FLIGHT PLANNING · TECH LOG

DATE	REGISTRATION	TYPE	PIC

AERODROME DATA ICAO	FREQ MHZ	ELEVATION FT	PATTERN ALT. FT MSL	LENGTH M	DIRECTION RWY + R / L

ATIS	INFO	TIME UTC	RWY IN USE	WIND °/KT	VIS M / KM	CLOUDS BASE FT	TEMP DEWPT.	QNH HPA	TRL
DEP									
DEST									

TIME RECORDING ☐ UTC ☐ LT	START	END	TOTAL
HOBBS Engine on → engine off (engine running time)			h.xx
BLOCK TIME Off-block → on-block = flight time per FCL, goes in the logbook			h:mm

NOTES · CLEARANCES · REMARKS · DEFECTS

TRANSPONDER	**7000** VFR · USA 1200	**7500** HIJACK	**7600** RADIO FAILURE	**7700** MAYDAY			
FREQUENCIES MHZ	**121.500** EMERGENCY	**122.540** A/A GER	**122.555** A/A GER	**122.255** BALLOON			

FLIGHT PLANNING · NAV LOG

DATE	REGISTRATION	TYPE	PIC

AERODROME DATA ICAO	FREQ MHZ	ELEVATION FT	PATTERN ALT. FT MSL	LENGTH M	DIRECTION RWY + R / L

QNH	WIND	ALTERNATE	FUEL DEP.	FUEL LDG.

TIME RECORDING ☐ UTC ☐ LT	START	END	TOTAL
HOBBS Engine on → engine off			h.xx
BLOCK TIME Off-block → on-block · logbook			h:mm

NO	WAYPOINT / LEG	MC DEG	MH DEG	DIST NM	GS KT	ETE MIN	ETO UTC	ATO UTC
1								
2								
3								
4								
5								
6								
7								
8								
9								

ATIS	GROUND	TOWER / INFO	FIS	DEST / ALTN

TRANSPONDER	7000	VFR · USA 1200	7500	HIJACK	7600	RADIO FAILURE	7700	MAYDAY
FREQUENCIES MHZ	121.500	EMERGENCY	122.540	A/A GER	122.555	A/A GER	122.255	BALLOON

NAV LOG · LEGEND & WORKING

COURSE CHAIN: FROM CHART TO COMPASS

TC	± VAR	MC	± WCA	MH	± DEV	CH
TRUE COURSE measured off the chart	Variation from the chart	**MAGNETIC COURSE** MC column in the nav log	Wind corr. angle from the wind	**MAGNETIC HEADING** MH column, this is what you fly	Deviation from the card	**COMPASS HEADING** what the compass reads

Variation: subtract east, add west *("East is least, West is best")*. · **Wind correction angle:** wind from the right add, wind from the left subtract. · **Deviation:** only if a deviation card is fitted at the compass, otherwise 0.

ABBREVIATIONS

MC	**MAGNETIC COURSE** (chart + variation)
MH	**MAGNETIC HEADING** (MC + WCA)
DIST	**DISTANCE** (leg length in NM)
GS	**GROUNDSPEED** (speed over ground, kt)
ETE	**EST. TIME ENROUTE** (duration of the leg)
ETO	**EST. TIME OVERHEAD** (planned over the WP)
ATO	**ACTUAL TIME OVERHEAD** (real, noted in flight)
ETA	**EST. TIME OF ARRIVAL** (arrival at destination)
TC	**TRUE COURSE** (against geographic north)
VAR	**VARIATION** (true ↔ magnetic north, chart)
DEV	**DEVIATION** (error of the compass itself)
WCA	**WIND CORRECTION ANGLE** (offset against the wind)
IAS	**INDICATED AIRSPEED** (read on the ASI)
TAS	**TRUE AIRSPEED** (IAS + altitude/temp)
W/V	**WIND** (direction/speed, true)
WA	**WIND ANGLE** (wind direction − course)

WORKING PER LEG, WITHOUT A FLIGHT COMPUTER

1. Measure course and length off the chart → `TC`, `DIST` [NM]
2. Apply variation → `MC = TC − east VAR` or `TC + west VAR`
3. Determine the wind angle → `WA = wind direction − TC`
4. Split into components → `Crosswind = W × sin WA` `Headwind = W × cos WA`
5. Wind correction angle → `WCA = crosswind × 60 ÷ TAS` · wind from the right +, from the left −
6. Heading → `MH = MC + WCA`
7. Speed over ground → `GS = TAS − headwind` · tailwind: +
8. Leg time → `ETE = DIST ÷ GS × 60` [min]
9. Overhead time → `ETO = departure time + ETE`, then `ETO = previous ETO + ETE`
10. Enter `ATO` in flight. The difference to ETO is your time error for the rest of the route

RULES OF THUMB, DONE IN YOUR HEAD

SINE IN YOUR HEAD	30°≈0.5 · 45°≈0.7 · 60°≈0.9 · 90°=1.0	**COSINE**	same row backwards: 0°=1.0 … 90°=0
TAS FROM IAS	+ 2% per 1000 ft pressure altitude	**MINUTES PER NM**	60 ÷ GS
1-IN-60 RULE	Error° = offset × 60 ÷ NM flown	**FUEL**	ETE ÷ 60 × burn rate [l/h]
DESCENT RATE 3°	ft/min ≈ GS ÷ 2 × 10	**WCA SANITY CHECK**	WCA ≤ 10° → GS ≈ TAS − headwind

TIMES & DOCUMENTATION

WHICH TIME GOES IN WHICH BOOK

TIME	TECH LOG (BELONGS TO THE AIRCRAFT)	LOGBOOK (BELONGS TO YOU)
HOBBS Engine on → engine off	**YES** Running time of the engine, usually also the basis for billing.	**NO** There is no column for it in the logbook.
BLOCK TIME Off-block → on-block	**YES** Recorded there as the flight time of the aircraft.	**YES, THIS IS THE ONE** This is total flight time under FCL. It counts for the licence, the currency record and the 90-day rule.
AIR TIME Lift-off → touchdown	**ONLY IF REQUIRED** Some operators record it as well, many do not.	**NO** Purely additional information.
HOUR METER Reading of the counter	**YES** Basis for maintenance intervals, TBO and the ARC.	**NO** Only of interest to the operator.
LANDINGS Number per flight	**YES** As a plain count.	**YES** Split into day and night, for the 90-day currency record.

WHAT BELONGS IN ONLY ONE OF THE TWO BOOKS

LOGBOOK ONLY

Your capacity (PIC / dual / SPIC), night and instrument time, remarks on training or a check ride together with the instructor's name. The tech log does not care in which role you flew.

TECH LOG ONLY

Everything technical. Fluids, counter readings, and above all defects. The next pilot reads the tech log, not your logbook. That is why the notes field on sheet A is headed “Remarks · Defects”: that is the slip you copy into the tech log from.

INTO BOTH BOOKS

Date · registration · type · departure and destination · name of the pilot in command · block time · landings. You write these once on sheet A and copy them into both books.

TWO CAVEATS

The operator sets the tech log columns. Clubs, charter operations and ultralight owners handle this differently, and many now use electronic systems instead of paper. In case of doubt their rule applies, not this table. · **For the logbook the block time counts, not the Hobbs time.** You need the Hobbs figure for the tech log and for billing; anyone who copies it into the logbook credits themselves with too many hours, every single flight.