Testing procedure

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| BOCS setup  Manual mode and monitor strategy should be applied in BOCS at all time |
| eBirdSoft will force the mode to Manual and to strategy Monitor when starting.  Therefore, if the strategy is locked in BOCS, the program will not be able to change the strategy.  Consequently the motor speed test will not be operational and the signature graph will not be relevant.  Example of lock strategy in BOCS GUI (exclamation mark meaning lock being active).   * Right click on the body to unlock the strategy * ALT-C to access and check the mode configuration   If eBirdSoft failed to change the strategy and mode to Manual, please do it from the GUI with ALT-C |

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| Setup eBird body serial number in the configuration file |
| Write the body serial number into the configuration file ‘spread.cfg’ on the desktop.  This number needs to be updated each time a new body is inserted or used for testing wings  Please restart BOCS core after any changes in the file.   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | bird | Serial number | Streamer | Offset | position |  | Ebird name |  | |  | **12880** | **1** | **0** | **-300** | **-15** | **S1K02** | **1** |   Use hashtag to comment out the lines.  Position defines the eBird body position and name. In the example -300 define body number 2 or S1K02  -150 would have been body number 1 or S1K01 |

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| Place the wing/body to be tested on the stand |
| It is necessary to install the wing(s) before starting the program.  Place one wing at the time or three wings (multiple wings works too) |

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| Start the program  Double click on the launching icon |
| You could also manually start the application via command line using grep to debug only what you are looking for.  for example:  # python eBirdSoft.py | grep Error  will show only systematic error(s) |

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| Make sure the program is not running in simulation mode |
| This should not happened but be aware it does exist.  Simulation mode has been created to test the software in a different environment and can be enable with the source code.  The mode is written in the PDF file (in top header)   * Here : Simulation is False | OFF |

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| Check indicators (communication and power) |
| Check the power status on the POWER tab ( Power indicator should be green)  if not, go to the power tab and adjust the power manually  Refer to the documentation if needed (help menu)  Here you can adjust the power on L1 and L2.  Slide the scale to the right for full power. |

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| Tips |
| Make sure no radios are in the vicinity of the eBird body during testing. This is very important as the radio will interfere with the unit(s) and the communication may dropout.  Restarting/resyncing the body will cause the wing to loose comms for a lapse of time; this issue will be flagged during the test (This applies only if you are rebooting an eBird from BOCS GUI).  Restarting/resyncing an eBird from eBirdSoft will pause automatically the Master thread until the cycle is completed.    You can pause the software at any time (see picture below)    The pause button will stop the Thread Master resulting in freezing the monitoring (stop all activities until the user is pressing resume). |

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| How to generate an online PDF after performing a wing test |
| Front page (top frame)  Here, are the online PDF icons ( from left to right : W1 , W2, W3, Body)  The bar below the icon will gradually change color from red, orange, yellow and green  The icons will be grayed until enough data has been recorded.  To generate a PDF record the program needs 30 records or “events”.  It is also compulsory to make a wing motor test in order to get a valid certificate (only 2 periods are valid for the test, therefore you can use either period for testing wings motor)  Only one wing at the time can take a test (this is due to eclt limitation)    Click into the TAB Wing angle  You can move wings (one at the time) using -15/+15 degrees angle.  The graph buttons is used for testing the wing for a chosen number of periods (2 periods here on the picture).  Only two periods tests are valid for the PDF report.  However, you can test a wing with N periods if you like, but the graph will not be reported in the final PDF.  The red square button will interrupt the test.  The play button is used to test the wing at a specific angle; it works the same way than eclt commands.  Failing to records a test with two periods will cause the wing to fail the motor test (part of the PDF report).  The wing needs to be able to communicate with the body in order to take a test. |

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| How to generate an offline PDF |
| |  | | --- | |  | | Exiting the program from the main menu (Menu File 🡪 exit ) or closing the application will launch the In-memory database conversion and the **PDF selection process (see below)**  This window allows you to choose the final PDF you wish to generate.  If the serial number is None (due to no communication or no wing being connected) the PDF option will be grayed.  The BOCS serial number detection process is very unreliable (problem inherent to the body algorithm).  Reading a serial number from a specific port does not guarantee a wing being physically present.  Also if you place sequentially the same wing on all 3 ports, the same s/n will shows up on the body.  For that reason, it is necessary to have a user interaction to determine what is physically connected to the body during the test | |

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| The importance of checking physically the wing cover and motor mechanism |
| Some of the wing motor mechanisms are getting a bit loose over time and a gentle push (few degrees) on each direction +15 and -15 degrees will shows that issue.  Nevertheless it is normal to have some slack when pushing the wing in either directions but the absence of repulsive force is symptomatic of the issue.  The maximum range a wing is allowed to work is +15, -15.  It is possible to force the wings to go to 20 degrees in both directions (via command line eclt), I don’t recommend it though!.  For the same reason explained above, a wing reaching the maximum angle of [15,-15] could be pushed with a strong current to the max angle allowed  If a wing angle is pushed over 20 degrees the motor mechanism will have a very unusual response (slower signature) and eventually, comes back to normal after couple of seconds.  This is why slack wings should be identify and not used in production. |
| How to import latest IFS database |
| Unfortunately the bird shack computer is not connected to rest of the network.  IFS is not directly accessible but nevertheless, an IFS cube can be created and copied over with an USB stick from time to time until a connection is established in the Bird Shack allowing IFS interrogation ( This will require office approval etc.)   * The IFS cube is not bigger than 128 Mbytes (it includes only data related to eBird Wings and bodies) * A program is running every night at 23:45 GMT time and gathering all this data from IFS and creates a cube (local database) called IFS\_eBird.sq3 located into R:\Common\Common PGS and Maritime\10. Crew\Obs\Yoann)     When IFS is not accessible the software is designed to fall back onto a local database (/home/Desktop/eBirdLinux1/IFSdatabase.sq3)  copy IFS\_eBird.sq3 in /home/Desktop/eBirdLinux1 &  rename IFS\_eBird.sq3 with IFSdatabase.sq3 |

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| How to request IFS information |
| You can choose a wing serial number detected by the body and perform a series of checks through IFS.  (Menu IFS options 🡺 Serial numbers)  Here is the check list   * check if the wing exists in IFS * Shows the Active Work Order (if any) * Shows the Historical WO (list all of them) * Shows all Transport Order. ( if a wing is currently assigned to a TO the background color will be yellow ( see picture below) |