

CHECKLIST FOR NORMAL OPERATION ROBIN DR40

Parameters, restrictions, procedures and emergency procedures see AFM

BEFORE ENGINE START

1	Aircraft & Cockpit inspection	- COMPLETED according AFM	1
2	Parking brake.....	- SET	2
3	Flight time counter.....	- RECORDED	3
4	Ignition key	- OFF.....	4
5	Passenger briefing.....	- COMPLETED	5
6	Seats.....	- ADJUSTED & LOCKED	6
7	Seat belts / shoulder harnesses	- FASTENED & ADJUSTED	7
8	Mixture.....	- IDLE CUT OFF	8
9	Propeller	- FULL INCREASE	9
10	Alternate Air	- CLOSED	10
11	Cowl Flaps.....	- OPEN (visual checked)	11
12	Controls	- FREE & CORRECT	12
13	Flaps (full range)	- CHECKED / UP	13
14	Altimeter	- SET	14
15	Battery	- ON	15
16	Elevator and rudder trim.....	- TAKE OFF	16
17	Fuel quantity	- CHECKED.....	17
18	Fuel selector	- MAIN OPEN / AUX. CLOSED	18
19	Radiomaster	- OFF.....	19
20	Annunciator warnings.....	- TEST	20

READY FOR ENGINE START

ENGINE START

1	Rotating Beacon.....	- ON	1
2	Propeller area.....	- CLEAR	2
3	Engine start.....	- according AFM	3

ENGINE START COMPLETED

AFTER ENGINE START

1	Oil pressure.....	- CHECKED.....	1
2	Alternator	- ON	2
3	Voltmeter.....	- CHECKED GREEN ARC	3
4	Gyro suction	- CHECKED.....	4
5	Fuel pump.....	- OFF	5
6	Annunciator warnings.....	- OFF	6
7	Radiomaster	- ON	7
8	Avionic	- PRESELECTED.....	8
9	Transponder.....	- MODE CHECKED	9

READY FOR TAXI

TAXI

- | | | | |
|---|-------------------------|----------------|---|
| 1 | Brakes & steering | - CHECKED..... | 1 |
| 2 | Gyro instruments | - CHECKED..... | 2 |

TAXI CHECK COMPLETED**ENGINE TEST**

- | | | | |
|---|--------------------|----------------------------------|---|
| 1 | Warm up time | - CHECKED..... | 1 |
| 2 | Run up | - according AFM and page 4 | 2 |

ENGINE TEST COMPLETED**BEFORE DEPARTURE**

- | | | | |
|----|---------------------------------------|---------------------------------|----|
| 1 | Seats..... | - LOCKED | 1 |
| 2 | Seat belts / shoulder harnesses | - FASTENED..... | 2 |
| 3 | Fuel pump..... | - ON | 3 |
| 4 | Fuel quantity | - CHECKED..... | 4 |
| 5 | Fuel selector | - MAIN OPEN / AUX. CLOSED | 5 |
| 6 | Mixture..... | - SET | 6 |
| 7 | Propeller | - FULL INCREASE | 7 |
| 8 | Friction (Throttle)..... | - SET | 8 |
| 9 | Alternate Air (Notansaugluft)..... | - CLOSED | 9 |
| 10 | Cowl Flaps..... | - OPEN..... | 10 |
| 11 | Magnetos..... | - BOTH..... | 11 |
| 12 | Controls | - FREE & EASY | 12 |
| 13 | Elevator and rudder trim..... | - TAKE OFF | 13 |
| 14 | Flaps..... | - TAKE OFF | 14 |
| 15 | Flight instruments | - SET | 15 |
| 16 | Avionic | - SET | 16 |
| 17 | Takeoff Briefing..... | - COMPLETED..... | 17 |
| 18 | Transponder..... | - CODE SET | 18 |
| 19 | Canopy | - CLOSED & LOCKED..... | 19 |

READY FOR DEPARTURE**CLIMB**

- | | | | |
|---|-----------------|----------------|---|
| 1 | Flaps | - UP | 1 |
| 2 | Power..... | - CHECKED..... | 2 |
| 3 | Fuel pump..... | - OFF..... | 3 |
| 4 | Cowl Flaps..... | - OPEN..... | 4 |

CLIMB CHECK COMPLETED**CRUISE**

- | | | | |
|---|------------------------------------|----------------------|---|
| 1 | Flight- & Engine instruments | - CHECKED..... | 1 |
| 2 | Fuel | - CHECKED..... | 2 |
| 3 | Power..... | - SET / CHECKED..... | 3 |
| 4 | Cowl Flaps..... | - CLOSED | 4 |

CRUISE CHECK COMPLETED

APPROACH

1	Approach briefing	- COMPLETED	1
2	Seats	- LOCKED	2
3	Seat belts / shoulder harnesses	- FASTENED	3
4	Flight instruments	- SET	4
5	Avionics	- SET	5
6	Fuel pump	- ON	6
7	Fuel quantity	- CHECKED	7
8	Fuel selector	- AUX. CLOSED	8
9	Mixture	- SET	9
10	Alternate Air	- CLOSED	10

APPROACH CHECK COMPLETED**FINAL**

1	Flaps	- SET	1
2	Brakes (pressure)	- CHECKED	2
3	Brakes	- FREE	3

FINAL CHECK COMPLETED**AFTER LANDING**

1	Propeller	- FULL INCREASE	1
2	Flaps	- UP	2
3	Electrical consumers	- AS REQUIRED	3
4	Transponder	- MODE CHECKED	4
5	Cowl Flaps	- OPEN	5

AFTER LANDING CHECK COMPLETED**ENGINE SHUT DOWN & PARKING**

1	Electrical consumers	- OFF except avionic & rot. beacon	1
2	Alternator	- OFF	2
3	Throttle	- IDLE	3
4	Magnetos grounding	- AS REQUIRED	4
5	Mixture	- CUT OFF	5
6	Magnetos	- OFF	6
7	Avionic	- 121.500 TEST	7
8	Radiomaster	- OFF	8
9	Battery	- OFF	9
10	Flaps	- FULL DOWN	10
11	Flight data	- RECORDED	11
12	Aircraft	- CHOCKED / SECURED	12

PARKING CHECK COMPLETED

SPEEDS FOR OPERATION AT MAX. TAKE OFF MASS (MTOM)

KIAS

Rotate	FLAPS 1	61
Best angle Vx	FLAPS UP / 1	67 / 65
Best rate Vy up to 2000 ft/AGL.....	FLAPS UP	86
Cruise climb Vcc above 2000 ft/AGL.....	FLAPS UP	89
Initial approach	FLAPS 1	80
Intermediate approach.....	FLAPS 2	70
Final approach	FLAPS 2	65
Go around	before FLAPS UP	67
Best glide.....	FLAPS UP	81
Max. demonstrated crosswind		22 KT
Max. speed for Flaps 1		92
Max. speed for Flaps 2		81

POWER SETTINGS

<i>MP</i>		<i>RPM</i>
Take off.....	full open	(max. 2. Min.) 2700
Climb.....	25“	2500
Cruise and descent.....	55 - 65 %	2400
Approach / circuit	as required	2200

RUN UP

Engine	2000 RPM
Magnetos	max. drop / diff..... 175 / 50 RPM
Idle	500-700 RPM

POSTFLIGHT

Refuel standard.....	Main full
Refill Oil.....	if below 4 QTS to max. 8 QTS

LOADING

	Empty mass		Moment	[kg] cabine load with fuel:		MTOM	
<i>HB-</i>	<i>[lbs]</i>	<i>[kg]</i>	<i>[m*kg]</i>	<i>standard</i>	<i>full</i>	<i>[lbs]</i>	<i>[kg]</i>
KFH	1398.6	634.4	195.292	393	357	2425	1100

REFUELING

Standard (Main full, Auxilliary empty)	26.4 USG	100 lt	72 kg	159 lbs
Longrange (Main & Auxilliary full)	39.6 USG	150 lt	108 kg	238 lbs

FIRE ON GROUND

1	Starter	- CRANK ENGINE.....	1
2	Mixture	- IDLE CUT OFF	2
3	Throttle	- FULL OPEN.....	3
4	Fuel Pump.....	- OFF	4
5	Fuel selector	- OFF	5
6	Battery / Alternator	- OFF	6
7	Pax and Crew	- EVACUATE	7

FIRE IN FLIGHT

1	Source of fire	- IDENTIFY.....	1
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ELECTRICAL FIRE (Smoke in cabin)

1	Battery / Alternator	- OFF	1
2	Vents	- OPEN	2
3	Cabin heat	- OFF	3

LAND AS SOON AS PRACTICABLE

ENGINE FIRE

1	Fuel selector	- OFF	1
2	Throttle.....	- CLOSED	2
3	Mixture	- IDLE CUT OFF	3
4	Fuel pump.....	- OFF	4
5	Cabin heater and defroster.....	- OFF	5
6	Elevator trim.....	- SET FOR BEST GLIDE 79 KIAS.....	6

PREPARE FOR POWER OFF EMERGENCY LANDING

ENGINE POWER LOSS IN FLIGHT

- | | | | |
|---|---------------------|----------------------------------|---|
| 1 | Attitude | - BEST GLIDE SPEED 81 KIAS | 1 |
| 2 | Fuel selector | - MAIN & AUX OPEN | 2 |
| 3 | Fuel pump | - ON | 3 |
| 4 | Mixture | - RICH | 4 |
| 5 | Alternate Air | - ON | 5 |
| 6 | Ignition | - BOTH | 6 |
| 7 | Engine gauges | - CHECK CAUSE OF POWER LOSS. | 7 |

When power is restored

- | | | | |
|---|---------------------|-------------|---|
| 8 | Alternate Air | - OFF | 8 |
| 9 | Fuel pump | - OFF | 9 |

If power is not restored

- | | | | |
|----|---------------------|-----------------------------------|----|
| 10 | Elevator trim | - SET FOR BEST GLIDE 81 KIAS | 10 |
|----|---------------------|-----------------------------------|----|

PREPARE FOR POWER OFF EMERGENCY LANDING

EMERGENCY LANDING

Trim for best glide speed 81 KIAS

Locate suitable field

When the landing field can easily be reached

- | | | | |
|---|---------------------------------|--------------------------------|---|
| 1 | Seat belts / shoulder harnesses | - TIGHT | 1 |
| 2 | Fuel selector | - MAIN & AUX CLOSED | 2 |
| 3 | Mixture | - IDLE CUT OFF | 3 |
| 4 | Throttle | - IDLE | 4 |
| 5 | Ignition | - OFF | 5 |
| 6 | Battery / Alternator | - OFF | 6 |
| 7 | Flaps | - FULL DOWN | 7 |
| 8 | Speed | - REDUCE FOR FINAL APPROACH... | 8 |

ALTERNATOR FAILURE

No Alternator output or Alternator-Warning (Annunciatorpanel) illuminates

- | | | | |
|---|---------------------------------|-----------------------|---|
| 1 | Alternator Switch | - CHECK ON | 1 |
| 2 | Alternator Circuit breaker..... | - CHECK PUSH IN | 2 |

if 1 and 2 are checked on/in and still no output

ALTERNATOR RECYCLING PROCEDURE

- | | | | |
|---|----------------------------|---------------------------|---|
| 3 | Electrical consumers | - OFF as practicable..... | 3 |
| 4 | Alternator Switch | - OFF | 4 |
| 5 | Alternator Switch | - ON aft. 5-10 sec..... | 5 |
| 6 | Alternator output..... | - CHECKED | 6 |

if still no output

- | | | | |
|---|----------------------------|---------------------------|---|
| 7 | Electrical consumers | - OFF as practicable..... | 7 |
|---|----------------------------|---------------------------|---|

Land on the nearest Airport as practicable

RADIO FAILURE

NO RADIOCONTACT WITH TWR / ACC

- | | | | |
|---|----------------------------|-----------------|---|
| 1 | Radio | - ON | 1 |
| 2 | Vol | - TEST..... | 2 |
| 3 | Frequency | - CHECKED | 3 |
| 4 | Headset / Mike Plugs | - CHECKED | 4 |

if still no contact

remain outside of controlled airspace

LOSS OF RADIOCONTACT WITH TWR / ACC

- | | | | |
|---|----------------------------|-----------------|---|
| 1 | Radio | - ON | 1 |
| 2 | Vol | - TEST..... | 2 |
| 3 | Headset / Mike Plugs | - CHECKED | 3 |

if still no contact

- | | | | |
|---|------------------|-----------------------|---|
| 4 | Transponder..... | - 7600 / ALT | 4 |
| 5 | Procedure | - ACCORDING AIP | 5 |

GROUND PROCEDURES**BEFORE FIRST TAXI**

1	Time (Block off).....	-	TABULATED.....	1
2	Directional Gyro.....	-	SET.....	2
3	Taxi Area.....	-	FREE.....	3

TAXI

1	Taxi Light.....	-	ON.....	1
2	Power.....	-	SET.....	2
3	Parking Brake.....	-	RELEASED.....	3

AFTER FIRST TAXI

1	Brakes.....	-	CHECKED.....	1
2	Attitude Indicator.....	-	ERECTED / STABLE.....	2
3	Turn Coordinator.....	-	L/R TURNING.....	3
4	Directional Gyro.....	-	L/R TURN: DECREASING/INCREASING.....	4

STOP

1	Power.....	-	SET.....	1
2	Parking Brake.....	-	SET.....	2
3	Taxi Light.....	-	OFF.....	3

LINING UP

1	Wind (RTF / Windssock).....	-	DIRECTION / SPEED.....	1
2	Runway.....	-	IDENTIFIED.....	2
3	Approach Sector.....	-	FREE.....	3
4	Lights (Landing / Strobe).....	-	ON.....	4

LINED UP & TAKE OFF

1	Brakes.....	-	PUSH.....	1
2	Runway & Gyro Heading.....	-	COMPARE.....	2
3	Take Off Power.....	-	SET.....	3
4	Power (min. RPM).....	-	CHECKED.....	4
5	Brakes.....	-	RELEASED.....	5
6	Speed.....	-	RISE.....	6

PARKING

1	Time (Block on).....	-	TABULATED.....	1
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TAKEOFF BRIEFING**Departure**

Wind.....	Richtung, Stärke, Einfluss auf Start
Takeoff procedure	Gewicht, Temperatur, Pistenzustand
Speeds.....	Profil & Geschwindigkeit bis 2000 ft AAL
Routing / airspace restrictions	Flugweg zum verlassen Flugplatzzone

Emergency

Malfunction on Ground	Massnahmen vor dem Abheben
Engine failure TO & Climbout.....	erste Massnahmen nach dem Start
Major Malfunction after TO	Massnahmen und Flugweg nach dem Start

APPROACH BRIEFING

Runway in use, routing	Flugweg und Höhengates beim Anflug
Airspace restrictions	Einschränkungen auf dem Flugweg
Missed approach	Flugweg und Höhen nach einem Durchstart

FINAL SPEED CALCULATION

MASS FACTOR

Speed Reduction on Final

1 KT per 30 kg below MTOM

WIND FACTOR

Speed Increments Final

if windspeed or gust is exceeding 10% of v-FINAL

Add 1/2 of headwind component to v-FINAL

EXAMPLE FINAL-SPEED INCREMENT

v-FINAL	66 KIAS		
v-HEADWIND	6 KT		
Windspeed	below 10% v-FINAL	=> increment 0	=> 66 KIAS
v-FINAL	66 KIAS		
v-HEADWIND	20 KT		
Windspeed	above 10% v-FINAL	=> increment +10 KT	=> 76 KIAS
v-FINAL	66 KIAS		
v-HEADWIND	20 up to 36 KT		
Gustspeed above	10% v-FINAL	=> increment +18 KT	=> 84 KIAS

FINAL APPROACH SPEED

=

v-FINAL - Mass Factor + Wind Factor

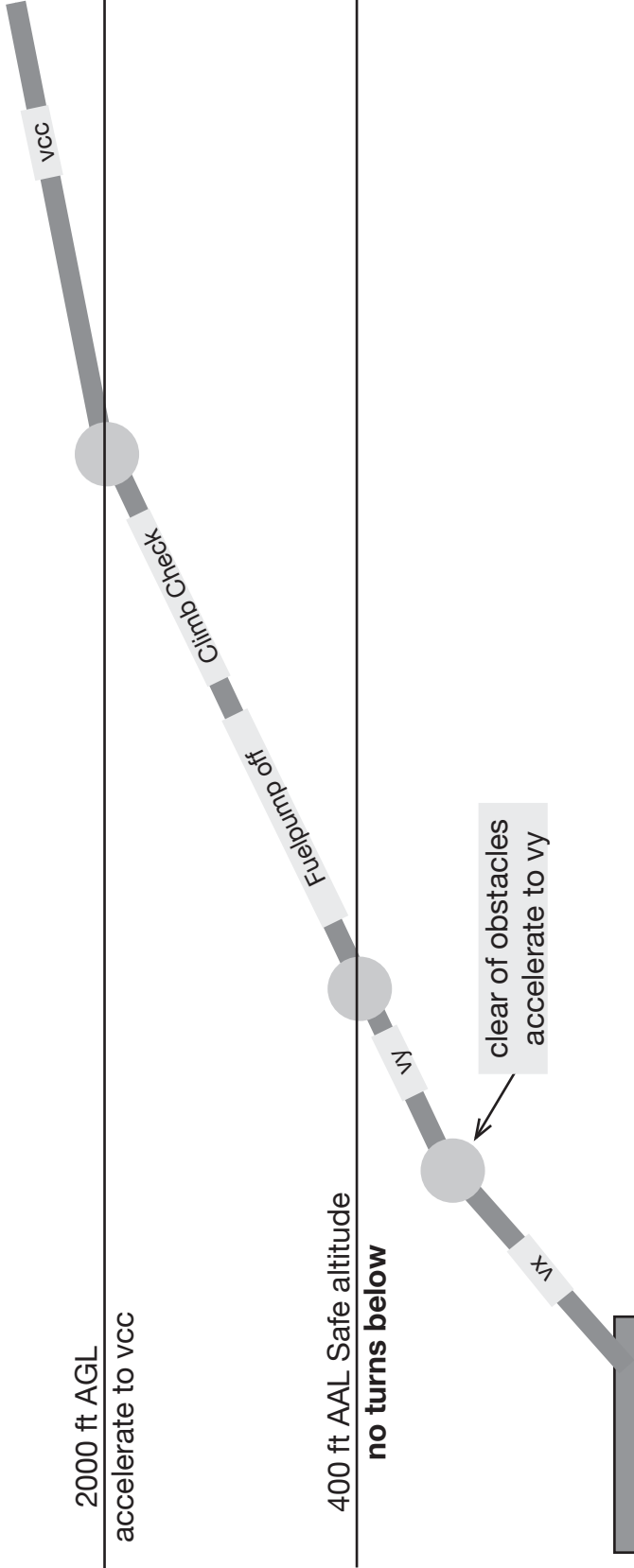
BANK FACTOR

*if bankangle for turning final is more than 25°***Add 5 KT to v-INTERMEDIATE****FLIGHTPATH CALCULATION**

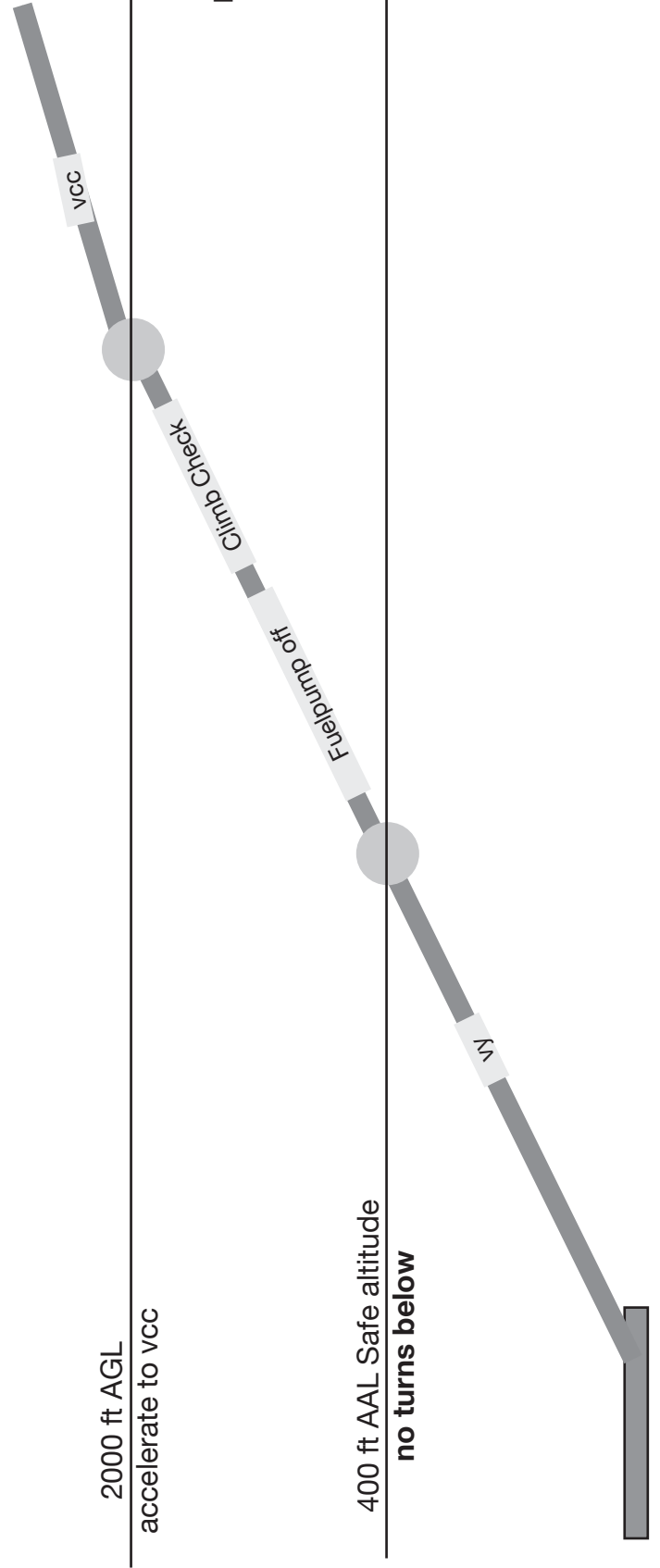
Flight angle	Gradient [ft/nm], [%]	ROD/ROC [ft/min]	ref. RPM (no wind)
3°	300 ft/nm = 5%	GS x 5	1700
4°	400 ft/nm = 7%	GS x 7	1600
5°	500 ft/nm = 9%	GS x 9	1500

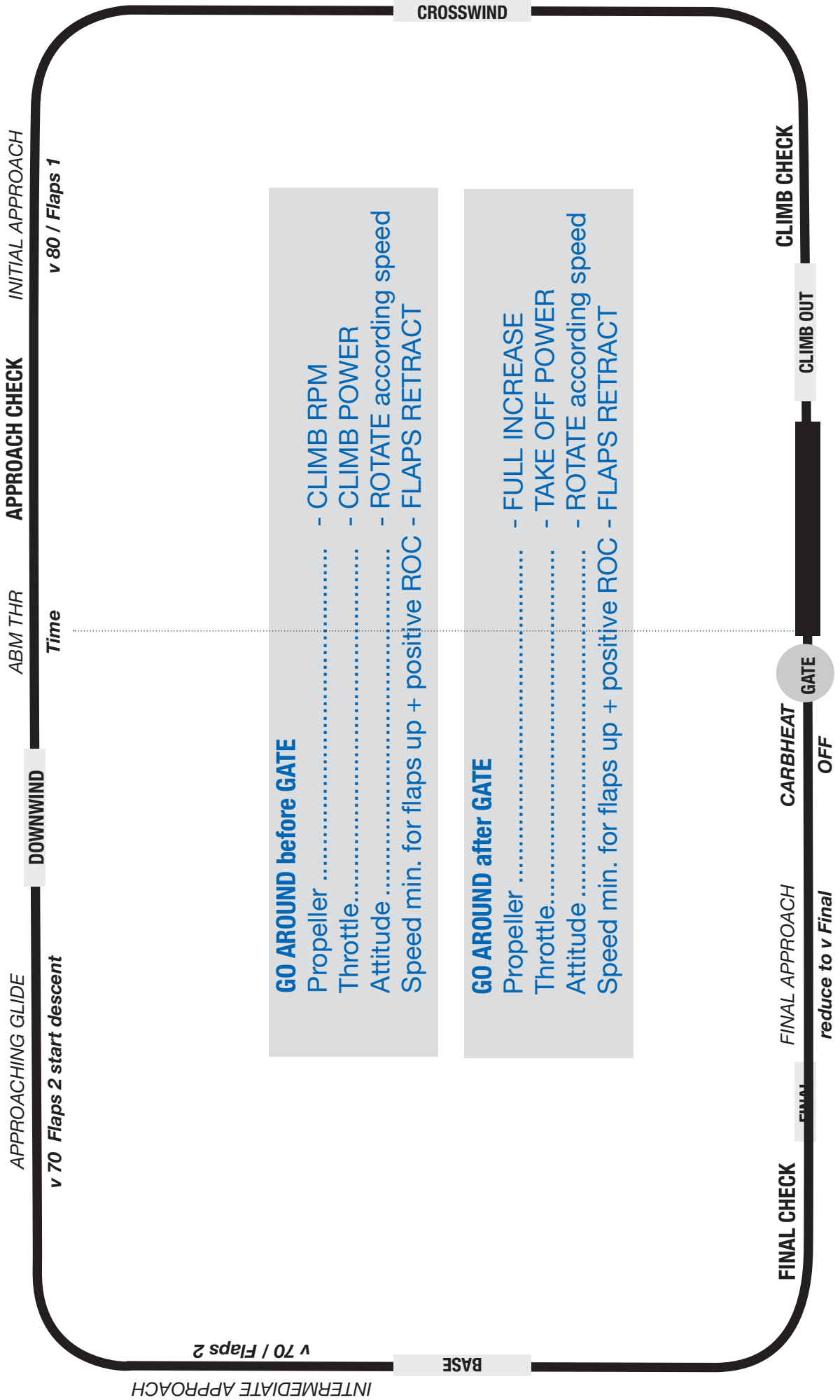
ROD/ROC[ft/min] = GS [kts] x Gradient [%]

**Climbout
with obstacles**



**Climbout
no obstacles**





GO AROUND before GATE

Propeller - CLIMB RPM
 Throttle..... - CLIMB POWER
 Attitude - ROTATE according speed
 Speed min. for flaps up + positive ROC - FLAPS RETRACT

GO AROUND after GATE

Propeller - FULL INCREASE
 Throttle..... - TAKE OFF POWER
 Attitude - ROTATE according speed
 Speed min. for flaps up + positive ROC - FLAPS RETRACT

