

# ULTIMA

Effective Airside Bird and Wildlife Dispersal

WORLD LEADERS IN BIO-ACOUSTIC BIRD DISPERSAL



EFFECTIVE, SAFE AND HUMANE TECHNOLOGY FOR AIRSIDE APPLICATIONS



**SCARECROW**  
**BIO-ACOUSTIC SYSTEMS**

KEEPING BIRDS AT BAY

## What is Ultima?

**Ultima** offers effective airside bird and wildlife dispersal. It is both a highly effective bird dispersal system and a data analysis tool. Using a rugged tablet touch-screen pc, a GPS receiver and data collection software, **Ultima** creates a real time record of dispersal management. The system creates an audit trail featuring date, time, location, system operator, species, flock size and dispersal direction.

**Ultima** is easy to use. The 21cm screen can display a database of bird recognition information, including full-screen illustrations to aid identification. **Ultima** 'learns' the routine of each system operator, remembering the species present and the various sound levels previously used at GPS linked airside locations.

**Ultima** establishes proof of dispersal procedures completed in real time, logging the system operator, species, time and date of dispersal. Its GPS function logs the vehicles airside position maintaining a complete 'due diligence' record.

**Ultima** is a complete system. A high quality rugged tablet PC, prepared for each application is at the heart of the system, together with a pre-loaded processor with up to 20 bird distress calls as standard (more are available). A vehicle roof mounting loudspeakers, mounting kit and a fist microphone for live announcements are all included. USB flash-drives are provided for captured data to be transferred to the airport analysis system. They can also be used as an identity key for each system operator.

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In 2009, there were 1823 reported birdstrikes in the UK. (Source: CAA)

In the US, around 8000 birdstrikes were reported in 2008. (Source: FAA)



**Ultima** features a clear sunlight readable screen.



Our latest Runway Inspection Module confirms and ensures best practice.

A flock of geese flying into an aircraft turbine can cause catastrophic engine failure. No airline engine is designed to withstand this type of impact. A Canada Goose, struck by a 150mph aircraft at lift-off, generates the force of a 454 kg weight dropped from a height of 3 meters.



## Ultima – an overview

The wildlife selection screen automatically displays most observed species relevant to the vehicle location. This creates the fastest response opportunity. Graphical illustrations offer assistance when identifying species and this module has a multi-lingual capability (available to special order.)

A comprehensive guide to the bird species loaded onto each system is standard. Bird size, wingspan, colourings and plumage detail is available on demand.

Ultima's dispersal screen allows the system operator to log the flock size, dispersal method and direction. The system has logical progression so that no critical function is bypassed.

The final screen of the process allows the user to confirm the action taken. The techniques available are controlled from the **Ultima Reporting Software** and allow for any dispersal technique to be entered. Each technique may have up to three sub-options (such as different pyrotechnic brands). The dispersal direction is also entered at this point. A dispersal log cannot be confirmed until all the required information has been entered.

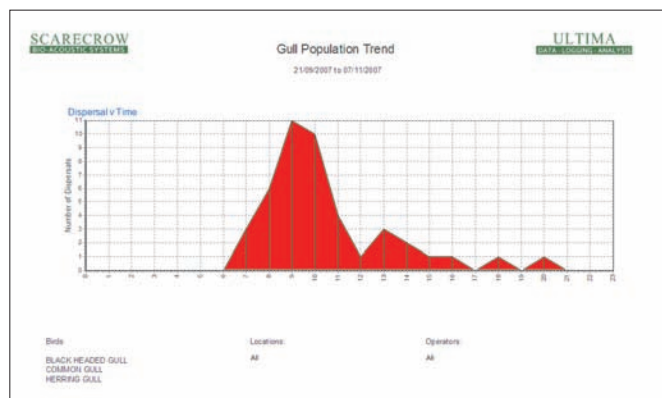


## The Ultima Report Generator

The **Ultima Report Generator** has been designed for quick access to data. The power of the software lies in it's simplicity. By demanding basic criteria, a huge number of data comparisons can be made.

The initial step is to define what time range is required for review. This can show anything from a single day, to migratory patterns, seasonal trends or monthly and annual reports. Some of the most powerful options lie within the selection of species, location and operator. Every report provides a complete data table of every compatible entry, providing an instant virtual logbook. The data can be exported in a common format for additional analysis, or exported for data security.

The screenshot shows the 'Ultima Report Generator' software interface. The title bar indicates 'Scarecrow Ultima - Report Generator'. The main window has a menu bar with 'Read Data', 'Dates', 'Bird', 'Location', 'Operator', and 'Summary'. Below the menu bar, there are input fields for 'Title:' (Seagull Population - Spring 2008), 'Start Date:' (24/03/2008), and 'End Date:' (20/06/2008). There are also 'Exclude' and 'Include' lists of bird species. The 'Exclude' list includes: BLACK COLLARED STARLING, BLACKBIRD, CARRION CROW 1, CARRION CROW 2, JACKDAW, LAPPING, MAGPIE, MALE WHITE IBIS, PIGEON, OYSTERCATCHER, PIGEON, STARLING, and WHITE IBIS. The 'Include' list includes: BLACK HEADED GULL, COMMON GULL, and HERRING GULL. Below the input fields, there is a large table with columns for 'Start Time', 'Location', 'Bird', 'Operator', 'Method', 'Observed Species', 'Volume', and 'Report'. The table contains multiple rows of data, with the first few rows showing observations of Black-headed Gull and Herring Gull.



Each graph generated can be printed or copied into a document for saving. Whether simply displayed on a screen or printed to hard copy, each of the criteria used to generate the report is clearly shown for complete clarification.

## Customised Modules

### 1 GPS Calibrated Image Mapping

Giving an instant overview of the level of wildlife presence, this module combines the airfield map with **Ultima** data. By selecting combinations of criteria (species, operator, data range etc) it is possible to view the number of actions that have occurred in each grid reference.



### 2 Runway Inspection Module

This module has been developed to allow users to log runway conditions and for general runway inspections; it can easily be set-up by the operator, for bespoke applications to individual airports. It is supplied with reporting software to analyse the collected data. Our clients appreciate the convenience of this module being available within their bird and wildlife dispersal system.

### 3 Firearm Management

Taking full advantage of all available techniques is of utmost importance when working in airside bird dispersal. Keeping track of firearm events can be laborious, but accurate reporting detail is essential. This module keeps track of all shots fired and misfired, be it lethal, non lethal, pyrotechnic, flares etc. Accurate stock management is logged for later reporting.

### 4 Image Logging

It is now possible to equip **Ultima** with a digital camera that captures proof of all bio-acoustic bird dispersal events. These images are archived alongside the data record and can be recalled instantly.

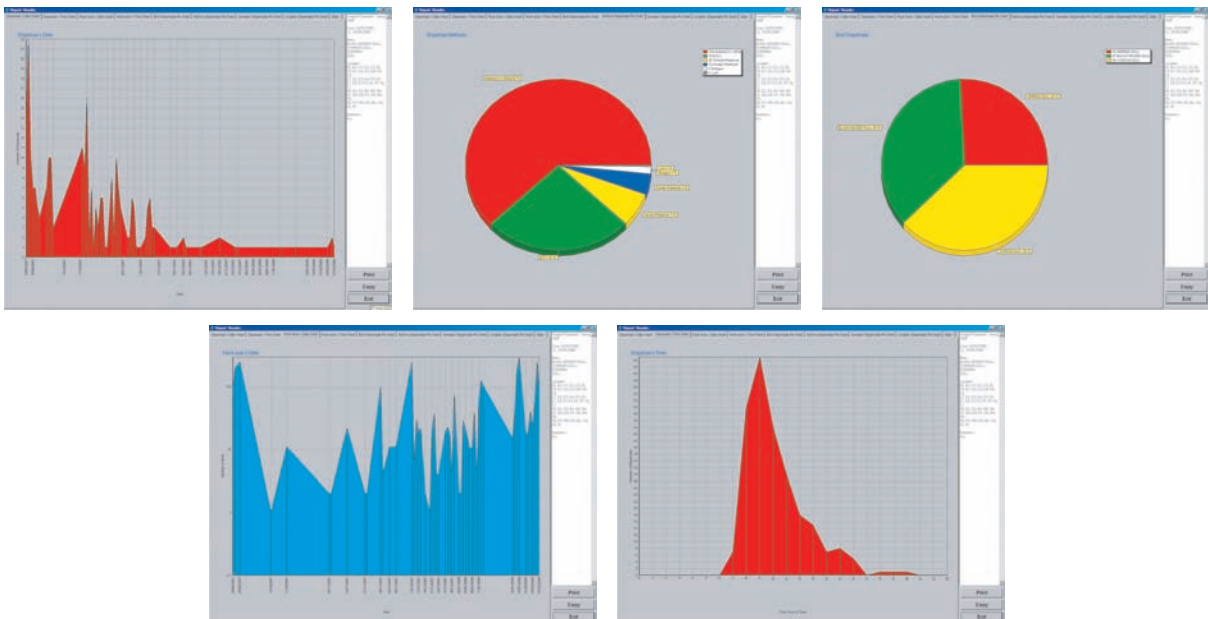
At the start of the millennium, bird strikes were estimated to cost the aviation industry US\$1.2 billion.



### The importance of diligent data collection

In today's litigious society the importance of safety control data has never been higher. At the start of the millennium, bird strikes were estimated to cost the aviation industry US\$1.2 billion. When factored alongside the rapid expansion of air traffic this figure is now considered highly conservative. With such high costs involved there is an increasing tendency towards airlines and/or their insurers embarking on legal action to recover the costs of

bird/wildlife strike damage from the airports at which they occur. It is important that airports record the bird control actions that they take in order to be able to show that they had an adequate bird/wildlife control programme in place at the time of an incident and that the programme was functioning properly (International Bird Strike Committee, Recommended Practices No1, Standards for aerodrome bird/wildlife control – October 2006).



## Prove due diligence | Demonstrate best practice | Produce statistics on-demand

**Ultima** is an organic platform designed to grow with airside operations. The software driven basis of **Ultima** means that subsequent improvements and enhancements to the software can be easily delivered to existing system users.

In case of IT failure, **Ultima** is supplied with a backup remote control. This ensures that you never lose your best practice bird dispersal capabilities.

The tablet PC supplied with **Ultima** is Microsoft Windows<sup>®</sup> based. This allows the hardware to be multifunctional. Scarecrow Bio-Acoustic Systems Ltd do not limit what software can be loaded onto the unit. It is entirely possible that the **Ultima** tablet PC can become the base for all your airside software requirements.

**Ultima** has a graphical data interface, so can be understood easily across the world. However, the software can also be multilingual, so the required language can be selected.

Scarecrow Bio-Acoustic Systems is the industry leader in the science of bio-acoustic bird dispersal and was originally a subsidiary of one of Europe's largest commercial audio manufacturers, established in 1967. In 1990 Scarecrow became independent to allow focussed development in the field of airside bird dispersal, to capitalise on their specialist digital audio knowledge.

The team of digital audio engineers and ornithologists comprising Scarecrow Bio-Acoustic Systems Limited have been in the business of designing, manufacturing and perfecting systems for bio-acoustic bird control since 1985, their products 'preferred' by airfields where birds present a hazard to flight safety.

Scarecrow is a privately owned Company. All products are manufactured to comply with ISO 9000 Quality Standards and European Safety and Noise Immunity Directives, including CE and E Approvals, RoHS and WEEE Directives.

### CASE STUDY:

#### Pittsburgh International Airport (PIT)

Shortly after US Airways Flight 1549 ditched into the Hudson River in January 2009, the topic of birdstrikes was thrust into the public eye. Soon after, Dave Tartler, Manager of Wildlife at Pittsburgh International Airport (PIT) began testing **Scarecrow's Ultima system**.

PIT scheduled its 90 day trial to run through September so it could test the system during the migration season, when the airport's bird population swells. Although **Scarecrow** has supplied more than 1500 airports worldwide, this was the first US installation.

Sherwin Industries is **Scarecrow's** US Partner and expect demand to accelerate for **Ultima** as the FAA introduces tougher regulations on airport operators.

*"The functionality and adaptability of **Ultima** to the US market has proven to be a real asset for airport operators."*

Todd Rushing, Regional Sales Manager of Sherwin Industries,

To find out more about  
**Scarecrow Bio-Acoustic Systems** and  
our products please visit our website

[www.scarecrow.eu](http://www.scarecrow.eu)

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