Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Office of Civil Aviation FOCA
Flight Personnel
3003 Berne
Switzerland

NIT(H) 1

HELICOPTER NIGHT Qualification

Licence N°

Name: ..... *First Name:* ..... *Date of birth:* .....

Tel. Home: ..... *Tel. Mobile:* ..... *Fax:*.....

Address (indicate only if new address) *email:* .....

Postal code / city: ..... *Street:* .....

Flight School

Name: ..... N°

Flight Experience (min. 100 hours HEL)

Total HEL Hours: ..... SOLO / PIC: .....

NVFR Flight Experience (min. 5 hours DC HEL + 5 ldgs SOLO)

Total NVFR Hours DC (min.5): ..... last 90 days: .....

Total NVFR solo / PIC Hours: .....

NVFR landings (min. 30 appr. with ldg. HEL)

Total NVFR landings:..... last 90 days (min. 3 T/O, Approach. and Ldg NIT): .....

Total NVFR solo landings (minimum 5): .....

NVFR Navigation Flight (min. 50 km straight distance from point of departure)

From: ..... To:..... Dist: .....km

Remarks / Notes:

The trainee has received the flight instruction required by swiss law (RFP/RPN) and he/she is qualified to act as PIC in NIT(H) 1 operations. The trainee's logbook has been endorsed.

Date: ..... FI Signature / License N°: .....

After completion of training send this form to Federal Office of Civil Aviation FOCA

FOCA official use only:

NIT(H) 1

Licence N°

GROUND INSTRUCTION (all items must be covered)

Air Law

- Aircraft equipment / MEL / TM 050-40 ☐
- Aircraft lighting / collision avoidance ☐
- Airport lights (PAPI, TWY, ALS) ☐
- Airspace and facilities available ☐
- ATC Flight plan ☐
- International flights (F / D / I / A) ☐
- Night flight activity (Mil / Civil / Rescue) ☐
- NVFR CH air law 748.121.11 art 43) ☐
- Sunrise / Sunset ☐

Anatomy of the eye (see details attached)

- Anatomy ☐
- Physiology ☐

Night Vision Human Factors (see details attached)

- Aircraft design limitations ☐
- Human performance ☐
- Illusions, Disorientation ☐
- Light Level ☐
- Night vision technique ☐
- Self-imposed stresses ☐
- Weather / Environmental conditions ☐

Flight Procedures / Planning

- Behaviour in case of emergency ☐
- Cockpit management ☐
- External lights (position lights / strobes / landing light) ☐
- Instrument scanning techniques ☐
- Mountain flying tactics ☐
- Navigation principles ☐
- Night preflight inspection ☐
- Obstacle lighting (Towers, antennas, cranes) ☐
- Planning and use of safety altitude ☐
- Radio altimeter techniques* ☐
- Reconnaissance / performance ☐
- Risk assessment (obstacles, light level, weather, wind) ☐
- Take off / Landing procedures / steep approach ☐
- Use of cockpit lighting (red, white light), flash light ☐

Emergency / Limitations

- A/C systems failure* ☐
- Autopilot / SAS failure (if applicable)* ☐
- Electrical failures / total / partial ☐
- Engine failure / SE / ME* ☐
- Internal / External lighting failure ☐
- Limitations* ☐
- Master Warning / Caution* ☐

*see applicable RFM

Dangers

- Accident review ☐
- Blinding (light, snow, rain, etc.) ☐
- CFIT ☐
- Disorientation at night ☐
- Inadvertent IMC (avoidance and escape) ☐
- Loss of visual reference (white out, brown out) ☐
- Precipitation (mist / fog / snow) ☐
- Rotor clearance ☐
- Traffic avoidance ☐
- Vortex ☐
- Weather deterioration ☐

Remarks:

Minimum requirements before starting practical NIT1 (H) instruction:

- **PPL(H)** ☐
- **NIT(H) theory completed** ☐

I herewith certify that the trainee has received the required NIT(H) 1 ground instruction and is competent to begin the practical NIT(H) 1 instruction.

Date: .....

Name: .....

Signature: .....

NIT(H) 1

Licence N°

FLIGHT INSTRUCTION

Flight Instructor(s) in charge of NIT practical training. **Maximum 2 persons.**

Name: ..... Licence Nr:

Name: ..... Licence Nr:

Training must be completed in different light levels and at minimum 2 different nights

Date Flight 1: ..... Light Level: P M H

Date Flight 2: ..... Light Level: P M H

Date Flight 3: ..... Light Level: P M H

Date Flight 4: ..... Light Level: P M H

Date Flight 5: ..... Light Level: P M H

Codes and Grades

GRADES	OPERATIONAL ENVIRONMENT		LIGHT LEVEL	AIR WORK [1]	NAV EQUIPMENT [2]
X Demo FI	**1** Airport	**4** Unlighted open area	**P** POOR	**1** Eight Turns	**V** VOR - DME
P Passed	**2** Heliport	**5** Lighted obstructed	**M** MEDIUM	**2** Slow Flight	**G** GPS
F Failed	**3** Lighted open area	**6** Unlighted obstructed	**H** HIGH	**3**	**M** Movig Map
S Solo				**4**	**N** None

FLIGHT TRAINING

ALL EXERCISES MUST BE REPEATED UNTIL A PASSING GRADE IS CONSISTENTLY ACHIEVED

NORMAL

Ground, Hover and Taxi

Ops. environment: 1 2 3 4 5 6 7 8 9 10

Grade:

RMK

Traffic pattern (incl. 5 solo circuits on airport / heliport)

Ops. environment: 1 2 3 4 5 6 7 8 9 10

Grade:

RMK

INFLIGHT MANEUVERS

[1] Inflight air work / flight tactics (eight turns, slow flight, etc...)

Exercise: 1 2 3 4 5 6 7 8 9 10

Grade:

RMK

[2] Navigation flight DC with Ldg. / Min.1 flight (must be min. 50km and Light Level MEDIUM or POOR)

	From	To	Light Level	Nav equip.
Nav. Flight 1:				
Nav. Flight 2:				
Nav. Flight 3:				

Note / Definitions: For the purpose of flight training, the light levels are defined as follows:

POOR: No visible details or contrast on the earth surface

MEDIUM: Visible ground details or contrast (ex: transitions from forests to agriculture can be identified)

HIGH: Details on the earth surface can be easily identified. (even visible shadows)

FLIGHT TRAINING

ABNORMAL PROCEDURES

Ground, Hover and Taxi without landing light

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Traffic pattern without landing light

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Outside landing / Steep appr. 10°< angle < 20° / clear area (min. 3 landings with Light Level MEDIUM or POOR)

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Simulated IMC / 180° level turns (+/- 100ft / +/- 10°)

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

EMERGENCY PROCEDURES / KNOWN TERRAIN / LIGHTED SURFACE

Simulated engine failures / Autorotations

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Hydraulic failure (*if applicable)

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

TR malfunctions / failures / NO GND CONTACT

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

O.E.I. operations (*if applicable)

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Fuel control / governor failure (*if applicable)

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Electrical failures (see RFM)

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Remarks / Notes:

Licence N°

FLIGHT TRAINING

EMERGENCY PROCEDURES

Simulated engine failures / Autorotations / Go around at 200ft/AGL min. (Known terrain / Unlighted surface)

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Other Emergency / specify: ....

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Other Emergency / specify: ....

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Other Emergency / specify: ....

	1	2	3	4	5	6	7	8	9	10	RMK
Ops. environment:											
Grade:											

Remarks / Notes:

NIT GROUND TRAINING
Detailed examples of subjects to be instructed in a NIT ground instruction are included below.

General Anatomy and Characteristics of the Eye

Anatomy
Overall structure of the eye
Cones
Rodes

Physiologie
Types of vision (photopic, mesopic, scotopic)
Day versus night vision
Dark adaption process

Night Vision Human Factors
Night blind spot
Field of view and peripheral vision
Distance estimation and depth perception
Aerial perspective
Binocular cues
Night vision techniques
Vestibular / Somatogravic / Proprioceptive illusions
Visual illusions
Dealing with Spatial Disorientation

Aircraft Design Limitations
Windshield condition
Aircraft instrument design
Aircraft structural obstruction
interior / exterior lights

Human Performance
24 hours diagram

Self-imposed stresses
Drugs, Alcohol, Tabacco
Exhaustion
Hypoglycaemia
Injuries
Physical fitness
Stress & Fatigue (acute vs. chronic, prevention)

Hypoxia
Issues and night vision

Weather / Environmental conditions
Snow, Dust
Haze, Fog
Rain

Light Level
Astronomical lights (moon, star)
Effects of cloud cover
Illumination, luminance, contrast