

THE basic principle of Surface Vessel recognition as with aircraft is familiarity with the *total form* of the object observed. The true character of a ship is not determined by a single feature or features but by the familiarity we may have with the total mass of the hull and superstructure, when viewed from great distances.

As in aircraft recognition, the salient recognition characteristics are shown in their simplest form by silhouettes. If this silhouette is further simplified into its basic masses, we obtain a silhouette where the minor details have disappeared, leaving only the real recognition features. It should be noted, however, that in one important respect ship silhouettes differ from those of aircraft. With planes, all three views are of nearly equal importance for correct identification, but in ship recognition, the use of the beam, or side view silhouette, is by far the most important. If the beam silhouette is thoroughly known, the ship can be recognized from either the surface or the air. This can be proven by examining any group of aerial views of ships.

Preceding each group of vessels of each nation represented in this manual is a chart of these simplified silhouettes representing a vessel of each class. These are arranged at the same scale for ease of comparison with each other and with other ships in the same class in other navies. Large instructional charts of these simplified silhouettes are being prepared and will be distributed in the near future.

The present manual will serve as a text book in recognition courses inasmuch as it will have material, readily available, within a single cover, on all ships on the present operational list.

Sets of scale models of surface craft are available on request for supplementary instruction from the Bureau of Aeronautics for the Navy, and from the A. A. F. Training Aids Division, New York City, for the Army Air Forces. These are useful for detail examination and for various forms of realistic display on surfaces simulating water under varying light conditions, such as study of fleet maneuvers. The models are particularly valuable since they may be displayed at any angle and may be viewed from above to illustrate views of ships or groups of ships.

Motion pictures are available for a limited number of subjects and serve further to assist in recognition training.

Training in recognition of surface craft follows the same general pattern as in aircraft recognition. The principal value of the flash meter as a teaching device is that it forces the student to grasp total form as opposed to detail. It has already been indicated that this recognition of total mass is as essential for surface craft as for aircraft. Therefore, exposures of slides should be as brief as is consistent with the progress of the group being taught. While, in general, exposures will probably be at the one or one-half second rate, successful work on surface craft images has been reported at speeds up to $\frac{1}{75}$ of a second.

