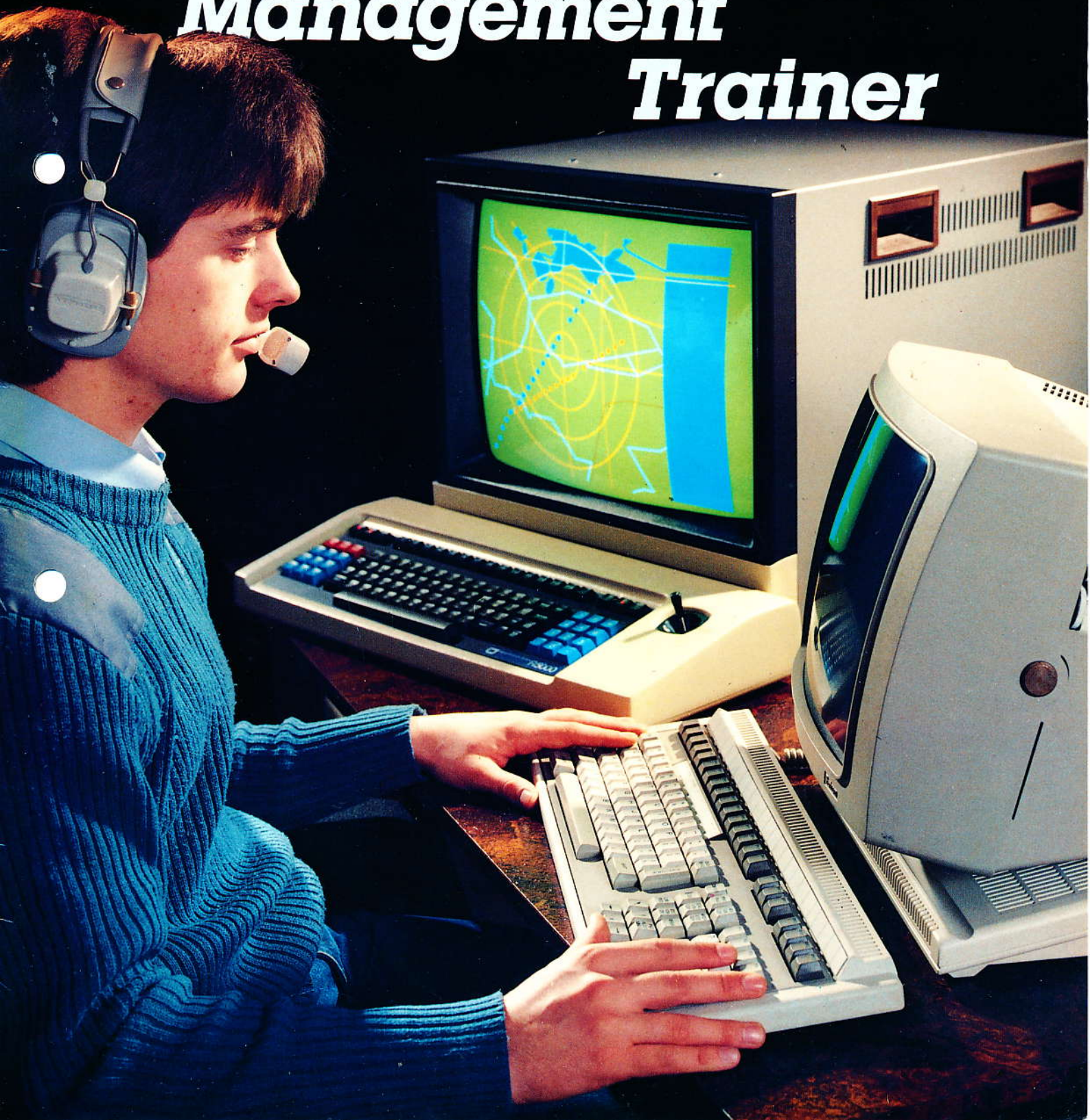**Marconi**
Data Systems

Force
Management
Trainer

Force Management Trainer

The Problem: *Achieving and Maintaining Commanders' Tactical Skills*

Smart, prompt decisions win battles; uncertain or delayed ones cost material and lives. Sometimes there is no second chance.

Frequently a commander's tactical experience is limited to purely theoretical studies with some occasional friendly war-games involving tens/hundreds/thousands of participants.

The studies are slow and lack response.

The war-games are expensive, disruptive and visible to a potential enemy.

For various reasons both are limited in duration and realism.

The Solution: *Effective Simulation Systems by Marconi Radar which:–*

- Provide tactical experience for battle commanders
- Allow complete theatre battles to be played
- Are suitable for all forces – Army, Navy and Air Force
- Are suitable for all levels of executive commander
- Generate a simulated RASP with realistic
  - Environment
  - Hostile Forces
  - Friendly Forces
  - Weapon Systems
- Prepare exercises by operationally experienced staff
- Require no computer programming knowledge
- Deploy resources by commanders to meet the stated threat
- Allocate resources for use as the exercise proceeds

The S390 series Force Management Training System allows commanders to acquire operational experience. Suitable for all levels of executive commander, this system has been developed by Marconi Radar as a result of its extensive simulation experience.

Experience gained over many years from working with, and providing realistic radar simulators to, the armed forces of the world.

This system allows commanders to be stressed under realistic operational conditions and for them to see the eventual, likely, outcome resulting from their decisions.

Decisions which can be taken completely free and in total safety.

Exercises may be repeated identically or with a different environment/resource deployment.

All exercises may be recorded and replayed for detailed analysis and comparison.

Operational Capability

The S390 series of simulation system allows battle commanders to practise and develop their tactical skills. It provides a war-game facility.

A facility which allows complete theatre battles to be realistically played.

It is designed specifically to allow all levels of executive commander to gain experience in situation analysis and decision making.

The attack(s), environment and both hostile and friendly forces, are defined by the game staff when the exercise is prepared.

The commanders are briefed and they deploy their defence resources (within the computer) to meet the stated threat(s).
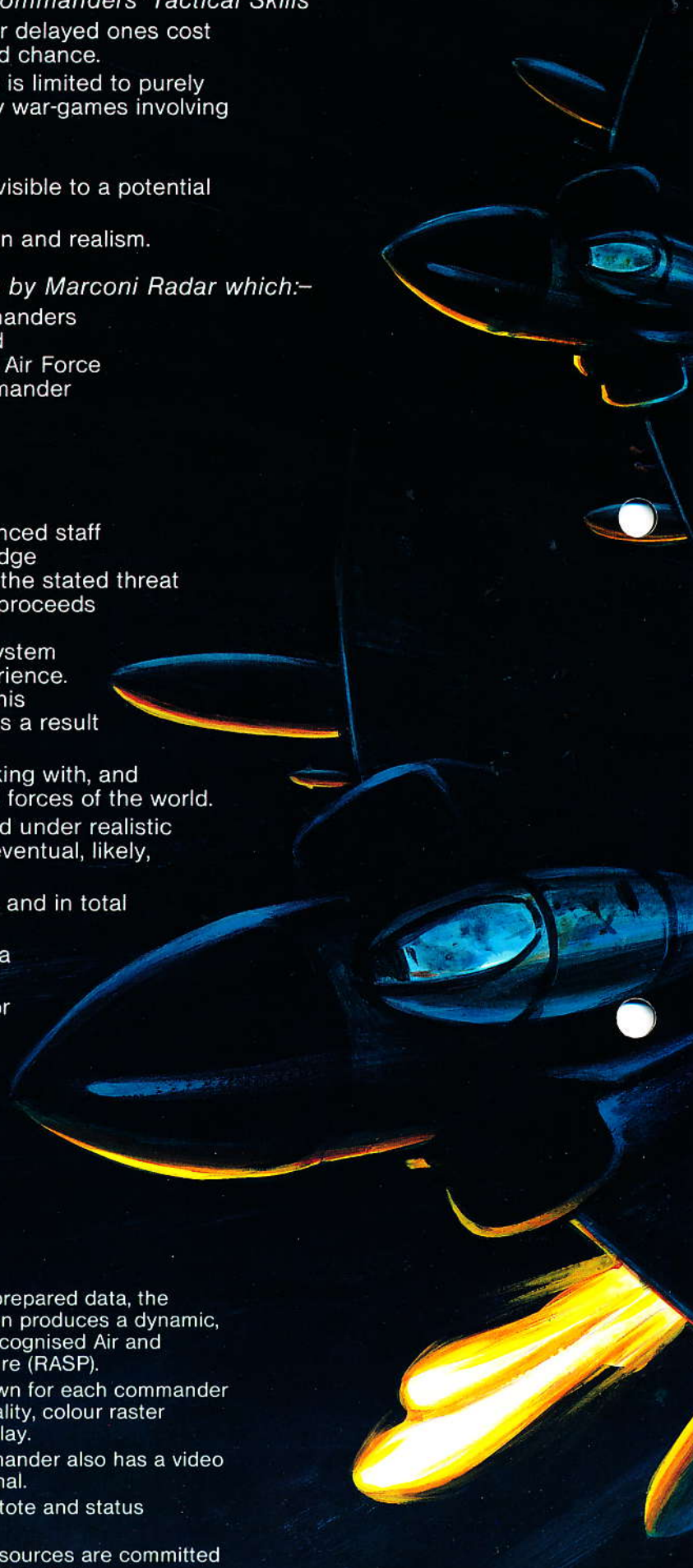
Using the prepared data, the computer then produces a dynamic, simulated Recognised Air and Surface Picture (RASP).

This is shown for each commander on a high quality, colour raster graphics display.

Each commander also has a video display terminal.

It provides tote and status information.

Defence resources are committed as the attacks develop.

A training programme is seen by the commander as a four stage process. It consists of:-

The Briefing

The game staff describe the exercise features. In particular the threat and the defence resources.

The Deployment

The commanders define, to the computer, where their defence resources are to be deployed. Deployment may be anywhere within the RASP permitted by the game staff.

The Exercise

When all of the moveable resources have been deployed, the exercise begins. Hostile forces then move across the RASP according to the prepared specification; for example routes, speeds, radar coverage and Electronic Counter-Measures.

When a hostile force is detected, the commanders commit a defence resource to cover that threat.

A subsequent command will allow the threat to be engaged.

The result of the engagement is computed using probability figures specified by the game staff.

Each weapon is individually specified.

During an exercise, the game staff may either remove or diminish the effectiveness of a defence resource.

The exercise continues until a time decided by the game staff, the threat is dealt with, or until all resources have been used.

The De-briefing

After the exercise, the game staff and the commanders may analyse the tactics used and their effectiveness. Data is collected automatically during the exercise by the computer to assist this task.

Various factors may be analysed. For example, speed of response and degree of penetration. Exercises may be recorded. This allows the exercise to be played back at both normal and accelerated speeds.

Exercise Preparation

User-friendly software is provided by Marconi Radar to ensure that exercise preparation is simple to understand and easy to perform. It allows exercises to be created by operationally experienced personnel without any need for computer programming expertise.

Guided by this software, the operator enters the necessary data into computer generated proformae on a VDT.

This data is checked, for validity on entry and then when data entry is completed, the overall exercise is checked for consistency.

Clear error reports are produced in either case when a violation is detected.

Finally, complete exercises are stored in a library, within the computer, from where they may be selected for use whenever required.

Exercises may be created completely from new material, or may be based on existing data from the library.

Initial exercises are provided by Marconi Radar to enable the system to be put into operational use immediately on delivery.

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