Condor 2 LK 1.5 manual

1) What does it do?

C2LK translates Condor Soaring Simulator task file to the LK8000 task file format. It also sets glider type, polar, map and terrain files, waypoint files and penalty zones in LK8000 profile files and settings saving time and effort. After conversion and setting water ballast LK8000 is ready to fly.
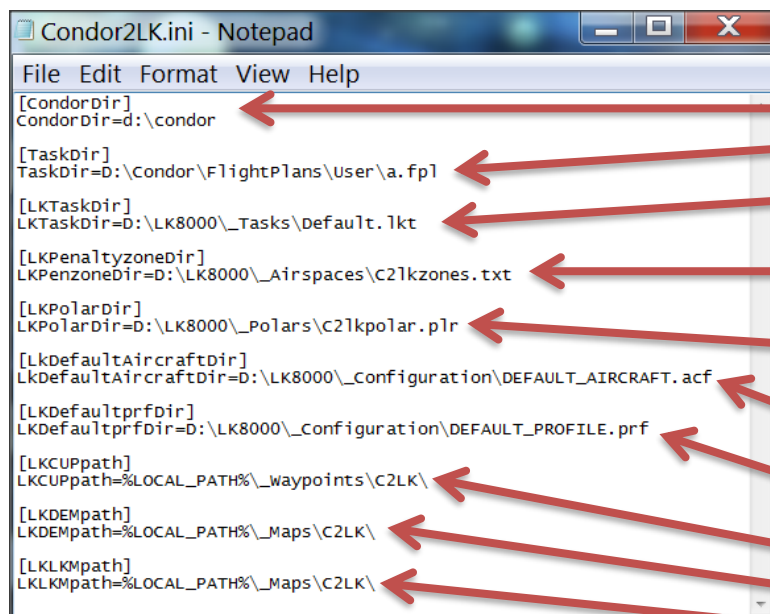
2) Package content.

Condor2LK package contains the following files which should be in the same folder:

- 01.ico
- C2LK_manual.pdf, Condor2LK_Terms and conditions.pdf
- C2LKpolars.txt
- Condor2LK.ini
- C2LK.exe

3) C2LK initial setup

Before using C2LK **Condor2LK.ini file must be edited.** Example is shown below.

Condor2LK.ini - Notepad	
`[CondorDir]` `CondorDir=d:\condor`	Path of the main Condor folder
`[TaskDir]` `TaskDir=D:\Condor\FlightPlans\User\a.fpl`	Path of the task file that will be exported
`[LKTaskDir]` `LKTaskDir=D:\LK8000\_Tasks\Default.lkt`	Path of the task file in the LK8000 _Tasks folder.
`[LKPenaltyzoneDir]` `LKPenzoneDir=D:\LK8000\_Airspaces\C2lkzones.txt`	Path to the file in which penalty zones will be saved.
`[LKPolarDir]` `LKPolarDir=D:\LK8000\_Polars\C2lkpolar.plr`	Path to the file in which condor polar will be saved.
`[LkDefaultAircraftDir]` `LkDefaultAircraftDir=D:\LK8000\_Configuration\DEFAULT_AIRCRAFT.acf`	Path to the file in which Aircraft profile will be saved.
`[LKDefaultprfDir]` `LKDefaultprfDir=D:\LK8000\_Configuration\DEFAULT_PROFILE.prf`	Path to the file in which LK8000 profile will be saved.
`[LKCUPpath]` `LKCUPpath=%LOCAL_PATH%\_Waypoints\C2LK\`	Lk path where CUP file is stored
`[LKDEMpath]` `LKDEMpath=%LOCAL_PATH%\_Maps\C2LK\`	Lk path where DEM map file is stored
`[LKLKMpath]` `LKLKMpath=%LOCAL_PATH%\_Maps\C2LK\`	Lk path where LKM map file is stored

Important notes:

- If "Default.lkt" is set as the task file the original default task file will be overwritten. This will automatically set the task in the LK8000. If you want to choose your task file manually every time you fly, choose a different name for the task file.
- Similarly if "DEFAULT_AIRCRAFT.acf" and "DEFAULT_PROFILE.prf" are chosen original LK8000 files will be overwritten. **Make a backup copies of these files!**

Before using C2LK LK map (LKM) files and terrain files (DEM) must be placed in the **LK8000_Maps\C2LK** folder. Waypoint files should be placed in **LK8000_Waypoints\C2LK** folder. **C2LKlandscapes.txt file must also be edited.** For all landscapes used section as on the example below must be created.
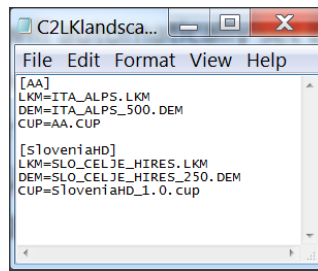
4) Using C2LK.

Run C2LK.exe

1) Select task type - Speed or AAT. If AAT is selected type task time in minutes.

2) Select waypoint advance option. More details in the LK8000 help and manual.

3) Click "Convert"

5) LK8000 settings – first use after C2LK task export.

Set profiles as show below. Don't forget to back up your files.

These should be set automatically by C2LK

Manually set the penalty zones file. You will need to do it once.

Set this to "on". This will save the LK8000 profile every time you close LK8000.

Set polar file created by C2LK

Set your registration and competition numbers if you want.

6) Polar data and Flaps setting box

C2LKpolars.txt file can be edited to add data for new gliders if needed.

- SafteySpeed1 represents VNE in mm/s
- AircraftType1 – should be taken from condor task file
- Handicap1 – should be taken from condor glider data screen
- BallastSecsToEmpty1 – usually equal to water ballast assuming 1kg/s water drop
- Numbers after 'polar=' represent the following:
  - Field 1: Gross weight of the glider, excluded water ballast, wing loading * wing area
  - Field 2: Max ballast you can load (water). It will add wing loading, separately
  - Field 3-4, 5-6, 7-8 are couples of speed, sink rate in km/h and m/s . These values are used to create an interpolated curve of sink rates
  - Field 9: Wing surface area in squared meters
- Numbers after 'flaps=' represent the following:
  - Field1 - mass at which you specify flaps position speeds
  - Field2 - position counts (how many possible flap settings your glider has)
  - Remaining fields - for every position you need a pair of values: minimum speed for the position, and the ID of the position. The ID is simply the name you have on the flaps lever. Like S1, L1 etc. It can be anything, but the name of ID cannot exceed 7 characters. Example for Diana2: another line after the standard polar line should be: 280, 7, 0, 28, 67,21, 71.5, 14, 77.5, 8, 98, 3, 140, 0, 170, -2
  - If glider has no flaps '600, 1, 0, N/A' could be used which will show N/A in lk8000 flaps box

Change log:

1.5

- Added support for LK8000 recommended flaps setting box

1.4

- Warning added if fixed mass not set in Condor

1.3

- If different radii task points are used C2LK will set the smallest radius to prevent pilots missing turn points in Condor.

1.2

- Waypoint advance option export fixed
- Minimal finish height (AGL) in task rules is now set correctly in LK8000
- Default paths where map files (*.LKM, *.DEM) and waypoint file (*.CUP) are located can now be configured in Condor2LK.ini file.