Data technician

# OVERVIEW & PURPOSE

Data technician is a role who transfers data collected from flight test to k-drive so that it is accessible and ready to be analyzed. There are four data should be saved in k-drive during the process: data flash log, t-log, video, and pictures. The following paragraphs will explain the specific procedures. K-drive copy is a directory that mirrors actual k drive. The data will be transfer into k-drive copy first. After confirmation of the director of the flight operation, it will be transferred to the actual k-drive.

# Make a directory of flight test in k-drive copy

1. ThisPc/ KDriveCopy/FlightOperations/Operations/Missions
2. Copy and rename [Template] folder to “year-month-date\_ placement of flight test”
3. Inside of the folder you just renamed, go to [Rawdata] directory.
4. Copy and rename [(UAS Name) Data] for all the UAVs that were tested on the flight test.
5. Inside of each UAV directory, there will be folders with flight number
6. If you don’t remember the flight number of the UAV, go to
   1. perfoce/AFSL/FlightOperations/UAS/ “UAVname”/ flightlog.xlsm
   2. Check the flight number.

# Data flash log

1. Find [data transfer] USB cable from [SD card and cable box] and connect the pixhawk and CONDOR
2. Open mission planner, change the COM number on the right side top to COM10 ( or the COM number shown on your screen), change baud rate to [115200], and connect.
3. When plane is connected, find “dataflash logs” tab under the instrument panel screen.
4. Click [Download DataFlash Log Via Mavlink]
5. When the logs are loaded, choose the logs with the correct flight test date and click [download selected logs]
   1. Warning! If you close the [log downloader] before it loads the logs, it might say [logs cannot be found] following times. If it happens, disconnect the plane and connect again.
6. After the download is finished(you can check it by feedback lines on the panel), go to [CONFIG/TUNNING] tab at the top, go to [Planner].
7. Copy the address shown in [log path] and use it to find where the logs are saved.
8. Open up the directory that the logs are saved.
9. [.gpx] and [.kmz] files go into [google earth] directory inside of [flightXXX] folder
10. [.bin], [.bin-####], [log.param], [.log0wp.txt] file goes into [DataFlashLogs] inside of according [flight###] directory.
11. Go back to mission planner, go to [Flight Data tab](the main tab), find [data flash logs] tab under the instrument panel screen.
12. Click [Create Matlab File]
13. Choose all the [.bin] file saved in [dataflash\_log] directory in k-drive copy
14. Wait until the process successfully finishes.

# T-log

1. This is also saved in the same directory that data flash log is saved
2. Because t logs created whenever mission planner is connected to pixhawk, there will be a lot of logs.
3. Order them into dates and find the logs for your flight test
4. You don’t need [.jgp], but dump all the logs into [t-log] directory in k-drive copy
5. Go back to mission planner, [Flight Data tab](the main tab), find [telemetry logs] tab under the instrument panel screen.
6. Click [Tlog > Kml or graph]
7. And click [Create Matlab file]
8. Choose all the t-logs that you saved in the directory of [k-drive copy].
9. Wait until it successfully finishes the process.

# Videos/Pictures

1. Plug the SD card and find media from
   1. Video
      1. PRIVATE/AVCHD/BDMV/STREAM
   2. Camera
      1. DCIM/100Canon
2. Put them in a [PicturesAndMedia] directory
   1. FlightOperations\operations\Missions\[date of the flight]\RawData\[Flight number]\PictureAndMedia
   2. In each video, the recorder will say the flight number. Put the video into according flight test
   3. Or go find flight log file and compare time.

# Other

1. Use AFSL CONDOR for data transfer
2. Use USB card reader (ANKER) from [cable/SD card] box
3. Put every data into the according to flight test.