

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.....	- RICH	8
9	Carburetor heat	- OFF.....	9
10	Controls	- FREE & CORRECT	10
11	Elevator trim.....	- TAKE OFF	11
12	Flaps (full range)	- CHECKED / UP	12
13	Altimeter	- SET	13
14	Battery	- ON	14
15	Fuel quantity	- CHECKED.....	15
16	Fuel selector	- MAIN OPEN.....	16
17	Avionic	- OFF.....	17
18	Annunciator warnings.....	- TEST	18

READY FOR ENGINE START**ENGINE START**

1	Propeller area.....	- CLEAR	1
2	Engine start.....	- according AFM	2

ENGINE START COMPLETED**AFTER ENGINE START**

1	Oil pressure.....	- CHECKED.....	1
2	Alternator	- ON	2
3	Voltmeter.....	- CHECKED GREEN ARC	3
4	Magnetos.....	- BOTH.....	4
5	Fuel pump.....	- OFF.....	5
6	Annunciator warnings.....	- OFF.....	6
7	Avionic/Transponder	- 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 5
 6 Mixture - SET 6
 7 Carburetor heat - OFF 7
 8 Magnetos - BOTH 8
 9 Controls - FREE & EASY 9
 10 Elevator trim - TAKE OFF 10
 11 Flaps - TAKE OFF 11
 12 Flight instruments - SET 12
 13 Avionic - SET 13
 14 Takeoff Briefing - COMPLETED 14
 15 Transponder - SET 15
 16 Canopy - CLOSED & LOCKED 16

READY FOR DEPARTURE**CLIMB**

- 1 Flaps - UP 1
 2 Power - CHECKED 2
 3 Fuel pump - OFF 3

CLIMB CHECK COMPLETED**CRUISE**

- 1 Flight- & Engine instruments - CHECKED 1
 2 Fuel - CHECKED 2
 3 Power - SET / CHECKED 3

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	Avionic	- SET	5
6	Fuel pump	- ON	6
7	Fuel quantity	- CHECKED	7
8	Fuel selector	- MAIN OPEN	8
9	Mixture	- SET	9
10	Carburetor heat	- AS REQUIRED	10

APPROACH CHECK COMPLETED**FINAL**

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

FINAL CHECK COMPLETED**AFTER LANDING**

1	Carburetor heat	- OFF	1
2	Flaps	- UP	2
3	Electrical consumers	- AS REQUIRED	3
4	Transponder	- MODE CHECKED	4

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

1	Electrical consumers	- OFF except avionic	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	Avionic/Transponder	- 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)		KMH/IAS
Rotate	FLAPS 1	100
Best angle Vx	FLAPS UP or 1	130
Best rate Vy up to 2000 ft/AGL.....	FLAPS UP	150
Cruise climb Vcc above 2000 ft/AGL.....	FLAPS UP	165
Initial approach	FLAPS 1	150
Intermediate approach.....	FLAPS 2	130
Final approach	FLAPS 2	115
Go around	before FLAPS UP	110
Best glide.....	FLAPS UP	145
Max. demonstrated crosswind		22 KT
Max. speed for Flaps 1		170
Max. speed for Flaps 2		150

POWER SETTINGS

Take off and climb.....	throttle full open
Cruise and descent up to 5000 ft/AMSL	2400 RPM
Cruise and descent above 5000 ft/AMSL.....	2500 RPM
Approach descent.....	2300 RPM

RUN UP

Engine	1800 RPM
Magnetos	max. drop / diff..... 125 / 125 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>full</i>	<i>[lbs]</i>	<i>[kg]</i>
KCS	1333.8	606	201.317	323	2205	1000

REFUELING

Standard (Maintank full)	26.4 USG	100 lt	72 kg	159 lbs
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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 78 KIAS	6

PREPARE FOR POWER OFF EMERGENCY LANDING

ENGINE POWER LOSS IN FLIGHT

- | | | | |
|---|-----------------------|----------------------------------|---|
| 1 | Attitude | - BEST GLIDE SPEED 78 KIAS | 1 |
| 2 | Fuel selector | - OPEN MAIN & AUX | 2 |
| 3 | Fuel pump | - ON | 3 |
| 4 | Mixture | - RICH | 4 |
| 5 | Carburetor heat | - ON | 5 |
| 6 | Ignition | - BOTH | 6 |
| 7 | Engine gauges | - CHECK CAUSE OF POWER LOSS. | 7 |

When power is restored

- | | | | |
|---|-----------------------|-------------|---|
| 8 | Carburetor heat | - OFF | 8 |
| 9 | Fuel pump | - OFF | 9 |

If power is not restored

- | | | | |
|----|---------------------|-----------------------------------|----|
| 10 | Elevator trim | - SET FOR BEST GLIDE 78 KIAS | 10 |
|----|---------------------|-----------------------------------|----|

PREPARE FOR POWER OFF EMERGENCY LANDING

EMERGENCY LANDING

Trimm for best glide speed 78 KIAS

Locate suitable field

When the landing field can easily be reached

- | | | | |
|---|---------------------------------|-------------------------------|---|
| 1 | Seat belts / shoulder harnesses | - TIGHT | 1 |
| 2 | Fuel selector | - CLOSE MAIN & AUX | 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 (low Voltage)
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 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

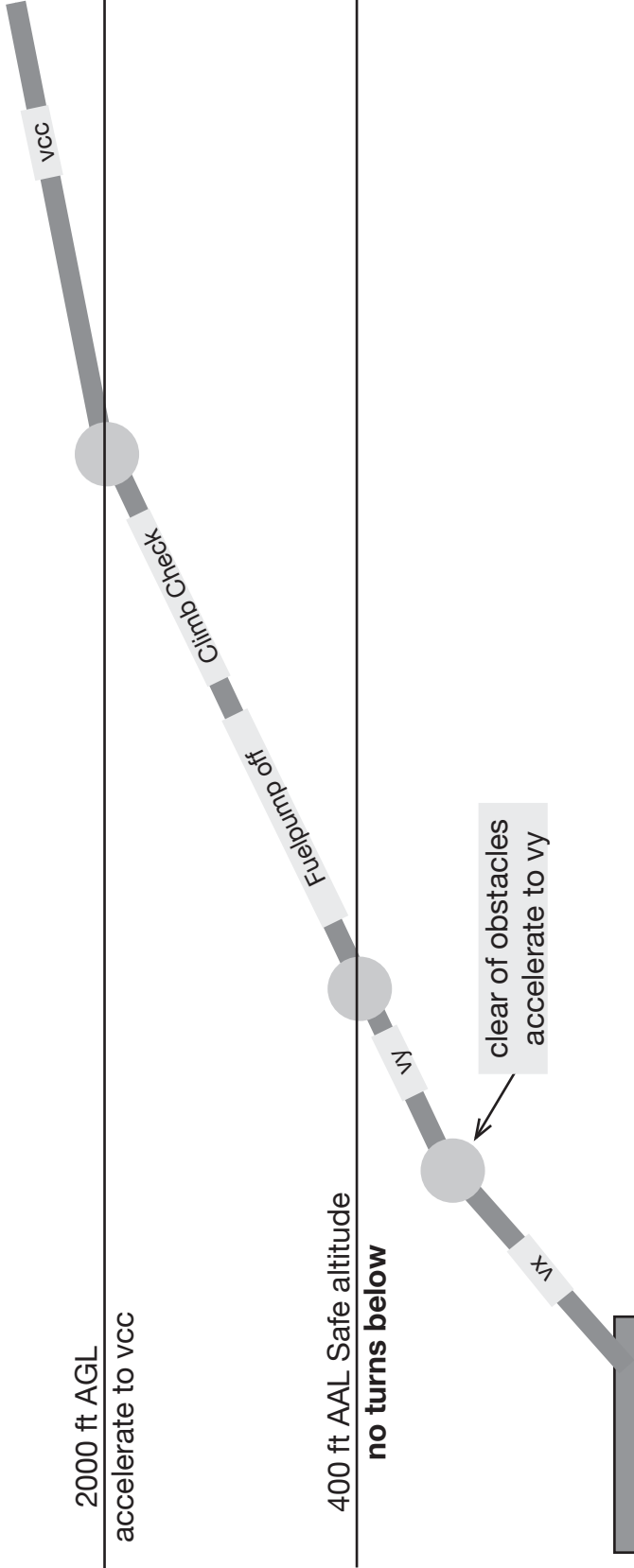
BANK FACTOR

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

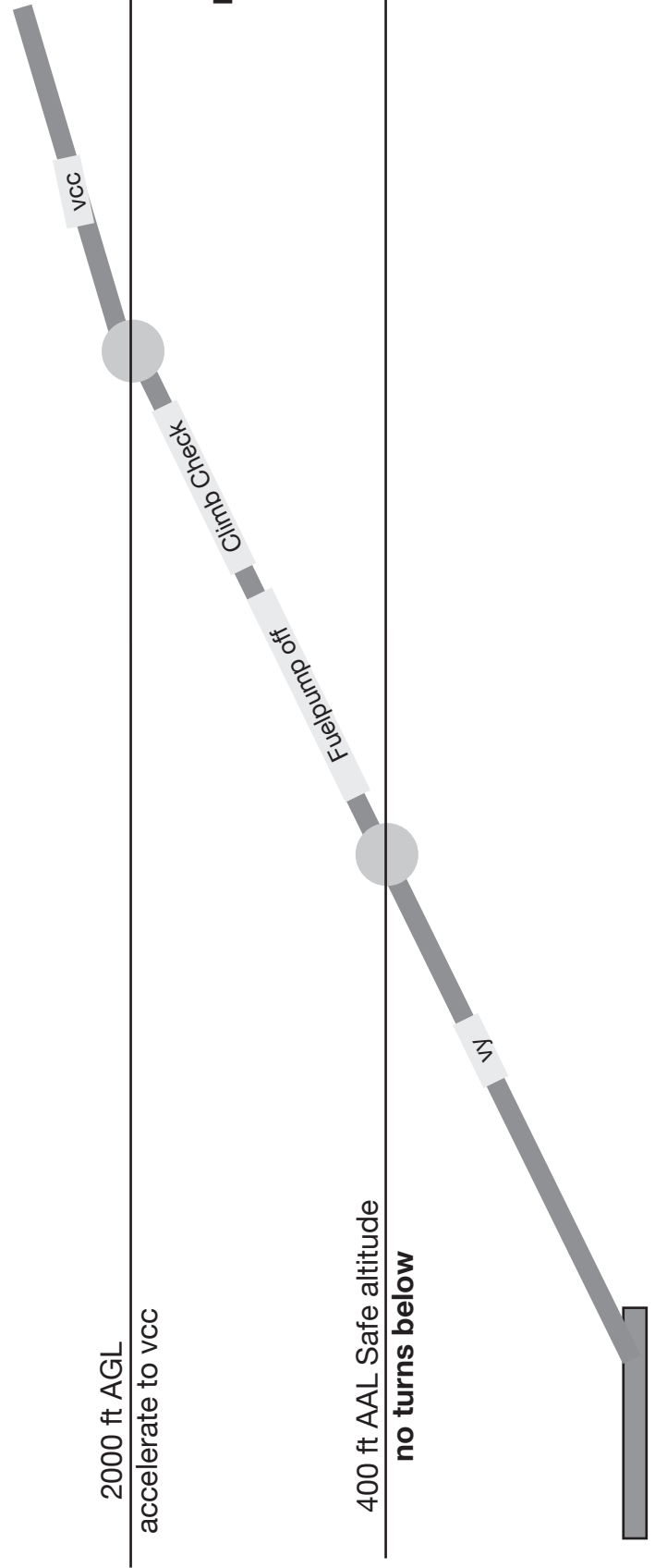
Flight angle	Gradient [ft/nm], [%]	ROD/ROC [ft/min]	ref. RPM (no wind)
3°	300 ft/nm = 5%	GS x 5	1700
4°	400 ft/nm = 7%	GS x 7	1600
5°	500 ft/nm = 9%	GS x 9	1500

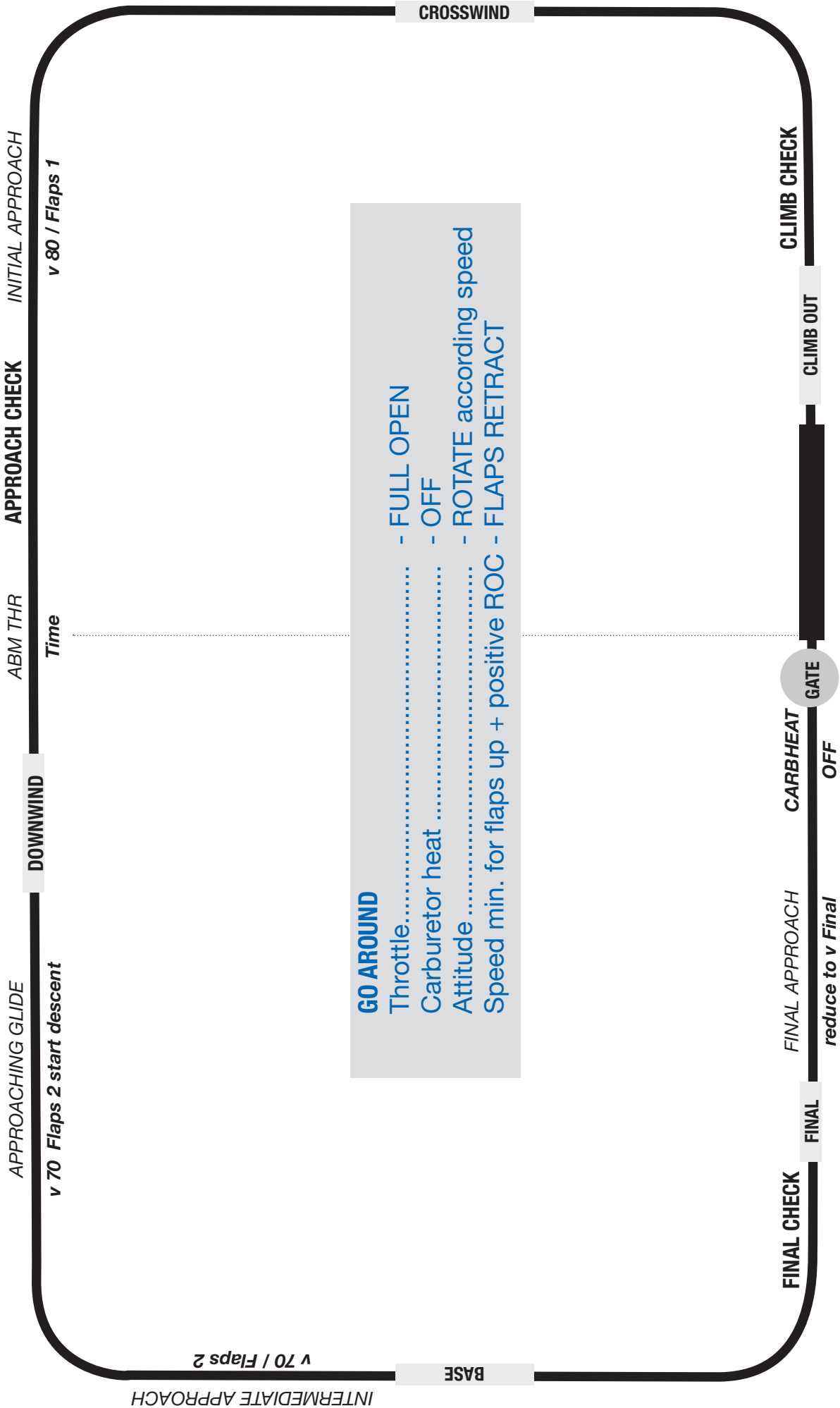
ROD/ROC[ft/min] = GS [kts] x Gradient [%]

**Climbout
with obstacles**



**Climbout
no obstacles**





INITIAL APPROACH
v 80 / Flaps 1

APPROACH CHECK

ABM THR

DOWNWIND

APPROACHING GLIDE
v 70 Flaps 2 start descent

Time

CROSSWIND

CLIMB CHECK

CLIMB OUT

GATE

CARBHEAT

OFF

FINAL APPROACH
reduce to v Final

FINAL

FINAL CHECK

BASE

INTERMEDIATE APPROACH
v 70 / Flaps 2

