

# FW & JL

In this section you can add **Flight Watch** and **Journey Log** data. Inserted post-flight data to Journey Log allows to generate various kinds of reports in Leon (Crew, OPS, Sales, etc...).

**Flight Watch** and **Journey Log** can only be added to the confirmed flights.

**Flight Watch** is not available for the **Simulator** flights.

## Flight Watch

GLE1 G-LEON 23:00z EPWA - EGGW 01:20z

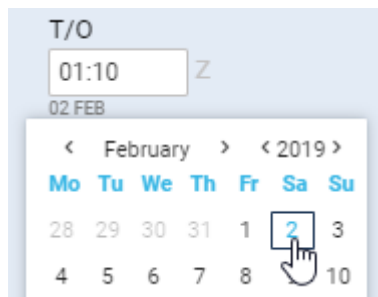
CTOT	ETD
23:30	23:00
BLOFF	T/O
23:30	23:38
EET	ETA
02:20	01:58
LDG	BLON
01:50	02:01
Pax	DIV
2	---
Cargo	Delay
0 kg	15/0030
Notes	
PAX - late arrival	
SEND MVT	

Flight Watch data entrance panel

By clicking on FW & JL column Leon opens the tab in the right-hand side filter. If there is no Journey Log added Leon opens FW tab. If there is a Journey Log added (even if it is partly filled in) Leon opens JL tab.

FW contains several fields where you can input details such as:

- **CTOT** - calculated takeoff time - if it is the only detail added to FW in Flights List Leon shows **S**.
- **ETD** - estimated time of departure - if added to FW Leon shows **D**.
- **BLOFF** - block off time - if added to FW Leon shows **A**.
- **T/O** - take off time - if added to FW Leon shows **A**.
- **EET** - estimated endroute time (T/O + EET should equal ETA. i.e. T/O 12:00, EET 02h30m, so ETA should be 14:30). The value is diaplyed in the format:HHhMMm, i.e. 12h15m.
- **ETA** - estimated time of arrival.
- **LDG** - landing - if added to FW Leon shows **+**.
- **BLON** - block on time - if added to FW Leon shows **+**.
- **Pax** - number of passengers.
- **DIV** - diversion - insert the code of the airport to which the flight was diverted.
- **Cargo** - cargo weight.
- **Delay** - delay code and the delay time can be inserted (the format: code/delay i.e. 14/0010 where 0010 means 00:10 minutes) - if added to FW Leon shows **D**.
- **Notes** - add notes which can be read by OPS or crew.



## Date input in the Flight Watch

**Date** of the time input can be selected for each individual box apart from EET. As soon as you click inside the applicable box Leon will display the date underneath the box in the “ddMMM” format. If there is a need to **change** the date, simply click on the date displayed below the box and choose the new date from the calendar.

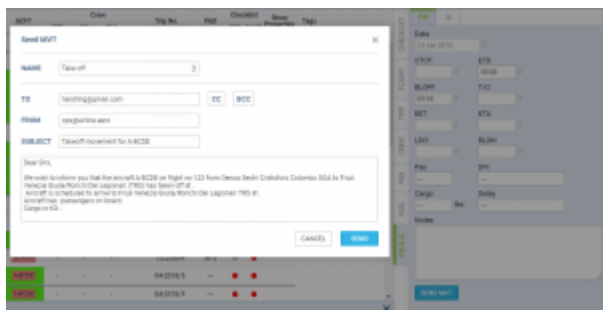
At the bottom of the panel Leon will show information **“Last modified by”** showing Eurocontrol or SITA and UTC time of the change. For manual changes Leon will show user's name/surname and UTC time of the change.

**Details such as BLOFF, T/O, LDG and BLON can be copied to Journey Log by clicking**

COPY DATA FROM FW

**in the tab JL**

## Manual MVT Messages



## Manual sending of MVT messages

It is possible to send MVT messages **manually** using selected movement rule as the template source.

To send MVT message manually you have to follow the below steps:

1. Fill in FW and save it.
2. Click on 'SEND MVT' button to populate a 'Send MVT' pop-up window where you can select Movement rule as the template source. This is a template assigned as an 'MVT rule' in a section Settings > MVT Messages to an aircraft you're sending the MVT for.
3. Once you chose a template the system prepopulates message and recipients according to selected 'MVT rule'. You can now customize every part of final message and recipients.
4. If everything is ready, press 'SEND'.

**If there are no 'MVT rules' assigned to an aircraft in Settings > MVT Messages' section, the template source in step 2 will**

| not populate any choice. |

## Importing MVT Messages

**Movement messages** can be imported to Leon if they are being sent to email address [mvt@leon.aero](mailto:mvt@leon.aero) and if they are in one of the below formats:

- SITA format message
- SATCOM format message

### SITA format

## Departure message format

```
MVT
ABC123/03.ACREG.STN
AD1200/1300 EA1600 AMS
DL01/0101
PX100
SI ...
```

Example of SITA departure message is showed in the screen.

The data included is as follow:

- **ABC123/03** - flight number and day of the month
- **ACREG** - aircraft registration number
- **STN** - departure airport (in this case it is London Stansted)
- **AD1200/1300** - actual departure. BLOFF at 1200, airbourne at 1300
- **EA1600** - estimated arrival time. There have to be spaces before EA and after 1600
- **AMS** - arrival airport (in this case it is Amsterdam)
- **DL01/0101** - delay information including delay reason and time of delay in hhmm, i.e. 01/0101 means that the reason is a custom 01 and the flight is delayed by 1h1min. If there are **more than one delay codes**, the format should look as follow rr/rr/hhmm/hhmm, ie 01/02/0101/0202
- **PAX100** - number of PAX on board
- **SI...** - space for supplementary information inserted after SI which will be populated in FW Notes section in Leon

## Arrival message format

**MVT**  
**ABC123/03.ACREG.AMS**  
**AA1600/1610**  
**SI ...**

The data included in SITA arrival message include:

- **ABC123/03** - flight number and day of the month
- **ACREG** - aircraft registration number
- **AMS** - arrival airport
- **AA1600/1610** - Arrival identifier including touch-down time (1600) and BLON time (1610)
- **SI...** - space for supplementary information inserted after SI which will be populated in FW Notes section in Leon

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## SATCOM format

Takeoff Report and Landing Report messages imported to Leon need to be in **specific formats**. Once such messages are received they will be automatically added to '**Flight Watch**' in Leon (**BLOFF when Takeoff Report sent and BLON when Landing Report sent**). See the example of the flight below.

## Takeoff Report format

### subject:

Takeoff Report for AC-REG

### message:

Takeoff Report

Off Time: 11-Jun-2013 0700 UTC / 11-Jun-2013 0900 LCL

Departure Airport: LIML - LINATE

Destination Airport: LIRA - CIAMPINO

ETA 11-Jun-2013 0800 UTC / 11-Jun-2013 1000 LCL

## Landing Report format

### subject:

Landing Report for AC-REG

### message:

## Landing Report

On Time: 11-Jun-2013 1000 UTC / 11-Jun-2013 1200 LCL

Departure Airport: LIML - LINATE

Destination Airport: LIRA - CIAMPINO

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## ACARS format

**ACARS** movement emails can be sent out in the same way as SATCOM or SITA - to the email address mvt@leon.aero and Leon will update **Flight Watch** with details input in the mvt email.

Below you can find appropriate formats which should be used.

- **OFF REPORT extended version**

Subject: A-BCDE OFFRP (where A-BCDE is acft reg number)

To: mvt@leon.aero

### Content

10-JUN-2015 15:00:00

OFF EVENT REPORT

ORIGIN: WAW

DESTINATION: AMS

OUT TIME: 1456

OFF TIME: 1500

FUEL ON BOARD: 0430

ETA: 1554

- **OFF REPORT simplified version**

Subject: A-BCDE OFFRP (where A-BCDE is acft reg number)

To: mvt@leon.aero

### Content

A-BCDE OFF REPORT

ORIG: WAW

DEST: AMS

TIME: 1456

- **IN REPORT extended version**

Subject: A-BCDE INRP (where A-BCDE is acft reg number)

To: mvt@leon.aero

**Content**

10-JUN-2015 16:00:00

IN EVENT REPORT

ORIGIN: WAW

DESTINATION: AMS

ON TIME: 1600

IN TIME: 1610

FUEL ON BOARD: 0470

- **IN REPORT simplified version**

Subject: A-BCDE INRP (where A-BCDE is acft reg number)

To: mvt@leon.aero

**Content**

A-BCDE IN REPORT

ORIG: WAW

DEST: AMS

TIME: 1600

FOB: 0470

The format of the 'subject' & 'message' <b>MUST</b> be always the same, which means, that if you add anything to the text in either 'subject' or 'message' format, the message <b>WILL NOT</b> get imported into the 'Flight Watch'.
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**Eurocontrol**

It is possible to receive Flight Watch times automatically to Leon from Eurocontrol servers.

**Eurocontrol** is an international organisation working to achieve safe and seamless air traffic management across Europe. Eurocontrol works with national authorities, air navigation service providers, civil and military airspace users, airports, and other organisations. Its activities involve all gate-to-gate **air navigation service operations**: strategic and tactical flow management, controller training, regional control of airspace, safety-proofed technologies and procedures, and collection of air navigation charges. For more information, please visit [Eurocontrol website](#).

In order to integrate with Eurocontrol, you have to open a section [Integrations](#), click **ENABLE** button, then switch the Status to **ON** and save changes.

If the Operator ICAO code in the section Settings > Handling Request tab is the same as registered with Eurocontrol, the integration will be completed upon saving changes. If the ICAO code in Leon doesn't match the one registered with Eurocontrol, you will see an error message saying "Operator ICAO not recognized by Eurocontrol".

When the integration is completed, **Flight Watch** in Leon will start receiving flight times from Eurocontrol servers. You will recognise them by opening a Flight Watch and hovering the mouse over the time value, as shown in the screenshot above. Eurocontrol will **only** send Block off, Take off, Landing and Block on times.

## Journey Log

123 D-LEON 16:00Z EPWA - EGGW 18:50z

FW

JL

CHECKLIST

FLIGHT

TSP

CREW

PAX

FUEL

FW & JL

ACFT

FULL JL MANDATORY FIELDS [?]

Date\*:

22 Oct 2019

ADEP\*:

EPWA

ADEN\*:

EGGW

BLOFF\*:

16:01

T/O\*:

16:00

LDG\*:

18:45

BLON\*:

18:53

COPY DATA FROM FW

All times in UTC

16:01

16:00

18:45

18:53

2 Oct 52

Block fuel\* [?]:

3000

lbs

Fuel used\* [?]:

2000

lbs

Fuel remaining\* [?]:

1000

lbs

OPTIONAL JL FIELDS

Approach:

--

⌵

Discretion [?]:

☐

Custom code:

--

Notes:

Rest Facility:

Suitable

⌵

Engine rate:

0

Deicing:

☐

Files:

📁

UPLOAD FILES

You can drag & drop files to this section.

TAH:

All past flights journey logs for this aircraft must be filled out

TAC:

Save

Delete Flight

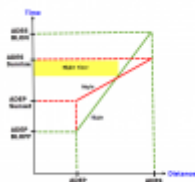
Cancel

Last modified by Rafal Gryniak 25-Oct-2019 at 13:58 UTC

Journey Log - post-flight data input panel

<input type="checkbox"/> Anomalous	<input checked="" type="checkbox"/> Large	<input checked="" type="checkbox"/> Info-rich
<input checked="" type="checkbox"/> Normal clustering	<input checked="" type="checkbox"/> Small bias	<input type="checkbox"/> None or FDR
<input checked="" type="checkbox"/> Policy rules	<input checked="" type="checkbox"/> Local bias	<input type="checkbox"/> Approach
<input checked="" type="checkbox"/> Negativity	<input checked="" type="checkbox"/> Main bias	<input type="checkbox"/> FPR/FNR
<input checked="" type="checkbox"/> Bias	<input checked="" type="checkbox"/> Too	<input type="checkbox"/> DRFC mean <sup>(*)</sup>
<input type="checkbox"/> Transformed bias	<input type="checkbox"/> On edge	<input type="checkbox"/> DRFC score
<input checked="" type="checkbox"/> Scale	<input type="checkbox"/> From top	<input type="checkbox"/> (2D) vs (2D) vs (Weight)
<input checked="" type="checkbox"/> Feature	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Direction
<input type="checkbox"/> Clustered	<input type="checkbox"/> GMR	<input type="checkbox"/> Custom code
<input type="checkbox"/> Invalid	<input type="checkbox"/> Instrument time	<input checked="" type="checkbox"/> Notes
<input type="checkbox"/> Plot	<input type="checkbox"/> One-sided	<input type="checkbox"/> Drawing
<input type="checkbox"/> Edge	<input type="checkbox"/> (N) vs (N) Enclosure	<input type="checkbox"/> Right Labeling and Plot ID

Journey Log items available in the section Settings > Flight Editing



## Night Time calculation in Leon

[Video Tutorial](#)

You can add flight times to the **Journey Log** from the scratch or you can copy them from FW (by clicking the blue button). All data inserted to JL is then used in reports.

Apart from the obvious fields in JL such as Date, ADEP, ADES, BLOFF, T/O, LDG and BLON - there are also other available fields split into 2 sections:

### Mandatory JL fields

- **MAX FL** - maximum flight level during the flight - Leon uses this data to calculate [Cosmic Radiation Dose](#). You can also check [Cosmic Radiation Summary](#) for all crew members.
- **Block fuel** - the total fuel required for the flight and is the sum of the Taxi fuel and the Trip fuel.
- **Fuel used** - total fuel used on the trip.
- **Fuel remaining** - difference between Block fuel and Used fuel (Leon calculates this value automatically).

**It is possible to set up a default fuel unit per the aircraft: KG, LBS, L or US GAL - in an aircraft edition panel (section Settings > Fleet)**

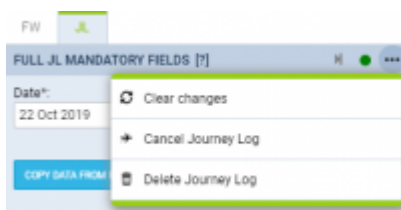
**Hover the mouse over BLOFF, T/O, LDG, BLON to see alternative indications: OUT, OFF, ON, IN.**

### Optional JL fields

- **Landings** - in case of training flights (when more than 1 circuit was performed) you can insert the exact number, which will be used to calculate crew currency (explained in [this](#) chapter).
- **Delay code** - delay details must be input in the format: code/delay i.e. 14/0010 where 0010 means 00:10 minutes.
- **Night time** - if the flight was during the night (in the period sunset-sunrise for a particular airport), by clicking on this field Leon will show 2 values: flight time & block time.
- **CMT** - commercial time - used in salary calculation which can be generated [in this report](#) if wages have been defined in section Settings > Aircraft Crew Positions.
- **PAX** - total number of passengers.
- **Uplift** - fuel value before the takeoff.
- **Pilot flying** - insert a pilot's code who has performed the trip. If a captain has done takeoff and a first officer has done the landing, insert both codes in the format: CPT/FO. 'Pilot flying' field is used to calculate crew currency (explained in more details [here](#)).
- **Approach** - there are different types of approaches available: ILS cat I, ILS cat II, ILS cat III, GPS, VOR or NDB, Visual, PNB, RNP AR.




- **HUD/EVS** - Head Up Display/Enhanced Vision System approach.
- **Discretion** - if there was FDP extension due to Commander's Discretion, mark this checkbox, then if you edit crew member's FTL Sheet in a column 'CD' you will see how much time beyond permitted FDP was used as the Commander's Discretion extension.
- **Notes** - add notes for OPS or other departments.
- **Rest Facility** - select the one used for the augmented crew - Leon then will increase MAX FDP. You can define options for RF in section Settings > Flight Editing as well as per an aircraft in section [Fleet](#).
- **Night time** - select 'flight time' or 'block time' from the drop-down box. Leon automatically calculates both values as any time between hours of ECT (evening civil twilight) and MCT (morning civil twilight) - see screenshot on the right for details.
- **Instrument Time** - time in the air spent flying by IFR. When rule I-IFR is set in OPS > FLIGHT tab, data input shows flight time (it can be over-written). If V-VFR is set - Instrument time needs to be entered manually. Instrument Time cannot be longer than Flight Time.
- **TAH & TAC** - total aircraft **hours & cycles**. Leon shows data ONLY if every single JL has been filled in for particular aircraft. In brackets, there are TAH displayed in **decimals restricted to one space after a comma**, i.e. 10969:43 (10969.7).
- **Engine rate** - numeric values of thrust set for take-off (if there was full available thrust set, or any derates used).
- **Upload files** - PDF and graphics files can be dragged and dropped to this section.



Option to delete JL

If the **JL is inserted by mistake**, for example for the future flight, it is possible to **delete** it. To

delete JL you need to click on  icon located in the top-right corner of the 'JL' tab. There are 3 options available:

- **Clear changes** - clears data inserted in JL **before it is saved**. Useful when incorrect data is inserted in the JL and has to be cleared. Rather than clearing it from each individual field
- **Cancel Journey Log** - cancels saved Journey Log. Cancelling the JL will clear the data as well as display the flight in CALENDAR view as cancelled
- **Delete Journey Log** - allows deleting JL. Useful when the JL is inserted by mistake, for example, on the future flight. Deleting JL clears mistakenly inserted data as well as keeps the flight active

At the bottom of the Journey Log panel you can find an information **Last modified by** showing name & surname of the user who made changes in JL as the last one as well as UTC time of those changes.

## Fuel in litres & US gallons

It is now possible to add **Fuel** data in **litres** or **US gallons** in the Journey Log panel.

In a section Settings > Fleet, edit the aircraft and set up a default fuel unit as **L** or **US Gal**

UNITS

Weight

☐ kg ☒ lbs

Fuel

☐ kg ☐ lbs ☒ L ☐ US Gal

Once the default fuel unit is set up, you can add fuel in litres or US gallons in the Journey Log panel (as on screenshot below) - the default fuel unit applies to: Block fuel, Used fuel, Remaining fuel and Uplift.

COPY DATA FROM FW

BLOFF\*: 16:00

T/O\*: 16:10

LDG\*: 17:05

BLON\*: 17:13

All times in UTC

Σ 00:55

Σ 01:13

MAX FL\* [?]: 340 FL

Block fuel\*: 4500 L

Fuel used\*: 2500 L

Fuel remaining\*: 2000 L

COPY DATA FROM FW

BLOFF\*: 16:00

T/O\*: 16:10

LDG\*: 17:05

BLON\*: 17:12

All times in UTC

Σ 00:55

Σ 01:12

MAX FL\* [?]: 340 FL

Block fuel\*: 3500 US Gal

Fuel used\*: 1500 US Gal

Fuel remaining\*: 2000 US Gal

The same defined fuel unit shows in the 

EDIT LOG

 panel (suitable for adding JL data for multiple sector trip)

Block fuel*	Fuel used*	Fuel remaining*	Uplift [?]
3500	1500	2000	US Gal
US Gal	US Gal	US Gal	US Gal

We also added **Fuel density (kg/L)** in the JL section. This field is optional and can be activated in Settings > Flight Editing > Journey Log section.

The **default Fuel density values** are as per below:

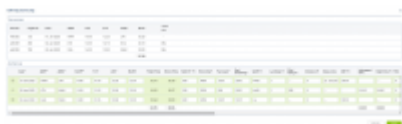
- **JET A-1** - 0.81556862 kg/L
- **AVGAS** - 0.69559241 kg/L

The value is selected by default in the JL based on fuel type set in Settings > Fleet > OPS tab. This field allows amending the density of the fuel with the values between 0 and 1.


The density value is automatically added when creating new refueling. The density value reacts to the 'Fuel type' changes in the 'New Refueling'.

All the reports that take fuel into consideration such as: CO2 emission, Aircraft Flights, Network Departures, columns in Report Wizard will recalculate with accordance to this density value.

## Adding JL to multiple sectors

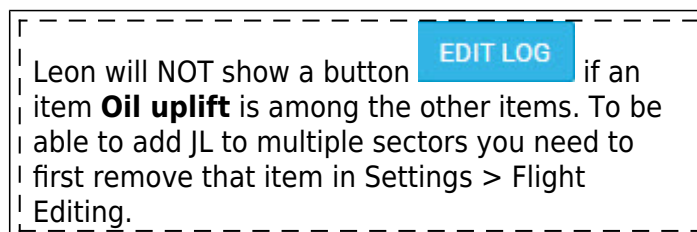


Adding JL data to multiple sectors


If you want to add Journey Log to multiple sectors on one screen, click  button at the bottom of OPS panel and fill in a new open window (see screenshot on the right).

The 'Edit trip JL' window is split into 2 sections“

1. **Trip summary** - showing an aircraft reg number, flight number, date, ADEP, STD, STA, ADES, Block time and assigned crew (codes).
2. **Journey Log** - showing all default fields (defined in Settings > Flight Editing) to be filled in.



## Deleting Journey Log

To delete a journey log click **X** icon (between the trash icon and the status dot). Leon will show a blank JL page. Once it's saved, in a column **FW & JL** instead of a dot Leon will show 'X'. To bring a journey log page back click , however, Leon will NOT restore previous entrances - it will only restore JL fields to be filled in again.

From:  
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Last update: **2020/03/30 07:04**

