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Reality Expansion Pack for X-Plane

Beechcraft B58 Baron

Checklists & References

BEFORE STARTING

1. Seats POSITION AND LOCK
2. Seat Belts and Shoulder Harnesses FASTEN AND ADJUST
3. Parking Brake SET
4. All Avionics OFF
5. Landing Gear Handle DOWN
6. Cowl Flap Switches CHECK, OPEN
7. Fuel Selectors CHECK ON
8. All Circuit Breakers, Switches and Equipment Contr CHECK
9. Battery Switch ON
10. Beacon ON
11. Fuel Quantity Indicators CHECK QUANTITY
12. Landing Gear Position Lights CHECK
13. Emergency Landing Gear Handcrank STOWED

STARTING (Repeat for second engine)

1. Mixture Control FULL RICH
2. Propeller Control FULL FORWARD
3. Throttle FULL OPEN
4. Fuel Boost Pump Switch HI - until fuel flow peaks then OFF
5. Throttle CLOSE, THEN OPEN 1/2 INCH

CAUTION

Do not engage starters for more than 30 seconds in any 4-minute period.

6. Magneto/Start Switch START
7. Throttle 900 to 1000RPM after start

NOTE

If the engine is hot, and the ambient temperature is 32°C or above, place mixture control in IDLE CUT-OFF, switch fuel boost pump to HI for 30 to 60 seconds, then OFF. Return mixture control to FULL RICH.

In the event of a balked start (or overprime condition) place mixture control in IDLE CUT-OFF and open the throttle; operate the starter to remove excess of fuel. As engine starts, reduce the throttle to idle rpm and place the mixture control in FULL RICH.

8. Oil Pressure 10 PSI WITHIN 30 SECONDS
9. Alternator Switch ON
10. Loadmeters and Voltmeter CHECK FOR BATTERY CHARGE
11. Voltmeter CHECK FOR 28 VOLTS
12. Red START Annunciator Light CHECK OFF

AFTER STARTING AND TAXI

CAUTION

Do not operate engine above 1200 RPM until oil temperature reaches 24°C or above and oil pressure is in the green arc.

1. Avionics ON, AS REQUIRED
2. Exterior Lights AS REQUIRED
3. Brakes RELEASE AND CHECK

BEFORE TAKEOFF

1. Parking Brake SET
2. Seat Belts and Shoulder Harnesses CHECK
3. Fuel Boost Pump OFF (if OAT > 32°C, use LOW pres boost)
4. All Instruments CHECKED
5. Fuel Indicators CHECK QUANTITY INDICATED
6. Mixture FULL RICH
7. Starter Energized Annunciator Light CHECK OFF
8. Throttles 2200 RPM
9. Propeller EXERCISE
10. Throttles 1700 RPM
11. CHECK (50rpm max diff. between mags/150rpm max drop)
12. Throttles 1500 RPM
13. Propellers CHECK FEATHERING
14. Throttles IDLE (Note RPM)
15. Throttles 900 to 1000 RPM
16. Electric Trim CHECK OPERATION
17. Flaps CHECK AND SET FOR TAKEOFF
18. Flight Controls CHECK
19. Doors and Windows CLOSED AND LOCKED
20. Parking Brake OFF

TAKEOFF

Takeoff Power Full Throttle, 2700 rpm

Minimum Takeoff Oil Temperature 24°C

SET TAKEOFF POWER (MIXTURE-FULL RICH) BEFORE
ACCELERATE TO AND MANTAIN RECOMMENDED

5. Landing Gear RETRACT

6. Airspeed ESTABLISH DESIRED CLIMB SPEED

CRUISE CLIMB

- 1. Mixture FULL RICH
- 2. Cowl Flaps AS REQUIRED
- 3. Power FULL THROTTLE
- 4. Propellers 2500 RPM
- 5. Engine Temperatures MONITOR
- 6. Fuel Boost Pumps OFF

FUEL FLOW SCHEDULE FOR FULL THROTTLE AND 2500 RPM			
PRESSURE ALT (FEET)	FUEL FLOW GPH/ENG	PRESSURE ALT (FEET)	FUEL FLOW GPH/ENG
SL	24.6 - 26.3	10000	17.5 - 20.0
2000	23.2 - 24.2	12000	16.3 - 19.0
4000	21.8 - 23.4	14000	14.8 - 18.0
6000	20.3 - 22.3	16000	13.4 - 17.0
8000	18.8 - 21.2	17000	12.7 - 16.5

FUEL FLOWS SHOWN ARE FOR BEST RATE OF CLIMB
AND MAY VARY WITH AIRPLANE ATTITUDE

CAUTION

Engine roughness at high altitudes or fuel flow fluctuation or low fuel flow can occur when climbing on hot days. These can be eliminated by switching the fuel boost pump to LO and manually leaning to the prescribed fuel flow schedule.

MANUALLY LEANING FUEL FLOW SCHEDULE FOR FULL THROTTLE AND 2500 RPM WITH LOW BOOST			
PRESSURE ALT (FEET)	FUEL FLOW GPH/ENG	PRESSURE ALT (FEET)	FUEL FLOW GPH/ENG
SL	25.5	10000	18.8
2000	23.7	12000	17.7
4000	22.6	14000	16.4
6000	21.3	16000	15.2
8000	20.0	17000	14.6

NOTE

After adjustment of the mixture control, setting the fuel flow per the manual leaning schedule, the Engine Driven Fuel Pump will automatically lean engine mixture for the airplane's pressure altitude as the airplane climbs.

CAUTION

Return the mixture control to FULL RICH before switching the fuel boost pump to OFF.

CRUISE

See Cruise Tables and MANIFOLD PRESSURE vs RPM graph in PERFORMANCE Section.

- 1. Cowl Flaps CLOSED
- 2. Power SET
- 3. Fuel Boost Pumps AS REQUIRED
- 4. Mixtures SET USING EGT

DESCENT

- 1. Altimeter SET
- 2. Mixture FULL SET
- 3. Cowl Flaps CLOSED
- 4. Flaps AS REQUIRED
- 5. Power AS REQUIRED

Avoid prolonged idle settings. Cylinder Head Temperatures are not to fall below 149°C for longer than five minutes.

RECOMMENDED DESCENT SPEEDS

- 16,000 to 13,000 ft 160 kts
- Below 13,000 ft 170 kts

LANDING

- 1. Seat Belts and Shoulder Harnesses FASTENED
- 2. Fuel Selector Valves SELECT FULLER TANK
- 3. Fuel Boost Pumps OFF, OR LOW AS PER OAT
- 4. Cowl Flaps AS REQUIRED
- 5. Mixture Controls FULL RICH
- 6. Flaps APPROACH (15°) below 152 kts
- 7. Landing Gear DOWN below 152 kts
- 8. Flaps FULL DOWN below 122 kts
- 9. Airspeed ESTABLISH NORMAL LANDING APPROACH SPEED
- 10. Propellers HIGH RPM

BALKED LANDING

- 1. Propellers HIGH RPM
- 2. Power MAXIMUM ALLOWABLE
- 3. Airspeed 95 kts
- 4. Flaps UP
- 5. Landing Gear UP
- 6. Cowl Flaps AS REQUIRED

AFTER LANDING

- 1. Landing and Taxi Lights AS REQUIRED
- 2. Flaps UP
- 3. Trim Tabs SET TO ZERO
- 4. Cowl Flaps OPEN
- 5. Fuel Boost Pumps AS REQUIRED

SHUTDOWN

- 1. Parking Brake SET
- 2. Propellers HIGH RPM
- 3. Throttles 1000 RPM
- 4. Fuel Boost Pumps OFF
- 5. Electrical and Avionics Equipment OFF
- 6. Mixture Controls IDLE CUT-OFF
- 7. Magneto/Start Switches OFF, AFTER ENGINES STOP
- 8. Battery and Alternator Switches OFF

ENGINE FAILURE DURING GROUND ROLL

- 1. Throttles CLOSED
- 2. Braking MAXIMUM
- 3. Fuel Selectors OFF
- 4. Battery, Alternator, and Magneto/Start Switches OFF

NOTE

Braking effectiveness is improved if the brakes are not locked.

ENGINE FAILURE AFTER LIFT-OFF AND IN FLIGHT

An immediate landing is advisable regardless of takeoff weight. Continued flight requires immediate pilot response to the following procedures.

1. Landing Gear and Flaps UP
2. Throttle (inoperative engine) CLOSED
3. Propeller (inoperative engine) FEATHER
4. Power (operative engine) AS REQUIRED
5. MAINTAIN 100kts MAX UNTIL OBSTACLES ARE CLEARED

After positive control of the airplane is established:

6. Inoperative engine SECURE
 - a. Mixture Control - IDLE CUT-OFF
 - b. Fuel Selector - OFF
 - c. Fuel Boost Pump - OFF
 - d. Magneto/Start Switch - OFF
 - e. Alternator Switch - OFF
 - f. Cowl Flaps - CLOSED
7. Electrical Load MONITOR

Maximum load of 60 amps on remaining engine. Reduce electrical load if voltmeter indicates less than 28 volts.

NOTE

The most important aspect of engine failure is the necessity to maintain lateral and directional control. If airspeed is below 84 kts, reduce power on the operative engine as required to maintain control.

AIR START**CAUTION**

The pilot should determine the reason for engine failure before attempting an airstart

1. Fuel Selector Valve ON
2. Throttle SET approximately 1/4 travel
3. Mixture Control FULL RICH
4. Fuel Boost Pump LOW
5. Magnetos CHECK ON
6. Propeller MOVE CONTROL TO REACH 600 RPM
ADJUST THROTTLE, PROPELLER and MIXTURE
8. Fuel Pump OFF
9. Oil Pressure CHECK
10. Alternator Switch ON
11. Warm Up EXECUTE (1500 RPM and 15 inch Hg)

EMERGENCY DESCENT

1. Throttles CLOSED
2. Propellers 2700 RPM
3. Airspeed 152 kts
4. Landing Gear DOWN
5. Flaps APPROACH (15°)

GLIDE

1. Propellers FEATHER
2. Flaps UP (0°)
3. Landing Gear UP
4. Cowl Flaps CLOSED
5. Airspeed 115 kts

The glide ration in this configuration is approximately 2 nautical miles of gliding distance for each 1000 feet of altitude above terrain.

GEAR-UP LANDING

If possible, choose firm sod or foamed runway. When assured of reaching landing site:

1. Cowl Flaps CLOSED
2. Wing Flaps AS DESIRED
3. Throttles CLOSED
4. Fuel Selectors OFF
5. Mixture Controls IDLE CUT-OFF
6. Battery, Alternator and Magneto/Start Switches OFF
7. Wings KEEP LEVEL DURING TOUCHDOWN
8. Airplane CLEAR AS SOON AS POSSIBLE

ONE-ENGINE-INOPERATIVE LANDING

On final approach and when it is certain that the field can be reached:

- 1. Landing Gear DOWN
- 2. Flaps APPROACH (15°)
- 3. Airspeed 95 kts
- 4. Power AS REQUIRED to maintain 800 ft/min rate of descent

When it is certain there is no possibility of go-around:

- 5. Flaps DOWN (30°)

ONE-ENGINE-INOPERATIVE GO-AROUND

WARNING

In any event, DO NOT attempt a one-engine-inoperative go-around after flaps have been fully extended.

- 1. Power MAXIMUM ALLOWABLE
- 2. Landing Gear UP
- 3. Flaps UP (0°)
- 4. Airspeed MAINTAIN 100 KTS MINIMUM)

REFERENCE SPEEDS

VNE - Never Exceed Speed	223 KIAS
VNO - Max Operating Speed	195 KIAS
VA - Maneuvering Speed	156 KIAS
VFE - Maximum Flap Extended Speed (15°)	152 KIAS
VFE - Maximum Flap Extended Speed (30°)	122 KIAS
VMCA - Single Engine Minimum Control Speed	84 KIAS
Vx - Best Angle-of-Climb Speed	92 KIAS
Vy - Best Rate-of-Climb Speed	105 KIAS
Maximum Glide Speed (5975 Pounds)	115 KIAS

**MAXIMUM CRUISE POWER SETTINGS - 20° ROP - 25 IN.Hg @
2500RPM**

PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW/ ENGINE		AIRSPEED	
	FEET	°C		°F	IN. HG	PPH	GPH
ISA - 20°C							
SL	-2	29	25	101	16.8	194	187
2000	-6	22	25	105	17.5	195	193
4000	-9	15	25	109	18.2	196	199
6000	-13	8	24	106	17.5	191	200
8000	-17	1	22	98	16.3	184	198
10000	-21	-6	21	92	15.3	177	196
12000	-25	-14	19	86	14.3	169	194
14000	-29	-21	18	80	13.3	162	191
16000	-33	-28	16	74	12.3	154	187
ISA							
SL	18	55	25	98	16.3	189	188
2000	15	58	25	101	16.8	190	195
4000	11	51	25	105	17.5	191	201
6000	7	44	24	102	17.0	186	202
8000	3	37	22	95	15.8	179	200
10000	-1	30	21	89	14.8	171	198
12000	-5	23	19	83	13.8	162	195
14000	-9	15	18	77	12.8	156	192
16000	-13	8	16	72	12.0	148	188
ISA + 20°C							
SL	38	101	25	95	15.8	184	190
2000	35	94	25	98	16.3	185	196
4000	31	88	25	101	16.8	185	202
6000	27	81	24	98	16.3	181	203
8000	23	73	22	92	15.3	183	201
10000	19	66	21	86	14.3	166	199
12000	15	59	19	80	13.3	159	196
14000	11	51	18	75	12.5	151	193
16000	7	44	16	70	11.7	143	188

**RECOMMENDED CRUISE POWER SETTINGS - 20° LOP - 25 IN.Hg @
2500RPM**

PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW/ ENGINE		AIRSPEED	
	FEET	°C		°F	IN. HG	PPH	GPH
ISA - 20°C							
SL	-2	29	25	87	14.5	189	182
2000	-6	22	25	91	15.2	191	188
4000	-9	15	25	94	15.7	191	194
6000	-13	8	24	91	15.2	186	195
8000	-17	1	22	84	14.0	179	193
10000	-21	-6	21	78	13.0	172	191
12000	-25	-14	19	72	12.0	164	188
14000	-29	-21	18	67	11.2	157	185
16000	-33	-28	16	62	10.3	149	181
ISA							
SL	18	55	25	84	14.0	184	184
2000	15	58	25	87	14.5	185	190
4000	11	51	25	91	15.2	186	196
6000	7	44	24	88	14.7	181	197
8000	3	37	22	81	13.6	174	195
10000	-1	30	21	75	12.5	167	193
12000	-5	23	19	70	11.7	159	190
14000	-9	15	18	65	10.8	152	186
16000	-13	8	16	60	10.0	143	182
ISA + 20°C							
SL	38	101	25	81	13.5	179	185
2000	35	94	25	84	14.0	180	191
4000	31	88	25	87	14.5	181	197
6000	27	81	24	84	14.0	176	198
8000	23	73	22	78	13.0	169	195
10000	19	66	21	72	12.0	161	193
12000	15	59	19	67	11.2	154	190
14000	11	51	18	62	10.3	146	187
16000	7	44	16	58	9.7	138	182

**RECOMMENDED CRUISE POWER SETTINGS - 20° ROP - 23 IN.Hg @
2300RPM**

PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW/ ENGINE		AIRSPEED	
	FEET	°C		°F	IN. HG	PPH	GPH
ISA - 20°C							
SL	-2	29	23	81	13.5	176	170
2000	-6	22	23	84	14.0	178	176
4000	-9	15	23	87	14.5	179	182
6000	-13	8	23	91	15.2	180	188
8000	-17	1	22	89	14.8	177	190
10000	-21	-6	21	94	14.0	169	188
12000	-25	-14	19	78	13.0	162	185
14000	-29	-21	18	73	12.2	154	182
16000	-33	-28	16	68	11.3	146	178
ISA							
SL	18	55	23	78	13.0	171	171
2000	15	58	23	81	13.5	173	177
4000	11	51	23	85	14.2	174	183
6000	7	44	23	88	14.7	175	190
8000	3	37	22	87	14.5	171	192
10000	-1	30	21	81	13.5	164	189
12000	-5	23	19	76	13.5	156	186
14000	-9	15	18	71	11.8	149	183
16000	-13	8	16	66	11.0	140	178
ISA + 20°C							
SL	38	101	23	76	12.7	166	171
2000	35	94	23	79	13.2	168	178
4000	31	88	23	82	13.7	169	184
6000	27	81	23	85	14.2	169	191
8000	23	73	22	84	14.0	166	193
10000	19	66	21	78	13.0	159	190
12000	15	59	19	73	12.2	151	187
14000	11	51	18	68	11.3	143	182
16000	7	44	16	64	10.7	135	178

**RECOMMENDED CRUISE POWER SETTINGS - 20° LOP - 23 IN.Hg @
2300RPM**

PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW/ ENGINE		AIRSPEED	
	FEET	°C		°F	IN. HG	PPH	GPH
ISA - 20°C							
SL	-2	29	23	67	11.2	171	164
2000	-6	22	23	70	11.7	172	170
4000	-9	15	23	73	12.2	173	176
6000	-13	8	23	76	12.7	174	182
8000	-17	1	22	75	12.5	171	184
10000	-21	-6	21	69	11.5	164	182
12000	-25	-14	19	64	10.7	156	179
14000	-29	-21	18	60	10.0	149	176
16000	-33	-28	16	55	9.3	140	171
ISA							
SL	18	55	23	64	10.7	166	165
2000	15	58	23	67	11.2	167	171
4000	11	51	23	70	11.7	168	177
6000	7	44	23	73	12.2	169	184
8000	3	37	22	72	12.0	166	185
10000	-1	30	21	67	11.2	158	183
12000	-5	23	19	62	10.3	151	180
14000	-9	15	18	58	9.7	143	176
16000	-13	8	16	54	9.0	135	171
ISA + 20°C							
SL	38	101	23	62	10.3	161	166
2000	35	94	23	65	10.8	162	172
4000	31	88	23	68	11.3	163	178
6000	27	81	23	70	11.7	164	184
8000	23	73	22	69	11.5	160	186
10000	19	66	21	64	10.7	153	182
12000	15	59	19	60	10.0	145	180
14000	11	51	18	55	9.3	137	175
16000	7	44	16	52	8.7	128	169

**RECOMMENDED CRUISE POWER SETTINGS - 20° ROP - 25 IN.Hg @
2100RPM**

PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW/ ENGINE		AIRSPEED	
	FEET	°C		°F	IN. HG	PPH	GPH
ISA - 20°C							
SL	-2	29	25	79	13.2	175	168
2000	-6	22	25	82	13.7	176	174
4000	-9	15	25	85	14.2	176	180
6000	-13	8	24	83	13.8	173	181
8000	-17	1	22	78	13.0	166	179
10000	-21	-6	21	73	12.2	158	176
12000	-25	-14	19	68	11.3	151	173
14000	-29	-21	18	64	10.7	143	169
16000	-33	-28	16	60	10.0	135	164
ISA							
SL	18	55	25	77	12.8	170	169
2000	15	58	25	80	13.3	171	175
4000	11	51	25	82	13.7	171	181
6000	7	44	24	81	13.5	167	182
8000	3	37	22	76	12.7	160	180
10000	-1	30	21	71	11.8	153	177
12000	-5	23	19	66	11.0	145	173
14000	-9	15	18	62	10.3	137	169
16000	-13	8	16	58	9.7	128	163
ISA + 20°C							
SL	38	101	25	74	12.3	165	170
2000	35	94	25	77	12.8	166	176
4000	31	88	25	80	13.3	166	181
6000	27	81	24	78	13.0	162	183
8000	23	73	22	73	12.2	155	180
10000	19	66	21	69	11.5	148	177
12000	15	59	19	64	10.7	140	173
14000	11	51	18	60	10.0	131	168
16000	7	44	16	56	9.3	122	160

**RECOMMENDED CRUISE POWER SETTINGS - 20° LOP - 25 IN.Hg @
2100RPM**

PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW/ ENGINE		AIRSPEED	
	FEET	°C		°F	IN. HG	PPH	GPH
ISA - 20°C							
SL	-2	29	25	63	10.5	167	160
2000	-6	22	25	66	11.0	168	166
4000	-9	15	25	68	11.3	168	171
6000	-13	8	24	67	11.2	165	173
8000	-17	1	22	62	10.3	158	170
10000	-21	-6	21	58	9.7	150	167
12000	-25	-14	19	55	9.2	143	164
14000	-29	-21	18	51	8.5	135	159
16000	-33	-28	16	48	8.0	126	153
ISA							
SL	18	55	25	61	10.2	162	161
2000	15	58	25	64	10.7	163	167
4000	11	51	25	66	11.0	163	172
6000	7	44	24	65	10.8	160	174
8000	3	37	22	60	10.0	152	171
10000	-1	30	21	56	9.3	145	167
12000	-5	23	19	53	8.6	137	163
14000	-9	15	18	50	8.3	129	158
16000	-13	8	16	46	7.7	119	151
ISA + 20°C							
SL	38	101	25	59	9.8	157	162
2000	35	94	25	61	10.2	158	167
4000	31	88	25	64	10.7	158	173
6000	27	81	24	82	10.3	155	174
8000	23	73	22	58	9.7	147	171
10000	19	66	21	55	9.2	139	167
12000	15	59	19	51	8.5	131	162
14000	11	51	18	48	8.0	122	156
16000	7	44	16	45	7.5	111	146

**RECOMMENDED CRUISE POWER SETTINGS - 20° ROP - 21 IN.Hg @
2100RPM**

PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW/ ENGINE		AIRSPEED	
	FEET	°C		°F	IN. HG	PPH	GPH
ISA - 20°C							
SL	-2	29	21	62	10.3	155	149
2000	-6	22	21	65	10.8	157	155
4000	-9	15	21	67	11.2	158	161
6000	-13	8	21	70	11.7	159	167
8000	-17	1	21	72	12.0	160	172
10000	-21	-6	21	73	12.2	158	176
12000	-25	-14	19	68	11.3	151	173
14000	-29	-21	18	64	10.7	143	169
16000	-33	-28	16	60	10.0	134	164
ISA							
SL	18	55	21	60	10.0	150	150
2000	15	58	21	63	10.5	152	156
4000	11	51	21	65	10.8	153	162
6000	7	44	21	68	11.3	154	167
8000	3	37	21	70	11.7	155	173
10000	-1	30	21	71	11.8	153	177
12000	-5	23	19	66	11.0	145	173
14000	-9	15	18	62	10.3	137	169
16000	-13	8	16	58	9.7	128	153
ISA + 20°C							
SL	38	101	21	59	9.8	145	150
2000	35	94	21	61	10.2	147	156
4000	31	88	21	63	10.5	148	162
6000	27	81	21	66	11.0	149	167
8000	23	73	21	68	11.3	149	173
10000	19	66	21	69	11.5	148	177
12000	15	59	19	64	10.7	140	173
14000	11	51	18	60	10.0	131	168
16000	7	44	16	56	9.3	122	160

**ECONOMY CRUISE POWER SETTINGS - 20° LOP - 21 IN.Hg @
2100RPM**

PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW/ ENGINE		AIRSPEED	
	FEET	°C		°F	IN. HG	PPH	GPH
ISA - 20°C							
SL	-2	29	21	50	8.3	147	141
2000	-6	22	21	52	8.7	149	147
4000	-9	15	21	54	9.0	150	153
6000	-13	8	21	56	9.3	151	158
8000	-17	1	21	58	9.7	152	164
10000	-21	-6	21	58	9.7	150	167
12000	-25	-14	19	55	9.2	143	164
14000	-29	-21	18	51	8.5	135	159
16000	-33	-28	16	48	8.0	126	153
ISA							
SL	18	55	21	48	8.0	142	141
2000	15	58	21	50	8.3	144	147
4000	11	51	21	52	8.7	145	153
6000	7	44	21	54	9.0	146	159
8000	3	37	21	56	9.3	146	164
10000	-1	30	21	56	9.3	145	167
12000	-5	23	19	53	8.8	137	163
14000	-9	15	18	50	8.3	129	158
16000	-13	8	16	46	7.7	119	151
ISA + 20°C							
SL	38	101	21	47	7.8	137	141
2000	35	94	21	49	8.2	138	147
4000	31	88	21	51	8.5	140	152
6000	27	81	21	52	8.7	141	158
8000	23	73	21	54	9.0	141	164
10000	19	66	21	55	9.2	139	167
12000	15	59	19	51	8.5	131	162
14000	11	51	18	48	8.0	122	156
16000	7	44	16	45	7.5	111	146

