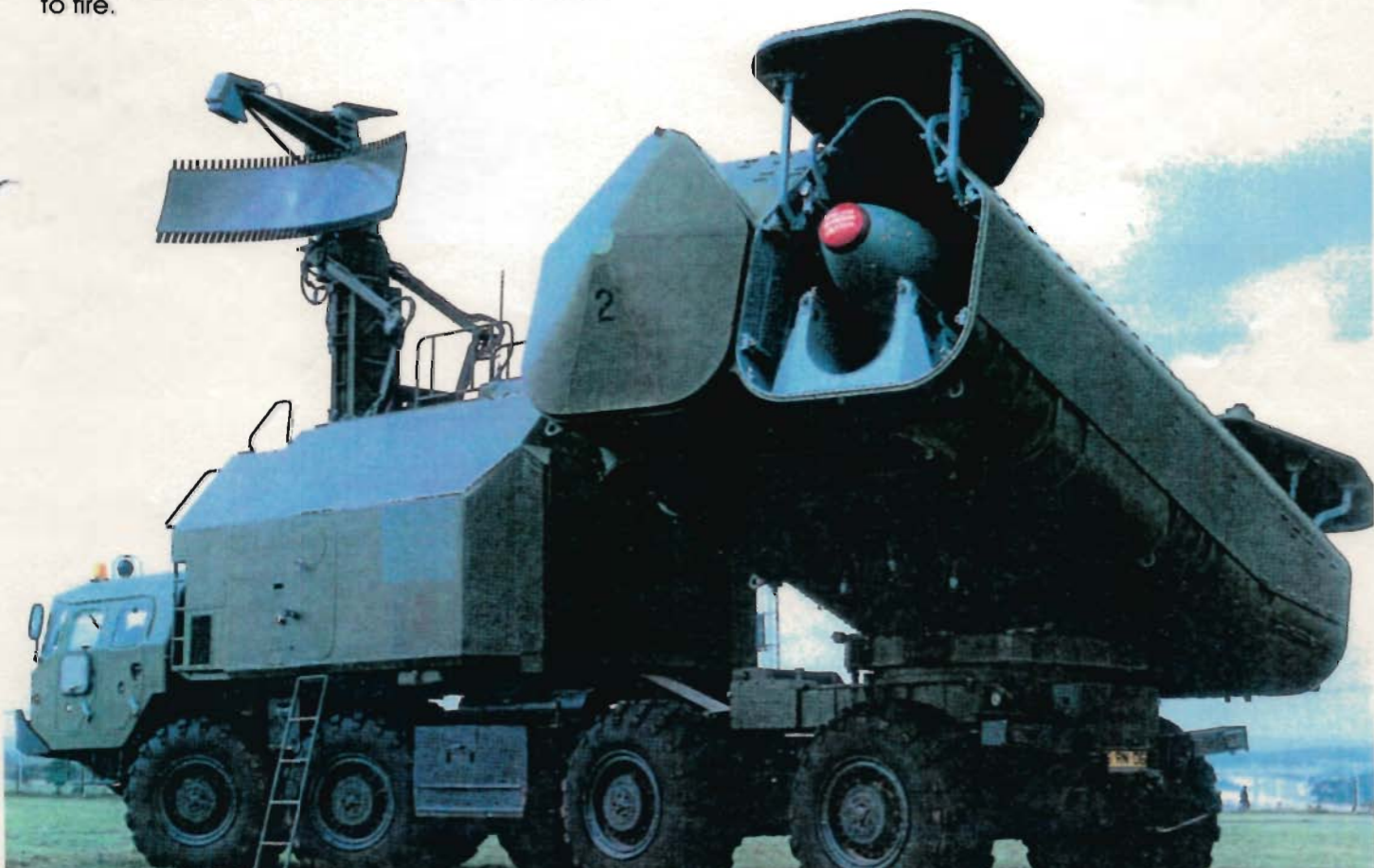


# The TELAR



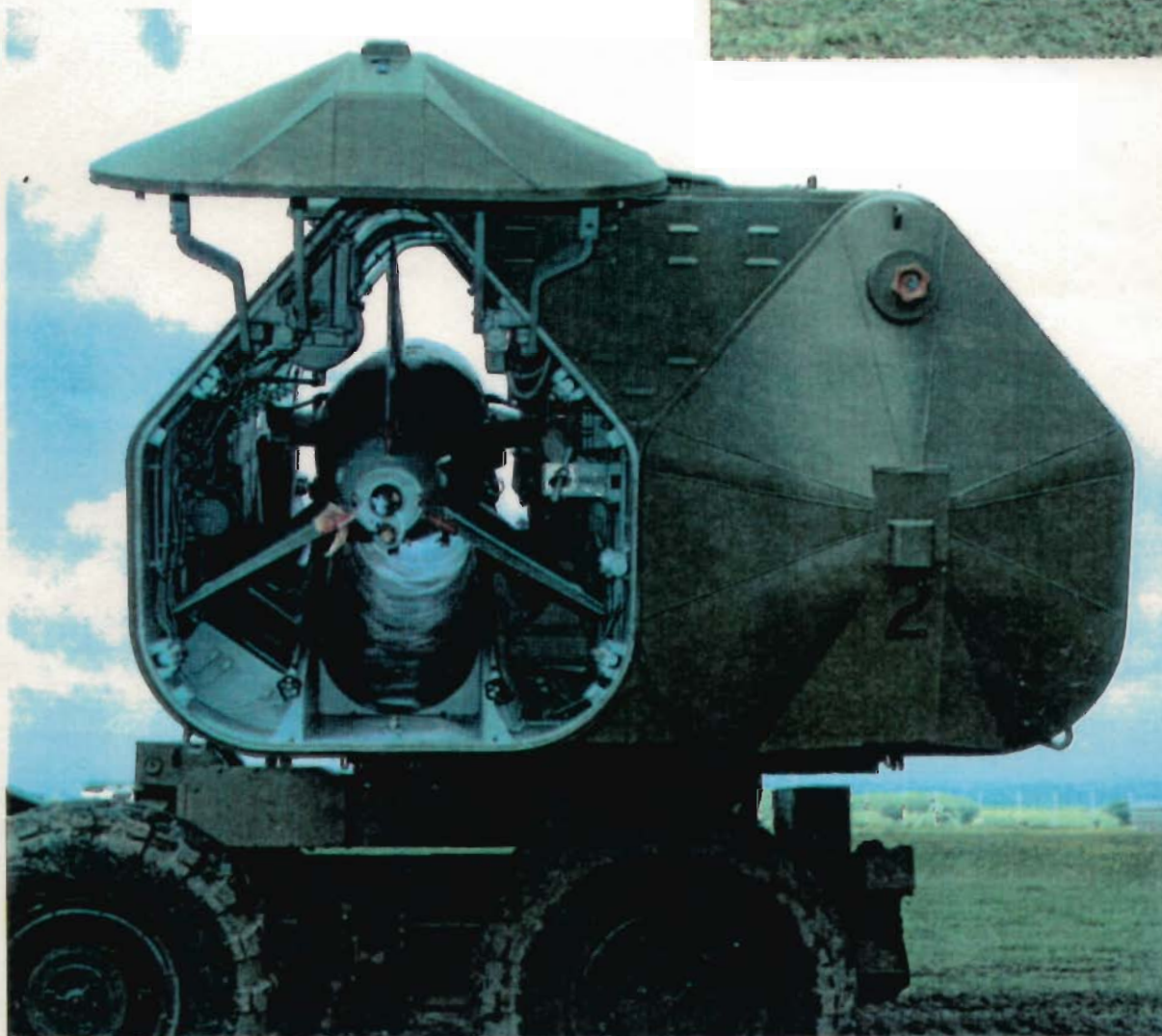
In summary the TELAR is a well designed and well integrated missile platform. While some of the electronic technology is behind the latest Western standards the design appears to be functionally correct. Reliability and availability have proved to be of a high order and the system has been found to be easy to operate. Improvements the crew most wanted to see were digital data links, digital computers, frequency agility for PLANKSHAVE and solid fuel missiles!

The launcher has now been trained and elevated to the correct firing position with the missile doors open. The launcher is following the targets movement and the system is ready to fire.





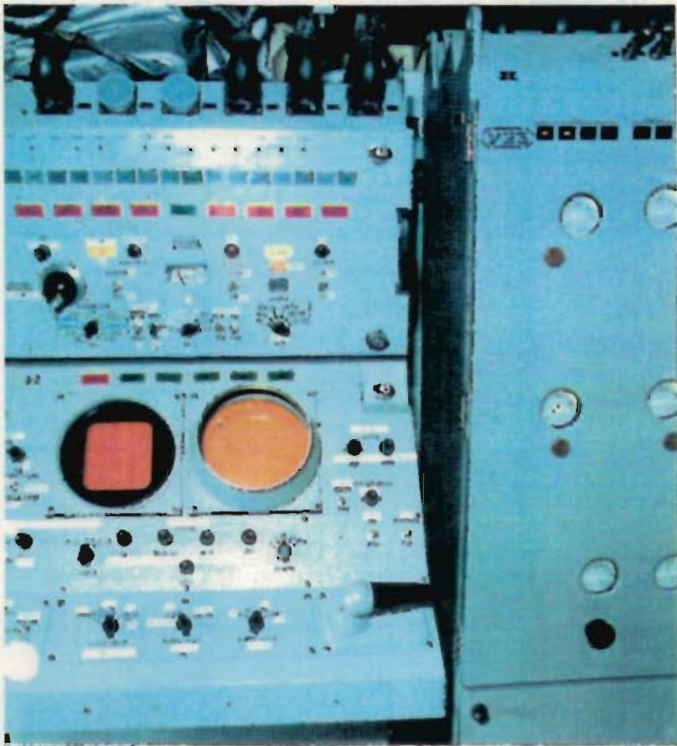
This picture shows the launcher automatically being trained round to the firing bearing. The PLANKSHAVE is in sector scan and the target is being tracked in auto.



A view from the rear of the launcher shows the 2 ton liquid fuelled missile (without its solid propellant boost motor which is normally mounted beneath it) ready to fire.

Missile loading/unloading is carried by lowering the launcher to the horizontal position and loading/unloading from the front of the launcher using the mobile crane and a special portable beam assembly.





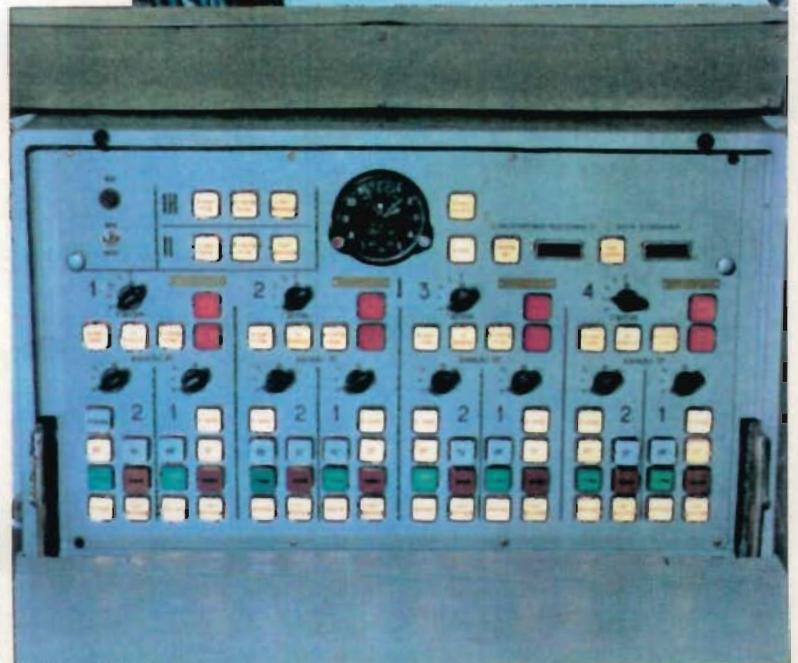
The radar operator controls PLANKSHAVE. This radar has a standard PPI display and a fine display. The operator's task is to bring the target to the centre of the fine display using the twist and turn joystick. Once centred the target is then auto tracked by the analogue computer seen to the right of the radar console.

The radar has two magnetrons:-

- A primary mode high power long pulse magnetron with a choice of four selectable frequencies and a jittered prf capability. One of these frequencies is the war frequency.
- A secondary mode low power high prf single frequency magnetron. In ship fits this is also used as a standby navigation radar.

The radar also has a passive mode when it acts as an ESM receiver.

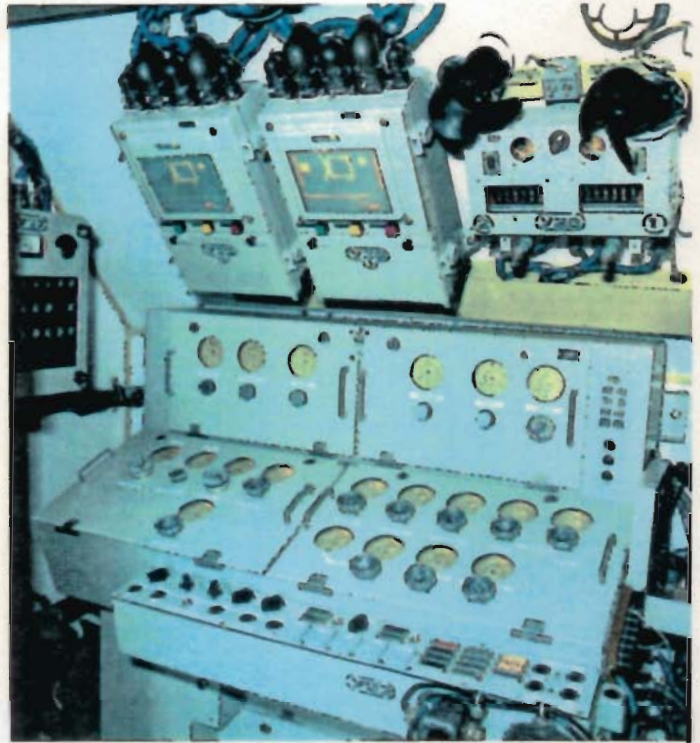
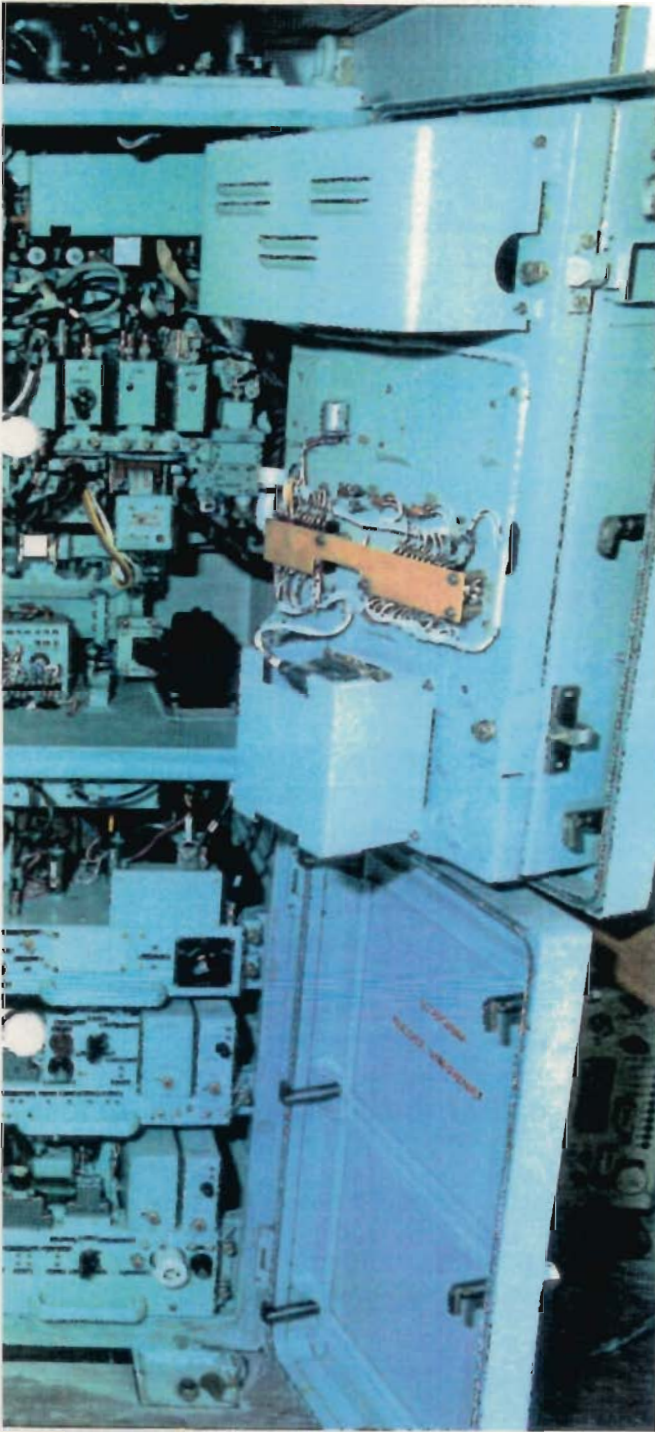
The radar is largely solid state with a full range of bu under the small cover on the left hand unit. There is facilities are provided including lamp indication of f



The group commander has a mimic board which shows him (a Lt Cdr) the status of the other four TELARs in the group. This helps him to carry out coordinated attacks on the selected target(s).



The frequency selection switch can be seen  
st equipment as such but good monitoring



The launch console operator controls the information fed to the missiles through the analogue launch computer. Target information is normally provided by a third party using secure voice - this is manually put into the launch computer or automatically entered if the information is from PLANKSHAVE. The operator then selects the missile flight profile, chooses the missile to be fired, puts the launcher to auto and fires the missile in sequence with the other TELARs.

The two missile testing boxes above and to the left of the console gives the operator the option of carrying out over fifty automatic checks on the missile before firing. There are also two missile simulators provided which enable the crew to carry out repeated practice firings without powering up the missiles.



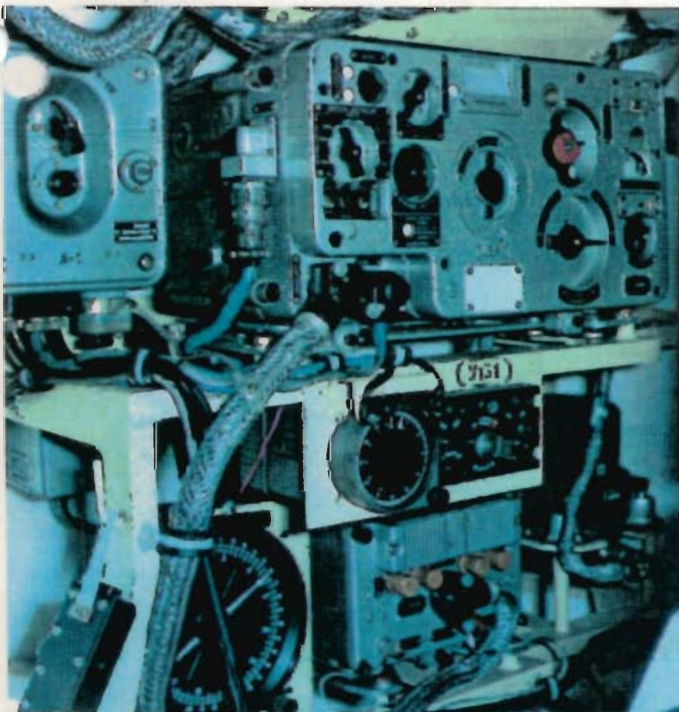
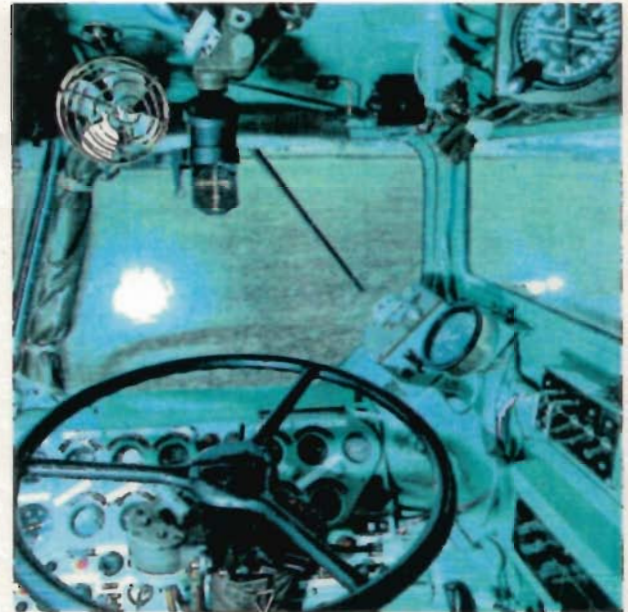


The TELAR is a highly mobile fully integrated SS-N-2D missile platform which was deployed by the East German Navy for coastal defence purposes. The SS-N-2D has a radar or an IR homing head, a range of about 90km and carries a 450kg warhead. The East Germans had ten of these vehicles which generally operated in two groups. This particular TELAR was built in the USSR in 1989 and purchased by East Germany for around £1.5M.

The TELAR is a 44 ton rigid chassis, eight wheel drive, 12 cylinder 38 litre diesel engine powered vehicle (as used for the SCUD launcher) fitted with the following main naval sub systems:-

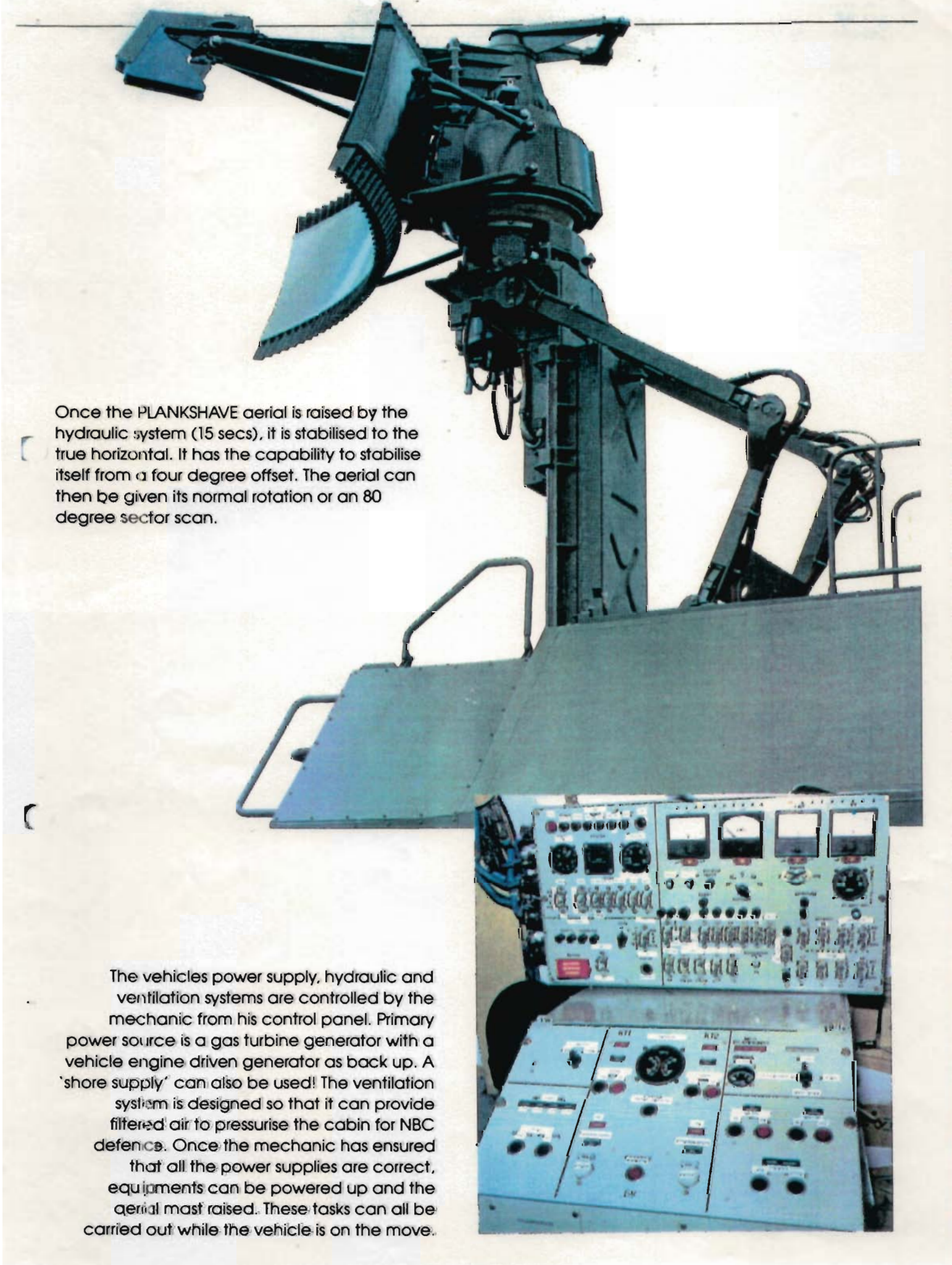
- PLANKSHAVE Surveillance and Target indication radar.
- Radar auto tracking computer.
- SS-N-2D launch computer.
- SS-N-2D firing system.
- Twin SS-N-2D launchers.
- Commander's control panel.
- Communications and navaid equipments.
- Power supply systems.

From arrival at the firing site to firing a missile takes a maximum of ten minutes but this can be reduced by the five man crew to two minutes at pre-surveyed sites. The driver uses a head up display to align the vehicle so that its alignment relative to North can be manually fed into the auto tracking computer - from now on everything is referenced to North. The vehicle must be level to within four degrees - this can be assisted by adjusting the tyre pressures which are all centrally controlled from the driver's cabin.



Each vehicle is provided with a comprehensive set of navigational equipment including a gyro compass and a VHF tx/rx for communications. Communications was normally by secure voice or telephone. Each group of five TELARs was accompanied by a radio truck which acted as the link back to HQ. Group coordination might have been a problem as besides the TELARs and radio truck additional support vehicles included lorries carrying fully fuelled and prepared missiles for reload, a special crane lorry used for missile reloading, a complete missile testing and repair system carried in a lorry and support trailer and various other ancillary vehicles.





Once the PLANKSHAVE aerial is raised by the hydraulic system (15 secs), it is stabilised to the true horizontal. It has the capability to stabilise itself from a four degree offset. The aerial can then be given its normal rotation or an 80 degree sector scan.

The vehicles power supply, hydraulic and ventilation systems are controlled by the mechanic from his control panel. Primary power source is a gas turbine generator with a vehicle engine driven generator as back up. A 'shore supply' can also be used! The ventilation system is designed so that it can provide filtered air to pressurise the cabin for NBC defence. Once the mechanic has ensured that all the power supplies are correct, equipments can be powered up and the aerial mast raised. These tasks can all be carried out while the vehicle is on the move.





