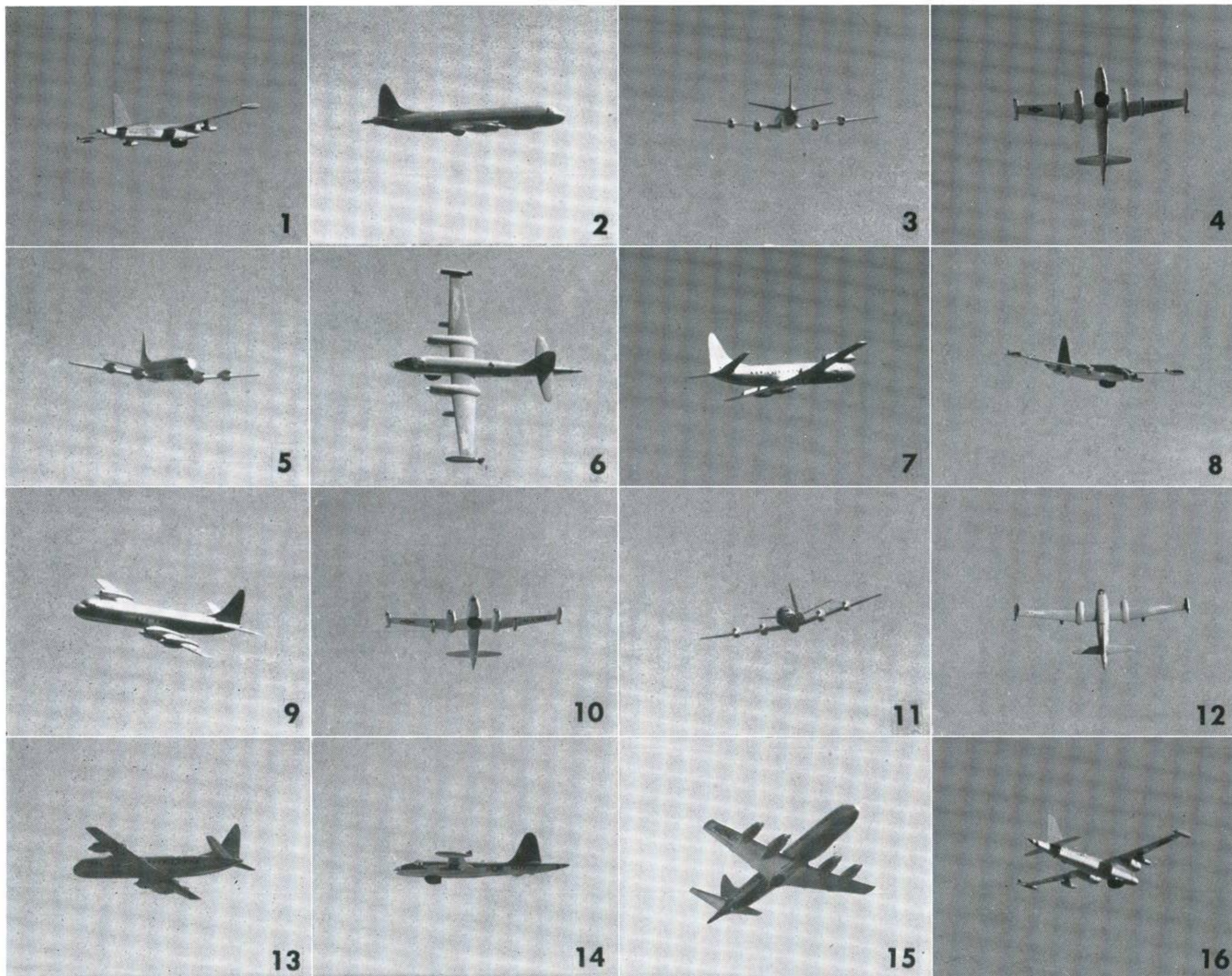
26



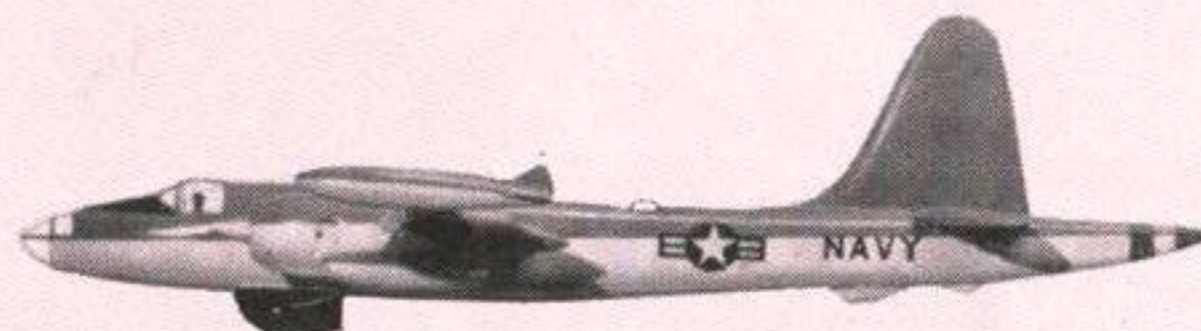
27

# Anti Sub Club

This lesson introduces a new member to the club and shows you not only how different it is from its predecessor, the Neptune P2V-7, but what is more important, helps you to identify the Electra P3V-1 naval patrol aircraft (see target No. 15) and the Neptune P2V-7. Neptunes are old friends—or ought to be after so long a life—some 14 years. Still, they'll be with us for a bit yet, so be sure of them! So up tridents!—sorry—pencils—and write out each answer before checking with our list on the cover.



**NEPTUNE P2V-7**  
Span 103 feet

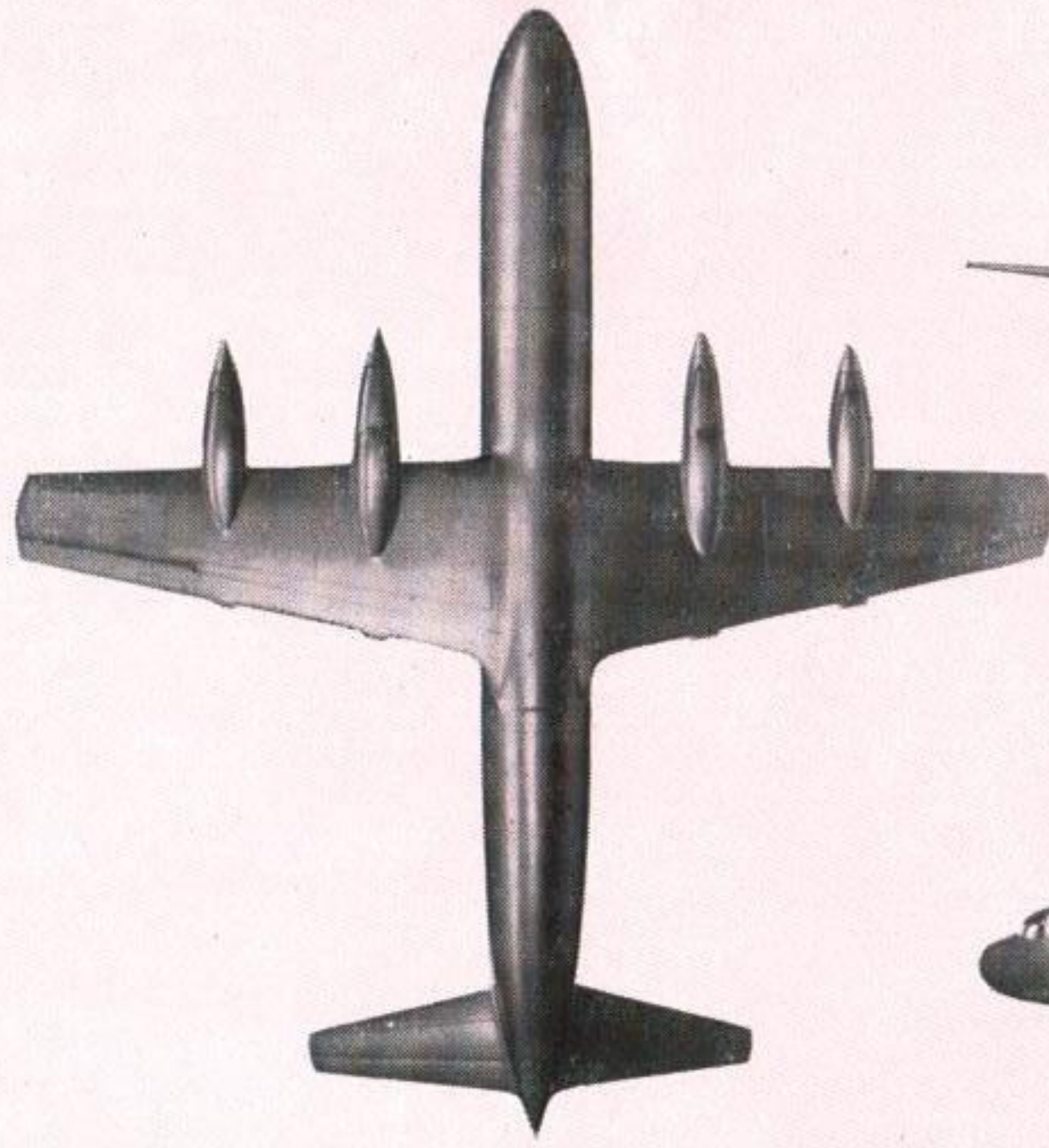


**Lockheed**  
**NEPTUNE P2V-7**  
*Naval Patrol Aircraft*

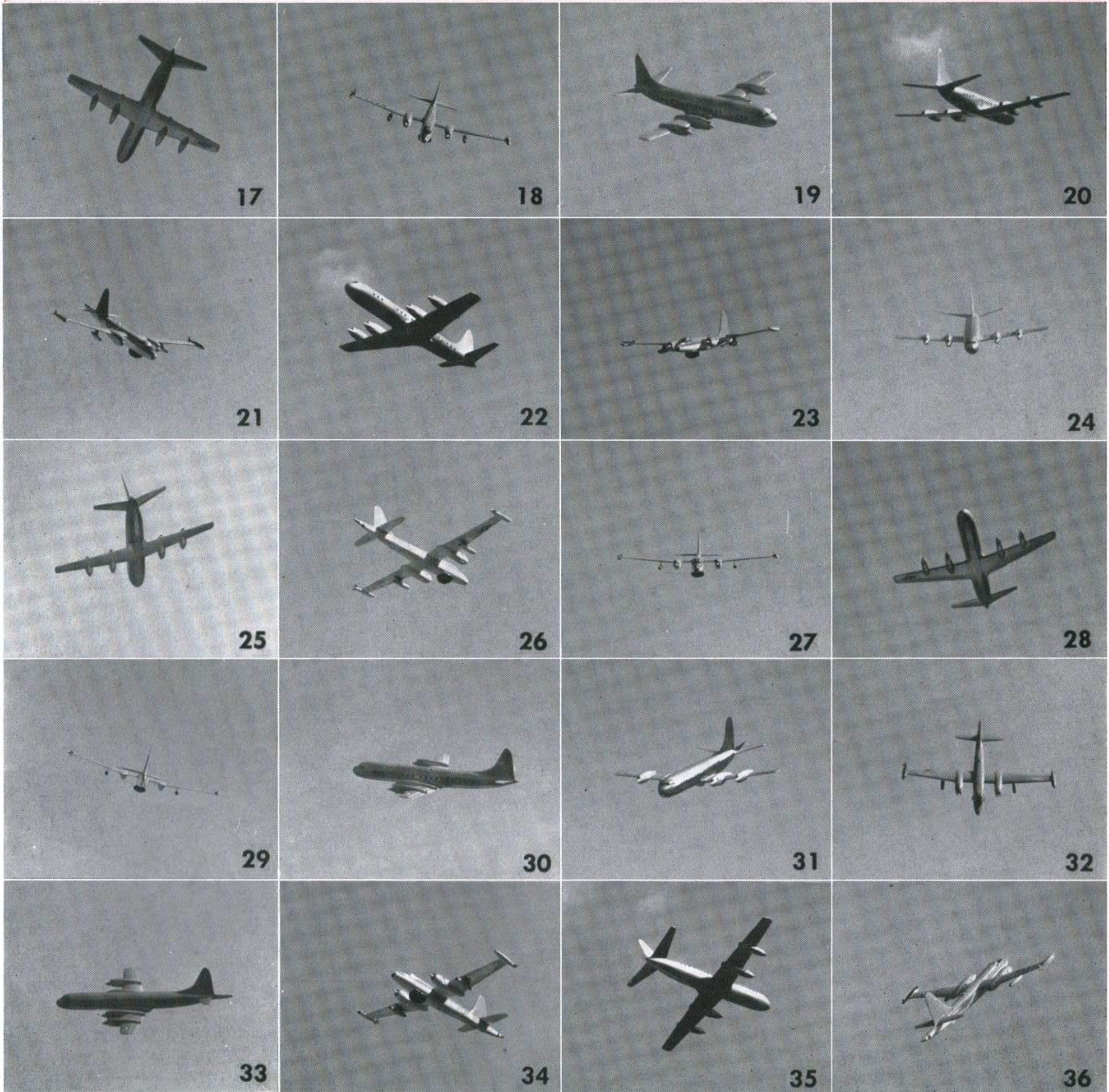
This last of a long series can be converted for patrol, mine-laying or torpedo bomber duties. The latest models have Emerson Electric turrets in mid-upper position armed with two 20-mm. cannon. The P2V-7 was the first of the Neptune series to have auxiliary turbojets.

Lockheed  
ELECTRA  
Civil Airliner

The Electra is a short/medium range turbo-prop aircraft which will shortly be in service in quantity with some fifteen airlines. Targets also include the military version, the P3V-1. Distinguishable from the civil Electra by the "stinger tail," the P3V-1 is intended as a replacement for the Neptune P2V-7.



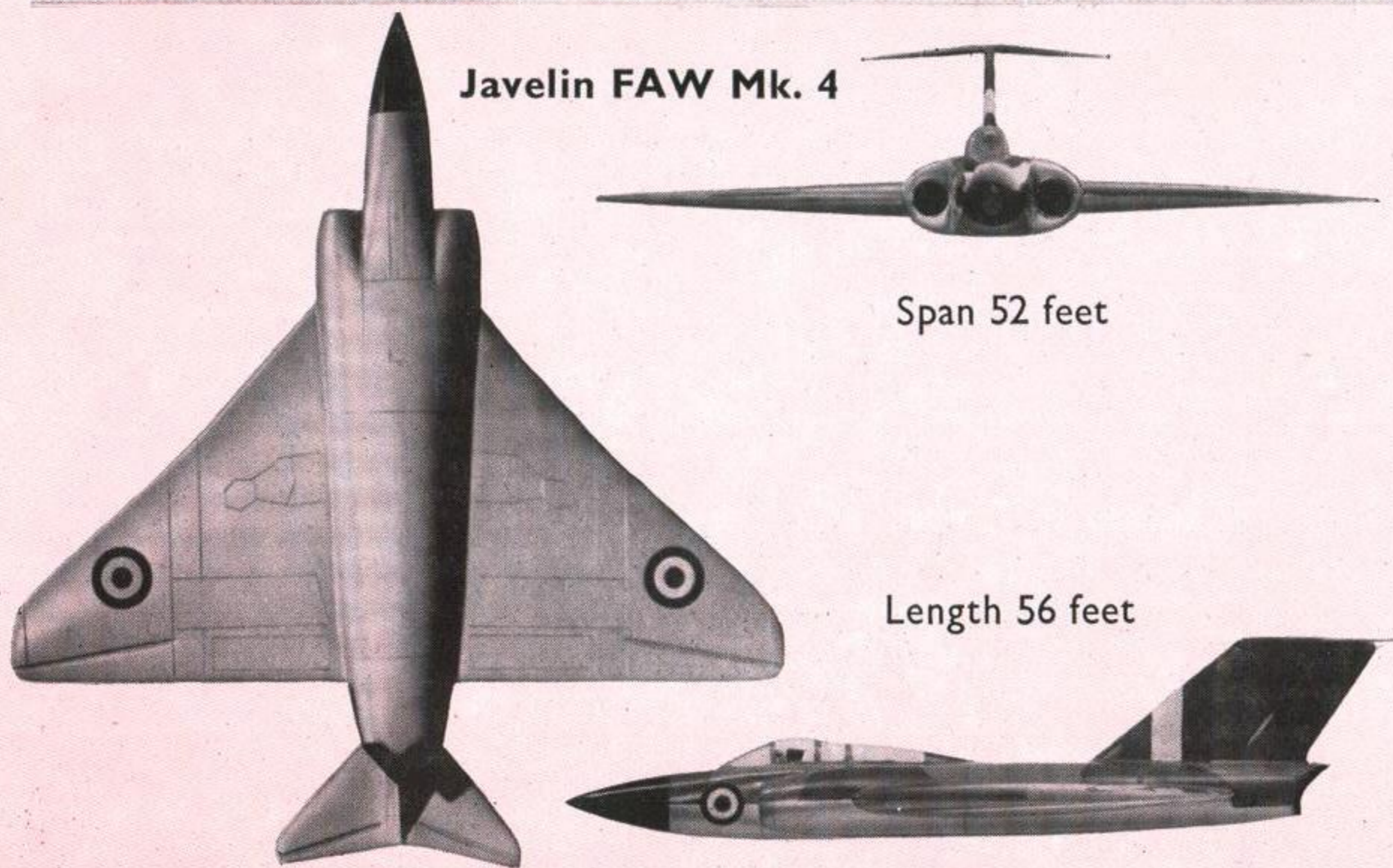
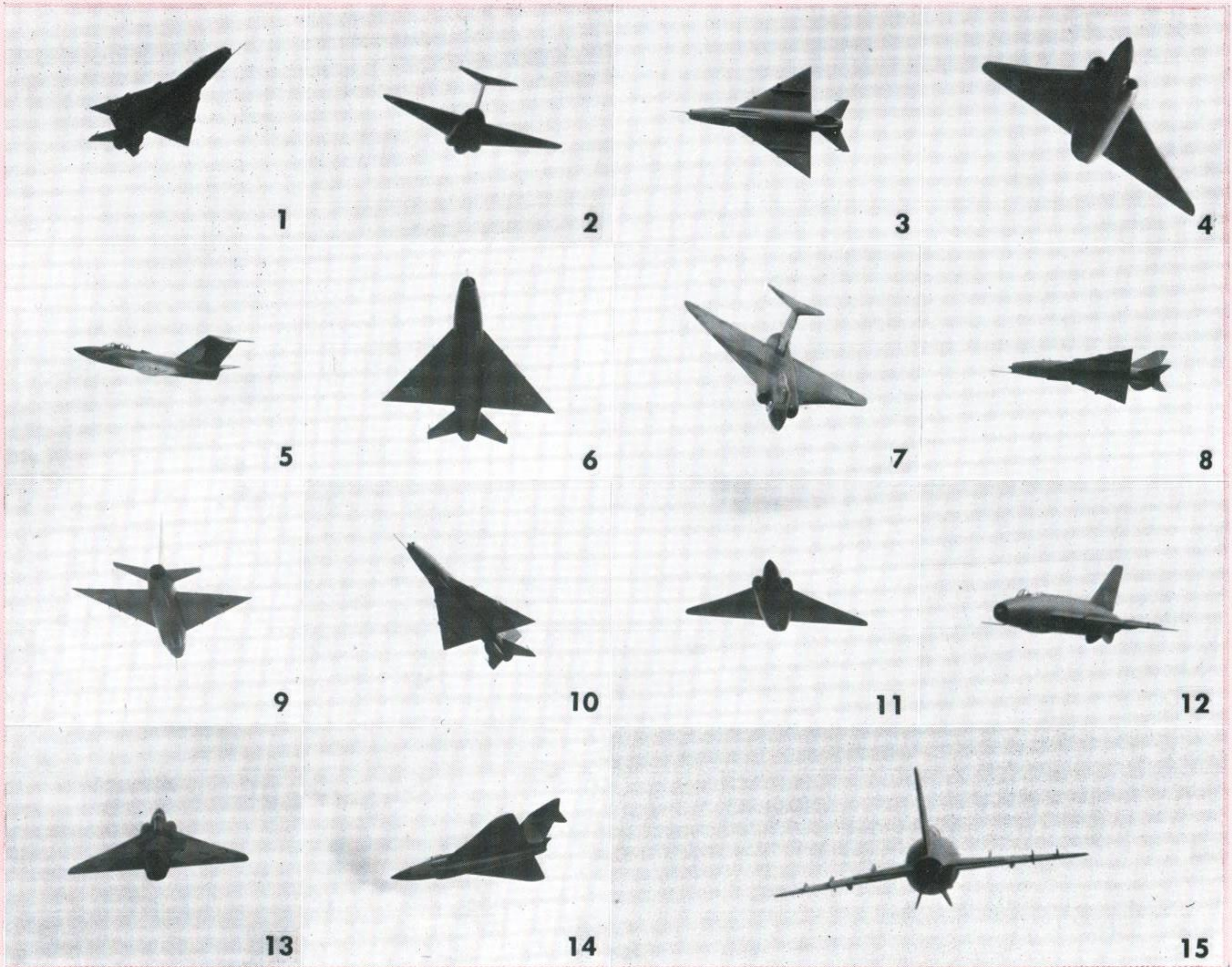
ELECTRA  
Span 99 feet



# “All Deltas Look Alike to Me!”

And you can't very well expect anything else if you don't take the trouble to learn the differences between them, which a glance at the key information in this lesson on the Javelin and the Fishbed will show. But don't stop there—sail right in and identify all the targets, writing down your answers each time you do so, so that these types will be thoroughly well known to you. Only by knowing them intimately at this range will you stand a chance of identifying them at a distance.

Answers on the cover.



Javelin FAW Mk. 4

Span 52 feet

Length 56 feet

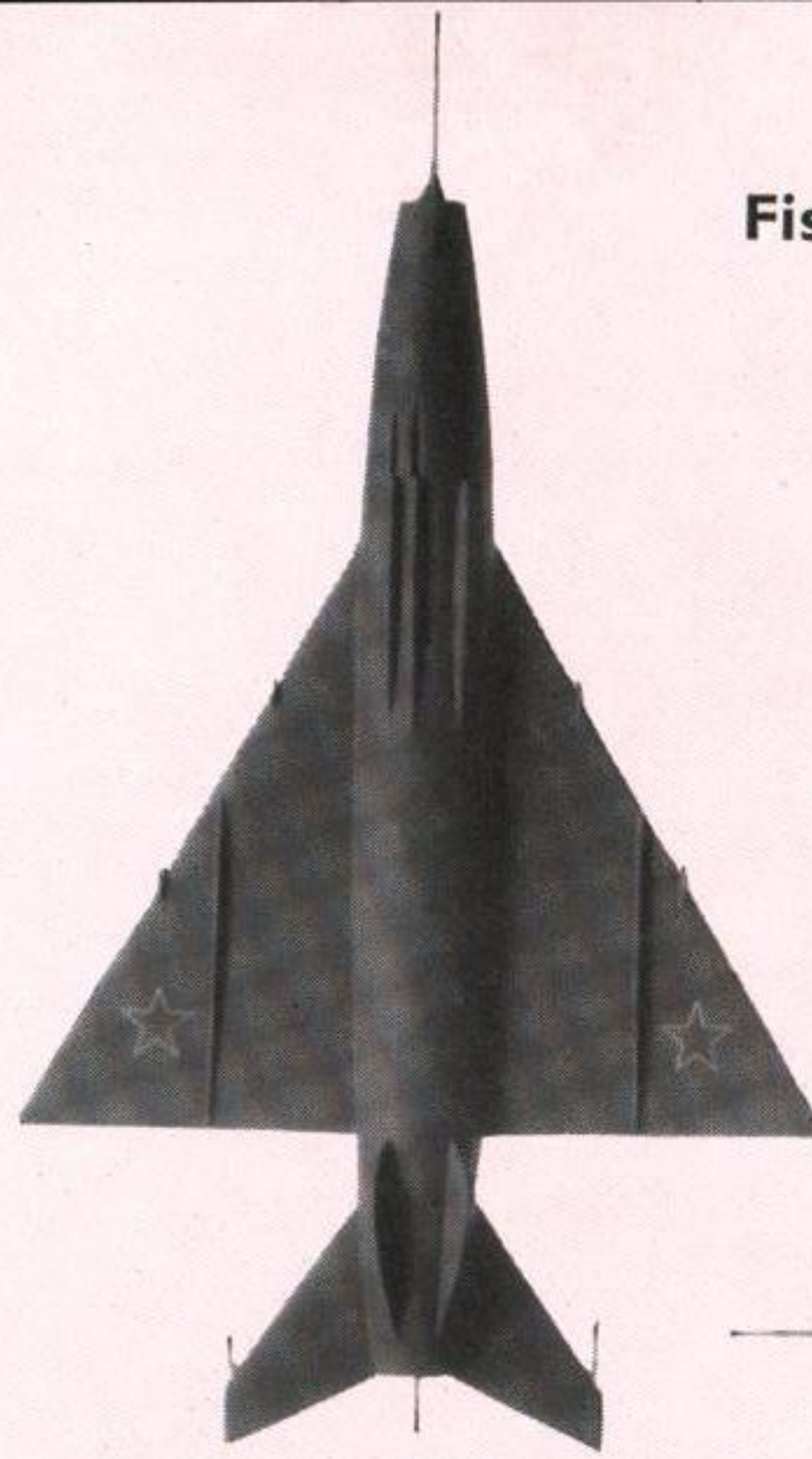
## GLOSTER JAVELIN

British All-Weather Fighter

The outstanding feature of the Javelin is the form of its tail which has its horizontal member sitting on top of the fin. The Javelin also has a cockpit canopy very much longer than that of the Fishbed and two separate air intakes to its twin-axial-flow turbojets which embrace the fuselage, making it, incidentally, one of the fattest in the business. The Javelin is twice the size of Fishbed spanwise and its spread of delta wing is a helpful clue.

# SUKHOI FISHBED A (Su-16) Russian Fighter

Fishbed "A" has pointed tips to its wings, Fishbed "B" has had the points clipped off but is otherwise similar. Fishbed "A" has little in common, at least on paper, with the Javelin, and is generally sleeker, smaller and apart from being a Delta has no really significant features. Boundary layer fences can be "clueful" at some angles of view, particularly if shadows are being cast. Fishbed's tail plane is low set by contrast. The lesson, properly done, will reveal more of this character.

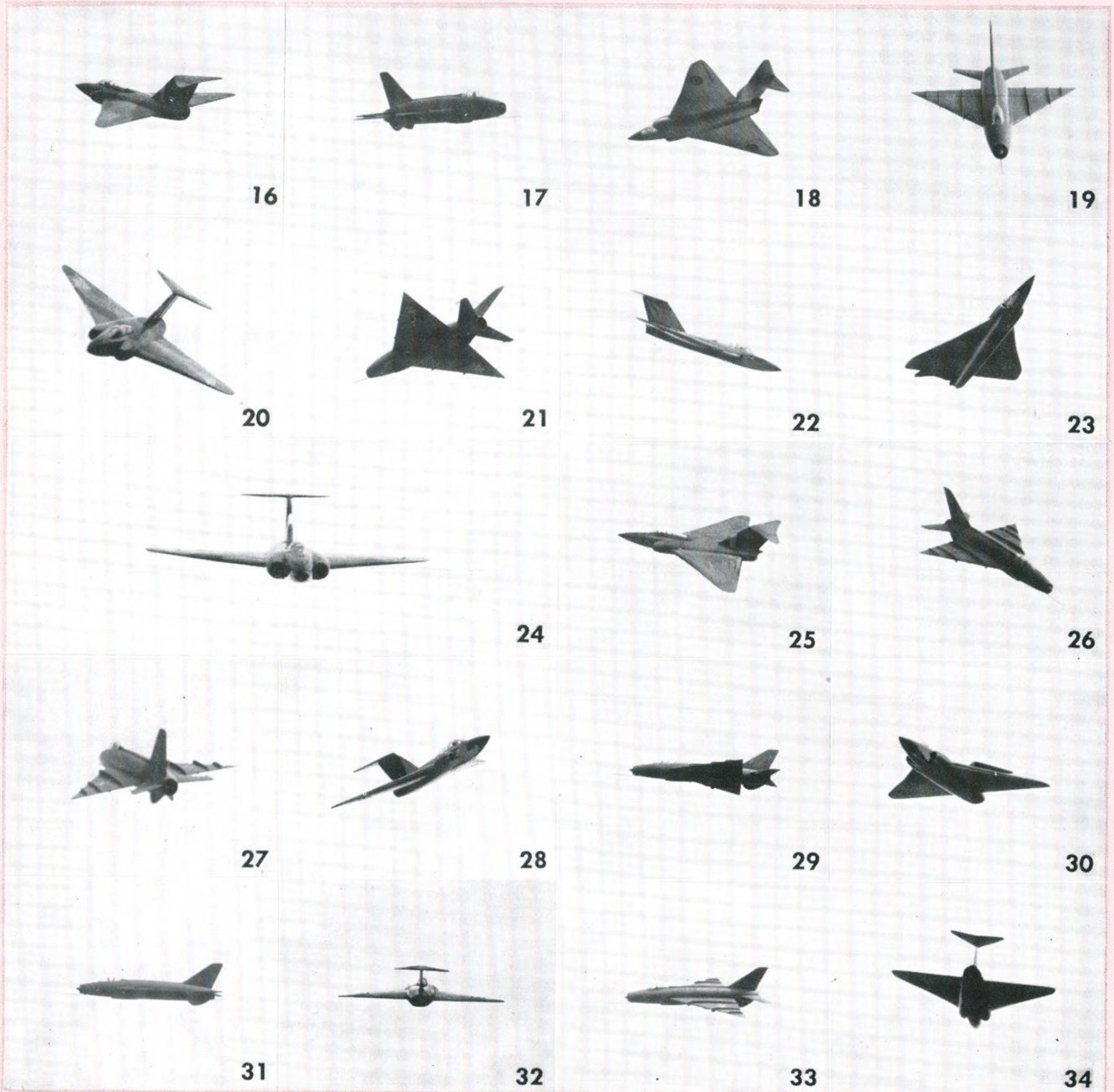
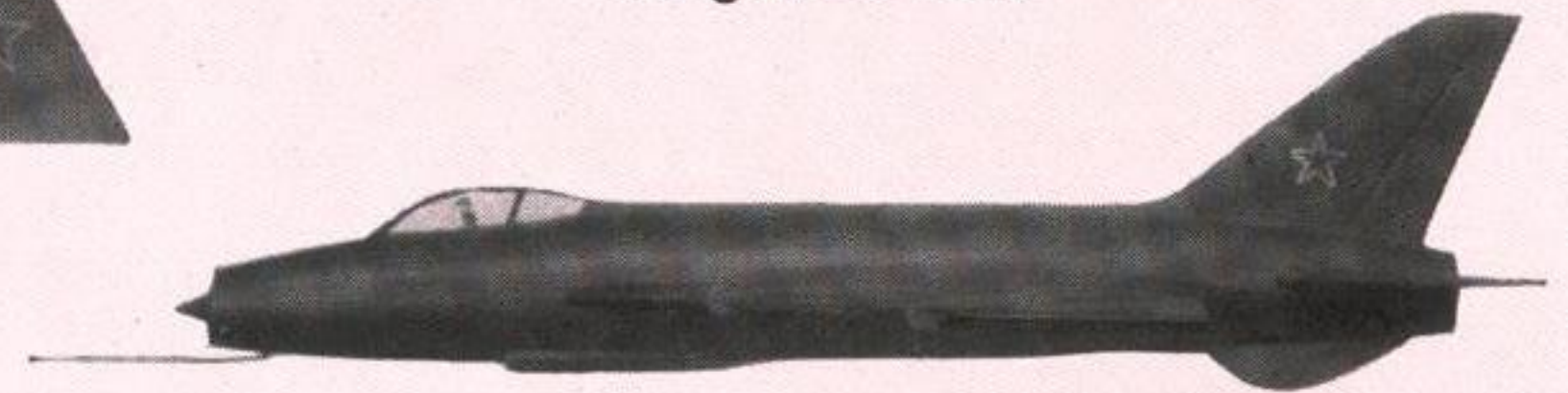


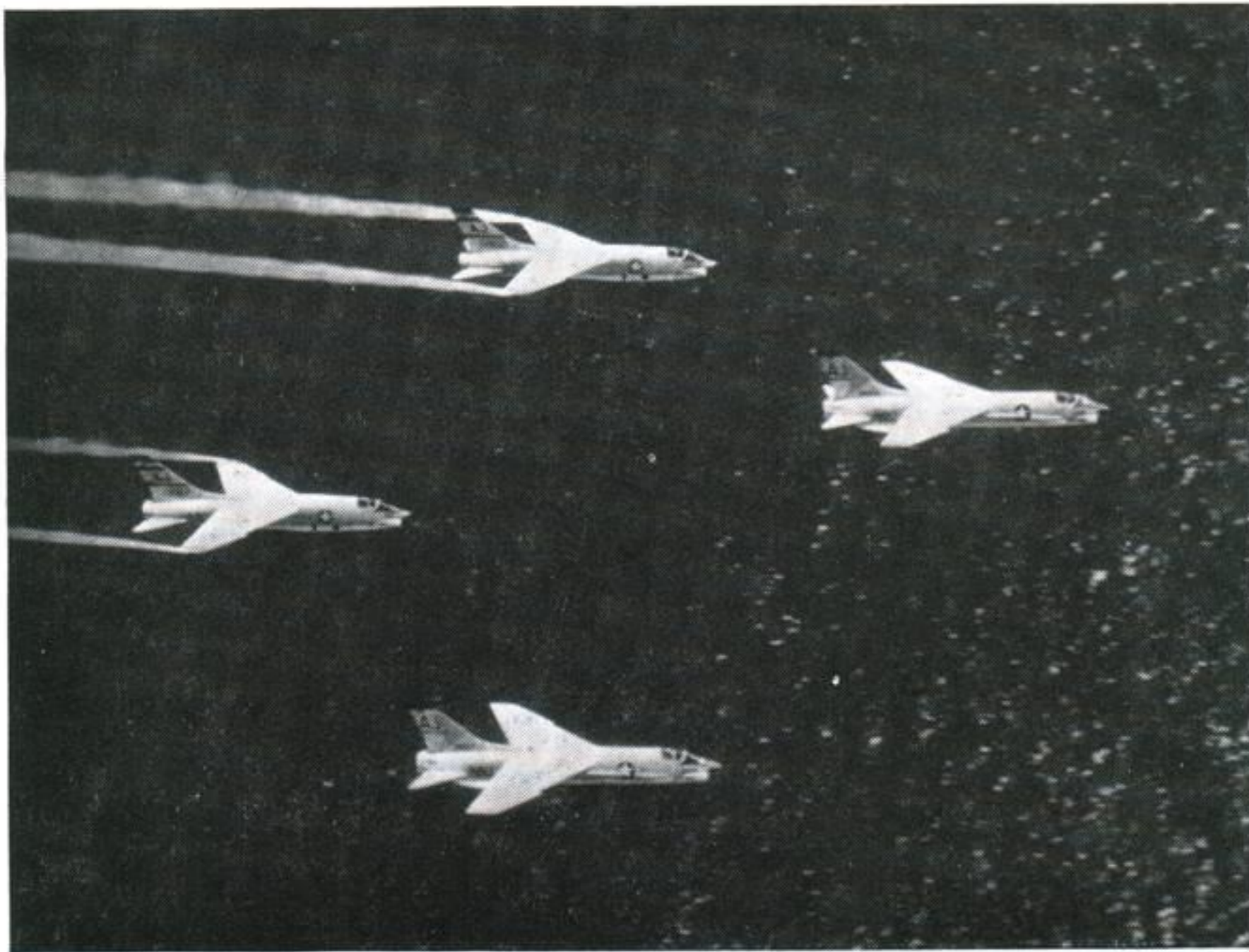
Fishbed "A"



Span 26 feet

Length 48 feet





Cover Picture: F8U-2 and F8U-IP Crusaders over the Mediterranean.

★ SOLUTIONS TO TESTS AND EXERCISES ★  
IN THIS EDITION

★ TRUE OR FALSE? ★

This odd-view is of the B.58 Hustler taken from below.

★ ÉTENDARD IV-M ★

All targets are Étendard IV-M except Nos. 6, 10, 15, 21 which are prototype Étendard IV, and No. 18 which is Mirage III.

★ NEPTUNE P2V-7/ELECTRA ★

Neptune P2V-7: 1, 4, 6, 8, 10, 12, 14, 16, 18, 21, 23, 26, 27, 29, 32, 34, 36.  
Electra: 3, 5, 7, 9, 13, 17, 19, 20, 22, 24, 25, 28, 30, 35.  
P3V-1: 2, 11, 15, 31, 33.

★ FISHBED/JAVELIN ★

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

★ A MASTER TEST ★

1. Colt (An-2)	18. Potez 75	35. Gannet A.E.W.3
2. Creek (Yak-12)	19. Alizé	36. Skyraider
3. Fouga CM-170R Magister	20. E.P.9	37. P.149D
4. Piaggio P.149D	21. Creek	38. Creek
5. Skyraider AD-7	22. Colt	39. Magister
6. Gannet A.E.W.3	23. Magister	40. Colt
7. Potez 75	24. P.149D	41. Gannet A.E.W.3
8. Alizé	25. Skyraider	42. Potez 75
9. E.P.9	26. Potez 75	43. E.P.9
10. Dornier Do 27	27. Gannet A.E.W.3	44. Alizé
11. Skyraider	28. Alizé	45. Do 27
12. Creek	29. Do 27	46. Skyraider
13. Colt	30. E.P.9	47. P.149D
14. Magister	31. Do 27	48. Magister
15. P.149D	32. E.P.9	49. Creek
16. Gannet A.E.W.3	33. Alizé	50. Colt
17. Do 27	34. Potez 75	

◆ NOTICE TO PHOTOGRAPHIC OFFICERS ◆

Units having unclassified official photographs suitable for inclusion in the *Journal's* recognition lessons are asked to forward them to:

*The Editor,*  
*Joint Services Recognition Journal,*  
*Air Ministry (S.T.6),*  
*Whitehall,*  
*London, S.W.1*

★ LIGHTNING/FACEPLATE ★

1. Faceplate	17. Lightning	33. Faceplate
2. Lightning	18. Faceplate	34. Lightning
3. Lightning	19. Lightning	35. Lightning
4. Faceplate	20. Faceplate	36. Faceplate
5. Lightning	21. Lightning	37. Lightning
6. Faceplate	22. Lightning	38. Lightning
7. Lightning	23. Faceplate	39. Faceplate
8. Faceplate	24. Lightning	40. Lightning
9. Lightning	25. Lightning	41. Faceplate
10. Lightning	26. Lightning	42. Lightning
11. Faceplate	27. Faceplate	43. Faceplate
12. Lightning	28. Lightning	44. Lightning
13. Faceplate	29. Lightning	45. Lightning
14. Lightning	30. Faceplate	46. Faceplate
15. Faceplate	31. Lightning	
16. Faceplate	32. Lightning	

★ SWIFT/SCIMITAR ★

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