

CHECKLIST FOR NORMAL OPERATION PIPER P28A

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 & rudder trim	- TAKE OFF	11
12	Flaps (full range)	- CHECKED / UP	12
13	Altimeter	- SET	13
14	Battery & alternator.....	- ON	14
15	Fuel quantity	- CHECKED.....	15
16	Fuel selector	- FULLEST TANK	16
17	Annunciator warnings.....	- TEST	17
18	Radiomaster	- OFF.....	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 output.....	- CHECKED.....	2
3	Gyro suction	- CHECKED.....	3
4	Fuel pump.....	- OFF	4
5	Annunciator warnings	- OFF except Pitot heat	5
5	Radiomaster	- ON	6
7	Avionic	- PRESELECTED.....	7
8	Transponder.....	- MODE CHECKED	8

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 - FULLEST TANK 5
 6 Mixture - SET 6
 7 Friction - SET 7
 8 Carburetor heat - OFF 8
 9 Magnetos - BOTH 9
 10 Controls - FREE & EASY 10
 11 Elevator & rudder trim - TAKE OFF 11
 12 Flaps - TAKE OFF 12
 13 Flight instruments - SET 13
 14 Avionic - SET 14
 15 Takeoff Briefing - COMPLETED 15
 16 Transponder - CODE SET 16
 17 Door & stormwindow - CLOSED & LOCKED 17

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	Avionics	- SET	5
6	Fuel pump	- ON	6
7	Fuel quantity	- CHECKED	7
8	Fuel selector	- FULLEST TANK	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	Radiomaster	- OFF	8
9	Battery	- OFF	9
10	Flight data	- RECORDED	10
11	Aircraft	- CHOCKED / SECURED	11

PARKING CHECK COMPLETED

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

KIAS

Rotate	FLAPS UP	55
Best angle Vx	FLAPS UP	63
Best rate Vy up to 2000 ft/AGL.....	FLAPS UP	79
Cruise climb Vcc above 2000 ft/AGL.....	FLAPS UP	87
Initial approach	FLAPS 10°	80
Intermediate approach.....	FLAPS 25°	70
Final approach	FLAPS 40°	63
Go around	before FLAPS UP	55
Best glide	CLEAN	73
Max. demonstrated crosswind		17 KT
Max. speed for Flaps		103

POWER SETTINGS

Take off and climb..... throttle full open
 Cruise and Cruise Descent.....acc AFM table, 55 - 65 %

RUN UP

Engine 2000 RPM
 Magnetos max. drop / diff 175 / 50 RPM
 Idle500-700 RPM

POSTFLIGHT

Refuel standard.....2 cm below Filler Neck = 28 USG/106 lt
 Refill Oilif below 4 QTS to max. 8 QTS

LOADING

HB-	Empty mass		Moment [in*lbs]	[kg] cabine load with fuel:			MTOM	
	[lbs]	[kg]		standard	Filler	full	[lbs]	[kg]
PPF	1503.3	682	127610	240	224	186	2200	999
PPG	1511.5	686	128428	237	221	183	2200	999

REFUELING

Standard	28 USG	106 lt	76 kg	168 lbs
Filler Neck	34 USG	129 lt	93 kg	205 lbs
Full	48 USG	182 lt	131 kg	289 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 73 KIAS	6

PREPARE FOR POWER OFF EMERGENCY LANDING

ENGINE POWER LOSS IN FLIGHT

1	Attitude	- BEST GLIDE SPEED 73 KIAS	1
2	Fuel selector	- SWITCH	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 73 KIAS	10
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PREPARE FOR POWER OFF EMERGENCY LANDING

EMERGENCY LANDING

Trimm for best glide speed 73 KIAS

Locate suitable field

When the landing field can easily be reached

1	Seat belts / shoulder harnesses	- TIGHT	1
2	Fuel selector	- OFF	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 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

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v-FINAL - Mass Factor + Wind Factor

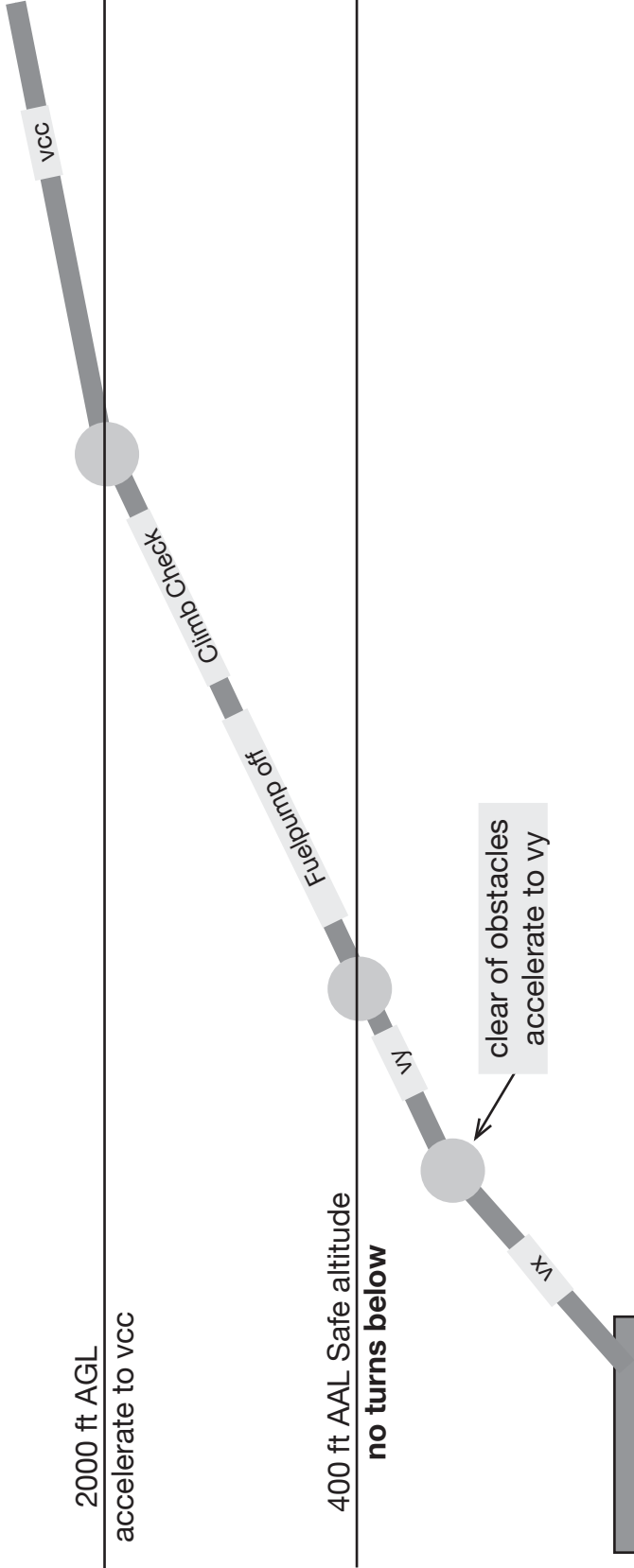
BANK FACTOR

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

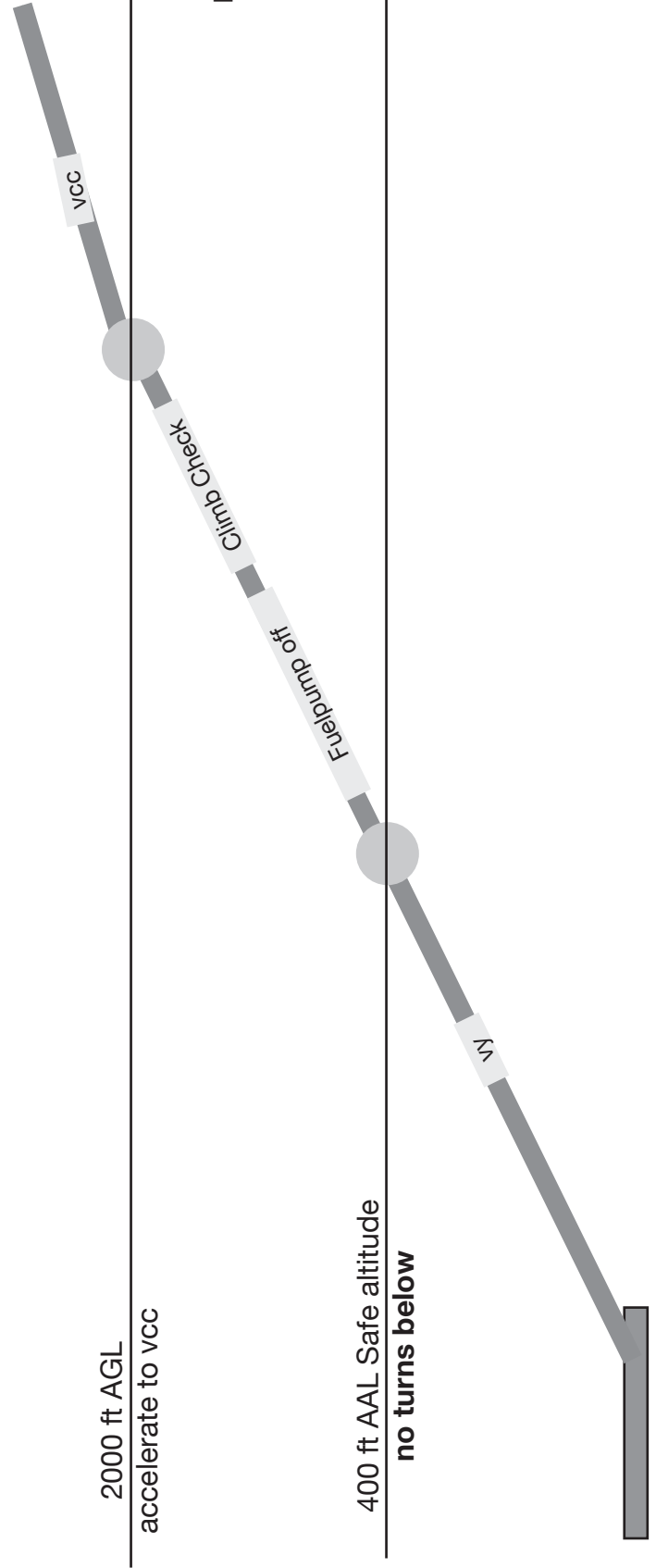
Flight angle	Gradient [ft/nm], [%]	ROD/ROC [ft/min]	ref. RPM (no wind)
3°	300 ft/nm = 5%	GS x 5	1700
4°	400 ft/nm = 7%	GS x 7	1600
5°	500 ft/nm = 9%	GS x 9	1500

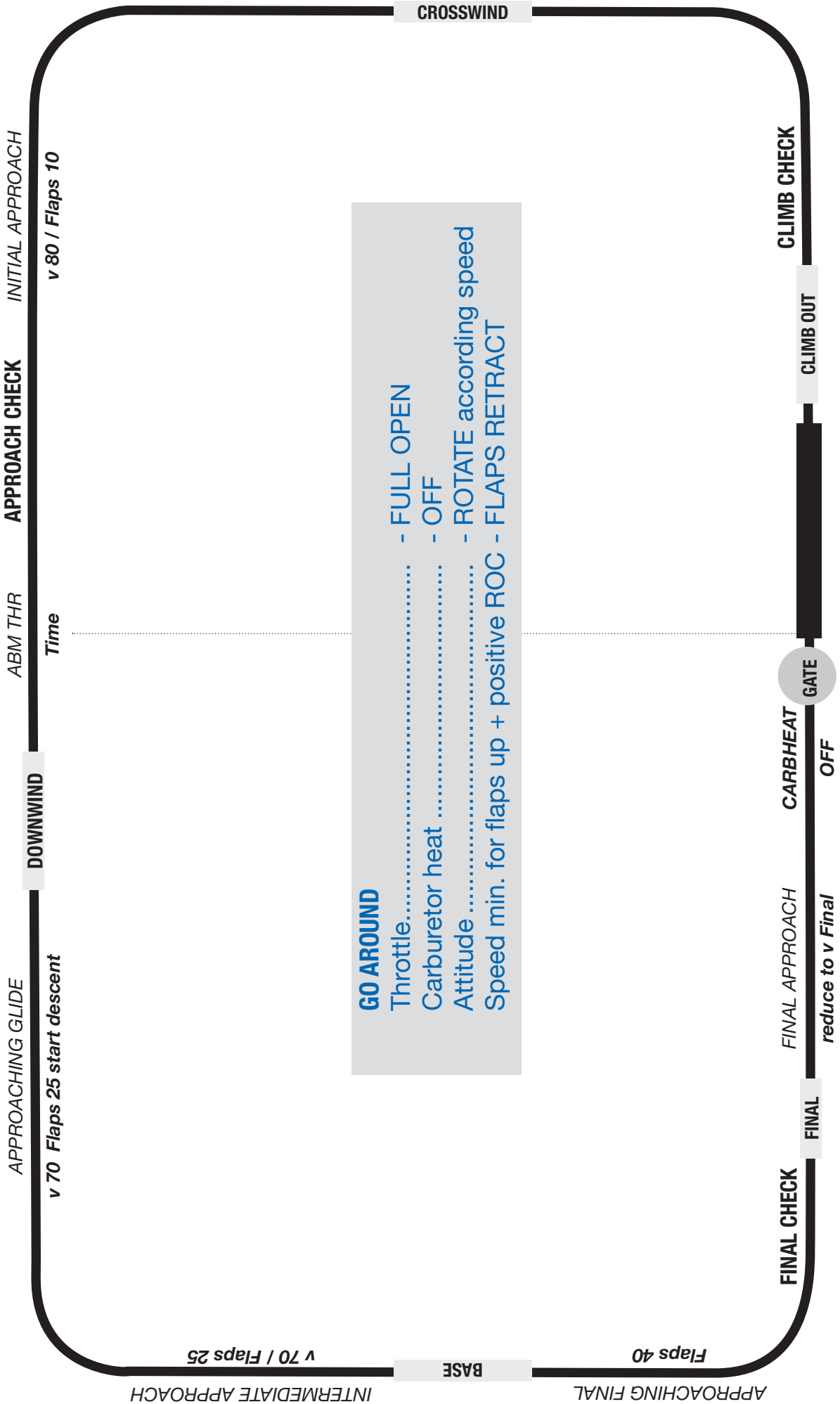
ROD/ROC[ft/min] = GS [kts] x Gradient [%]

**Climbout
with obstacles**



**Climbout
no obstacles**





APPROACHING GLIDE

v 70 Flaps 25 start descent

DOWNWIND

ABM THR

Time

APPROACH CHECK

INITIAL APPROACH

v 80 / Flaps 10

CROSSWIND

CLIMB CHECK

CLIMB OUT

GATE

CARBHEAT

OFF

FINAL APPROACH

reduce to v Final

FINAL

FINAL CHECK

APPROACHING FINAL

Flaps 40

BASE

INTERMEDIATE APPROACH

v 70 / Flaps 25

