

**LOCKERBIE BOMBER ▲**

The Libyan intelligence officer convicted of the bombing worked for Libyan Arab Airlines. His knowledge of security procedures enabled him to send the bomb as unaccompanied luggage.

COCKPIT CARNAGE ►

Amazingly, whole sections of the aircraft survived intact, despite falling from an altitude of 6 miles (10 km).

The Lockerbie bombing

To Alan Topps, Flight 103 was just another New York-bound "Clipper" when it entered the airspace he controlled on December 21, 1988. But, just after 7 P.M., something happened that he had never seen before: the blip on his radar display, marking the aircraft's position over the Scottish town of Lockerbie, suddenly split into five.

Topps made frantic efforts to contact the aircraft by radio, but without success. Minutes later, the pilot of another aircraft reported seeing a fire on the ground, "... as if a gasoline storage tank had blown up." It was the fuel-filled wing of Flight 103, which had hit the ground and exploded with tremendous force, like a small earthquake.

The front section of the aircraft came down in one piece, with the pilots still strapped in their seats.

Much of the rest was spread over an area of 1,000 sq miles (1,610 sq km).

The search for wreckage

The day after the crash, the search for bodies began; then volunteers combed the area for debris. Some had landed in hard-to-reach woodland, and spy satellites and helicopters with infrared cameras had to be used to locate it. Each part of the wreckage was collected and coded for reconstruction. Items of debris were initially bagged and taken to Lockerbie town hall, where investigators entered their details onto a computer database. This eventually swelled to include 200,000 items, some tinier than a fingernail.

The crippled Boeing 747 was virtually rebuilt from recovered aircraft parts. It soon became clear that an explosion had



blown a hole in the fuselage. The blast wave tore the aircraft apart. The pattern of damage suggested that an explosion had occurred in cargo bay 14L. This explained a vital mystery: why had Flight 103 never sent a "mayday" signal? Bay 14L was adjacent to the plane's electricity supply, and the blast would have cut power to the radio. It also brought flight data and cockpit voice recording to an abrupt end, silencing the "black boxes."

Traces of a bomb

It soon became evident that the origin of the explosion was centered around the baggage compartment. Since it was not possible for this to be linked with the fuel system, a bomb was suspected. Items thought to be from this area were tested, using a GC/MS Instrument (see p. 82), for traces of primary explosive. At the same time, recovered articles were screened for evidence of a timing mechanism. Pieces of a sophisticated trigger device—an altitude-sensitive switch linked to a timer—were discovered. It had been cleverly designed to outwit airport security equipment.

Though the inquiry was exhaustively diligent, it was a stroke of luck that led investigators to the bombers. More than a year after the crash, a man walking his dog found a piece of a gray shirt, missed in the initial search. Detectives traced the manufacturer to the Mediterranean island of Malta (see box).

A minute inspection also revealed a tiny chip of a circuit board, printed with the number "1." From this clue, and other shreds of evidence, the bomb's timer was identified as a Swiss-made MST-13.

Arab connections

A pattern was beginning to emerge: the timer's makers had sold a batch of them to the Libyan government. And an identical timer had turned up in Senegal two years earlier in a Semtex bomb carried by two Libyan agents.

Other items in the wreckage also suggested an Arab connection. The explosives had been packed into a radio-cassette recorder, and its instruction manual was scarcely singed. It identified the model as a "Bombeat," sold only in North Africa and the Middle East. Piecing together the evidence, investigators identified two Libyan suspects. In 1999, after intense diplomatic pressure, the Libyan government extradited them for trial at a specially convened court in the Hague.

When their trial ended in January 2001, it brought to an end one of the world's longest and costliest criminal investigations. The court found just one of the defendants—Abdelbaser Ali Mohamed Al Megrahi—guilty of the murder of the 259 passengers and crew and 11 people on the ground.

COMBING THE DEBRIS ▼

One thousand volunteers joined the air accident investigators in the search for debris. Their brief was simple: "If it's not growing, and it's not a rock, pick it up."

EVIDENCE



The Lockerbie bomb blast shredded a gray T-shirt, which was packed around the bomb, but did not destroy its label. This led detectives to its manufacturer: the Yorkie Clothing Company of Malta. Detectives found out that it had been sold by a small clothing shop called "Mary's House" and, amazingly, the owner, Tony Gauchi, could recall selling it. The purchaser was memorable because he had bought a variety of garments without any consideration of style or size. Gauchi's evidence enabled investigators to close in on two Libyan agents who worked at Malta's airport. Using stolen luggage tags, they were able to send the brown suitcase containing the bomb to Frankfurt, Germany, where it was loaded aboard a flight carrying passengers to London to join Flight 103 to New York.

