Ukraine uses mobile phones on poles to thwart Russian drones

By **Joe Barnes**

UKRAINE is using a network of thousands of mobile phones deployed across the country to track incoming drones and missiles.

The project, which Ukrainian sources have said is too secretive to discuss in detail, was disclosed by the US air force's most senior officer in Europe.

Speaking at a recent event, General James Hecker described the acoustic sensors as a network of thousands of mobile phones attached to 6ft poles.

Kyiv's national air defence command network, known as "Virazh", relies on at least 40 separate kinds of sensor networks to track airborne threats.

The acoustic sensors gather uncharacteristic sounds from the environment before artificial intelligence is used to establish whether anomalies are incoming kamikaze drones or missiles.

Dr Thomas Withington of the Royal United Services Institute said: "It's interesting that this technology is making a comeback because it was all the rage before the invention of the radar in the 1920s and 1930s.

"History, in a sense, comes full circle, but with the adaptation of the technological age that we have today."

The most basic sensor, manufactured by a non-governmental organisation called "Skyfortress", is deployed in areas close to the front lines in Ukraine. It is built from an android smartphone housed in a box with other commercially-available technologies.

The mobile phones are constantly switched on and recording to detect incoming aerial targets, and they use local phone networks to relay the information back to a centralised system.

The Telegraph can reveal the systems are funded through the Safe Skies initiative, a scheme set up under president Volodymyr Zelensky's United24 platform. Describing the system, Mykhailo Fedorov, the minister for digital transformation, told *The Telegraph* last year: "It's a quite revolutionary breakthrough technology."

The scheme is raising money for as many as 12,500 sensors, built by Ukrainian firm Ajax Systems, to position in Sumy, Odesa, Mykolaiv and Kherson.

A second system used by Ukraine's armed forces is known as Zvook, which uses similar acoustic technologies to provide a better picture of the skies above the country.

The machine learning firm's sensors use micro-computers instead of mobile phones, to detect drones at a range of three miles away, cruise missiles at four miles and ballistic missiles at six miles.

Artificial intelligence helps the system distinguish between the sound of a mooing cow and incoming drones.

Maryan Sulym, chief executive officer of Zvook said: "We detect the air threats and then the military can turn on the radar systems to highlight a particular region. It's an auxiliary system. It's not replacing radar but making it more efficient."

The company currently covers 5 per cent of Ukraine's territory – 5,400 square miles – with its 210 sensors. It estimates it could cover the entire country with 8,000 of its devices, which cost about £400 to manufacture. Systems have been fitted to critical infrastructure, such as telephone masts and electricity substations, since winter 2022.

General Hecker said Nato countries are now also looking into whether the equipment could be used to bolster their own air defence networks.