

air forces from the point of view of the destruction of prepared gun emplacements, especially when completely concreted; their neutralisation for a critical and limited time is, of course, another matter. At the same time there is a strong inclination among air-men to look more upon the material rather than the morale side of such bombing. The demoralisation of the gun crews through the psychological reaction to bombing contributes as much towards the neutralisation of gun defences as does damage by actual hits or by shock effects.

#### *Spotting for Naval Bombardment*

498. The Fleet Air Arm was unable to accept the full responsibility of spotting for naval bombardment either for the assault or for subsidiary operations and in the main, this task fell to Royal Air Force fighter reconnaissance squadrons. The pilots of these squadrons had necessarily to undergo a special course of training in naval procedure. The conversion presented no real difficulty but the prolonged diversion of these units from their normal tasks caused some anxiety as our total resources were limited. In the end, all our reconnaissance commitments were fairly adequately met.

499. There are obvious advantages in training some Royal Air Force reconnaissance units for the dual role of co-operation with both ground and naval forces.

#### *Anti-Aircraft Defences*

500. On a number of occasions, our own anti-aircraft guns, both naval and military, shot down friendly aircraft. The claims of fighter aircraft and A.A. guns in air defence have always conflicted because the ideal for the fighter is a field clear of any restrictions, and for A.A. gunfire a sky free of friendly aircraft.

501. In comparatively static conditions, such as the Battle of Britain, it has generally been accepted that the merits of these two claims could best be resolved by an Air Defence Commander (who in the case of the United Kingdom was the Senior Defensive Air Force Commander). It is relevant to note that after much experience the same principle was adopted in the Mediterranean.

502. For Operation "Neptune", however, no one officer was made specifically responsible for Air Defence as such, primarily because in the initial stages it was held that the Army Group Commanders themselves should decide the precise allocation of their resources to the limited number of landing craft allowed them. Also, it was considered that in forward areas the only effective control which could be exercised over A.A. weapons would be by the imposition of standing instructions.

503. From the Air Force point of view, it became clear shortly after the operation had been satisfactorily launched that this policy should be revised in favour of unified control. My request on these lines was not accepted by your Headquarters in August on the grounds that the time was not opportune for a change in this particular policy.

504. I cannot help feeling, however, that if the scale of enemy air attack had in fact been heavier such a change would have been essential in order to bring about a satisfactory

degree of security when and where it was really needed. Moreover, I am of the opinion that the knowledge that a well co-ordinated air defence system exists will of itself produce a deterrent effect upon the enemy.

505.\* In the absence of serious air attack, the claims of A.A. guns were at times pressed, to my mind, without full regard to the air situation of the moment. Army Commanders declared a considerable area around the majority of river crossings or similar places of importance a "prohibited" area for the operation of friendly aircraft by night. The Tactical Air Force Commanders concerned were approached by the appropriate Army Commander for acceptance of these I.A.Z's and, although they could speak for their own night operations, which were primarily of a local nature, they were in no position to answer for the requirements of the Commanders of the Strategic Bomber Forces or for the needs of S.O.E. operations.

506. The patchwork of these restricted flying areas thereby created imposed upon both Royal Air Force Bomber Command and No. 38 Group tremendous operational difficulties and handicaps which were surmounted mainly by the navigational ability of the crews concerned. These I.A.Z's constituted an unnecessary complication of an air situation already made difficult by the restrictions which had to be imposed on the use of I.F.F.

507. I feel most strongly that the establishment of restricted areas for flying, when part of the Air Defence arrangements, is primarily an air problem and should be solved by the Air Commander, naturally after the necessary consultations with the ground and naval commanders. The issues which are involved have never been faced up to because the scale of enemy air attack has been of such a low order, but it has been our own air forces which have had to suffer unnecessary inconveniences, and at times danger, and the A.A. guns have enjoyed a freedom of action which has been out of proportion to the real defensive requirements.

#### *Aircraft Identification.*

508. It was realised for some time before Operation "Neptune" was launched that our mechanical means of identifying aircraft, namely I.F.F., was not a satisfactory type of equipment for aircraft which operate in any numbers. In fact, owing to mutual interference and the probability that no value at all could be gained by the general application of this equipment, it was decided, after consultation with all United States and British services and technical authorities concerned, to limit the use of I.F.F. to a few special types of aircraft in order that these aircraft at least could be adequately tracked.

509. This decision meant that the only remaining means of identifying aircraft was the careful passing of aircraft movements and by

\* Apart from the operational factors referred to in paragraphs 505, 506 and 507, it is appreciated that there is a "morale" side to this question. On the one hand there are the fighting troops who may be kept awake by the effects of minor air action to which they cannot retaliate, and, on the other, the tired crews returning from missions, whose aircraft cannot avoid the prohibited areas, either because of shortage of petrol or because they have been already badly damaged, and who find themselves fired upon and possibly shot down by friendly A.A. defences.