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Recognition Instructors' HANDBOOK

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Recognition Instructors' HANDBOOK

THIS handbook has been prepared to serve as a concise file of information for the guidance of both trained and untrained personnel called upon to conduct a course in the recognition of planes, ships, and other implements of war.

At the start it should be emphasized that the problems to be encountered in the teaching of recognition are so varied, and the conditions under which recognition may be taught are so unpredictable, that it has been and is impossible to write an unchanging pattern, in the form of a syllabus, to which the instructor can adhere.

What is here attempted is to set up the general principles of recognition instruction that might apply under almost any set of conditions. There is included, however, an outline of certain definite material to be covered in 120 class periods; this material represents the basis of the recognition course for the Naval Aviation Pilot Training Program. There is included also a statement of the general objectives of the official United States Navy Recognition Training System, which should be used where proper facilities, time, and equipment are available. In regularly established Naval Aviation Training Schools such prescribed routine and pattern can be followed; the present handbook, however, has been prepared primarily for the guidance of instructors at operating naval air stations, aboard ship, and in combat areas where conditions can vary with the tick of the clock.

At best, the material herein can be considered only as a secondary aid to the most important single factor in the successful teaching of any subject—the ingenuity of the individual instructor.

In many instances, the instructor will be called upon to plan his own course, to set up his own syllabus, to select his own material, and to adapt all these to fit unprecedented situations and conditions.

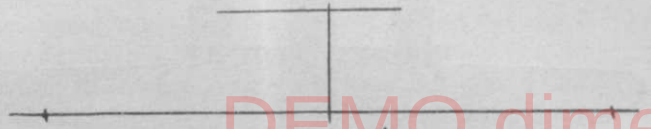


FIGURE 1

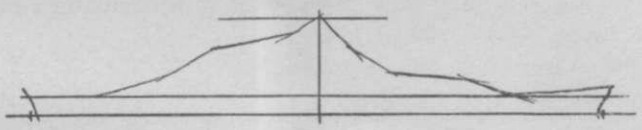


FIGURE 2

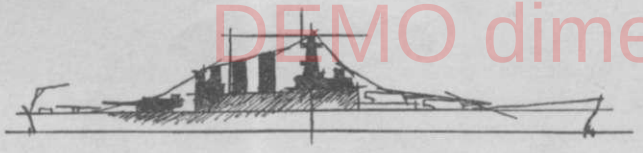


FIGURE 3

Head-on view:

(a) Draw a horizontal line to indicate the wing span, marking off on it the outer tips of the wings.

(b) In relation to this wing-span line, draw the shape of the fuselage (in this case, it is a high wing—the fuselage is drawn just below this line).

(c) Draw the shape of the wing—in this case, slight dihedral with thick wing roots tapering sharply.

(d) Locate the engines along the wing-span line in relation to the over-all length of the wing, and sketch in their general shape.

(e) Draw in the cockpit enclosure, the tail plane in relation to the wing, and the fin and rudder (keeping the proportions of its height and thickness).

Plan view:

(a) Draw horizontal line to represent the wing through its outermost tips, then along this line indicate the end of the wing tips.

(b) A vertical line crossing the wing line directly in its center indicates the line of the fuselage. Along this line indicate the length in proportion to the wing span indicated on the wing line.

(c) Sketch in the wing, leading edge first (in this case straight), the wing tips (curved and tapered), and the trailing edge (sharply tapered).

(d) Sketch in the general over-all shape of the fuselage (especially important).

(e) Sketch in the tail plane (elliptical leading edge, slightly tapered trailing edge).

(f) Sketch in the engines, keeping their location on the wing in direct proportion to the wing span and in line with their locations in the head-on view.

(g) Add any outstanding peculiarities (in this case, inboard wing panel set forward, odd shape of engine cowling, one protruding engine housing on trailing edge of wing).

Side view:

(a) Indicate the over-all length on a horizontal line.

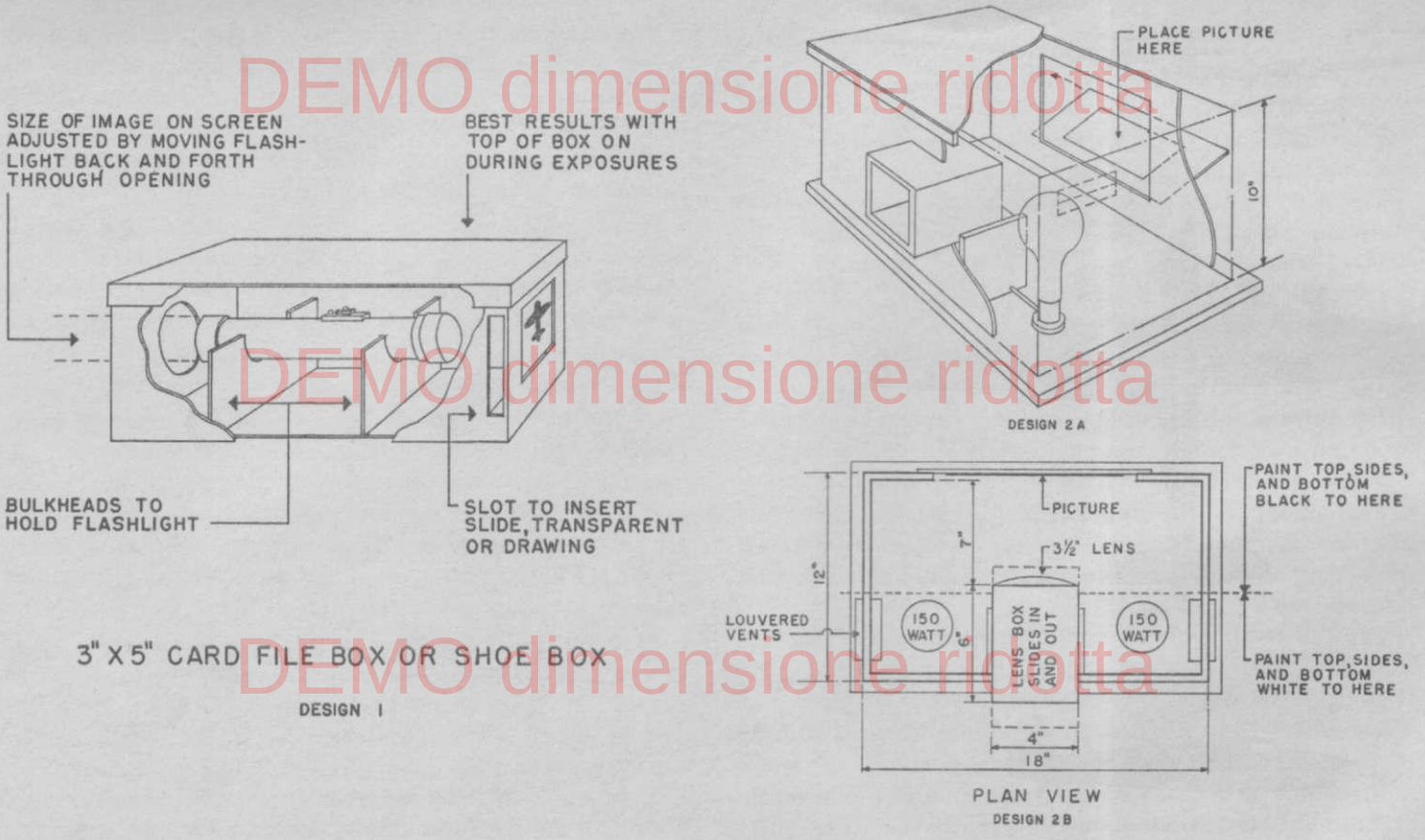
(b) Sketch the general shape of the fuselage. This is the most important step in this view as it indicates the entire character of the plane (graceful cigar shape tending to curve slightly downward in the nose).

(c) Draw the cockpit enclosure.

(d) Draw the fin and rudder, stressing its location in relation to the end of the fuselage and its peculiarity of individual shape.

(e) Draw in the wing and engine, being careful to show any protrusions beyond the general outlines of the fuselage.

NOTE.—Fill in any of the above outline sketches to complete the silhouettes.



4. Designs for improvised projector

Saunders—Roe Ltd.
Vickers-Armstrong Ltd. (Supermarine).
Westland Aircraft Ltd.
Hawker-Siddley Ltd. (incorporating): Armstrong-Whitworth Aircraft; A. V. Roe Ltd. (Avro); Hawker Aircraft; Gloster Aircraft Ltd.; and Armstrong-Siddley Motors).
Rolls-Royce Ltd.

NOTE.—This list gives the names of the better-known manufacturers. Although these manufacturers naturally give their own serial number to their products, once the aircraft goes into service use it is given a name. Frequently (but not invariably), this name is alliterative. For example the Hawker "Hurricane," Bristol "Beaufighter," or Short "Stirling."

(2) German:

Title	Abbreviation
Arado Flugzeugwerke	Ar
Blohm & Voss	Ha or Bv
Bucker Flugzeugbau	Bu
Dornier-Werke	Do
Gerhard Fieseler Werke	Fi
Focke-Wulf Flugzeugbau	Fw
Gothaer Waggonfabrik	Go
Ernst Heinkel Flugzeugwerke	He
Henschel Flugzeug-Werke	Hs
Junkers Flugzeug-und-Motorenwerke	Ju
Messerschmitt A. G. (Incorporating Bayerische Flugzeugwerke)	Me
Argus Motoren Gesellschaft	
Bayerische Flugmotorenbau (Incorporating the B.M.W. Flugmotoren-Werke Brandenberg)	B.M.W. Bramo
Daimler-Benz Aktiengesellschaft	D.B.

NOTE.—The titles of German aircraft are normally composed of the makers abbreviation letters plus a makers number. Examples, Ar 196, Ju 88, Do 218. Where additional letterings or numerals occur, as in Ju 88-A6 or Do 217-E2 these merely imply a modification of the type.

(3) Italian:

Title	Abbreviation
Costruzioni Aeronautiche Novaresi	C.A.N.S.A.
Cantieri Riuniti Dell'Adriato	CANT
Societa Italiana Caproni	Ca
The products of some of the companies controlled by Caproni appear under their own names, notably:	
Bergamaschi	
Caproni-Vizzola	
Reggiane	Re
Campini	

Isotta-Fraschini	
Aeronautica D'Italia S.A. (Fiat)	FIAT
Aeronautica Macchi	Macchi
Societa Italiana Ernesto Breda	Breda
(Incorporating the Meridionali Co.)	Ro
Societa Anonima Piaggio	P
Societa Italiana Aeroplani Idrovolanti "Savoia-Marchetti"	S.M.
Societa Anonima Alfa-Romeo	Alfa

NOTE.—In many instances the initial of the designer is placed between the makers name and the serial number of the aircraft. For example, "Macchi C 202," where "C" stands for the designer, Castoldi; or again, "Fiat B.R. 30," where "B.R." stands for Bombardamente Rosatelli (Rosatelli Bomber).

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